April 10, 2019

BIOLOGICAL ASSESSMENT
COMMERCIAL CANNABIS CULTIVATION PROJECT

2200 W. Highway 246 (APN: 099-230-034)
Buellton, California

Prepared for:
Castlerock Family Farms II, LLC
25 El Paseo
Santa Barbara, CA 93101

Prepared by:
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1.0 INTRODUCTION

This biological assessment report describes the results of biological surveys performed within and adjacent to proposed commercial cannabis cultivation areas, processing areas, and access roads located at 2200 Highway 246 (APN: 099-230-034) near the town of Buellton in Santa Barbara County (Figure 1). Included in this report is an assessment of potential impacts to biological resources resulting from project implementation and applicant-proposed biological resource impact avoidance and protection measures. Watershed Environmental, Inc., a County of Santa Barbara-approved professional biological consulting company, prepared this report under contract to the project applicant, Castlerock Family Farms II, LLC.

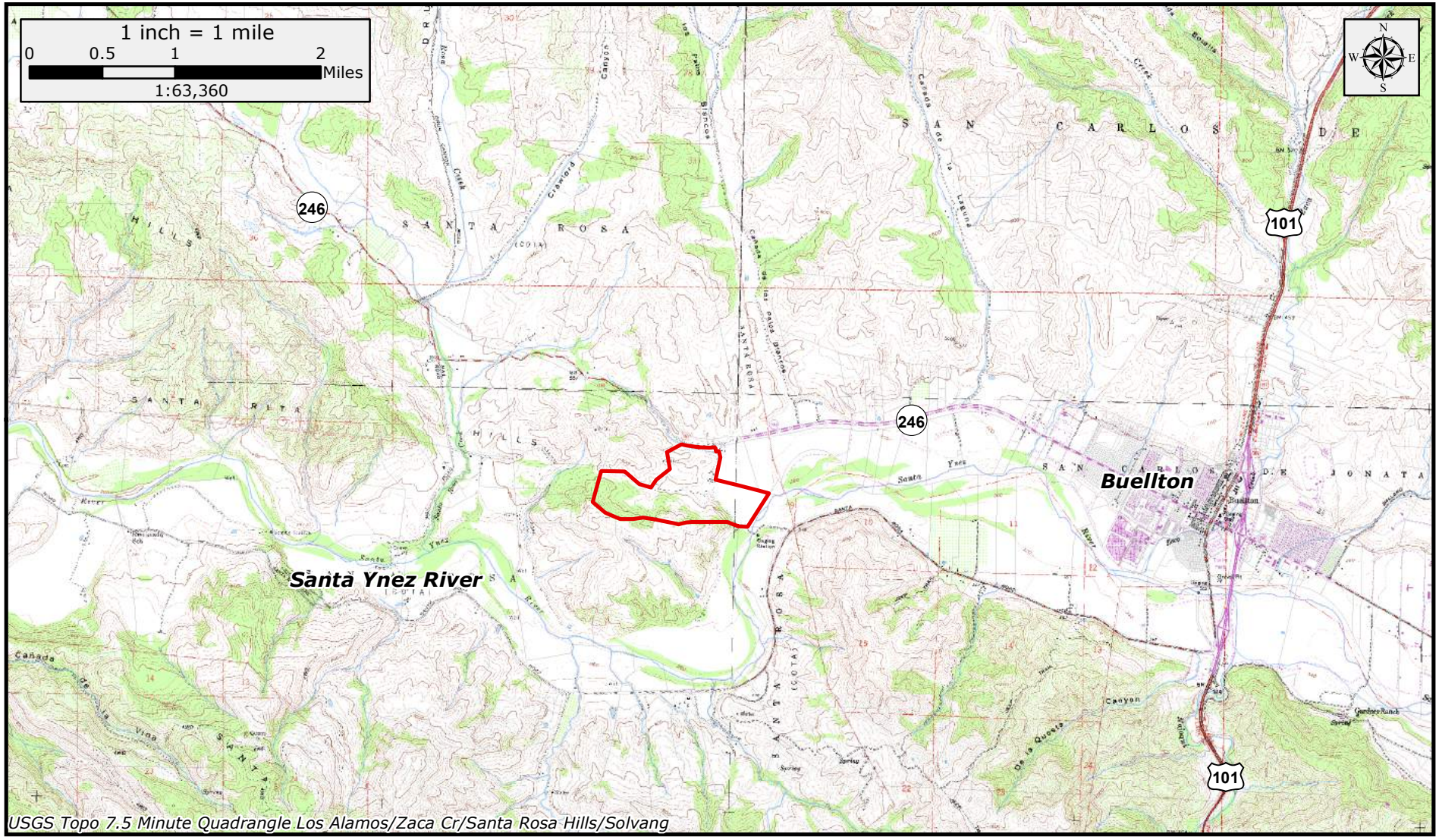
The purposes of this report are to: 1) identify existing biological resources; 2) evaluate the potential impacts of the cannabis cultivation project on biological resources, including endangered, threatened, and candidate species protected by the federal and state Endangered Species Acts, Species of Special Concern and fully protected species protected by California Fish and Wildlife Department (CDFW) code, and rare plant species protected by the Native Plant Protection Act; 3) identify biological mitigation measures needed to ensure project compliance with federal and state laws protecting special-status species and water quality; and 4) ensure project consistency with County of Santa Barbara biological resource protection policies, CDFW code, and State Water Resources Control Board cannabis cultivation policies (SWRCB 2017).

1.1 Background Regulatory Information

This report is designed for the County to use for environmental review purposes mandated by the California Environmental Quality Act (CEQA). The County of Santa Barbara (County) Planning and Development Department is the lead agency for CEQA purposes on this project. The impacts associated with commercial cannabis activities allowed by the County Cannabis Land Use Ordinance and Licensing Program were assessed in a 2017 Final Environmental Impact Report (EIR) for the Cannabis Land Use Ordinance and Licensing Program SCH No. 2017071016 (SBCO 2017). The County requires the applicant to comply with its cannabis cultivation ordinances (SBCO 2018) and to obtain a land use permit to cultivate cannabis commercially.

All commercial cannabis cultivation projects in California are required to obtain a license from the California Department of Food and Agriculture (CDFA) and to demonstrate compliance with CDFW Section 1602 regulations. CDFA currently requires all outdoor commercial cannabis cultivators to apply for a CDFW 1602 Lake or Streambed Alteration Agreement (LSA) or to obtain an LSA agreement or letter from CDFW stating that an LSA agreement is not required. Watershed Environmental will submit this report to CDFW on behalf of the project applicant as part of the 1602 LSA Agreement application for this commercial cannabis cultivation project.

All commercial cannabis cultivators must also demonstrate compliance with the Porter-Cologne Water Quality Control Act, which is administered by the SWRCB. The SWRCB requires all commercial cannabis cultivators to enroll in the Division of Water Quality's Cannabis Cultivation General Order program (SWRCB 2017) and, if surface water diversions are required, to register with the Division of Water Rights to obtain a Small Irrigation Use Registration (SIUR).



Map Items

Property Boundary (APN: 099-230-034)

Figure 1. Location Map

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2.0 PROJECT DESCRIPTION

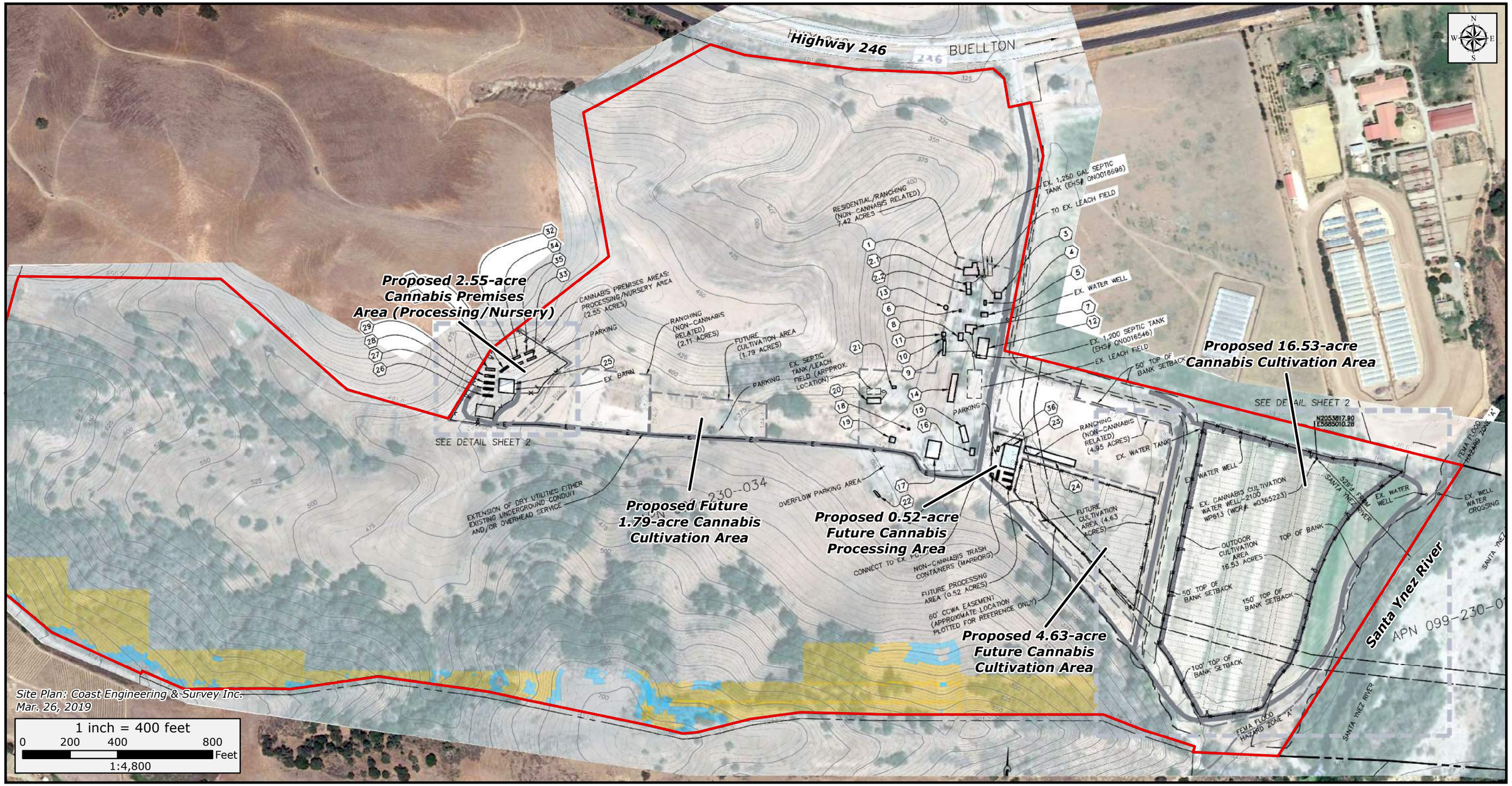
To facilitate project permitting, Watershed Environmental has described the project in this assessment per the definitions provided by the SWRCB Cannabis Cultivation Policy Attachment A, *Definitions and Requirements for Cannabis Cultivation* (SWRCB 2017), and the definitions provided by CDFW in its General Lake or Streambed Alteration Agreement for Activities Related to Cannabis Cultivation *Notification Instructions and Process* (CDFW 2019). The project description consists of cultivation areas, a field office, processing/packaging areas, a nursery and trash/composting area, employee parking, access roads/driveways, and utilities, all of which are located on the 247-acre parcel (APN: 099-230-034) and within the 113.27-acre study area (Figure 2). The project site plan was prepared by Coast Engineering & Survey, Inc. on March 26, 2019.

The project description below includes the as-built permitting of 13 residential and/or agricultural structures in the developed portion of the property that are not proposed for cannabis cultivation use. The County is requiring the applicant to resolve all zoning issues associated these structures by either demolishing and removing them or obtaining as-built permits as part of the land use permit for this commercial cannabis cultivation project. The applicant (Castlerock Family Farms II, LLC) and the property owner have chosen to permit these structures.

2.1 Cannabis Cultivation Areas and Field Office

Cannabis will be grown outdoors in 3 cultivation areas (totaling 22.95 acres) on the 247-acre parcel (APN: 099-230-034). The largest is 16.53 acres in the southeast corner of the property. A 4.63-acre future cultivation area is located adjacent to (west of) the 16.53-acre cultivation area. A 1.79-acre future cultivation area is located approximately 1,150 ft. west of the 4.63-acre cultivation site (refer to Figure 2). The applicant intends to plant the 16.53-acre area this spring as soon as a land use permit (LUP) is issued from the County of Santa Barbara and CDFA annual licenses are issued. The 2 smaller future cultivation areas are anticipated to be planted as soon as this summer or in spring 2020, with issuance of County LUP and CDFA licenses.

Cannabis will be grown in the ground in mounded, 4-ft.-wide rows that are spaced approximately 1 ft. apart outdoors and/or in similar rows under 24-ft.-wide plastic-covered hoop houses in the 16.53-acre and 4.63-acre cultivation sites. Plastic sheeting will be placed over the mounded planting rows to retain soil moisture and prevent weed growth. A drip irrigation system will be used to water the cannabis plants. The 1.79-acre cultivation area will either be planted in the ground using the methods described above or will be planted in above-ground plastic containers. Only natural sunlight will be used to grow the plants in all 3 cannabis cultivation sites. Several different varieties of cannabis will planted, some of which can be grown year-round, and some of which do not need to be grown inside a hoop house. Irrigation water will be supplied from an existing agricultural well (Well ID No. E0365223) located in the northern portion of the 16.53-acre cultivation site.



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Property Boundary (APN: 099-230-034)

Figure 2. Site Plan

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A small farm tractor and harrow will be used to till the soil prior to planting and to create planting mounds. Semi-tractor trailer trucks will deliver agricultural materials to the cultivation areas and pickup trucks will be used to transport plastic sheeting, soil amendments, seedlings, fertilizer, drip irrigation pipes, and irrigation valves to the planting area. In 2018, Castlerock Family Farms II, LLC grew commercial cannabis in hoop houses and outdoors in a 4.7-acre portion of the 16.53-acre cultivation area under temporary license from CDFA. As part of this project, the hoop houses that were used last year will be reutilized.

Riparian and Watercourse Setbacks
To comply with SWRCB Cannabis Cultivation Policy No. 37, all proposed cultivation and processing areas have been reconfigured to avoid the required Class I 150-ft. riparian setback from the Santa Ynez River top-of-bank, as well as the required Class II 100-ft. and Class III 50-ft. watercourse setbacks. Access to the proposed 16.53-acre cultivation area has also been modified to avoid use of the existing unimproved dirt agricultural road within the Santa Ynez River riparian setback. All cannabis cultivation, vehicle and equipment parking, material storage, field office placement, use of unimproved access roads, and security fencing installation will occur outside SWRCB-mandated riparian setbacks.

SWRCB Cannabis Cultivation Policies No. 33 and 35 require restoration of disturbed land within the Class I riparian setback area. To comply with these policies, the project applicant will prepare a revegetation plan for the riparian setback area.

Office Area
This project includes placement of a small, 160-sq.-ft. metal shipping container (Structure #36) in the southwest corner of the future 0.52-acre processing area (refer to Figure 2). The field office will be used by management personnel to manage site operations, supervise employees' stored personal belongings, and maintain site security. Electrical power will be supplied from existing overhead powerlines.

Restrooms/Sanitation
Sanitation for employees will be provided by rented portable bathrooms with hand wash stations, which are proposed to be located near the employee parking areas, the field office, and any other State-mandated location(s). They will be located outside of State Water Resource Control Board (SWRCB) watercourse setbacks and will have secondary containment pans. The bathrooms will be serviced regularly by a commercial sanitation company; all effluent will be pumped from the portable units and removed from the property. Trash containers/dumpsters (for non-cannabis refuse) will be located adjacent to the office and serviced by a local refuse/recycling services company (currently, Marborg).

Fencing/Screening
For security purposes, all cultivation areas will be fenced with 6-8-ft.-tall galvanized chain-link fencing/gates outfitted with green plastic slats for screening purposes. Security cameras with motion-activated lighting will be located around the perimeter of the fenced cultivation areas in accordance with state and local requirements. At the ends of the hoop houses, mesh fabric will be placed on cables, supported by wood or metal posts, to limit the effects of wind and dust on the plants. Additional privacy screening is not proposed at this time, since the 16.53-acre and 4.63-acre

cultivation areas are located more than 1,700 ft. from the nearest public road (Highway 246) and the 1.79-acre cultivation is shielded from public view by rolling hills located west, north, and south of this cultivation site. However, should the County of Santa Barbara require additional screening, evergreen landscape shrubs and trees will be installed where needed.

Access/Parking
Vehicle, equipment, and employee access will be from Highway 246 via existing asphalt-paved and gravel roads to the cultivation areas and processing and storage areas. Vehicle and equipment access within the 3 cultivation areas will be provide via gates in the security perimeter fencing on unimproved dirt roads. All project employees will park in designated parking locations adjacent to the cultivation sites on the road shoulder and on gravel pads adjacent to the cannabis processing area. All vehicle and equipment will be parked outside of SWRCB-required watercourse setbacks and "No Parking" signs will be installed within watercourse setback areas adjacent to cannabis cultivation sites.

Lighting
All proposed project outdoor lighting will be motion-activated, fully-shielded, and directed downward. Motion-activated lights will be programmed to remain on for no greater than twelve (12) minutes. All lighting will be directed towards on-site secured areas and will avoid spill-over effects on adjacent properties. The applicant will install shields around security lights to direct lights downward and prevent security flood lights from shining toward riparian woodland vegetation or the riparian setback revegetation area.

Best Management Practices
Runoff from the cultivation areas will be contained onsite by berms, drainage swales, and stormwater detention basins. Best management practices to protect water quality include: routing stormwater runoff through vegetated biofiltration strips and swales, installation of silt fencing, use of straw waddles, and prohibiting vehicle and farm equipment access on dirt roads and use within the cultivation areas when it is raining and when vehicles would track mud.

2.2 Cannabis Processing, Packaging, Temporary Storage, Seedling Nursery, and Hazardous Substance Storage

All cannabis processing and packaging, temporary storage, the seedling nursery, and hazardous substance storage will occur in a 2.55-acre "Cannabis Premises Area" located approximately 500 ft. west of the proposed 1.79-acre future cultivation area (refer to Figure 2). Within this 2.55-acre area, cannabis processing and packaging will be located in an existing 3,960-sq.-ft. barn (Structure #25) and a 320-sq.-ft. metal shipping container (Structure #31). Cannabis will be temporarily stored in 4 320-sq.-ft. metal shipping containers (Structures #26, 27, 28, 29) adjacent to (west of) the barn on the existing gravel pad that surrounds the barn. Herbicides, fertilizers, and other hazardous materials will be stored within a primary containment storage unit inside a 320-sq.-ft. metal shipping container (Structure #30) on the north side of the barn. The metal shipping container itself will serve as the secondary containment vessel and its exterior will be labeled per Occupational Safety and Health Administration (OSHA) Hazard Communication Standards. The seedling nursey will be housed in 4 320-sq.-ft. metal shipping containers (Structures #32, 33,

34, 35) on the north side of the barn. An existing 2,200-ft.-long by 12-16-ft.-wide gravel and partially paved road provides access to the 2.55-acre cannabis premises area. Employees working there will park on the gravel pad next to the barn. The gravel pad on the eastern side of the barn will function as a loading and unloading zone for trucks.

A 0.52-acre "Future Processing Area" is proposed adjacent to (west of) the 4.63-acre cultivation area. This area will be used if and when (potentially in summer 2020) cannabis processing can no longer be accommodated within the 2.55-acre Cannabis Premises Area, or as business needs dictate. Currently, the only activity planned within this 0.52-acre area is the placement of a 160-sq.-ft. metal shipping container (Structure #36) that will be used as a field office and parking for employee vehicles and farm equipment. The placement of any additional permanent structures, including other metal shipping containers, within this 0.52-acre future processing area will be subject to issuance of permits from the County of Santa Barbara.

Lighting
All proposed project outdoor lighting will be motion-activated, fully-shielded, and directed downward. Motion-activated lights will be programmed to remain on for no greater than twelve (12) minutes. All lighting will be directed towards on-site secured areas and will avoid spill-over effects on adjacent properties. The applicant will install shields around security lights to direct lights downward and prevent security flood lights from shining toward riparian woodland vegetation or the riparian setback revegetation area.

2.3 Cannabis Organic Waste Composting

All organic waste left over from cannabis cultivation will be composted onsite within the 2.55-acre cannabis premises area in a fenced 3,750-sq.-ft. area located 30 ft. south of the barn (refer to Figure 2). A gas-powered wood chipper will be used to grind woody debris into small pieces for composting. The compost will be stored on the ground in 2-4-cu.-yd. piles that will be periodically watered and turned to aid the decomposition process. The piles will be covered with plastic tarps to retain moisture and prevent leaching during rainfall events. The breakdown of organic woody material in these piles is expected to take 6-8 weeks depending on weather conditions. The material will then be loaded onto trucks and used in the seedling nursery or returned to the outdoor cannabis cultivation area. The composting area perimeter will be fenced to prevent cattle and livestock from entering. Access to the composting area will be from the existing gravel access road.

2.4 Existing Access Roads/Driveways

Vehicle access to the property from Highway 246 is via an existing 24-ft.-wide asphalt-paved road that functions as a driveway for residents of the property and their neighbors on adjacent land. This road serves as the primary vehicle access route onto the property and is also used by employees and delivery trucks performing non-cannabis farming activities and livestock production. All commercial cannabis project-related vehicles will use this entrance to access the property. The access road from Highway 246 runs north-south past an agricultural field planted in row crops, a single-family residence, a horse barn and stables, and pastures used for livestock grazing. There are 2 48-in.-diameter storm drain culverts that pass under

this access road approximately 350 ft. south of Highway 246. These culverts convey stormwater runoff from areas northwest of Highway 246 into a 10-15-ft.-wide drainage ditch on the east side of the access road. The ditch cuts across the 2200 Highway 246 property and flows into the Santa Ynez River. (See Section 4.3: Watercourses and Impoundments for a more detailed description of watercourses near the cannabis cultivation sites.)

Approximately 1,830 ft. from Highway 246, the primary asphalt access road intersects an 18-ft.-wide ranch road at the "Y" (as it is locally known), which extends west up a valley to the 1.79-acre future cultivation area and to the 2.55-acre cannabis premises area where the barn is located. This access road passes over 2 reinforced concrete pipe culverts that convey stormwater from man-made agricultural Class IV drainages. The eastern portion of the existing access road to the barn (315 linear ft.) is asphalt paved and the remainder (1,800 linear ft.) is a compacted gravel road used for cattle ranching operations and to access non-cannabis-related agricultural buildings.

The primary access road from Highway 246 continues southeast of the "Y" past a large fenced horse pasture that will be converted into the 4.63-acre future cultivation area, and past the 16.53-acre cannabis cultivation area. The road south of the 16.53-acre cultivation area continues off the APN 099-230-034 property and provides access to a single-family residence and agricultural fields on the adjacent property to the southwest. The segment of the access road on the 2200 Highway 246 property between the "Y" intersection and the southern property line (1,200 linear ft.) is gravel except for a 90-ft.-long, asphalt-paved segment near the "Y" and a 70-ft.-long, concrete segment where the drainage ditch crosses the access road, known as a summer creek crossing. There is an unimproved dirt access road around the perimeter of the 16.53-acre cultivation site, which historic GoogleEarth photographs reveal has been there since at least 1994.

All roads used for cannabis project activities will continue to be maintained per the *Handbook for Forest, Ranch, and Rural Roads* (Weaver et al. 2014). Access roads will be maintained using standard construction heavy equipment such as motor graders and skip loaders. The cannabis cultivation sites and the access roads within them will drain into grass-lined drainage swales and sheet flow onto vegetated biofiltration strips. Vegetation strips and vegetated channels and other best management practices (silt fencing and straw wattles) will be employed to prevent erosion from the cultivation sites and access roads. The concrete summer crossing will be kept free of debris and sediment and will be inspected and maintained before any predicted storm with a 50 percent chance of 0.50-in. precipitation or greater.

2.5 Existing Unpermitted Agricultural Structures

The following 13 non-cannabis-related residential/agricultural structures will be "as-built" permitted to be consistent with Santa Barbara County zoning requirements:

- Structure #1: 1,216 sq. ft., Residential Addition
- Structure #2.1: 716 sq. ft., Change of Use-Office to Ag. Employee Dwelling
- Structure #5: 288 sq. ft., Garage Addition
- Structure #8: 400 sq. ft., Change of Use-Garage to Ag. Employee Dwelling

- Structure #9: 640 sq. ft., Ag. Employee Dwelling
- Structure E #14: 3,000 sq. ft., Horse Corrals
- Structure #18: 64 sq. ft., Fuel Dispenser w/2 Above-ground Storage Tanks
- Structure #19: 736 sq. ft., Pole Barn
- Structure #20: 1,320 sq. ft., Double-wide Mobile Home
- Structure #21: 180 sq. ft., Shed
- Structure #22: 280 sq. ft., Shed
- Structure #23: 6,260 sq. ft., Pole Barn
- Structure #24: 5,692 sq. ft., Horse Corrals

3.0 SURVEY METHODS

Watershed Environmental, Inc. biologist Mark de la Garza and environmental analyst/cartographer Dominick Burnham performed walking field surveys on February 7 and March 26, 2019. The February 7 survey was performed between the hours of 9:00 am and 3:00 pm and the March 26 survey was performed between hours of 10:00 am and 1:00 pm. Weather conditions during the surveys were clear and calm, with temperatures ranging from 38˚ F to 58° F on February 7 and 57˚ F to 67˚ F on March 26.

