Appendix B

B.1 – Biological Assessment

B.2 – Raptor Survey

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Biological Assessment

Mountains Recreation & Conservation Authority
Escondido Canyon Park to Murphy Way Connector Project
City of Malibu, Los Angeles County, California

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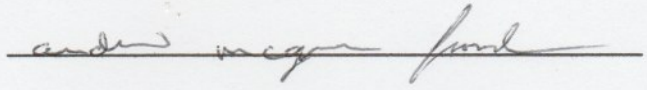
July 7, 2018

This report is a true and accurate statement of the existing conditions of the biological resources located along and immediately adjacent the Mountains Recreation & Conservation Authority - Escondido Canyon Park to Murphy Way Connector Project, City of Malibu, Los Angeles County, California. This report complies with the requirements of Chapter 4.4.2 of the City of Malibu Local Coastal Program, Local Implementation Plan (2002).



Signature

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Date

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INTRODUCTION

The Mountains Recreation and Conservation Authority (MRCA) propose the construction of a connector trail from Murphy Way to the existing Escondido Falls Trail in Escondido Canyon Park. The start of the proposed trail is located at Murphy Way across from the water tank of the Los Angeles County Waterworks District No. 29. The trail traverses eastward across MRCA-owned vacant land into a portion of Escondido Canyon Park owned by both the MRCA and the Santa Monica Mountains Conservancy, where it will connect to the existing Escondido Falls Trail.

The Coastal Slope Trail has been referenced in trail planning documents dating back to the mid-1970s. At that time, the Trails Coordinating Committee of the Santa Monica Mountains State Parks Advisory Committees began preparing what resulted in the 1979 draft document, *Conceptual Trail Network for the Santa Monica Mountains*. Thereafter, the Coastal Slope Trail has been included in virtually all coastal-oriented planning documents with a trail planning component such as the Santa Monica Mountains National Recreation Area General Plan, Santa Monica Mountains National Recreation Area Interagency Trail Management Plan, Los Angeles County General Plan, and the City of Malibu General Plan. The proposed connector trail would be consistent with a segment of the planned Coastal Slope Trail in the Escondido Canyon area of Malibu. Escondido Canyon Park is located approximately one mile east of Kanan Dume Road. The park is located within designated environmentally sensitive habitat area (ESHA). Escondido Canyon Park does not have any built structures or facilities other than one picnic table near the park entrance. Dense vegetation consisting of oak woodland, riparian woodland, coastal sage scrub habitat, Escondido Creek, and a network of trails encompass the park. Escondido Canyon Park is for the most part, surrounded by privately owned land and residential neighborhoods. Currently, the only access to the park is via an existing trail easement along the edge of East Winding Way starting from the public parking lot located at the intersection of Winding Way and the Pacific Coast Highway approximately one mile south of the park. The easement crosses East Winding Way at a number of points. Increasing popularity of Escondido Canyon Park has resulted in a high level of use and overcrowding of the only access into the park via East Winding Way. Alternative access points into the park are needed to alleviate use of East Winding Way.

PROJECT DESCRIPTION

The project includes construction of a 3,883 linear foot trail, 3 feet wide (up to a 6 feet wide trail construction corridor), between Murphy Way and Escondido Falls Trail. The trail will require 10 feet of overhead clearance and will include rolling grade crossings at ephemeral drainages and intermittent streams. The trail and its associated erosion controls encompass approximately 23,303 sq. ft. (~0.535 acres) of land. The area to be graded is approximately 15,873 sq. ft. (~0.36 acres) of land. The amount of cut and fill proposed is 312 and 13.7 cubic yards, respectively. The trail would begin on the shoulder of Murphy Way sloping downwards where it switchbacks across an ephemeral drainage then parallels and crosses an intermittent stream, before crossing Escondido Creek and connecting with the existing Escondido Falls Trail. The trail will reduce the high-volume pedestrian traffic along East Winding Way. The location of the proposed project is depicted in Exhibit A. The properties owned by the MRCA are depicted in Exhibit B. The trail alignment is depicted in Exhibit C (see Appendix A for complete plan set).

PURPOSE

The City of Malibu Local Coastal Plan (City of Malibu LCP) requires a Biological Assessment for new development within 200 feet of ESHA. The City of Malibu LCP's ESHA and Marine Resources Maps depict ESHA along almost the entire length of the proposed trail.

DESKTOP REVIEW

The biologists reviewed maps, documents, and a number of other resources including -

1. The City of Malibu LCP, Local Implementation Plan and City of Malibu LCP, Land Use Plan
2. The City of Malibu ESHA & Marine Resources Maps and City GIS, ESHA & Marine Resources Overlay,
3. The US. Fish and Wildlife Services (USFWS), National Wetlands Inventory,[1]
4. The U.S. Department of Agriculture Soil Conservation Service's Web Soil Survey,
5. The California Native Plant Society's (CNPS) Inventory of Rare and Endangered Plants (IREP),[2]
6. The California Natural Diversity Database (CNDDB) and Biogeographic and Observation System (BIOS),[3]
7. The California Department of Fish and Wildlife's (CDFW) list of "Special Animals",[4]
8. The CDFW list of "Fully Protected Animals",[5]
9. The CDFW list of "State and Federally Endangered and Threatened Animals of California",[6]
10. The CDFW list of "Special Vascular Plants, Bryophytes, and Lichens",[7]
11. The CDFW list of "State and Federally Listed Endangered, Threatened, and Rare Plants of California",[8] and
12. The USFWS, Sacramento Office's "Proposed and Candidate Species" system.[9]

1 http://www.fws.gov/wetlands/Data/Mapper.html

2 California Native Plant Society, 2016, Inventory of Rare and Endangered Plants

3 CAL. Fish & Wildlife, Wildlife & Habitat Data Analysis Branch, California Natural Diversity Database, Accessed April 2018

4 CAL. Fish & Wildlife, Special Animals, April 2018

5 CAL. Fish & Wildlife, Fully Protected Animals, May 2003

6 CAL. Fish & Wildlife, State & Federally Endangered & Threatened Animals of California, May 2018

7 CAL. Fish & Wildlife, Special Vascular Plants, Bryophytes, & Lichens, April 2018

8 CAL. Fish & Wildlife, State & Federally Listed Endangered, Threatened, & Rare Plants of California, April 2018

The CNPS IREP includes information on the distribution, ecology, and conservation status of California's rare, threatened, and endangered plants. The CNPS data are widely accepted as the standard for information on the status of the flora of California. The CNPS recognizes more than 1600 plant taxa (species, subspecies and varieties) as rare, threatened, or endangered in California, more than 500 additional species that have limited distribution, and approximately 55 additional species for which the CNPS needs more information. The IREP also contains information on approximately 25 species presumed to have become extinct in California in the last 100 years. The CNDDB is part of a nationwide network overseen by NatureServe. The CNDDB includes Rarefind 5 and BIOS, which include locations and natural history information on special-status plants and animals and natural communities throughout California. The data help drive conservation decisions, aid in the environmental review of projects and land use changes, and provide baseline data helpful in recovering rare, threatened, and endangered species. The goal of the CNDDB is to provide the most current information available on the state's most imperiled elements of natural diversity and to provide tools to analyze these data. The species on the CDFW lists are considered to be those of greatest conservation need and are commonly referred to as special-status species. Special-status species include those protected by the State Endangered Species Act,[10] the Federal Endangered Species Act,[11] the California Fish and Game Code[12] including fully protected species,[13] and all other species that appear on the lists. As defined by the California Coastal Commission (CCC) and the City of Malibu LCP, special-status species include only those that are protected by the State Endangered Species Act, the Federal Endangered Species Act, CDFW Species of Special Concern, and species on Rank 1A, 1B, and 2 of the CNPS IREP. Because the CDFW and CNPS consider the species on the lists to be those of greatest conservation need, the biologists includes an analysis of all CDFW and CNPS special-status species that are known to occur in the region. The biologists also rely on these lists for current species designations. Using the CNDDB, Rarefind 5, BIOS, and IREP the biologists compiled a list of every special-status species that occur in the Santa Monica Mountains and ultimately made a determination with regards to potential occurrence of these species at the subject property.

SURVEY DATES

General Wildlife & Raptor Survey - April 28, 2016 (Andrew McGinn Forde)

General Wildlife & Raptor survey - April 29, & May 27, 2016 (Amy Plesetz)

Botanical Surveys & Plant Community Mapping - April 28 & May 2, 2016 (Dr. Edith Read)

Wetland Delineation & Botanical, Survey - May 9 & May 10, 2018 (Andrew McGinn Forde & Greg Chatman)

Wetland Delineation & Botanical Survey- May 9 & May 10, 2018 (Andrew McGinn Forde & Greg Chatman)

Invertebrate Survey (Butterflies & Skippers) - May 9 & May 10, 2018 (Greg Chatman)

9 US Fish and Wildlife Service, Sacramento Fish & Wildlife Office, Proposed & Candidate Species, Threatened & Endangered Species System, Accessed April 2018

10 CAL. Fish & Game Code §§ 2050-2097

11 16 U.S.C. §§ 1531-1544

12 CAL. Fish & Game Code §§ 3511, 4700, 5050, & 5515

13 CAL. Fish & Game Code §§ 3511, 4700, 5050, & 5515

SURVEY METHODOLOGY

Biologist Andrew McGinn Forde visited the site on April 28, 2016 to conduct a general wildlife survey and a raptor survey, delineated the extents of drainages and streams, and conducted a botanical survey on May 9 and May 10. Biologist Amy Plesetz conducted a general wildlife and raptor survey on April 29, and May 27, 2016. Dr. Edith Read conducted botanical surveys and mapped plant communities on April 28 and May 2, 2016. Biologist Greg Chatman conducted botanical and invertebrate surveys on May 9 and May 10, 2018 and assisted with wetland delineation. The botanical surveys and plant community mapping were conducted consistent with USFWS (1996),[14] CDFW (2000)[15] and CNPS (2001)[16] guidelines; however, due to dense vegetation, the proposed trail and areas adjacent it were mostly viewed at distance with exception to where it meets Escondido Falls Trail. During the general wildlife surveys the biologists looked under rocks, wood, and other surface debris and searched in and around trees and shrubs for wildlife including special-status species, signs of wildlife, and any resources that could potentially be used by them including woodrat houses, burrows, dens, large cavities, and also searched for raptor nests and used binocular to identify wildlife on and adjacent the proposed trail. The raptor survey was conducted consistent with CCC and City of Malibu LCP guidelines. A raptor survey report is provided separately. The biologists also delineated streams and wetlands using state and federal guidelines.

WATERSHED

The proposed trail is located entirely within the Escondido Canyon Watershed.

STREAMS & WETLANDS

The National Wetlands Inventory (NWI) depicts several drainages and streams in the general vicinity of the proposed trail. The proposed trail crosses three of the drainages and two of the streams. Because the trail crosses the drainages and streams, the applicant requested delineation. Biologists Andrew McGinn Forde and Greg Chatman delineated the extents of the ephemeral drainages and streams on May 9 and May 10, 2018. The drainages and streams are depicted in Exhibit D and discussed below.

Drainage 1 (Escondido Creek)

Escondido Creek is approximately 14 feet wide between the tops of its banks and approximately 10 feet wide between its ordinary high water marks. The biologists observed ponded water between the ordinary high water marks up and down stream from the proposed crossing. The majority of the ponds were about 10 inches deep with some being about 20 inches deep. *Quercus agrifolia* Woodland Alliance dominates the drainage where the crossing is proposed. California sycamore (*Platanus racemosa*), California black walnut (*Juglans californica*), and arroyo willow (*Salix lasiolepis*) also occur. The woodland canopy prevents the suns rays from reaching some of the ponds, which likely allows them to persist through spring and maybe into summer during years with above average rainfall. The dominant vegetation and ponded water

14 U.S. Fish and Wildlife Service. 1996. Guidelines for conducting and reporting botanical inventories for federally listed, proposed, and candidate plants. Sacramento, California

15 California Department of Fish and Game. 2000. Guidelines for assessing the effects of proposed projects on rare, threatened, and endangered plants and natural communities. (Revision of 1983 guidelines.) Sacramento, CA

16 California Native Plant Society. 2001. CNPS botanical survey guidelines. Pages 38-40 in California Native Plant Society's inventory of rare and endangered vascular plants of California (D.P. Tibor, editor)

indicates that the drainage is not ephemeral and the lack of flow indicates that it is not perennial. The biologists sampled the soils at the edges of the pools and determined that they were not hydric. The fact that the soils are not hydric indicates that the drainage is intermittent. The biologists also sampled soils in areas immediately above the ordinary high water marks and determined that they were not hydric. There are no adjacent wetlands. The limit of USACE jurisdiction is the area between the ordinary high water marks. The limit of CDFW jurisdiction is the area between the tops of banks and any contiguous riparian vegetation (= *Quercus agrifolia* Woodland Alliance). The proposed trail borders the riparian vegetation and crosses the drainage in one location.

Drainage 2

Drainage 2 is tributary to Drainage 1 (Escondido Creek). It is approximately 12 feet wide between the tops of its banks and approximately 10 feet wide between its ordinary high water marks. The biologists observed ponded water, less than 6 inches deep, between the ordinary high water marks within the drainage up and down stream from the proposed crossing. *Quercus agrifolia* Woodland Alliance dominates the entire length of the drainage. California sycamore, California black walnut, and arroyo willow also occur. The dominant vegetation and ponded water indicates that the drainage is not ephemeral and the lack of flow indicates that it is not perennial. The biologists sampled the soils at the edges of the pools and determined that they were not hydric, indicating that the drainage is in fact intermittent. The biologists also sampled soils in areas immediately above the ordinary high water marks and determined that they were not hydric. There are no adjacent wetlands. The limit of USACE jurisdiction is the area between the ordinary high water marks. The limit of CDFW jurisdiction is the area between the tops of banks and any contiguous riparian vegetation (= *Quercus agrifolia* Woodland Alliance). The proposed trail borders the riparian vegetation and crosses the drainage in one location.

Drainage 3

Drainage 3 is tributary to Drainage 2. It is approximately 5 feet from top of bank to top of bank along the majority of its length and about 6 feet where it meets Drainage 2. It is approximately 3 feet wide between the ordinary high water marks. *Juglans californica* Woodland Alliance dominates its banks where it occurs on adjacent private property and *Quercus agrifolia* Woodland Alliance dominates its banks on the MRCA owned property where it meets Drainage 2 and where the trail will cross it. The biologists did not observe any flow or ponded water within the drainage during any of the site visits. The presence of riparian vegetation and the lack of flow or ponded water indicate that it is intermittent. The biologists sampled soils between the tops of banks and ordinary high water marks and also sampled soils above the tops of banks and determined that they were not hydric. The fact that the soils are not hydric indicates that the drainage is intermittent. The biologists also sampled soils in areas immediately above the ordinary high water marks and determined that they were not hydric. There are no adjacent wetlands. The limit of USACE jurisdiction is the area between the ordinary high water marks. The limit of CDFW jurisdiction is the area between the tops of banks and any contiguous riparian vegetation (= *Quercus agrifolia* Woodland Alliance and off-site = *Juglans californica* Woodland Alliance). The proposed trail borders the riparian vegetation and crosses the drainage in one location.

Drainage 4

Drainage 4 is tributary to Drainage 2. It is approximately 4 feet wide from top of bank to top of bank along most of its length but ranges between 3 to 6 feet in some areas. The distance between ordinary high water marks is approximately 2 feet wide. The biologists did not observe flow or ponded water within the drainage. *Salvia leucophylla* Shrubland Alliance dominates its banks. *Quercus agrifolia* Woodland Alliance dominates its banks where it meets Escondido Creek. Based on lack of flow and lack of riparian vegetation along the majority of its length, indicates that the drainage is ephemeral and because it doesn't have flow or riparian vegetation (= hydrophytic vegetation) it fails the USACE's 3-parameter test; therefore, the biologists did not sample soils. The proposed trail crosses this drainage in four locations. The limit of USACE jurisdiction is the area between the ordinary high water marks. The limit of CDFW jurisdiction is the area between the tops of banks. There are no adjacent wetlands.

PLANT COMMUNITIES

Plant communities are typically dependent on or affected by such factors as geographical location, elevation, soil/substrate types and chemistry, precipitation rates, wildfire, and many other factors. Based on plant community descriptions in Sawyer *et* al.[17] two distinct plant communities occur along and immediately adjacent the proposed trail. The communities include *Quercus agrifolia* Woodland Alliance and *Salvia leucophylla* Shrubland Alliance. A photograph depicting the communities is included as Exhibit E. A map depicting the plant communities is included as Exhibit F. A complete plant inventory is included in Exhibit G. The communities are discussed below.

Quercus agrifolia Woodland Alliance

The area mapped by the Dr. Read included the proposed trail and areas immediately adjacent it. The area mapped included 1.19 acres of *Quercus agrifolia* Woodland Alliance, which occurs in Escondido Canyon and an unnamed tributary to the west. The trail will affect approximately 0.3 acres of this community. Vegetation canopy cover, including tree and understory shrub species combined, is in the range of 80 to 100 percent, with the highest density in Escondido Canyon. While California live oak (*Quercus agrifolia*) is the most common tree species, California sycamore and southern California black walnut are also present. Understory species vary from dense riparian to scattered upland species and include poison oak (*Toxicodendron diversilobum*), bush monkeyflower (*Mimulus aurantiacus*), arroyo willow (*Salix lasiolepis*), California coffeeberry (*Frangula californica*), and climbing penstemon (*Keckiela californica*).

