

Biological Resources Evaluation



View toward existing Farm Center



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May 31, 2023

Laura O'Leary
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Re: Coastal Biological Resources Evaluation for Fifth Crow Farm Backfield Farm Labor Housing Project in Pescadero, San Mateo County, California

Dear Ms. O'Leary,

The purpose of this letter report is to provide the results of a biological resource evaluation (BRE) of the natural community, sensitive habitats, and special status species resources potentially present at Fifth Crow Farm Backfield Farm Labor Housing Project, located in rural San Mateo County, California, near the town of Pescadero (Project Study Area; Attachment A, Figure 1). This assessment is required for a new coastal development permit by the San Mateo County Planning Department. POST and Fifth Crow Farm are proposing to establish a four-unit farm worker housing cluster in two duplex structures in a corner of the existing farming ground, to accommodate Fifth Crow Farm's agricultural staff and families.

The Project is located east of Cloverdale Road approximately two miles south of the town of Pescadero and is accessible via a farm road. The Project Study Area is in a narrow valley situated between the Butano Ridge to the east and coastal hills to west. The property is one of numerous farms present along Cloverdale Road. Butano Creek flows on a westerly course along the northwestern boundary of the Project Study Area. The creek sustains a thick riparian corridor dominated by willows. Chaparral habitat forms the boundary to the south. The entire property is outside designated critical habitat for endangered species. The approximately 2.3-acre Project Study Area consists of an open field utilized for cultivating row crops, as shown in Attachment A, Figure 1.

The purpose of the assessment is to complete an evaluation of potential impacts to sensitive coastal habitats (or ESHA) from development of the proposed Project Study Area, under the guidelines of the San Mateo County Local Coastal Plan (LCP). This report describes the results of the assessment and provides recommendations for avoidance and minimization measures for any ESHA protected by local, state, and/or federal laws and regulations present on or in the immediate vicinity of the Project Study Area.

Methods

On April 14, 2023, Sol Ecology biologists conducted a biological resources study at the Project Study Area which includes the proposed project footprint and outlying areas that could be affected indirectly by project activities. Prior to the site visit, the Soil Survey of San Mateo County, California [U.S. Department of Agriculture (USDA) Web Soil Survey, Google Earth aerial images, USGS topographic quadrangle maps, and *A Manual of California Vegetation, Online Edition*¹ was reviewed to assess the potential for sensitive biological communities and special status species to occur on the Project Study Area. In addition, database searches of the California Natural Diversity Database (CNDDDB)² were performed for known occurrences of special-status species near the Project Study Area; these searches focused on the Half Moon Bay 7.5-minute USGS quadrangle and the five surrounding USGS quadrangles within 5 miles of the Project Study Area.

The assessment focused on determining whether suitable habitat elements for special status species (including those unique species listed in the LCP) documented in the surrounding vicinity are present on the Project Study Area or not and whether the project would have the potential to result in impacts to any of these species and/or their habitats either on- or off-site.

The Project Study Area was also evaluated to determine if any coastal wetland (one-parameter rule) is present, or if a riparian corridor is present. Coastal wetlands are defined as an area where the water table is at, near, or above the land surface long enough to bring about the formation of hydric soils or to support the growth of plants which normally are found to grow in water or wet ground (also known as hydrophytic); in either case, hydrology must be present also. To qualify, a coastal wetland must contain at least a 50 percent cover of some combination of these plants, unless it is a mudflat. Riparian corridors were identified as areas along streams that naturally support native vegetation and wetlands. These areas filter runoff, provide runoff protection, and facilitate groundwater recharge. Setbacks for wetlands are 100 feet; setbacks for riparian corridors are 50-feet for perennial streams and 30-feet for intermittent.

Coastal Wetland Criteria

Soils

The Natural Resource Conservation Service (NRCS) defines a hydric soil as follows:

“A hydric soil is a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part.”

Federal Register July 13, 1994,
U.S. Department of Agriculture, NRCS

¹ [CNPS] California Native Plant Society. 2018. *A Manual of California Vegetation, Online Edition*. Sacramento, California. Online at: <http://vegetation.cnps.org/>; most recently accessed: April 2023.

² California Department of Fish and Wildlife (CDFW). 2023. California Natural Diversity Database. Wildlife and Habitat Data Analysis Branch, Sacramento, CA; most recently accessed: April 2023.

