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ENVIRONMENTAL CONSULTANTS

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Los Angeles Turf Club, Inc.
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Subject: Biological Resources Letter Report for the Enhanced Emergency Services Access Roadway Grading Permit, at San Luis Rey Training Center (Project #: PDS2019-LDGRMJ-30228)

Dear Mr. Spetnagel:

This letter report provides an assessment of potential biological resources associated with the proposed Enhanced Emergency Services Access Roadway Grading Project ("Project") at the San Luis Rey Training Center (SLRTC) in Bonsall, California.

In accordance with the current San Diego County Report Format and Content Requirements for Biological Resources (San Diego County 2010), this letter report describes the field assessment methods, existing biological resources, potential for sensitive biological resources to be present, potential biological constraints, and recommended resource avoidance measures.

The County-approved CEQA - Biological Resources Consultant that participated in the preparation of this report and review of the study is: Scott Taylor, ECORP Consulting, Inc.

In summary of the findings, the proposed Project's grading area ("Grading Area") contains 2.537 acres of disturbed and developed habitat, and 0.346 acres of early-stage coastal sage scrub that is situated on a cut-slope face and in areas at the top of the slope. Though sensitive species were determined to not use the area of impact, sensitive habitat exists in the buffer areas near where grading will occur, and sensitive species associated with these habitats could be using these habitats. The proposed Project includes an expansion of an existing road and slope stabilization and thus would not affect the landuse, corridor use by wildlife, and habitat use patterns and species diversity and abundance in extending periods after implementation. Any disruption of habitat uses and wildlife use in the area would be temporary and occur only during construction. To avoid disruption during the breeding season, construction should occur between September 1 and February 14 or when a biologist has determined that there are no active nests in areas influenced by construction noise and activity. To avoid long-term effects to the sensitive habitats adjacent to the Project, the plant palettes for the planned landscaping should exclude non-nativespecies and species considered to be invasive. To avoid impacts to sensitive species that may be using thearea proposed for grading as a transition area between adjacent habitats, during construction it is recommended that morning sweeps and relocations (as needed) be conducted to make sure the site is clear of sensitive wildlife.

1.0 PURPOSE OF THE REPORT

SLRTC is responding to a Notice of Violation (NOV) received from the County in April 2019, (Case # PDS2019-ENFGCO-000065) with information to support the County's decision regarding a remedial grading permit that will bring the action into compliance. At the request of the County and as part of the information to be submitted to the County, this Biological Resources Letter Report was prepared.

2.0 PROJECT AND STUDY AREA LOCATION

The SLRTC property ("Property") is located within the unincorporated area of Bonsall in San Diego County (County), California and is within U.S. Geological Survey (USGS) 7.5-minute Bonsall quadrangle (Figure 1). The Property is located at 5772 Camino Del Rey Road, approximately 0.8 mile east of Camino Del Cielo and directly adjacent to and west of a residential property at 31612 Wrightwood Road. Under its current use, SLRTC is a thoroughbred racehorse training facility owned and operated by Los Angeles Turf Club, Incorporated. SLRTC houses up to 499 thoroughbred horses on approximately 204 acres over 12 APNs.

The proposed Grading Area consists of 2.883 acres within two parcels: APN #127-460-12-00 and 127-460-13-00. It is in an eastern section of the Property. The proposed Grading Area serves the SLRTC facility and is currently used for access roads, staging equipment, and temporary structures. The Survey Area assessedfor this report includes the entire Grading Area and up to a 250-foot buffer zone (Figure 2).

3.0 PROJECT DESCRIPTION

In response to a NOV received from the County in April 2019, (Case # PDS2019-ENFGCO-000065) referencing an existing slope that does not have an associated permit, the applicant is processing a remedial grading permit. This permit incorporates stabilization of the existing slope as referenced in the NOV, as well as bringing into compliance with County regulations an existing borrow site and enhanced emergency services access via an improved existing utility roadway width that will be achieved through relocation of an existing riding arena and exercise pens. These relocations also eliminate the need to construct an extensive retaining wall as part of slope stabilization.

Given the sensitive nature and flight response of thoroughbred racehorses, disruptions to their environment must be limited and strictly managed to ensure safety for both humans and animals. Therefore, the application includes areas beyond the original NOV in order to minimize multiple impacts to facility operations by combining objectives into a single construction disturbance upon execution.

The proposed grading plan disturbance area includes 1.00 acre for the borrow site, 1.01 acres for the slope stabilization, 0.41 acres for the relocated arena, and 0.46 acres for the road (Figure 1).

4.0 REGIONAL AND REGULATORY CONTEXT

Table 1 provides a summary of the regulations considered and under which the resources on the Property were evaluated for this study.

Table 1: Applicable Federal, State, and Local Regulations

Federal Regulations		
Regulation	**Resource**	**Regulating Agency**
Federal Endangered Species Act	Listed "Endangered" or "Threatened" plant and animal species	USFWS
Migratory Bird Treaty Act	Migratory birds, or their parts, nests, or eggs	USFWS
Clean Water Act	"Waters of the U.S." – aquatic resources	USACE+RWQCB
State Regulations		
Regulation	**Resource**	**Regulating Agency**
California Endangered Species Act	Listed "Endangered," "Threatened," or "Candidate" native species and their habitats	CDFW
Native Plant Protection Act	64 species, subspecies, and varieties of endangered or rare native plants	CDFW
California Fish and Game Code	37 CESA threatened or endangered species that are rare or face possible extinction; Section 1600 protection of streambeds and associated riparian habitat; Fully protected species.	CDFW
Porter-Cologne Water Quality Control Act / California Water Code	"Waters of the State" – aquatic resources	RWQCB
CEQA Significance Criteria	Special status species, riparian habitat or sensitive natural communities, federal	County of San Diego
Local Regulations		
Regulation	**Resource**	**Regulating Agency**
Habitat Loss Permit (HLP) Ordinance	Grading or clearing permit required if direct impacts to coastal sage scrub habitat wetlands, and wildlife movement and nursery sites	County of San Diego

Table 1: Applicable Federal, State, and Local Regulations		
DRAFT County MSCP Subarea Plan (North County)	Sensitive, rare, threatened, and endangered plant and animal species; preserve areas, and pre-approved mitigation areas	County of San Diego
San Diego County Code of Regulatory Ordinances:		
County's Zoning and Land Use Regulations, Ch. 6 Resource Protection Ordinance	Environmentally sensitive lands, wetlands, wetland buffers, floodways, steep slopes, sensitive habitat lands, and significant prehistoric or historic sites	County of San Diego

The SLRTC property is in the County of San Diego, in the northern portion of the County and in the unincorporated community of Bonsall. The County is currently in the process of developing a regional conservation plan that extends the scope of the Region's Multiple Species Conservation Program (MSCP) to include the conservation of targeted species and habitats and provides a streamlined approach and permitting process for developers in this region of the County (North County). The SLRTC property is also located in the Pre-Approved Mitigation Area (PAMA) within the draft North County MSCP. Until this North County Subarea Plan is approved and implemented, development projects will need to secure their own permits for any "take" related to species currently on Federal and State lists of endangered or threatened species.

The Project falls under the Habitat Loss Permit (HLP) Ordinance, which requires a permit when coastal sage scrub habitat may be impacted by grading, clearing, and improvement plans. Although, coastal sage scrub habitat may be impacted by the grading plans, the impacted acreage falls under one acre and is not expected to be utilized by coastal California gnatcatcher. Therefore, this Project is anticipated to fall under a de minimis HLP, if the County concurs with the finding that coastal California gnatcatchers would not be present.

5.0 METHODS

5.1 BACKGROUND REVIEW

ECORP conducted background research, which included a review of standard resources such as the latest version of the California Natural Diversity Database (CNDDB) within 5 miles of the Grading Area (CNDDB; CDFW 2020a), U.S. Fish and Wildlife Service (USFWS) Critical Habitat Portal and Information for Planning and Consultation (IPaC) Trust Resource List (USFWS 2020a), California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (CNPS 2020), USFWS National Wetland Inventory (USFWS 2020b), and San Diego Geographic Information Source (SANGIS) as preparation for a field visit and reporting. All sensitive species listed in the County's Biological Resource Review Memorandum to the San Luis Rey Training Center as well as the CDFW Special Animals List (CDFW 2020b) were addressed during the survey and are addressed in this report. Database searches extended beyond the Survey Area; therefore, sensitive species that

appeared in the literature review but are restricted to the coast and have no potential to occur within the Survey Area were omitted from this assessment.

Using desktop review information and observations in the field, a list of special-status plant and wildlife species that have potential to occur within or adjacent to the Grading Area was generated. For the purpose of this assessment, special-status species are defined as plants or wildlife that:

- have been designated as either rare, threatened, or endangered by CDFW, CNPS, or the USFWS, and/or are protected under either the federal or California Endangered Species Acts(ESAs);
- are candidate species being considered or proposed for listing under these same acts;
- are fully protected by the California Fish and Game Code, §§ 3511, 4700, 5050, or 5515; and/or
- are of expressed concern to resource and regulatory agencies or local jurisdictions.

Potential for occurrence of special-status species were determined based on the following guidelines:

Present: The species was observed on site during a site visit.

High: Habitat (including soils and elevation factors) for the species occurs within the Project site and a known occurrence has recently been recorded (within the last 20 years) within five miles of the area.

Moderate: Habitat (including soils and elevation factors) for the species occurs within the Project site and a documented observation occurs within the database search, but not within five miles of the area; a historic documented observation (more than 20 years old) was recorded within five miles of the Project site; or a recently documented observation occurs within five miles of the area and marginal or limited amounts of habitat occurs in the Project site.

Low: Limited or marginal habitat for the species occurs within the Project site and a recently documented observation occurs within the database search, but not within five miles of the area; a historic documented observation (more than 20 years old) was recorded within five miles of the Project site; or suitable habitat strongly associated with the species occurs on site, but no records or only historic records were found within the database search.

Presumed Absent: Species was not observed during a site visit or focused surveys conducted in accordance with protocol guidelines at an appropriate time for identification; habitat (including soils and elevation factors) does not exist on site; or the known geographic range of the species does not include the Project site.

5.2 FIELD SURVEY

Following the literature review, qualified ECORP biologists, Margaret Bornyasz and Christina Congedo, conducted a field assessment on July 14, 2020 from 0900 to 1300. Weather conditions consisted of clear skies, temperature range of 67 – 75 degrees Fahrenheit, and wind speeds of 0 – 7 miles per hour.

The Grading Area, as well as the 250-foot buffer around the Project site (hereafter referred to as "Survey Area"), was surveyed on foot by biologists familiar with the biological resources located in the regional vicinity of the Property. Proposed Grading Areas were surveyed to provide for 100 percent visual coverage.

The biologists conducted an onsite survey throughout the Survey Area to further examine the biological resources present on the Property and to determine the potential presence for special-status biological resources. Focused, protocol-level surveys were not conducted as a part of this visit. Vegetation mapping was conducting using aerial imagery and ground-truthed during field surveys. Plant and wildlife species observed during the survey were recorded (Attachments A and B, respectively) and representative photographs of the Property were taken (Attachment C). Binoculars were used to aid in bird and butterfly identifications.

The assessment was conducted on foot to visually and audibly cover 100 percent of the Survey Area and a 130-scale (i.e., 1 inch = 130 feet) digital orthographic map of the site with aerial was utilized to map the vegetation communities and record any special-status biological resources directly in the field.

6.0 RESULTS

6.1 Vegetation Communities and Land Covers

The habitat and vegetation community mapping are consistent with the classifications described by Robert F. Holland's Preliminary Descriptions of the Terrestrial Natural Communities of California (Holland 1986). The Draft Vegetation Communities of San Diego County was also used as a reference (Oberbauer et al. 2008). Habitat and vegetation communities were based off SANDAG's parcel lookup interactive map with San Diego County vegetation layer and Western San Diego County (2013) vegetationlayers, Vegetation Classification Manual for Western San Diego County (SANDAG 2011), and an onsite visit conducted on July 13, 2020.

The locations of each vegetation community in the Grading Area and Survey Area are described in detail below and presented in the Figure 2. Acreages of each habitat and vegetation community in the Grading Area are shown below in Table 2. Representative photographs of the habitats within the Grading Area are included within Attachment C

Table 2. Habitat and Vegetation Communities in the Grading Area

Habitat and Vegetation Communities	Acres
Developed - access road (dirt)	0.360
Developed - access road (paved)	0.001
Developed - built environment or constructed slopes, pads	1.175
Disturbed	0.990
Disturbed - berms	0.011
Disturbed Diegan coastal sage scrub	0.346
Grading Area Total	***2.883***

Vegetation Communities Onsite

Disturbed - Diegan Coastal Sage Scrub (Holland Code 32500)

Diegan coastal sage scrub is a native plant community which is composed of a variety of low shrubs, dominated by drought deciduous species with scattered evergreen shrubs (Holland 1986). This species occurs typically on low moisture-availability sites such as steep, xeric slopes or clay-rich soils that are slow to release stored water. A small area of Diegan coastal sage scrub has developed and occurs in the northeastern portion of the site on a very steep, weathered granite cut slope, which is highly degraded. This area consists of non-native ruderal annuals, including tocalote (*Centaurea melitensis*), shortpod mustard (*Hirschfeldia incana*), and tree tobacco (*Nicotiana glauca*) seedlings. Scattered native shrub vegetation also exists and includes establishing California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), deerweed (*Acmispon glaber*), and laurel sumac (*Malosma laurina*).

Urban/Developed (Holland Code 12000)

Urban/Developed areas do not constitute a vegetation classification, but rather a land cover type. This land cover is characterized by structures, pavement, and landscaped areas that usually require irrigation and native vegetation is no longer supported (Oberbauer et al. 2008). Areas where debris is covering a large area where no signs of natural land is apparent can also be considered urban/developed (Oberbauer et al. 2008). In the Survey Area, this land cover was dominant covering compacted dirt roads, structures, and areas completely devoid of vegetation with compacted soils.

Disturbed Habitat (Holland Code 11300)

Disturbed habitat is characterized as an area that has been previously modified by anthropogenic effects but retains soils and is largely comprised of ruderal, non-native vegetation (Oberbauer et al. 2008) that typically has little ecological value. The dominant plant species observed in the land cover included tocalote, shortpod mustard, Russian thistle (*Salsola tragus*), Canada horseweed (*Erigeron canadensis*), spotted spurge (*Euphorbia maculata*). Other species observed included salt heliotrope (*Heliotropium curassavicum*), pigweed amaranth (*Amaranthus albus*), telegraph weed (*Heterotheca grandiflora*), jimsonweed (*Datura wrightii*), nettle leaf goosefoot (*Chenopodium murale*), and red brome (*Bromus rubens*).

Within the 250-foot buffer, three additional vegetation communities were present, which are described in detail below. The location of each vegetation community within the Survey Area is depicted in Figure 2 and representative photographs of these communities are included in Attachment C.

6.1.1 Vegetation Communities within Adjacent Areas

Non-native Grassland (Holland Code 42200)

Non-native grassland is a sparse to dense cover of primarily annual grasses with flowering culms 0.2-0.5 m high (Holland 1986). It is often associated with a variety of annual forbs, especially in years of favorable rainfall (Holland 1986). Occurs on extremely dry during the summer and fall months (Holland 1986). This habitat is used as pastureland and is regularly grazed and therefore lacks the diversity typically associated with this vegetation community. Dominant species observed within the non-native grassland included

ripgut brome (*Bromus diandrus*), red brome, fennel (*Foeniculum vulgare*), shortpod mustard, tree tobacco, clustered tarweed (*Deinandra fasciculata*) and to a lesser extent jimsonweed, Canada horseweed, wild radish (*Raphanus sativus*), doveweed (*Croton setiger*), telegraph weed, and Australian saltbush (*Atriplex semibaccata*).