Salvia leucophylla Shrubland Alliance

The area mapped by Dr. Read included 1.47 acres of *Salvia leucophylla* Shrubland Alliance, which occupies the slopes above the drainages. Purple sage (*Salvia leucophylla*) is the dominant species. The trail will affect about 0.24 acres of this community. The vegetation has not been significantly disturbed by recent fire or human intrusion and therefore shrub cover is relatively high, in the range of 80 to 100 percent. Other species within this alliance include California sagebrush (*Artemisia californica*), elderberry (*Sambus nigra* ssp. *caerulea*), laurel sumac (*Malosma laurina*), and toyon (*Heteromeles arbutifolia*).

17 John O. Sawyer, Todd Keeler-Wolf, and Julie M. Evens. 2009. A manual of California vegetation. Second Edition. California Native Plant Society, Sacramento, California, USA.

NATIVE TREE PROTECTION ORDINANCE

The Native Tree Protection Ordinance outlined in the City of Malibu LCP is designed to preserve and protect native trees including alder (*Alnus rhombifolia*), southern California black walnut, oak (*Quercus* sp.), toyon, and California sycamore.[18] Trees protected by the ordinance must have at least one trunk with a diameter measuring 6 inches or more or a combination of two trunks totaling 8 inches or more as measured 4 and one 1/2 foot above natural grade. The majority of the live oak, California sycamore, and California black walnut that occur along and immediately adjacent the trail, meet the protected tree definition. The trail will encroach some of these trees; however, none shall be removed.

COMMON WILDLIFE

The biologists observed or otherwise detected eleven invertebrate species (butterflies & skippers), no amphibians, two reptile species, forty-eight bird species including Cooper's hawk (*Accipiter cooperii*), Allen's hummingbird (*Selasphorus sasin*), oak titmouse (*Baeolophus inornatus*), and Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), and five mammal species including woodrat (*Neotoma* sp.) houses. A complete list of species observed along and adjacent the trail is included as Exhibit H. Cooper's hawk, Allen's hummingbird, oak titmouse, and southern California rufous-crowned sparrow are special-status species. The woodrat houses are likely to be occupied by big-eared woodrat (*Neotoma macrotis*); however, San Diego desert woodrat (*Neotoma lepida intermedia*), a special-status species, cannot be ruled out. A number of other species are expected to occur, particularly birds and bats during spring and fall migration, and the mature trees associated with the California Live Oak Woodland have features (basal hollows, cavities, fissures, cracks, peeling bark, and multilayered canopy) that are undoubtedly used by a variety of bats and owls for roosting and breeding. With exception to some invertebrates, the biologists did not observe any aquatic species in any of the pools, but they are undoubtedly used as a drinking source and could be used by Baja California treefrog (*Pseudacris hypochondriaca*), California treefrog (*Psuedacris cadaverina*), western toad (*Anaxyrus boreas*), and coast range newt (*Taricha torosa torosa*), a special-status species, for breeding.

SPECIAL-STATUS SPECIES

The review of the CDFW CNDDB and the CNPS IREP revealed that a number of special-status species have been recorded throughout the Santa Monica Mountains, but none actually occur along or immediately adjacent the proposed trail. Non-specific polygons representing occurrences of Braunton's milkvetch (*Astragalus brauntonii* Parish), Parry's Spineflower (*Chorizanthe parryi* S. Watson var. *parryi*), Coulter's saltbush (*Atriplex coulteri* (Moq.) D. Dietr.), mesa horkelia (*Horkelia cuneata* Lindl. var. *puberula* (Rydb.) Ertter & Reveal), blochman's dudleya (*Dudleya blochmaniae* (Eastw.) Moran ssp. *blochmaniae*), winter populations of monarch butterfly (*Danaus plexippus*), coast horned lizard (*Phrynosoma blainvillii*), and American badger (*Taxidea taxus*) all occur within 2 miles of the proposed trail. Exhibit I includes a BIOS map depicting the locations of special-status species near the property. Exhibit J includes all special-status species returned by the databases, their legal status, listing date, a brief description of habitat associations and requirements, and a statement regarding potential for occurrence based on known habitat associations and other factors.

18 City of Malibu Local Coastal Plan, Local Implementation Plan, Chapter 5.2; City of Malibu Local Coastal Plan, Land Use Plan Chapter 3.63

Special-Status Plants

Important factors to consider when evaluating potential for special-status plant species to occur are geographic location, elevation, plant communities and structure, the occurrence of streams and wetlands, other unique habitats, and microhabitats. Another important factor to consider is soil type and soil chemistry. The U.S. Department of Agriculture Soil Conservation Service produces and publishes soil maps and reports for most areas within the U.S. including the Santa Monica Mountains National Recreation Area. According to the Soil Survey, the dominant soil types that occur on and adjacent the property are Cotharin-Talepop Association, Cumulic Haploxerolls, Topanga-Mipolomol-Sapwi Association, and Calcic Argixerolls.

The major components of the Cotharin-Talepop Association are Cotharin and Talepop. Cotharin is described as slightly decomposed plant material (Oe - 0 to 1 inch), loam (A - 1 to 9 inches), and loam (Ac - 9 to 11 inches), which overlie soft weathered bedrock (Cr - 11 to 21 inches). Parent material is colluvium and/or residuum derived from andesite. It is well drained and is pH 6. Talepop is described as gravelly loam (A1 - 0 to 1 inch) and gravelly loam (Bt - 1 to 5 inches), which overlie soft weathered bedrock (Cr - 5 to 15 inches). Parent material is colluvium and/or residuum derived from andesite. It is well drained and is pH 7.2. Minor components of the Cotharin-Talepop Association include Pachic Argixerolls, Rock Outcrop, and Cumulic Haploxerolls. Cumulic Haploxerolls is described as stratified sandy loam (A - 0 to 16 inches) and stratified clay loam (2Bk - 16 to 69 inches), which overlies extremely gravelly coarse sand (3C - 69 to 83 inches); it is well drained, and has pH 7. Parent material is alluvium derived from volcanic and sedimentary rock. Minor components include Danville coastal, Typic Argixerolls, and Riverwash.

The dominant soil types in the Topanga-Mipolomol-Sapwi Association are Topanga, Mipolomol, and Sapwi. The typical profile for Topanga is described as gravelly loam (A1 - 0 to 2 inches), gravelly loam (A2 - 2 to 15 inches), gravelly clay loam (Bt - 15 to 18 inches), overlying, soft weathered bedrock (Cr - 18 to 27 inches). Parent material is colluvium and/or residuum derived from sandstone, shale, and slate. It is well drained and has surface pH 6.5. The typical profile for Mipolomol is described as channery loam (A - 0 to 12 inches), overlying, soft weathered bedrock (Cr - 12 to 22 inches). Parent material is colluvium and/or residuum derived from sandstone, shale, and slate. It is well drained and has surface pH 6.6. The typical profile for Sapwi is described as slightly decomposed plant material (Oe - 0 to 1 inch), loam (A - 1 to 4 inches), stony clay loam (Bt1 - 4 to 24 inches), and very stony clay loam (Bt2 - 24 to 38 inches), which overlie non-weathered bedrock (Cr - 38 to 48 inches). Parent material is colluvium and/or residuum derived from sandstone. It is well drained and has surface pH 6.0. Minor components include Pachic Argixerolls (~10% of map unit), Typic Argixerolls (~3% of map unit), and Rock Outcrop (~2% of map unit). The typical profile of Calcic Argixerolls is described as silt loam (A - 0 to 1 inch), silty clay loam (Btk - 1 to 15 inches), silt loam (Bk - 15 to 37 inches), which overlies soft, weathered bedrock (Cr - 37 to 47 inches). Parent material is colluvium and/or residuum derived from calcareous sandstone. It is well drained and has surface pH 6.8. Minor components of the association include Calcic Haploxerolls (~8% of map unit) and Calcic Pachic Haploxerolls (~7% of map unit). A map depicting distribution of soils and other data are included as Exhibit K.

Based on geographic location, elevation, and the plant communities that dominate along and adjacent the trail, the biologists determined that the majority of the special-status plant species returned by the databases are not expected to occur or only have a low potential to occur. Special-status plant species with moderate to high potential to occur along the proposed trail include Coulter's saltbush, Parry's spineflower, mesa horkelia, white-veined monardella (*Monardella hypoleuca* A. Gray ssp. *hypoleuca*), and chaparral ragwort (*Senecio aphanactis* Greene). Dr. Edith Read conducted botanical surveys on April 28 and May 2, 2016 and did not observe special-status plant species; however, negative survey results do not necessarily mean that they are absent particularly given that a number of areas were inaccessible and the continuing drought conditions. Andrew McGinn Forde and Greg Chatman also conducted botanical surveys on May 9 and May 10, 2018. The biologists did not observe any special-status species along or immediately adjacent the trail; however, the majority of trail is still mostly inaccessible.

Special-Status Wildlife

Special-status wildlife species observed along and adjacent the proposed trail included Cooper's hawk, Allen's hummingbird, oak titmouse and Southern California rufous-crowned sparrow. Special-status wildlife species expected to occur along and immediately adjacent the proposed trail include southern California legless lizard (*Anniella stebbensi*), San Bernardino ringneck snake (*Diadophis punctatus modestus*), silver-haired bat (*Lasionycteris noctivagans*), western small-footed myotis (*Myotis ciliolabrum*), and Yuma myotis (*Myotis yumanensis*). Special-status wildlife species with moderate to high potential to occur along and adjacent the proposed trail include trask shoulderband snail (*Helminthoglypta traskii traskii*), southern shoulderband snail (*Helminthoglypta tudiculata convicta*), Santa Monica grasshopper (*Trimerotropis occidentiloides*), Santa Monica shieldback katydid (*Aglaothorax longipennis*), crotch bumble bee (*Bombus crotchii*), coast horned lizard, coast patch-nosed snake (*Salvadora hexalepis virgultea*), San Diego mountain kingsnake (*Lampropeltis zonata pulchra*), two-striped garter snake (*Thamnophis hammondii*), south coast garter snake (*Thamnophis sirtalis* ssp.), Coast Range newt (*Taricha torosa torosa*), long-eared owl (*Asio otis*), Costa's hummingbird (*Calypte costae*), Nuttall's woodpecker (*Picoides nuttallii*), hairy woodpecker (*Picoides villosus*), yellow warbler (*Setophaga petechia*), Bell's sage sparrow (*Artemisiospiza belli belli*), lark sparrow (*Chondestes grammacus*), pallid bat (*Antrozous pallidus*), hoary bat (*Lasiurus cinereus*), western red bat (*Lasiurus blossevillii*), and San Diego desert woodrat.

NESTING BIRDS

The Migratory Bird Treaty Act protects the majority of migratory birds breeding in the US. The Act specifically states that it is illegal "… for anyone to take … any migratory bird … nests, or eggs."[19] "Take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.[20] The California Fish & Game Code protects the nest or eggs of all birds and specifically states, "that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird."[21] The Code defines "take" as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill."[22] The CDFW recognizes the breeding season in southern California from February

19 16 U.S.C. §§ 703-712, Migratory Bird Treaty Act of 1918 as amended 1936, 1960, 1968, 1969, 1974, 1978, 1986 and 1989

20 50 C.F.R. § 10.12

21 CAL. Fish & Game Code § 3503

22 CAL. Fish & Game Code § 86

through August;[23] however, a number of species can nest outside this timeframe. For example, Anna's hummingbird (*Calypte anna*) nests mid-December to mid-August, barn owl (*Tyto alba*) nests from January through November, great-horned owl (*Bubo virginianus*) nests mid-January through June, greater roadrunner (*Geococcyx californianus*) typically nests March - September, California thrasher (*Toxostoma redivivum*) nests November to July, northern mockingbird (*Mimus polyglottos*) nests from mid-February until late September, and mourning dove (*Zenaida macroura*) typically nests February to September but can nest year round.[24] These species were detected by the biologists during the site visits or are expected to occur. Special-status species expected or have high potential to nest along and adjacent the trail include Allan's hummingbird (typically nests February - August), Costa's hummingbird (typically nests February - August), Cooper's hawk (typically nests February - August), long-eared owl (typically nests March - July), oak titmouse (typically nests March to July), Nuttall's woodpecker (typically nests March - July), yellow warbler (nests Aril through June,) southern California rufous-crowned sparrow (typically nests March - September), Bell's sage sparrow (nests March through June), and lark sparrow (nests April through June). Given the above, the potential for birds to nest along and adjacent the proposed trail throughout most of the year is high.

The biologists conducted raptor surveys on April 28, April 29, and May 27, 2016. The report is provided separately. During the surveys the biologists determined that a pair of red-tailed hawks (*Buteo jamaicensis*) nest on the rock face at Escondido Falls at UTM 334684E, 3768359N. Red-tailed hawks can begin nest building in January but typically begins March through July; peaking in May and June. A large stick nest that appears to be that of a Cooper's hawk is located at UTM 335783E, 3767782N, an old stick nest is located at 334384E, 3767864N, a large stick nest occupied by common ravens (*Corvus corax*) is located well northwest of the project site at UTM 334985E, 3768746N, and a pair of red-shouldered hawks (*Buteo lineatus*) nest in a large eucalyptus tree adjacent Escondido Creek at UTM 337065E, 3766691N. Ravens nest from mid-February into July and red-shouldered hawks typically nest February through July. The biologists also observed active and inactive nests of numerous passerines and other behaviors indicative of nesting during the surveys.

LINKAGES (CORRIDORS & CONNECTIVITY)

The National Park Service, CDFW, and the Santa Monica Mountains Conservancy have expressed concerns about the adverse effects of urbanization on wildlife, particularly the fragmentation of habitat areas, which prevents the freedom of movement that species need. Preservation of linkages between large blocks of core habitat is of the utmost importance in the region and preservation through linkages is a major concern. In general, a linkage is a feature that connects at least two blocks of habitat.[25, 26, 27, 28] The assumed function of a linkage is to facilitate dispersal of individuals between blocks of habitat, allowing for long-term genetic interchange and for re-colonization of blocks of habitat from which

23 CAL. Fish & Wildlife, Personal Communication, 2012

24 CAL. Fish & Game, Wildlife & Habitat Data Analysis Branch, California's Wildlife, Volume II: Birds, 1988 – 1990, Paul J. Baicich and J. O. Harrison. A Guide to the Nests, Eggs, and Nestlings of North American Birds, 1997. Harrison, C. A Field Guide to the Nests, Eggs and Nestlings of North American birds, 1978

25 Hobbs, R. J., 1992. The Role of Corridors in Conservation: Solution or Bandwagon? Trends in Evolutionary Ecology 7(11):389-392

26 Hess, G. R., 1994. Conservation Corridors and Contagious Disease: A Cautionary Note. Conservation Biology 8(1):256-262

27 McEuen, A. 1993. The Wildlife Corridor Controversy: A Review. Endangered Species Update, 10, 11, &12

28 Beier, P. & S. Loe, 1992. A Checklist For Evaluating Impacts to Wildlife Movement Corridors. Wildl. Soc. Bull. 20:434-440

populations have been locally extirpated. There are essentially two types of linkages, 1) Landscape Linkages and 2) Connectivity Choke Point Corridors. A Landscape Linkage may or may not be constricted, but it is essential to maintain the connectivity function of a particular region. A Connectivity Choke Point Corridor is a narrow, often short, and impacted corridor between blocks of habitat. This type of linkage typically requires that wildlife move through a choke point structure. Choke point structures include culverts, underpasses, overpasses, or tunnels that were not specifically designed for movement, but incidentally provide movement opportunities through otherwise impenetrable barriers. Major landscape linkages have been identified in southern California. The property where the trail is proposed is not part of any identified landscape linkage and it is not a choke point. The trail is located on the edge of core habitat.

ENVIRONMENTALLY SENSITIVE HABITAT AREAS

The City of Malibu LCP defines Environmentally Sensitive Habitat Areas (ESHA) as "any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem." ESHA include native habitats, which contribute to the viability of species protected by the State and Federal endangered species acts, those that are fully protected, and those recognized as "species of special concern" by the State. Any habitats with plant species on list 1B or list 2 of the California Native Plant Society's Inventory of Rare and Endangered Plants or habitats that are rare or valuable from a local, regional, or statewide basis including wetlands and streams are ESHA.[29] The City of Malibu LCP, ESHA and Marine Resources Maps and the City GIS ESHA and Marine Resources Overlay depict ESHA along and adjacent the trail. The overlay is included as Exhibit L. The ephemeral drainages, intermittent streams, the *Quercus agrifolia* Woodland Alliance, and the *Salvia leucophylla* Shrubland Alliance meet the ESHA definition.

IMPACT ANALYSIS

The project includes construction of a 3,883 linear foot trail, 3 feet wide (up to a 6 feet wide trail construction corridor), between Murphy Way and Escondido Falls Trail. The trail will require 10 feet of overhead clearance and will include rolling grade crossings at ephemeral drainages and intermittent streams. Crossings will be approximately 3 feet wide and will consist of stepping-stones. The plan set is included in the Appendix. Construction of the trail will affect two ephemeral drainages, two intermittent streams, and native habitat that meet the ESHA definition. Construction will also encroach protected trees and could also potentially affect special-status species and nesting birds.

Drainage 1 Impacts (Escondido Creek)

Escondido Creek is approximately 14 feet wide between the tops of its banks and approximately 10 feet wide between its ordinary high water marks. The trail crosses Drainage 1 in one location and will be approximately 3 feet wide. The trail will therefore affect approximately 42 sq. ft. of the drainage between the tops of banks (CDFW jurisdiction) and about 30 sq. ft. of the drainage between the ordinary high water marks (USACE jurisdiction). Large stepping-stones will be introduced to the drainage at the crossing. The stepping-stones will be approximately 14-inch to 18-inch in diameter. Assuming an average of 16-inch diameter, the amount of fill required in Drainage 1 between the ordinary high water marks is 30 cubic feet.