Soils formed over long periods of time under wetland (anaerobic) conditions often possess characteristics that indicate they meet the definition of hydric soils. Hydric soils can have a hydrogen sulfide (rotten egg) odor, low chroma matrix color, generally designated 0, 1, or 2, used to identify them as hydric, presence of redox concentrations, gleyed or depleted matrix, or high organic matter content.

Hydrology

Evidence of wetland hydrology can include primary indicators, such as visible inundation or saturation, drift deposits, oxidized root channels, and salt crusts, or secondary indicators such as the FAC-neutral test, presence of a shallow aquitard, or crayfish burrows. The Arid West Supplement³ contains 16 primary hydrology indicators and 10 secondary hydrology indicators. Only one primary indicator is required to meet the wetland hydrology criterion; however, if secondary indicators are used, at least two secondary indicators must be present to conclude that an area has wetland hydrology.

Vegetation

Plant species observed on the Project Study Area were identified using the CNPS Online Manual. Plants were assigned a wetland indicator status according to the National Wetland Plant List (NWPL)⁴ as described below. To qualify, a wetland must contain at least a 50 percent cover of some combination of obligate and facultative wetland plants. FAC species were not considered due to their common association with coastal upland habitats unless in present in combination with an obligate species and clear indicators of hydrology were present.

Wetland indicator statuses listed in the NWPL are based on the expected frequency of occurrence in wetlands as follows:

OBL	Obligate (OBL)	Always found in wetlands	>99% frequency
FACW	Facultative Wetland	Usually found in wetlands	67-99%
FAC	Facultative	Equal in wetland or non-wetlands	34-66%
FACU	Facultative Upland	Usually found in non-wetlands	1-33%
UPL	Upland	Upland/Not listed (upland)	<1%

Results

Biological communities present on the Project Study Area were classified based on existing plant community descriptions described in the CNPS Online Manual. Sensitive habitats are those habitats defined as sensitive under the Mid-Coast LCP Section 7.1 and are described below if found.

³ U.S. Army Corps of Engineers (USACE). 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0).

⁴ USACE. 2020. National Wetland Plant List. Western Mountains, Valleys, and Coast Regional List. Online at: https://wetland-plants.usace.army.mil/nwpl_static/v34/home/home.html; accessed: May 2023

The elevation within the Project Study Area is uniformly 19.8 meters (65 feet above mean sea level). The Project Study Area encompasses two soil map units identified by the USDA, NRCS (USDA 2019):

- **Corralitos sandy loam, over gravel, nearly level, imperfectly drained (CuA):** this soil map unit covers almost the entire site. It consists of soils that are deep and somewhat poorly drained and is sub-prime farmland. These soils were formed in alluvial materials. Minor components include Soquel (5%), Dublin (5%), Tunitas (4%) and unnamed (1%). Sandy loam is the predominant soil type in the Project Study Area and it is not rated as hydric.
- **Mixed alluvial land (Ma):** this soil map unit is in a very small area located along the Butano Creek riparian corridor and extends only slightly into the Project Study Area. It consists of soils that are deep and excessively drained and is considered to be sub-prime farmland. These soils were formed in alluvium. Minor components include Unnamed (5%) and Terrace escarpments (5%) and neither of these is hydric.

Vegetation communities present in the Project Study Area were classified based on existing plant community descriptions described in the California Native Plant Society Online Manual of California Vegetation (CNPS 2023a). However, in some cases it is necessary to identify variants of community types or to describe non-vegetated areas that are not described in the literature.

The entire Project Study Area was devoid of trees and is comprised of a fallow agricultural field covered in non-native species. Grasses observed included soft chess (*Bromus hordeaceus*), rattail sixweeks grass (*Festuca myuros*), foxtail barley (*Hordeum murinum*), and annual bluegrass (*Poa annua*). Other herbaceous species included mustard (*Hirschfeldia incana*) field bindweed (*Convolvulus arvensis*), scarlet pimpernel (*Lysimachia arvensis*), California burclover (*Medicago polymorpha*), wild radish (*Raphanus sativus*), common groundsel (*Senecio vulgaris*), fava bean (*Vicia faba*), spring vetch (*Vicia sativa*), and bird's eye speedwell (*Veronica persica*). One native species, pineapple weed (*Matricaria discoidea*), was observed. Species observed during the assessment are provided in Attachment C.

Sensitive Habitats (ESHA)

Based on data available on the site and conditions observed at the time of the site assessment, two ESHAs were observed outside the Project footprint but are within the Project Study Area. These included Butano Creek and its riparian habitat/corridor as shown on Figure 1 (Attachment A).