Disturbed Freshwater Seep (Holland Code 45400)

Freshwater seep is a vegetation community dominated by perennial herbs, especially sedges and grasses, that is typically a low-growing dense cover and can be associated with narrow drainages (Oberbauer et al. 2008). This habitat-type was observed along the banks of a natural drainage, where water has ponded at the culver inlet and a scour area at the outlet. Dominant species observed included watercress (*Nasturtium officinale*), bristly ox-tongue (*Helminthotheca echioides*), cocklebur (*Xanthium strumarium*), and curly dock (*Rumex crispus*). Other species observed in this area included sandbar willow (*Salix exigua*), saltmarsh bulrush (*Bolboschoenus maritimus* ssp. *paludosus*), and mulefat (*Baccharis salicifolia*).

Disturbed Southern Cottonwood-Willow Riparian Forest (Holland Code 61330)

Southern cottonwood-willow riparian forest is a vegetation community defined by broad-leafed, deciduous relatively tall trees (Oberbauer et al. 2008), closely associated with a water feature, typically lining drainages, but can be found in ditches and other manmade basins. Dominant species observed included scattered Fremont cottonwood (*Populus fremontii*) and Mexican fan palm (*Washingtonia robusta*) trees with an understory dominated by stinging nettle (*Urtica dioica*), watercress, cocklebur, bristly ox-tongue, and fennel.

6.2 General Wildlife Species

The flora and fauna observed during the field assessment included those that are typical of the aforementioned disturbed habitats and vegetation communities. Wildlife observed included red-tailed hawk (*Buteo jamaicensis*), red-shouldered hawk (*Buteo lineatus*), turkey vulture (*Cathartes aura*), northern mockingbird (*Mimus polyglottos*), California towhee (*Melozone crissalis*), rock dove (*Columba livia*), lesser goldfinch (*Spinus psaltria*), black phoebe (*Sayornis nigricans*), Anna's hummingbird (*Calypte anna*), western tiger swallowtail (*Papilio rutulus*), mourning cloak (*Nymphalis antiopa*), painted lady (*Vanessa cardui*), cabbage white (*Pieris rapae*), desert cottontail (*Sylvilagus audubonii*), California ground squirrel (*Otospermophilus beecheyi*), coyote (*Canis latrans*), mountain lion (*Puma concolor*), and western fence lizard (*Sceloporus occidentalis*).

6.3 Special Status Species

Focused special-status plant or wildlife surveys were not conducted within the Survey Area as part of this assessment. No special-status plant species were observed within the Survey Area. Two special-status wildlife species were observed during the assessment and are discussed below.

Special-status plants were evaluated for their potential to occur within the Grading Area where impacts could occur. Special-status wildlife were evaluated for their potential to occur within the Survey Area and a

broader area which includes the Grading Area and buffer, where direct or indirect (i.e. incidental) impacts during construction could occur.

6.3.1 Special-Status Plants

Special-Status Plant Species with a Potential to Occur in the Grading Area

No special-status plants were observed during the assessment. All special-status plants were determined unlikely to occur within the Grading Area due to the lack of suitable habitat and/or other conditions such as soil or elevation. Justifications for potential to occur are provided in Attachment D.

6.3.2 Special-Status Wildlife

The special-status wildlife species with occurrence records in the area were assessed for potential to occur within the Study Area (Attachment E). Two sensitive wildlife species, turkey vulture and red-shouldered hawk, were observed within the Grading Area. Five additional species have a moderate to high potential tooccur in the Grading Area.

Special-Status Wildlife Species Observed

Red-shouldered hawk is a County Group 1 species and is proposed to not be covered by the draft North County MSCP (County of San Diego 2009). One adult red-shouldered hawk was observed perched within the Survey Area. This species is associated with low-elevation riparian woodlands, particularly in areas with interspersed swamps and emergent wetlands. It builds a stick nest in a major fork of a large trees. No stick nests were detected during the site visit and nesting habitat does not occur within the Project limits. Foraging habitat is present throughout the site and landscaped trees and riparian trees within the buffer provides suitable nesting habitat.

Turkey vulture is a County Group 1 species and is a proposed species to not be covered by the draft MSCP North (County of San Diego 2009). Three adults were observed soaring above the Survey Area. This species inhabits farmland or other open areas suitable for scavenging carrion. It nests in rock crevices, caves, ledges, thickets, mammal burrows and hollow logs, fallen trees, abandoned hawk or heron nests, and abandoned buildings. The site does not provide suitable nesting habitat, but foraging habitat is present throughout the site.

Special-Status Wildlife Species with a Potential to Occur in the Grading Area

The five special-status wildlife species that were determined to have a moderate to high potential to occur within the Grading Area are listed below with their status designations. Justifications for potential to occur are provided in Attachment E.

- Arroyo toad (*Anaxyrus californicus*), Endangered, CA Species of Special Concern, Group 1 (high sensitivity)
- Western spadefoot (*Spea hammondii*), CA Species of Special Concern, Group 2 (declining)
- Orange-throated whiptail (*Aspidoscelis hyperythra*), Watchlist, Group 2 (declining)

- Coastal whiptail (*Aspidoscelis tigris stejnegeri*), CA Species of Special Concern, Group 2 (declining)
- Coast horned lizard (*Phrynosoma blainvillii*), CA Species of Special Concern, Group 2 (declining)

The majority of the Grading Area is comprised of compacted soils, which are unusable for burrowing wildlife species. However, areas with uncompacted soils in the disturbed habitat provide suitable soils for aestivation habitat for the arroyo toad, western spadefoot, and southern California legless lizard. Habitat that provides forage and cover for these species occurs adjacent to the Grading Area and could be used by the species to transition to different the environments.

There are three recent CNDDB records of arroyo toad within 5 miles of the Project, located in the San Luis Rey River and associated tributary, Keys Creek (1996 – 2001; Attachment E). There are four recent CNDDB records (1997 – 2016; Attachment E) of western spadefoot within 5 miles of the Grading Area; the closest record within Moosa Creek. There are two recent CNDDB records (2017, 2014) of the southern California legless lizard within 5 miles of the Grading Area.

Sparse open areas within the disturbed Diegan coastal sage scrub and disturbed habitat provide suitable habitat for the coastal whiptail, orange-throated whiptail, and coast horned lizard. Harvester ants (*Pogonomyrmex* spp.) were also present onsite and are the main food source of coast horned lizards. All three species have recent CNNDB records within 5 miles of the Grading Area (Attachment E).

Small mammal specialist, Stephen Montgomery (SJM), conducted a site visit on August 7, 2020 to assess the potential for Stephen's kangaroo rat (*Dipodomys stephensi*; SKR), northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*), and Dulzura pocket mouse (*Chaetodipus californicus femoralis*). His findings concluded that there was no sign of SKR or potential for their occurrence. The northwestern San Diego pocket mouse and Dulzura pocket mouse are presumed absent from the Grading Area due to lack of sign and have low potential to occur within the Survey Area due to degraded habitat conditions. It is unlikely that populations of these species would establish in this area, and no additional surveys should be needed.

Special-Status Wildlife Species with a Potential to Occur in Adjacent Areas

The eight additional special-status wildlife species that were determined to have potential to occur within the Survey Area are listed below with their status designations. Justifications for potential to occur are provided in Attachment E.

- Arroyo toad, Endangered, CA Species of Special Concern, Group 1 (high sensitivity)
- Western spadefoot, CA Species of Special Concern, Group 2 (declining)
- Coastal California gnatcatcher, Threatened, CA Species of Special Concern, Group 1 (high sensitivity)
- Cooper's hawk (*Accipiter cooperii*), Watch List, Group 1 (high sensitivity)
- Orange-throated whiptail, Watch List, Group 2 (declining)
- Coastal whiptail, CA Species of Special Concern, Group 2 (declining)
- Coast horned lizard, CA Species of Special Concern, Group 2 (declining)

- Southern California legless lizard (*Anniella stebbinsi*), CA Species of Special Concern

6.3.3 U.S. Fish and Wildlife Service Designated Critical Habitat

The Property is not located within any USFWS-designated critical habitat. There is critical habitat for the coastal California gnatcatcher located just north of the Project Area, approximately 100 feet away from Project impact areas, within sparse patches of coastal sage scrub habitat located between properties. Due to the quality and patchiness of the critical habitat, coastal California gnatcatchers are not expected to frequently utilize the area. There is higher quality coastal sage scrub critical habitat located on a large, undeveloped parcel, approximately 0.66 mile north of the Project Area, that integrates with the San Luis Rey River Park. No coastal California gnatcatchers were observed in the patches of coastal sage scrub habitat during the site visits, which were conducted by an authorized coastal California gnatcatcher section 10(a)(1)(A) permitted biologist.

6.3.4 Migratory Birds and Raptors

The Grading Area provides foraging habitat for migratory bird species and raptor. No nesting habitat or long-standing nests were observed within the Grading Area during the reconnaissance survey. Although highly trafficked and fragmented, the disturbed Diegan coastal sage scrub and disturbed habitats provide marginal foraging habitat.

The suitable foraging habitat for raptors within the Survey Area is located within isolated patches of disturbed areas, non-native grassland, and a small section of the disturbed coastal sage scrub. There are several large, planted trees that are suitable for nesting; however, they are situated adjacent to highly trafficked areas (i.e., roads and horse arenas). Therefore, raptor species are not expected to use these treesfor nesting. There is no suitable nesting habitat for raptors within the Grading Area and no raptor nests were observed during the site visit.

6.4 Jurisdictional Wetlands and Waterways

There are no jurisdictional water features within the Grading Area; therefore, no direct or indirect impacts to jurisdictional wetlands and waterways are anticipated.

6.5 Wildlife Corridors and Linkages

Natural movement corridors occur to the east and west of the Grading Area along patches of existing undeveloped land and canyons. The entire SLRTC facility is fenced and gated, thus constraining movement to the drainage areas or where there are gaps in fencing on the Property. The Grading Area is an open pathway that could provide some space for movement and it is possible that the area is used as animals transition to open space areas offsite. Mountain lion and coyote scat was observed northeast of the Grading Area. The natural canyon with a mature tree canopy, on the northeast section of the Survey Area and further east, provides more cover and would be more well suited to facilitate wildlife movement. If these species were to use the Grading Area, they would be expected to pass through temporarily.

7.0 PROJECT EFFECTS AND SIGNIFICANCE DETERMINATION

The Project would not have a substantial adverse effect, either directly or through habitat modifications, on a candidate, sensitive, or special status species listed in local or regional plans, policies, or regulations, or by the CDFW or USFWS.

The Grading Area does not contain any County List A or B plant species, but does support two County Group 1 wildlife species, turkey vulture and red-shouldered hawk. Impacts would occur to foraging habitat for the red-shouldered hawk and turkey vulture. The Project will implement seasonal avoidance and monitoring measures to avoid potential impacts to these species. The project will also purchase 0.692 acres of Diegan coastal sage scrub habitat at a County approved mitigation bank. The Grading Area does not contain any County List C or D plant species or Group 2 wildlife species. Therefore, impacts are considered less than significant with the incorporation of avoidance and minimization measures.

The Project would not have a substantial adverse effect on riparian habitat or another sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS. The determination was based on the facts that the Project could affect only disturbed and developed habitat, and a small remnant pocket of disturbed coastal sage scrub habitat, which will be mitigated for through purchase of mitigation credits at a 2:1 ratio (that is, 0.692 acre). Therefore, impacts are considered less than significant with the incorporation of avoidance and minimization measures.

The Project would not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal) through direct removal, filling, hydrological interruptions, or other means. This is due to the lack of jurisdictional water features occupying the site. Therefore, no impact would occur.

The Project would not interfere substantially with the movement of a native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. This determination was made due to the already constrained nature of wildlife movement on the Project site and the natural canyon to the northeast providing more suitable cover for movement and nursery sites. Therefore, impacts are less than significant.

The Project would not conflict with one or more local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, and/or would conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan. This determination was made on the findings that the Project could qualify for the Habitat Loss Permit (HLP) Ordinance Exemption (de minimis) for impacts to 0.346 acres of coastal sage scrub habitat. Therefore, impacts are less than significant.

Below is a summary discussion of Project effects by resource category, and suggested measures to further minimize impacts to biological resources.

7.1 Vegetation Communities

7.1.1 Direct Effects

All disturbance and staging will occur within previously disturbed areas, primarily consisting of impacts to

urban/developed land, disturbed areas, and approximately 0.346 acre of disturbed Diegan coastal sage scrub. The disturbed Diegan coastal sage scrub habitat is dominated by non-native ruderal vegetation as previously described and is not expected to be used by the coastal California gnatcatcher for foraging or nesting.

Measures will be implemented to minimize or reduce direct and permanent impacts to the 0.346 acre of disturbed Diegan coastal sage scrub habitat (BIO-1, BIO-2). In addition, a mitigation credit equivalent to 0.692 acre of Diegan coastal sage scrub will be purchased prior to issuance of the grading permit (BIO-4).

7.1.2 Indirect Effects

It is unlikely that the grading work would create "edge effects" that could extend into adjacent habitat areas and cause significant changes to species abundance and changes in use of the resources in those areas.

There is potential for habitats adjacent to the Grading Area to be affected by construction dust. Measures can be implemented to avoid and minimize the potential for short-term and long-term indirect effects to the biological resources and to avoid impacts to habitats that are valuable resources for native wildlife (BIO-2).

All indirect impacts would occur during construction and are assumed to be temporary.

7.2 Special-Status Species

7.2.1 Direct Effects

Red-shouldered hawks and turkey vultures, which were observed within the Survey Area, could use the Grading Area to forage. There is potential for other special-status wildlife species to also occur within the Grading Area. Measures can be implemented to avoid and minimize the potential for short-term and long-term effects to special-status species, avoid impacts to populations of sensitive species that could be using habitat within and adjacent to the Grading Area, and avoid "take" of listed species (BIO-1, BIO-3, BIO-4). Disruption of habitat use and wildlife use in the area would be temporary and occur only during construction.

7.2.2 Indirect Effects

It is unlikely that the grading work would create "edge effects" that could extend into adjacent habitat areas and cause significant changes to species abundance and changes in use of the resources in those areas.

There is potential for special-status wildlife species to occur within the buffer area adjacent to the Grading Area. Measures can be implemented to avoid and minimize the potential for short-term and long-term effects to the special-status species, avoid impacts to populations of sensitive species that could be using habitat within and adjacent to the Grading Area, and avoid "take" of listed species (Bio-2, Bio-3).

7.3 Migratory Birds and Raptors

It is unlikely that the grading work would create "edge effects" that could extend into adjacent habitat areas and cause significant changes to species abundance and changes in use of the resources in those areas.

There is potential for special-status wildlife species, in particular, red-shouldered hawk and turkey vulture individuals, to forage within the Grading Area as well as forage and nest within the Survey Area. Measures can be implemented to remove the potential to affect migratory bird and raptor nesting cycles within and adjacent to the Project (BIO-3).

7.4 Federal Wetlands

There are no jurisdictional water features within the Grading Area.

7.5 Wildlife Movement

Land use, habitat types, and corridor availability will not change with the implementation of the Project.

7.6 Local Policies, Ordinances, Adopted Plans

The Project will temporarily impact approximately 0.346 acres of disturbed coastal sage scrub habitat, which will require compliance with the HLP ordinance. Based on the minimal amount of coastal sage scrub habitat impacted and negative results of the gnatcatcher focused surveys, the Project could qualify for a de minimis HLP (BIO-4).

8.0 CUMULATIVE IMPACTS

Although 0.346 acre of disturbed coastal sage scrub habitat will be temporarily impacted by construction related activities, there is abundant Diegan coastal sage scrub within the vicinity of the Project area that would remain in its current state. No impacts from known projects are anticipated that would reduce the areal extent of these resources. In addition, a mitigation credit equivalent to 0.692 acres of Diegan coastal sage scrub will be purchased at a County approved mitigation bank (BIO-4), thus offsetting the impacts. Therefore, no permanent cumulative impacts to coastal sage scrub habitat or any other native vegetation community is expected, resulting in no cumulative impacts are anticipated as a result of Project implementation.