Our survey of the 113.27-acre study area extended approximately 500 ft. beyond the sites where cannabis-related activities are proposed or to the property line (if closer than 500 ft.) and within 100 ft. of existing access roads/driveways that will be used by vehicles involved in cannabis cultivation activities. We did not survey the developed areas where existing unpermitted structures will be permitted. We used field notes to record direct observations of botanical and wildlife species observed, along with vegetation and land cover types.

Our botanical surveys followed the California Native Plant Society's recommended survey guidelines (CNPS 2010), the US Fish and Wildlife Service's *Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed, and Candidate Plants* (USFWS 2000), and the California Department of Fish and Wildlife *Protocols for Surveying and Evaluating Impacts to Special-Status Native Plant Populations and Natural Communities* (CDFW 2009).

Wildlife surveys followed standard professional practices and the County of Santa Barbara's *Biological Survey Guidelines* (SBCO 1995; contained in SBCO's *Environmental Thresholds and Guidelines Manual,* updated 2002). Background biological information came from the most recent California Natural Diversity Data Base (CDFW 2019) and County of Santa Barbara Environmentally Sensitive Habitat Geographic Information System Data (SBCO 2016).

4.0 ENVIRONMENTAL SETTING

4.1 Land Use

The property is currently zoned for agriculture (zoning map symbol AG-II-100) and is enrolled in the Santa Barbara County Agricultural Preserve Program. The adjacent properties are all of a similar size and also zoned for agricultural use. The property is located in an unincorporated area of Santa Barbara County, west of the town of Buellton and outside of the Santa Ynez Valley Community Plan (SBCO 2009) planning area. Thus it is not subject to the plan's biological resource protection policies and development standards. However, development on this property is subject to compliance with biological resource protection policies contained in the Santa Barbara County Conservation Element, Comprehensive Plan (SBCO 1979; rev. 2010) and the Conservation Element Supplement—Oak Tree Protection in the Inland Areas of Santa Barbara County (SBCO 2003).

Prior to February 2018, the proposed 16.53-acre cannabis cultivation area was used to grow cilantro and other irrigated row crops. The adjacent 4.63-acre proposed future cannabis cultivation area has been used since 2015 as a horse pasture and the 1.79-acre proposed future cannabis cultivation area is currently and has been historically used as rangeland for livestock. Historic aerial photographs show that the southeastern portion of the property, where these 16.53 acre and 4.63 acre cannabis cultivation areas are located, has been used for agriculture production since at least 1928 (UCSB 2019). The 1.79 acre proposed future cannabis cultivation area is in an east-west trending valley that was graded and terraced sometime after 1940 (UCSB 2019).

Historic aerial photographs show that the proposed 2.55-acre cannabis premises area has been used for livestock since at least 1956, and the proposed 0.52-acre future processing area has been cleared and used for agriculture production since at least 1928 (UCSB 2019). Currently, portions of the property that are not developed or farmed are used for livestock grazing.

4.2 Topography and Soils

The 16.53-acre proposed cannabis cultivation area gently slopes <1-1.5 percent toward the south. Elevations range from a high of approximately 310 ft. in the northwest to a low of 295 ft. along the southern edge of the area. The 4.63-acre proposed future cannabis cultivation area gently slopes <1 percent toward the southeast. Elevations range from a high of 305 ft. in the northwestern corner to a low of 300 ft. along the southeastern edge of the area. The 1.79-acre proposed future cannabis cultivation area gently slopes 2-3 percent toward the northeast. Elevations range from 375 ft. along the western edge of the area to 365 ft. along the eastern edge.

Elevations in the proposed 2.55-acre cannabis premises area (cannabis processing, packaging, temporary storage, seedling nursery, hazardous substance storage, and organic waste composting) range from 450 ft. in the north to 415 ft. in the south. Elevations in the proposed 0.52-acre future cannabis processing area range from 310 ft. along the western edge to 305 ft. along the east.

The Natural Resource Conservation Service (USDA 1972) classifies soils in the 16.53-acre proposed cannabis cultivation area as Mocho loam (Mv). Soils in the proposed 4.63-acre future cannabis cultivation area are classified as Mocho loam (Mv) and Corralitos loamy sand (CuA). Soils in the proposed 1.79-acre future cannabis cultivation area are classified as Gullied land (GuE). Soils in the proposed 2.55-acre cannabis premises area are classified as Tierra loam (TrE3). Soils in the proposed 0.52-acre future cannabis processing area are classified as Corralitos loamy sand (CuA). None of these soil types are considered by the NRCS to be a hydric soil (NRCS 2019).

> "Corralitos loamy sand" soil (map symbol CuA) has rapid permeability, a very slow runoff rate, and no erosion hazard. This soil is good for strawberries and other irrigated row crops.
>
> "Gullied land" soil (map symbol GuE) occurs in valleys and terraces and deeply entrenched drainage ways. The soil profile in gullied lands have been destroyed by deep gullies. Gullied land soils are classified as well-drained with variable permeability, a very rapid runoff rate, and very high hazard of erosion.
>
> "Mocho loam" soil (map symbol Mv) has moderate permeability, a very slow runoff rate, and slight to no erosion hazard. Areas containing Mocho loam that are irrigated are classified as prime agricultural land.
>
> "Tierra loam" soil (map symbol TrE3) has very slow permeability, rapid runoff rate, and very high erosion hazard.

4.3 Watercourses and Impoundments

As part of this biological assessment, we reviewed US Geological Survey 7.5-minute quadrangle topographic maps for Santa Rosa Hills and Solvang, California (USGS 2018a and 2018b); the National Wetland Inventory (USFWS 2019); and the National Hydrography Dataset (USGS 2018) to see if these federal agencies had mapped any blue-line watercourses, ponds, wetlands, or impoundments near the proposed cannabis cultivation areas where ground disturbance activities will occur. We also reviewed historic aerial photographs available on GoogleEarth to see if there are any unmapped vernal pools, ponds, or agricultural impoundments within 1.2 mi. of the cannabis cultivation area. The 1.2-mi. distance is the maximum potential dispersal range from a breeding pond that the federally endangered and California threatened California tiger salamander *(Ambystoma californiense)* is known to travel (USFWS 2016).

4.3.1 USGS-Mapped Watercourses

The USGS Santa Rosa Hills and Solvang 7.5-minute quadrangle topographic maps identify 2 watercourses on the property: the **perennial** Santa Ynez River and an **intermittent** stream that flows along Highway 246 and onto the property. Neither of these watercourses is mapped by USGS as occurring within the proposed cultivation sites or the proposed processing sites. The intermittent stream's flowline on the USGS topographic map follows the property's eastern boundary from Highway 246 until it ends abruptly approximately 100 ft. northwest of the 16.53-acre proposed cultivation site. The USGS topographic maps do not identify any ponds or other standing waterbodies on the property.

4.3.2 National Wetland Inventory-Mapped Watercourses

The USFWS National Wetland Inventory (NWI) identifies the same 2 watercourses on the property, but the extent of the intermittent stream's flowline is not mapped as far into the property, ending near Highway 246 approximately 1,500 ft. northwest of the 16.53-acre proposed cultivation site. The NWI does not identify any ponds or other standing waterbodies on the property.

4.3.3 National Hydrography Dataset-Mapped Watercourses

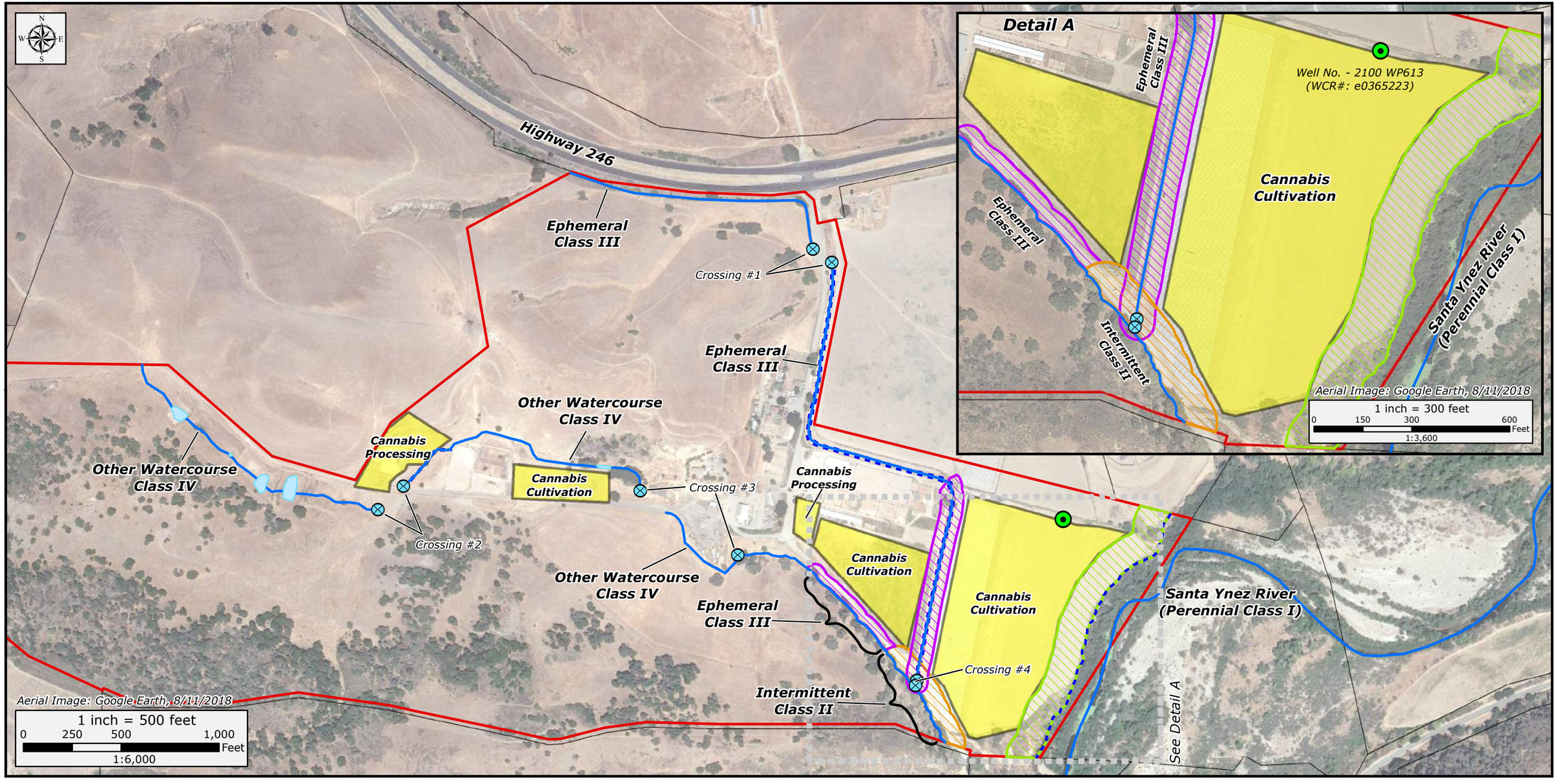
The National Hydrography Dataset (NHD) identifies the same 2 watercourses, mapping their respective flowlines to the same extent as the USGS. The Santa Ynez River is identified as a **perennial** river in the NHD, and the watercourse that ends abruptly 100 ft. from the 16.53-acre proposed cultivation site is identified as an **intermittent** stream. The NHD identifies 2 additional watercourses on the property that are not identified in the USGS topographic maps or NWI. These 2 watercourses are mapped as flowing onto the property from the west and merging at a culvert 175 ft. south of the proposed 2.55-acre cannabis premises area. The merged flowline then continues through the property, coming to an end approximately 150 ft. west of the proposed 4.63-acre future cultivation area by the paved access road used to enter the property. The NHD identifies the 2 watercourses and their merged counterpart as **ephemeral** streams. The NHD does not identify any ponds or other standing waterbodies on the property.

4.3.4 Watershed Environmental Hydrography Survey Results and SWQCB Classification

During performance of our February 7 and March 26, 2019 surveys, Watershed Environmental staff examined all watercourses and waterbodies in the study area. We verified the existence of all watercourses indicated by the USGS 7.5-minute topographic maps, the USFWS NWI, and the USGS NHD. As part of our survey, we mapped the top-of-bank of all watercourses pertinent to the project and the location of road/watercourse crossings. Figure 3 depicts the location of watercourses in the study area and SWRCB-required watercourse buffer zone setbacks.

There is an additional, previously unmapped watercourse that flows on the west side of the access road along the 16.53-acre proposed cultivation area and 4.63-acre proposed future cultivation area. This watercourse exhibits a bed and bank, and eventually flows into a culvert off the property and into the Santa Ynez River. Watershed Environmental mapped the top-of-bank of this watercourse (refer to Figure 3) and surveyed the watercourse mapped by the USGS and NHD as ending abruptly 100 ft. northwest of the 16.53-acre proposed cultivation area. We extended its flowline, since this watercourse actually flows further, running between the proposed 16.53-acre cultivation area and 4.63-acre proposed future cultivation area and eventually reaching the previously unmapped watercourse that runs parallel to the access road (refer to Figure 3).

The east-west trending valley between the paved access road used to enter the property and the proposed 2.55-acre cannabis premises area has been terraced and the natural drainage has been modified to flow through a series of storm drain culverts and open concrete box channels into a series of small man-made ponds.



State Water Resources Control Board (SWRCB) Watercourses & Minimum Riparian Setbacks
**setbacks calculated from top-of-bank*

- Watercourse Flowline *(surveyed by Watershed Environmental)*
- Class I Setback (150 ft.)
- Class II Setback (100 ft.)
- Class III Setback (50 ft.)

Map Items

- Man-made ponds/reservoirs *(surveyed by Watershed Environmental)*
- Proposed Project Site
- Road Drainage Crossing
- Water Well
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Figure 3. Existing Watercourses, Reservoirs, and Ponds in Project Vicinity

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Based on our review of historic aerial photographs, the terracing and drainage modification occurred sometime prior to 1956 and after 1940 (UCSB 2019). We were unable to ascertain whether this work was undertaken in coordination with the Soil Conservation Service to control erosion and increase groundwater recharge, or if the work was performed solely by a property owner. We did not find any ponds or similar standing waterbodies on the property aside from man-made ponds, which are part of the modified drainage system (refer to Figure 3). We evaluate their viability to support endangered California tiger salamanders in Section 4.4 of this report.

Watershed Environmental has classified each watercourse on the property according to its State Water Resources Control Board (SWRCB) classification. All of the watercourses observed during our field survey are Waters of the State subject to CDFW and SWRCB regulatory authority. SWRCB classification definitions are provided below. The classification of each watercourse on the property follows (SWRCB 2017):

Watercourse *– a natural or artificial channel through which water flows.*

- ***Perennial watercourse (Class I*)****:*
    1. *In the absence of diversions, water is flowing for more than nine months during a typical year,*
    2. *Fish always or seasonally present onsite or includes habitat to sustain fish migration and spawning, and/or*
    3. *Spring: an area where there is concentrated discharge of ground water that flows at the ground surface. A spring may flow any part of the year. For the purpose of this Policy, a spring does not have a defined bed and banks.*

- ***Intermittent watercourse (Class II*):***
    1. *In the absence of diversions, water is flowing for three to nine months during a typical year,*
    2. *Provides aquatic habitat for non-fish aquatic species,*
    3. *Fish always or seasonally present within 1,000 feet downstream, and/or*
    4. *Water is flowing less than three months during a typical year and the stream supports riparian vegetation.*

- ***Ephemeral watercourse (Class III*):*** *In the absence of diversion, water is flowing less than three months during a typical year and the stream does not support riparian vegetation or aquatic life. Ephemeral watercourses typically have water flowing for a short duration after precipitation events or snowmelt and show evidence of being capable of sediment transport.*

- ***Other watercourses (Class IV*):*** *Class IV watercourses do not support native aquatic species and are man-made, provide established domestic, agricultural, hydroelectric supply, or other beneficial use.*

*******Except where more restrictive, stream class designations are equivalent to the Forest Practice Rules Water Course and Lake Protection Zone definitions (California Code of Regulations, title 14, Chapter 4, Forest Practice Rules, Subchapters 4, 5, and 6 Forest District Rules, Article 6 Water Course and Lake Protection).*

The Santa Ynez River is a perennial watercourse (Class I) that flows in an east to west direction south of the 16.53-acre cultivation area. USGS stream gauge data of the Santa Ynez River measured near the town of Santa Ynez, CA shows the river has perennial year-round flow (USGS 2019). The Santa Ynez River is indicated in Figure 3 as a "Class I watercourse."

An ephemeral (Class III) watercourse flows north to south from Highway 246 through the property to a low-flow summer road/watercourse crossing, where it flows into an intermittent (Class II) watercourse. The ephemeral portion of this watercourse flows in an unlined channel adjacent to (east of) the main access road, past the horse stables, and between the proposed 16.53-acre cultivation area and 4.63-acre proposed future cultivation area. The watercourse flows into a natural intermittent watercourse south of the summer road/watercourse crossing and continues southward through the neighbor's property and into the Santa Ynez River (refer to Figure 3). The ephemeral portion of this watercourse does not support any riparian vegetation or aquatic habitat capable of supporting fish, and appears to flow for less than 3 months during a typical year. The intermittent portion of this watercourse contains arroyo willow-western sycamore riparian woodland vegetation between the summer road/watercourse crossing and the Santa Ynez River.

A previously unmapped watercourse exists on the west side of the access road between the "Y" intersection and the summer road/watercourse crossing described above. Watershed Environmental has classified this watercourse as ephemeral (Class III) because it lacks riparian vegetation. We estimate that water flows there for less than 3 months during a typical year and can confirm that fish are not present in the watercourse at any time (refer to Figure 3).

The 2.55-acre cannabis premises area and the 1.79-acre future cultivation area are located in an east-west trending valley that has been terraced. The watercourse in the valley bottom is routed through a series of 5-6-ft.-wide by 3-4-ft.-deep concrete open box channels that outlet into a series of small (less than one-quarter-acre), shallow (4-12-in.-deep) man-made ponds. Watershed Environmental has identified this watercourse as a Class IV man-made watercourse. It appears to convey water for less than 3 months during a typical year and the ponds hold water for just a few weeks after rainfall.

4.3.5 Watercourse Crossings

There are 4 existing watercourse/stream crossings in the project area. There are no proposed additional watercourse/stream crossings. All of these crossings are subject to CDFW jurisdiction and are considered separate projects as defined by the 1602 Lake and Streambed Alteration Agreement application instructions. All road watercourse crossings will be maintained to provide proper function and will be inspected before any predicted storm with a 50 percent chance of 0.5 in. or greater precipitation.

Crossing #1: Two 48-in.-diameter corrugated metal pipe culverts are located beneath the existing main asphalt-paved access road near the main entrance to the property off Highway 246. These culverts convey water from the northwest portion of the property beneath the access road and into an ephemeral Class III watercourse

that exists between Highway 246 and the low-flow summer road/watercourse crossing in the southern portion of the property.

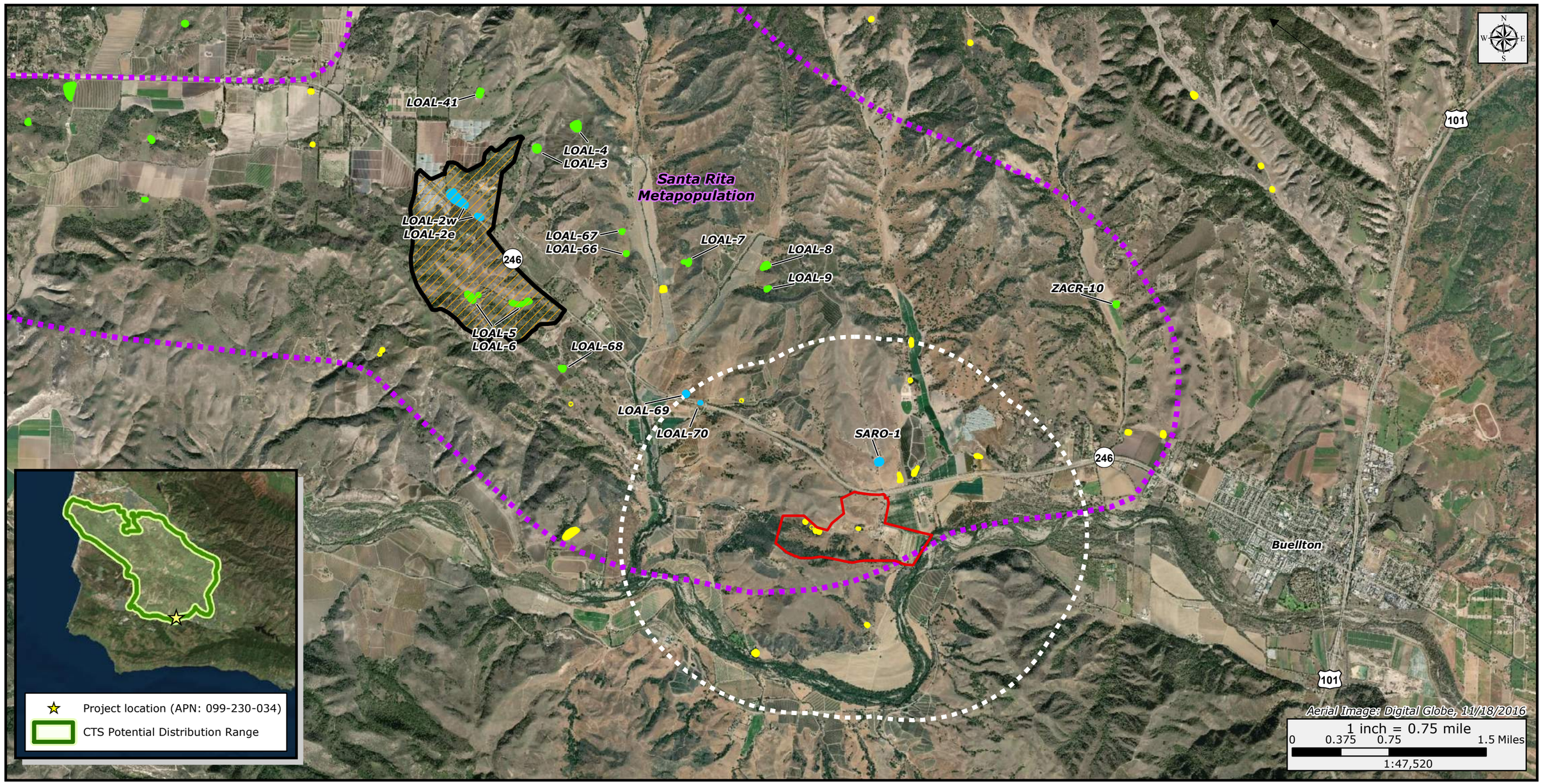
Crossings #2 and #3: There are 2 culverted watercourse crossings along the existing gravel road that are used to access the proposed 2.55-acre cannabis premises area and proposed 1.79-acre future cannabis cultivation area. These road watercourse crossings are part of the man-made Class IV drainage system that exists in the east-west-trending valley on the property. **Crossing #2** is a 24-in.-diameter burred reinforced concrete pipe culvert located approximately 100 ft. southeast of the processing barn (Structure #25). **Crossing #3** is a 32-in.-diameter by 600-ft.-long reinforced concrete pipe that begins in a man-made pond. It conveys water beneath the existing gravel access road and under a large gravel pad, emerging at the base of a man-made terrace through a 24-in.-diameter reinforced concrete pipe outlet structure.

Crossing #4: Along the southeastern access road west of the 16.53-acre proposed cultivation area, there is an existing concrete-paved, low-water "summer crossing." This crossing conveys flow from an ephemeral Class III watercourse that begins near Highway 246, flows past the horse stables, and runs between the 16.53-acre and 4.63-acre cultivation areas to the summer crossing.

4.4 Environmentally Sensitive and Critical Habitat

The property does not contain any previously mapped or identified environmentally sensitive habitat (Santa Barbara County 2016). As part of this assessment, we accessed the US Fish and Wildlife Service's online critical habitat mapper (2018a) and determined that the 2200 Highway 246 property contains federally designated critical habitat for federally endangered southern steelhead *(Oncorhynchus mykiss)* and federally and California endangered southwestern willow flycatcher *(Empidonax traillii).* The Santa Ynez River, which flows along the eastern edge of the property, is designated federal critical habitat for both species. The proposed 16.53-acre cannabis cultivation area is located approximately 150 ft. from the boundaries of these critical habitats. Occurrence potential of these species within the cannabis cultivation areas is analyzed in Section 5.5 of this report, and impact analysis and mitigation recommendations are provided in Sections 6.0 and 7.0.