Riverine

A little more than 100 feet away from the proposed Project footprint to the northeast, Butano Creek flows on a westerly course along the northwestern boundary of the Project Study Area. Butano Creek is a perennial creek that is within the Pescadero Creek Watershed. The creek channel is very wide, averaging about 20 feet. The banks are very steep with a great deal of erosion on both banks. At the time of the April 2023 survey, flows within the creek were about 3 to 4 feet deep. No aquatic vegetation was present in the creek due to recent rain events. The

creek is designated critical habitat for coho salmon (*Oncorhynchus kisutch*) – central California coast Evolutionarily Significant Unit (ESU) population 4, and steelhead (*O. mykiss irideus*) Distinct Population Segment (DPS) population 8.

Riparian

The riparian corridor associated with Butano Creek consists of dense vegetation dominated by a contiguous canopy comprised of a mix of red willow (*Salix laevigata*) and arroyo willow (*S. lasiolepis*); this habitat is located more than 50 feet to the northeast of the proposed project footprint as shown in Figure 1. Plant species observed in the understory consisted of blue elderberry (*Sambucus nigra*), California blackberry (*Rubus ursinus*), and annual stinging nettle (*Urtica urens*). Abundant wildlife was present in the riparian corridor. Birds observed included song sparrow (*Melospiza melodia*), and Allen’s hummingbird (*Selasphorus sasin*). Mammals included brush rabbit (*Sylvilagus bachmani*), and a large San Francisco dusky-footed woodrat (SFDW; *Neotoma fuscipes annectens*) nest complex. Both Allen’s hummingbird and SFDW are considered special status species.

Special Status Species

Special-status species include those plants and wildlife species that have been formally listed, are proposed as endangered or threatened, or are candidates for such listing under the Federal Endangered Species Act (ESA) or California Endangered Species Act (CESA). These acts afford protection to both listed species and those that are formal candidates for listing. Plant species on the California Native Plant Society (CNPS) Rare and Endangered Plant Inventory (Inventory) with California Rare Plant Ranks (Rank) of 1 and 2 are also considered special-status plant species. CDFW Species of Special Concern, CDFW California Fully Protected species, USFWS Birds of Conservation Concern, and CDFW Special-status Invertebrates are all considered special-status species. Furthermore, CDFG Fish and Game Code and the Migratory Bird Treaty Act (MBTA) prohibits the take of actively nesting birds as well as common bats and their roosts (CDFG Code only). Lastly, special status species in this report include all rare or unique species listed in the LCP.

Eleven (11) special status plants have been documented within five miles of the Project Study Area (Attachment A, Figure 2). Of these, no special status plants are present or have potential to occur in the Project Study Area due to the disturbed nature and historic tilling. One species, Choris’ popcornflower is documented to occur in annual grassland and chaparral habitat located south of the Project footprint. No indirect effects to this community are likely to occur due to the aspect of the southerly slope to the site and proximity to existing disturbances.

Eighteen (18) special status animals have been documented within five miles of the Project Study Area (Attachment A, Figure 3). Given proximity of the site to Butano Creek and its associated riparian habitat to the northeast, and chaparral habitat to the south (located outside the study area), two (2) federal listed species, and two special status species along with other migratory bird species protected under the MBTA may be present in surrounding habitats outside the proposed project footprint. These species are described in greater detail in Table 1 below.

Table 1. Special Status Wildlife with Potential to Occur in the Project Study Area