9.0 PROPOSED AVOIDANCE AND MINIMIZATION MEASURES

The following compliance measures are recommended to comply with regulations that protect biological resources (Table 1) and avoid impacts to protected resources and to otherwise minimize impacts to biological resources described in the results section. With the implementation of these measures or variants with similar protections, significant impacts will not occur to biological resources and compensatory mitigation would not be required.

9.1.1 BIO-1. Minimization of direct impacts to disturbed Diegan sage scrub habitat and Associated Species

Prior to or during construction, Grading Area boundaries will be staked with the supervision of a qualified biologist, to minimize direct impacts to disturbed coastal sage scrub habitat to the maximum extent

practicable. A biologist will be on site during all work activities that involve placement of fill where necessary within the disturbed coastal sage scrub habitat to assist. Any activities within and adjacent to this habitat should be planned to occur outside of the breeding season for coastal California gnatcatcher (February 15-August 31). Also, see BIO-4 for additional measures relating to avoidance of permanent impacts to Diegan coastal sage scrub and associated species.

9.1.2 BIO-2. Standard BMPs to reduce effects of construction dust and erosion

Limits of work should be designated and clearly demarcated, and specifications should provide a stringent level of Best Management Practices (BMPs) to control dust, runoff, and spills and prevent indirect effects to the adjacent sensitive habitats (coastal sage scrub and aquatic habitats). Limits will be marked with temporary fencing that is suitable as a barrier for dust control.

Vegetation communities have the potential to be indirectly affected by deposition of dust during grading activities. Excess dust may affect photosynthesis, respiration, transpiration, and other natural processes (Farmer 1993). To prevent degradation of adjacent habitats, exposed soils must be stabilized, through watering or other measures, to prevent movement of dust at the Project site caused by wind and construction activities such as grading and traffic. To reduce potential impacts related to erosion, BMPs including slope stabilization and control of runoff should be implemented during construction.

9.1.3 BIO-3. Compliance with Migratory Bird Treaty Act

Construction activity (for example, but not limited to, staging, site preparation, grading) should occur between September 1 and January 14 and outside of the nesting season (January 15 to August 31). However, if construction does occur within the nesting season, surveys for migratory bird and raptor nests should be conducted. These surveys should be performed by a qualified biologist within 72 hours prior to the commencement of construction activities. Surveys should include the construction area plus a 500-foot buffer. Survey findings would be documented prior to initiating any construction activities. If active nests are found during nesting bird survey, appropriately sized no-work buffers (generally 50 to 300 feet depending on species sensitivity) will be established around the active nests identified within and adjacent to the Project site. The qualified biologist will determine the appropriate buffer size and level of nest monitoring necessary for species not listed under the federal ESA or the California ESA based on the species' life history, the species' sensitivity to disturbances (e.g., noise, vibration, human activity), individual behavior, status of nest, location of nest and site conditions, presence of screening vegetation, anticipated Project activities, ambient noise levels compared to Project-related noise levels, existing non-Project-related disturbances in vicinity, and ambient levels of human activity.

Buffers will be marked (flagged or fenced with Environmentally Sensitive Area fencing) around any active nests and periodic monitoring by the qualified biologist will occur to ensure the Project does not result in the failure of the nest. The buffer(s) will be maintained around each nest until the nest becomes inactive as determined by the qualified biologist. At the discretion of the qualified biologist, if a nesting bird appears to be stressed as a result of Project activities and the buffer does not appear to provide adequate protection, additional minimization measures may need to be implemented.

Construction can continue outside of the no-work buffers. The qualified biologist will ensure that restricted activities occur outside of the delineated buffers, check nesting birds for any potential indications of stress,

and ensure that installed fencing or flagging is properly maintained during nest monitoring and any additional site visits. Buffer sizes may be adjusted (either increased or reduced), or the extent of nest monitoring may be adjusted, at the discretion of the qualified biologist based on the conditions of the surrounding area and/or the behavior of the nesting bird.

Any changes to buffer sizes and/or nest monitoring frequency will be documented.

If listed species are found to be nesting in the survey area, construction activity should not occur without coordination with regulating agencies and may require an agency-approved bird management plan.

9.1.4 BIO-4: Compliance with Habitat Loss Permit

Per the HLP Ordinance, mitigation is required for impacts to coastal sage scrub habitat. The mitigation ratio is based on the quality of the habitat and consultation with the wildlife agencies (USFWS and CDFW). Protocol-level coastal California gnatcatcher surveys were conducted and provided negative results. Therefore, due to the minimal amount of coastal sage scrub impacts (0.346 acres) and negative results of the gnatcatcher surveys, the Project qualifies for a de minimis HLP. Mitigation credits in the amount of 0.692 acre of Diegan coastal sage scrub will be purchased from a mitigation bank.

9.1.5 BIO-5: Additional Measures for Protection of Sensitive Species

To avoid impacts to arroyo toad, western spadefoot toad, orange-throated whiptail, coastal whiptail, southern California legless lizard, and coast horned lizard a biological monitor should be on site on an as-needed basis to conduct morning sweeps and relocate sensitive wildlife prior to the commencement of work. Additionally, Project work should not occur during rain events.

10.0 SIGNIFICANCE OF PROJECT EFFECTS

With appropriate design and compliance measures implemented to avoid impacts to sensitive resources that could occupy the area (such as coastal California gnatcatcher, arroyo toad, orange-throated whiptail, coastal whiptail, southern California legless lizard, coast horned lizard and nesting birds), the Project will not have significant direct effects on biological resources.

With appropriate design and compliance measures implemented to avoid impacts to avoided and protected biological resources that may occur on or adjacent to the Grading Area, the Project can reduce potential effects to sensitive plant communities and sensitive biological resources to less than significant levels.

With regards from the following report preparers,

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LIST OF FIGURES

Location: N:\2019\2019-165 San Luis Rey Training Center Expansion\MAPS\Location_Vicinity\SLRTCE_Location_GradingLimits.mxd (AMM)-trotellini 8/5/2020

Map Date: 8/5/2020

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

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Figure 1. Project Location and Vicinity

Biological Resources Letter Report - San Luis Rey Training Center

Job Name: Landcover
Project Number: 2019-155
Map Scale: 1 " = 130 '
Production Date: 7/28/2020
Plot Date: 7/28/2020
Map Name: Land Cover Types

NOTES

Photo Source: NAIP 2018

Scale in Feet
0 250
1 " = 130 '

MAP FEATURES

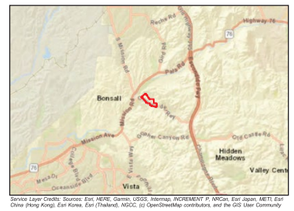
Legend

Grading Limits
250-ft Buffer

Landcover Types

Disturbed Cottonwood-willow Riparian Forest
Disturbed diegan Coastal Sage Scrub
Low Quality Non-native Grassland
Disturbed, Berms
Disturbed
Developed, Access Road (Dirt)
Developed, Access Road (Paved)
Disturbed Freshwater Seep
Developed, Built Environment or Constructed Slopes\Pads

VICINITY MAP



Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MGCC, (c) OpenStreetMap contributors, and the GIS User Community

SAN LUIS REY TRAINING CENTER

Figure 2. Vegetation Communities

N:\2019\2019-165 San Luis Rey Training Center Expansion\MAPS\Vegetation_and_LandCover\SLRTC_Vegetation_Grading_Limits_20200717_V2_ANSID.mxd

Production Date: 7/28/2020	Plot Date: 7/28/2020	Project Number: 2019-155
Coordinate System: NAD 1983 StatePlane California VI FIPS 0406 Feet	Scale: 1 " = 130 '	GIS Specialist: AMM/TR

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LIST OF ATTACHMENTS

ATTACHMENT A

Plant Compendium

Attachment A
Plant Compendium

Scientific Name	Common Name
VASCULAR PLANTS	
ANGIOSPERMS (DICOTYLEDONS)	
ADOXACEAE	**MOSCHATEL FAMILY**
Sambucus nigra ssp. *caerulea*	blue elderberry
AMARANTHACEAE	**AMARANTH FAMILY**
*Amaranthus albus**	pigweed amaranth
*Atriplex semibaccata**	Australian saltbush
Chenopodium californicum	California goosefoot
*Chenopodium murale**	nettle leaf goosefoot
*Salsola tragus**	Russian thistle
ANACARDIACEAE	**SUMAC OR CASHEW FAMILY**
Malosma laurina	laurel sumac
APIACEAE	**UMBELLIFER FAMILY**
*Conium maculatum**	poison hemlock
*Foeniculum vulgare**	fennel
ASTERACEAE	**SUNFLOWER FAMILY**
Acourtia microcephala	sacapellote
Artemisia californica	California sagebrush
Artemisia douglasiana	mugwort
Baccharis salicifolia	mulefat
*Centaurea melitensis**	tocalote
Chaenactis glabriuscula	yellow pincushion
Cirsium sp.	thistle
Corethrogyne filaginifolia	common sandaster
Deinandra fasciculata	clustered tarweed
Erigeron canadensis	Canada horseweed
Eriophyllum confertiflorum	yellow yarrow
Heterotheca grandiflora	telegraph weed
*Helminthotheca echioides**	bristly ox-tongue
*Matricaria discoidea**	pineapple weed
Pseudognaphalium sp.	cudweed
Xanthium strumarium	cocklebur
ASPARAGACEAE	**ASPARAGUS FAMILY**
Yucca schidigera	mohave yucca
BIGNONIACEAE	**CATALPA FAMILY**
*Jacaranda mimosifolia**	jacaranda

Attachment A
Plant Compendium

BORAGINACEAE	**BORAGE FAMILY**
Amsinckia sp.	fiddleneck
Heliotropium curassavicum	salt heliotrope
BRASSICACEAE	**MUSTARD FAMILY**
*Hirschfeldia incana**	shortpod mustard
Lepidium sp.	pepperweed
*Lobularia maritima**	sweet alyssum
Nasturtium officinale	watercress
*Raphanus sativus**	wild radish
CACTACEAE	**CACTUS FAMILY**
Opuntia phaeacantha	brown spined prickly pear
EUPHORBIACEAE	**SPURGE FAMILY**
Croton setiger	dove weed
*Euphorbia maculata**	spotted spurge
FABACEAE	**LEGUME FAMILY**
Acmispon glaber	deerweed
GERANIACEAE	**GERANIUM FAMILY**
Pelargonium citrosum	mosquito plant
LAMIACEAE	**MINT FAMILY**
Salvia mellifera	black sage
MYRTACEAE	**MYRTLE FAMILY**
Eucalyptus sp.*	eucalyptus
NYCTAGINACEAE	**FOUR O'CLOCK FAMILY**
Mirabilis laevis	desert wishbone bush
PAPAVERACEAE	**POPPY FAMILY**
Romneya coulteri "white cloud"	Coulter's matilija cultivar
PLANTAGINACEAE	**PLANTAIN FAMILY**
Antirrhinum nuttallianum	Nuttall's snapdragon
Penstemon spectabilis	showy penstemon
POLYGONACEAE	**BUCKWHEAT FAMILY**
Eriogonum fasciculatum	California buckwheat
*Rumex crispus**	curly dock
SALICACEAE	**WILLOW FAMILY**
Salix exigua	sandbar willow
Salix lasiolepis	arroyo willow

Attachment A
Plant Compendium

SALICACEAE (cont.)	**WILLOW FAMILY**
Populus fremontii	Fremont cottonwood
SOLANACEAE	**NIGHTSHADE FAMILY**
Datura wrightii	jimsonweed
*Nicotiana glauca**	tree tobacco
TAMARICACEAE	**TAMARISK FAMILY**
*Tamarix ramosissima**	tamarisk
URTICACEAE	**NETTLE FAMILY**
Urtica dioica	stinging nettle
VITACEAE	**GRAPEVINE FAMILY**
Vitis girdiana	desert wild grape
ANGIOSPERMS (MONOCOTYLEDONS)	
ARECACAEAE	**PALM FAMILY**
*Washingtonia robusta**	Mexican fan palm
CYPERACEAE	**SEDGE FAMILY**
Bolboschoenus maritimus ssp. *paludosus*	saltmarsh bulrush
POACEAE	**GRASS FAMILY**
*Bromus diandrus**	ripgut brome
*Festuca myuros**	rattail sixweeks grass
Bromus madritensis ssp. *rubens**	red brome
*Polypogon monspeliensis**	rabbtisfoot grass

California Native Plant Society (CNPS) Rare Plant Ranks:

1A: Plants presumed extinct in California.

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

2: Plants rare, threatened, or endangered in California but more common elsewhere.3: Plants about which need more information; a review list.

4: Plants of limited distribution; a watch list.

CNPS Threat Ranks:

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

0.2 Fairly threatened in California (20-80% of occurrences threatened / moderate degree and immediacy ofthreat)

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

* Not native to California.

Sources:

California Natural Diversity Data Base (CDFW 2021) CNPS Rare and Endangered Plant Inventory (CNPS 2021)

ATTACHMENT B

Wildlife Compendium

Attachment B
Wildlife Compendium

Scientific Name	Common Name
BIRDS	
Accipitridae	**Hawks**
Accipiter cooperii	Cooper's hawk
Buteo jamaicensis	red-tailed hawk
Buteo lineatus	red-shouldered hawk
Aegithalidae	**Bushtits**
Psaltriparus minimus	bushtit
Ardeidae	**Herons**
Ardea herodias	great blue heron
Cathartidae	**New World Vultures**
Cathartes aura	turkey vulture
Charadriidae	**Plovers, Dotterels, and Lapwings**
Charadrius vociferus	killdeer
Columbidae	**Pigeons and Doves**
Columba livia	rock pigeon
*Streptopelia decaocto**	Eurasian collared-dove
Zenaida macroura	mourning dove
Corvidae	**Jays and Crows**
Aphelocoma californica	California scrub-jay
Corvus brachyrhynchos	American crow
Corvus corax	common raven
Falconidae	**Falcons and Caracaras**
Falco sparverius	American kestrel
Fringillidae	**Finches**
Haemorhous mexicanus	house finch
Spinus lawrencei	Lawrence's goldfinch
Spinus psaltria	lesser goldfinch
Hirundinidae	**Swallows**
Petrochelidon pyrrhonota	cliff swallow
Icteridae	**Blackbirds and Allies**
Icterus cucullatus	hooded oriole
Quiscalus mexicanus	great-tailed grackle
Mimidae	**Mockingbirds and Thrashers**
Mimus polyglottos	northern mockingbird
Toxostoma redivivum	California thrasher
Paradoxornithidae	**Parrotbills**
Chamaea fasciata	wrentit
Parulidae	**New World Warblers**
Cardellina pusilla+	Wilson's warbler
Geothlypis trichas	common yellowthroat
Setophaga coronata	yellow-rumped warbler
Passerellidae (previously Emberizidae)	**Sparrows and Towhees**
Melospiza melodia	song sparrow

Attachment B
Wildlife Compendium

Passerellidae (previously Emberizidae) (cont.)	**Sparrows and Towhees**
Melozone crissalis	California towhee
Pipilo maculatus	spotted towhee
Zonotrichia leucophrys	white-crowned sparrow
Picidae	**Woodpeckers**
Dryobates nuttallii	Nuttall's woodpecker
Sturnidae	**Starlings**
Sturnus vulgaris	European starling
Trochilidae	**Hummingbirds**
Calypte anna	Anna's hummingbird
Troglodytidae	**Wrens**
Thryomanes bewickii	Bewick's wren
Troglodytes aedon	house wren
Tyrannidae	**Tyrant Flycatchers**
Empidonax difficilis	Pacific-slope flycatcher
Sayornis nigricans	black phoebe
Sayornis saya	Say's phoebe
Tyrannus vociferans	Cassin's kingbird
INSECTS	
Nymphalidae	**Brush-footed Butterflies**
Nymphalis antiopa	mourning cloak
Vanessa atalanta	red admiral
Vanessa cardui	painted lady
Papilionidae	**Parnassians and Swallowtails**
Papilio rutulus	western tiger swallowtail
Pieridae	**Whites and Sulphurs**
Pieris rapae	cabbage white
MAMMALS	
Canidae	**Canines**
Canis latrans	coyote
Felidae	**Felines**
Puma concolor	mountain lion (tracks)
Leporidae	**Hares and Rabbits**
Sylvilagus audubonii	desert cottontail
Sciuridae	**Squirrels**
Otospermophilus beecheyi	California ground squirrel
REPTILES	
Hylidae	**Tree Frogs**
Pseudacris hypochondriaca hypochondriaca	Pacific tree frog
Iguanidae	**Iguanids**
Sceloporus occidentalis	western fence lizard