California tiger salamander (CTS) federally designated critical habitat is located 2.3 mi. northwest of the property (Figure 4), and the property does lie within the CTS Santa Rita Metapopulation Area, according to the USFWS 2016 *Recovery Plan for the Santa Barbara County Distinct Population Segment of the California Tiger Salamander (Ambystoma californiense)*. There is a network of USFWS-mapped known and potential breeding ponds that extends throughout the metapopulation area. According to the recovery plan, the nearest known breeding pond, LOAL-9, is located 1.7 mi. north of the property, and the nearest potential breeding pond, SARO-1, is located 1,200 ft. north of the property. Watershed Environmental also reviewed the California Natural Diversity Database (CDFW 2019), which indicates evidence of breeding occurring in LOAL-69 in an occurrence record entry dated 2008 that found 12 CTS larvae. LOAL-69 lies 1.15 mi. northwest of the property.



California Tiger Salamander (CTS) Map Items

- 1.2-mile CTS dispersal range
- CTS Federal Critical Habitat (USFWS)
- CTS Metapopulation Boundaries (USFWS)
- Known Breeding Ponds (USFWS 2010)
- Potential Breeding Ponds (USFWS 2010)
- Unrecorded Potential Breeding Ponds *(Watershed Environmental aerial image interpretation)*

Map Items

- Property Boundary (APN: 099-230-034)

Figure 4. California Tiger Salamander Data

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CTS are known to travel a distance of up to 1.2 mi. from a breeding pond. There are no USFWS-mapped known breeding ponds within 1.2 mi. of the property, but evidence indicates that LOAL-69 (1.15 mi. northwest of the property) has been used by CTS for breeding (CNDDB 2019). In the recovery plan, the USFWS mapped LOAL-69 as a potential breeding pond. There are 2 other USFWS-mapped potential breeding ponds within 1.2 mi. of the property: LOAL-70 and SARO-1. Figure 4 depicts the Santa Rita Metapopulation Area boundary, USFWS-mapped known and potential breeding ponds, and other ponds within the 1.2 mile tiger salamander dispersal range from a breeding pond. There are 5 small man-made ponds on the 2200 Highway 246 property that are part of the modified drainage system in the east-west trending valley. Based on our field surveys and review of historic aerial imagery we have determined these ponds hold water for a short period of time (2-4 weeks), not for the two-three months required for California tiger salamanders to complete their breeding cycle and for larvae to complete metamorphosis. There are also 8 ponds located off of the 2200 Highway 246 property that are within the 1.2 mi. California tiger salamander dispersal range that could potentially be used for breeding. These 8 other ponds are located on neighboring properties and Watershed Environmental was not able to determine whether these ponds are capable of supporting California tiger salamander breeding.

5.0 SURVEY RESULTS

5.1 Vegetation and Land Cover Types

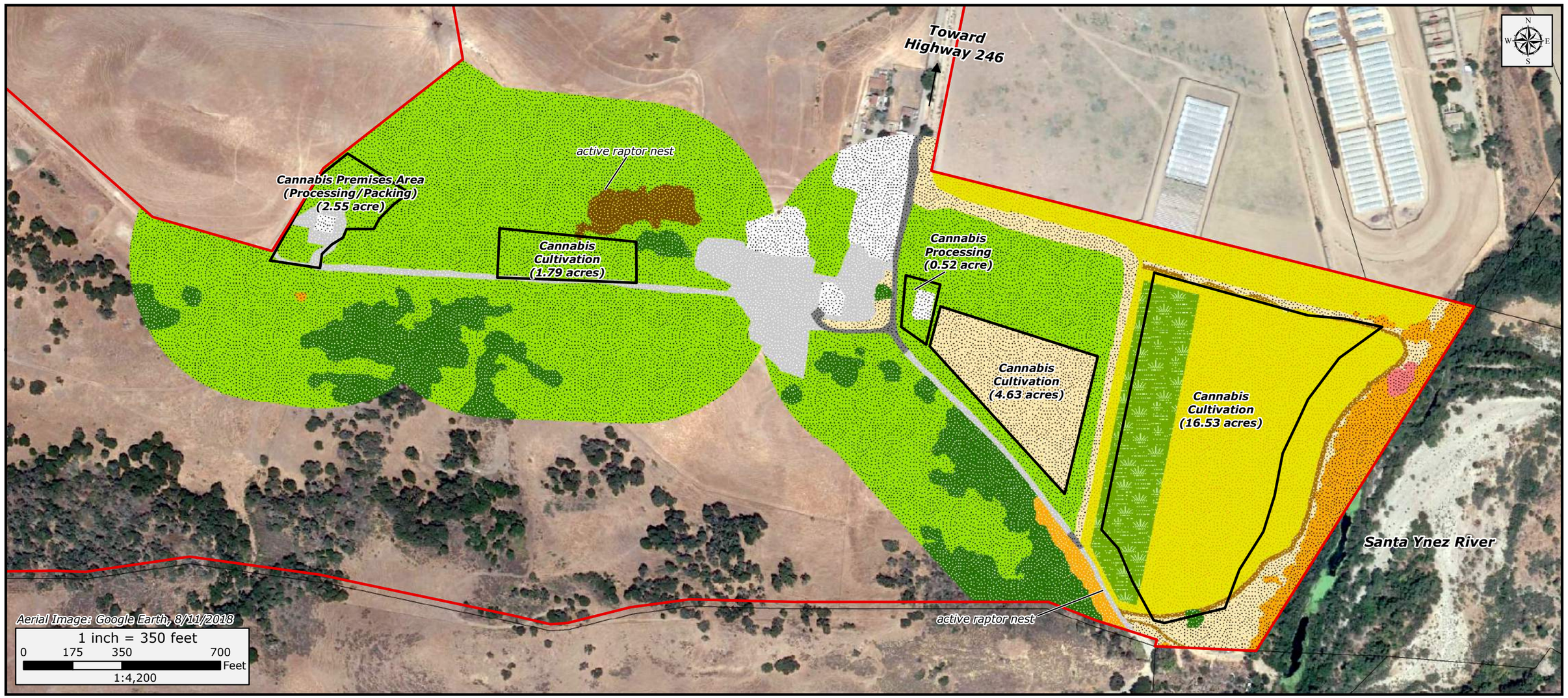
We performed vegetation and land cover mapping by identifying the plant species and land cover types and mapping their aerial extent on a 1-in.=100-ft. color aerial photograph taken on August 11, 2018. "Land cover" describes developed areas that contain no vegetation, referring to structures, roads, and paved surfaces. Vegetation type classification and nomenclature follows the *Manual of California Vegetation 2nd Edition* (2009 Sawyer et al.), which has 3 main categories:

1. **Forests and Woodlands** with a tree canopy of at least 10 percent over denser layers of shrubs and herbaceous species.
2. **Shrublands** with at least 10 percent shrub cover and less than 10 percent tree cover; herbaceous species may have total higher cover than shrubs.
3. **Herbaceous** dominated by graminoids (grasses) and forbs with less than 10 percent shrubs, sub-shrubs, and trees.

Environmentally sensitive habitats include: 1) habitat/vegetation types that Santa Barbara County classifies as environmentally sensitive and 2) vegetation types that the CDFW considers threatened (2018), with a ranking of S3.2 or higher. Within the 113.27-acre project study area, we identified 9 different vegetation types and 4 land cover types (Table 1). Figure 5 depicts their locations.

Table 1. Existing Vegetation and Land Cover Types in Study Area

Vegetation and Land Cover Type	Area (sq. ft.)	Area (acres)
Vegetation		
Agriculture – cannabis (2018)	219,702	5.04
Agriculture - fallow previously irrigated row crops (left fallow spring 2018)	841,830	19.33
Arroyo Willow Riparian Woodland	144,628	3.32
Arroyo Willow-Western Sycamore Riparian Woodland	27,365	0.63
Coast Live Oak Woodland with non-native annual grass understory	430,868	9.89
Cottonwood Riparian Woodland	8,553	0.20
Eucalyptus Woodland	52,534	1.21
Non-native annual grassland	2,382,315	54.69
Ruderal/Disturbed	390,877	8.97
Land Cover		
Gravel Access Road/Pad	235,418	5.40
Paved Access Road	27,814	0.64
Structures	136,400	3.13
Unimproved Dirt Road	35,668	0.82
Total	**4,933,972**	**113.27**



Land Cover Types
**within 500 ft. of proposed project site & within 100 ft. of project access roads*

- Gravel Access Road/Pad
- Paved Access Road
- Structures
- Unimproved Dirt Road

Map Items

- Proposed Project Site
- Property Boundary (APN: 099-230-034)

Vegetation Types
**within 500 ft. of proposed project site & within 100 ft. of project access roads*

- Agriculture *(cannabis 2018)*
- Agriculture *(fallow previously irrigated row crops)*
- Arroyo Willow Riparian Woodland
- Arroyo Willow - Western Sycamore Riparian Woodland
- Coast Live Oak Woodland
- Cottonwood Riparian Woodland
- Eucalyptus Grove
- Non-Native Annual Grassland
- Ruderal/Disturbed

Figure 5. Existing Vegetation and Land Cover Types in Project Vicinity

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5.1.1 Description of Vegetation Types

Agriculture—cannabis: Cannabis was grown last year in the western portion of the proposed 16.53-acre cannabis cultivation area (refer to Figure 5). Although no cannabis was being grown at the time we surveyed the site, the hoop houses, mounded planting rows, and plastic sheeting were still present. This area was previously used to grow *(Cannabis sativa* and *C. indica)* hybrids that were crossed with *Cannabis ruderalis*. These hybrids can be grown year-round and are auto-flowering (i.e., produce flowers approximately 30 days after planting and are ready to be harvested after 70-110 days). The vegetation growing in this area at the time of our survey was limited to a few non-native annual herbs and grass species: field mustard *(Brassica rapa)*, black mustard *(Brassica nigra),* cheese weed *(Malva parviflora)*, shepherd's purse *(Capsella bursa-pastoris),* Italian rye *(Festuca perennis)*, and smilo grass *(Stipa miliacea* var. *miliacea).* The CDFW California Natural Diversity Data Base has not assigned a global or state rarity ranking to this non-native agricultural vegetation type (CNDDB 2019).

Agriculture—fallow, previously irrigated row crops (left fallow spring 2018): This vegetation type exists in the majority of the proposed 16.53-acre cannabis cultivation area (refer to Figure 5). For at least the past 90 years, it has been used to grow irrigated row crops, but since spring 2018 has been left fallow. The absolute vegetation cover at the time of our survey ranged from 50 to 80 percent. The dominant plant species in this area are cheese weed *(Malva parviflora)*, shepherd's purse *(Capsella bursa-pastoris),* and field mustard *(Brassica rapa).* Other species occurring in the vegetation type are black mustard *(Brassica nigra),* annual bluegrass *(Poa annua)*, prickly sow-thistle *(Sonchus asper)*, henbit *(Lamium amplexicaule)*, fumitory *(Fumaria officinalis),* Italian rye *(Festuca perennis)*, knotweed *(Polygonum aviculare* subsp. *depressum),* Bermuda grass *(Cynodon dactylon),* Mexican tea *(Dysphania ambrosioides),* and lamb's quarters *(Chenopodium album)*. This vegetation type is not listed in the *Manual of California Vegetation* and does not have a global or state rarity ranking because it is composed entirely of non-native weed species that are common in agricultural fields (CNDDB 2019).

Arroyo Willow Riparian Woodland: This vegetation type occurs east of the proposed 16.53-acre cannabis cultivation area along the bed and banks of the Santa Ynez River (refer to Figure 5). The dominant species is arroyo willow *(Salix lasiolepis)*. This vegetation type does not contain any understory vegetation, but does contain a few scattered Fremont cottonwood *(Populus fremontii* subsp. *fremontii),* box elder *(Acer negundo),* California ash *(Fraxinus dipetala),* and Pacific willow *(Salix lasiandra* var. *lasiandra)* trees. Applying the nomenclature rules in the 2009 *Manual of California Vegetation 2nd Edition* classification scheme, this vegetation type is classified as a *Salix lasiolepis* Shrubland. The CDFW California Natural Diversity Data Base assigned a G4 global S4 state rarity ranking to this woodland type, meaning it is apparently secure at global and state levels, although it is also considered a sensitive natural community (CNDDB 2019).

Arroyo Willow-Western Sycamore Riparian Woodland: This vegetation type exists along the banks of an intermittent watercourse on the west side of the access road used to access the proposed 16.53-acre cannabis cultivation area (refer to Figure 5). The dominant tree species present in this area are arroyo willow (*Salix lasiolepis)* and western sycamore *(Platanus racemosa).* Understory vegetation present

comprises black elderberry *(Sambucus nigra* subsp. *caerulea)*, poison oak *(Toxicodendron diversilobum),* California ash *(Fraxinus dipetala),* tree tobacco *(Nicotiana glauca),* box elder *(Acer negundo),* poison hemlock *(Conium maculatum),* and hoary nettle *(Urtica dioica* subsp. *holosericea).* Applying the nomenclature rules in the 2009 *Manual of California Vegetation 2nd Edition* classification scheme, this vegetation type is classified as a *Platanus racemosa - Salix lasiolepis* Riparian Woodland. The CDFW California Natural Diversity Data Base assigned a G3 global S3 state rarity ranking to this woodland type, meaning it is vulnerable at global and state levels. It is also considered a sensitive natural community (CNDDB 2019).

Coast Live Oak Woodland with non-native annual grass understory: This vegetation type exists west of the access road used to access the proposed 16.53-acre cannabis cultivation area and proposed 4.63-acre future cultivation area (refer to Figure 5). The dominant tree species is coast live oak *(Quercus agrifolia)* and the dominant shrub is toyon *(Heteromeles arbutifolia)*. There are also a few scattered valley oak trees *(Quercus lobata)* in this vegetation type. The understory vegetation is dominated by non-native grasses: rip-gut brome *(Bromus diandrus)*, wild oat *(Avena fatua)*, soft chess *(Bromus hordeaceus),* and rattail fescue *(Festuca myuros)*. Other plant species growing beneath the oak tree canopy are Italian rye *(Festuca perennis)*, fiesta flower *(Pholistoma auritum* var. *auritum),* bedstraw *(Galium aparine)*, and johnny-jump-up *(Viola pedunculata).* Applying the nomenclature rules in the 2009 *Manual of California Vegetation 2nd Edition* classification scheme, this vegetation type is classified as a *Quercus agrifolia / Heteromeles arbutifolia* Woodland Alliance. The CDFW California Natural Diversity Data Base assigned a G5 global S4 state rarity ranking to this woodland type, meaning it is demonstrably secure at a global level and apparently secure at a state level (CNDDB 2019).

Cottonwood Riparian Woodland: A small stand of cottonwood *(Populus fremontii* subsp. *fremontii)* trees exists on the banks of the Santa Ynez River east of the proposed 16.53-acre cannabis cultivation area (refer to Figure 5). This vegetation type does not contain any understory vegetation, but does have a few scattered arroyo willow (*Salix lasiolepis)* trees. Applying the nomenclature rules in the 2009 *Manual of California Vegetation 2nd Edition* classification scheme, this vegetation type is classified as *Populus fremontii* subsp. *fremontii* Riparian Woodland. The CDFW California Natural Diversity Data Base assigned a G4 global and S3 state rarity ranking to this woodland type, meaning it is apparently secure globally and vulnerable at state levels, although it is also considered a sensitive natural community (CNDDB 2019).

Eucalyptus Woodland: This vegetation type occurs north (adjacent) of the proposed 1.79-acre future cultivation area. The dominant tree species is blue gum eucalyptus (*Eucalyptus globulus*). Other trees present are Peruvian pepper (*Schinus molle*) and Bishop pine (*Pinus muricata*). Understory vegetation consists of California sagebrush (*Artemisia californica*), lemonade berry (*Rhus integrifolia*), coyote brush (*Baccharis pilularis*), toyon (*Heteromeles arbutifolia*), black elderberry (*Sambucus nigra* ssp. *caerulea*), and poison hemlock (*Conium maculatum*). Applying the nomenclature rules in the 2009 *Manual of California Vegetation 2nd Edition* classification scheme, this vegetation type meets the classification criteria to be called *Eucalyptus globulus* Semi-Natural Forest Alliance. The CDFW California Natural Diversity Data Base has

not assigned a global or state rarity ranking to this non-native vegetation type (CNDDB 2019).

Non-native Annual Grassland: This vegetation type occurs where there are no trees or shrubs in areas that have not been recently farmed (refer to Figure 5). The dominant grass species we observed are wild oat *(Avena fatua)*, soft chess *(Bromus hordeaceus),* and rattail fescue *(Festuca myuros).* Other grasses present are Italian rye *(Festuca perennis),* ripgut brome *(Bromus diandrus),* red brome *(Bromus madritensis* subsp. *rubens),* and hare barley *(Hordeum murinum* subsp. *leporinum)*. Herbs commonly occurring in this vegetation type are red-stem filaree *(Erodium cicutarium),* tecalote (*Centaurea melitensis*), Italian thistle *(Carduus pycnocephalus),* black mustard *(Brassica nigra),* bur clover *(Medicago polymorpha)*, and cheese weed *(Malva parviflora).* Applying the nomenclature rules in the 2009 *Manual of California Vegetation 2nd Edition* classification scheme, this vegetation type meets the classification criteria to be called *Avena fatua - Bromus hordeaceus - Festuca myuros* Semi-Natural Herbaceous Stand. The CDFW California Natural Diversity Data Base has not assigned a global or state rarity ranking to this non-native vegetation type (CNDDB 2019).

Ruderal/Disturbed: This vegetation type occurs in the southern portion of the proposed 16.53-acre cannabis cultivation area between the fallow, previously farmed field and the riparian woodland vegetation on the banks of the Santa Ynez River (refer to Figure 5). It also occurs in an ephemeral drainage on the west side of the proposed 16.53-acre cannabis cultivation area, and within the proposed 4.63-acre future cultivation area that is currently used for horse pasture. The absolute vegetation cover varies and is dependent upon the length of time since the area was last disturbed. Areas that have not been disturbed for a year of more have 80 to 100 absolute cover, while areas that have been disturbed within the past several months have 5-20 percent cover. Areas identified and mapped as ruderal/disturbed have been disturbed by previous farming activities, were used to store farm equipment and materials, and (in the case of the ephemeral drainage) are periodically scoured by storm water runoff and cleaned out for flood control purposes to maintain the capacity of the drainage to convey stormwater runoff. The plant species growing in these ruderal/disturbed areas are primarily non-native herbs and grasses, but there are a few scattered native herbs and shrubs.

We observed these non-native species during our February 2019 survey: field mustard *(Brassica rapa)*, black mustard *(Brassica nigra),* cheese weed *(Malva parviflora)*, shepherd's purse *(Capsella bursa-pastoris),* Italian rye *(Festuca perennis)*, smilo grass *(Stipa miliacea* var. *miliacea),* henbit *(Lamium amplexicaule)*, fumitory *(Fumaria officinalis)*, tecalote (*Centaurea melitensis*), Italian thistle *(Carduus pycnocephalus)*, knotweed *(Polygonum aviculare* subsp. *depressum),* Bermuda grass *(Cynodon dactylon),* Mexican tea *(Dysphania ambrosioides),* lamb's quarters *(Chenopodium album)*, Russian tumbleweed *(Salsola tragus)*, tree tobacco *(Nicotiana glauca)*, poison hemlock *(Conium maculatum),* horehound *(Marrubium vulgare),* California burclover (*Medicago polymorpha*), red-stem filaree *(Erodium cicutarium)*, and white sweet clover *(Melilotus albus)*. There were also some native herbs and shrubs present: cocklebur *(Xanthium strumarium),* coyote brush *(Baccharis pilularis* subsp. *consanguinea*), horseweed *(Erigeron canadensis)*, mugwort *(Artemisia douglasiana),* and western ragweed *(Ambrosia psilostachya).*

This vegetation type is not listed in the *Manual of California Vegetation* and does not have a global or state rarity ranking because it is composed almost entirely of non-native weed species that are common in agricultural fields and disturbed areas (CNDDB 2019).

5.1.2 Description of Land Cover Types

Gravel Access Road/Pad: Includes existing gravel access roads and gravel pads adjacent to the roadways.

Paved Access Road: Includes all asphalt-paved roads and the concrete summer drainage crossing on the main access road.

Structures: Includes all existing structures on the property.

Unimproved Dirt Access Road: Includes the existing dirt road that extends around the perimeter of agricultural field where cannabis cultivation is proposed and other dirt roads used by the property owner for ranching and agricultural activities.

5.2 Flora

A total of 63 different species of plants were observed in the project study area during our February 7 and March 26, 2019 surveys (Table 2). Approximately 58 percent of the species present are nonnative and 42 percent are native. The number of nonnative plant species is high, but reflects that most of the study area has been in agricultural production or used to raise livestock for decades.

Table 2. Vegetation Observed in Study Area

Scientific Name	Common Name	Native (N) Introduced (I)	Strata	Status
Acer negundo	box elder	N	Tree	None
Ambrosia psilostachya	western ragweed	N	Herb	None
Amsinckia intermedia	common fiddleneck	N	Herb	None
Anagalis arvensis	scarlet pimpernill	I	Herb	None
Artemisia californica	California sagebrush	N	Shrub	None
Artemisia douglasiana	mugwort	N	Herb	None
Avena fatua	wild oat	I	Herb	None
Baccharis pilularis subsp. *consanguinea*	coyote brush	N	Shrub	None
Baccharis salicifolia subsp. *salicifolia*	mulefat	N	Shrub	None
Brassica nigra	black mustard	I	Herb	None
Brassica rapa	field mustard	I	Herb	None
Bromus diandrus	ripgut brome	I	Herb	None
Bromus hordeaceus	soft chess	I	Herb	None
Bromus madritensis subsp. *rubens*	red brome	I	Herb	None
Capsella bursa-pastoris	shepard's purse	I	Herb	None
Carduus pycnocephalus subsp. *pycnocephalus*	Italian thistle	I	Herb	None

Scientific Name	Common Name	Native (N) Introduced (I)	Strata	Status
Centaurea melitensis	tecalote	I	Herb	None
Chenopodium album	lamb's quarter	I	Herb	None
Conium maculatum	poison hemlock	I	Herb	None
Cynodon dactylon	Bermuda grass	I	Herb	None
Dichelostemma capitatum	blue dicks	N	Herb	None
Dysphania ambrosioide	Mexican tea	I	Herb	None
Erigeron canadensis	horseweed	N	Herb	None
Erodium cicutarium	redstem filaree	I	Herb	None
Eucalyptus globulus	blue gum eucalyptus	I	Tree	None
Festuca myuros	rattail fescue	I	Herb	None
Festuca perennis	Italian rye	I	Herb	None
Fraxinus dipetala	California ash	N	Tree	None
Fumaria officinalis	fumitory	I	Herb	None
Galium aparine	bedstraw	N	Herb	None
Heteromeles arbutifolia	toyon	N	Shrub	None
Hordeum murinum subsp. *leporinum*	hare barley	I	Herb	None
Lamium amplexicaule	henbit	I	Herb	None
Lepidium draba	Heart-podded hoary chess	I	Herb	None
Malva parviflora	cheeseweed	I	Herb	None
Marrubium vulgare	horehound	I	Herb	None
Medicago polymorpha	bur clover	I	Herb	None
Melilotus albus	white sweet clover	I	Herb	None
Nicotiana glauca	tree tobacco	I	Shrub	None
Pinus muricata	Bishop pine	N	Tree	None
Pholistoma auritum var. *auritum*	fiesta flower	N	Herb	None
Platanus racemose	western sycamore	N	Tree	None
Poa annua	annual bluegrass	I	Herb	None
Polygonum aviculare subsp. *depressum*	knotweed	I	Herb	None
Populus fremontii subsp. *fremontii*	Fremont cottonwood	N	Tree	None
Quercus agrifolia var. *agrifolia*	coast live oak	N	Tree	None
Quercus lobate	valley oak	N	Tree	None
Raphnus sativus	radish	I	Herb	None
Rhus integrifolia	lemonade berry	N	Shrub	None
Salix lasiandra var. *lasiandra*	Pacific willow	N	Tree	None
Salix lasiolepis	arroyo willow	N	Tree	None
Salsola tragus	Russian tumbleweed	I	Herb	None
Sambucus nigra	black elderberry	N	Herb	None

Scientific Name	Common Name	Native (N) Introduced (I)	Strata	Status
subsp. *caerulea*				
Schinus molle	Peruvian pepper tree	I	Tree	None
Sonchus asper	prickly sow-thistle	I	Herb	None
Sonchus oleraceus	common sow-thistle	I	Herb	None
Stipa miliacea var. miliacea	smilo grass	I	Herb	None
Toxicodendron diversilobum	poison oak	N	Shrub	None
Ulmus glabra	Scotch elm	I	Tree	None
Urtica dioica subsp. *holosericea*	hoary nettle	N	Herb	None
Urtica urens	dwarf nettle	I	Herb	None
Viola pedunculata	johnny-jump-up	N	Herb	None
Xanthium strumarium	cocklebur	N	Herb	None

5.3 Fauna

We observed 32 wildlife species during our February 7 and March 26, 2019 surveys—most of them birds, as expected. Table 3 contains a list of wildlife species observed, expected, and with a potential to occur in the project area.