Scientific Name/ Common Name	Status ¹	Habitat	Potential for Occurrence Within the Project Footprint
Amphibians and Reptiles			
<i>Thamnophis sirtalis tetrataenia</i> San Francisco garter snake	FE, SE, FP	Occur in the vicinity of freshwater marshes, ponds, and slow-moving streams in San Mateo County and extreme northern Santa Cruz County. Prefers dense cover and water depths of at least one foot. Upland areas near water are also very important.	Low Potential: Multiple occurrences within five miles; the nearest is a garter snake found dead on Cloverdale Road at a location approximately 0.2 miles north of the Project Study Area. Nearby Butano Creek is documented to provide foraging and dispersal habitat for this species. This species is not likely to be present in the proposed footprint, due to the lack of available cover and limited refugia close to water and thus, the site would not be considered ESHA . This species is not likely to be present outside nearby riparian habitat given the site is not within any dispersal corridor and lacks necessary cover.
<i>Rana draytonii</i> California red-legged frog	FT, SSC	Lowlands in or near permanent sources of deep water with dense, shrubby, or emergent riparian vegetation. Requires 11 to 20 weeks of permanent water for larval development. Prefers shorelines with extensive vegetation. Disperses through upland habitats after rains.	Moderate Potential: Multiple occurrences within five miles; the nearest is within one mile of the Project Study Area. Nearby Butano Creek is documented to provide foraging and dispersal habitat for this species. Rodent burrows on the site provide marginally suitable refugia for dispersing frogs; however, upland habitat is not present due to lack of suitable breeding habitat within 300 feet; further, the site is outside designated critical habitat. CRLF may disperse into the project footprint, but lack of suitable upland features nor breeding habitat indicates the Project Study Area would not be considered ESHA for this species .
Birds			
<i>Selasphorus sasin</i> Allen's hummingbird	BCC	Resident to the coast of California and Oregon during the breeding season. Nests are constructed in trees or shrubs near shady streams in both understory and tree canopy.	Low Potential: An Allen's hummingbird was observed in the Butano Creek riparian corridor adjacent to the Project footprint during the April 14, 2023 survey. Suitable nesting habitat is present in the adjacent riparian corridor and in the chaparral habitat upslope of the Project Study Area; there is no suitable nesting substrate in the Project footprint and as such, would not be considered ESHA .
Mammals			
<i>Neotoma fuscipes annectens</i> San Francisco dusky-footed woodrat	SSC	Forest, riparian, and chaparral habitats of moderate canopy and moderate to dense understory. Constructs nests of shredded grass, leaves, and other material.	Low Potential: Nearby Butano Creek riparian corridor to the north and chaparral habitat to the south provide suitable habitat for this species. Lack of cover within the project footprint precludes this species on the site. SFDW may rarely disperse through the footprint. As such, the site would not be considered ESHA .

¹ FE/FT – Federal Endangered/Threatened
SSC – CDFW Species of Special Concern

SE/ST – State Endangered/Threatened
FP – CDFW Fully Protected Species

FC/SC – Federal or State Candidate
BCC – Bird of Conservation Concern

Other species identified in the database review or LCP are not likely to occur on the Project Study Area due to the absence of suitable habitat elements or vegetation communities including coastal prairie, or dune habitat, pond habitat, refugia (downed logs, rock outcrops, large burrows, etc.), suitable bat roosts, friable soils, appropriate elevations, etc. Generally, the Project Study Area's overall disturbed nature and regular tilling likely precludes most native flora and fauna.

Discussion and Recommendations

Based on the results of this assessment, no ESHA have been identified on the Project Study Area, including no coastal wetlands nor unique or occupied habitats. Much of the site is dominated by invasive and ornamental plants typical of areas that have been disturbed or where topsoil has been removed for tilling or farming. These areas generally do not support most native flora and fauna.

Butano Creek and its associated riparian habitat is located more than 50 feet away from proposed activities and as such, will not be affected by proposed activities. Similarly, habitat to the south of the access road will also be completely avoided. These habitats are likely to support at least four (4) special status wildlife species described in Table 1, including two federal listed species: SFGS and CRLF. Neither species is likely to occur in the proposed footprint due to lack of suitable refugia. However, CRLF may make overland movements during periods of wet weather. As such, best management practices are provided below to ensure avoidance of any dispersing individuals. Similarly, Allen's hummingbird, and other migratory birds may nest in surrounding habitats, and if present, could be adversely affected during the nesting season.

Incorporation of the following avoidance measures will ensure that take of these species is completely avoided:

1. **Environmental Awareness Training:** Prior to the start of work, environmental awareness training should be provided to all construction crew. Training will include a description of all biological resources that may be found on or near the Project Study Area, the laws and regulations that protect those resources, the consequences of non-compliance with those laws and regulations, instructions for inspecting equipment each morning prior to activities, and a contact person if protected biological resources are discovered on the Project Study Area.
2. **Wildlife Exclusion Fencing (WEF):** At least 14 days prior to the commencement of construction-related activities, CRLF exclusion fencing with exit funnels shall be installed between the riparian corridor and the Project footprint under the direction of a qualified biologist. Following installation, the fence should be inspected weekly by trained construction personnel to monitor and maintain the fence throughout the duration of the Project's ground-disturbing activities.
3. **Erosion control Materials:** Tightly woven fiber netting or similar material shall be used for erosion control or other purposes to ensure amphibian and reptile species do not get trapped. Plastic mono-filament netting (erosion control matting) rolled erosion control products, or similar material shall not be used.