*Non-native species
**CDFW California Species of Special Concern/CDFW Fully Protected Species/Watch List Species
***Federally-listed endangered or threatened/State-listed endangered or threatened
+Western Riverside County Multiple Species Habitat Conservation Plan (WR-MSHCP) covered species

ATTACHMENT C

Site Photographs

Photo 1: Northern Section of Grading Area (facing north)

Photo 2: Disturbed Coastal Sage Scrub Habitat on Slope of Northeastern Portion of Project Site (facing southeast)

Photo 3: Non-native Grassland and Disturbed Freshwater Seep Habitat Type in Survey Area on Northwestern Edge of Buffer

Photo 4: Adjacent Disturbed Coastal Sage Scrub Habitat with Disturbed Cottonwood-Willow Riparian Forest in the Background - Along Northeastern Portion of Survey Area (facing northeast)

Photo 5: Ponded Water at the Culvert Inlet in the Survey Area (facing Southwest)

Photo 6: Southern Portion of Project Site with Developed and Disturbed Lands (facing northeast)

ATTACHMENT D

Sensitive Plant Species with the Potential to Occur in the Study Area

Scientific Name Common Name	**Status**		**Flowering Period; Elevation (meters)**	**Habitat Requirements**	**Potential for Occurrence**
Acanthomintha ilicifolia San Diego thorn-mint	USFWS: CDFW: CNPS: County:	**THR END** 1B.1 List A	April-June 10-960	Occurs in various chaparral habitats, coastal scrub, valley and foothill grasslands, and vernal pools, typically on clay sediment lenses within openings of vegetation. This plant is endemic to active vertisol clay soils in mesas and valleys. It is equally likely to occur in wetlands or non-wetlands.	**Presumed absent.** No suitable habitat for this species is present due to lack of soils and habitat. Two recent CNDDB records within 5 miles of the Survey Area, the closest located approximately 0.9-mile northwest of the Project.
Adolphia californica California adolphia	USFWS: CDFW: CNPS: County:	none none 2B.1 none	December-May 10-740	Occurs in chaparral, coastal sage scrub, valley and foothill grasslands. Found in a variety of substrate from sandy/ gravelly to clay soils; various exposures. Nearly all known occurrences in coastalSan Diego County.	**Presumed absent.** There is marginally suitable habitat within the coastal sage scrub habitat in the Survey Area; however, this species was not observed during the site visit. No CNDDB records within 5 miles of the Survey Area.
Ambrosia pumila San Diego ambrosia	USFWS: CDFW: CNPS: County:	**END** none 1B.1 List A	April-October 20-415	Occurs in disturbed and vernal pool sites within valley grasslands, chaparral, coastal sage scrub, and wetland habitats.	**Presumed absent.** The site and buffer are located above the known elevational range for this species. Surveyed during blooming periods and no species were observed in riparian areas.
Brodiaea filifolia thread-leaved brodiaea	USFWS: CDFW: CNPS: County:	**THR END** 1B.1 List A	March-June 25-1120	Occurs in openings within chaparral, cismontanewoodland, coastal scrub, playas,valley and foothill grassland, and vernal pools. Often found in claysoils.	**Presumed absent.** Soils are not suitable for this species. No CNDDB records occur within 5 miles of the site.
Brodiaea orcutti Orcutt's brodiaea	USFWS: CDFW: CNPS: County:	none none 1B.1 List A	May-July 30 - 1692	Occurs in chaparral, cismontane woodland, closed-cone coniferous forest, meadow and seep, ultramafic, valley and foothill grassland, vernal pool, and wetland habitats.	**Presumed absent.** Soils are not suitable for this species. No CNDDB records occur within 5 miles of the site.

Scientific Name Common Name	**Status**		**Flowering Period; Elevation (meters)**	**Habitat Requirements**	**Potential for Occurrence**
Calandrinia breweri Brewer's calandrinia	USFWS: CDFW: CNPS: County:	none none 4.2 List D	February-May 0-1200	Occurs in sandy to loamy soil within disturbed and/or burned sites in chaparral and coastal sage scrub habitats.	**Low (offsite).** There is marginally suitable habitat in the low-quality coastal sage scrub habitat within the survey and buffer areas. Recent CNDDB records do not occur within 5 miles of the site.
Camissoniopsis lewisii Lewis' evening-primrose	USFWS: CDFW: CNPS: County:	none none 3 List C	March-June 0-300	Occurs in coastal bluff scrub, cismontane woodland, coastal dunes, coastal scrub, and valley and foothill grassland in sandy or clay soils.	**Low (offsite).** There is marginally suitable habitat in the coastal sage scrub habitat within the survey and buffer areas. No CNDDB records occur within 5 miles of the site.
Ceanothus verrucosus wart-stemmed ceanothus	USFWS: CDFW: CNPS: County:	none none 2B.2 List B	January-April 0-350	Occurs on rocky slopes in chaparral habitat. Occurrences in Riverside and San Diego counties.	**Presumed absent.** There is no suitable habitat within the survey and buffer areas. This species was not observed during the site visit. One recent CNDDB records occur within 5 miles of the site in San Marcos, approximately 3.5 miles south of the Project site.
Centromadia pungens **ssp. *laevis*** smooth tarplant	USFWS: CDFW: CNPS: County:	none none 1B.1 List A	April-September 0-640	Occurs in alkaline soils in chenopod scrub, meadows and seeps, playas, riparian woodlands, and valley andfoothill grassland.	**Presumed absent.** Marginally suitable habitat within the disturbed riparian habitat within the Survey Area. Surveyed during blooming periods and no species were observed in riparian areas.
Chamaebatia australis southern mountain misery	USFWS: CDFW: CNPS: County:	none none 4.2 List D	November-May 300-1230	Occurs in chaparral habitat in gabbroic ormetavolcanic soils.	**Presumed absent.** The Project site and buffer are outside the elevation range of the species. No CNDDB records occur within 5 miles of the site.

Scientific Name Common Name	**Status**		**Flowering Period; Elevation (meters)**	**Habitat Requirements**	**Potential for Occurrence**
Chorizanthe procumbens prostrate spineflower	USFWS: CDFW: CNPS: County:	none none CBR List D	April-June 0-1300	Occurs in sandy or gravelly soils in chaparral, valley grasslands, pinyon-juniper woodland, and coastal sagescrub habitats.	**Low.** Marginal habitat in the form of coastal sage scrub habitat adjacent to the Grading Area. Recent CNDDB records do not occur within 5 miles of the site.
Comarostaphylis diversifolia* ssp. *diversifolia summer holly	USFWS: CDFW: CNPS: County:	none none 1B.2 List A	April-June 30-790	Occurs in chaparral orcismontane woodland.	**Presumed absent.** There is no suitable habitat within the survey and buffer areas. There is one CNDDB record from 1995, located approximately 3.2 miles southeast of the Project site.
Convolvulus simulans small floweredmorning glory	USFWS: CDFW: CNPS: County:	none none 4.2 List D	April-June 30-875	Occurs in clay soils, occasionally serpentine, withingrassland, coastal sage scrub,and chaparral habitats.	**Presumed absent.** No suitable soils for this species within the Project site or buffer. No CNDDB records within 5miles of the Project.
Deinandra paniculata paniculate tarplant	USFWS: CDFW: CNPS: County:	none none 4.2 List D	April-November 25-940	Occurs in coastal scrub, valleyand foothill grassland, and vernal pools.	**Low.** Marginally suitable habitat for this species in theform of low-quality coastal scrub occurs within the Project site and buffer. No CNDDB records within 5 miles ofthe site.
Dichondra occidentalis western dichondra	USFWS: CDFW: CNPS: County:	none none 4.2 List D	March-June 0-520	Occurs in the understory of shrubs and near rocks in coastal scrub, chaparral, andoak woodlands.	**Low (offsite).** Marginally suitable habitat for this species in the form of coastal scrub occurs within adjacent areas. No CNDDB records within 5 miles of the site.
Dudleya viscida sticky dudleya	USFWS: CDFW: CNPS: County:	none none 1B.2 List A	May-June 10-550	Occurs in bluff and rocky cliffs incoastal chaparral and coastal scrub in rocky soils.	**Presumed absent.** No suitable habitat in the form of bluff or rocky cliffs for this species within the Project site or buffer. No CNDDB records within 5 miles of the Project.

Scientific Name Common Name	**Status**		**Flowering Period; Elevation (meters)**	**Habitat Requirements**	**Potential for Occurrence**
Ericameria palmeri* var. *palmeri Palmer's goldenbush	USFWS: CDFW: CNPS: County:	none none 1B.1 List B	July-November 30-600	Occurs in chaparral and coastal scrub in mesic soils.	**Low (offsite).** Marginally suitable coastal sage scrub habitat for this species is present within the Survey Area. No CNDDB records within 5 miles of the Project.
Holocarpha virgata* ssp. *elongata graceful tarplant	USFWS: CDFW: CNPS: County:	none none 4.2 List D	July-November 0-900	Occurs in valley and foothill grassland, chaparral, coastal scrub, and cismontane woodland habitats.	**Low.** Marginal habitat in the form of non-native grassland and coastal sage scrub habitats within the Project site and buffer. Recent CNDDB records do not occur within 5 miles of the site.
Isocoma menziesii* var. *decumbens decumbent goldenbush	USFWS: CDFW: CNPS: County:	none none 1B.2 List A	April-November 10-135	Occurs in chaparral and coastal scrub in sandy, often disturbed areas.	**Presumed absent.** Marginally suitable habitat for this species in the form of grassland and coastal scrub occurs within the Project buffer, but the site is outside of the known elevation range. No CNDDB records within 5 miles of the site.
Juncus acutus* ssp. *leopoldii southwestern spiny rush	USFWS: CDFW: CNPS: County:	none none 4.2 List D	June-August 0-300	Occurs in moist saline places, salt marshes, meadows, and alkaline seeps.	**Presumed absent.** Marginally suitable habitat within the disturbed riparian habitat within the Grading Area; however, this species was not observed during the site visit. No CNDDB records occur within 5 miles of the site.

Scientific Name Common Name	**Status**		**Flowering Period; Elevation (meters)**	**Habitat Requirements**	**Potential for Occurrence**
***Lepidium virginicum* var. *meziessii* (*=Lepidium virginicum* var. *robinsonii*)** Robinson's pepper-grass	USFWS: CDFW: CNPS: County:	none none 4.3 List A	March-June 0-2800	Occurs in dry, disturbed areas, riverbanks, meadows, pastures, cliffs, fields, and scrub habitats.	**Low.** Marginal habitat in the form of disturbed areas, pastures, and coastal sage scrub habitats within the Project site and buffer. Recent CNDDB records do not occur within 5 miles of the site.
Microseris douglasii ssp. ***platycarpha*** small-flowered microseris	USFWS: CDFW: CNPS: County:	none none 4.2 List D	March-May 0-1100	Occurs in clay soils in grassland habitat, typically near vernal pools or serpentine outcrops.	**Presumed absent.** Soils are not suitable for this species. No CNDDB records occur within 5 miles of the site.
Monardella viminea willowy monardella	USFWS: CDFW: CNPS: County:	**END** **END** 1B.1 List A	June-August 0-400	Occurs in rocky washes with cobbles, alluvial benches.	**Presumed absent.** Soils are not suitable for this species. There is one CNDDB within 5 miles, located in the San Marcos Mountains, approximately 4 milessouth of the Project.
Navarretia fossalis Spreading navarretia	USFWS: CDFW: CNPS: County:	**THR** none 1B.1 List A	June-July 200-700	Occurs in vernal pools and ephemeral basins/ditches.	**Presumed absent.** There is no suitable habitat in the form of ephemeral basins for this species within the Project site or buffer area. No CNDDB records occur within 5 miles of the site.
Nolina interrata Dehesa nolina	USFWS: CDFW: CNPS: County:	none none 1B.1 none	June-July 200-700	Occurs in chaparral habitat in gabbroic, metavolcanic, or serpentinite soils.	**Low.** Marginally suitable habitat for this species in the form of coastal scrub occurs within the buffer. This would have been observed during the survey, if it occurred in the onsite portion of the costal scrub habitat. Soils onsite are derived from granite, not gabbro. No CNDDB records within 5 miles of the site.

Scientific Name Common Name	Status		Flowering Period; Elevation (meters)	Habitat Requirements	Potential for Occurrence
Piperia cooperi Cooper's rein orchid	USFWS: CDFW: CNPS: County:	none none 4.2 List D	March-June 0-1500	Occurs in dry areas inscrub, chaparral, woodland, and foresthabitats.	**Low.** Marginally suitable habitat for this species in the form of coastal scrub occurs within the buffer. No CNDDB records within 5 miles of the site.
Selaginella cinerascens ashy spike moss	USFWS: CDFW: CNPS: County:	none none 4.1 List D	N/A 0-550	Occurs in sunny spots or undershrubs in clay soils within chaparral and coastal sage scrub habitats.	**Presumed absent.** Soils are not suitable for this species. No CNDDB records occur within 5 miles of the site.
Tetracoccus dioicus Parry's tetracoccus	USFWS: CDFW: CNPS: County:	none none 1B.2 List A	April-May 0-1000	Occurs within gabbro and metavolcanic soils on dry slopes in chaparral habitat.	**Low.** Marginally suitable habitat for this species in the form of coastal scrub occurs within the buffer. One recent CNDDB record within 5 miles of the site in the San Marcos Mountains, approximately 3.5 miles south of the Project site.
Quercus engelmannii Engelmann oak	USFWS: CDFW: CNPS: County:	none none 4.2 List D	March-June 50 - 1300	Occurs in chaparral, cismontane woodland, riparian woodland, valleyand foothill grassland habitats.	**Presumed absent.** This species was not observed within the Project site or buffer during initial site visit. No CNDDB records occur within 5 miles of the site.

Scientific Name Common Name	Status	Flowering Period; Elevation (meters)	Habitat Requirements	Potential for Occurrence

Federal Designations:

(Federal Endangered Species Act, USFWS)

END: Federally-listed, Endangered

THR: Federally-listed, Threatened

FC: Federal Candidate Species

FSC: Federal Species of Concern

FPD: Federal Proposed for Delisting

DL: Federally-delisted

State designations:

(California Endangered Species Act, CDFW)

END: State-listed,Endangered

THR: State-listed, Threatened

RAR: State-listed, Rare

SSC: California Species of Special Concern

FP: Fully Protected Species

California Native Plant Society (CNPS) Designations:

1A: Plants presumed extinct in California.

1B: Plants rare and endangered in CA and throughout their range.

2: Plants rare, threatened, or endangered in CA but more common elsewhere in their range.

3: Plants about which need more information; a review list.

4: Plants of limited distribution; a watch list.

Plants 1B, 2, and 4 extension meanings:

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

.2 Fairly endangered in California (20-80% occurrences threatened)

.3 Not very endangered in CA (<20% of occurrences threatened or no current threats known)

*Note: according to CNPS [Skinner and Pavlik 1994], plants on Lists 1B and 2 meet definitions for listing as threatened or endangered under Section 1901, Chapter 10 of the California Fish and Game Code (CDFG 2010b). This interpretation is inconsistent with other definitions.)