Table 3. Wildlife Observed and Expected to Occur in Study Area

Common Name	Scientific Name	Seasonal Status	Site Status
Amphibians and Reptiles			
American bullfrog	*Lithobates catesbeianus*	RB	P
arboreal salamander	*Aneides lugubris*	RB	P
black-bellied slender salamander	*Batrachoseps nigriventris*	RB	E
California legless lizard	*Anniella pulchra*	RB	P
California mountain king snake	*Lampropeltis zonata*	RB	P
California night snake	*Hypsiglena torquata*	RB	P
California red-legged frog	*Rana draytonii*	RB	P
California striped racer	*Masticophis lateralis lateralis*	RB	P
California tiger salamander	*Ambystoma californiense*	RB	P
California tree frog	*Pseudacris cadaverina*	RB	E
coast garter snake	*Thamnophis elegans terrestris*	RB	E
coast horned lizard	*Phrynosoma coronatum*	RB	P
coast range newt	*Taricha torosa*	RB	P
common king snake	*Lampropeltis getula californiae*	RB	E

Common Name	Scientific Name	Seasonal Status	Site Status
coral-bellied ring-necked snake	*Diadophis punctatus modestus*	RB	P
ensatina	*Ensatina eschscholtzii*	RB	P
gopher snake	*Pituophis catenifer*	RB	E
Pacific tree frog	*Pseudacris regilla*	RB	P
southern alligator lizard	*Elgaria multicarinata*	RB	E
southern Pacific rattlesnake	*Crotalus oreganus helleri*	RB	P
western fence lizard	*Sceloporus occidentalis*	RB	E
western patchnose snake	*Salvadora hexalepis*	RB	P
western pond turtle	*Emys marmorata*	RB	P
western skink	*Eumeces skiltonianus*	RB	P
western toad	*Bufo boreas*	RB	E
western yellow-bellied racer	*Coluber mormon*	RB	P
Birds			
acorn woodpecker	*Melanerpes formicivorus*	RB	O
Allen's hummingbird	*Selasphorus sasin*	M	E
American coot	*Fulica americana*	RB	P
American crow	*Corvus brachyrhynchos*	RB	O
American goldfinch	*Carduelis tristis*	WV	O
American kestrel	*Falco sparverius*	RB	O
American robin	*Turdus migratorius*	WV	E
Anna's hummingbird	*Calypte anna*	RB	O
ash-throated flycatcher	*Myiarchus cinerascens*	SB	E
band-tailed pigeon	*Columda fasciata*	RB	E
barn owl	*Tyto alba*	RB	E
barn swallow	*Hirundo rustica*	SB	E
Bewick's wren	*Thryomanes bewickii*	RB	O
black phoebe	*Sayornis nigricans*	RB	O
black-chinned hummingbird	*Archilochus alexandri*	M	P
black-headed grosbeak	*Pheucticus melanocephalus*	SB	P
black-shouldered kite	*Elanus axillaris*	RB	P
blue-gray gnatcatcher	*Polioptila caerulea*	SB	P
Brewer's blackbird	*Euphagus cyanocephalus*	RB	E
brown-headed cowbird	*Molothrus ater*	SB	E
Bullock's oriole	*Icterus bullockii*	SB	E
bushtit	*Psaltriparus minimus*	RB	E
California scrub-jay	*Aphelocoma californica*	RB	O
California quail	*Callipepla californica*	RB	O
California thrasher	*Toxostoma redivivum*	RB	P
California towhee	*Pipilo crissalis*	RB	O
canyon wren	*Catherpes mexicanus*	RB	P
Cassin's kingbird	*Tyrannus vociferans*	RB	E
cedar waxwing	*Bombycilla cedrorum*	WV	E
cliff swallow	*Hirundo pyrrhonota*	SB	E
common yellowthroat	*Geothlypis trichas*	RB	E
Cooper's hawk	*Accipiter cooperii*	RB	E

Common Name	Scientific Name	Seasonal Status	Site Status
Costa's hummingbird	*Calypte costae*	M	P
dark-eyed junco	*Junco hyemalis*	RB	E
downy woodpecker	*Picoides pubescens*	RB	E
Eurasian collared dove	*Streptopelia decaocto*	IB	O
European starling	*Sturnus vulgaris*	RB	O
ferruginous hawk	*Buteo regalis*	WV	P
fox sparrow	*Passerella iliacea*	WV	P
golden eagle	*Aquila chrysaetos*	RB	P
great blue heron	*Ardea herodias*	RB	O
great horned owl	*Bubo virginianus*	RB	E
greater roadrunner	*Geococcyx californianus*	RB	P
hairy woodpecker	*Picoides villosus*	RB	E
hermit thrush	*Catharus guttatus*	WV	P
hermit warbler	*Dendroica occidentalis*	M	E
hooded oriole	*Icterus cucullatus*	SB	E
house finch	*Carpodacus mexicanus*	RB	O
house sparrow	*Passer domesticus*	I	E
house wren	*Troglodytes aedon*	RB	E
Hutton's vireo	*Vireo huttoni*	SB	E
lark sparrow	*Chondestes grammacus*	SB	P
Lawrence's goldfinch	*Carduelis lawrencei*	M	P
lazuli bunting	*Passerina amoena*	SB	P
least Bell's vireo	Vireo bellii pusillus	RB	P
lesser goldfinch	*Carduelis psaltria*	RB	E
Lincoln's sparrow	*Melospiza lincolnii*	WV	P
merlin	*Falco columbarius*	WV	P
mourning dove	*Zenaida macroura*	SB	O
northern flicker	*Colaptes auratus*	RB	E
northern harrier	*Circus cyaneus*	WV	P
northern mockingbird	*Mimus polyglottos*	RB	E
northern oriole	*Icterus bullockii*	M	P
Nuttall's woodpecker	*Picoides nuttallii*	RB	O
oak titmouse	*Bacolophus ridgwayi*	RB	E
Pacific-slope flycatcher	*Empidonax difficilis*	SB	E
phainopepla	*Phainopepla nitens*	M	P
purple finch	*Carpodacus purpurius*	RB	E
red-breasted nuthatch	*Sitta canadensis*	WV	P
red-breasted sapsucker	*Sphyrapicus ruber*	WV	P
red-shouldered hawk	*Buteo lineatus*	RB	E
red-tailed hawk	*Buteo jamaicensis*	RB	O
red-winged blackbird	*Agelaius phoeniceus*	RB	O
rock pigeon	*Columba livia*	RB	E
ruby-crowned kinglet	*Regulus calendula*	WV	E
rufous hummingbird	*Saelasphorus rufus*	M	E
savanna sparrow	*Passerculus sandwichensis*	SB	E
Say's phoebe	*Sayornis saya*	RB	O

Common Name	Scientific Name	Seasonal Status	Site Status
sharp-shinned hawk	*Accipiter striatus*	WV	P
song sparrow	*Melospiza melodia*	RB	O
southwestern willow flycatcher	*Empidonax traillii extimus*	RB	P
spotted towhee	*Pipilo maculatus*	RB	O
Swainson's thrush	*Catharus ustulatus*	M	P
turkey vulture	*Cathartes aura*	V	O
western bluebird	*Sialia mexicana*	RB	E
western kingbird	*Tyrannus verticalis*	SB	E
western meadowlark	*Sturnella neglecta*	RB	E
western screech owl	*Otus kennicottii*	RB	P
western scrub jay	*Aphelocoma californica*	RB	O
western tanager	*Piranga ludoviciana*	M	E
western wood pewee	*Contopus sordidulus*	M	P
white-breasted nuthatch	*Sitta carolinensis*	RB	P
white-crowned sparrow	*Zonotrichia leucophrys*	WV	E
white-tailed kite	*Elanus leucurus*	RB	E
Wilson's warbler	*Wilsonia pusilla*	M	P
wrentit	*Chamaea fasciata*	RB	O
yellow-billed magpie	*Pica nuttalli*	RB	O
yellow-breasted chat	Icteria virens	RB	P
yellow-rumped warbler	*Dendroica coronata*	WV	O
Mammals			
American badger	*Taxidea taxus*	RB	P
beaver	*Castor canadensis*	RB	P
big brown bat	*Eptesicus fuscus*	SB	E
big-eared woodrat	*Neotoma macrotis*	RB	O
black bear	Ursus americanus	RB	P
black-tailed jackrabbit	*Lepus californicus*	RB	O
bobcat	*Lynx rufus*	RB	E
Botta's pocket gopher	*Thomomys bottae*	RB	E
broad-footed mole	*Scapanus latimanus*	RB	E
brush mouse	*Peromyscus boylii*	RB	E
brush rabbit	*Sylvilagus bachmani*	RB	O
California ground squirrel	*Spermophilus beecheyi*	RB	O
California mouse	*Peromyscus californicus*	RB	E
California myotis	*Myotis californicus*	SB	E
California pocket mouse	*Chaetodipus californicus*	RB	E
California vole	*Microtus californicus*	RB	E
coyote	*Canis latrans*	V	O
deer mouse	*Peromyscus maniculatus*	RB	E
gray fox	*Urocyon cinereoargenteus*	RB	E
hoary bat	*Lasiurus cinereus cinereus*	RB	P
house mouse	*Mus musculus*	RB	E
long-eared myotis	*Myotis evotis evotis*	RB	P
Merriam's chipmunk	*Eutamias merriami*	RB	P

Common Name	Scientific Name	Seasonal Status	Site Status
mountain lion	*Felis concolor*	RB	E
mule deer	*Odocoileus hemionus*	RB	E
ornate shrew	*Sorex ornatus*	RB	E
pallid bat	*Antrozous pallidus*	SB	P
raccoon	*Procyon lotor*	RB	O
red fox	*Vulpes vulpes*	RB	P
ringtail	*Bassariscus astutus*	RB	E
striped skunk	*Mephitis mephitis*	V	E
Townsend's big-eared bat	*Plecotus townsendii*	RB	P
Virginia opossum	*Didelphis virginiana*	I	E
western grey squirrel	*Sciurus griseus*	RB	E
western harvest mouse	*Reithrodontomys megalotis*	RB	E

Seasonal Status: RB = Resident Breeder; SB = Summer Breeder; M = Migrant; V = Visitor; WV = Winter Visitor; I = Introduced Species
Site Status: E = Expected to occur at the project site; O = Observed on or in the immediate vicinity of the project site; P = Potential to occur

5.3.1 Migration Corridors and Wildlife Movement

The project site is in a rural area of Santa Barbara County that has scattered residential development (generally 1 single-family residence per 100 acres), but is primarily used for agriculture (row crops, vineyards, and livestock grazing). The only potential barriers to wildlife movement are fences separating pastures and around cultivated fields and vertical banks along portions of the Santa Ynez River. Most of the fences in the study area are pipe and rail or barbwire and do not interfere or prevent wildlife movement. The western edge of the 2018 cannabis cultivation site is fenced with 8-ft.-tall chain-link with privacy screening that most terrestrial mammals are unable to climb. However, they can easily go under or around it.

During our surveys, we did not see any evidence (game trails, scat accumulations, or tracks) of a wildlife migration or movement corridor. The only trails we observed were created and used by livestock.

5.4 Special-Status Species

Review of the March 2019 CNDDB revealed some previously recorded sensitive species observations within the project area or nearby. As part of this biological assessment, we performed a habitat suitability analysis for all recent and historic sensitive wildlife and plant species observations within 3 mi. of the project site (Figure 6).

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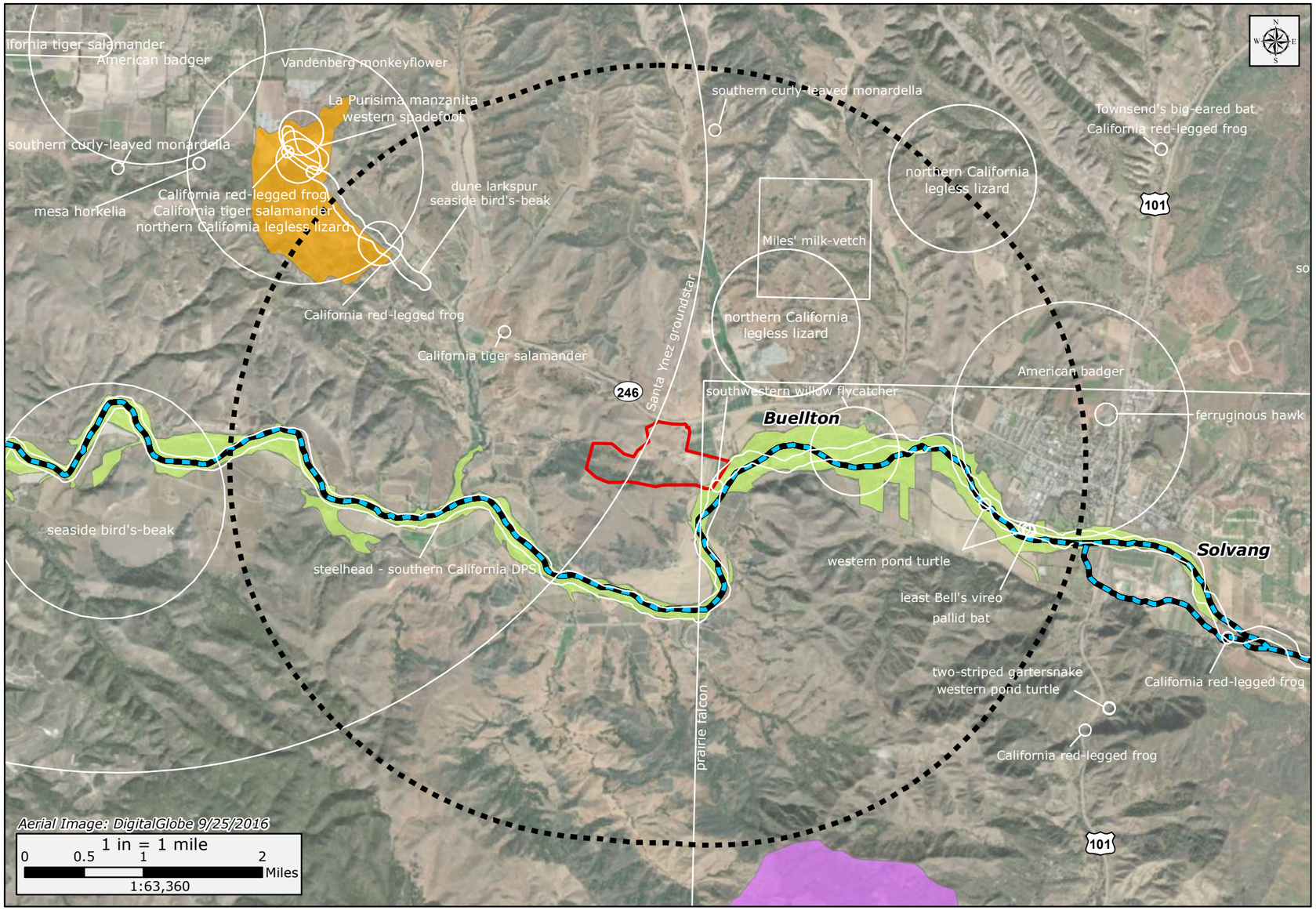

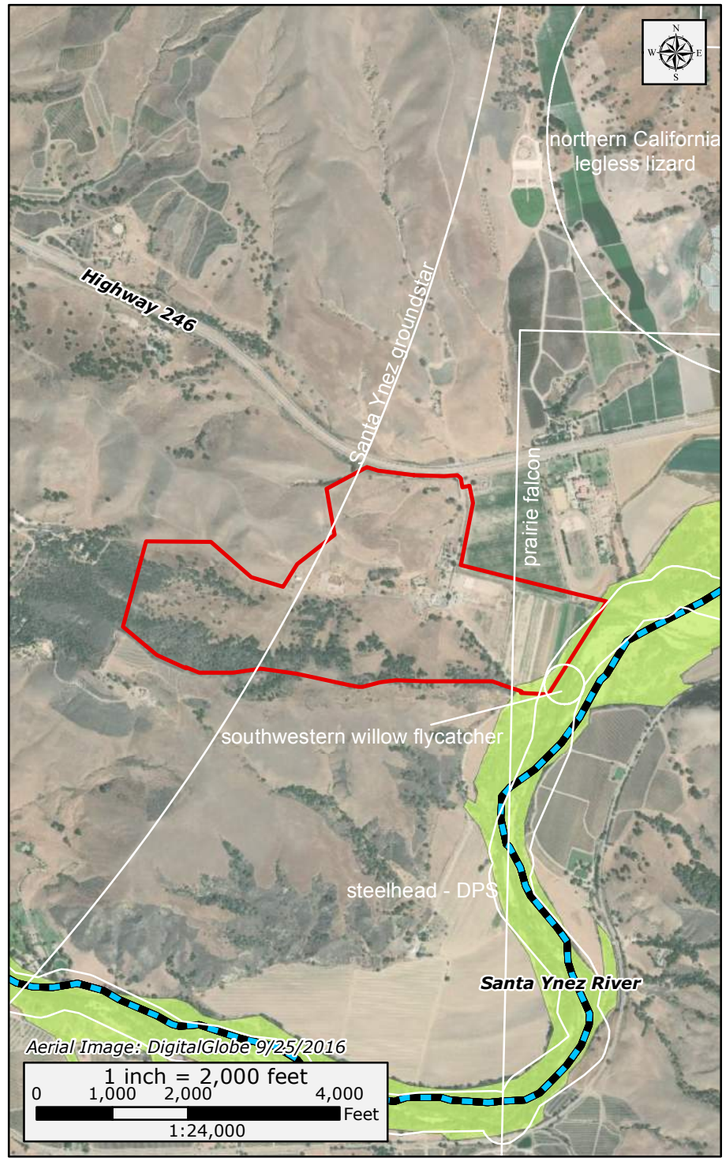

California Natural Diversity Database (CDFW March 2019 CNDDB)

- CNDDB Occurence Records

Map Items

- Property Boundary (APN: 099-230-034)
- 3-mile Property Boundary Buffer

USFWS Federal Critical Habitat

- California Red-Legged Frog
- California Tiger Salamander
- Southern Steelhead
- Southwestern Willow Flycatcher

Figure 6. Sensitive Species and Designated Critical Habitat in Project Vicinity

BIOLOGICAL ASSESSMENT
COMMERCIAL CANNABIS CULTIVATION PROJECT
2200 W. Highway 246 (APN: 099-230-034)
Buellton, California

Watershed Environmental, Inc. 4/10/2019

Sensitive Species and Habitats

Sensitive species considered in this assessment are those protected by the federal Endangered Species Act and/or the California Endangered Species Act and those species meeting the California Environmental Quality Act definition of "rare." This includes all endangered or threatened species, candidates for listing, CDFW Species of Special Concern, and CDFW fully protected species listed by the federal and state government and plants listed by the California Native Plant Society (CNPS) as List 1 or List 2, as well as plants listed by the Santa Barbara Botanic Garden (2007) as locally sensitive. Sensitive habitats include all federally designated critical habitat for threatened and endangered wildlife species, all County of Santa Barbara-designated environmentally sensitive habitat, and habitats listed as threatened (i.e., ranked S3.2 or higher) by the California Department of Fish and Wildlife (CDFW 2018).

There is critical habitat for federally endangered southern steelhead (*Oncorhynchus mykiss*) and federally and California endangered southwestern willow flycatcher (*Empidonax traillii extimus*) in Santa Ynez River, directly adjacent to the eastern boundary of the property. Critical habitat for federally endangered California tiger salamander (*Ambystoma californiense*) also exists nearby, approximately 2.3 mi. northwest of the property. During our February 7, and March 26, 2019 biological field surveys, we found no federally endangered species or sensitive plants or wildlife species. Potential for these species to occur on the property or within the project site is discussed in Table 4.

We surveyed for bird nests in the trees and shrubs on the property using a pair of binoculars, and discovered 2 active red-tailed hawk nests: one in a western sycamore tree growing adjacent to (within 20 ft. of) the existing access road near the southwest corner of the proposed 16.53-acre cultivation site and the other in a eucalyptus tree located approximately 200 ft. north of the proposed 1.79-acre future cultivation area (refer to Figure 5 for nest locations). Our surveys occurred at the beginning of the 2019 bird nesting season, so the likelihood that new nests will be constructed on the property in the future is high. It is a crime to destroy the active nests of migratory bird species protected by the Federal Migratory Bird Treaty Act (Federal Register 2013) or active raptor nests protected by Section 3503.5 of the CDFW Code (2014). At this time, the nests of 1,007 bird species nationally are protected by the Federal Migratory Bird Treaty Act and approximately 32 raptor species state-wide are protected by CDFW Code.

There are a number of sensitive species occurrence records mapped by the CDFG's California Natural Diversity Database (2019) as occurring in the vicinity of the project site (refer to Table 4). Refer to Figure 6 for a map depicting the location of sensitive species occurrence records from the March 2019 California Natural Diversity Database.

Table 4. Sensitive Species Potentially Occurring in the Project Area and Evaluation of Occurrence Potential

Common Name	Scientific Name	Special Status	Occurrence Potential	Notes
Fish				
southern steelhead ESU	*Oncorhynchus mykiss irideus*	FE	None	The Santa Ynez River, located along the eastern edge of the property and crosses into the property boundaries, is federally designated critical habitat for southern steelhead. These endangered fish use the river as a migration corridor from the Pacific Ocean to spawning grounds in Hilton Creek, a tributary to the Santa Ynez River below Lake Cachuma. Occurrence potential within the river is high for steelhead using the river as a movement corridor. There are no creeks or drainages within the project area that they could use. Therefore, we have concluded that there is no potential for southern California steelhead to occur in the project area, although stormwater runoff (if untreated) from the project could affect the species' protected habitat (*Federal Register* 2005).
Birds				
least Bell's vireo	*Vireo bellii pusillus*	FE CE	High	Least Bell's vireo is a small (4.5-5.0-in-long) olive-gray, migratory songbird that is a subspecies of Bell's vireo. Least Bell's vireo is the western-most subspecies, breeding entirely in southwestern California and northern Baja California and in winters in Mexico. This bird arrives in its breeding habitat in mid-March to early April and leaves in late August-September to winter in southern Baja California, Mexico. The least Bell's vireo is an obligate riparian breeder that nests in dense willow-dominated riparian habitat with lush understory vegetation near water (*Federal Register* 1986). There is 1 CNDDB occurrence record for this bird within 3 mi. of the property, located approximately 2.5 mi. east along the Santa Ynez River. The occurrence record, dated 2016, identified 1 adult in a cottonwood/willow riparian scrubland. This bird was not seen during our February and March 2019 surveys, but is expected to occur on the property and in the project area.

Common Name	Scientific Name	Special Status	Occurrence Potential	Notes
prairie falcon	*Falco mexicanus*	WL	Low	Prairie falcons were once a common resident of California (Grinnell and Miller 1944). Now they're considered uncommon throughout the state except in the deserts, where numbers are still high (Remsen 1978). Prairie falcons are considered rare transients and winter visitors to coastal southern California (late August-mid-May). While foraging, they frequent open country such as grasslands, agricultural areas, sloughs, beaches, and river mouths. Roosting and nesting sites are typically located on cliff faces in rocky, inaccessible mountainous regions, which can be dozens of miles from foraging habitat. There is 1 CNDDB occurrence record for prairie falcon: a vague, inaccurate entry that encompasses the eastern portion of the property (refer to Figure 6). This species was not seen during the February and March 2019 surveys, and is not likely to occur in the project site.
southwestern willow flycatcher	*Empidonax traillii extimus*	FE CE	High	Southwestern willow flycatcher is found in dense riparian habitats along rivers, streams, and wetlands. Known breeding locations for this bird are located along the Santa Ynez River (Lehman 1994). There is 1 CNDDB occurrence record within the southeastern corner of the property, dated 1995 and identifying 2 adults breeding. It is presumed that the bird occurs in the arroyo willow and cottonwood riparian scrubland that exists along the eastern boundary of the property along the Santa Ynez River. There is another CNDDB occurrence record 0.7 mi. east of the property along the Santa Ynez River, dated 1989 and identifying 4 adults breeding. We did not see this bird during our February and March 2019 biological surveys, but since suitable habitat exists adjacent to and within the project area, there is a high potential for this bird to occur or breed there.

Common Name	Scientific Name	Special Status	Occurrence Potential	Notes
Mammals				
American badger	*Taxidea taxus*	CSC	None	There is 1 CNDDB occurrence record for American badger from 1989 approximately 1.9 mi. east of the property, just northwest of Buellton (refer to Figure 6). This occurrence record is from roadkill. Badgers are solitary (except when mothers are rearing young), nocturnal carnivores that feed on ground squirrels and other small burrowing mammals. During daylight hours badgers occupy the burrows they have dug out to obtain their prey. They forage over large territories, only staying in a particular location while prey sources are available. After they have consumed all the prey in one area they move on. This species has a low tolerance for human presence and was not seen in the project area during our February and March 2019 surveys. Given the highly mobile habits of this species and high levels of human activity on the property (i.e., farming), we have concluded that there is no potential for this species to occur in the project area.
pallid bat	*Antrozous pallidus*	CSC	Low	There is one CNDDB occurrence record from 2015 for a pallid bat that was discovered during passive acoustic monitoring in willow riparian scrubland along the Santa Ynez River approximately 2.5 mi. east of the property. Pallid bats are presumed to use the riparian scrubland vegetation found along the Santa Ynez River for foraging. They prey on crickets, scorpions, centipedes, beetles, grasshoppers, cicadas, and potato bugs, which they capture on the ground surface. There are no mines or rock crevices in the project area that the bats could use to roost, so we have concluded that pallid bats may forage in the project area, but there is no potential for them to roost.