[29] City of Malibu Local Coastal Plan, Local Implementation Plan, Chapter 4.1; City of Malibu Local Coastal Plan, Land Use Plan, Chapter 3.1

Drainage 2 Impacts

Drainage 2 is a tributary to Drainage 1 (Escondido Creek) and is approximately 12 feet wide between the tops of its banks and approximately 10 feet wide between its ordinary high water marks. The trail crosses Drainage 2 in one location and will be approximately 3 feet wide. The trail will therefore affect approximately 36 sq. ft. of the drainage between the tops of banks (CDFW jurisdiction) and about 30 sq. ft. of the drainage between the ordinary high water marks (USACE jurisdiction). Large stepping-stones will be introduced to the drainage at the crossing. The stepping-stones will be approximately 14-inch to 18-inch in diameter. Assuming an average of 16-inch diameter, the amount of fill required in Drainage 2 between the ordinary high water marks is 30 cubic feet.

Drainage 3 Impacts

Drainage 3 is a tributary to Drainage 2 and is approximately 5 feet from top of bank to top of bank along the majority of its length and about 6 feet where it meets Drainage 2. It is approximately 3 feet wide between the ordinary high water marks. The trail crosses Drainage 3 in one location and will be approximately 3 feet wide. The trail will therefore affect approximately 18 sq. ft. of the drainage between the tops of banks (CDFW jurisdiction) and about 9 sq. ft. of the drainage between the ordinary high water marks (USACE jurisdiction). Large stepping-stones will be introduced to the drainage at the crossing. The stepping-stones will be approximately 14-inch to 18-inch in diameter. Assuming an average of 16-inch diameter, the amount of fill required in Drainage 3 between the ordinary high water marks is 9 cubic feet.

Drainage 4 Impacts

Drainage 4 is approximately 4 feet wide from top of bank to top of bank along most of its length but ranges between 3 to 6 feet in some areas. The distance between ordinary high water marks is approximately 2 feet wide. The trail crosses Drainage 4 in four locations and will be approximately 3 feet wide. The trail will therefore affect approximately 12 sq. ft. of the drainage between the tops of banks (CDFW jurisdiction) and about 8 sq. ft. of the drainage between the ordinary high water marks (USACE jurisdiction) in 4 locations. Total area affected is 48 sq. ft. and 32 sq. ft respectively. Large stepping-stones will be introduced to the drainage at the crossings. The stepping-stones will be approximately 14-inch to 18-inch in diameter. Assuming an average of 16-inch diameter, the amount of fill required in Drainage 4 between the ordinary high water marks is 32 cubic feet.

Drainage Impact Summary

Approximately 144 sq. ft. (~0.003 acres) of ephemeral and intermittent streams, which fall under the jurisdiction of the CDFW will be affected by the proposed trail. The total area affected under USACE jurisdiction is approximately 101 sq. ft (~0.002 acres). The amount of fill that will be introduced between the ordinary high water marks will be about 101 cubic feet.

Plant Community Impacts

The trail will affect approximately 0.3 acres of the understory of the *Quercus agrifolia* Woodland Alliance and about 0.24 acres of the *Salvia leucophylla* Shrubland Alliance.

Potential Impacts on Protected Trees

The trail will encroach on an undetermined number of protected trees; however, none shall be removed. The encroachments are expected to be minimal as the trail can be moved or narrowed at any point. The plan states that 10 feet of overhead clearance is needed. It is likely that some lower branches of some protected trees will need to be removed. Recommendations for avoidance and impact minimization are included below.

Potential Impacts on Special-Status Plant Species

The biologists did not observe any special-status plant species along or adjacent the trail; however, the majority of its length is relatively inaccessible (unless one goes crashing through habitat). Construction of the proposed trail could potentially affect Coulter's saltbush, Parry's spineflower, mesa horkelia, white-veined monardella, and chaparral ragwort, if present. Recommendations are included below that will reduce or remove the potential for impacts to these species.

Potential Impacts on Special-Status Wildlife Species

Cooper's hawk, Allen's hummingbird, and oak titmouse are expected to nest along and adjacent the proposed trail. Construction of the trail therefore has potential to affect these special-status species during nesting; however, direct impacts can easily be avoided (see recommendations below). Southern California legless lizard, San Bernardino ringneck snake, silver-haired bat, western small-footed myotis, and Yuma myotis are expected to occur. Recommendations are included below that will reduce or remove the potential for direct impact upon these species. Construction could also affect trask shoulderband snail, southern shoulderband snail, Santa Monica grasshopper, Santa Monica shieldback katydid, crotch bumble bee, coast horned lizard, coast patch-nosed snake, San Diego mountain kingsnake, two-striped garter snake, south coast garter snake, Coast Range newt, long-eared owl, Costa's hummingbird, Nuttall's woodpecker, hairy woodpecker, yellow warbler, Southern California rufous-crowned sparrow, Bell's sage sparrow, lark sparrow, pallid bat, hoary bat, western red bat, and San Diego desert woodrat; however, potential impacts upon the majority of these species can be easily avoided or reduced. Recommendations are included below that will reduce or remove the potential for direct impact upon these species.

ESHA Impacts

The ephemeral drainages, intermittent streams, the *Quercus agrifolia* Woodland Alliance and the *Salvia leucophylla* Shrubland Alliance meet the ESHA definition. Construction of the trail will result in the removal of approximately 0.54 acres of vegetation, which meet the ESHA definition and will result in fill material (stepping stones) being introduced to the drainages and streams that the trail crosses (see above discussion).

Linkage Impacts

Construction of the trail and its use will not affect any regional linkages or choke point corridors and is not expected to restrict wildlife movement.

Impact Summary

Although construction of the proposed trail will affect native habitat that meets the ESHA definition, the loss is not expected to have a significant detrimental affect on the environment and it shall ultimately be mitigated for. Similarly, the loss of wildlife including special-status species would not have a significant affect on populations as a whole.

ALTERNATIVES

Rule of reason governs the range of alternatives for any project; therefore, alternatives need only address those that would avoid or reduce significant impacts and those that could feasibly meet the objectives of the project. Economic viability, site geology, availability of infrastructure and utilities, jurisdictional boundaries, location of natural resources, consistency with general plans and local coastal plans are factors that must be considered when addressing alternatives. The trail will begin at Murphy Way and will connect with Escondido Falls Trail. The trail will allow additional access into Escondido Canyon Park and will also alleviate congestion at the trailhead of the existing Escondido Falls Trail. No alternatives are offered.

PERMIT REQUIREMENTS

The proposed trail crosses two ephemeral drainages and two intermittent streams. *Quercus agrifolia* Woodland Alliance dominates the latter. Because the trail crosses drainages and streams a CDFW Streambed Alteration Agreement will be required. The project will also require USACE and RWQCB pre-notification.

RECOMMENDATIONS & AVOIDANCE STRATEGIES

This section includes recommendations and avoidance strategies that if included as part of the proposed project, will avoid and/or reduce the potential for the project to affect the ephemeral drainages, intermittent streams, native habitats and special-status plant species if present, protected trees, common and special-status wildlife species, and nesting birds.

Erosion Control and Best Management Practices Plan

The project proponent shall submit to the City of Malibu an Erosion Control Plan and a Best Management Practices Plan, prepared by a qualified, licensed professional. The qualified, licensed professional shall certify in writing that the plan is in conformance with City requirements. The plan should include components that will reduce and prevent accidental discharge of materials to parts of the streambed that will not be affected by the proposed project.

Staking of Grading Limits

The project proponent's contractor shall delineate the proposed limits of the trail, if possible, before any construction activities occur and before any of the measures outlined below are implemented. The contractor shall not remove any native vegetation during staking and shall set the stakes so that they are clearly visible. The locations of the stakes shall be recorded using GPS and provided to the monitoring biologist. This will allow the biologist to focus their effort so that they can implement the avoidance and relocation measures outlined below.

Botanical Surveys

Although the biologists did not observe special-status plant species during the surveys, negative survey results do not necessarily mean that they are absent from the survey area, particularly given inaccessibility along most of its length. A biologist shall monitor all construction activities and shall survey areas as trail construction progresses. If rare plants are found during trail construction and determined to be vulnerable by the monitoring biologist, they shall make recommendations so that they are avoided. Avoidance may include partially re-routing the trail. If avoidance is not feasible, any individual or populations of special-status plants shall be protected in place until an appropriate relocation and mitigation plan is developed and implemented.

Native Tree Protection Plan

The proposed trail shall be routed so that protected trees are not removed and that encroachment and removal of large branches is reduced to the practicable extent possible. An arborist or qualified biologist shall monitor all activities occurring within the protected zones of protected trees, and shall make recommendations for avoidance, and for any necessary remedial work to ensure the health and safety of any trees that are encroached, and any measures necessary to reduce and/or remove potential safety hazards posed by any of the trees.

Bat Protection Plan

If branches greater than 8-inches in diameter or any with significant amounts of peeling bark are to be removed from any of the protected trees that occur within the *Quercus agrifolia* Woodland Alliance, a qualified biologist shall inspect them to determine if there are cavities that could be used by bats before removal occurs (the biologist should also check for bird nests). If the biologist finds suitable cavities, they shall conduct an emergence survey to determine if they are actually being used and will use ultrasonic detectors to record and ultimately analyze and determine species. If common bats are discovered using any cavities, removal of the branch shall be avoided. If avoidance is not possible, the bats shall be excluded before branch removal occurs. If special-status bats are using any of the cavities, they too shall also be avoided. If avoidance is not possible, the applicant will enter discussions with CDFW to determine appropriate mitigation. Placement of rock near basal cavities shall be positioned in a manner so that it will not block or interfere with flight patterns of bats that may be using them. This plan will reduce the potential for direct adverse affects on bats including silver-haired bat, pallid bat, western small-footed myotis, and Yuma myotis. Hoary bat and western red bat are unlikely to be affected by branch removal, as they roost high up in the foliage of trees.

Woodrat Survey, Avoidance & Relocation Plan

The monitoring biologist shall conduct a survey for woodrat houses. The surveys should be conducted on a daily basis as part of the daily pre-construction survey and shall be conducted within the trail limits only. Woodrat houses that are located within the trail limits shall either be avoided or dismantled and the sticks of each placed in a pile beyond the trail. This will reduce the potential for direct mortality upon woodrat including San Diego desert woodrat, if present, by providing them a chance to escape and a source of sticks that they could potentially use to rebuild their house.

Nesting Bird Survey & Protection Plan

The trail should be constructed between October and January when the potential for nesting birds is much less likely. Prior to trail construction, a qualified biologist should perform a nesting bird survey to determine if any nests or nesting activity is occurring at or near the trail construction area. This will reduce the potential for the construction of the trail to adversely affect nesting birds including Cooper's hawk, Allen's hummingbird, oak titmouse, long-eared owl, Costa's hummingbird, Nuttall's woodpecker, hairy woodpecker, yellow warbler, Southern California rufous-crowned sparrow, Bell's sage sparrow, and lark sparrow.

a. The biologist must be familiar with nesting ecology of southern California species and have a proven track record of actually finding nests.

b. If initial vegetation clearance, grubbing, grading, and construction activities are scheduled to occur outside the defined nesting season, the biologist shall conduct a survey 7 days and 3 days before the activities are scheduled to begin. The biologist should focus effort within the proposed development area. To reduce impact to surrounding vegetation, the surveying biologist shall stay within the proposed development area and use binocular to conduct observations 50 feet on either side of it. Surveys for raptor nests should extend 300 feet beyond the development area and shall be conducted from within the development area and other nearby vantage points.

c. If initial vegetation clearance, grubbing, grading, and construction activities are scheduled within the CDFW defined nesting season, the biologist should conduct a series of surveys, which should begin 31 days before any scheduled activities, and be conducted one week a part with the final survey being conducted 3 days before scheduled activities begin.

d. The biologist should prepare a brief report summarizing the results of the surveys and submit it to the CDFW and the City of Malibu Department of Planning.

e. If the biologist determines that there are active nests within or adjacent these areas, they should establish a 100-foot buffer for passerine nests and a 300-foot buffer for raptor nests.

f. The biologist should clearly mark the buffer area in the field in areas where it overlaps the proposed development area.

g. No work will occur within a nest buffer under any circumstance unless authorized in writing by the CDFW, or until the fledglings are no longer dependent on the nest, or until the biologist otherwise determines that the nest is inactive.[30]

h. If the biologist determines that a buffer reduction is feasible, without affecting the outcome of a nest, they shall prepare and submit a letter requesting a reduction to the CDFW along with any necessary information and a statement of justification so that they can make an informed decision to allow the reduction or not. Reduction approvals must be provided to the City of Malibu Department of Planning.

   i. In circumstances when activities are scheduled to occur between an original buffer and a reduced buffer, a qualified biologist should monitor the nest before, during, and after the activities, to determine if it's being affected.

   ii. The only activities that shall be allowed between the original buffer and the reduced buffer are those that generate noise levels less than 60 dBA as measured at the resource.

   iii. The biologist shall record noise levels every hour and must have the authority to stop activities that exceed 60 dBA if it is affecting or has the potential to affect the outcome of a nest.

   iv. The biological monitor shall compile weekly monitoring reports and submit them to the CDFW documenting the status of monitored nests and others as necessary. The weekly monitoring reports shall be sent to the City of Malibu Department of Planning at the end of the construction phase of the project. Both CDFW and the City of Malibu Department of Planning shall be notified immediately if project activity results in take.

Drainage Protection Plan

The Erosion Control and Best Management Practices Plan shall include components that will prevent accidental discharge of materials to the parts of the streambed that will not be affected by the proposed project.

Special-Status Species Protection Plan & Construction Monitoring

A biologist shall monitor trail construction activities so that they can capture and relocate wildlife including trask shoulderband snail, southern shoulderband snail, Santa Monica grasshopper, Santa Monica shieldback katydid, crotch bumble bee, coast horned lizard, southern California legless lizard, San Bernardino ringneck snake, coast patch-nosed snake, San Diego mountain kingsnake, two-striped garter snake, south coast garter snake, and Coast Range newt.

30 Buffer reduction may be appropriate depending on the species involved, ambient levels of human activity/disturbance, presence of visual and noise barriers, and other factors.

Vegetation Removal

Laborers shall use hand held tools to remove vegetation. Using hand-held tools will allow common and special-status wildlife a chance to escape and reduce the potential of them being crushed by heavy machinery. It will also provide the biologist additional opportunities to find and avoid special-status species and active nests. Heavy machinery is only to be used after the vegetation has been cleared. The biologist must hold a CDFW Scientific Collectors Permit authorizing handling of invertebrates, reptiles, amphibians, and mammals.

Non-Native Species Removal

Non-native weed species including castor bean (*Ricinus communis*), carnation weed (*Euphorbia terracina*), and thistle (*Centaurea melitensis*) occur along and adjacent the proposed trail in the more open, fuel-modified and weed abated areas adjacent Murphy Way. The California Invasive Plant Council (Cal-IPC) recognizes these species to be highly invasive.

a. The highly invasive species shall be removed before construction of the proposed trail begins.

b. The highly invasive species shall be removed by cutting them at their base, placing the parts immediately in bags or other suitable container, and then by removing their roots.

c. If thistle or castor bean are in seed, the seed shall be removed first and bagged, and then the remainder of the plant. Seed that has fallen on the ground shall also be collected and bagged.

d. Care should be taken to thoroughly clean all tools, equipment, and clothing of personnel working in these areas to avoid carrying propagules (seeds, stem pieces) of these weeds into undisturbed scrub and woodland habitats. All plant parts and seed shall be taken to an appropriate landfill site.

e. Future maintenance activities shall also include removal of highly invasive non-native species.

AWARENESS

The permittee shall provide a copy of this Biological Assessment to all of its contractors and ensure that they understand and implement the recommendations and avoidance strategies outlined above, along with any other conditions set for the project, and that they understand that they must comply with the recommendations of the monitoring biologists.