San Diego County Designations

List B: Plants rare, threatened or endangered in California but more common elsewhere
List C: Plants which may be rare, but need more information to determine their true rarity status
List D: Plants of limited distribution and are uncommon, but not presently rare or endangered

ATTACHMENT E

Sensitive Wildlife Species with the Potential to Occur in the Study Area

Scientific Name Common Name	Status		Habitat Requirements	Potential for Occurrence
INVERTEBRATES				
INSECTA				
Danaus plexippus plexippus Monarch butterfly	USFWS: CDFW: County:	none none Group 2	Openings within chaparral and coastal sage scrublands in Riverside and San Diego Counties.	**Presumed absent.** Site is absent of host plants milkweeds (*Asclepias* spp.). Foraging habitat present. No CNDDB record within 5 miles of the site.
Lycaena hermes Hermes copper butterfly	USFWS: CDFW: County:	**CAN** none Group 1	Chaparral and coastal sage scrublands in San Diego County. Typically found where its larval host plant (spiny redberry) occurs within 10 feet of its primary nectar source (California buckwheat).	**Presumed absent.** Site is absent of host plants spiny redberry (*Rhamnus crocea*). No CNDDB record within 5 miles of the site.
FISH				
CYPRINDIAE (minnows & carp)				
Gila orcutti arroyo chub	USFWS: CDFW: County:	none SSC Group 1	Creeks, streams, and rivers with areas of slow-moving water with sand or mud bottoms. Ranges from San Diego to San Luis Obispo county.	**Presumed absent.** Site is absent of a flowing, perennial water source. No CNDDB records within 5 miles of the site.
AMPHIBIANS				
BUFONIDAE (true toads)				
Anaxyrus californicus arroyo toad	USFWS: CDFW: County:	**END** SSC Group 1	Sandy banks of rivers, arroyos, and streams with shallow sandy pools. Also found in riparian woodlandsor uplands adjacent to arroyos.	**Moderate.** Ponded areas associated with the offsite drainage within buffer are highly disturbed with little riparian vegetation but are connected to more suitable habitat. Soils are friable and well suited for burrowing. Three CNDDB records occur within 5 miles of the site in northern tributary to San Luis Ray River (1997), San Luis Ray River (1996), and Keys Creek (2001).

Scientific Name Common Name	Status		Habitat Requirements	Potential for Occurrence
SCAPHIOPODIDAE (spadefoot toads)				
Spea hammondii western spadefoot	USFWS: CDFW: County:	none SSC Group 2	Open areas with sandy soils in a wide range of habitats including lowlands to foothills, coastal sage scrub, chaparral, mixed woodlands, alluvial fans, and grasslands.	**Moderate.** Ponded areas associated with the offsite drainage within buffer are highly disturbed with little riparian vegetation but are connected to more suitable habitat. Soils are friable and well suited for burrowing. Seven CNDDB records occur within 5 miles of the site in Moosa Creek (1997), two on Horse Ranch Creek Road (2007, 2006), two at San Luis Ray River (2016, 1927), Camino Del Rey (1959).
RANIDAE (frogs)				
Rana draytonii California red-legged frog	USFWS: CDFW: County:	**THR** SSC Group 1	Found near water features such as ponds or streams inhumid forests, grasslands, coastal scrub, and woodlands.	**Presumed absent.** Project site is located outside the current range of the species. Ponded areas associated with the offsite drainages in buffer are disturbed with little vegetation in surrounding hillsides. drainages on Project site. No CNDDB records within 5 miles of the site.
REPTILES				
EMYDIDAE (box and water turtles)				
Emys marmorata western pond turtle	USFWS: CDFW: County:	none SSC Group 1	Ponds, lakes, rivers, streams, marshes, and other water sources with rocky or muddy substrate. Basks on logs, rocks, and exposed banks.	**Presumed absent.** No perennial water sources within Project site or buffer. No CNDDB records within 5 miles of the site.
GEKKONIDAE (geckos)				
Coleonyx variegatus abbotti San Diego banded gecko	USFWS: CDFW: County:	none SSC Group 1	Chaparral and coastal scrub in San Diego County.	**Presumed absent.** The low quality coastal sage scrub habitat on site and within the Survey Area provides limited habitat. This species has potential to occur within the chaparral habitat north and east of the site. No CNDDB records within 5 miles of the site.

Scientific Name Common Name	Status		Habitat Requirements	Potential for Occurrence
ANNIELLIDAE (American legless lizards)				
Anniella stebbinsi Southern California legless lizard	USFWS: CDFW: County:	none SSC none	Moist, warm, loose soils within sparsely vegetation areas of beach dunes, chaparral, pine and oak woodlands, desert scrub, sandy washes and terraces with leaf litter. Often found under rocks, wood, leaf litter. Occasionally found in suburban landscaped features.	**Moderate.** There are suitable soils for this species within the buffer. Two recent CNDDB records (2017; 2014) within 5 miles of the site, the closest is approximately 1 mile southwest of site.
Anniella pulchra pulchra silvery legless lizard	USFWS: CDFW: County:	FSC SSC Group 2	Found in warm, moist, and loose soil with plant cover in sparsely vegetated areas including chaparral, beach dunes, pine-oak woodlands, desert scrub, and sandy washes.	**Low.** There are suitable soils for this species within the buffer. No CNDDB records within 5 miles of the Project.
PHRYNOSOMATIDAE (spiny lizards)				
Phrynosoma blainvillii coast horned lizard	USFWS: CDFW: County:	none SSC Group 2	Open areas of valleys, foothills, and semiarid mountains with sandy soil and low vegetation including chaparral, woodlands, and grasslands.	**Moderate.** Harvester ants, the main food source for coast horned lizards, were present on site. The coastal sage scrub and open areas are suitable for this species. The coastal sage scrub throughout the buffer provides more well-suited potential habitat. Two CNDDB records within 5 miles of the sites, one in 2007 off Pankey Road and one in 1999 in the San Marcos Mountains.
SCINCIDAE (skinks)				
Plestiodon skiltonianus interparietalis **(previously *Eumeces skiltonianus interparietalis*)** Coronado Island skink	USFWS: CDFW: County:	none WL Group 2	Semi-arid open areas with coarse soils including chaparral, as well as cismontane woodland, Pinon and juniper woodlands.	**Presumed absent .** The coastal sage scrub habitat is marginally suitable for this species; however, soils are not well suited for this species. The coastal sage scrub habitat throughout the buffer provides more well-suited potential habitat. There is one recent CNDDB records occur within 5 miles of the site near Lawrence Welk Village, approximately 3.8 miles east of the site.

Scientific Name Common Name	Status		Habitat Requirements	Potential for Occurrence
TEIIDAE (whiptails and relatives)				
Aspidoscelis hyperythra orange-throated whiptail	USFWS: CDFW: County:	none WL Group 2	Semi-arid open areas with coarse soils including coastal sage scrub, chaparral, and dry riparian areas and washes.	**Moderate (offsite).** The coastal sage habitat is suitable for this species. The coastal sage scrub throughout the buffer provides more well-suited potential habitat. There are 10 recent CNDDB records occur within 5 miles of the site. The closest record is approximately 1.3 miles northwest of the site.
Aspidoscelis tigris stejnegeri (= Cnemidophorus tigris multiscutatus) coastal whiptail	USFWS: CDFW: County:	none SSC Group 2	Arid habitats including chaparral, scrub, woodlands, and dry riparian areas.	**Moderate (offsite).** The coastal sage habitat is suitable for this species. The coastal sage scrub throughout the buffer provides more well-suited potential habitat. Two recent CNDDB records occur within 5 miles of the site near Lawrence Welk Village (1995) and just north ofGopher Canyon Road (2002).
BOIDAE (boas)				
Charina trivirgata roseofusca coastal rosy boa	USFWS: CDFW: County:	FSC None Group 2	Variety of arid habitats including desert, brushland, rocky slopes, chaparral foothills, and sandy plains.	**Low (offsite).** The coastal sage habitat is marginally suitable for this species. The coastal sage scrub throughout the buffer and adjacent canyons provides more well-suited potential habitat. No CNDBB records within 5 miles of the Project site.
COLUBRIDAE (Colubrids)				
Arizona elegans occidentalis California glossy snake	USFWS: CDFW: County:	none SSC none	Inhabits arid scrub, grasslands, chaparral, and rocky washes. Prefers patches of open areas and loose soils.	**Low (offsite).** The coastal sage habitat is suitable for this species. The drainages were sandy and did not have appropriate substrate for this species. The coastal sage scrub throughout the buffer and adjacent canyons provides more well-suited potential habitat. One old CNDDB record (1946) occurs within 5 miles of the site, approximately 0.36 mile of the site.

Scientific Name Common Name	Status		Habitat Requirements	Potential for Occurrence
COLUBRIDAE (Colubrids) (cont.)				
Diadophis punctatus similis San Diego ringneck snake	USFWS: CDFW: County:	none SSC Group 2	Prefers moist habitats within chaparral, grassland, mixed coniferous forest, woodlands, farmlands, and gardens.	**Low (offsite).** There is marginally suitable near the drainage and low quality coastal sage habitat. The drainages and coastal sage scrub throughout the buffer and adjacent canyons provide more well-suited potential habitat. No CNDDB records within 5 miles of the Project site.
Salvadora hexalepis virgultea coast patch-nose snake snake	USFWS: CDFW: County:	none SSC Group 2	Inhabits semi-arid scrub brush areas, canyons with chaparral habitat, rocky hillsides, and plains.	**Low (offsite).** The coastal sage - chaparral and grassland habitats provide marginally suitable habitat for this species. The coastal sage scrub and chaparral throughout the buffer provides more well-suited potential habitat. No CNDDB records within 5 miles of the Project site.
Thamnophis hammondii two-striped garter snake	USFWS: CDFW: County:	none SSC Group 1	Inhabits marsh, swamp, and riparian scrub. Also found in riparian woodland and wetland.	**Low (offsite).** The drainage located in the Survey Area provides suitable habitat for this species. There is more well-suited habitat within the San Luis Rey River andassociated tributaries. No CNDDBrecords within 5 miles of the site.
Thamnophis sirtalis novum south coast garter snake	USFWS: CDFW: County:	none SSC Group 2	Inhabits a wide range of habitats, including mixed woodlands, forests, chaparral, and farmlands typically close to ponds, marshes or streams.	**Low (offsite).** The low-quality coastal sage and drainages provide marginally suitable habitat for this species. There is better suited habitat located north and west of the Project within an ephemeral basin and within the San Luis Rey River and associated tributaries. No CNDDB records within 5 miles of the site.
VIPERIIDAE (vipers)				
Crotalus ruber red-diamond rattlesnake	USFWS: CDFW: County:	none SSC Group 2	Found in coastal chaparral, arid scrub, rocky grassland, oak and pine woodlands, desert mountain slopes and rocky desert flats.	**Low (offsite).** The coastal sage habitat provides marginally suitable habitat for this species. There is better suited habitat located in the natural canyons surrounding the site. No CNDDB records within 5 miles of the site.

Scientific Name Common Name	Status		Habitat Requirements	Potential for Occurrence
BIRDS				
ACCIPITRIDAE (hawks, kites, harriers, and eagles)				
Accipiter cooperii Cooper's hawk (nesting)	USFWS: CDFW: County:	none WL Group 1	Open woodlands, or broadleaf and coniferous forested areas but also found in parks and fields with tall trees. Nests in tall trees, usually on flat ground, in dense woods.	**Moderate (offsite).** Buffer provides potential nesting habitat due to presence of large eucalyptus trees in the vicinity. Two recent CNDDB records (2003; 2001) occur within 5 miles of the site, approximately 3.3 miles north of the site.
Accipiter striatus sharp-shinned hawk (nesting)	USFWS: CDFW: County:	none SSC Group 1	Open woodlands, forests and forest edges but also found in suburban areas. Nests in dense forests.	**Low (offsite).** Buffer provides potential nesting habitat due to presence of large eucalyptus trees in the vicinity. No CNDDB records within 5 miles of the site.
Aquila chrysaetos golden eagle (nesting & wintering)	USFWS: CDFW: County:	BCC **FP** Group 1	Open country including prairies, sagebrush, savannah or sparse woodlands, and barren hills or mountainous areas. Nests on rocky cliff edges or in large trees such as eucalyptus or oak.	**Low (offsite).** Buffer provides potential nesting habitat due to presence of large eucalyptus trees in the vicinity. There is foraging habitat within grasslands adjacent to the Project. No CNDDB record for an active nest occurs within 5 miles of the site.
Buteo lineatus red-shouldered hawk	USFWS: CDFW: County:	none none Group 1	Associated with low-elevation riparian woodlands, particularly in areas with interspersed swamps and emergent wetlands.	**Present.** One adult was observed soaring over the Project during the site visit. Buffer provides potential nesting habitat due to presence of large eucalyptus trees in the vicinity. Foraging habitat present. No CNDDB records occur within 5 miles of the site.
Buteo swainsoni Swainson's hawk (nesting)	USFWS: CDFW: County:	BCC **THR** Group 1	Open pine-oak woodland, savannah, and agricultural fields with scattered trees. Nests in a solitary bush or tree, or in small groves.	**Low (offsite).** Buffer provides potential nesting habitat due to presence of large eucalyptus trees in the vicinity. There is foraging habitat within grasslands adjacent to the Project. No recent CNDDB records occur within 5 miles of the site. One historic CNDDB record from 1933, approximately 0.35south of the site.

Scientific Name Common Name	**Status**		**Habitat Requirements**	**Potential for Occurrence**
FALCONIDAE (falcons)				
Falco columbarius merlin (wintering)	USFWS: CDFW: County:	none WL Group 2	Open woodland and fragmented forests. Also found in grasslands, marshes, deserts, lakes, fields, along the coast.	**Low.** There is suitable wintering habitat for this species in the form of grassland and fields for foraging. No CNDDB record within 5 miles of the Project.
Falco mexicanus prairie falcon (nesting)	USFWS: CDFW: County:	none WL Group 1	Open habitats such as plains, prairies, steppe, and mountainous areas. Nests in a sheltered ledge of rocky cliffs.	**Low.** There is no suitable nesting habitat within the Project site or buffer. There is more appropriate nesting habitat in the canyons and hillsides east of the Grading Area. There is suitable foraging habitat for this species in the form of grassland and fields for foraging. No CNDDB record within 5 miles of the Project.
ALAUDIDAE (larks)				
Eremophila alpestris actia California horned lark	USFWS: CDFW: County:	none WL Group 2	Bare open areas dominated by low vegetation or widely scattered shrubs, includes prairies, deserts, and plowed fields. Nests in a hollow on the ground.	**Low.** The open areas in site and buffer provides potential habitat. No CNDDB records occur within 5 miles of the site.
ARDEIDAE (herons, egrets, and bitterns)				
Ardea herodias great blue heron (nesting colony)	USFWS: CDFW: County:	none none Group 2	Lakes, rivers, streams, bays, mangroves, and brackish and freshwater marshes. Nests in high trees of swamps or forested areas.	**Presumed absent.** Site and buffer do not provide nesting habitat. There is no foraging habitat due to the lack of a suitable perennial water source nearby. No CNDDB record for an active nest occurs within 5 miles of the site.
ARDEIDAE (herons, egrets, and bitterns) (cont.)				
Butorides virescens green heron (nesting)	USFWS: CDFW: County:	none none Group 2	Coastal and inland wetlands. Nests near marshes, lakes, ponds, swamps, and other habitats with vegetation cover that is associated with water.	**Presumed absent.** Site and buffer do not provide nesting or foraging habitat due to the lack of a perennial water source nearby. No CNDDB record for an active nest occurs within 5 miles of the site.