Common Name	Scientific Name	Special Status	Occurrence Potential	Notes
Reptiles and Amphibians				
California red-legged frog	*Rana draytonii*	FT	Low	California red-legged frogs breed and reproduce in ponds and in slow-moving, pond-like parts of streams, marshes, and lagoons. Adult frogs are almost always associated with permanent bodies of water with emergent freshwater marsh vegetation or riparian vegetation, but are known to forage in upland vegetation a distance of 1 mi. from their aquatic breeding habitat (USFWS 2005). There is 1 CNDDB occurrence record within 3 mi. of the project site, dated 1984, 2.5 mi. northwest along Highway 246 (refer to Figure 6). There are no ponds or slow-moving, pond-like parts of streams located within the project area, but given the project's proximity to aquatic habitat in the Santa Ynez River, we have concluded that there is a low potential for red-legged frogs to occasionally forage for insects there.
California tiger salamander	*Ambystoma californiense*	FE CT	None	There is 1 CNDDB occurrence record for California tiger salamander within 3 mi. of the property, dated 2008 and located 1.15 mi. northwest along Highway 246 (refer to Figure 6). Twelve larvae were documented in this record, occurring in a pond off Highway 246. Refer to Section 4.4 for USFWS CTS Critical Habitat and breeding pond analysis. There is no potential for this salamander to occur in the proposed cannabis cultivation areas, because these areas have been repeatedly tilled for many years and there are almost no small mammal burrows for them to live in. The project has no potential to cause take of this species and no potential to directly or indirectly harm pond habitat that this species requires for breeding.
northern California legless lizard	*Anniella pulchra*	CSC	Low	Preferred habitat is sandy soil and/or areas with thick accumulations of leaf litter. There are 2 CNDDB occurrence records located within 3 mi. of the property, the nearest of which is located 0.55 mi. northeast (refer to Figure 6). Given the lack of suitable habitat, there is a low potential for this species to occur.

Common Name	Scientific Name	Special Status	Occurrence Potential	Notes
western pond turtle	*Emys marmorata*	CSC	Low	This species is typically found in aquatic habitat (ponds, lakes, streams), but is also known to move into adjacent upland areas to nest or estivate (enter summer dormancy). There are 2 CNDDB occurrence records for this species, the nearest of which occurs 2.2 mi. downstream (east) in the Santa Ynez River (refer to Figure 6). Because the river passes through the property, there is a low potential for this species to occur in the project site.
Plants				
dune larkspur	*Delphinium parryi* ssp. *blochmaniae*	List 1B SBBG Rare	Low	This small perennial herb in the ranunculus family (*Ranunculaceae*) is endemic to California, with a distribution limited to coastal areas in Santa Barbara and San Luis Obispo counties. This plant is typically found in locations with sandy soils in coastal strand and chaparral vegetation. There is 1 CNDDB occurrence record within 3 mi. of the property, dated 1929 and located 1.9 mi. northwest along Highway 246 (refer to Figure 6). Dune larkspur blooms from April to May and was not seen during our February and March 2019 surveys. Given the lack of suitable habitat on the property, we have concluded that this plant has little to no potential to occur in the project area.
Miles' milk-vetch	*Astragalus didymocarpus* subsp. *milesianus*	List 1B SBBG Rare	Low	This annual herb blooms in the spring and is usually found in coastal scrub, oak woodland, and grassland habitat with clay soil. The property has suitable habitat in the hills adjacent to the cultivation site and processing area. There is 1 CNDDB occurrence record within 3 mi. of the property, dated 1935 and located 1.25 mi. northeast (refer to Figure 6). This plant was not observed during performance of our February and March 2019 surveys and has little to no potential to occur within the project area.
Santa Ynez groundstar	*Ancistrocarphus keilii*	List 1B	None	Santa Ynez groundstar is a small, extremely rare, endemic annual herb only known to occur in 3 locations in Santa Barbara County, each of them along the Santa Ynez River drainage in sandy soils in chaparral habitat adjacent to oak woodlands. The bloom period for this plant is March to April. There is 1 CNDDB occurrence record for it within 3 mi. of the property, from 1929 (refer to Figure 6). The location of this occurrence record is deliberately vague to protect the species, but it is along the Santa Ynez River drainage between Lompoc and Buellton. No chaparral vegetation or Santa Ynez groundstar was found in the project area during the February and March 2019 surveys. Based on the vegetation types observed in the project area and the historic use of the

Common Name	Scientific Name	Special Status	Occurrence Potential	Notes
				cultivation site for agriculture, we have concluded that this plant has no potential to occur in the project area.
seaside bird's-beak	*Cordylanthus rigidus* ssp. *littoralis*	SE	None	Seaside bird's-beak is an endemic, hemiparasitic, annual herb that blooms from April to October. This plant is typically found in saltwater marsh habitat and coastal dune scrub vegetation. There is 1 CNDDB occurrence record for this plant within 3 mi. of the property, dated 1956 and located 1.9 mi. northwest along Highway 246 (refer to Figure 6). No salt marsh or dune scrub vegetation was found in the project area during our February and March 2019 surveys, so we have concluded that seaside bird's-beak has no potential to occur in the project area.
southern curly-leaved monardella	*Monardella sinuata* ssp. *sinuata*	List 1B	Low	Southern curly-leaved monardella is a fragrant annual herb in the mint family that grows in sandy soils in coastal strand, dune, sagebrush scrub, coastal chaparral, and oak woodland habitats. This plant blooms from April to September. There is 1 CNDDB occurrence record within 3 mi. of the property, dated 2011 and located approximately 2.4 mi. north (refer to Figure 6). This plant was not found during our February and March 2019 surveys, and given the historic use of the cultivation site for agriculture, we have concluded that it has little to no potential to occur in the project area.
Vandenberg monkeyflower	*Diplacus vandenbergensis*	FE	None	Vandenberg monkeyflower is a narrow-leaved, endemic, small annual herb only known to occur in Santa Barbara County on sandy soils in the gaps between chaparral shrubs. The bloom period for this plant is April to June. There is 1 CNDDB occurrence record within 3 mi. of the property, dated 1931 and located approximately 2.4 mi northwest along Highway 246. No chaparral vegetation was found in the project area during performance of the February and March 2019 surveys. Based on the vegetation types we observed and the historic use of the cultivation site for agriculture, we have concluded that the plant has no potential to occur in the project area.

Status Codes

FT = Federally listed as threatened
FE = Federally listed as endangered
CSC = CDFW California Special-Concern Species
WL = CDFW Watch List
CE = California endangered
ET = California threatened
CFP = CDFW fully protected species
LC = IUCN Least Concern
SBBG = Listed by Santa Barbara Botanic Garden as locally sensitive

6.0 POTENTIAL EFFECTS TO BIOLOGICAL RESOURCES

Before the County can issue a land use permit to Castlerock Family Farms II, LLC to grow commercial cannabis on the 2200 Highway 246 property, the County (as the lead agency) is required to perform an environmental review of the project in accordance with CEQA requirements, provisions, and definitions. The County's environmental review will consider whether the Castlerock Family Farms II LCC cannabis cultivation project has to potential to cause any new adverse impacts to biological resources that were not previously identified and addressed in the 2017 Final Environmental Impact Report (EIR) for the Cannabis Land Use Ordinance and Licensing Program SCH No. 2017071016 (SBCO 2017).

This section of the report also contains an assessment of the potential for the project to directly or indirectly impact special-status species and habitats. Special-status species are: 1) protected by the California or federal Endangered Species Acts (i.e., **threatened, endangered, candidate**); 2) plant species listed as "**rare**" by the Native Plant Protection Act; 3) California Native Plant Society "**List 1**" and "**List 2**" plants; and 4) wildlife species listed by the state as **Species of Special Concern** or **Fully Protected**. Special-status habitats are federally designated **critical habitat**, state-listed **sensitive natural communities**, and County-designated **environmentally sensitive habitat**. The impact assessment evaluating impacts to special-status species and habitats is intended for the CDFW and SWRCB, which will be reviewing the project for compliance with federal and state laws protecting special-status species, habitats, and water quality as part of the regulatory permit process to grow commercial cannabis.

6.1 CEQA Definitions

An environmental effect is defined as **significant** if it *"causes a substantial or potentially substantial adverse change in any of the existing physical conditions within the area affected by the project"* (CEQA Guidelines 15382). The CEQA Guidelines Section 150565 requires **mandatory finding of significance** if a *"project has the potential to…reduce the number or restrict the range of an endangered, rare, or threatened species."*

CEQA Title 14 Section 15380 defines the terms "endangered," "rare," or "threatened" as follows:

> **Endangered**: when its survival and reproduction in the wild are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, overexploitation, competition, disease, or other factors.
>
> **Rare**:
>
> a) Although not presently threatened with extinction, the species exists in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment worsens.
>
> b) The species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and may be considered "**threatened**" as that term is used in the federal Endangered Species Act.

Species are presumed to be endangered, rare, or threatened if listed by the CDFW (Sections 670.2 or 670.5 Title 14, *California Code of Regulations*) or the USFWS (Title 50, *Code of Federal Regulations* Sections 17.11 or 17.12). A species not listed by the CDFW or USFWS may be considered in the CEQA review process if it can be shown to meet the above-listed criteria.

6.2 Biological Resource Impacts Identified in the SBCO Cannabis Land Use Ordinance & Licensing Program FEIR

The 2017 Final Environmental Impact Report (FEIR) for the Cannabis Land Use Ordinance and Licensing Program SCH No. 2017071016 determined that:

> *"Existing development standards and standard permit processes and conditions, as well as development standards and criteria proposed as part of the Project [SBCO Cannabis Land Use Ordinance & Licensing Program] …would serve to mitigate environmental impacts …. Where impacts are potentially significant, mitigation measures are proposed and residual impacts are determined [to be less than significant]. It is anticipated that the majority of the future cannabis activities would operate within existing structures (e.g., greenhouses) and on a relatively small amount of agricultural land which would be converted from existing crops. This would limit the potential for direct impacts to biological resources within the County; however, some potential for impacts remains due to the broad range of sensitive natural communities as well as special-status plant and wildlife species within the County."*

A summary of the FEIR's biological impact conclusions, required mitigation measures, and residual significance is presented in Table 5.

Table 5. Summary of FEIR Biological Resource Impacts, Mitigation Measures, and Residual Significance

Impact	Mitigation Measures	Residual Significance
Impact BIO-1. Cannabis activities could have adverse effects on unique, rare, threatened, or endangered plant or wildlife species.	MM BIO-1a. Tree Protection Plan. MM BIO-1b. Habitat Protection Plan. MM HWR-1a. Cannabis Waste Discharge Requirements Draft General Order (see Section 3.8, Hydrology and Water Resources)	Less than significant with mitigation (Class II)
Impact BIO-2. Cannabis activities could have adverse effects on habitats or sensitive natural communities.	MM BIO-1a. Tree Protection Plan. MM BIO-1b. Habitat Protection Plan.	Less than significant with mitigation (Class II)

Impact	Mitigation Measures	Residual Significance
Impact BIO-3. Cannabis activities could have adverse effects on the movement or patterns of any native resident or migratory species.	MM BIO-1b. Habitat Protection Plan. MM BIO-3. Wildlife Movement Plan.	Less than significant with mitigation (Class II)
Impact BIO-4. Cannabis activities may conflict with adopted local plans, policies, or ordinances oriented towards the protection and conservation of biological resources.	MM BIO-1a. Tree Protection Plan. MM BIO-1b. Habitat Protection Plan.	Less than significant with mitigation (Class II)
Cumulative Impacts	Mitigations above are required.	Less than significant with mitigation (Class II)

An expanded discussion relative to Impacts BIO-1, BIO-2, BIO-3, and BIO-4 relative to on-site biological resources is provided below. The EIR-required mitigation measures have been integrated into the County's Land Use Development Code (LUDC). The CEQA effects determinations in this report are intended for the County of Santa Barbara, which is the lead agency for CEQA environmental review purposes.

The following sub-sections provide an expanded discussion of potential short-term, long-term, temporary, and permanent effects to biological resources (including special-status species and habitats) consistent with the California Environmental Quality Act (CEQA) guidelines and the County EIR as well as the applicability of EIR-required mitigation measures. Special-status species are: 1) protected by the California or federal Endangered Species Acts (i.e., **threatened, endangered, candidate**); 2) plant species listed as "**rare**" by the Native Plant Protection Act; 3) California Native Plant Society "**List 1**" and "**List 2**" plants; and 4) wildlife species listed by the state as **Species of Special Concern** or **Fully Protected**. Special-status habitats are federally designated **critical habitat**, state-listed **sensitive natural communities**, and County-designated **environmentally sensitive habitat**. The biological effects discussion to special-status species and habitats is intended for the CDFW and SWRCB, which will be reviewing the project for compliance with federal and state laws protecting special-status species, habitats, and water quality as part of the regulatory permit process to grow commercial cannabis.

6.3 SBCO Cannabis Project Zoning Requirements

Under section 35.42.075 of the LUDC, all cannabis projects are subject to the following general zoning standards:

Fencing and Security Plan. The applicant for a permit to allow outdoor, mixed-light, or nursery cannabis cultivation development shall prepare and submit to the Department for review and approval a Fencing and Security Plan demonstrating ample security and screening of the commercial cannabis activity. The standards of this Section shall be in addition to Section 35.30.070 (Fences and Walls). Where there are conflicts between the standards in this Section and any other applicable standards of this Article, the standards in this Section shall control. The Plan shall be

implemented prior to the issuance of final building and/or grading inspection and/or throughout operation of the project, as applicable. The Fencing and Security Plan shall include the following:

a. The Fencing Plan shall depict typical fencing details, including location, fence type, and height.

b. All fencing and/or walls shall be made out of material that blends into the surrounding terrain and shall minimize any visual impacts.

d. Where fencing would separate an agricultural area from undeveloped areas with native vegetation and/or Habitat Management Plan easement area, said fencing shall use material or devices that are not injurious to wildlife and enable wildlife passage.

f. Prohibited fencing materials include razor wire, tarps, dust guard fencing, privacy netting, or woven or non-woven polyethylene plastic.

g. The fence shall include lockable gate(s) that are locked at all times, except for during times of active ingress/egress.

h. No visual markers indicating that cannabis is cultivated on the site shall be visible from offsite.

Landscape Plan and Screening Plan. The applicant for a permit to allow outdoor, indoor, mixed-light, or nursery cannabis cultivation development shall submit a Landscape Plan and Screening Plan to the Department for review and approval. The requirements in this Section shall also apply to the cannabis cultivation as part of a microbusiness. All cultivation shall be screened to the maximum extent feasible to avoid being seen from public places, including, but not limited to, public rights of way, shall comply with Section [LUDC] 35.34 (Landscaping Standards), and the standards listed below. The Landscape Plan and Screening Plan shall be implemented prior to the issuance of final building and/or grading inspection and/or throughout operation of the project as applicable. The applicant shall demonstrate to the Department that all aspects of the Landscape Plan and Screening Plan comply with the following requirements:

a. Said Plan(s) shall include landscaping which, within five years, will reasonably screen the view of any new structure, including greenhouses and agricultural accessory structure, and on-site parking areas from the nearest public road(s).

b. All landscaping shall be installed prior to initiating the cultivation activities that are subject to the permit for the cultivation activities.

c. Prior to the issuance of any permits, a performance security, in an amount determined by a landscape architect and approved by the Department, to insure installation and maintenance for two years, shall be filed with the County. Said performance security shall be released upon a written statement from the Department that the landscaping, in accordance with the approved Landscape Plan and Screening Plan, has been installed and maintained for two years.

d. If, due to site-specific conditions (e.g., slopes), an applicant believes that screening cannot be fully achieved, the applicant shall submit a Landscape Plan and Screening Plan showing what portion can be screened and written documentation, which sets forth the reasons other portions cannot be screened.

Lighting Plan. The applicant for any commercial cannabis activity involving artificial lighting shall submit a Lighting Plan to the Department for review and approval. The

standards of this Section shall be in addition to [LUDC] Section 35.30.120 (Outdoor Lighting), and all other applicable Sections. Where there are conflicts between the standards in this Section and any other applicable standards of this Article, the standards that are most restrictive shall control. The Lighting Plan shall be implemented prior to the issuance of final building inspection and/or throughout operation of the project, as applicable. The Lighting Plan shall include the following:

a. Plans that identify all lighting on the lot demonstrating that all lighting will comply with the standards set forth in this Section and all applicable Community Plans.

b. Lighting necessary for security shall consist solely of motion-sensor lights and avoid adverse impacts on properties surrounding the lot on which the cannabis activity is located.

c. Any outdoor lighting used for the illumination of parking areas and/or loading areas, or for security, shall be fully shielded and directed downward.

d. Lighting is prohibited in hoop structures.

e. If, due to site-specific conditions, an applicant believes that a Lighting Plan is not necessary, the applicant shall submit written documentation with the application for the cannabis permit, which sets forth the reasons. The Department shall review the written documentation and determine whether a Lighting Plan must be submitted with the application for the cannabis activity.

The following additional County of Santa Barbara LUDC standards are mandated to protect special-status species:

Tree Protection, Habitat Protection, and Wildlife Movement Plans. The applicant for any cannabis permit for a site that would involve the removal of native vegetation or other vegetation in an area that has been identified as having a medium to high potential of being occupied by a special-status wildlife species, nesting bird, or a Federal or State-listed special-status plant species, shall prepare and submit to the County Planning Department for review and approval a **Tree Protection, Habitat Protection**, and/or **Wildlife Movement Plan** in accordance with LUDC Cannabis Activities Additional Standards (refer to Attachment 2). The Tree Protection, Habitat Protection, and Wildlife Movement Plan shall be implemented prior to the issuance of final building and/or grading inspection and/or throughout operation of the project as applicable.

Cannabis Waste Discharge Requirements General Order. The applicant shall demonstrate compliance with the State Water Resources Control Board's comprehensive Cannabis Cultivation Policy which includes principles and guidelines for cannabis cultivation, including regulations on the use of pesticides, rodenticides, herbicides, insecticides, fungicides, disinfectants, and fertilizers, within the State.

Water efficiency for commercial cannabis activities. To the maximum extent feasible, and to the Director's satisfaction, water-conserving features shall be included in the design of proposed cannabis cultivation. These features may include, but are not limited to:

1) Evaporative barriers on exposed soils and pots.

2) Rainwater capture and reuse.

3) Recirculated irrigation water (zero waste).

4) Timed drip irrigation.

5) Soil moisture monitors.

6) Use of recycled water.

6.4 Project Effects on Vegetation

The areas to be converted into proposed commercial cannabis cultivation have been used as horse pasture, livestock range, to grow irrigated row crops, and to store farm equipment and materials. Cultivation of cannabis will disturb a total of 22.95 acres that we have classified as agriculture-cannabis, agriculture-fallow previously irrigated row crops, non-native annual grassland, and ruderal/disturbed vegetation. The Santa Ynez River and its arroyo willow and cottonwood riparian woodland vegetation are located along the eastern boundary of the property. There is also an arroyo willow–western sycamore riparian woodland located west of the 16.53-acre cultivation area. CDFW classifies both riparian woodlands as "sensitive natural communities."

SWRCB Cannabis Cultivation Policy No. 37 requires a 150-ft. setback from the Class I Santa Ynez River top-of-bank; a 100-ft. setback from the top-of-bank of intermittent Class II watercourses; and a 50-ft. setback from the top-of-bank of ephemeral Class III watercourses. The boundary of the 16.53-acre cultivation area has been modified in the current site plan to stay out of these SWRCB-required watercourse setbacks. Furthermore, access to the 16.53-acre cultivation area has been modified to avoid use of any unimproved dirt roads within those setbacks. The 2 other future cultivation areas (4.63 acre and 1.79 acres) are not located near any sensitive vegetation or any watercourses that are subject to SWRCB-mandated setbacks. The proposed 160-sq.-ft. field office and parking areas have also been relocated from previous site plans to a 0.52-acre future cannabis processing area outside of SWRCB watercourse setbacks. The 2 future cannabis cultivation sites are not near any sensitive vegetation and are located outside of any watercourse setback areas.

The applicant has redesigned the project to ensure that all cannabis cultivation areas, vehicle and equipment parking areas, cannabis processing areas, harvest storage locations, seedling nurseries, field office, composting facilities, and unimproved access roads are outside of SWRCB-required watercourse setbacks. SWRCB Cannabis Cultivation Policies No. 33 and 35 require restoration of disturbed land within riparian setback areas. To comply with these policies, the applicant will prepare a revegetation plan for previously disturbed areas (i.e., previously farmed areas and unimproved dirt access roads) within the prescribed setback areas.

The proposed 2.55-acre cannabis premises area (processing, packaging, temporary storage, seedling nursery, hazardous substance storage, and composting) will be located in an existing barn and on an existing gravel pad that has been used to house livestock and store farm equipment and materials for decades. The proposed 0.52-acre future processing area will be located on non-native annual grassland that has been used to grow irrigated row crops and store farm equipment and materials for decades. As part of this project, 10 metal storage containers will be placed on the gravel pad adjacent to the barn. A metal storage container that will be used as a field office will be placed in the 0.52-acre future processing area within an area that currently contains non-native grassland vegetation. The applicant may in the future apply for a County permit to place a few more metal storage containers in the future

processing area. The placement of the field office and future placement of metal storage containers in this area will not require any grading or cause any soil disturbance. The proposed organic waste composting near the barn is not anticipated to require any grading.

Use of the existing paved and gravel access roads to access the proposed cannabis cultivation areas and the cannabis premises and future processing areas will not impact any vegetation. The existing access roads are currently well maintained and meet the SWRCB-required road specification standards from the *Handbook for Forest, Ranch, and Rural Roads* (Weaver et al. 2014).

Vegetation Removal and Disturbance
The short- and long-term direct effects to agriculture-cannabis, agriculture-fallow previously irrigated row crops, non-native annual grassland, and ruderal/disturbed vegetation ***will not require*** implementation of Tree Protection Plan or Habitat Protection Plan.

Revegetation of previously disturbed areas within SWRCB-mandated watercourse setbacks is required by SWRCB Cannabis Cultivation Policies No. 33 and 35 ***will require*** a Tree Protection Plan/ Habitat Protection Plan.

6.5 Project Effects on Wildlife

The proposed 16.53-acre cultivation area has been used to grow row crops and has been irrigated since at least 1928. The proposed 4.63-acre cultivation area has been used as horse pasture for the last few years, and prior to that was used to grow row crops. It has been irrigated since at least 1928. The proposed 1.79-acre cultivation area is currently used as rangeland for livestock, and has historically been used for this purpose. Because of the high levels of human presence involved in these activities, as well as frequent soil cultivation that occurs when row crops are grown, wildlife utilization within the proposed cannabis cultivation areas is low and limited to highly mobile species and those that can tolerate high levels of disturbance.

During our February 7 and March 26, 2019 surveys, the vegetation within the proposed cultivation areas provided very little vegetation cover for wildlife species. The proposed cultivation areas had no ground squirrel burrows and very few gopher burrows. The sparse vegetation cover is a limiting factor that is suppressing above-ground and burrowing small mammal utilization of the site and is reducing the presence of predators that normally prey upon these small mammals. The repeated soil tillage that has occurred over the past 90 years in these areas has diminished the capacity for fossorial (adapted to burrowing) reptiles and amphibians such as black-bellied slender salamanders, coast range newts, California legless lizards, and California tiger salamanders to exist in these areas.

For security purposes, the entire perimeter of the 3 proposed cannabis cultivation areas, totaling 22.95 acres, will be fenced with 8-ft.-tall galvanized metal fencing. Access into the cultivation areas will be provided through 8-ft.-wide gates. Motion-activated security cameras with 30-watt LED floodlights will be installed on the fencing surrounding all 3 sites. The security lighting will only turn on when motion is detected and will automatically turn off after a few minutes if no further motion occurs. The flood lights will be directed into the cultivation site. A motion-activated security camera and a 30-watt LED flood light will also be installed on the exterior of

the proposed field office. The security flood lights have the potential to disrupt wildlife breeding, foraging, and habitat utilization patterns within and adjacent to the cannabis cultivation areas, but are not expected to cause wildlife to completely avoid these areas. The SWRCB-mandated watercourse setbacks (150 ft. and 100 ft. from the Class I Santa Ynez River, 100 ft. from Class II intermittent watercourses, and 50 ft. from Class III ephemeral watercourses) is expected to reduce the effects of night lighting to environmentally sensitive riparian woodland habitat near the 16.53-acre cultivation area.

The proposed 2.55-acre cannabis premises area (processing, packaging, temporary storage, seedling nursery, and hazardous substance storage) will occur in an existing barn and in 10 metal shipping containers that will be placed on an existing gravel pad adjacent to the barn. The proposed 0.52-acre future processing area will occur in metal shipping containers that will be placed on non-native annual grassland vegetation. The barn has existing exterior lights and we anticipate that additional exterior lighting will be installed in the area where the storage containers will be placed. Use of the barn for cannabis cultivation-related activities, installation of additional exterior lights, and the placement of 10 shipping containers on the gravel pad in the 2.55-acre cannabis premises area and placement of shipping containers on non-native annual grassland in the 0.52-acre future processing area will not require any ground disturbance and is not expected to directly or indirectly affect wildlife in this area.