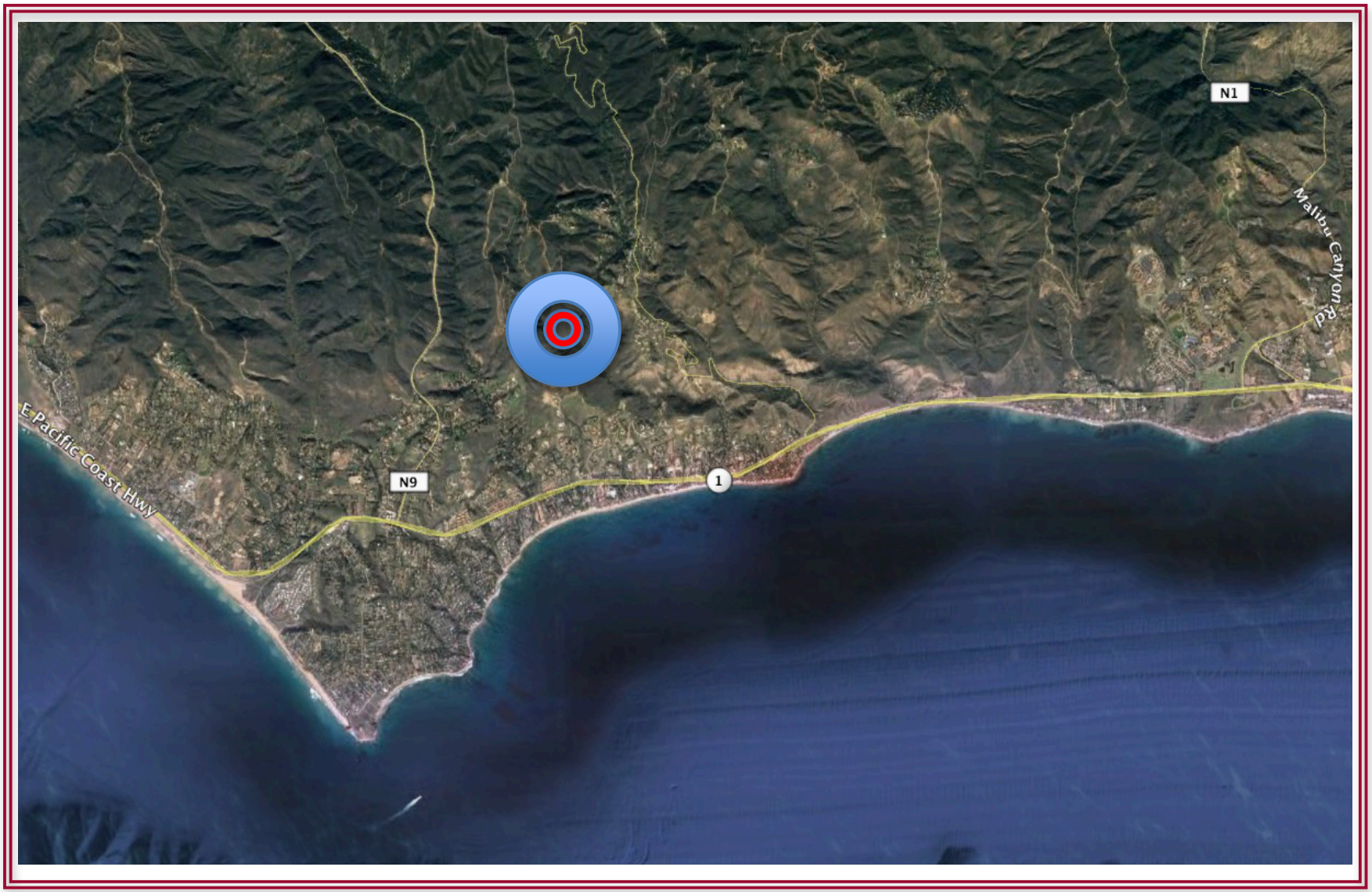


Exhibit A - Area of Interest

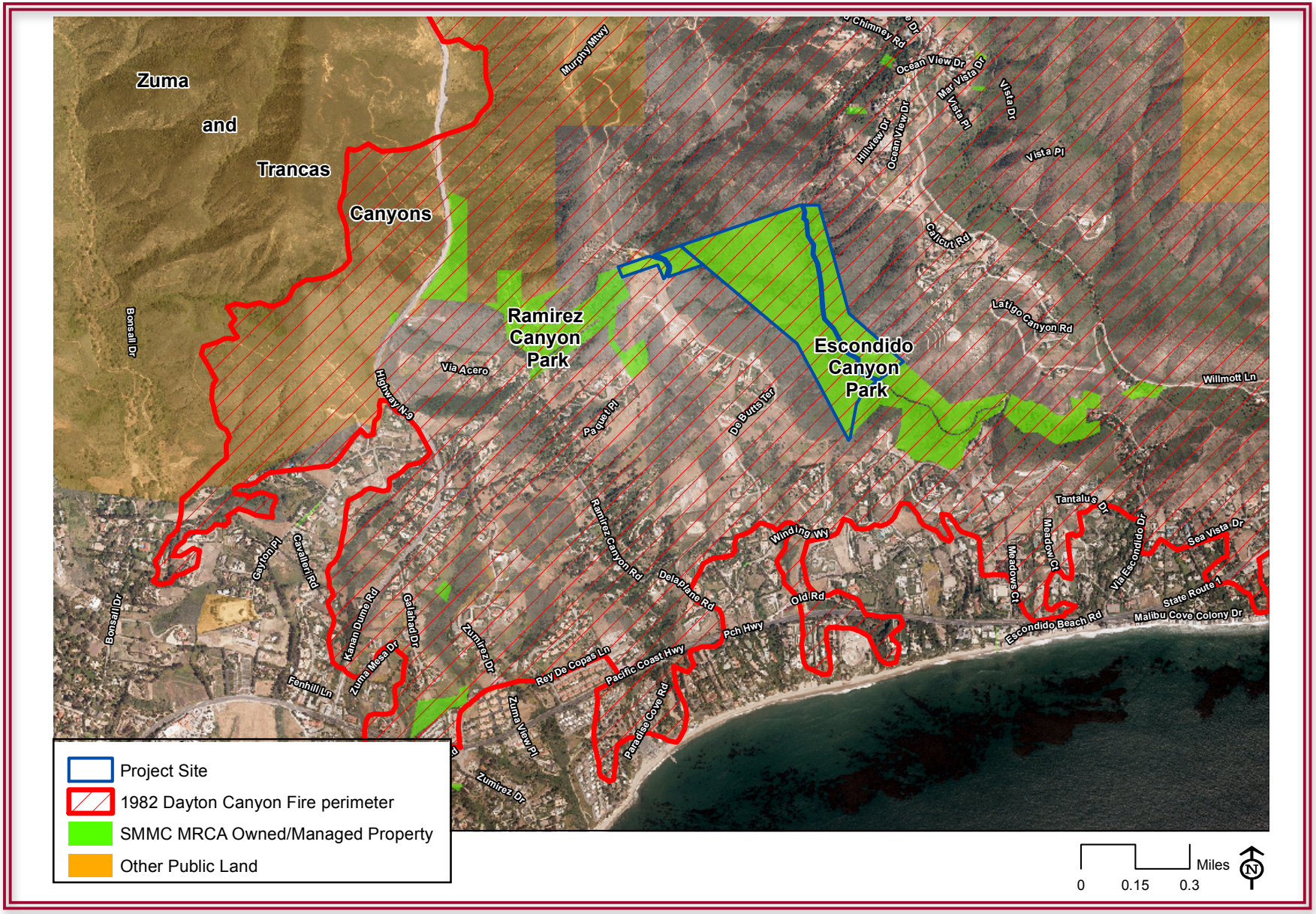


Exhibit B - Mountains Recreation & Conservation Authority Property

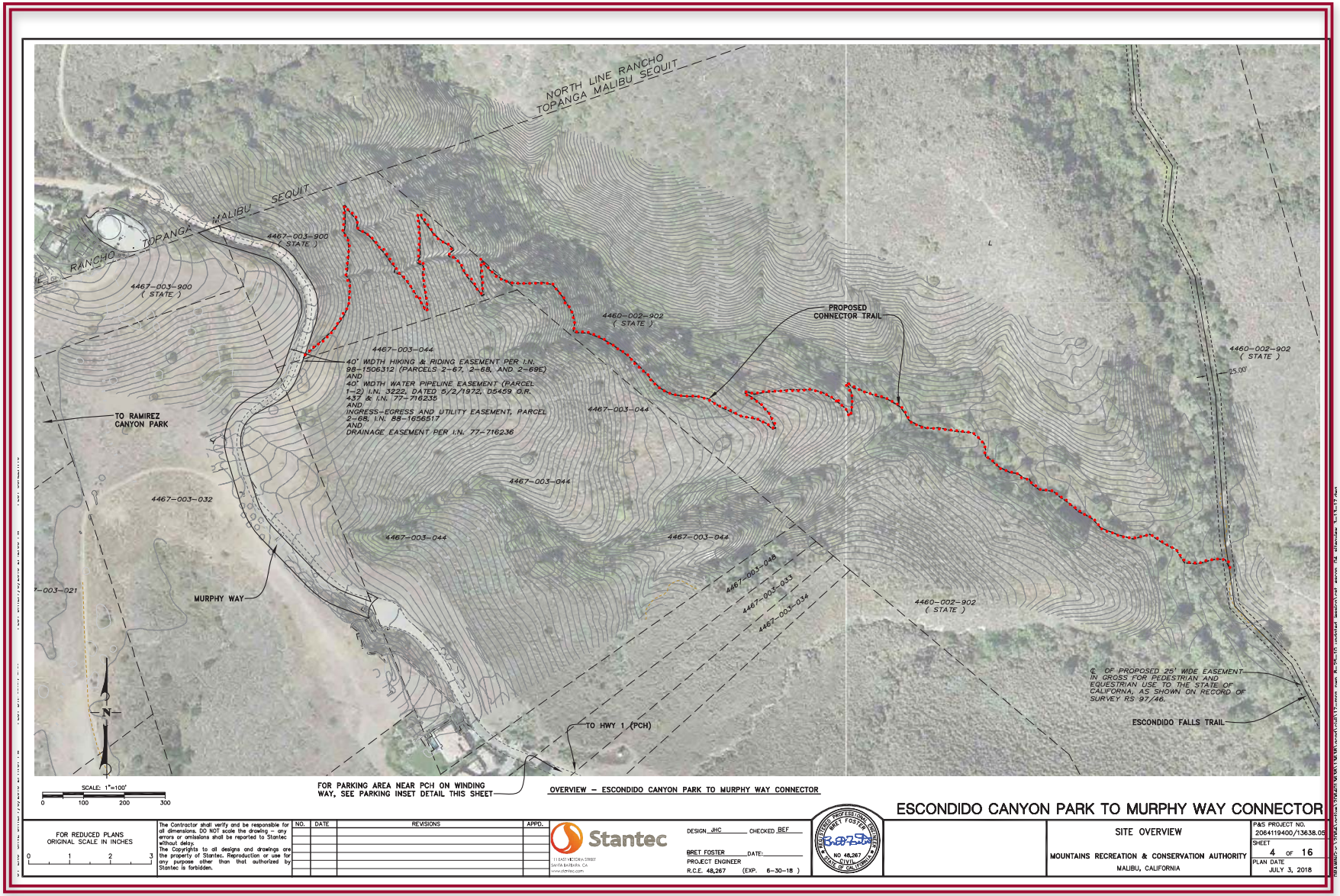
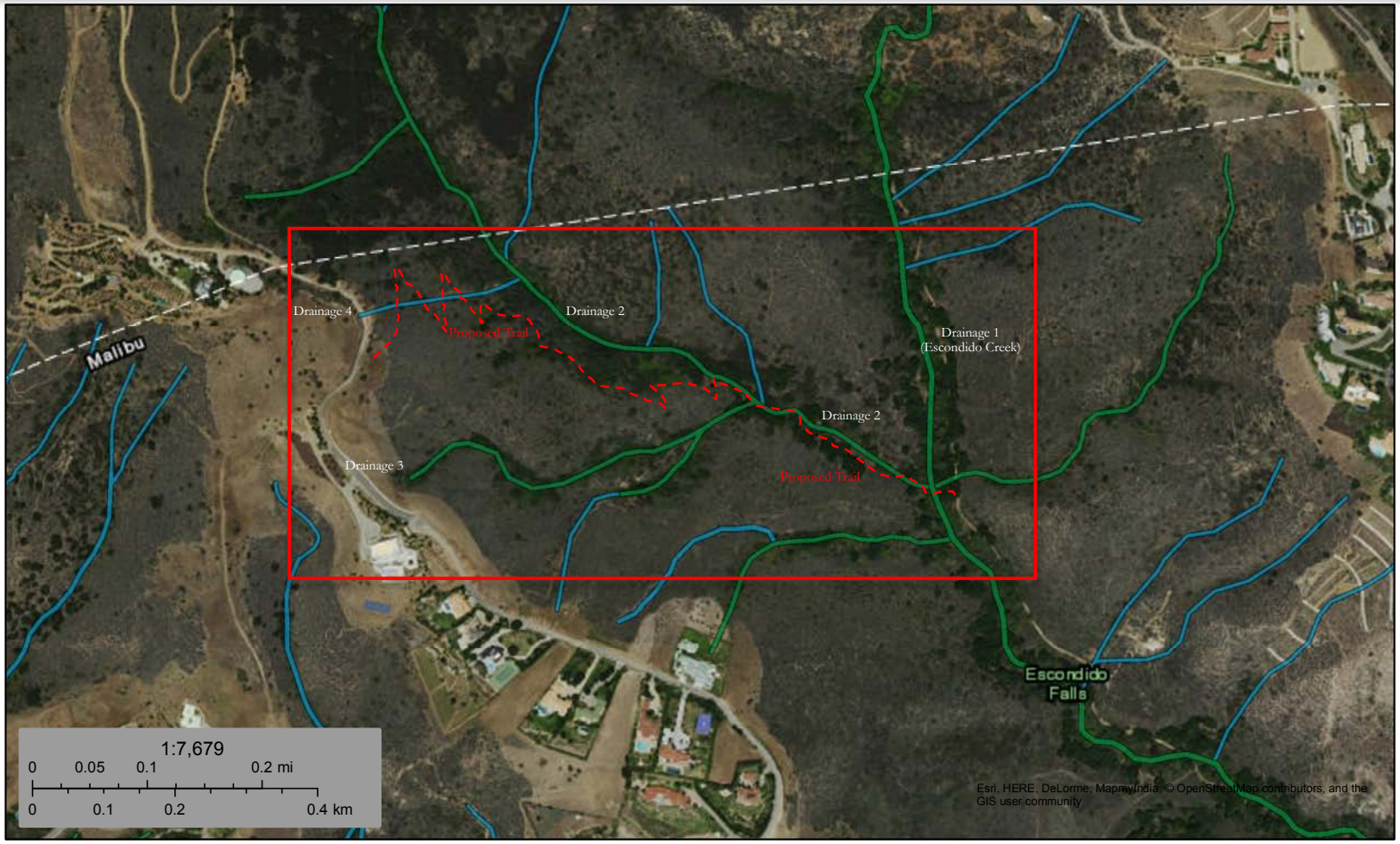


Exhibit C - Proposed Coastal Slope Trail - Murphy Way to Escondido Falls



October 28, 2016

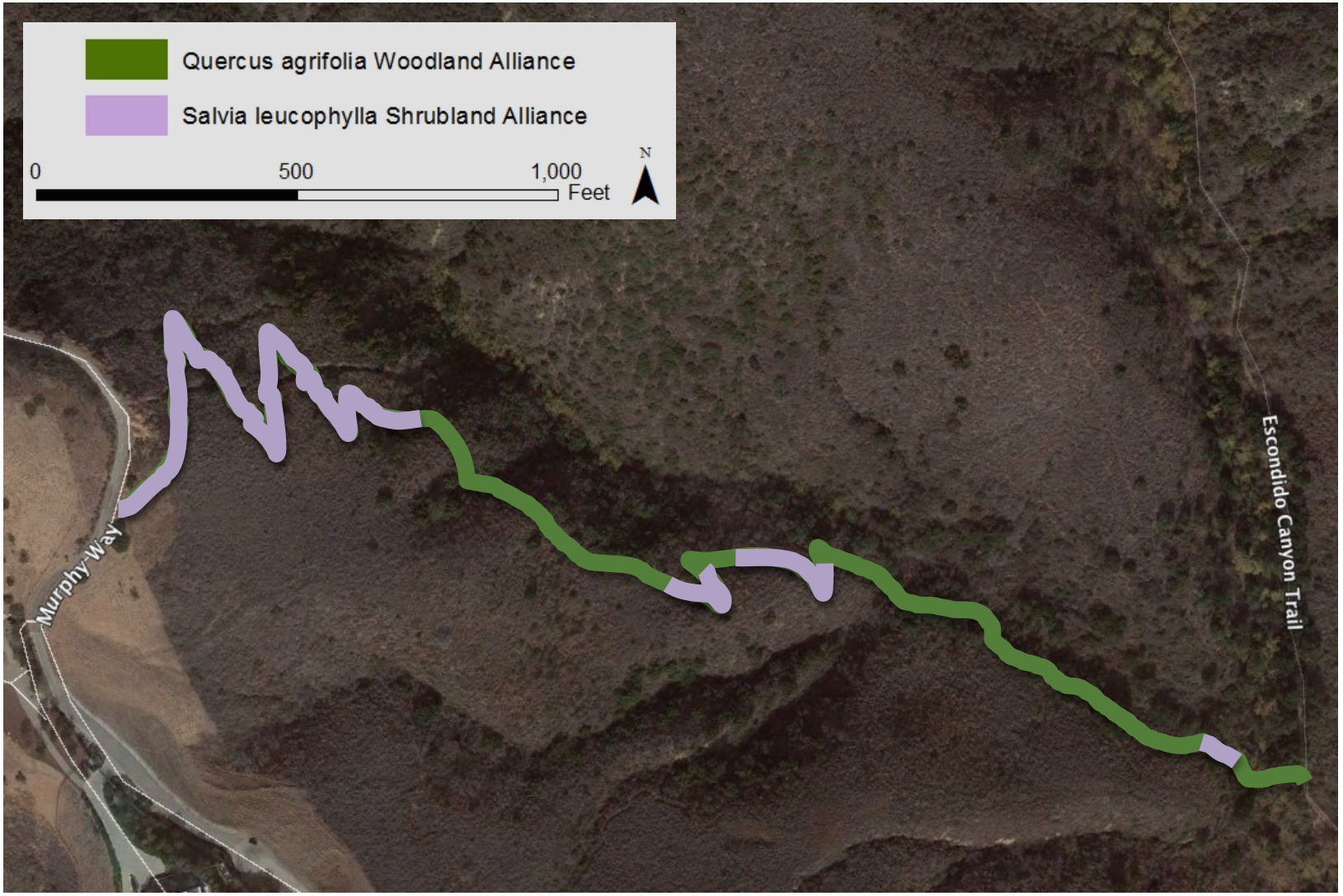
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)

Exhibit D - National Wetlands Inventory & Trail Overlay

Exhibit E - Plant Communities/Current Conditions


Quercus agrifolia Woodland Alliance
Salvia leucophylla Shrubland Alliance
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Feet
N
Murphy Way
Escondido Canyon Trail