4. **Pre-Construction Wildlife Surveys:** Pre-construction surveys for CRLF shall be conducted prior to initiation of project activities within 48 hours of the start of ground disturbance activities. After the Wildlife Exclusion Fence has been properly erected, scoping of any burrows on the site to ascertain the absence of CRLF is recommended in lieu of daily biological monitoring. Surveys are to be conducted by a qualified biologist. If CRLF is detected during the survey, the animal should be allowed to leave the area on its own accord.

5. **Nesting Bird Seasonal Work Window or Surveys:** Tree and vegetation removal activities should be initiated during the non-nesting season from September 1 to January 31 to the extent feasible. If work cannot be initiated during this period, then nesting bird surveys should be performed in suitable nesting habitat within 250 feet of the project footprint.

If nests are found, a no-disturbance buffer should be placed around the nest until young have fledged or the nest is determined to be no longer active by the biologist. The size of the buffer may be determined by the biologist based on species and proximity to activities but should generally be between 50 feet for songbirds and up to 250 feet for nesting raptors.

Please do not hesitate to contact me with any questions.

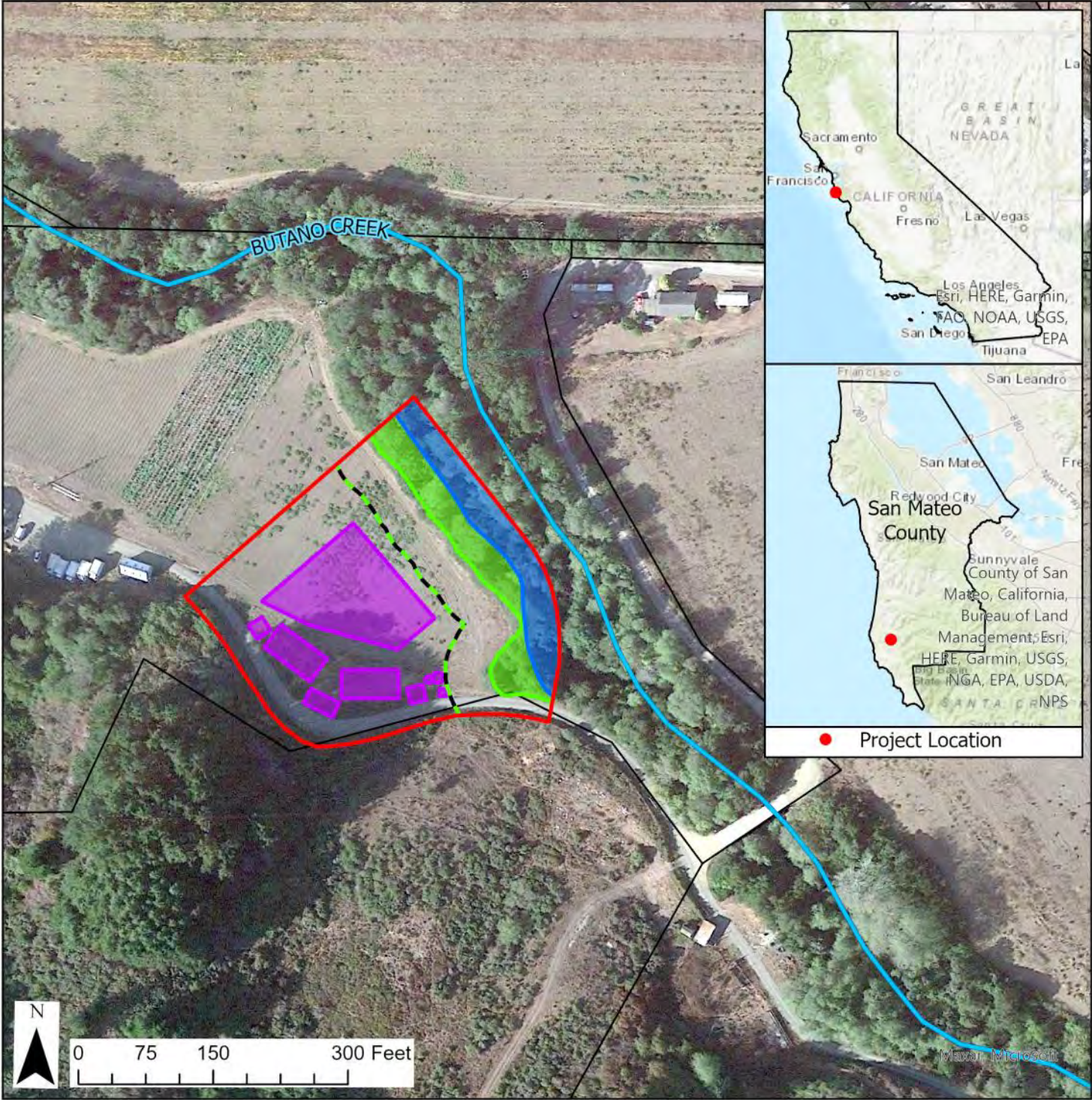
Sincerely,



Dana Riggs,
Principal Biologist

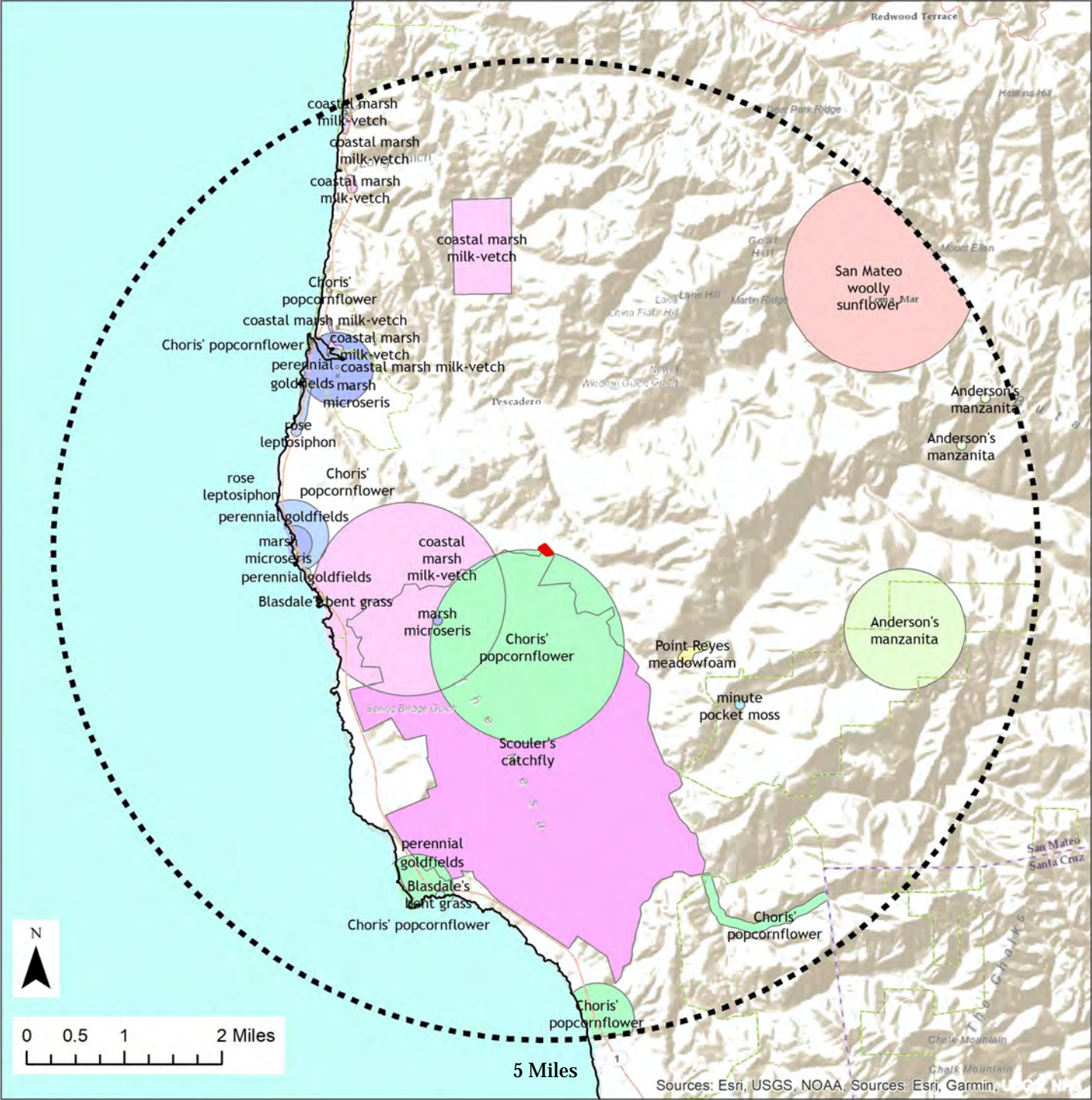
Attachments (3): (A) Project Figures; (B) Site Photographs; (C) Observed Species Tables