The establishment and use of a 3,750-sq.-ft. organic waste composting area will occur within the 2.55-acre cannabis premises area on the south side of the barn. Use of the composting area will not require the removal of any vegetation. Small 2-4-cu.-yd. piles of organic waste will temporarily (6-8 weeks) be placed on the ground and covered with plastic tarps while the mulched cannabis waste converts into compost. It will then be loaded into trucks and taken to the cannabis cultivation and seedling nursery sites, where it will be used to amend the soil. The creation and use of the composting facility will cause some superficial ground disturbance when the compost piles are moved, but this activity is not anticipated to affect wildlife adversely.

Use of the existing paved and gravel roads to access the proposed cultivation areas, the cannabis premises, and future processing area will not require any ground disturbance or vegetation removal that could impact wildlife.

Noise and Human Disturbance of Wildlife
Short- and long-term project effects to wildlife related to increased noise and human disturbance on wildlife and their habitat are expected to be similar to the land's current and past levels of disturbance. This ***will not require*** a Habitat Protection Plan/ Wildlife Movement Plan.

Wildlife Disturbance Caused by Night Lighting
Short- and long-term effects to wildlife and wildlife habitat caused by security lighting around the perimeter of the cannabis cultivation site (near the riparian woodland habitat located 100 ft. south and 150 ft. east of the largest proposed 16.53-acre cultivation area, or toward the revegetated riparian setback area) ***will require*** a Habitat Protection Plan/ Wildlife Movement Plan to ensure no interference/ disruption of wildlife breeding, foraging, and habitat utilization patterns.

Disturbance and/or Disruption of Protected Bird Nests
The February 7 and March 26, 2019 surveys occurred at the beginning of the bird nesting season. During our surveys we found 2 active red-tailed hawk nests: one in a western sycamore tree growing adjacent to (within 20 ft. of) the existing access road near the southeast corner of the property and within 100 ft. of the proposed 16.53-acre cultivation area; and the other in a eucalyptus tree approximately 150 ft. north of the proposed 1.79-acre future cultivation area. It is illegal to destroy the active nests of migratory bird species protected by the Federal Migratory Bird Treaty Act (USFWS 2013) or active raptor nests protected by Section 3503.5 of the California Department of Fish and Wildlife Code (CDFW 2019). At this time, nationally, the nests of 1,007 bird species are protected by the Federal Migratory Bird Treaty Act and approximately 32 raptor species are protected by California Department of Fish and Wildlife Code.

Birds are not expected to nest within the proposed cannabis cultivation areas due to lack of vegetation cover and high levels of human disturbance. However, we expect birds to nest in the dense riparian woodland vegetation that exists 150 ft. south and east of the largest proposed 16.53-acre cultivation area. Birds are also expected to nest in and on the barn that will be used for cannabis processing and packaging. Birds will likely also nest in trees and shrubs adjacent to the existing access roads that vehicles will use for cannabis-related activities. Vehicle traffic may slightly increase on these existing roads, but is not expected to alter nesting activity.

The level of human disturbance caused by the proposed cannabis cultivation is expected to be roughly the same as from previous agricultural activities. It is not expected to cause birds to abandon their nests or select alternate nesting sites. Because the proposed cannabis cultivation area is modified to stay out of SWRCB-required watercourse setbacks, which include riparian woodland vegetation in the bed and banks of the Santa Ynez River. The setback buffer zones from riparian woodland vegetation may have a beneficial impact on birds that nest in these riparian woodlands.

Short- and long-term impacts to protected bird nests associated with human disturbance is expected to be roughly the same as from previous agricultural activities. This ***will not require*** a Habitat Protection Plan/ Wildlife Movement Plan.

The revegetation of previously disturbed land within SWRCB-mandated watercourse setbacks may have a beneficial long-term effect on birds that nest in the adjacent riparian woodland habitat, including federal- and state-endangered southwestern willow flycatcher. Applicant-proposed restoration within these setbacks is discussed in Section 7.

Migration Corridors and Wildlife Movement
No game trails or wildlife movement corridors were detected within the project study area during our February 7 and March 29, 2019 survey.

Short- and long-term disturbance of wildlife movement, migration, and dispersal corridors resulting from the project will not be affected as the sites does not contain any wildlife movement, migration, and dispersal corridors. This ***will not require*** a Habitat Protection Plan/ Wildlife Movement Plan.

6.6 Project Effects on Special-Status Species

The proposed cannabis cultivation areas (totaling 22.95 acres) are the only places where ground-disturbing activities will occur and are therefore the only project activities with a potential to affect special-status species. Other aspects of the project, such as cannabis processing, packaging, temporary storage, seedling nursery, and hazardous substance storage, do not involve ground disturbance, will occur in existing developed areas, and will use existing paved and gravel roads. For this reason, we have limited our evaluation of potential effects to special-status species to the 3 cannabis cultivation areas and the area adjacent to the cultivation areas (within 500 ft. or to the property line, whichever is closer) where indirect effects to special-status species have a potential to occur.

The Santa Ynez River is designated critical habitat for federally endangered southern steelhead *(Oncorhynchus mykiss irideus)* and federally and California endangered southwestern willow flycatcher (*Empidonax traillii extimus).*

Southern steelhead are known to migrate up and down the river when it is flowing, but have no potential to occur in the cannabis cultivation areas, since there is no aquatic habitat. We believe this project has no potential to cause take (i.e., kill any of the fish), but given the site's proximity to aquatic habitat, the project could degrade water quality and indirectly impact southern steelhead habitat.

Southwestern willow flycatchers are known to nest in the riparian vegetation in the bed and banks of the Santa Ynez River along the eastern property boundary (CNDDB 2019). This bird has no potential to nest in the proposed cultivation areas, since there is no riparian vegetation there. However, it has a high potential of nesting and foraging for insects in the riparian woodland habitat located 150 ft. east of the proposed 16.53-acre cultivation area. Riparian woodland patches used by breeding southwestern flycatchers are on average 21.2 acres in size, while the mean riparian patch size is 4.4 acres. Breeding territory sizes range from 0.25-5.7 acres, with most being 0.5-1.2 acres (USFWS 2002). Because no cannabis-related activities will occur in the 150-ft. setback from the Santa Ynez River, this project does not have the potential to disturb willow flycatcher nests in the riparian woodland habitat east of the cultivation area. Restoration of the 150-ft. setback from the Santa Ynez River will have a long-term beneficial effect on southwestern willow flycatcher. Potential nest disturbance activities include equipment/vehicle operation while performing site preparation activities for restoration of disturbed watercourse buffer zones, dust generation, and night lighting from security flood lights. It should be noted that southwestern willow flycatchers have successfully nested in the adjacent riparian woodland habitat in the past when irrigated row crops were grown right up to the Santa Ynez River top-of-bank.

Least Bell's vireo *(Vireo bellii pusillus)* is a federal- and state-endangered migratory song bird that nests exclusively in riparian scrubland and woodland habitat. Federally designated critical habitat exists for this species in the upper Santa Ynez River approximately 36 mi. east of the project site in one of the few remaining locations where this bird is known to nest in Santa Barbara County. Least Bell's vireos were historically known to nest in riparian habitat along the entire Santa Ynez River, along portions of the Santa Maria/Sisquoc River, and in coastal creeks along the South Coast of Santa Barbara County (Lehman 1994). The decline in this species began in the 1940s and is attributed to loss of riparian habitat and brood-parasitism

by brown-headed cowbirds. They are still occasionally seen and heard in riparian habitat along the Santa Ynez River, but are not known to nest anywhere along it except in the upper Santa Ynez River Valley and some of the tributary creeks that drain into the upper Santa Ynez River. There is no potential for this vireo to nest in the cannabis cultivation area or in the riparian woodland habitat located 150 ft. south and east of the 16.53-acre cultivation area. However, it may occasionally forage in this riparian woodland habitat while migrating. We have concluded that this project has no potential to cause take of this species and no potential to directly or indirectly harm riparian habitat where it may occasionally be present.

There is also the potential for the federally threatened **California red-legged frog** (*Rana draytonii*) to occur in slow-moving and ponded parts of the Santa Ynez River 150 ft. south and east of the 16.53-acre cultivation area. They may also occur in ponds and impoundments near the other cannabis cultivation areas. These frogs require slow-moving or ponded aquatic habitat to breed and tend to stay near their breeding pond, although they are known to forage in riparian and upland habitats up to 1.2 mi. from a breeding pond (USFWS 2002). There is no aquatic habitat for California red-legged frogs in the proposed cannabis cultivation areas, but given the project's proximity to aquatic habitat in the Santa Ynez River, we have concluded that there is a low potential for red-legged frogs to occasionally forage for insects within and adjacent to cannabis cultivation sites. The Santa Ynez River bank is located 150 ft. south and east of the 16.53-acre cultivation area and is 30-40 ft. high and nearly vertical, functioning as a natural barrier to wildlife movement. However, approximately 400 ft. of the river bank along the southeastern corner of the property is less steep, so terrestrial wildlife (including these frogs and western pond turtles) are expected to be able to get into the cultivation areas from the river bed along this stretch of the river bank. This project has a very low potential to cause take of this frog, and it is possible to implement impact avoidance measures that will ensure this does not occur. Given the proximity of the cannabis cultivation areas to aquatic habitat, we have concluded that the project has the potential to degrade water quality and indirectly affect aquatic habitat that red-legged frogs and other aquatic species depend upon.

Critical habitat for federally endangered, state-threatened **California tiger salamander** *(Ambystoma californiense)* exists approximately 3.3 mi. northwest of the proposed cannabis cultivation area. In addition, there is a known breeding pond approximately 1.7 mi. northwest of the cultivation area. Tiger salamanders require pond habitat to breed, and they are rarely found in streams or rivers. They are known to range up to 1.2 mi. from a breeding pond (USFWS 2016) if there is a network of below-ground small mammal burrows for them to travel in. They cannot dig their own burrows and are completely dependent upon the burrows created by small mammals. Tiger salamanders spend the majority of their lives in upland habitat near a breeding pond; they do not travel above ground except at night during migration to another breeding pond. There is no potential for this salamander to occur in the proposed cannabis cultivation areas because the sites have been repeatedly tilled for the past 90 years and there are almost no small mammal burrows for them to live in. The project has no potential to cause take of this species and no potential to directly or indirectly harm pond habitat that this species requires for breeding.

In addition to the federally endangered and threatened wildlife species above, 4 CDFW Species of Special Concern are known to occur in the project vicinity: **American badger** (*Taxidea taxus),* **pallid bat** *(Antrozous pallidus),* **California legless lizard** *(Anniella pulchra),* and **western pond turtle** *(Emys marmorata).* Only the pallid bat and western pond turtle have a potential to occur within or adjacent to the proposed cultivation areas. Pallid bats are expected to forage in and adjacent to riparian woodland vegetation near the cultivation areas, but have no potential to roost in the cultivation area. Western pond turtles are expected to occur in the Santa Ynez River in slow-moving aquatic habitat and on the river banks. These turtles have a low potential to occur within the proposed cannabis cultivation areas. They are primarily an aquatic species, but are known to forage up 1,500 ft. from aquatic habitat and can migrate up to 0.5 mi. through upland habitat (USDA 1997). Pond turtles hibernate during the winter in adjacent upland habitat, and females lay eggs within a few hundred feet of their aquatic habitat during May-August. The project has no potential to adversely affect American badger, pallid bat, or California legless lizard, although there is a low potential for it to directly affect western pond turtles should they wander into the cultivation area. The project could also indirectly affect aquatic turtle habitat by degrading water quality.

Special-Status Wildlife Species and Habitat
Short- and long-term effects to special-status species ***will require*** a Habitat Protection Plan/ Wildlife Movement Plan because there is potential for the project to: 1) directly affect California red-legged frogs, southwestern willow flycatcher, and western pond turtle and 2) indirectly affect adjacent southern steelhead, southwestern willow flycatcher critical habitat, and California red-legged frog aquatic habitat. We believe that take of California red-legged frog, southwestern willow flycatcher, and western pond turtles can be avoided with implementation of appropriate Habitat Protection Plan measures. We have also determined that potential degradation of southern steelhead and southwestern willow flycatcher critical habitat can be avoided by implementing appropriate Habitat Protection Plan measures (refer to Section 7.0). To ensure that take of southwestern willow flycatcher does not occur, we recommend that protocol-level surveys be performed in the riparian woodland habitat adjacent to (within 500 ft. of) the 16.53-acre site during the May 15 to July 17 breeding/nesting season by a USFWS-approved/ permitted biologist if site preparation activities (equipment operation, junk removal, or soil disturbance) is scheduled to occur within 300 ft. of riparian woodland habitat during that time.

Special-Status Plant Species
Our February 7, 2019 survey occurred when the following special-status plant species, which are known to occur within 3 mi. of the project site, would not have been detectable: dune larkspur *(Delphinium parryi* ssp. *blochmaniae*)*,* Miles' milk-vetch *(Astragalus didymocarpus* subsp. *milesianus),* Santa Ynez groundstar *(Ancistrocarphus keilii),* seaside bird's-beak *(Cordylanthus rigidus* ssp. *littoralis)*, southern curly-leaved monardella *(Monardella sinuata* ssp. *sinuata),* and Vandenberg monkeyflower *(Diplacus vandenbergensis)*. Nevertheless, we have concluded that there is no potential for them to occur in the proposed cannabis cultivation areas given the sites' longtime agricultural use, past cultivation practices, and current disturbed conditions. This ***will not require*** a Habitat Protection Plan.

6.7 Project Effects on Water Quality

The outdoor cannabis cultivation portion of the project involves converting an existing irrigated row crop agricultural field to a drip-irrigated 16.53-acre cannabis cultivation field; converting an existing horse pasture to a drip-irrigated 4.63-acre cannabis cultivation field; and converting existing previously disturbed rangeland to a drip-irrigated 1.79-acre cannabis cultivation field. The applicant proposes to grow cannabis year-round in mounded rows covered with plastic sheeting in the 16.53-acre and 4.63-acre cultivation fields. This will conserve water by reducing evaporation and also greatly lessen the amount of bare soil. The applicant proposes to grow cannabis year-round in mounded rows or in plastic containers above the ground in the 1.79-acre cultivation field. The only areas where bare soil will occur are between the planting rows and on farm equipment access roads within the cultivation area. Bare soil will also be exposed during creation of the mounded planting rows and periodically when the sheeting is replaced. The plastic will prevent erosion of the planting mounds, but will also increase stormwater runoff because of its impermeability. Thus, the plastic sheeting prevents water loss caused by evaporation but also prevents infiltration of rainfall.

Given this situation, the volume of stormwater runoff from the proposed cannabis cultivation areas is expected to increase and to be concentrated in uncovered areas. This increase in stormwater runoff has the potential to cause erosion in the areas where the stormwater runoff is concentrated and could degrade surface water quality if not handled properly. Suspended sediment is detrimental to aquatic biota and can smother invertebrates and amphibian eggs, elevate water temperatures, and correspondingly decrease dissolved oxygen levels. Fortunately, there are a wide variety of inexpensive, practical, erosion control best management practices that can and will be implemented during the rainy season to prevent erosion and protect surface water quality.

Degradation of Water Quality
Short- and long-term effects to water quality caused by erosion and sedimentation during the rainy season (October 12 to April 30) will be addressed through ***compliance with*** the Cannabis Waste Discharge Requirements General Order (as further discussed in Section 7.0 below).

7.0 MITIGATION MEASURES INCORPORATED INTO PROJECT DESCRIPTION

Biological mitigation measures include those required by the SBCO Cannabis Land Use Ordinance and Licensing Program (SBCO 2018), the State Water Resources Control Board cannabis cultivation policy (SWRCB 2017) and those identified by Watershed Environmental biologist Mark de la Garza in this report as necessary to ensure that the project will not cause "take" of a federal- or state-listed endangered, threatened, or candidate species, "harm" (i.e., significantly modify or degrade critical habitat) essential habitat or disrupt essential behavior patterns, or "disturb" any CDFW species of concern, CDFW fully protected species, or any species of rare plants.

As previously described, the project applicant has modified the project description and site plan that was previously submitted to state and local regulatory agencies to

ensure compliance with adopted Santa Barbara County, CDFW, and SWRCB commercial cannabis ordinances, policies, and regulations (refer to Attachment 2).

This cannabis cultivation project will occur in 2 distinct areas (totaling 22.95 acres) on the 247-acre property. Cannabis will be cultivated in 2 fields in the southeast corner of the property in an area located at least 150 ft. from the Santa Ynez River that has been historically used to grow row crops. Another area in the western portion of the property that has historically been used as rangeland for livestock will be used for cannabis cultivation. Cannabis processing, packaging, temporary storage, seedling nursery, hazardous substance storage, and organic waste composting will occur in the western portion of the property adjacent to an existing agricultural barn that was previously used to house livestock and store agricultural equipment and materials. Cannabis processing will also occur in an area in the center of the property that has historically been used to grow row crops and is currently used as a horse pasture. Access to these areas will be provided via existing, well-maintained paved and gravel roads.

Site preparation and use of the 2 cannabis processing areas, including packaging, temporary storage, seedling nursery, hazardous substance storage, and the organic waste composting area, was determined to have: 1) no potential to significantly affect biological resources and 2) no potential to cause take or harm to any endangered, threatened, or candidate species listed by the CDFW as Species of Special Concern or Fully Protected Species.

Site preparation and use of the eastern portion of the property for proposed cannabis cultivation areas was determined to be consistent with SWRCB cannabis cultivation policy riparian setback requirements, and will not directly affect any sensitive riparian habitat. Cannabis cultivation, however, was determined to have a potential to cause take of federally threatened California red-legged frog *(Rana draytonii*) and western pond turtle *(Emys marmorata),* a CDFW Species of Special Concern. Cannabis cultivation was also determined to have the potential to significantly modify or degrade (i.e., harm) critical habitat for federally endangered southern steelhead *(Oncorhynchus mykiss irideus)* by degrading water quality with stormwater runoff that flows directly into the Santa Ynez River. The project was also found to have the potential to modify or degrade (i.e., harm) critical habitat for endangered southwestern willow flycatcher (*Empidonax traillii extimus)*, due to proximity of the 16.53-acre cultivation site to known nesting habitat, and for the potential to disrupt breeding behavior and nesting activity from the improper operation of security flood lights around the perimeter of the 16.53-acre cultivation site.

To ensure compliance with SBCO Cannabis Land Use Ordinance and Licensing Program requirements and ensure impacts to biological resources are avoided, and reduced to less than significant levels, the following biological mitigation/protection plans will be prepare by a County approved biologist and implemented by the project applicant:

- **Habitat Protection Plan**
- **Wildlife Movement Plan**
- **Tree Protection Plan**

To ensure compliance with SWRCB policies No. 33 and 35 the following mitigation plan will be prepared by a County approved biologist and implemented by the project applicant:

- **Revegetation Plan** for previously disturbed areas within SWRCB-mandated watercourse setbacks.

The County of Santa Barbara required Habitat Protection Plan, Wildlife Movement Plan, and Tree Protection Plan will be prepared by a county approved biologist and will contain the required elements specified in the SBCO Cannabis Land Use Ordinance & Licensing Program and the LUDC (refer to Attachment 2). The Tree Protection, Habitat Protection, and Wildlife Movement Plans will be implemented prior to the issuance of final building and/or grading inspection and throughout operation of the project as applicable.

Project Features to Address Potential Effects to Wildlife and Wildlife Habitat Caused by Security Lighting around Perimeter of Cannabis Cultivation Sites and the Field Office

The applicant shall install shields around security lights to direct lights downward and prevent security flood lights from shining toward riparian woodland vegetation or the riparian setback revegetation area. After installation, the lights shall be turned on and a County of Santa Barbara-approved biologist shall inspect the site at night to verify that they and any other project lights are properly shielded and do not shine toward sensitive riparian woodland vegetation or into the riparian revegetation area within the riparian setback. The monitoring biologist shall take photographs and/or video of the cultivation site after dark while the security lights are on to verify compliance with this mitigation measure and shall notify the County, and CDFW, in writing about applicant compliance and the effectiveness of this mitigation measure.

Project Features to Address Potential Effects to Special-Status Species

To ensure that the project does not cause "take" of a federal- or state-listed endangered, threatened, or candidate species or impact any CDFW Species of Special Concern or CDFW fully protected species the following measures will be performed:

1. Within 1 week of the start of site preparation activities in the cannabis cultivation areas and prior to any clean-up site preparation activities, presence/absence surveys for special-status species will be performed by a qualified biologist. If a California red-legged frog or any other state or federally threatened or endangered species is found, it will not be harassed, harmed, pursued, hunted, shot, wounded, killed, trapped, captured, or collected by the biologist performing the survey. The biologist will cordon off the area where the species is located to prevent anyone from engaging in any such conduct and to prevent anyone from taking actions that may cause injury or significantly disrupt normal wildlife behavior patterns such as breeding, feeding, or sheltering. Site preparation activities and all other activity will be halted in the area where the listed species was found until the animal has vacated the project area of its own volition. If surveys determine that California red-legged frogs and other state or federally threatened or

endangered species are absent from the project site, then and only then will site preparation and clean-up activities occur.

2. Silt fencing shall be installed along the perimeter of the cultivation sites. The silt fencing shall be keyed into the ground per the manufacturer's specifications and shall be supported by stakes per the manufactures instructions or attached to the galvanized security fencing that will be installed around the perimeter of the cultivation sites. The purpose of the silt fencing is to create a barrier that prevents California red-legged frogs, western pond turtles and other ground dwelling special status species from entering the cannabis cultivation sites. The silt fencing will also prevent sediment from leaving the cultivation site.
3. A qualified biologist shall be present during the performance of site preparation activities when existing vegetation is removed and planting rows are created in the cannabis cultivation areas. The biologist shall also be present when clean-up and revegetation activities are performed in previously disturbed watercourse setback areas. If any non-listed sensitive species are found (i.e., CDFW Species of Special Concern), the biologist shall relocate these animals to suitable habitat outside of the project area.
4. A qualified biologist shall monitor the installation of the plant materials in the riparian setback revegetation area and ensure that there are no special status species present in the revegetation area and that "take" of federally or state endangered, threatened, and candidate species does not occur.
5. Ground disturbance, vegetation removal, debris removal/clean up, and revegetation activities within 500 ft. of riparian woodland vegetation shall occur outside of the bird breeding season (February 1 through September 1). If these activities must occur during the bird breeding season, pre-construction breeding bird surveys shall be performed by a qualified biologist. Nesting bird pre-construction surveys shall occur within the area to be disturbed and shall extend outward approximately 500 ft. or to the property boundary. Bird surveys shall be conducted by a County-approved biologist familiar with identifying raptors and other birds.

   Surveys for southwestern willow flycatcher nests shall be performed in the riparian woodland habitat adjacent to (within 500 ft. of) the cultivation site between May 15 and July 17 by a USFWS-approved/permitted biologist and shall be performed per the southwestern willow flycatcher protocol (USFWS 2000). If any occupied bird nests or cavity roosts are found, the biologist shall determine an appropriate nest/cavity roost buffer zone (500 ft. for raptor nests and 300 ft. for passerine nests) that considers the bird species, nest location, nest height, existing pre-construction level of disturbance in the vicinity of the nest, and proposed construction activities. The nest/cavity roost buffer zone shall be sized to ensure that birds do not abandon their nest or cavity roost due to disturbance caused by project activities. The nest buffer zone boundary shall be demarcated with signage, survey tape, or fencing to be clearly visible to personnel with access to the project site. All personnel shall be informed as to the location of the nest buffer and advised that they are prohibited from entering the area.

   No ground disturbance or project-related activities shall occur within the nest buffer zone until the biologist has confirmed that breeding/nesting is

completed and all young birds have fledged the nest. Pre-construction nesting bird surveys are not required for project activities that are 500 ft. or more from the edge of the riparian woodland canopy or for activities within 500 ft. of the riparian canopy that occur between September 1 and February 1.

Project Features to Address Potential Effects to Water Quality Caused by Erosion and Sedimentation

The following measures are specific to the cannabis cultivation areas and are intended to provide short- and long-term water quality protection and to ensure project compliance with SWRCB cannabis cultivation water quality protection requirements:

1. Land disturbance activities shall not occur during the winter unless authorized by a SWRCB executive officer. In that case, site stabilization measures shall be in place prior to the onset of the winter period (SWRCB Condition No. 6).
2. During performance of land disturbance activities, daily 24-hour weather forecasts shall be monitored and records of the forecast shall be maintained. All land disturbance activities shall cease and erosion control measures shall be implemented when there is a 50 percent or greater chance of precipitation more than 0.5 in. in a 24-hour period (SWRCB Condition No. 9).
3. Erosion control and soil disposal and spoils management measures shall be installed prior to onset of the winter period (SWRCB Condition No. 125).
4. All temporary unimproved dirt access roads to and within the cultivation site shall be blocked and closed during the winter (SWRCB Condition No. 126).
5. The operation of heavy equipment of any kind is prohibited during the winter (SWRCB Condition No. 127).
6. Linear sediment controls (e.g., silt fences, wattles, etc.) shall be installed at 20-ft. intervals along the toe of the slope, face of the slope, and at the grade breaks of exposed slopes (SWRCB Condition No. 127).
7. All disturbed areas and construction entrances and exits shall be stabilized to control erosion and sediment discharge (SWRCB Condition No. 130).
8. All loose stockpiled construction materials (e.g., soil, spoils, aggregate, etc.) that are not actively (i.e., scheduled for use within 48 hours) being used to prevent erosion by stormwater shall be covered and bermed (SWRCB Condition No. 131).
9. Erosion repair and control measures shall be applied to areas of exposed bare ground (e.g., cultivation area, access paths, etc.) to prevent discharge of sediment to Waters of the State (SWRCB Condition No. 132).
10. The applicant shall prepare an erosion/sediment control plan that specifies the type and location of erosion control measures that will be implemented to ensure compliance with the SWRCB cannabis cultivation water quality protection policies. The plan shall specify the quantity of erosion control materials that will be installed during the rainy season (October 12 to April 30), frequency of erosion control site inspections, frequency of routine maintenance activities, record keeping requirements, and agency reporting requirements.