Table 1. Plant Species Observed

Asterisk (*) indicates taxon not native to California

Latin Name	Common Name
DICOTS	**FLOWERING PLANTS**
Adoxaceae	**Muskroot Family**
Sambucus nigra L.subsp. *caerulea* (Raf.) Bolli	blue elderberry
Anacardiaceae	**Sumac Family**
Malosma laurina (Nutt.) Abrams	laurel sumac
Toxicodendron diversilobum (Torrey & A. Gray) E. Greene	poison oak
Apiaceae	**Carrot Family**
Foeniculum vulgare Mill.*	fennel
Araliaceae	**Ginseng Family**
*Hedera helix**	English ivy
Asteraceae	**Sunflower Family**
Artemisia californica Less.	California sagebrush
Artemisia douglasiana Besser	mugwort
Baccharis pilularis DC.	coyote brush
Centaurea melitensis L.*	Maltese star thistle
Deinandra fasciculata(DC.) Greene	common tarplant
Encelia californica Nutt.	coast sunflower
Hazardia squarrosa (Hook. & Arn.) Greene var. *grindelioides* (DC) W.D. Clark	saw-toothed goldenbush
Malacothrix saxatilis (Nutt.) Torrey & A. Gray	cliff aster
Bignoniaceae	**Bignonia Family**
Campsis radicans (L.) Bureau*	trumpet creeper
Brassicaceae	**Mustard Family**
Hirschfeldia incana (L.) Lagr.-Fossat*	wild mustard, shortpod mustard
Chenopodiaceae	**Goosefoot Family**
Salsola tragus L.*	Russian thistle, tumbleweed
Convolvulaceae	**Morning Glory Family**
Calystegia macrostegia (Greene) Brummitt ssp. *cyclostegia* (House) Brummit	wild morning glory
Euphorbiaceae	**Spurge Family**
Euphorbia terracina L.*	Geraldton carnation weed
Ricinis communis L.*	castor bean
Lupinus sp.	unidentified lupine
Fagaceae	**Oak Family**
Quercus agrifolia Nee	live oak
Quercus berberidifolia Liebm.	scrub oak
Juglandaceae	**Walnut Family**
Juglans californica S. Watson	California black walnut

Liliaceae	**Lily Family**
Calochortus catalinae S. Watson	Catalina mariposa lily

Lamiaceae	**Mint Family**
Salvia leucophylla Greene	purple sage
Salvia mellifera E. Greene	black sage
Malvaceae	**Mallow Family**
Malva parviflora L.*	cheeseweed
Nyctaginaceae	**Four-O'Clock Family**
Mirabilis laevis (Benth.) Curran var. *crassifolia* (Choisy) Spellenb.	California wishbone bush
Phyrmaceae	**Lopseed Family**
Mimulus aurantiacus Curtis	bush monkeyflower
Platanaceae	**Sycamore Family**
Platanus racemosa Nutt.	western sycamore
Polygonaceae	**Buckwheat Family**
Eriogonum cinereum Benth.	ashy-leaved buckwheat
Rhamnaceae	**Buckthorn Family**
Frangula californica (=Rhamnus c.) Eschsch.	California coffeeberry
Rosaceae	**Rose Family**
Heteromeles arbutifolia (Lindley) Roemer	toyon
Prunus ilicifolia (Nutt.) Walp. ssp. *ilicifolia*	holly-leaved cherry
Salicaceae	**Willow Family**
*Salix lasiolepis*Benth.	arroyo willow
Scrophulariaceae	**Figwort Family**
Keckiella cordifolia (Benth.) Straw	climbing penstemon
Tropaeolaceae	**Nasturtium Family**
Tropaeolum majus L.*	garden nasturtium
MONOCOTS	**GRASSES AND ALLIES**
Agavaceae	**Century Plant Family**
Hesperoyucca whipplei (Torr.) Trel.	chaparral yucca
Liliaceae	**Lily Family**
Dichelostemma capitatum (Benth.) A.W. Wood	blue dicks
Poaceae	**Grass Family**
Avena fatua L.*	common wild oats
Avena sativa L.*	cultivated oats
Bromus diandrus Roth*	ripgut brome
Bromus madritensis L. ssp. *rubens* (L.) Husnot*	red brome
Elymus condensatus J. Presl	giant wild rye
Horeum vulgare L.*	common barley
Stipa lepida Hitchc.	foothill needlegrass

INVERTEBRATES		
Papilioninae	*Papilio zelicaon*	Anise swallowtail
		Pale swallowtail
Pieridae	*Pontia protodice*	Checkered white
	Colias eurytheme	Orange sulphur butterfly
Polyommatinae	*Leptotes marina*	Marine blue
Nymphalidae	*Closyne gabbii*	Gabb's checkerspot
	Junonia coenia	Buckeye
	Adelpha bredowii	California sister
	Danaus plexippus	Monarch
Hesperiidae	*Pyrgus communis*	Common checkered skipper
	Poanes melane	Umber Skipper
REPTILES		
Phrynosomatidae	*Uta stansburiana elegans*	Western side-blotched lizard
	Sceloporus occidentalis longipes	Great Basin fence lizard
AMPHIBIANS	--	--
BIRDS		
Accipitridae	***Accipiter cooperii***	**Cooper's hawk**
	Buteo lineatus	Red-shouldered hawk
	Buteo jamaicensis	Red-tailed hawk
Odontophoridae	*Callipepla californica*	California quail
Apodidae	*Aeronautes saxatalis*	White throated swift
Aegithalidae	*Psaltriparus minimus*	Bushtit
Cathartidae	*Cathartes aura*	Turkey vulture*
Columbidae	*Patagioenas fasciata*	Band-tailed pigeon
	Zenaida macroura	Mourning dove
Cuculidae	*Geococcyx californianus*	Greater roadrunner
Trochilidae	***Selasphorus sasin***	**Allen's hummingbird**
	Calypte anna	Anna's hummingbird
	Archilochus alexandri	Black-chinned hummingbird
Picidae	*Melanerpes formicivorus*	Acorn woodpecker
	Colaptes auratus	Northern flicker
Tyrannidae	*Sayornis nigricans*	Black phoebe
	Sayornis saya	Say's phoebe
	Tyrannus vociferans	Cassin's kingbird
	Tyrannus verticalis	Western kingbird
Corvidae	*Aphelocoma californica*	California scrub-jay
	Corvus corax	Common raven
Hirundinidae	*Tachycineta bicolor*	Tree swallow
	Petrochelidon pyrrhonata	Cliff swallow
Timaliidae	*Chamaea fasciata*	Wrentit
Troglodytidae	*Thryomanes bewickii*	Bewick's wren
	Catherpes mexicanus	Canyon wren
Polioptilidae	*Polioptila caerula*	Blue-gray gnatcatcher

Mimidae	*Mimus polyglottos*	Northern mockingbird
	Toxostoma redivivum	California thrasher
Parulidae	*Setophaga coronata*	Yellow-rumped warbler
	Geothylpis tolmiei	MacGillivray's warbler
	Cardellina pusilla	Wilson's warbler
Regulidae	*Regulus calendula*	Ruby-crowned kinglet
Paradiae	***Baeolophus inornatus***	**Oak titmouse**
Emberizidae	*Melozone crissalis*	California towhee
	Pipilo maculatus	Spotted towhee
	Zonotrichia leucophrys	White-crowned sparrow
	Aimophila ruficeps canescens	**Southern California rufous-crowned sparrow**
Ptilogonatidaze	*Phainopepla nitens*	Phainopepla
Vireonidae	*Vireo gilvus*	Warbling vireo
	Vireo huttoni	Hutton's vireo
Turdidae	*Sialia mexicana*	Western bluebird
Passerellidae	*Junco hyemalis*	Dark-eyed junco
Cardinalidae	*Pheucticus melanocephalus*	Black-headed grosbeak
Icteridae	*Icterus bullockii*	Bullock's oriole
Fringillidae	*Carpodacus mexicanus*	House finch
	Spinus psaltria	Lesser goldfinch
Passeridae	*Passer domesticus***	House sparrow**
MAMMALS		
Leporidae	*Sylvilagus audubonii*	Audubon's cottontail***
Canidae	*Canis latrans*	Coyote***
Cricetidae	*Neotoma sp.*	Woodrat****
Geomyidae	*Thomomys bottae*	Valley pocket gopher****

Bold Type = Special-Status Species

* = Flyovers (species observed flying over property or within the immediate vicinity of it)
** = Non-Native Species
*** = Scat Detections
**** = Mound, hole, burrow, den, stick house, (as appropriate to species)

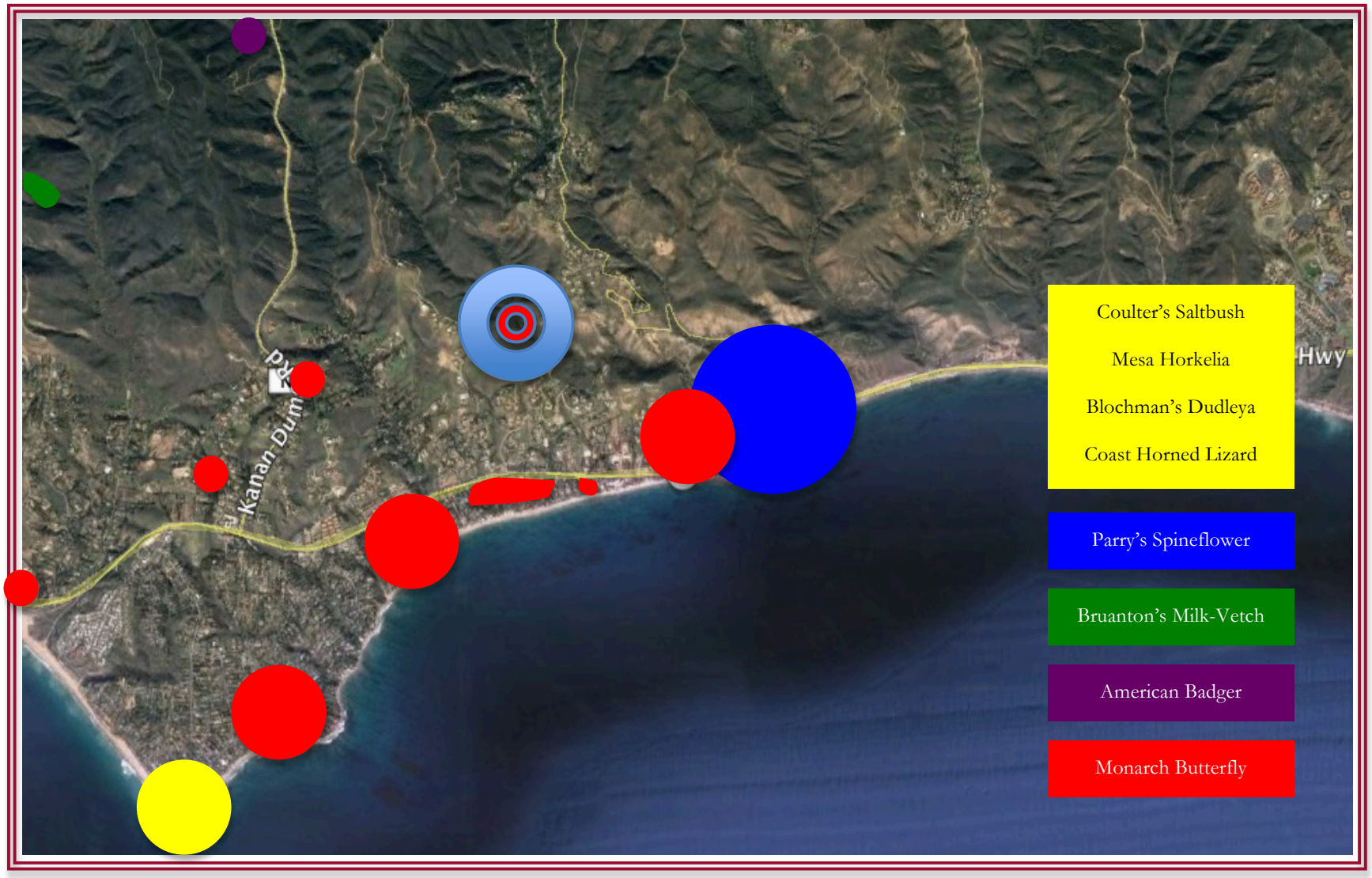

Exhibit I - California Department of Fish & Wildlife - BIOS Map (Approximate)

SCIENTIFIC NAME **COMMON NAME**	**STATUS (May 2018)**			**POTENTIAL FOR OCCURRENCE, HABITAT NOTES, & LIFE HISTORY** [1]
	Federal Status	**State Status**	**CDFW (Season/Region) Global Rank/State Rank**	
INVERTEBRATES				
Helminthoglypta traskii traskii Trask shoulderband	--	--	-- G1G2T1/S1 --	HIGH POTENTIAL Occurs from coastal Ventura County south into Mexico. Preferred habitat is coastal sage scrub and chaparral. There are suitable habitat elements along and adjacent the proposed trail.
Helminthoglypta tudiculata convicta Southern shoulderband	--	--	-- G2G3/SNR --	HIGH POTENTIAL Occurs in the Transverse & Peninsular ranges and the Los Angeles Basin, in annual grassland, coastal scrub, and riparian habitats under rock, leaf litter, decaying yucca, & woody debris. There are suitable habitat elements along and adjacent the proposed trail.
Haplotrema caelatum Slotted lancetooth	--	--	-- G1/SNR --	NOT EXPECTED Known from Santa Barbara, Ventura, Los Angeles, San Diego, and Ventura Counties in palustrine habitat. There are no suitable habitat elements along and adjacent the proposed trail.
Tryonia imitator Mimic tryonia (=California brackishwater snail)	--	--	-- G2/S2 --	NOT EXPECTED Occurs along the coast from just north of San Francisco to Ensenada, Mexico in brackish salt marshes and estuarine habitats. There are no suitable habitat elements along and adjacent the proposed trail.
Socalchemmis gertschi Gertsch's socalchemmis spider	--	--	-- G1/S1 --	MODERATE POTENTIAL Occurs in sage scrub, chaparral, oak woodland, coniferous forest, generally in rocky outcrops or talus slope. There are suitable habitat elements along and adjacent the proposed trail.

[1] *Habitat Notes are taken from California Department of Fish and Wildlife. California Interagency Wildlife Task Group. 2005. California Wildlife Habitat Relationships, Sacramento, California.*

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Streptocephalus woottoni Riverside fairy shrimp	FE August 1993	--	-- G1G2/S1S2 --	NOT EXPECTED This species is only found in deep, cool lowland vernal pools that retain water through the warmer weather of late spring and in ditches and road ruts. There are no suitable habitat elements along and adjacent the proposed trail.
Trimerotropis occidentiloides Santa Monica grasshopper	--	--	-- G1G2/S1S2 --	HIGH POTENTIAL Occurs on bare hillsides and along dirt trails in chaparral. There are suitable habitat elements along and adjacent the proposed trail.
Aglaothorax longipennis Santa Monica shieldback katydid	--	--	-- G1G2/S1S2 --	HIGH POTENTIAL Occurs in the Santa Monica Mountains in chaparral and stream bottom vegetation. There are suitable habitat elements along and adjacent the proposed trail.
Cicindela hirticollis gravida Sandy beach tiger beetle	--	--	-- G5T2/S1 --	NOT EXPECTED Coastal from north of San Francisco into Mexico in moist sand in swales, behind dunes, or upper beaches beyond normal high tides. Most common March through June and August through September. There are no suitable habitat elements along and adjacent the proposed trail.
Cicindela senilis frosti Senile tiger beetle	--	--	-- G2G3T1T3/S1 --	NOT EXPECTED Occurs in coastal salt marsh, tidal mud flats, and interior alkali mud flats. Adults active February - June and August - October. They overwinter in shallow underground galleries, usually under flat rocks at edge of habitat. There are no suitable habitat elements along and adjacent the proposed trail.

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	Federal Status	**State Status**	**CDFW (Season/Region) Global Rank/State Rank**	
Cicindela gabbii Western tidal-flat tiger beetle	--	--	-- G2G4/S1 --	NOT EXPECTED It occurs coastal habitats including salt marshes, tidal flats, and beaches from Ventura County into Baja California in dark mud of upper mudflats and salt-pannes. There are no suitable habitat elements along and adjacent the proposed trail.
Coelus globosus Globose dune beetle	--	--	-- G1G2/S1S2 --	NOT EXPECTED Inhabits fore dunes, sand hummocks, and back dunes from Bodega Bay, south, and some Channel Islands. There are no suitable habitat elements along and adjacent the proposed trail.
Carolella busckana Busck's gallmoth	--	--	-- G1G3/SH --	NOT EXPECTED Occurs in conifer forests. There are no suitable habitat elements along and adjacent the proposed trail.
Danaus plexippus Monarch butterfly (Overwintering Population)	--	--	-- G5/S3 --	NOT EXPECTED Critical features of winter sites are conifer and eucalyptus groves. There are no suitable habitat elements along and adjacent the proposed trail.
Euphydryas editha quino[2] Quino checkerspot butterfly	FE January 1997	--	-- G5T1T2/S1 --	NOT EXPECTED Now restricted to western Riverside County and San Diego County. Occurs in coastal sage scrub, chaparral, and valley grasslands. Adults typically fly late February into April, sometimes May. There are no suitable habitat elements along and adjacent the proposed trail.

[2] *Andrew McGinn Forde held a USFWS permit and CDFW MOU authorizing surveys for quino checkerspot butterfly for more than 12 years and is very familiar with its habitat requirements and life history.*

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Panoquina errans Wandering (=saltmarsh) skipper	--	--	-- G4G5/S2 --	NOT EXPECTED Occurs in central California and along the coast from Santa Barbara County south, in salt marshes near beaches and river mouths in stands of *Distichlis spicata*. There are no suitable habitat elements along and adjacent the proposed trail.
Bombus crotchii Crotch bumble bee	--	--	-- G3G4/S1S2	HIGH POTENTIAL Open grassland and scrub habitats. Food plants include *Asclepias, Chaenactis, Lupinus, Medicago, Phacelia,* and *Salvia.* There are suitable habitat elements along and adjacent the proposed trail.