Attachment A. Figure 1: Location of Project Area
Fifth Crow Farms Backfield Project, San Mateo County, CA



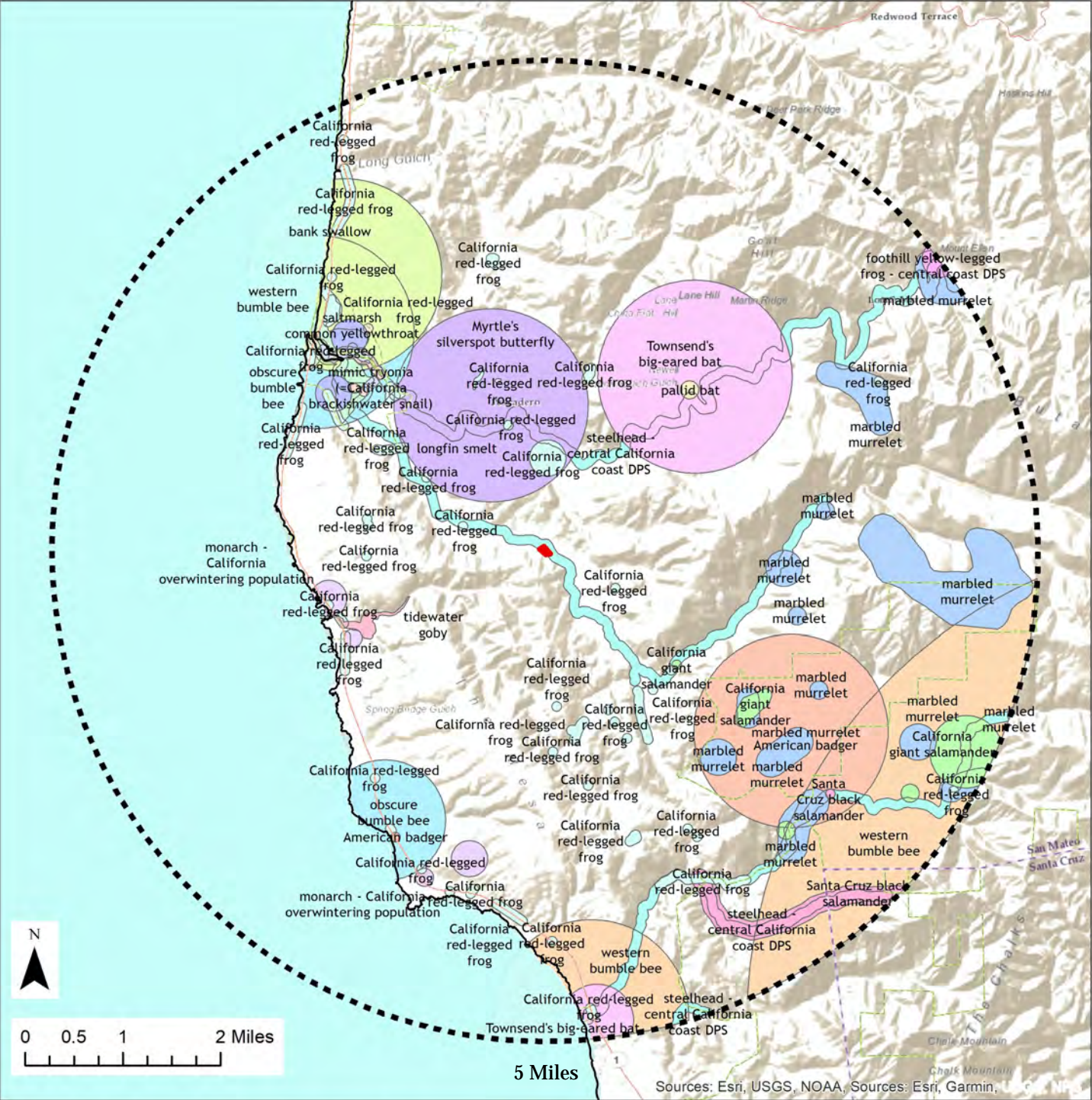
- Study Area (2.281 ac)
- Butano Creek Top of Bank
- Streams
- Project Features
- Riparian Habitat
- Parcels
- 50 Foot Riparian Setback

Figure 2: Special Status Plant Species within 5 Miles of the Project Site
Fifth Crow Farms Backfield Project, San Mateo County, California