Revegetation of Previously Disturbed Vegetation within SWRCB-Mandated Watercourse Setbacks

To comply with SWRCB Cannabis Cultivation Policy No. 37, the proposed cultivation area has been reconfigured to avoid SWRCB-mandated setbacks from watercourses. The applicant has redesigned the project to ensure that cannabis cultivation, vehicle and equipment parking, material storage, field office placement, use of unimproved access roads, and security fencing installation within the riparian setback do not occur.

SWRCB Cannabis Cultivation Policies No. 33 and 35 require restoration of disturbed land within riparian setback areas. To comply with these policies, the applicant will retain the services of a County of Santa Barbara approved biologist to prepare a revegetation plan. Revegetation of the riparian setback shall include removal of trash, abandoned agricultural equipment and materials, and the unimproved dirt access road itself. Revegetation shall be performed using native species that occur in the Buellton region and that typically occur within and adjacent to arroyo willow and cottonwood riparian woodland habitat. Restored areas shall be mulched using at least 2-4 in. of weed-free, clean straw or similar biodegradable mulch over the seeded/planted area. Mulching shall be completed within 30 days after land disturbance activities in the revegetation area have ceased. Revegetation planting shall occur at a seasonally appropriate time.

Vegetation shall be planted at an adequate density and variety to control surface erosion and regenerate a diverse composition of regionally appropriate native species for the habitat type being restored. The revegetation plan shall include biannual (2 times per year) monitoring/inspections to evaluate revegetation progress toward attainment of success criteria.

Revegetation will be considered successful if 85 percent native vegetation cover is achieved and 85 percent of the native trees that are planted survive 5 years after planting. The presence of exposed soil shall be documented for 3 years following revegetation work. If the revegetation effort fails to meet the success criteria after 5 years, the restoration area shall be replanted.

8.0 CONCLUSIONS

Implementation of the biological resource protection plans (i.e., Habitat Protection Plan, Wildlife Movement Plan, and Tree Protection Plan) required by the SBCO Cannabis Land Use Ordinance and Licensing Program and the LUDC, and project compliance with State Water Resources Control Board cannabis cultivation policies (SWRCB 2017), and implementation of special status species protection measures identified by Watershed Environmental biologist Mark de la Garza will reduce potentially significant impacts to biological resources to levels where clearly no significant effect on the environment will occur and will ensure that the Castlerock Family Farms II, LLC cannabis cultivation project does not cause take of any federally or state listed endangered, threatened, or candidate species or harm to any CDFW Species of Special Concern or CDFW fully protected species.
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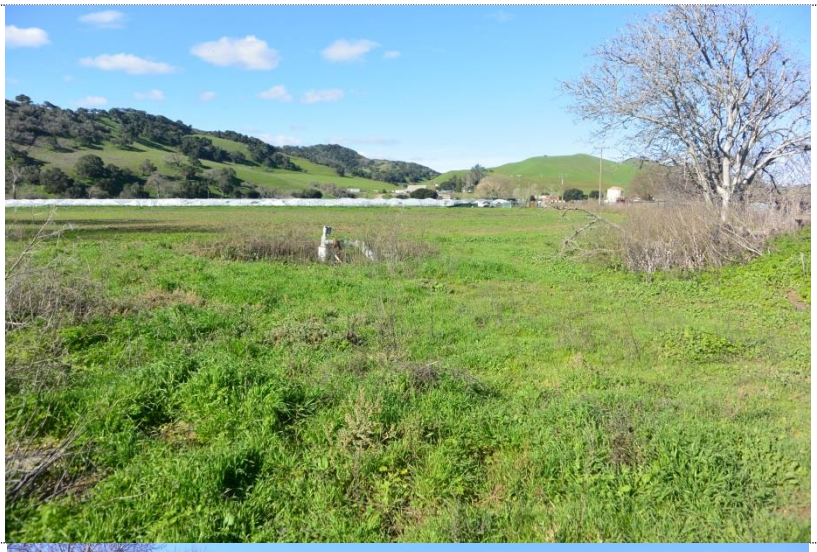
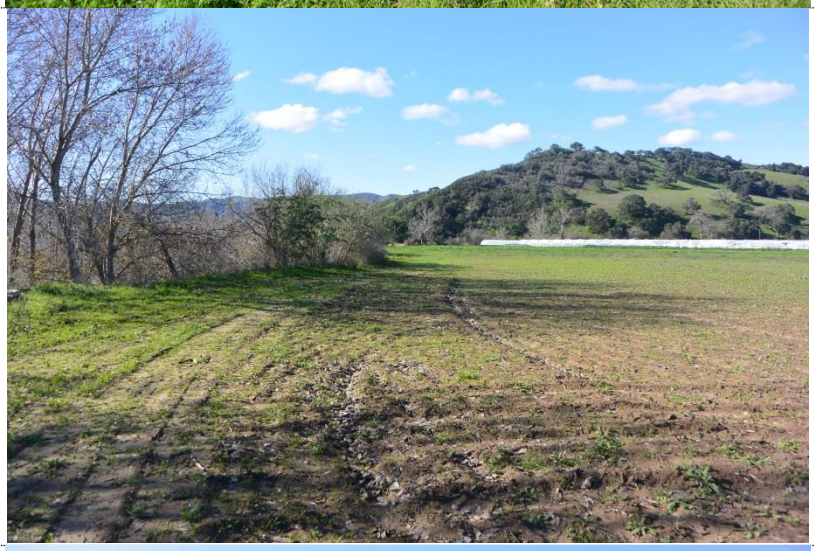
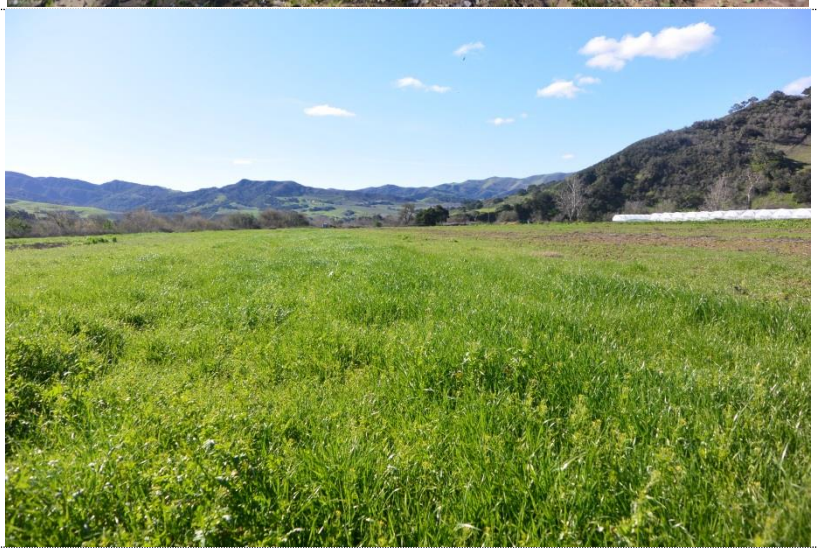
Attachment 1.

Photographs of Project Site

	**Photo 1.** Northeastern corner of 16.53-acre cultivation site, looking west. (photo taken 2/7/2019)
	**Photo 2.** Santa Ynez River top-of-bank and arroyo willow riparian woodland southeast of 16.53-acre cultivation site. (photo taken 2/7/2019)
	**Photo 3.** Proposed 16.53-acre cannabis cultivation. (photo taken 2/7/2019)

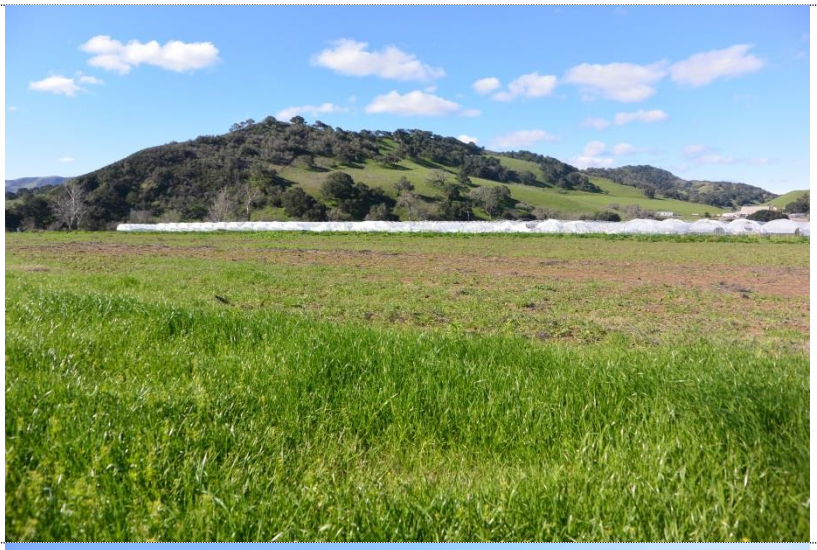
	**Photo 4.** Proposed 16.53-acre cannabis cultivation, looking west toward 2018 cannabis site. (photo taken 2/7/2019)
	**Photo 5.** Northern boundary of proposed 16.53-acre cultivation area and unimproved dirt access road. (photo taken 2/7/2019)
	**Photo 6.** Ruderal and riparian woodland vegetation along Santa Ynez River top-of-bank, southeast of 16.53-acre cultivation area. (photo taken 2/7/2019)

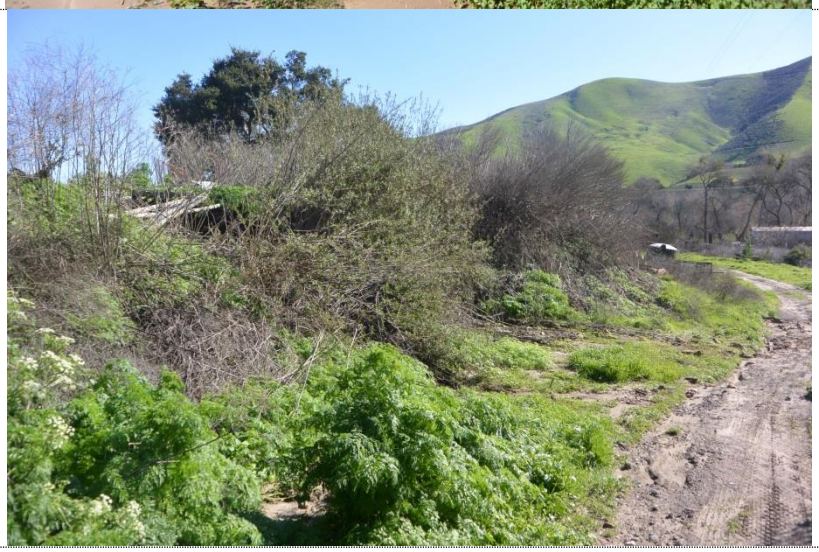
	**Photo 7.** Arroyo willow riparian woodland and Santa Ynez River along eastern boundary of property, southeast of 16.53-acre cultivation area. (photo taken 2/7/2019)
	**Photo 8.** Existing unimproved dirt access road located within 150-ft. Santa Ynez River setback, southeast of 16.53-acre cultivation area. (photo taken 2/7/2019)
	**Photo 9.** Ruderal vegetation southeast of 16.53-acre cultivation area. (photo taken 2/7/2019)

	**Photo 10.** Arroyo willow - western sycamore riparian woodland and intermittent watercourse (Class II) top-of-bank, which drains into Santa Ynez River. Located adjacent to gravel access road, southwest of 16.53-acre cultivation area. (photo taken 2/7/2019)
	**Photo 11.** Bed and banks of intermittent watercourse (Class II) within arroyo willow - western sycamore riparian woodland, which drains into Santa Ynez River. Located southwest of 16.53-acre cultivation area. (photo taken 2/7/2019)
	**Photo 12.** Ephemeral watercourse (Class III) that drains into intermittent watercourse (Class II) and into Santa Ynez River. Located southwest of 4.63-acre cultivation area. (photo taken 2/7/2019)

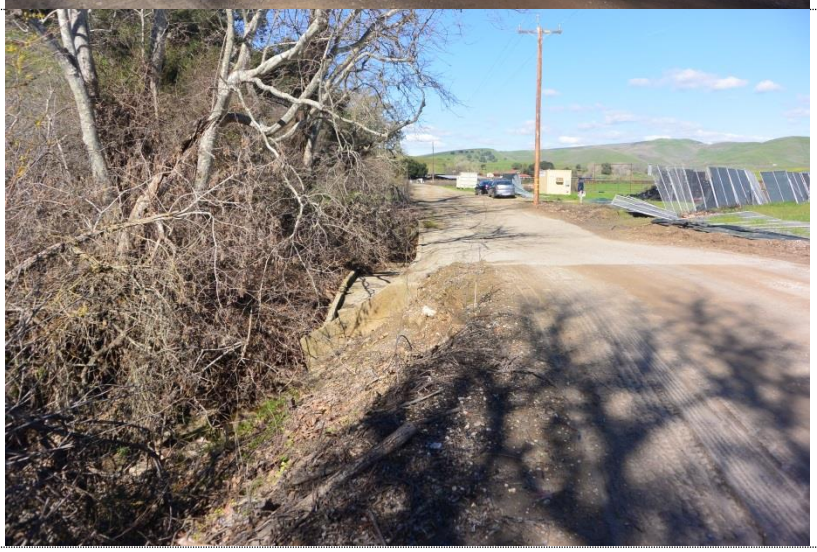
	**Photo 13.** Ephemeral watercourse (Class III), which drains into intermittent watercourse (Class II) and into Santa Ynez River. Located southwest of 4.63-acre cultivation area. (photo taken 2/7/2019)
	**Photo 14.** Existing 2018 cultivation site and gravel access road. (photo taken 2/7/2019)
	**Photo 15.** Crossing #4: Concrete-paved, low-water "summer crossing" located along gravel access road, southwest of 16.53-acre cultivation area. (photo taken 2/7/2019)

	**Photo 16.** Ephemeral watercourse (Class III) west of 2018 cultivation site. Reaches concrete summer crossing. (photo taken 2/7/2019)
	**Photo 17.** Ruderal vegetation in ephemeral watercourse (Class III), west of 2018 cultivation site. (photo taken 2/7/2019)
	**Photo 18.** Proposed metal office trailer, to be relocated to 0.52-acre future processing area. (photo taken 2/7/2019)

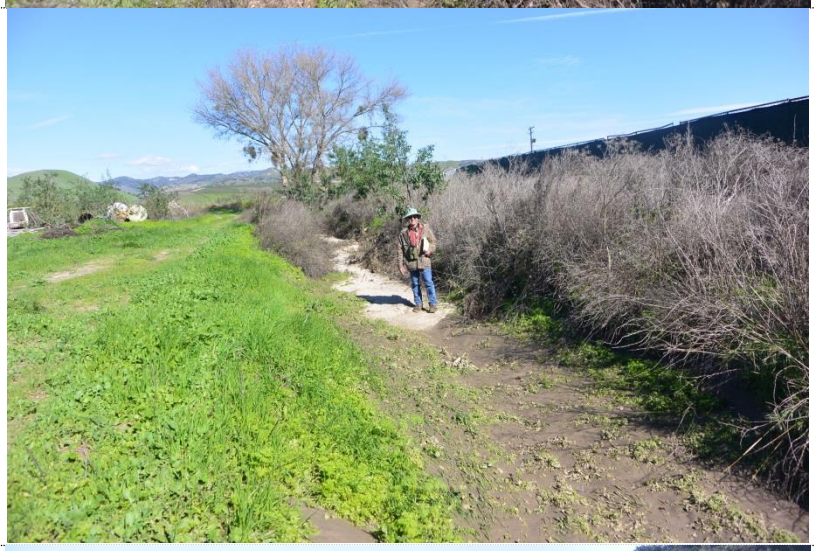
	**Photo 19.** Ruderal vegetation in ephemeral watercourse (Class III), located in between 16.53-acre and 4.63-acre cultivation areas. (photo taken 2/7/2019)
	**Photo 20.** Ephemeral watercourse (Class III), located in between 16.53-acre and 4.63-acre cultivation areas. (photo taken 2/7/2019)
	**Photo 21.** Ruderal vegetation in ephemeral watercourse (Class III), located in between 16.53-acre and 4.63-acre cultivation areas. (photo taken 2/7/2019)

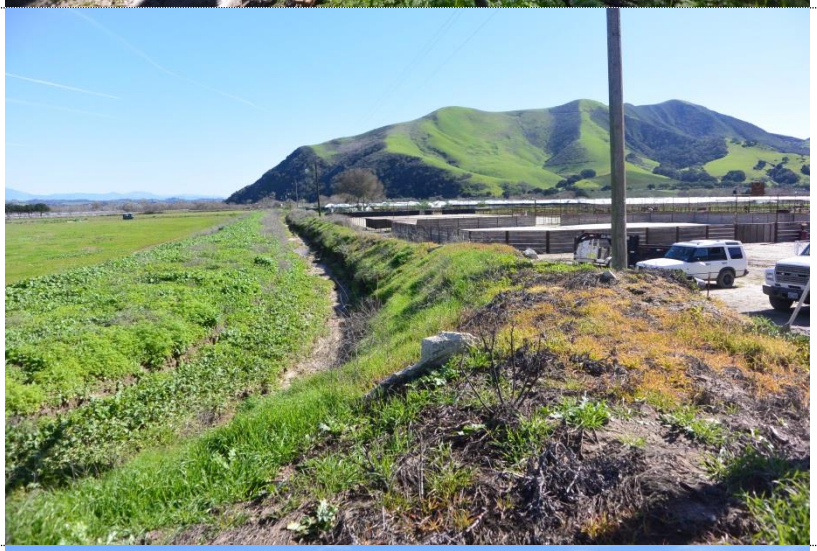
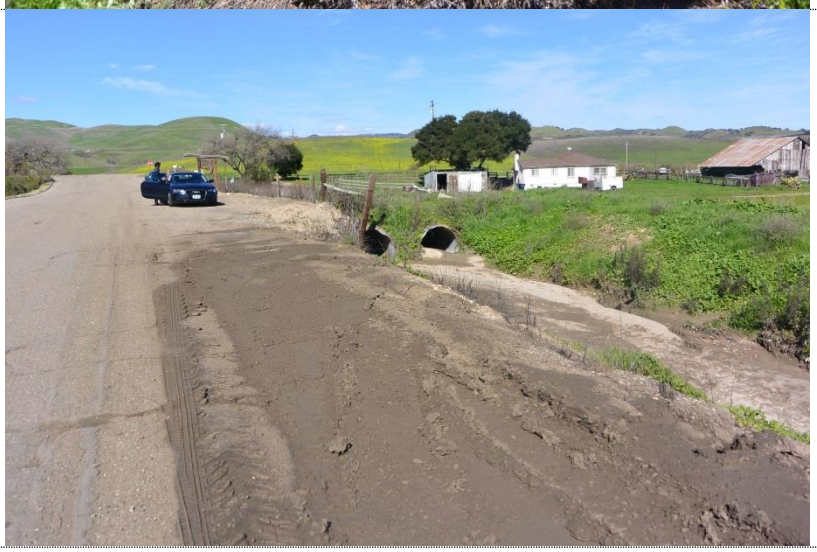
	**Photo 22.** Ephemeral watercourse (Class III), located in between 16.53-acre and 4.63-acre cultivation areas. (photo taken 2/7/2019)
	**Photo 23.** Ephemeral watercourse (Class III) along paved access road, flowline passes in between 16.53-acre and 4.63-acre cultivation areas. (photo taken 2/7/2019)
	**Photo 24.** Crossing #1: Two 48-in. CMP (corrugated metal pipe) culverts at entrance to property near Highway 246. (photo taken 2/7/2019)

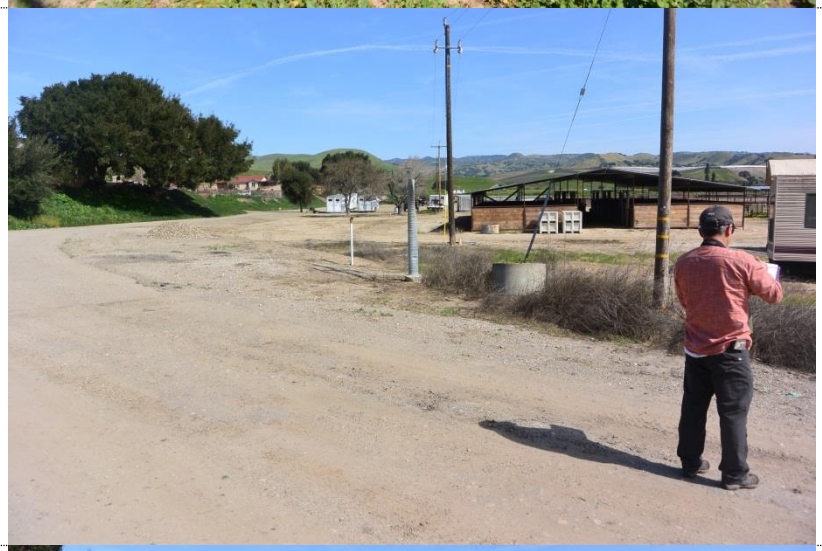
	**Photo 25.** Ruderal vegetation in proposed 4.63-acre future cultivation area. (photo taken 3/26/2019)
	**Photo 26.** Proposed 0.52-acre future processing area, located adjacent to (west of) 4.63-acre future cultivation area, near the "Y." (photo taken 3/26/2019)
	**Photo 27.** Proposed 0.52-acre future processing area, located adjacent to (west of) 4.63-acre future cultivation area, near the "Y." (photo taken 3/26/2019)