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FISH				
Oncorhynchus mykiss irideus Southern steelhead	FE August 1997	--	SSC G5T3Q/S2 --	NOT EXPECTED Young hatch and typically remain in fresh water for 1 - 3 years then swim to the ocean, staying 1 - 2 years before returning to their native streams. The ephemeral and intermittent streams are not suitable for fish. Fish typically require permanent flows or semi-permanent flows if there are ponds deep enough for them to retreat. The pools within the intermittent streams are shallow and unlikely to persist long enough to sustain fish.
Gila orcutti Arroyo chub	--	--	SSC G2/S2 --	NOT EXPECTED Native to Los Angeles, San Gabriel, San Luis Rey, Santa Ana, and Santa Margarita rivers, and Malibu and San Juan creeks and introduced to other rivers and creeks. The ephemeral and intermittent streams are not suitable for fish. Fish typically require permanent flows or semi-permanent flows if there are ponds deep enough for them to retreat. The pools within the intermittent streams are shallow and unlikely to persist long enough to sustain fish.
Catostomus santaanae Santa Ana sucker	FT May 2000	--	SSC G1/S1 --	NOT EXPECTED This species is endemic to the Los Angeles Basins south coastal streams. The ephemeral and intermittent streams are not suitable for fish. Fish typically require permanent flows or semi-permanent flows if there are ponds deep enough for them to retreat. The pools within the intermittent streams are shallow and unlikely to persist long enough to sustain fish.

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Gasterosteus aculeatus williamsoni Unarmored threespine stickleback	FE October 1970	SE June 1971	FP G5T1/S1 --	NOT EXPECTED Restricted to the Santa Clara River (Los Angles County) and San Antonio Creek (Santa Barbara County). Requires clear, flowing, well-oxygenated water with pools, eddies, and dense vegetation or debris for cover and food supply. The ephemeral and intermittent streams are not suitable for fish. Fish typically require permanent flows or semi-permanent flows if there are ponds deep enough for them to retreat. The pools within the intermittent streams are shallow and unlikely to persist long enough to sustain fish.
Eucyclogobius newberryi Tidewater goby	FE February 1994	--	SSC G3/S2S3 --	NOT EXPECTED Occurs in cool brackish water of lagoons; favoring salinities less than 10 ppt. Favorable habitat includes shallow open water with emergent vegetation. The ephemeral and intermittent streams are not suitable for fish. Fish typically require permanent flows or semi-permanent flows if there are ponds deep enough for them to retreat. The pools within the intermittent streams are shallow and unlikely to persist long enough to sustain fish. This one in particular requires brackish water. Although we did not test salinity, it is intuitively obvious that the drainages are not brackish. Furthermore, this species is only known to occur within a few lagoons along the coast.

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REPTILES				
Actinemys pallida Southern Western pond turtle	--	--	SSC G3G4/S3 --	LOW POTENTIAL Associated with permanent or nearly permanent water bodies. May be active year-round. Most often seen basking above the water line. The intermittent streams have shallow ponds but they are unlikely to persist long enough to sustain pond turtles.
Phrynosoma blainvillii Coast horned lizard	--	--	SSC G3G4/S3S4 --	HIGH POTENTIAL The species occurs throughout the foothills and coastal plains from Los Angeles area to northern Baja California. It frequents areas with open vegetation such as chaparral or coastal sage scrub. There are suitable habitat elements along and adjacent the proposed trail.
Aspidoscelis tigris stejnegeri San Diegan tiger whiptail	--	--	-- G5T3T4/S2S3 --	HIGH POTENTIAL Occurs in valley-foothill hardwood, valley-foothill hardwood-conifer, valley-foothill riparian, mixed conifer, pine-juniper, chaparral, desert scrub, desert wash, alkali scrub, and annual grassland. There are suitable habitat elements along and adjacent the proposed trail.
Anniella stebbensi Southern California legless lizard	--	--	SSC G3G4T3T4Q/S3 --	EXPECTED Occurs in sparsely vegetated areas of dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, and stream terraces with sycamores, cottonwoods, or oaks in loose soil and leaf litter. Lives mostly underground. Most active during the morning and evening. There are suitable habitat elements along and adjacent the proposed trail.

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Salvadora hexalepis virgultea Coast patch-nosed snake	--	--	SSC G5T4/S2S3 --	HIGH POTENTIAL Occurs from San Luis Obispo County, south through the coastal zone, south and west of the deserts, into coastal northern Baja California in semi-arid brushy areas and chaparral in canyons, rocky hillsides, and plains. There are suitable habitat elements along and adjacent the proposed trail.
Diadophis punctatus modestus San Bernardino ringneck snake	--	--	-- G5T2T3Q/S2? --	EXPECTED This small snake is found in a variety of habitats throughout the state including annual grassland and chaparral. It is usually found under the cover of rocks, wood, bark, boards and other surface debris, but occasionally seen moving on the surface on cloudy days, at dusk, or at night. There are suitable habitat elements along and adjacent the proposed trail.
Lampropeltis zonata pulchra San Diego mountain kingsnake	--	--	SSC G4G5/S1S2 --	HIGH POTENTIAL Common in the vicinity of rocks or boulders near streams or lakeshores. May also utilize rotting logs and seek cover under dense shrubs. There are suitable habitat elements along and adjacent the proposed trail.
Thamnophis hammondii Two-striped garter snake	--	--	SSC G4/S3S4 --	HIGH POTENTIAL Occurs from Monterey County west of the Coast Ranges south through the Transverse and Peninsular ranges into Mexico. Primarily aquatic; however, the biologist has observed it some distance from water in the Simi Valley area. Generally found around pools, creeks, cattle tanks, and other water sources, often in rocky areas, in oak woodland, chaparral, brushland, and coniferous forest. There are suitable habitat elements along and adjacent the proposed trail.

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Thamnophis sirtalis ssp. South coast garter snake	--	--	SSC (From Ventura to San Diego) G5T1T2/S1S2 --	MODERATE POTENTIAL Absent only from Alpine Co. southward (east of the Sierra crest), the southern desert regions, and coastally from northern San Diego Co. south to the Mexican border. Associated with permanent or semi-permanent bodies of water. There are suitable habitat elements along and adjacent the proposed trail.

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AMPHIBIANS				
Anaxyrus californicus Arroyo toad	FE August 1995	--	SSC G2G3/S2S3 --	NOT EXPECTED Occurs in washes, arroyos and riparian areas with willows, sycamores, oaks, and cottonwoods along exposed sandy substrates. Tadpoles sift fine sediments for food and are extremely dependant on this specialized habitat. This species has never been known to occur in the Santa Monica Mountains and it is our opinion that it doesn't occur. The shallow ponds within the intermittent streams likely persist for a number of weeks after rain events; however, they lack fine sediments that are critical for this species.
Rana aurora draytonii California red-legged frog	FT May 1996	--	SSC G2G3/S2S3 --	NOT EXPECTED Occurs in a variety of habitat types, including aquatic, riparian, and upland habitats. They prefer slow moving or deep standing ponds, pools, and streams. They are active all year but will in dry years estivate in moist refuges until the late fall rains. The nearest known naturally occurring population is at Ahmonson Ranch, north of Highway 101. Recently introduced to Ramirez Canyon Creek, this species is not known to occur anywhere else in the Santa Monica Mountains. The shallow ponds within the intermittent streams likely persist for a number of weeks after rain events; however, they lack the depth critical for this species.
Rana mucosa Mountain yellow-legged frog	FE April 2013	SE August 2002	SSC G1/S1 --	NOT EXPECTED Ponds, lakes and streams at moderate to high elevations. This species has never been known to occur in the Santa Monica Mountains and it is our opinion that it doesn't occur. The shallow ponds within the intermittent streams likely persist for a number of weeks after rain events; however, they lack the depth critical for this species.

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Taricha torosa torosa Coast Range newt	--	--	SSC (Monterey County to South) G4/S4 --	HIGH POTENTIAL Occurs in wet valley-foothill hardwood, hardwood-conifer, mixed conifer, oak woodlands, coastal scrub, chaparral, and annual grasslands. They summer in moist habitats under woody debris, or in rock crevices and animal burrows. Adults migrate in large numbers from terrestrial locations to ponds, reservoirs, and sluggish pools in streams to breed. There are suitable habitat elements along and adjacent the proposed trail.
Spea hammondii Western spadefoot	--	--	SSC G3/S3 --	NOT EXPECTED Occurs in grasslands, chaparral, and pine-oak woodlands preferring open areas with sandy or gravelly soils. Species requires vernal or pools of intermittent streams for breeding. They are typically active October to May. Breeding occurs January - May, 1 - 2 days after heavy rains. The shallow ponds within the intermittent and perennial stream likely persist for a number of weeks after rain events; however, they lack fine sediments that are critical for this species.

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BIRDS				
Phalacrocorax auritus Double-crested cormorant	--	--	WL (Nesting Colony) G5/S4	NOT EXPECTED A yearlong resident along the entire coast of California and on inland lakes, in fresh, salt and estuarine waters. There are no suitable habitat elements along and adjacent the proposed trail.
Pelecanus occidentalis californicus California brown pelican	Delisted December 2009 FE February 2008 FE October 1970	Delisted June 2009 SE June 1971	FP (Nesting Colony & Communal Roosts) G4T3/S1S2	NOT EXPECTED Estuarine, marine sub tidal, and marine pelagic waters along the California coast. Feeds on fish and occasionally on crustaceans, carrion, and young of its own species. Requires islands for nesting. There are no suitable habitat elements along and adjacent the proposed trail.
Botaurus lentiginosus American bittern	--	--	-- G4/S3S4	NOT EXPECTED Distributed widely in winter in fresh emergent wetlands, primarily west of the Sierra Nevada. Less common on coastal slope, Rare August to May in saline emergent wetlands along coast. Elsewhere in lowlands, a rare transient and local winter resident. No longer breeds regularly south of Monterey County There are no suitable habitat elements along and adjacent the proposed trail.

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Ixobrychus exilis Least bittern	--	--	SSC (Nesting) G5/S2	NOT EXPECTED In southern California, common summer resident (especially April to September), at Salton Sea and Colorado River, in dense emergent wetlands near sources of freshwater, and in desert riparian (saltcedar scrub). Probably nests only in emergent wetlands. In deserts and coastal lowlands, quite rare, but breeds locally in the Owens Valley and Mojave Desert. Rare to uncommon April to September in large, fresh emergent wetlands of cattails and tules in San Diego county, and the Sacramento and San Joaquin Valleys, and where it nests. There are no suitable habitat elements along and adjacent the proposed trail.
Ardea Herodias Great blue heron	--	--	-- (Nesting Colony) G5/S4	NOT EXPECTED Fairly common all year throughout most of California, in shallow estuaries and fresh and saline emergent wetlands. Less common along riverine and rocky marine shores, in croplands, pastures, and in mountains above foothills. This species nest regularly at Malibu Creek just north of Cross Creek Bridge. There are no suitable habitat elements along and adjacent the proposed trail.
Egretta thula Snowy egret	--	--	-- (Nesting Colony) G5/S4	NOT EXPECTED Widespread in California along shores of coastal estuaries, fresh and saline emergent wetlands, ponds, slow-moving rivers, irrigation ditches, and wet fields. Common September to April in coastal lowlands, but rare through summer. Nests regularly at Malibu Country Mart near Malibu Lagoon. There are no suitable habitat elements along and adjacent the proposed trail.
Ardea alba Great egret	--	--	-- (Nesting Colony) G5/S4	NOT EXPECTED Common yearlong resident throughout California, except for high mountains and deserts. Feeds and rests in fresh, and saline emergent wetlands, along the margins of estuaries, lakes, and slow-moving streams, on mudflats and salt ponds, and in irrigated croplands and pastures. Nests and roosts in large trees. Nests regularly at Malibu Country Mart near Malibu Lagoon. There are no suitable habitat elements along and adjacent the proposed trail.

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Nycticorax nycticorax Black-crowned night-heron	--	--	-- (Nesting Colony) G5/S4	NOT EXPECTED Fairly common, yearlong resident in lowlands and foothills throughout most of California. Feeds along the margins of lacustrine, large riverine, and fresh and saline emergent habitats and, rarely, on kelp beds in marine subtidal habitats. Nests and roosts in dense-foliaged trees and dense emergent wetlands. Nests regularly at Malibu Country Mart near Malibu Lagoon. There are no suitable habitat elements along and adjacent the proposed trail.
Plegadis chihi White-faced ibis	--	--	WL (Nesting Colony) G5/S3S4	NOT EXPECTED Uncommon summer resident in parts of southern California. It prefers to feed in fresh emergent wetland, shallow lacustrine waters, muddy ground of wet meadows, and irrigated or flooded pastures and croplands. Nests in dense, fresh emergent wetland. This species no longer breeds regularly in California. Local winter visitor along the coast. There are no suitable habitat elements along and adjacent the proposed trail.
Gymnigyps californianus California condor	FE March 1967	SE June 1971	FP G1/S1	NOT EXPECTED Permanent resident of the semi-arid, rugged mountain ranges surrounding the southern San Joaquin Valley, including the Coast Ranges from Santa Clara Co. south to Los Angeles Co., the Transverse Ranges, Tehachapi Mts., and southern Sierra Nevada. Forages over wide areas of open rangelands, roosts on cliffs and in large trees and snags. There are no suitable habitat elements along or adjacent the proposed trail.
Elanus leucurus White-tailed kite	--	--	FP (Nesting) G5/S3	MAY FORAGE OVER PROPERTY Inhabits grassland, pastures and other herbaceous habitat mostly in cismontane California. For breeding, requires dense clumps of trees or tall shrubs, surrounded by grassland and other open habitats. May forage within the general vicinity of the trail from time to time; however, they typically require wider swaths of riparian habitat for nesting.

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Aquila chrysaetos Golden eagle	--	--	FP/WL (Nesting) G5/S3	MAY FORAGE OVER PROPERTY Rolling foothills, mountain areas, sage-juniper flats, and desert habitats with secluded cliffs and overhanging ledges and large trees used for cover. May forage within the general vicinity of the trail from time to time; however, potential nest sites are absent along and adjacent the trail.
Circus cyaneus Northern harrier	--	--	SSC (Nesting) G5/S3	MAY FORAGE OVER PROPERTY Frequents meadows, grasslands, open rangelands, desert sinks, and both fresh and saltwater wetlands. More widespread in winter, foraging in sparse scrub and agricultural areas including fallow fields. May forage within the general vicinity of the trail from time to time; however, potential nest sites are absent along and adjacent the trail.
Accipiter striatus Sharp-shinned hawk	--	--	WL (Nesting) G5/S4	MAY FORAGE OVER PROPERTY DURING MIGRATION & WINTER Winter resident. They breed in coniferous or mixed woodlands and are often found in woodlots, towns, and parks in winter. May forage within the general vicinity of the trail from time to time; however, it does not nest in Southern California.
Accipiter cooperii **Cooper's hawk**	**--**	**--**	**WL** **(Nesting)** **G5/S4**	**OBSERVED - POTENTIAL NEST SITES PRESENT** **Dense stands of live oak, riparian deciduous, or other forest habitats near water used most frequently. Nests in deciduous trees in crotches 3-23 m (10-80 ft), but usually 6-15 m (20-50 ft), above the ground. Also nests in conifers on horizontal branches, in the main crotch, often just below the lowest live limbs. Usually nests in second-growth conifer stands, or in deciduous riparian areas, usually near streams.** **There are suitable habitat elements along and adjacent the proposed trail.**

SCIENTIFIC NAME **COMMON NAME**	**STATUS (May 2018)**			**POTENTIAL FOR OCCURRENCE, HABITAT NOTES, & LIFE HISTORY**
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Falco columbaris Merlin	--	--	WL (Wintering) G5/S3S4	MAY FORAGE OVER THE PROPERTY DURING MIGRATION & WINTER Uncommon winter migrant from September to May. Seldom found in heavily wooded areas, or open deserts. Frequents coastlines, open grasslands, savannahs, woodlands, lakes, wetlands, edges, and early successional stages. Ranges from annual grasslands to ponderosa pine and montane hardwood-conifer habitats. May forage within the general vicinity of the trail from time to time; however, it does not nest in southern California.
Falco peregrinus anatum Peregrine falcon	Delisted August 1999 FE June 1970	Delisted November 2009 SE June 1971	FP (Nesting) G4T4/S3S4	NOT EXPECTED Breeds mostly in woodland, forest, and coastal habitats. Migrants occur along the coast in spring and fall. May forage within the general vicinity of the trail from time to time; however, potential nest sites are absent along and adjacent the trail.
Laterallus jamaicensis coturniculus California black rail	--	ST June 1971	FP G3G4T1/S1	NOT EXPECTED It occurs in tidal emergent wetlands dominated by pickleweed, or in brackish marshes supporting bulrushes in association with pickleweed. In freshwater, usually found in bulrushes, cattails, and saltgrass. There are no suitable habitat elements along and adjacent the proposed trail.
Rallus longirostris obsoletus California clapper rail	FE October 1970	SE June 1971	-- G5T1/S1	NOT EXPECTED Locally common yearlong in coastal wetlands and brackish areas around San Francisco, Monterey, and Morro bays. Prefers emergent wetland dominated by pickleweed and cordgrass, and brackish emergent wetland dominated by bulrush. Requires shallow water and mudflats for foraging, with adjacent higher vegetation for cover during high water. There are no suitable habitat elements along and adjacent the proposed trail.