Scientific Name Common Name	Status		Habitat Requirements	Potential for Occurrence
ARDEIDAE (herons, egrets, and bitterns) (cont.)				
Butorides virescens green heron (nesting)	USFWS: CDFW: County:	none none Group 2	Coastal and inland wetlands. Nests near marshes, lakes, ponds, swamps, and other habitats with vegetation cover that is associated with water.	**Presumed absent.** Site and buffer do not provide nesting or foraging habitat due to the lack of a perennial water source nearby. No CNDDB record for an active nest occurs within 5 miles of the site.
CATHARTIDAE (vultures)				
Cathartes aura turkey vulture	USFWS: CDFW: County:	none none Group 1	Inhabits farmland or other open areas suitable for scavenging carrion. Nests in rock crevices, caves, ledges, thickets, mammal burrows and hollow logs, fallen trees, abandoned hawk or heron nests, and abandoned buildings.	**Present.** Five adults observed soaring and preening during site visit. Buffer provides suitable roosting and foraging habitat. No CNDDB records occur within 5 miles of the site.
CUCLIDAE (cuckoos)				
Coccyzus americanus occidentalis Western yellow-billed cuckoo	USFWS: CDFW: County:	**THR** **END** Group 1	Open woodland habitat, near water, especially with dense willow and cottonwood understory.	**Presumed absent.** Unlikely to occur on site due to absence of dense riparian habitat or woodland habitat, but potential nesting habitat occurs along Moosa Creek and San Luis Ray River south and west of the site, respectively. One recent CNDDB record (2011) approximately 1.6 miles north of site.
LANIIDAE (shrikes)				
Lanius ludovicianus loggerhead shrike (nesting)	USFWS: CDFW: County:	none SSC Group 1	Open country, with scattered shrubs and trees or other perches for hunting; includes agricultural fields, deserts, grasslands, savanna, and chaparral.	**Low**. There is marginally suitable nesting habitat for this species within the coastal sage scrub - chaparral and grassland habitats; however, there is better suited habitat in the chaparral habitat north and east of the Project. No CNDDB record within 5 miles of theProject.
VIREONIDAE (vireos)				
Vireo bellii pusillus least Bell's vireo (nesting)	USFWS: CDFW: County:	**END** **END** Group 1	Riparian woodlands and willow- cottonwood forests particularly with streamside thickets and dense brush.	**Presumed absent.** Unlikely to occur on site due to absence of contiguous, dense riparian habitat, but potential nesting habitat occurs along Moosa Creek and the San Luis Ray River north and west of the site. Six CNDDB records occurs within San LuisRay River and associated tributaries, the closest approximately 0.89 mile west of the site.

Scientific Name Common Name	Status		Habitat Requirements	Potential for Occurrence
LARIIDAE (gulls)				
Larus californicus California gull (non-breeding)	USFWS: CDFW: County:	none WL Group 2	Forage in open areas including scrub, pastures, meadows, orchards, farms, and garbage dumps. In winter, forage along the coast and use marine areas.	**Low.** There is suitable foraging habitat for this species in the form of pastureland; however, proximity to the coast may limit potential. No CNDDB records within 5 miles.
PARULIDAE (new world warblers)				
Icteria virens Yellow-breasted chat	USFWS: CDFW: County:	none SSC none	Riparian and upland thickets, and dry overgrownpastures. Prefers to nest in dense scrub along streamsor at the edges of ponds or swamps.	**Presumed absent.** Unlikely to occur on site due to absence of continuous riparian vegetation, but potential nesting habitat occurs along Moosa Creek and San Luis Ray River south and west of the site, respectively. Four recent CNDDB records (2001 - 2003), the nearest located approximately 3.3 miles northeast of the site.
Setophaga petechia Yellow warbler	USFWS: CDFW: County:	BCC SSC Group 2	Riparian woodlands especially with willows, open scrub, gardens, and thickets often near water.	**Presumed absent.** Unlikely to occur on site due to absence of riparianwoodland habitat, but potential nesting habitat occurs along Moosa Creek and the San Luis Ray River south and west of the site, respectively. Three recent CNDDB records (2001 - 2003), the nearest located approximately 3.3 milesnortheast of the site.
SYLVIIDAE (gnatcatchers)				
Polioptila californica californica coastal California gnatcatcher	USFWS: CDFW: County:	**THR** SSC Group 1	Dry coastal slopes, washes, and mesas with areas of low vegetation and coastal sage scrub.	**Low.** The coastal sage scrub habitat provides marginally suitable nesting habitat; however, there is more well-suited nesting habitat located in the surrounding canyons of extensive coastal sage scrub habitat. Twenty-two recent CNDDB records (1993 - 2017) within 5 miles of the site, closest occurrence approximately 48 feet northeast of the Project.
EMBERIZIDAE (sparrows, buntings, warblers, and relatives)				
Aimophila ruficeps canescens southern California rufous- crowned sparrow	USFWS: CDFW: County:	none WL Group 1	Coastal sage scrub or scrub with low scattered shrubs and moderate to steep, dry, and rocky slopes. Nests on ground or within 1 meter of ground in shrubs or trees.	**Low.** The low-quality coastal sage scrub habitat on site and in buffer provides marginal habitat. There is more well-suited habitat for this species in the surrounding canyons. No CNDDB records occur within 5 miles of the site.

Scientific Name *Common Name*	**Status**		**Habitat Requirements**	**Potential for Occurrence**
EMBERIZIDAE (sparrows, buntings, warblers, and relatives) (cont.)				
Ammodramus savannarum grasshopper sparrow (nesting)	USFWS: CDFW: County:	none SSC Group 1	Grasslands and prairies of moderate height with clusters of scattered shrubs among patches of bare ground.	**Low.** There is grassland habitat in the Grading Area; however, it is primarily used for pasture and appears to be well maintained; therefore, it is unlikely it will be used for nesting. No CNDDB records within 5 miles of the site.
Amphispiza belli belli Bell's sage sparrow	USFWS: CDFW: County:	none none Group 1	Chaparral dominated with California sagebrush or chamise. Nests on ground or within 1 meter above ground in a shrub.	**Low.** The coastal sage scrub habitat on site and in buffer provides marginal habitat. There is more well-suited habitat for this species in the surrounding canyons. No CNDDB records occur within 5 miles of the site.
ICTERIDAE (blackbirds)				
Agelaius tricolor tricolored blackbird (nesting colony)	USFWS: CDFW: County:	BCC **THR** Group 1	Freshwater marshes with dense cattails, bulrushes, sedges, and tule. Forages in open habitat such as cultivated fields and pastures.	**Presumed absent.** Survey Area does not provide nesting habitat due to lack of substantial wetland vegetation. Foraging habitat present with perennial man-made water sources nearby. One CNDDB record from 1971 approximately 4.7 miles north of Project site.
STRIGIDAE (owls)				
Asio otus long-eared owl (nesting)	USFWS: CDFW: County:	none SSC none	Dense wooded areas such as deciduous and evergreen forests near water.	**Presumed absent.** Survey Area does not provide nesting habitat due to lack of dense wooded areas within the Project and buffer areas. No CNDDB records occur within 5 miles of the site.
Athene cunicularia burrowing owl (burrow & some wintering sites)	USFWS: CDFW: County:	BCC SSC Group 1	Open grasslands including prairies, plains, and savannah, or vacant lots and airports. Nests in abandoned dirt burrows.	**Presumed absent.** There are several berms and open areas with ground squirrels and burrows that could be utilized by owls were detected within the site and buffer. No owls or owl sign observed during site visit. No CNDDB records occur within 5 miles of the site.

Scientific Name Common Name	Status		Habitat Requirements	Potential for Occurrence
TYTONIDAE (barn owls)				
Tyto alba barn owl	USFWS: CDFW: County:	none none Group 2	Field edges, edges of watercourses, open grassland for hunting. Nests in artificial structures and a variety of natural cavities.	**Low.** No cavities observed for nesting suitability. Open grassland habitat nearby with small rodent populations provides suitable foraging habitat. CNDDB records occur within 5 miles of the site.
TROGLODYTIDAE (wrens)				
Campylorhynchus brunneicapillus sandiegensis Coastal cactus wren	USFWS: CDFW: County:	none SSC Group 1	Coastal sage scrub with tall opuntia (*Opunita* spp.) cacti. Nests in opuntia cactus.	**Presumed absent.** There is no nesting habitat in the Project or buffer areas due lack of sufficient stands of cacti. No CNDDB records occur within 5 miles of the site.
TURDIDAE (bluebirds and thrushes)				
Sialia mexicana western bluebird	USFWS: CDFW: County:	none none Group 2	Open, deciduous woodlands wooded riparian areas, grasslands, and farmlands. Nests in tree cavities.	**Low.** Site does not provide well suited nesting habitat due to lack of woodlands. There are several scattered ornamental trees in the buffer that provide marginal nesting habitat. Suitable foraging habitat occurs on site in the form of farmlands and adjacent grassland habitat. No CNDDB records occurwithin 5 miles of the site.
TYRANNIDAE (tyrant flycatchers)				
Empidonax traillii extimus Southwestern willow flycatcher	USFWS: CDFW: County:	**END** **END** Group 1	Riparian woodlands particularly with willow thickets. Nests in densest areas of shrubs and trees with low-density canopies.	**Presumed absent.** Unlikely to occur on site due to absence of dense riparian habitat, but potential nesting habitat occurs along Moosa Creek and the San Luis Ray River south and west of the site, respectively. No CNDDB recordwithin 5 miles of the site.

Scientific Name Common Name	Status		Habitat Requirements	Potential for Occurrence
MAMMALS				
PHYLLOSTOMIDAE (leaf-nosed bats)				
Choeronycteris mexicana Mexican long-tongued bat	USFWS: CDFW: County:	none SSC Group 2	Roosts in caves, rock fissures, old mines, and rarely in buildings. Found in desert shrublands, tropical deciduous forests, deep mountain canyons with riparian vegetation, oak-conifer woodlands and forests.	**Low (offsite).** There is marginally suitable habitat in the northern drainage located within the buffer. There is more well-suited habitat in the natural canyons located east and north of the Project. No CNDDB records within 5 miles of the site.
Macrotus californicus California leaf-nosed bat	USFWS: CDFW: County:	none SSC Group 2	Roosts in caves, abandoned mines, or natural rock fissures in canyons during the day. May roost in buildings, under bridges, or in porches during the night. Found in lowland desert scrub.	**Low (offsite).** No suitable roosting habitat in the Project site or buffer; however, there are several large boulders and buildings within 500 feet of the site that provide suitable roosting habitat for this species. No CNDDB records within 5 miles of the site.
MOLOSSIDAE (free-tailed bats)				
Eumops perotis californicus western mastiff bat	USFWS: CDFW: County:	none SSC Group 2	Roosts high above ground in rock and cliff crevices, shallow caves, and rarely in buildings. Occurs in arid and semiarid regions including rocky canyon habitats.	**Low (offsite).** No suitable roosting habitat in the Project site or buffer; however, there are several large boulders within 500 feet of the site that provide suitable roosting habitat for this species. No CNDDB records within 5 miles of the site.
Nyctinomops femorosaccus pocketed free-tailed bat	USFWS: CDFW: County:	none SSC Group 2	Roosts in crevices of outcrops and cliffs, shallow caves, and buildings. Foundalong rugged canyons, highcliffs, and semiarid rock outcroppings.	**Low (offsite).** No suitable roosting habitat in the Project site or buffer; however, there are several large boulders within 500 feet of the site that provide suitable roosting habitat for this species. No CNDDB records within 5 miles of the site.
Nyctinomops macrotis big free-tailed bat	USFWS: CDFW: County:	none SSC Group 2	Roosts in cliff crevices, and less often in buildings, caves, and tree cavities. Occurs in rocky areas of rugged and hilly country including woodlands, evergreen forests, river floodplain-arroyo habitats, and desert scrub.	**Low (offsite).** No suitable roosting habitat in the Project site or buffer; however, there are several large boulders within 500 feet of the site that provide suitable roosting habitat for this species. No CNDDB records within 5 miles of the site.

Scientific Name Common Name	Status		Habitat Requirements	Potential for Occurrence
VESPERTILIONIDAE (evening bats)				
Antrozous pallidus pallid bat	USFWS: CDFW: County:	none SSC Group 2	Roosts in rock crevices, caves, mines, buildings, bridges, and in trees. Generally, in mountainous areas, lowland desert scrub, arid grasslands near water and rocky outcrops, and open woodlands.	**Low (offsite).** No suitable roosting habitat in the Project site or buffer; however, there are several large boulders within 500 feet of the site that provide suitable roosting habitat for this species. No CNDDB records within 5 miles of the site.
Euderma maculatum spotted bat	USFWS: CDFW: County:	none SSC Group 2	Roosts in crevices and cracks of cliffs and less often in caves or buildings adjacent to cliffs. Occurs in desert and montane habitats such as open pine or pinyon-juniper woodlands, riparian corridors, and canyons.	**Low (offsite).** No suitable roosting habitat in the Project site or buffer; however, there are several large boulders within 500 feet of the site that provide suitable roosting habitat for this species. No CNDDB records within 5 miles of the site.
Lasiurus blossevillii western red bat	USFWS: CDFW: County:	none SSC Group 2	Roosts in trees or large leafy shrubs and tend to avoid caves and buildings. Occurs in lowlands to mountains, in woodlands and forests and, especially along riparian habitats.	**Low (offsite).** Marginally suitable habitat within the scattered ornamental trees and Fremont cottonwoods in the northern drainage located in the buffer; however, there is more well-suited habitat in the surrounding natural canyons and San Luis Rey River floodplain located north and west of the Project. No CNDDB records within 5 miles of the site.
Lasiurus xanthinus Western yellow bat	USFWS: CDFW: County:	none SSC none	Roosts in trees, particularly palms, in desert wash, desert riparian, valley foothill riparian,and palm oasis habitats.	**Low.** There is suitable roosting habitat in the Mexican fan palms located just north of the buffer. There is more well-suited habitat in Moosa Creek and the San Luis Rey River floodplain located south and west of the Project, respectively. No CNDDB records within5 miles of the site.
LEPORIDAE (rabbits and hares)				
Lepus californicus bennettii San Diego black-tailed jackrabbit	USFWS: CDFW: County:	none SSC Group 2	Variety of open or semi-open country including grasslands, croplands, and sparse coastal scrub.	**Low.** The coastal sage scrub habitat and disturbed fields on site and within the buffer provide suitable habitat. No CNDDB records occur within 5 miles of the site.

Scientific Name Common Name	**Status**		**Habitat Requirements**	**Potential for Occurrence**
HETEROMYIDAE (kangaroo rats, pocket mice and kangaroo mice)				
Chaetodipus californicus femoralis Dulzura pocket mouse	USFWS: CDFW: County:	none SSC Group 2	Chaparral, coastal scrub, and desert grasslands in San Diego County along the U.S.-Mexico border.	**Presumed absent.** Focused assessment from SJM concluded that species is unlikely to occur or populate at this location. No CNDDB records occur within 5 miles of the site.
Chaetodipus fallax fallax northwestern San Diego pocket mouse	USFWS: CDFW: County:	none SSC Group 2	Chaparral and coastal scrub. Found in the arid coastal and desert border areas of San Diego County, as well as in parts of Riverside and San Bernardino Counties	**Presumed absent.** Focused assessment from SJM concluded that species is unlikely to occur or populate at this location. There is more well-suited habitat for this species in the scrub habitat in the surrounding natural canyons. No CNDDB records occur within 5 miles ofthe site.
Dipodomys stephensi Stephens' kangaroo rat	USFWS: CDFW:	**END** **THR**	Chaparral, coastal scrub, and desert grasslands in San Diego County along the U.S.-Mexico border.	**Presumed absent.** Focused assessment from SJM concluded that species is unlikely to occur or populate at this location. No suitable habitat on site; marginal suitable within the buffer. No CNDDB records occur within 5 miles of the site.
MURIDAE (mice, rats, and voles)				
Neotoma lepida intermedia San Diego desert woodrat	USFWS: CDFW: County:	none SSC Group 2	Coastal chaparral, sagebrush scrub, sandy desert and boulder habitats. May also be found in woodlands of Joshua trees or pinyon-juniper pine.	**Presumed absent.** The coastal sage scrub habitat on site and within the buffer provide suitable habitat; however, no woodrat middens were observed during the site visit. There is more well-suited habitat for this species in the scrub habitat in the surrounding natural canyons. No CNDDB records occur within 5 miles of the site.
MUSTELIDAE (weasels and relatives)				
Taxidea taxus American badger	USFWS: CDFW: County:	none SSC Group 2	Open habitats with friable soil such as grasslands, brushlands with sparse ground cover, open chaparral, and sometimes riparian zones.	**Presumed absent.** The grassland is primarily used for pasture and the scrub habitat in on the fringe of anthropogenic disturbance; therefore it is unlikely the habitats will be used by badgers. No CNDDB records within 5 miles of the site.