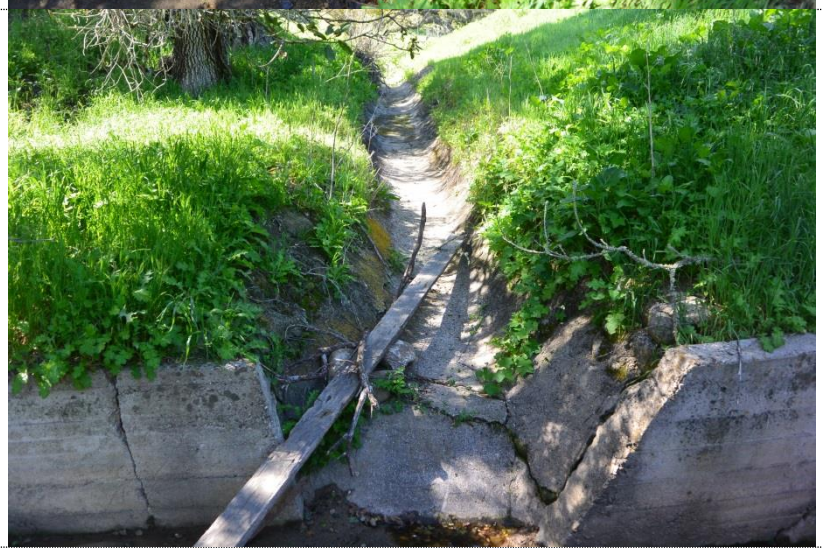
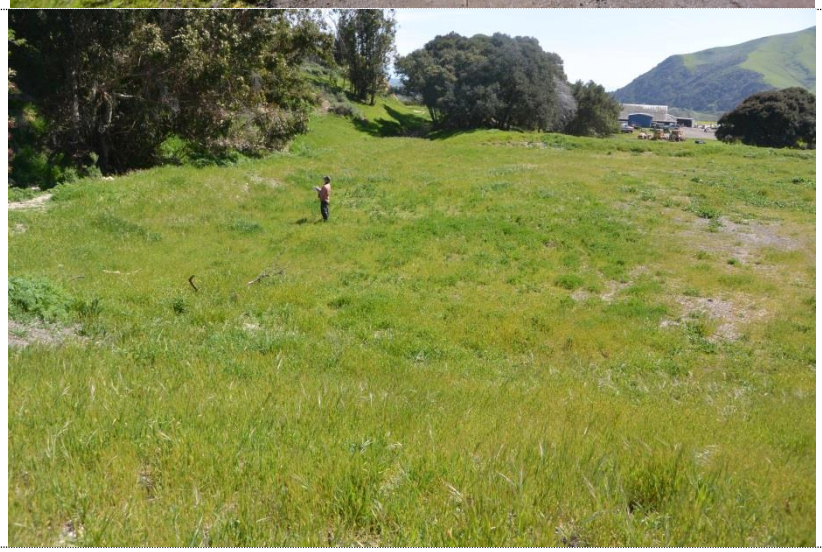
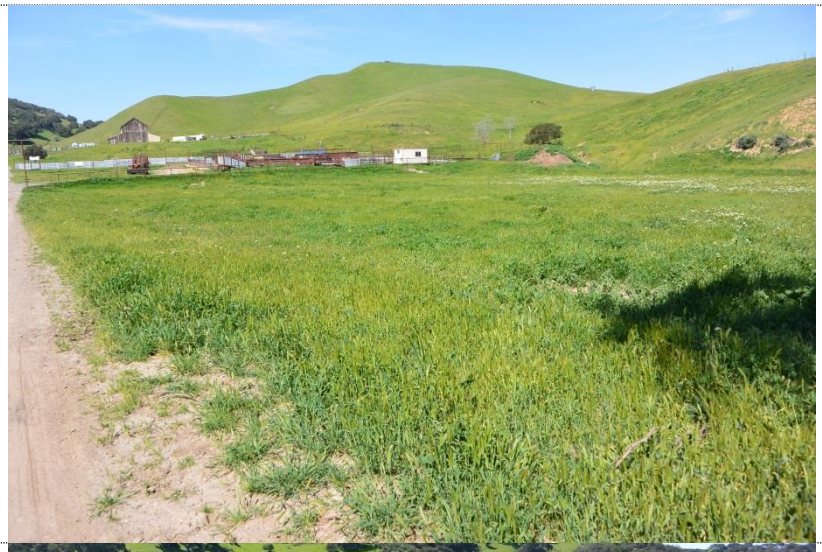
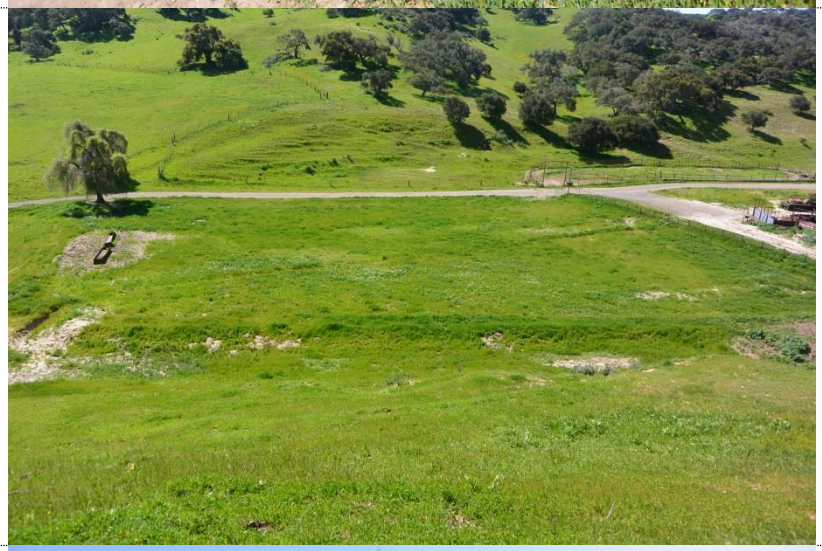
	**Photo 28.** Fork ("Y") in the paved access road. Southeastern path leads to proposed 16.53-acre and 4.63-acre cultivation areas; western path leads to proposed 1.79-acre cultivation and 2.55-acre cannabis premises area. (photo taken 3/26/2019)
	**Photo 29.** Crossing #3: 24-in. RCP culvert outlet structure that conveys water from man-made drainage system (Class IV watercourse) underneath gravel access road and gravel pad. (photo taken 3/26/2019)
	**Photo 30.** Concrete ditch (Class IV watercourse) that conveys water into man-made drainage system (Class IV watercourse). (photo taken 3/26/2019)

	**Photo 31.** Crossing #3: 32-in. RCP culvert inlet structure that conveys water from man-made drainage system (Class IV watercourse) underneath gravel access road and gravel pad. (photo taken 3/26/2019)
	**Photo 32.** Concrete ditch (Class IV watercourse) that conveys water into man-made drainage system (Class IV watercourse). (photo taken 3/26/2019)
	**Photo 33.** Gravel access road used to access the proposed 1.79-acre future cultivation area and proposed 2.55-acre cannabis premises area. (photo taken 2/7/2019)

	**Photo 34.** Man-made pond, part of man-made drainage system, located adjacent to (north of) 1.79-acre future cultivation area. Potentially created for groundwater recharge. (photo taken 2/7/2019)
	**Photo 35.** Gravel access road used to access the proposed 1.79-acre future cultivation area and proposed 2.55-acre cannabis premises area. (photo taken 2/7/2019)
	**Photo 36.** Proposed 1.79-acre future cultivation area. (photo taken 3/26/2019)

	**Photo 37.** Proposed 1.79-acre future cultivation area. (photo taken 3/26/2019)
	**Photo 38.** Proposed 1.79-acre future cultivation area. (photo taken 3/26/2019)
	**Photo 39.** Active raptor nest located within eucalyptus woodland, adjacent to (north of) proposed 1.79-acre future cultivation area. (photo taken 3/26/2019)

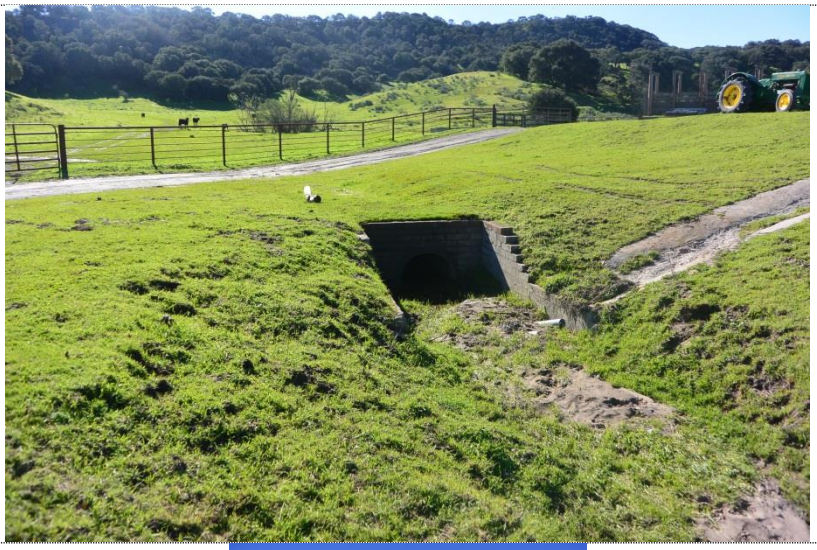


Photo 40. Crossing #2: 24-in. RCP culvert near proposed 2.55-acre cannabis premises area, which conveys water from man-made drainage system (Class IV watercourse) underneath gravel access road. (photo taken 2/7/2019)

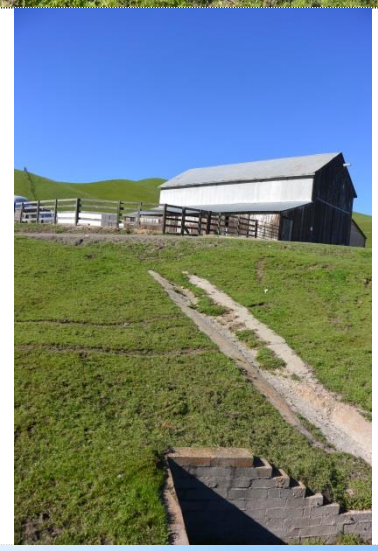


Photo 41. Proposed 2.55-acre cannabis premises area (barn) and concrete ditch (Class IV watercourse) that conveys water into man-made drainage system (Class IV watercourse). (photo taken 2/7/2019)

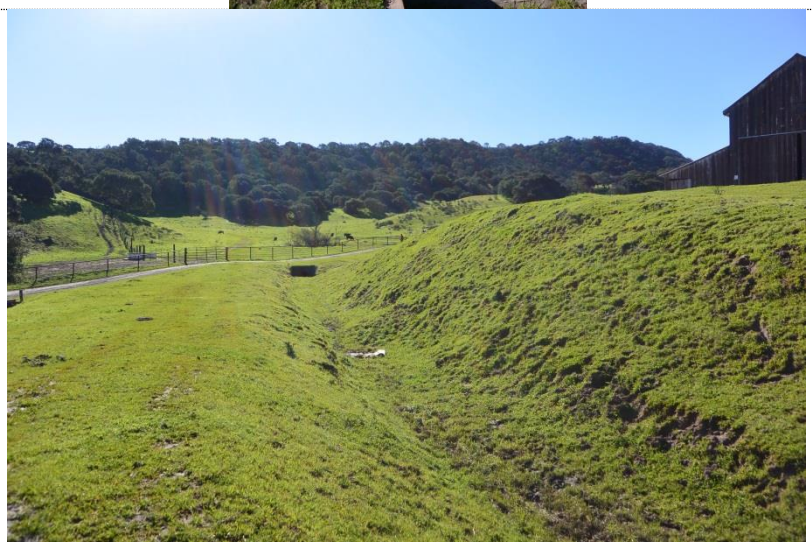
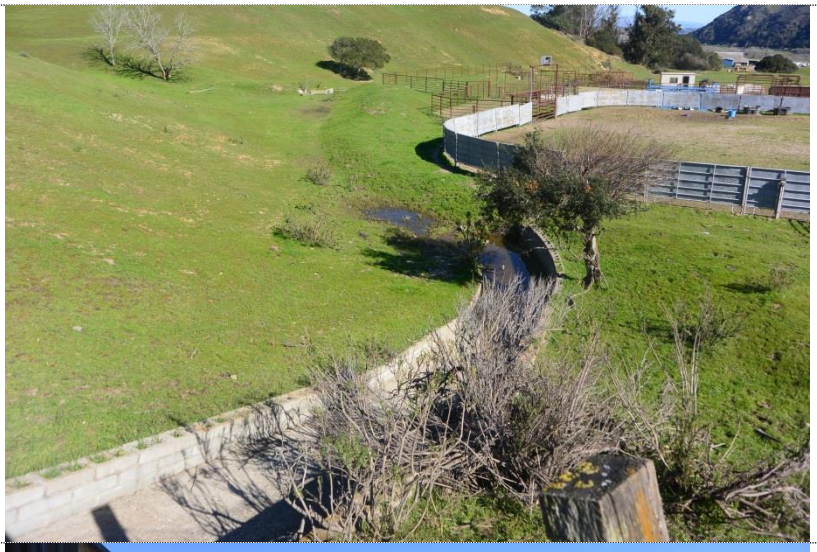
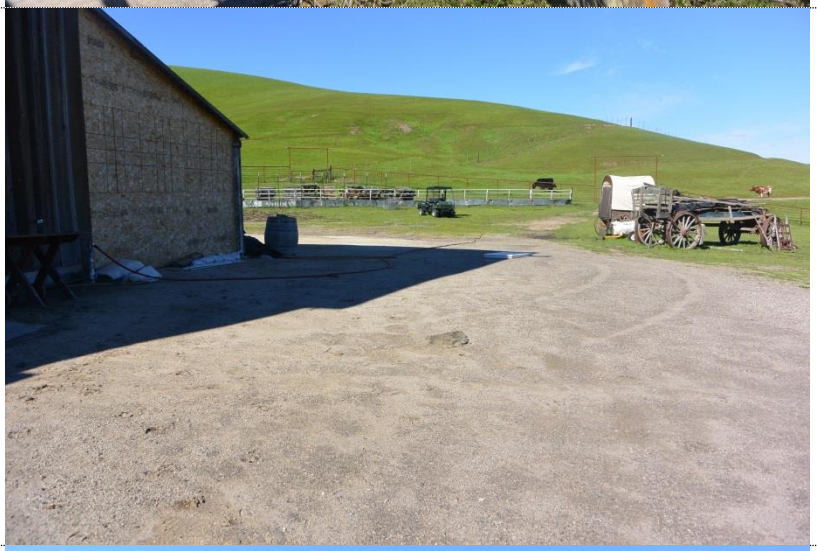
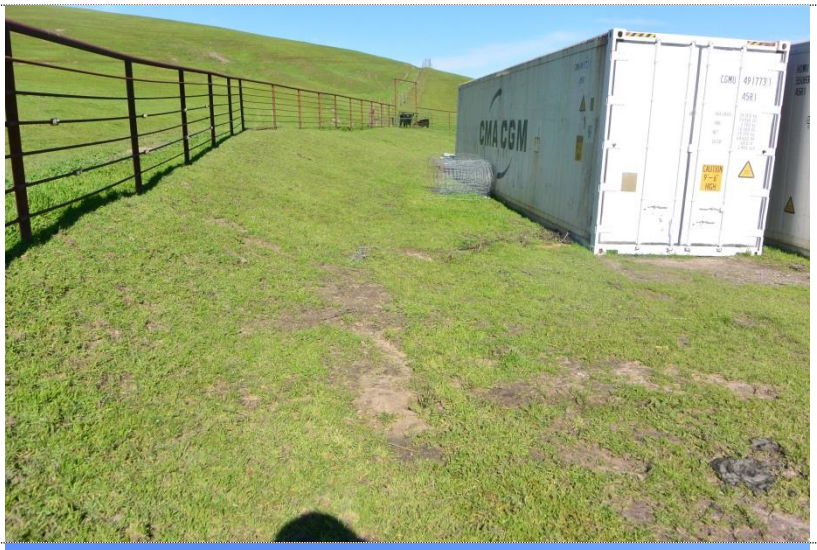


Photo 42. Man-made drainage system (Class IV watercourse) near proposed 2.55-acre cannabis premises area. (photo taken 2/7/2019)

	**Photo 43.** Man-made drainage system (Class IV watercourse) near proposed 2.55-acre cannabis premises area. (photo taken 2/7/2019)
	**Photo 44.** Proposed 2.55-acre cannabis premises area (barn, storage containers, and surrounding area). (photo taken 2/7/2019)
	**Photo 45.** Proposed 2.55-acre cannabis premises area (barn, storage containers, and surrounding area). (photo taken 2/7/2019)

	**Photo 46.** Proposed 2.55-acre cannabis premises area (barn, storage containers, and surrounding area). (photo taken 2/7/2019)
	**Photo 47.** Proposed 2.55-acre cannabis premises area (barn, storage containers, and surrounding area). (photo taken 2/7/2019)

Attachment 2.

SBCO Cannabis Cultivation Ordinance Biological Resource Protection Standards

APPENDIX J: CANNABIS ACTIVITIES ADDITIONAL STANDARDS.

A. Tree Protection Plan.

1. The Applicant for a land use entitlement for a commercial cannabis activity that would involve pruning, damage, or removal of a native tree, shall prepare and submit to the Department a Tree Protection Plan prepared by a Department-approved arborist designed to determine whether avoidance, minimization, or compensatory measures are necessary.
2. The Plan shall include:
    a. Biologically favorable options for access roads, utilities, drainages, and structure placement, taking into account native tree and shrub species, age, and health with preservation emphasized.
    b. Designated development envelopes. Include utility corridors, irrigation lines, roadways, driveways, etc.
    c. Equipment storage (including construction materials, equipment, fill soil, or rocks) and construction staging and parking areas outside of the protection area.
    d. The type and location of protective fencing or other barriers to be in place to protect trees in protection areas during construction.
    e. The location of all tree wells or retaining walls. These shall be located outside the area within six feet of the dripline of all protected trees unless authorized by the County.
    f. The location of all paths within 25 feet of dripline areas. Only pervious paving materials are permitted within 6 feet of dripline areas.
    g. The location of any replacement trees.
3. During construction these standards shall be met:
    a. All trees shall be protected by a fence located at least 6 feet outside of the dripline. Fencing shall be at least 3 feet high, staked to prevent any collapse, and with signs identifying the protection area placed in 15-foot intervals on the fencing.
    b. All grading and construction fencing, staking, and signage shall be maintained.
    c. All trees located within 25 feet of buildings shall be protected from stucco and/or paint.
    d. No irrigation is permitted within 6 feet of the dripline of any protected tree unless specifically authorized.
    e. If the use of hand tools is deemed infeasible by the Director, work with rubber-tired construction equipment weighing 5 tons or less may be authorized by the Director. If significant large rocks are present, or if soil placement will impact surrounding trees, then a small tracked excavator may be used as determined by the Department-approved biologist.
    f. A Department-approved arborist shall direct and oversee any development activity required within the dripline or sensitive root zone of any specimen tree. Any roots of one inch in diameter or greater which are encountered during grading or construction, and/or tree removal or trimming, must be cleanly cut.

g. Grading shall be designed to avoid ponding and ensure proper drainage within driplines of oak trees.

h. The Applicant shall designate a Department-approved arborist to be onsite throughout all grading and construction activities which may impact native trees. Duties of the arborist include the responsibility to ensure all aspects of the approved Tree Protection Plan are carried out.

4. Replacement trees shall be installed in compliance with the following standards:

   a. The replacement trees must be a native species, planted at a 10:1 ratio for oak trees (15:1 for Blue or Valley Oaks), and a 2:1 ratio for other trees.

   b. The replacement trees must be species from locally obtained plants and seed stock.

   c. The replacement trees must be gopher-fenced.

   d. The replacement trees must be irrigated with drip irrigation on a timer until established.

   e. The replacement trees must be weaned off of irrigation over a period of 2 to 3 years.

   f. No replacement tree shall require permanent irrigation within the dripline of the tree.

   g. If replacement trees cannot all be accommodated on the same lot, the Applicant shall submit a plan for replacement trees to be planted offsite.

   h. The replacement trees must be protected from predation by wild and domestic animals and from human interference by the use of staked, chain link fencing and gopher fencing during the maintenance period.

5. The Applicant shall install all measures identified by the Tree Protection Plan onsite prior to commencement of cannabis activities, as applicable. All such measures shall be indicated on final plans.

6. Prior to issuance of the cannabis permit, the Applicant shall submit the Tree Protection Plan to the Department for review and approval. The Applicant shall implement all tree protection measures of the Tree Protection Plan pursuant to the specific timing requirement for each measure set forth in the Tree Protection Plan.

7. The Department shall dispatch, on an ongoing basis, a qualified inspector to monitor and ensure compliance with the Tree Protection Plan.

B. Habitat Protection Plan

1. The Applicant for a land use entitlement for a cannabis activity that would involve clearing of native vegetation or other sensitive vegetation in an area that has been identified as having a medium to high potential of being occupied by a special-status wildlife species, nesting bird, or a Federal or State-listed special-status plant species, shall prepare and submit a Habitat Protection Plan prepared by a Department-approved biologist, in coordination with the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) as required for State or Federal permits and State or Federally listed species, designed to determine whether avoidance, minimization, or compensatory measures are necessary.

2. Focused species-specific surveys shall be required to determine whether a sensitive species or nesting bird may be present, and shall be conducted at the appropriate time of year and time of day when that species is active or otherwise identifiable. Where warranted by the findings of initial review, protocol level surveys may also be required.

3. If the project site is located within the known habitat of a species listed as rare, threatened, or endangered by the USFWS and/or CDFW, the issuance of a permit does not relieve the permit-holder of any duties, obligations, or responsibilities under the Endangered Species Act or any other law.

4. The Plan shall include:

   a. The location and extent of all driplines and sensitive root zones for all vegetation to be preserved.

   b. The location of sensitive habitat with a detailed description of proposed disturbance.

   c. Original and new locations for replanted species.

   d. Designated development envelopes. Include utility corridors, irrigation lines, roadways, driveways, etc.

   e. Equipment storage (including construction materials, equipment, fill soil, or rocks) and construction staging and parking areas.

   f. Sensitive habitats, including but not limited to those listed below, shall be preserved.

      (1) Southern Vernal Pool

      (2) Valley Needlegrass Grassland

      (3) Southern California Coastal Lagoon

      (4) Southern California Steelhead Stream

      (5) Southern California Threespine Stickleback Stream

      (6) Coastal and Valley Freshwater Marsh

      (7) Northern and Southern Coastal Salt Marsh

      (8) Central Coast Arroyo Willow Riparian Forest

      (9) Southern Coast Live Oak Riparian Forest

      (10) Southern Cottonwood Willow Riparian Forest

      (11) Southern Willow Scrub

      (12) Central Maritime Chaparral

   g. During construction all sensitive habitat shall be temporarily fenced with chain-link or other material satisfactory to the Department, at least 200 feet from the edge of the sensitive habitat, and staked to prevent any collapse.

   h. During construction and grading, all fencing, staking, and barriers shall be maintained.

   i. During construction if it becomes necessary (as authorized by the Department) to disturb or remove any plants within the habitat area, a Department-approved biologist shall direct the work. Where feasible, specimens shall be boxed and replanted. If a Department-approved biologist certifies that it is not feasible to replant, plants shall be

replaced under the direction of the Department-approved biologist at a 1:1 ratio. If replacement plants cannot all be accommodated on the same lot, a plan must be approved by the Department for replacement plants to be planted offsite.

j. During construction all grading activities shall be designed to ensure that habitat areas have proper drainage during and after construction, per a Department-approved biologist's recommendations.

k. If any ground disturbances will occur during the nesting bird season (February – mid-September), prior to any ground disturbing activity, surveys for active nests shall be conducted by a Department-approved biologist following CDFW approved protocols, no more than 10 days prior to the start of activities. The surveys shall be conducted in a sufficient area around the work site to identify any nests that are present and to determine their status. Identified nests shall be continuously surveyed for the first 24 hours prior to any activities to establish a behavioral baseline. Once work commences, all nests shall be continuously monitored to detect any behavioral changes. If behavioral changes are observed, the work causing that change shall cease and CDFW shall be consulted for additional avoidance and minimization measures. A minimum no disturbance buffer of 250 feet around active nests of non-listed bird species and a 500 foot no disturbance buffer around the nests of unlisted raptors shall be maintained until the breeding season has ended, or until the biologist determines that the birds have fledged and are no longer reliant upon the nest or parental care for survival. Any variance from these buffers shall be supported by the biologist and CDFW shall be notified in advance of implementation of a no disturbance buffer variance.

l. Applicants shall submit information about proposed pest management practices, including Integrated Pest Management techniques and proposed use, storage, and application of pesticides, herbicides, and/or rodenticides by type and amount as part of a Pest Management Plan to be reviewed and approved by the Department and the County Agricultural Commissioner (CAC) prior to issuance of a land use entitlement for the proposed cannabis activity. The Pest Management Plan shall describe the methods to be used for pest control, including the type, location, timing, and methods used for any rodenticide. If rodents are a pest issue for an applicant, non-toxic alternatives to rodenticides are recommended, such as mechanical controls like traps, gopher fencing, and weeding; biological controls such as natural pheromones; or cultural controls such as site maintenance and hygiene. Consistent with the California Department of Pesticide Regulation (DPR) determination that commercially grown cannabis is an agricultural commodity, cannabis cultivation on all licensed sites shall comply with the requirements of Division 6 and 7 of the Food and Agricultural Code and pertaining regulations. These laws and regulations set forth requirements for the legal use of pesticides, herbicides, and/or rodenticides, and are enforced by the CAC. Any uses of pesticide, herbicide, or rodenticide products shall be consistent with these requirements and any products on the site shall be placed, used, and stored in a manner that ensures that they will not enter or be released uncontrolled into the environment, including surface or ground waters. Per the California DPR's established regulatory process, commercial cannabis cultivators planning on using pesticides, herbicides, and/or rodenticides shall obtain an Operator Identification Number from the CAC before they can purchase or use these chemicals. Within the Pest Management Plan, the applicant shall demonstrate sufficient knowledge of regulatory requirements regarding the safe and effective use of pesticides and/or

rodenticides. Applicants that opt to use rodenticides shall provide an annual report of rodenticide use data to the CAC and County permitting.

5. Subsequent actions identified as necessary in the Habitat Protection Plan, such as species removal or relocation, shall be initiated following any required consultation with USFWS and CDFW pursuant to Federal and State regulations (respectively).

6. The Applicant shall install all measures identified by the Habitat Protection Plan prior to commencement of cannabis activities or as otherwise specified in the Habitat Protection Plan. All necessary requirements identified in the Habitat Protection Plan such as buffers, species monitoring, and plant species replacement, shall be indicated on final plans.

7. The Applicant shall submit a Habitat Protection Plan to the Department and demonstrate that all requirements pertaining to the Habitat Protection Plan have been implemented and completed prior to issuance of permits or licenses for cannabis activities.

8. The Department shall dispatch on an ongoing basis a qualified inspector to monitor and ensure compliance with the Habitat Protection Plan.

C. Wildlife Movement Plan.

1. The Applicant shall prepare a Wildlife Movement Plan for all commercial cannabis activities proposed in or near wildlife movement areas for the Department's review and approval. A Department-approved biologist shall review the Plan and confirm the adequacy of design for passage of smaller wildlife and safe prevention of entry by larger mammals, such as deer. The Applicant shall demonstrate to the Department that all perimeter fencing requirements are in place as required prior to commencement of cannabis activities. The Plan shall include:

   a. The type, material, length, and design of proposed fencing.

   b. Proposed fencing shall be designed to accommodate for the passage of smaller wildlife and safe prevention of entry by larger mammals, such as deer, and be non-disruptive, wildlife-friendly fencing, such as post and rail fencing, wire fencing, and/or high-tensile electric fencing.

   c. Analysis of the proposed fencing in relation to the surrounding opportunities for migration.