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Rallus longirostris levipes Light-footed clapper rail	FE October 1970	SE June 1971	FP G5T1T2/S1	NOT EXPECTED Requires emergent or brackish emergent wetlands and tidal sloughs dominated by pickleweed, cord grass and bulrush. There are no suitable habitat elements along and adjacent the proposed trail.
Rallus longirostris yumanensis Yuma clapper rail	FE March 1967	ST February 1978 SE June 1971	-- G5T3/S1	NOT EXPECTED In coastal saline emergent wetlands along southern California from Santa Barbara County to San Diego County. Prefers emergent wetland dominated by pickleweed and cordgrass, and brackish emergent wetland dominated by bulrush. Requires shallow water and mudflats for foraging, with adjacent higher vegetation for cover during high water. There are no suitable habitat elements along and adjacent the proposed trail.
Charadrius alexandrinus nivosus Western snowy plover	FT April 1993	--	SSC (Nesting) G3T3/S2	NOT EXPECTED Primarily occurs and nests on coastal beaches, sand spits, dune-backed beaches, sparse dunes, beaches at creek and river mouths, saltpans at lagoons and estuaries. Less commonly, on bluff-backed beaches, dredged material disposal sites, salt pond levees, dry salt ponds, and river bars. There are no suitable habitat elements along and adjacent the proposed trail.
Sterna antillarum browni California least tern	FE October 1970	SE June 1971	FP (Nesting Colony) G4T2T3Q/S2S3	NOT EXPECTED A summer resident, it arrives at breeding grounds along marine and estuarine shores late April in southern California. Feeds in shallow estuaries or lagoons where small fish are abundant. There are no suitable habitat elements along and adjacent the proposed trail.

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Coccyzus americanus occidentalis Western yellow-billed cuckoo	FT November 2014	SE March 1988 ST June 1971	-- (Nesting) G5T3Q/S1	NOT EXPECTED Nearly extirpated in southern California, now a rare summer resident of extensive valley, foothill and desert riparian habitats along river bottoms. Requires densely foliaged deciduous trees and shrubs, especially willows, for nesting and mature cottonwoods for foraging. There are no suitable habitat elements along and adjacent the proposed trail.
Asio otis Long-eared owl	--	--	SSC (Nesting) G5/S3?	EXPECTED - POTENTIAL NEST SITES PRESENT Occurs in the state year round, although seasonal status varies regionally; breeds from February through July. Uncommon yearlong resident throughout the state except the Central Valley and Southern California deserts where it is an uncommon winter visitor. Riparian habitat required; also uses live oak thickets and other dense stands of trees. It occurs along the Santa Clara River (Pers. Obs.) and presumed to breed there. Also known to nest in Big Tujunga Wash. There are suitable habitat elements along and adjacent the proposed trail including potential nest sites.
Asio flammeus Short-eared owl	--	--	SSC (Nesting) G5/S3	MAY FLY OVER PROPERTY DURING MIGRATION & WINTER A rare winter resident found in open areas with few trees, such as annual and non-native grasslands, irrigated pasture, and both estuarine and freshwater emergent wetlands. Known to occur at Ballona Wetlands and the Santa Clara River (Pers. Obs.) during winter. Does not nest in Southern California.
Athene cunicularia hypugea Western burrowing owl	--	--	SSC (Burrow Sites & Winter Sites) G4/S3	NOT EXPECTED Year-round resident throughout much of the state in open dry grassland and desert habitats, and in forb and open shrub stages of pinyon-juniper and ponderosa pine habitats. Breeding season is March to August, but can begin February and extend into December. Usually nests in mammal burrows that they modify. There are no suitable habitat elements along and adjacent the proposed trail.

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Chaetura vauxi Vaux's swift	--	--	SSC (Nesting) G5/S2S3	MAY FORAGE/FLY OVER PROPERTY DURING MIGRATION A summer resident of northern California. Breeds fairly commonly in the Coast Ranges from Sonoma Co. north, and very locally south to Santa Cruz Co.; in the Sierra Nevada; and possibly in the Cascade Range. Prefers redwood and Douglas fir habitats with nest-sites in large hollow trees and snags, especially tall, burned-out stubs. Fairly common migrant throughout most of the state in April and May, and August and September. A few winter irregularly in southern coastal lowlands.
Cypseloides niger Black swift	--	--	SSC (Nesting) G4/S2	MAY FORAGE/FLY OVER PROPERTY DURING MIGRATION Breeds very locally in the Sierra Nevada and Cascade Range, the San Gabriel, San Bernardino, and San Jacinto Mts., and in coastal bluffs and mountains from San Mateo Co. south probably to San Luis Obispo Co.
Calypte costae Costa's hummingbird	--	--	-- (Nesting) G5/S4	HIGH POTENTIAL Common in summer and uncommon in winter. Most common and widespread in southern California, but also breeds locally along the western edge of the San Joaquin Valley and the eastern edge of the Sierra Nevada north through Inyo Co. In winter, largely restricted to the southern coast, but also winters on southern deserts. Primary habitats are desert wash, edges of desert riparian and valley foothill riparian, coastal scrub, desert scrub, desert succulent shrub, lower-elevation chaparral, and palm oasis. There are suitable habitat elements along and adjacent the proposed trail including potential nest sites.
Selasphorus rufus Rufous hummingbird	--	--	-- (Nesting) G5/S1S2	MAY OCCUR DURING MIGRATION & WINTER A rare, but regular, winter resident in southern California. Found in a wide variety of habitats that provide nectar-producing flowers; uses valley foothill hardwood, valley foothill hardwood-conifer, riparian, and chaparral habitats during migration; montane riparian, aspen, and high mountain meadows to tree line and above.

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Selasphorus sasin **Allen's hummingbird**	**--**	**--**	**-- (Nesting) G5/S4**	**PRESENT** **A common summer resident (January to July) and migrant along most of the California coast. Breeders are most common in coastal scrub, valley foothill hardwood, and valley foothill riparian habitats, but also are common in closed-cone pine-cypress, urban, and redwood habitats. Occurs in a variety of woodland and scrub habitats as a migrant. Although mostly coastal in migration, fairly common in southern mountains in summer and fall migration.** **The biologists observed this species during the site visits,**
Picoides nuttallii Nuttall's woodpecker	--	--	-- (Nesting) G4G5/S4S5	MODERATE POTENTIAL A common, permanent resident of low-elevation riparian deciduous and oak habitats. Occurs in the Central Valley, Transverse and Peninsular Ranges, in the Coast Ranges north to Sonoma Co. and rarely to Humboldt Co., and in lower portions of the Cascade Range and Sierra Nevada. Occurs as a vagrant in the Owens Valley. Forages mostly in oak and riparian deciduous habitats. Pecks, probes, drills for sap, and gleans from trunks, branches, twigs and foliage. There are suitable habitat elements along and adjacent the proposed trail including potential nest sites.

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Picoides villosus Hairy woodpecker	--	--	-- G5/SNR	MODERATE POTENTIAL Although still a widespread resident in coniferous and mixed oak-conifer forest of the San Gabriel Mountains, occurring at lower elevations along deep, shady canyons (e.g., Arroyo Seco near Pasadena), true lowland populations have been virtually eliminated. This woodpecker once resided year-round in the willow thickets of the Los Angeles Basin nearly to the coast, particularly along major rivers including the Los Angeles and San Gabriel Rivers. A population occurs along the Santa Clara River and major tributaries including San Francisquito, Castaic Creek, and Soledad Canyons (Pers. Obs.). There are suitable habitat elements along and adjacent the proposed trail including potential nest sites.
Empidonax traillii extimus Southwestern willow flycatcher[3]	FE March 1995	SE January 1991	SSC (Nesting) G5T1T2/S1	NOT EXPECTED Summer resident. Breeds in dense riparian vegetation near surface water or saturated soil. Riparian patches used vary in size and shape, and may be a relatively dense, linear contiguous stand or an irregularly shaped mosaic with open areas. There are no suitable habitat elements along and adjacent the proposed trail.
Lanius ludovicianus Loggerhead shrike	--	--	SSC (Nesting) G4/S4	LOW POTENTIAL Found in arid grassland, open savannah, agricultural areas, and both coastal and desert scrub, often near areas of barren soil, including overgrazed land. Requires scattered thorny shrubs for nest placement and for hanging prey. There are no scattered thorny shrubs along and adjacent the proposed trail.
Vireo bellii pusillus Least Bell's vireo[4]	FE May 1986	SE October 1980	SSC (Nesting) G5T2/S2	NOT EXPECTED Frequents riparian habitats and require dense thickets of willow and other low shrubs for nesting. The dense riparian thickets they occupy are usually impenetrable, with ground cover in the shrub layer being nearly 100%. There are no suitable habitat elements along and adjacent the proposed trail.

[3] Andrew McGinn Forde holds a USFWS permit and CDFW MOU authorizing surveys for southwestern willow flycatcher and is very familiar with its habitat requirements and life history.
[4] Andrew McGinn Forde holds a USFWS permit and CDFW MOU authorizing surveys for least Bell's vireo and is very familiar with its habitat requirements and life history.

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Eremophila alpestris actia California horned lark	--	--	WL G5T3Q/S3	NOT EXPECTED Frequents grasslands and other open habitats with low, sparse vegetation. There are no suitable habitat elements along and adjacent the proposed trail. Vegetation is dense.
Baeolophus inornatus **Oak titmouse**	**--**	**--**	**--** **(Nesting)** **G4/S4**	**PRESENT** **A common resident in a variety of habitats, but primarily associated with oaks. Occurs in montane hardwood-conifer, montane hardwood, blue, valley, and coastal oak woodlands, and montane and valley foothill riparian habitats in cismontane California, from the Mexican border to Humboldt County.** **The biologists observed this species during the site visits.**
Progne subis arboricola Purple martin	--	--	SSC (Nesting) G5/S3	LOW POTENTIAL An uncommon to rare, local summer resident in a variety of wooded, low-elevation habitats throughout the state; a rare migrant in spring and fall, absent in winter. Uses valley foothill and montane hardwood, valley foothill and montane hardwood-conifer, and riparian habitats. Also occurs in coniferous habitats, including closed-cone pine-cypress, ponderosa pine, Douglas fir, and redwood. There are suitable habitat elements along and adjacent the proposed trail; however, this species raraely occurs in the general area.
Riparia riparia Bank swallow	--	SE June 1989	-- (Nesting) G5/S2S3	MAY FORAGE OVER PROPERTY DURING MIGRATION Restricted to riparian habitats during summer and open habitats during migration. Requires vertical banks, bluffs, or cliffs with fine-textured or sandy soils for nesting. It nests along a small section of the Sacramento and Feather rivers and other isolated areas. Species not known to nest in the region.

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Cistothorus palustris clarkae Marsh wren	--	--	SSC G5T2T3/S2S3	NOT EXPECTED A yearlong resident along northern and central coast, in the Central Valley, and in scattered locations in transmontane California. Migrants and winter residents may occur in any low vegetation growing in water or on damp ground. Breeding is restricted to cattails, bulrushes, sedges, and other vegetation in emergent wetland habitat. In southern California, breeds mainly in Imperial and Colorado River valleys, locally along the coast, and in a few desert wetlands. In the county it breeds primarily in the Antelope Valley at Piute Ponds, at Lake Palmdale, and Elizabeth Lake. There are no suitable habitat elements along and adjacent the proposed trail.
Polioptila californica California gnatcatcher[5]	FT March 1993	--	SSC G3T2/S2	NOT EXPECTED Obligate resident of arid coastal scrub. California buckwheat, coastal sage, and patches of prickly pear cactus are favored. Species nests within the vicinity of California State University Channel Islands. There are suitable habitat elements along and adjacent the proposed trail; however, the nearest population occurs at the western end of the Santa Monica Mountains.
Setophaga petechia Yellow warbler	--	--	SSC G5/S3S4	MODERATE POTENTIAL Occurs as a migrant and summer resident from late March through early October; breeds from April to late July in riparian woodlands from coastal and desert lowlands up to 2500 m in Sierra Nevada. Also breeds in montane chaparral, and in open ponderosa pine and mixed conifer habitats with substantial amounts of brush. There are no suitable habitat elements along and adjacent the proposed trail.

[5] *Andrew McGinn Forde holds a USFWS permit and CDFW MOU authorizing surveys for California gnatcatcher and is very familiar with its habitat requirements and life history.*

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Icteria virens Yellow-breasted chat	--	--	SSC G5/S3	NOT EXPECTED Occurs as a migrant and in summer primarily from late March to late September in coastal California and in foothills of the Sierra Nevada. Frequents dense, brushy thickets and tangles near water, and thick understory in riparian woodland. In migration, may be found in lower elevations of mountains in riparian habitat. Breeds late April through early August. There are no suitable habitat elements along and adjacent the proposed trail.
Aimophila ruficeps canescens Southern California rufous-crowned sparrow	--	--	WL G5T3/S2S3	HIGH POTENTIAL - POTENTIAL NEST SITES PRESENT Mixed chaparral and coastal scrub. Frequents relatively steep, often rocky hillsides with grass and forb patches; also grassy slopes without shrubs, if rock outcrops are present. There are suitable habitat elements along or adjacent the proposed trail.
Spizella passerina Chipping sparrow	--	--	-- (Nesting) G5/S4S5	LOW POTENTIAL A summer visitor throughout most of California, excluding Central Valley, southern deserts, and alpine areas. Winters less commonly in Central Valley and southern California lowlands. Prefers open wooded habitats with a sparse or low herbaceous layer and few shrubs, if any. Prefers trees for nesting, often forages in nearby herbaceous and open shrub habitats, including dry margins of wet meadows. There are suitable habitat elements along or adjacent the proposed trail but not as open as typically preferred by this species..
Spizella breweri Brewer's sparrow	--	--	-- (Nesting) G5/S4	LOW POTENTIAL A common summer resident and breeder east of the Cascade-Sierra Nevada crest, in mountains and higher valleys of Mojave Desert, and the southern end of the San Joaquin Valley. Breeds in treeless shrub habitats with moderate canopy, especially in sagebrush. Now mostly absent from former breeding grounds in southwestern California. Common in winter in open desert scrub and cropland habitats of southern Mojave and Colorado deserts, usually in areas with some herbaceous understory. There are suitable habitat elements along or adjacent the proposed trail but mostly absent from the region.

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Artemisiospiza belli belli Bell's sage sparrow	--	--	WL G5T2T4/S2?	HIGH POTENTIAL - POTENTIAL NEST SITES PRESENT Occurs on coastal slopes and part of the western slope of the sierra Nevada south into Baja California in chaparral dominated by chamise and coastal scrub dominated by sage. Breeds in fairly dense chaparral and desert scrub. There are suitable habitat elements along or adjacent the proposed trail.
Pooecetes gramineus affinis Vesper sparrow			SSC (Wintering) G5T3?/S3?	NOT EXPECTED Winters in open grasslands and sparse shrublands in the valley and desert regions of Los Angeles County. There are no suitable habitat elements along or adjacent the proposed trail.
Chondestes grammacus Lark sparrow	--	--	-- (Nesting) G5/S4S5	HIGH POTENTIAL - POTENTIAL NEST SITES PRESENT Resident in lowlands and foothills throughout much of California. Frequents sparse valley foothill hardwood, valley foothill hardwood-conifer, open mixed chaparral and similar brushy habitats, and grasslands with scattered trees or shrubs. Nests on the ground. There are suitable habitat elements along or adjacent the proposed trail.
Passerculus sandwichensis beldingi Belding's savannah sparrow	--	SE January 1974	-- G5T3/S3	NOT EXPECTED Occurs year-round in salt marsh usually in the upper littoral zone. It nests in dense pickleweed. There are no suitable habitat elements along or adjacent the proposed trail.
Ammodramus savannarum Grasshopper sparrow	--	--	SSC (Nesting) G5/S2	NOT EXPECTED Occurs nearly year-round in extensive, dense grasslands, especially those with a variety of grasses and tall forbs and scattered low shrubs for singing perches. There are no suitable habitat elements along or adjacent the proposed trail.

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Melospiza lincolnii Lincoln's sparrow	--	--	-- G5/SNR	NOT EXPECTED Nests only in damp mountain meadows that support tall grasses, sedge, and corn lilies interspersed with low-growing shrubs such as willow. There are no suitable habitat elements along or adjacent the proposed trail.
Piranga flava hepatica Hepatic tanager	--	--	WL (Nesting) G5/S1	NOT EXPECTED Rare migrant in lowlands of southern California and rare in winter. Species does not nest in the region.
Piranga rubra cooperi Summer tanager	--	--	SSC (Nesting) G5/S1	NOT EXPECTED An uncommon summer resident in desert riparian habitat along the lower Colorado River; very locally elsewhere in southern California deserts. Found in other localities in migration. Breeds in mature, desert riparian habitat dominated by cottonwoods and willows. Arrives on summer breeding grounds in April and usually departs by September. Transients occur elsewhere in interior mostly in May and June and September into November. Occurs along coast rarely but regularly from September to March and May to June.
Agelaius tricolor Tricolored blackbird	--	SE April 2018	SSC (Nesting Colony) G2G3/S1S2	NOT EXPECTED Feeds in grassland and cropland habitats and breeds near fresh water in emergent wetland with tall, dense cattails or tules, but also in thickets of willow, blackberry, wild rose, and tall herbs March through November. There are no suitable habitat elements along or adjacent the proposed trail.
Xanthocephalus xanthocephalus Yellow-headed blackbird	--	--	SSC (Nesting) G5/S3	NOT EXPECTED Breeds commonly, but locally, east of Cascade Range and Sierra Nevada, in Imperial and Colorado River valleys, in the Central Valley, and at selected locations in the coast ranges west of the Central Valley. Occurs as a migrant and local breeder in deserts and along the Orange county coast. Nests in fresh emergent wetland with dense vegetation and deep water, often along borders of lakes or ponds. Forages in emergent wetland and moist, open areas, especially cropland and muddy shores of lacustrine habitat. There are no suitable habitat elements along and adjacent the proposed trail.