Scientific Name Common Name	Status		Habitat Requirements	Potential for Occurrence
FELIDAE (cats)				
Puma concolor mountain lion	USFWS: CDFW: County:	none none Group 2	Occurs from sea level to 10,000 feet in elevation, from deserts to coastal forests.	**Present (offsite; scat).** Scat was observed within the canyon located in the northern buffer. Site provides suitable foraging habitat and small rodents were documented on site; however, more suitable habitat located in natural canyons nearby. No recent CNDDB records within 5miles of the site.
CERVIDAE (deer)				
Odocoileus hemionus mule deer	USFWS: CDFW: County:	none none Group 2	Open grassland and forest edges. Can range from desert scrub at southern extent of range to boreal forests in northern extent.	**Low (offsite).** Marginally suitable foraging habitat in the form of coastal sage scrub habitat. No recent CNDDB records within 5 miles of the site.

Federal Designations:

(Federal Endangered Species Act, USFWS)

END: Federally-listed, Endangered

THR: Federally-listed, Threatened

CAN: Federal Candidate Species

FSC: Federal Species ofConcern

FPD: Federal Proposed for Delisting

BCC: Bird of Conservation Concern

State designations:

(California Endangered Species Act, CDFW)

END: State-listed, Endangered

THR: State-listed, Threatened

SSC: California Species of SpecialConcern

FP: Fully Protected Species

WL: Watch List

San Diego County MSCP Designations

Group 1: County Sensitive
Group 2: County Sensitive

May 9, 2025

Jason Spetnagel
Los Angeles Turf Club, Inc.
285 West Huntington Drive
Arcadia, CA 91007
(626) 447-0868

Re: Crotch Bumble Bee Habitat Assessment Letter Report for the Enhanced Emergency Services Access Roadway Grading Project at the San Luis Rey Training Center (Project No. PDS2019-LDGRMJ-30228)

Dear Mr. Spetnagel:

This letter report provides a summary of a supplemental biological resources assessment for Crotch's bumble bee (CBB; *Bombus crotchii*) for the proposed Enhanced Emergency Services Access Roadway Grading Project (Project) at the San Luis Rey Training Center (SLRTC) in Bonsall, California.

In accordance with the current San Diego County (County) Report Format and Content Requirements for Biological Resources (San Diego County 2010), this letter report describes the updated literature review, field assessment methods, ground truthing of previously mapped vegetation communities and land cover types, potential for CBB to be present, potential biological constraints, and recommended CBB avoidance measures.

PURPOSE OF THE REPORT

SLRTC is still in the process of responding to a Notice of Violation (NOV) received from the County in April 2019, (Case No. PDS2019-ENFGCO-000065) with information to support the County's decision regarding a remedial grading permit that will bring the action into compliance. The remedial grading permit incorporates stabilization of the existing slope, as referenced in the NOV. It will also bring an existing borrow site and enhanced emergency services access into compliance with County regulations via an improved existing utility roadway width, which will be achieved through the relocation of an existing riding arena and exercise pens. These relocations also eliminate the need to construct an extensive retaining wall as part of slope stabilization.

CBB was petitioned for listing under the California Endangered Species Act (ESA) in October 2018 (Hatfield et al. 2018); it advanced to candidacy in June 2019 and was challenged in courts. The candidacy was temporarily stayed in February 2021, and candidacy was reinstated in September 2022 (California Department of Fish and Wildlife [CDFW] 2025a). As a state candidate species, CBB is afforded the same protection as a listed species under the California ESA.

Because the previous biological resources assessment was conducted in March 2022, at a time when CBB was not considered a candidate for listing, CBB was not included in the Biological Resources Letter Report (ECORP 2022). At the request of the County, ECORP has prepared this CBB-focused assessment as a supplement to the Biological Resources Letter Report (ECORP 2022).

PROJECT AND SURVEY AREA LOCATION

The SLRTC property (Property) is located within the unincorporated area of Bonsall in San Diego County, California and is within the U.S. Geological Survey Bonsall, CA 7.5-minute topographic quadrangle. The Property is located at 5772 Camino Del Rey Road, Bonsal, CA (Appendix A: Figure 1). It is approximately 0.8 mile east of Camino Del Cielo and directly adjacent to and west of a residential property at 31612 Wrightwood Road. The SLRTC is a thoroughbred racehorse training facility owned and operated by Los Angeles Turf Club, Incorporated. SLRTC houses up to 499 thoroughbred horses on approximately 204 acres across 12 Assessor's Parcel Numbers (APNs).

The proposed Grading Area consists of 2.883 acres of the eastern portion of the Property within two parcels: APN 127-460-12-00 and APN 127-460-13-00 (Appendix A: Figure 1)

The proposed Grading Area serves the SLRTC facility and is currently used for access roads, staging equipment, and temporary structures.

The proposed grading plan's disturbance area includes 1.00 acre for the borrow site, 1.01 acres for slope stabilization, 0.41 acre for the relocated arena, and 0.46 acre for the road. The Survey Area assessed for this report includes the entire Grading Area plus an approximately 250-foot buffer.

CROTCH BUMBLE BEE NATURAL HISTORY

CBB is found between San Diego and Redding in a variety of habitats, including open grasslands, shrublands, chaparral, desert margins (including Joshua tree and creosote scrub), and semi-urban settings. It is near endemic to California, with only a few records from Nevada and Mexico (CDFW 2022).

Similar to other bumble bee species, CBB is a generalist forager and visits a variety of flowering plants. It is a short-tongued bumble bee and is therefore best suited to forage on open flowers with short corollas (Hatfield et al. 2018). Plant families most commonly associated with CBB records in California include Fabaceae, Apocynaceae, Asteraceae, Lamiaceae, Hydrophyllacae, Asclepiadaceae, and Boraginaceae (Hatfield et al. 2018). Other reports commonly associate CBB with the following plant genera as nectar sources: *Antirrhinum, Phacelia, Clarkia, Cordylanthus, Dendromecon, Eschscholzia, Eriogonum, Hypericum, Lantana, Lupinus, Salvia, Asclepias, Cirsium, Monardella, Keckiella, Acmispon, Euthamia, Ehrendorferia, Vicia, Trichostema, Chaenactis,* and *Medicago*.

Bumble bees live in social colonies and have different divisions of labor (castes) that include a queen (reproductive female), workers (nonreproductive females), drones (males), and gynes (females destined to become queens). The CDFW's survey considerations define the queen flight season as February through March, the gyne flight season as September through October, and the colony active period (highest detection probability) as April through August (CDFW 2023).

CBB primarily nest underground; however, colony sizes have not been well documented, and CBB may utilize similar nesting habitats as other *Bombus* species (Williams et al. 2014). In general, *Bombus* queens do not dig or make their own nests and have been observed to occupy cavities in a variety of substrates, including thatched grasses, abandoned rodent burrows and bird nests, brush piles, rock piles, and fallen

logs (Alford 1975; Free and Gasking Butler 1959; Fussell and Corbet 1992; Lye et al. 2012; Sladen 1912; Williams et al. 2014). They have also been found nesting in human-made structures such as walls, rubble or abandoned furniture (Fussell and Corbet 1992; Williams et al. 2014). Bumble bee nests are annual and conclude with the deaths of the queen, workers, and drones at the end of the season—only the mated gynes survive the winter (overwintering), emerging the following spring to start the next year's colony.

Very little is known about the overwintering habitat typically used by CBB; however, based on overwintering sites of other bumble bee species, it is possible that CBB overwinter in soft, disturbed soils or under leaf litter and other debris (Hatfield et al. 2018). Factors that have been identified as substantial threats to the survival and reproduction of CBB include the loss of habitat due to human-caused landscape modifications (e.g., agricultural intensification, livestock grazing, urban development), increased use of herbicides and pesticides, competition, climate change, genetic factors, and disease/pathogen spillover (Hatfield et al. 2018).

METHODS

Background Review

ECORP conducted a literature review of mapped vegetation communities and land cover types, examined previous site photographs, and reviewed the plant list from the Biological Resources Letter Report (ECORP 2022). ECORP also conducted an updated database query of CDFW's California Natural Diversity Database (CNDDB) (CDFW 2025b) for historic and recent CBB occurrences within 5 miles of the Grading Area.

Field Survey

Following the background review, ECORP conducted two focused CBB habitat assessment surveys at least 1 week apart. During the surveys, ECORP ground-truthed previously mapped vegetation communities and land cover types and focused on characterizing existing habitat and land-cover features. ECORP characterized the habitat and land-cover features as: high-, moderate-, or low-quality foraging habitat; nesting habitat; and/or overwintering habitat. ECORP assessed land-cover features for abandoned small mammal burrows, bunch grasses, thatched annual grasses, brush piles, old bird nests, dead trees, and hollow logs that would qualify as nesting habitat. The surveyors focused on the detection of bumble bees and other pollinator species in areas with flowering resources at a rate of 1 person-hour per 3 acres, in accordance with presence/absence survey recommendations (CDFW 2023). ECORP used binoculars with magnifications of 8x42 and digital cameras with zoom lenses to assess unsafe areas (steep slopes) and inaccessible areas (private property) from safe locations. The biologists recorded plant and wildlife species observed during the survey utilizing a customized CBB form in Esri's ArcGIS Survey123 online application (Appendix B) and took representative photographs of the Property (Appendix C).

RESULTS

The database search of the CNDDB did not return any historic or recent records of CBB within 5 miles of the Project Area.

ECORP biologists Christine Tischer and Sarah Wagner conducted a focused CBB habitat assessment on April 21, 2025 from 0915 to 1220. Weather conditions consisted of clear skies, temperatures from 66 to 70 degrees Fahrenheit (°F), and wind speeds of 1 to 7 miles per hour. Ms. Tischer and Ms. Wagner conducted a secondary field assessment on April 28, 2025 from 1200 to 1400. Weather conditions consisted of clear skies with some clouds, temperatures from 67 to 72°F, and wind speeds of 1 to 8 miles per hour. Both surveys were conducted during the CBB colony active period and under suitable conditions to maximize the detection of CBB.

Vegetation communities and land-cover types present within the Grading Area during the 2025 surveys were consistent with previous mapping of the Project Area (Appendix A: Figure 2). Table 1 provides the acreages and summarizes the habitat quality (if applicable) of each habitat and vegetation community within the Grading Area.

Table 1. CBB Habitat Quality within the Grading Area

Habitat and Vegetation Communities	CBB Habitat Quality	Acres
Developed – Access Road (Dirt)	N/A	0.360
Developed – Access Road (Paved)	N/A	0.001
Developed – Built Environment or Constructed Slopes, Pads	Low	1.175
Disturbed	Low	0.990
Disturbed – Berms	Low	0.011
Disturbed Diegan Coastal Sage Scrub	Moderate	0.346
	Total	**2.883**

Notes: CBB = Crotch bumble bee; N/A = Not Applicable

Overwintering habitat is not present within the Survey Area. Vegetated portions of disturbed and developed communities provide low quality nesting and foraging habitat for CBB due to the presence of one to five flowering annuals at the time of the habitat assessments, minimal flowering trees and/or shrubs, and rodent burrows.

Moderate quality foraging and nesting habitat was present within the disturbed Diegan coastal sage scrub vegetation community within the northeastern portions of the Grading Area and the 250-foot buffer. Preferred nectar resources within this community were sparse but included a variety of flowering shrubs and annuals, including:

- California buckwheat (*Eriogonum fasciculatum*)
- black sage (*Salvia mellifera*)
- deerweed (*Acmispon glaber*)
- phacelia (*Phacelia* spp.)
- fiddleneck (*Amsinckia* sp.)
- chaparral beardtongue (*Keckiella antirrhinoides*)

The flora and fauna observed during the field assessment included those that are typical of the aforementioned disturbed and developed habitats, horse stables, and vegetation communities. ECORP observed the following wildlife species:

- red-tailed hawk (*Buteo jamaicensis*)
- turkey vulture (*Cathartes aura*)
- northern mockingbird (*Mimus polyglottos*)
- California towhee (*Melozone crissalis*)
- rock dove (*Columba livia*)
- great-tailed grackle (*Quiscalus mexicanus*)
- lesser goldfinch (*Spinus psaltria*)
- black phoebe (*Sayornis nigricans*)
- Anna's hummingbird (*Calypte anna*)
- Allen's hummingbird (*Selasphorus sasin*)
- Bullock's oriole (*Icterus bullockii*)
- desert cottontail (*Sylvilagus audubonii*)
- California ground squirrel (*Otospermophilus beecheyi*)
- coyote (*Canis latrans*)
- western fence lizard (*Sceloporus occidentalis*)

ECORP also observed several pollinator species:

- western honeybee (*Apis mellifera*)
- western tiger swallowtail (*Papilio rutulus*)
- valley carpenter bee (*Xylocopa varipuncta*)
- orange sulfur (*Colias eurytheme*)
- mourning cloak (*Nymphalis antiopa*)
- painted lady (*Vanessa cardui*)
- west coast lady (*Vanessa annabella*)
- cabbage white (*Pieris rapae*)

Despite the surveys being conducted during the CBB colony active period, in accordance with acceptable focused survey guidelines and suitable conditions, ECORP did not observe or detect any CBB or bumble bee species during the 2025 surveys.

Incidental Special-Status Species Detections

ECORP observed four special-status wildlife species during the focused CBB habitat assessment surveys:

- yellow warbler (*Setophaga petechia*)
- Cooper's hawk (*Accipiter cooperii*)
- red-shouldered hawk (*Buteo lineatus*)
- turkey vulture

Yellow warbler is a California Species of Special Concern and a County Group 2 species; however, it is proposed to not be covered by the draft North County Multiple Species Conservation Program (MSCP) (County of San Diego 2009). Cooper's hawk, red-shouldered hawk, and turkey vulture are County Group 1 species and are proposed to not be covered by the draft North County MSCP (County of San Diego 2009). ECORP did not observe any nesting or breeding habitat for these species within the Grading Area.

PROJECT EFFECTS AND SIGNIFICANCE DETERMINATION

Based on the lack of CBB records within 5 miles of the Project Area and the limited amount of habitat that only provides low-to-moderate quality potential nesting and foraging habitat, CBB has a low potential to occur within the Project Area. The Project would not have a substantial adverse effect, either directly or through habitat modifications on CBB. Grading activities within this highly disturbed environment that provides low to moderate quality foraging habitat would not result in significant impacts to CBB unless a CBB nest was present at the time of grading or other Project-related ground-disturbing activities. Should a nest be present within the Project's impact area at the time of Project construction, ground-disturbing activities may cause death or injury of adults, eggs, and larva; burrow collapse; nest abandonment; and/or reduced nest success. In addition to minimization and avoidance measures outlined in the Biological Resources Letter Report (ECORP 2022), Mitigation Measure BIO-6 should be implemented for areas with potential CBB nesting and foraging habitat.