- Project Study Area
- 5-Mile Buffer
- Anderson's manzanita (3)
- Blasdale's bent grass (3)
- Choris' popcornflower (8)
- Point Reyes meadowfoam (1)
- San Mateo woolly sunflower (1)
- Scouler's catchfly (1)
- coastal marsh milk-vetch (5)
- marsh microseris (3)
- minute pocket moss (1)
- perennial goldfields (4)
- rose leptosiphon (2)

Figure 3: Special Status Wildlife Species within 5 Miles of the Project Site
 Fifth Crow Farms Backfield Project, San Mateo County, California



Project Study Area	Santa Cruz black salamander (2)	marbled murrelet (14)	steelhead - central California coast DPS (3)
5-Mile Buffer	Townsend's big-eared bat (2)	mimic tryonia (=California brackishwater snail) (2)	tidewater goby (2)
American badger (2)	bank swallow (1)	monarch - California overwintering population (4)	western bumble bee (3)
California giant salamander (5)	foothill yellow-legged frog - central coast DPS (1)	obscure bumble bee (2)	western pond turtle (1)
California red-legged frog (40)	great blue heron (1)	pallid bat (1)	western snowy plover (1)
Myrtle's silverspot butterfly (1)	longfin smelt (1)	saltmarsh common yellowthroat (2)	

Attachment B. Site Photographs



Photo 1. Project Study Area. Looking northwest toward Butano Creek and riparian corridor.



Photo 2. Project footprint within Project Study Area. Looking north.



Photo 3. Chaparral habitat south of the Project footprint. Looking south.



Photo 4. Willow riparian corridor. Looking north.

Attachment C. Observed Species Tables

Table 2. Observed Plant Species

Common name	Scientific name	Origin
<i>Non-native grassland (Project footprint)</i>		
Soft chess	<i>Bromus hordeaceus</i>	Invasive non-native
Shepherd's purse	<i>Capsella bursa-pastoris</i>	Non-native
Field bindweed	<i>Convolvulus arvensis</i>	Non-native
Rattail sixweeks grass	<i>Festuca myuros</i>	Invasive non-native
Mustard	<i>Hirschfeldia incana</i>	Non-native
Foxtail barley	<i>Hordeum murinum</i>	Non-native
Scarlet pimpernel	<i>Lysimachia arvensis</i>	Non-native
Pineapple weed	<i>Matricaria discoidea</i>	Native
California burclover	<i>Medicago polymorpha</i>	Invasive non-native
Annual bluegrass	<i>Poa annua</i>	Non-Native
Wild radish	<i>Raphanus sativus</i>	Non-native
Common groundsel	<i>Senecio vulgaris</i>	Non-native
Fava bean	<i>Vicia faba</i>	Non-native
Spring vetch	<i>Vicia sativa</i>	Non-native
Bird's eye speedwell	<i>Veronica persica</i>	Non-native
<i>Riparian Corridor (Project Study Area)</i>		
California blackberry	<i>Rubus ursinus</i>	Native
Blue elderberry	<i>Sambucus nigra</i>	Native
Red willow	<i>Salix laevigata</i>	Native
Arroyo willow	<i>S. lasiolepis</i>	Native
Annual stinging nettle	<i>Urtica urens</i>	Native
<i>Coastal Scrub (Project Study Area)</i>		
Coyote brush	<i>Baccharis pilularis</i>	Native
Ceanothus (multiple species)	<i>Ceanothus</i> ssp.	Native
Coastal bush lupine	<i>Lupinus arboreus</i>	Native
Poison oak	<i>Toxicodendron diversilobum</i>	Native

Table 3. Observed Wildlife Species

Common name	Scientific name
<i>Amphibians</i>	
Pacific tree frog	<i>Pseudacris regilla</i>
<i>Birds</i>	
California quail	<i>Callipepla californica</i>
Wild turkey	<i>Meleagris gallopavo</i>
Allen's hummingbird	<i>Selasphorus sasin</i>
California scrub-jay	<i>Aphelocoma californica</i>
Common raven	<i>Corvus corax</i>
American crow	<i>Corvus brachyrhynchos</i>
Song sparrow	<i>Melospiza melodia</i>
Dark-eyed junco	<i>Junco hyemalis</i>
House finch	<i>Haemorhous mexicanus</i>
<i>Mammals</i>	
Brush rabbit	<i>Sylvilagus bachmani</i>
Black-tailed deer	<i>Odocoileus hemionus</i>