BIO-6 Seasonal Pre-Construction CBB Nesting Survey and No-Work Buffer Establishment Around Active CBB Nests. Prior to vegetation removal, a pre-construction CBB nesting survey shall occur prior to ground-disturbing or vegetation-trimming activities within the Project's work area and a 50-foot buffer. The timing of these surveys shall coincide with the Colony Active Period (April 1 through August 31 for Crotch's bumble bee). A qualified CBB biologist, with a Memorandum of Understanding (MOU) authorized under CESA, will conduct a CBB nesting and foraging survey within 1 week of ground disturbing construction activities. Surveys shall be conducted during daylight hours when ambient temperatures are between 60 and 90°F. Surveys shall not be conducted during wet conditions (e.g., foggy, rainy, or drizzling) and surveyors shall wait at least one hour following rain. Optimal surveys are those conducted when there are sunny to partly sunny skies.

If Crotch's bumble bee nests or individuals are not detected during focused surveys, no further mitigation would be required. In the event that a bumble bee nest is suspected (i.e., bumble bee was observed to have entered a burrow or disappeared under a shrub or into thatch), the suspected nest location will be passively observed for at least 20 minutes to confirm the presence/absence of a nest. It is up to the discretion of the biologist regarding the actual survey viewshed limits from the chosen vantage point to determine which would provide 100 percent visual coverage; this could include a 30-to 50-footwide area. If a nest is suspected, the surveyor can block the entrance of the possible nest with a sterile vial or jar until to verify nest activity is confirmed (no longer than 30 minutes). Netting/capture shall be conducted by the biologist authorized under the MOU and identification shall be verified by sending photographic vouchers to a CDFW approved taxonomist. The bee shall be placed in a clear container for observation and photographic documentation, if able. The bee shall be photographed using a macro lens from various angles to ensure recordation of key identifying characteristics. If bumble bee identifying characteristics cannot be adequately captured in the container due to movement, the container shall be placed in a cooler with ice until the bumble bee becomes inactive (generally within 15 minutes). Once inert, the bumble bee shall be removed from the container and placed on a white sheet of paper or card for examination and photographic

documentation. The bumble bee shall be released into the same area from which it was captured upon completion of identification. Based on implementation of this method on a variety of other bumble bee species, they become active shortly after removal from the cold environment, so photography must be performed quickly. A 50-foot buffer will be established and visibly flagged for avoidance if a nest location is discovered, and the discovery shall be reported to CDFW by the qualified CBB biologist within 24 hours of discovery to determine if an Incidental Take Permit would be required. If an Incidental Take Permit is required, it shall be obtained prior to issuance of Grading Permit, Demolition Plans/Permits and Building Plans/Permits, and all necessary permit conditions shall be fulfilled prior to initiation of project activities.

A written survey report shall be submitted to the City and CDFW within 30 days of the pre-construction survey. The report shall include survey methods, weather conditions, and survey results, including a list of insect species observed and a figure showing the locations of any Crotch's bumble bee nest sites or individuals observed. The survey report shall include the qualifications/resumes of the surveyor(s) and approved biologist(s) for identification of photo vouchers and a detailed habitat assessment. Survey results are considered valid until the start of the next Colony Active Period.

If you have any questions about the information presented in this survey letter report, please contact me at ctischer@ecorpconsulting.com or (714) 648-0630.

Sincerely,

ECORP Consulting, Inc.

Christine Tischer
Senior Biologist

Appendices:

Appendix A – Figures
Appendix B – CBB Forms
Appendix C – Site Photographs

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APPENDIX A

Figures

Location: N:\2019\2019-155 San Luis Rey Training Center Expansion\MAPS\Location_Vicinity\SLRTCE_Location_GradingLimits.mxd (AMW)-trotellini 8/5/2020

Map Date: 8/5/2020

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

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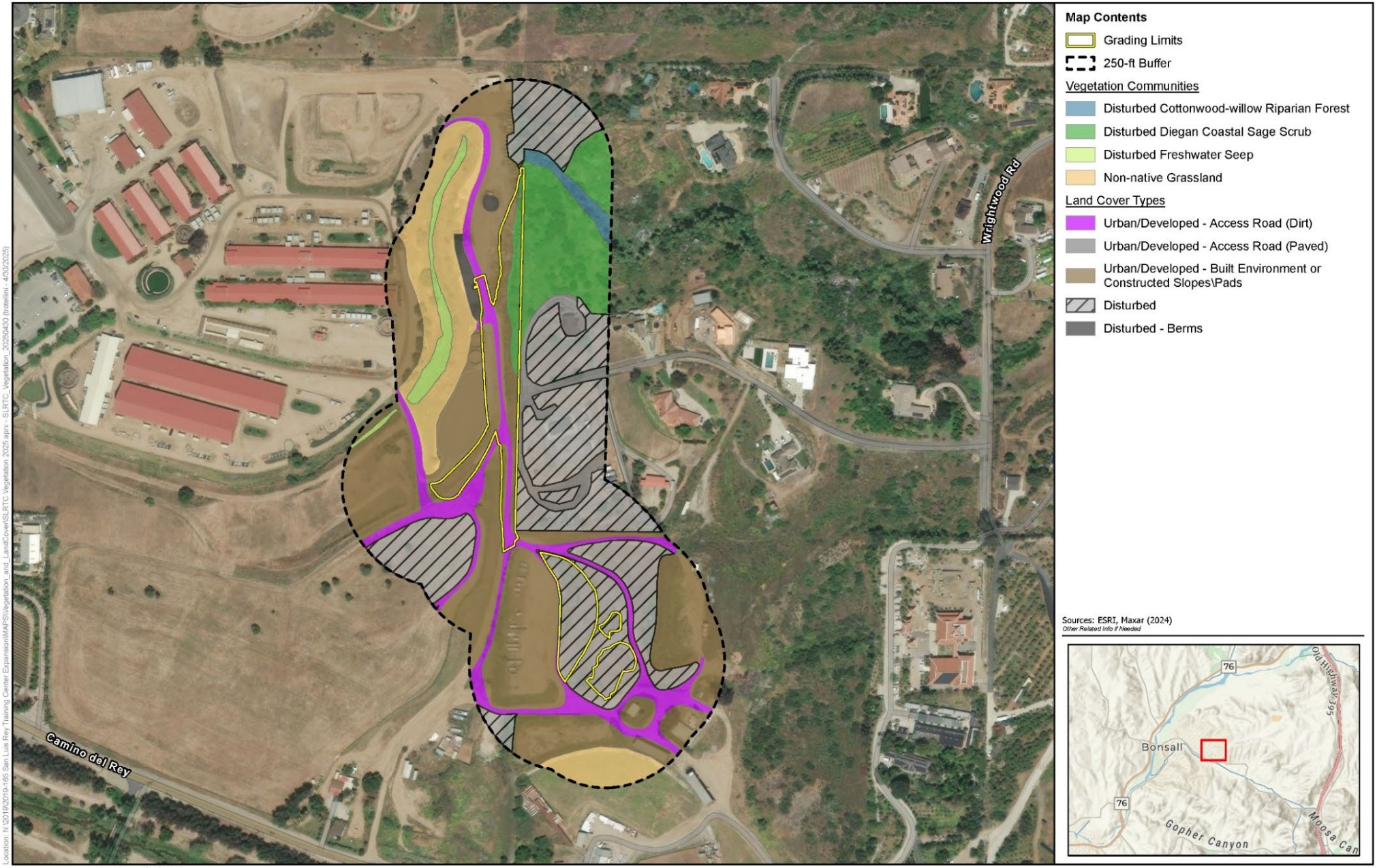
Figure 1. Project Location and Vicinity

2019-155 Revegetation Plan - San Luis Rey Training Center



Location: N:\2019\2019-155 San Luis Rey Training Center Expansion\MAPS\Vegetation_and_LandCover\SLRTC Vegetation 2025.aprx - SLRTC_Vegetation_20250430 (tratellini - 4/30/2025)

Map Date: 4/30/2025

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Scale in Feet
0 250

Figure 2. Vegetation Communities and Land Cover Types

2019-155 San Luis Rey Training Center

APPENDIX B

CBB Forms

Bombus Survey Log

Submitted by: SoCal_Bio

Submitted time: Apr 21, 2025, 5:24:17 PM

General Survey Info

Biologist/Monitor Name:

Christine Tischer

Additional Surveyors?

Yes

List Additional Surveyors

Sarah Wagner

Project Name and Number

2019-155

Survey Date:

Apr 21, 2025

Time Begin:

09:15

Time End:

12:20

Morning Weather (at time begin)

Can you see Shadow?

Yes

% Clouds

43

Temperature

66

Windspeed

1-3

Afternoon Weather (at time complete)

Can you see Shadow?

Yes

% Clouds

18

Temperature

70

Windspeed

2-7

Survey Area Descriptions

Habitat Type (Select Multiple)

- **Developed - Medium**
- **Barren Land**
- **Shrubland**
- **Pasture/Hay**
- **Grassland**

% Est. Vegetative cover

50-75%

Number of native plant spp. in flower

5-9 Species

Description of dominant management practices on the survey area

Grazing, horse training, mowing for fuel management

Description of observed or likely stressors in survey area

Mowing and weed whacking

Pollinator and Wildlife Species Observed:

ALHU*, WREN, HOWR, RTHA, AMCR, NRWS, horse, CA ground squirrel, LEGO, SAPH, CALT, GTGR, CAKI, BUSH, BLPH, HOFI, ROPI, honeybee* RSHA, COYE, SOSP, western fence lizard, ANHU*, CLSW, cranefly, side-blotched lizard, tarantula hawk, lark sparrow, BUOR

Plant Species in Bloom

Hirscheldia incana, tree tobacco, Raphinus sativa, mule fat, field mustard, poison hemlock, Jimsonweed, prickly pear, Amsinkia menziesii, Melilotus (yellow), horehound, geraniums and iceplant at horse facility, Melia azedarach (chinaberry), Erodium, London rocket, Cryptantha, Alyssum, Solanum eleaegnifolium, pepperweed, Tamarix Sp., hairy suncup, Heliotrope, CA buckwheat, Solanum douglasii,

Site Photos

Looking_NW_at_training_facility.jpg

Looking_north_at_slope_to_be_graded.jpg

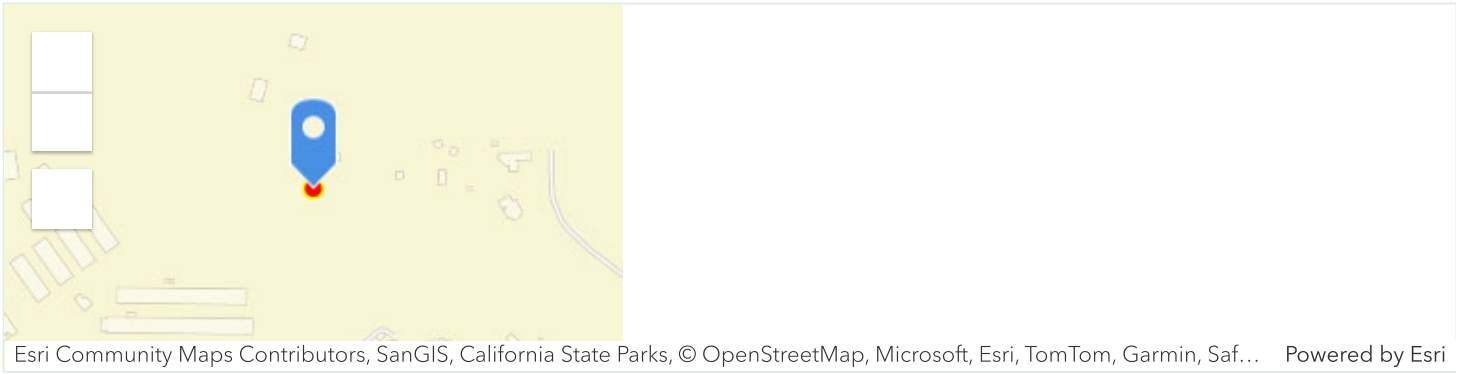
Bombus Detection

Were Bombus Present?

No

Location

Lat: 33.288825 Lon: -117.200646



Log Complete?

Yes

Signature:

Signature-20250421-192524.jpg

Bombus Survey Log

Submitted by: SoCal_Bio

Submitted time: Apr 28, 2025, 2:05:20 PM

General Survey Info

Biologist/Monitor Name:

Christine Tischer

Additional Surveyors?

Yes

List Additional Surveyors

Sarah Wagner

Project Name and Number

2019-155

Survey Date:

Apr 28, 2025

Time Begin:

11:58

Time End:

14:01

Morning Weather (at time begin)

Can you see Shadow?

No

% Clouds

72

Temperature

67

Windspeed

1-4

Afternoon Weather (at time complete)

Can you see Shadow?

Yes

% Clouds

33

Temperature

72

Windspeed

3-8

Survey Area Descriptions

Habitat Type (Select Multiple)

- **Developed - Medium**
- **Barren Land**
- **Shrubland**
- **Pasture/Hay**
- **Grassland**

% Est. Vegetative cover

50-75%

Number of native plant spp. in flower

5-9 Species

Description of dominant management practices on the survey area

Grazing, horse training, mowing for fuel management

Description of observed or likely stressors in survey area

Mowing and weed whacking

Pollinator and Wildlife Species Observed:

GTGR, BLPH, HOFI, ROPI, HOWR, Honeybees, western fence lizard,ALHU, granite spiny lizard*, LEGO, CALT, CLSW, giant swallowtail, WCSP, orange sulphur, desert cottontail, YEWA*, RSHA, TUVU, COHA pair flyover, RTHA,1 female valley carpenter bee flyover, CA ground squirrel, SPTO, cabbage white, west coat lady, NOMO, HOOR, side-blotched lizard, ANHU, coyote (scat), SAPH, CAKI

Plant Species in Bloom

Hirscheldia incana, tree tobacco, showy penstemon, Keckiella, Matillija poppy, pseudognathalium, golden yarrow, Raphinus sativa, mule fat, field mustard, poison hemlock, Jimsonweed, prickly pear, Amsinkia menziesii, Melilotus (yellow)= Mellica indicus, horehound, geraniums and iceplant at horse facility, Melia azedarach (chinaberry), Erodium, London rocket, Cryptantha, Alyssum, Solanum eleaegnifolium, pepperweed, Tamarix Sp., hairy suncup, Heliotrope, CA buckwheat, Solanum douglasii, 1 large narrowleaf milkweed with flowerbuds, 1 artichoke thistle

Bombus Detection

Were Bombus Present?

No

Are any Honey Bees (Apis) detected?

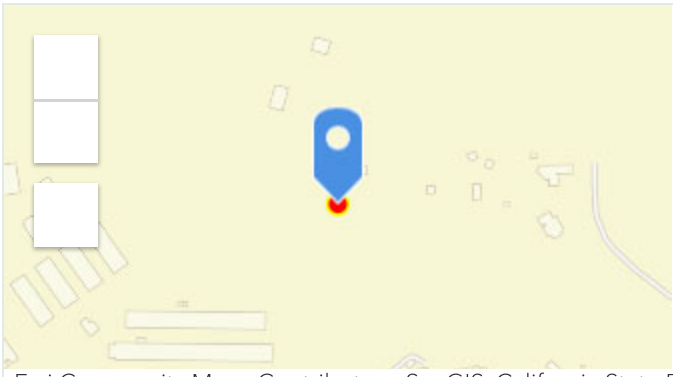
Yes

Bombus to Apis Ratio

N/A

Location

Lat: 33.288825 Lon: -117.200646



Photos

Slope_with_mammal_burrows.jpg

Log Complete?

Yes

Signature:

Signature-20250428-210501.jpg

APPENDIX C

Site Photographs

Photo 1. Northeastern Portion of Grading Area with Disturbed Diegan Coastal Sage Scrub (facing southeast).

Photo 2. Disturbed Freshwater Seep located in Western Portion of Survey Area (facing east).

Photo 3. Southern Portion of Project Area with Disturbed Land (facing east).

Photo 4. Northeastern Portion of Buffer with Disturbed Diegan Coastal Sage Scrub (facing south).