SCIENTIFIC NAME **COMMON NAME**	**STATUS (May 2018)**			**POTENTIAL FOR OCCURRENCE, HABITAT NOTES, & LIFE HISTORY** [6]
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MAMMALS[7]				
Sorex ornatus salicornicus Southern California saltmarsh shrew	--	--	SSC G5T1?/S1 --	NOT EXPECTED The Southern California salt marsh shrew is confined to coastal salt marshes in Los Angeles, Orange, and Ventura counties. There are no suitable habitat elements along and adjacent the proposed trail.
Macrotus californicus California leaf-nosed bat	--	--	SSC G4/S2S3 --	NOT EXPECTED - POTENTIAL ROOST SITES ABSENT Preferred habitats are caves, mines, and rock shelters, mostly in Sonoran desert scrub. It does not hibernate. Winter roosts are geothermically heated. Mating takes place in the fall. Pups born June. There are no suitable habitat elements along and adjacent the proposed trail.
Antrozous pallidus Pallid bat	--	--	SSC G5/S3 --	MODERATE POTENTIAL - POTENTIAL ROOST SITES PRESENT Throughout California except high Sierra Nevada. Habitat includes grassland, shrubland, woodland, and conifer forests. Most common in open, dry habitats with rocky areas for roosting. Roosts in caves, crevices, mines, under bridges, bird and bat boxes, and occasionally hollow trees and buildings. Non-migratory. Birth occurs late June, nursing continues into August.
Euderma maculatum Spotted bat	--	--	SSC G4/S2S3 --	NOT EXPECTED - POTENTIAL ROOST SITES ABSENT Occupied habitats include arid deserts, grasslands, and mixed conifer forests. Prefers sites with adequate roosting habitat, such as cliffs. Feeds over water and along washes. Pups are born late May to early June, nursing continues into August. There are no suitable habitat elements along and adjacent the proposed trail

[6] *Habitat Notes are taken from California Department of Fish and Wildlife. California Interagency Wildlife Task Group. 2005. California Wildlife Habitat Relationships, Sacramento, California.*
[7] *Andrew McGinn Forde holds a CDFW MOU that authourizes capture of bats using a variety of techniques including hand-held nets, mist nets, and harp traps; he is very familiar with the life history and habitat requirements of bats..*

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Lasionycteris noctivagans Silver-haired bat	--	--	-- G5/S3S4 --	EXPECTED - POTENTIAL ROOST SITES PRESENT In southern California from Ventura and San Bernardino Cos. south to Mexico and on some of the Channel Islands. Summer habitats include coastal and montane coniferous forests, valley foothill woodlands, pinyon-juniper woodlands, and valley foothill and montane riparian habitats. Roosts in hollow trees, snags, buildings, rock crevices, caves, and under bark. The mature trees along and adjacent the proposed trail are highly suitable for tree roosting bats and some of the pools within the intermittent streams are accessible as drinking sources.
Lasiurus cinereus Hoary bat	--	--	-- G5/S4	EXPECTED - POTENTIAL ROOST SITES PRESENT Throughout California, although distribution is patchy in southeastern deserts. This solitary species winters along the coast and in southern California, breeding inland and north of the winter range. Roosts in dense foliage of medium to large trees but also on tree trunks. Preferred sites are hidden from above, with few branches below, and have ground cover of low reflectivity. The mature trees along and adjacent the proposed trail are highly suitable for tree roosting bats and some of the pools within the intermittent streams are accessible as drinking sources.
Lasiurus blossevillii Western red bat	--	--	SSC G5/S3? --	MODERATE POTENTIAL - POTENTIAL ROOST SITES PRESENT Occurs from Shasta Co. south to Mexico, west of Sierra Nevada/Cascade crest and deserts. Feeds over scrublands, grasslands, open woodlands, and croplands. Roosts in foliage of forest and woodland trees. Pups born June. Nursing into August. Migrates to south of range to hibernate. The mature trees along and adjacent the proposed trail are highly suitable for tree roosting bats and some of the pools within the intermittent streams are accessible as drinking sources.
Myotis ciliolabrum Western small-footed myotis	--	--	-- G5/S3 --	EXPECTED - POTENTIAL ROOST SITES PRESENT Occurs from Contra Costa County south to the Mexico and west and east of the Sierra Nevada and in Great Basin and desert habitats from Modoc to San Bernardino counties in a wide variety of habitats, primarily wooded and brushy uplands near water. Roosts in caves, buildings, mines, crevices, and occasionally under bridges and bark. The mature trees along and adjacent the proposed trail are highly suitable for tree roosting bats and some of the pools within the intermittent streams are accessible as drinking sources.

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Myotis evotis Long-eared myotis	--	--	-- G5/S3 --	LOW POTENTIAL - POTENTIAL ROOST SITES PRESENT Widespread but generally uncommon. Occurs along the coast and in the Sierra Nevada, Cascades, and Great Basin from the Oregon border south through the Tehachapi Mts. to the Coast Ranges. Coniferous woodlands and forests preferred but also brush habitats. Roosts in caves, buildings, snags, crevices, and under bark. The mature trees along and adjacent the proposed trail are highly suitable for tree roosting bats and some of the pools within the intermittent streams are accessible as drinking sources. Andrew McGinn Forde has conducted acoustical bats surveys at several sites in the Santa Monica Mountains and has never detected this species.
Myotis thysanodes Fringed myotis	--	--	-- G4/S3 --	NOT EXPECTED - POTENTIAL ROOST SITES ABSENT In California, occurs in all but the Central Valley and Colorado and Mojave deserts. It occurs in a wide variety of habitats. Optimal habitats are pinyon-juniper, valley foothill hardwood and hardwood-conifer. Roosts in caves, mines, buildings, and crevices. Andrew McGinn Forde has conducted acoustical bats surveys at several sites in the Santa Monica Mountains and has never detected this species.
Myotis volans Long-legged myotis	--	--	-- G5/S3 --	LOW POTENTIAL - POTENTIAL ROOST SITES PRESENT It is absent only from the Central Valley, the Colorado and Mojave deserts (except in mountain ranges), and from eastern Lassen and Modoc cos. Forages in chaparral, coastal scrub, Great Basin shrub, and early successional stages of woodlands and forests. Roosts in rock crevices, buildings, under bark, in snags, mines, and caves. Maternity sites under bark or in hollow trees, but occasionally crevices or buildings. The mature trees along and adjacent the proposed trail are highly suitable for tree roosting bats and some of the pools within the intermittent streams are accessible as drinking sources. Andrew McGinn Forde has conducted acoustical bats surveys at several sites in the Santa Monica Mountains and has never detected this species.

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	Federal Status	State Status	CDFW (Season) Global Rank/State Rank	
Myotis yumanensis Yuma myotis	--	--	-- G5/S4	EXPECTED - POTENTIAL ROOST SITES PRESENT Occurs in a wide variety of habitats ranging from sea level to 3300 m (11,000 ft), but uncommon to rare above 2560 m (8000 ft). Optimal habitats are open forests and woodlands with sources of water over which to feed. Roosts in caves, trees, bridges, mines, barns and abandoned houses. The mature trees along and adjacent the proposed trail are highly suitable for tree roosting bats and some of the pools within the intermittent streams are accessible as drinking sources.
Corynorhinus townsendii Townsend's big-eared bat	--	SC December 2013	SSC G3G4/S2S3 --	NOT EXPECTED - POTENTIAL ROOST SITES ABSENT Found throughout California except subalpine and alpine habitats. Roosts in caves, mines, tunnels, buildings, and other human-made structures. Prefers mesic habitats where it gleans vegetation or captures moths and beetles in flight. Pups are born in May or June, nursing continues into August. There are no suitable habitat elements along and adjacent the proposed trail. Specifically, potential roost sites are absent. Andrew McGinn Forde has conducted acoustical bats surveys at several sites in the Santa Monica Mountains and has never detected this species.
Eumops perotis californicus Greater bonneted bat	--	--	SSC G5T4/S3? --	NOT EXPECTED - POTENTIAL ROOST SITES ABSENT MAY FORAGE ALONG & ADJACENT PROPOSED TRAIL Prefers open arid areas. Crevices, high buildings, trees, and tunnels required for roosting and maternal sites. Pups are born late June through September, nursing continues into early November. Does not migrate or hibernate. There are no suitable habitat elements along and adjacent the proposed trail. Specifically, potential roost sites are absent. Species may roost near the falls.
Nyctinomops femorosaccus Pocketed free-tailed bat	--	--	SSC G4/S3 --	NOT EXPECTED - POTENTIAL ROOST SITES ABSENT MAY FORAGE ALONG & ADJACENT PROPOSED TRAIL Rare in California. Prefers rocky desert areas with high cliffs or rock outcrops. Habitats used include pinyon-juniper woodlands, desert scrub, desert succulent shrub, desert riparian, desert wash, alkali desert scrub, Joshua tree, and palm oasis. Prefers rock crevices in cliffs as roosting sites. Maternity sites include rock crevices, caverns, or buildings. Pup usually born early July. There are no suitable habitat elements along and adjacent the proposed trail. Specifically, potential roost sites are absent. Species may roost near the falls.

SCIENTIFIC NAME **COMMON NAME**	**STATUS (May 2018)**			**POTENTIAL FOR OCCURRENCE, HABITAT NOTES, & LIFE HISTORY** [6]
	Federal Status	**State Status**	**CDFW (Season) Global Rank/State Rank**	
Bassariscus astutus Ringtail	--	--	FP G5/S3S4 --	MODERATE POTENTIAL - POTENTIAL DEN SITES PRESENT Ideal habitat consists a mix of forest and shrub land associated with rocky or riparian habitats. Its principal habitat requirements seem to be den sites among boulders or in hollows of trees with sufficient food in the form of rodents and other small animals.
Taxidea taxus American badger	--	--	SSC G5/S4 --	NOT EXPECTED - DENS ABSENT Prefers dry open stages of most shrub, forest, and herbaceous habitats, with friable soils. The plant communities along and adjacent the proposed trail are not open.
Perognathus longimembris brevinasus Los Angeles pocket mouse	--	--	SSC G5T1T2/S1S2 --	NOT EXPECTED Occurs in lower elevation grassland, alluvial sage scrub, and coastal sage scrub. Areas along and adjacent the trail consist of suitable elements; however, the site is located well beyond the species known range.
Neotoma lepida intermedia San Diego desert woodrat	--	--	SSC G5T3?/S3? --	HIGH POTENTIAL - WOODRAT HOUSES PRESENT Joshua tree, pinyon-juniper, mixed and chamise-redshank chaparral, sagebrush, and most desert habitats with rocky outcrops and substrates. Houses are constructed with twigs, sticks, cactus parts, and rocks, and are used for nesting, food caching, and predator escape. The biologists observed woodrat houses during the site visits.
Microtus californicus stephensi South coast marsh vole	--	--	SSC G5T1T2/S1S2 --	NOT EXPECTED This subspecies occurs from Santa Barbara County south to Orange County in coastal salt marshes dominated by pickleweed. There are no suitable habitat elements along and adjacent the proposed trail.

SCIENTIFIC NAME **COMMON NAME**	**STATUS (May 2018)**			**POTENTIAL FOR OCCURRENCE, HABITAT NOTES, & LIFE HISTORY** [6]
	Federal Status	**State Status**	**CDFW (Season) Global Rank/State Rank**	
Lepus californicus bennetti San Diego black-tailed jackrabbit	--	--	SSC G5T3?/S3? --	NOT EXPECTED Abundant at lower elevations in herbaceous and desert-shrub areas and open, early stages of forest and chaparral habitats. There habitat along and adjacent the proposed trail is not open.

Status Key:

Federal		State		California Department of Fish and Wildlife	
FE:	Federally Endangered	SE:	State Endangered	FP:	Fully Protected
FT:	Federally Threatened	ST:	State Threatened	SSC:	Species of Special Concern
FC:	Federal Candidate	SC:	State Candidate	WL:	Watch List

Potential for Occurrence: Based on professional experience, knowledge of habitat associations, and known occurrences in the region.

Present = Detected during site visit, known to occur, or recently reported to occur
Expected = Suitable habitat is present and species known to occur in the immediate vicinity
High Potential = Suitable habitat is present and species is known to occurs frequently in the region
Moderate Potential = Suitable habitat is limited and species occurs in the region infrequently
Low Potential = Species-specific survey negative or marginal habitat is present or temporary in nature and species known to occur in the immediate vicinity (potential for occurrence cannot be ruled out)
Not Expected = Suitable habitat is absent or species is not expected to occur during the "season of concern"

The official federal listing of Endangered and Threatened animals is published in the Federal Register, 50 CFR 17.11. The official state Endangered and Threatened animals list is contained in the California Code of Regulations, Title 14, Section 670.5. A state candidate species is one that the Fish and Game commission had formally noticed as being under review by the Department for addition to the State list. A federal candidate species is one for which a proposed regulation has been published in the Federal Register.

Fully Protected: This classification was the State's initial effort to identify and provide additional protection to those animals that were rare or faced possible extinction. Most of the species on these lists have subsequently been listed under the state and/or federal endangered species acts; white-tailed kite, golden eagle, trumpeter swan, northern elephant seal and ring-tailed cat are the exceptions. The white-tailed kite and the golden eagle are tracked in the CNDDB; the trumpeter swan, northern elephant seal and ringtail cat are not. The Fish and Game Code sections dealing with Fully Protected species state that these species "may not be taken or possessed at any time and no provision of this code or any other law shall be construed to authorize the issuance of permits or licenses to take any fully protected" species, although take may be authorized for necessary scientific research. This language arguably makes the "Fully Protected" designation the strongest and most restrictive regarding the "take" of these species. In 2003 the code sections dealing with fully protected species were amended to allow the Department to authorize take resulting from recovery activities for state-listed species. More information on Fully Protected species and the take provisions can be found in the Fish and Game Code, (birds at §3511, mammals at §4700, reptiles and amphibians at §5050, and fish at §5515). Additional information on Fully Protected fish can be found in the California Code of Regulations, Title 14, Division 1, Subdivision 1, Chapter 2, Article 4, §5.93. The category of Protected Amphibians and Reptiles in Title 14 has been repealed.

California Species of Special Concern: It is the goal and responsibility of the Department of Fish and Wildlife to maintain viable populations of all native species. To this end, the Department has designated certain vertebrate species as "Species of Special Concern" because declining population levels, limited ranges, and/or continuing threats have made them vulnerable to extinction. The goal of designating species as "Species of Special Concern" is to halt or reverse their decline by calling attention to their plight and addressing the issues of concern early enough to secure their long term viability. Not all "Species of Special Concern" have declined equally; some species may be just starting to decline, while others may have already reached the point where they meet the criteria for listing as a "Threatened" or "Endangered" species under the State and/or Federal Endangered Species Acts.

Global Rank (G Rank) is a reflection of the overall status of an element throughout its global range. Both Global and State ranks represent a letter and number score that reflects a combination of Rarity, Threat, and Trend factors, with weighting being heavier on Rarity than the other two. Taxa that are subspecies or varieties receive a taxon rank (T-rank) attached to their G-rank. Where the G-rank reflects the condition of the entire species, the T-rank reflects the global situation of just the subspecies.

GQ = Questionable Taxonomy - Denotes an element that is very rare, but there are taxonomic questions associated with it.
GX = Presumed Extinct - Species not located despite intensive searches and virtually no likelihood of rediscovery. Ecological community or system eliminated throughout its range, with no restoration potential.
GH = Possibly Extinct - Known from only historical occurrences but some hope of rediscovery. Evidence exists that species may be extinct or ecosystem eliminated throughout its range, but not enough to state this with certainty.
G1 = Critically Imperiled - At very high risk of extinction due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors.
G2 = Imperiled - At high risk of extinction due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors.
G3 = Vulnerable - At moderate risk of extinction due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors.
G4 = Apparently Secure - Uncommon but not rare; some cause for long-term concern due to declines or other factors.
G5 = Secure - Common; widespread and abundant.
G? = Inexact Numeric Rank
GU = Unrankable

State Rank (S Rank) is assigned much the same way as the global rank, but state ranks refer to the imperilment status only within California's state boundaries.

SQ = Questionable Taxonomy - Denotes an element that is very rare, but there are taxonomic questions associated with it.
SX = Presumed Extirpated
SH = Possibly Extirpated
S1 = Critically Imperiled - Critically imperiled in the state because of extreme rarity (often 5 or fewer populations) or because of factor(s) such as very steep declines making it especially vulnerable to extirpation from the state.
S2 = Imperiled - Imperiled in the state because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the state.
S3 = Vulnerable - Vulnerable in the state due to a restricted range, relatively few populations (often 80 or fewer) recent and widespread declines, or other factors making it vulnerable to extirpation from the state.
S4 = Apparently Secure - Uncommon but not rare in the state; some cause for long-term concern due to declines or other factors.
S5 = Secure- Common, widespread, and abundant in the state.
S? = Inexact Numeric Rank
SU = Unrankable
SNR = Unranked
SNA = Not Applicable

SCIENTIFIC NAME **COMMON NAME**	**STATUS (May 2018)**			**ELEVATION RANGE, LIFE FORM, & FLOWERING PERIOD**	**OCCURRENCE POTENTIAL (See notes at end of table for sources of information)**
	Federal Status	**State Status**	**CNPS Global Rank/ State Rank**		
Astragalus brauntonii Parish Braunton's milk-vetch	FE January 1997	--	1B.1 G2/S2	4 m - 640 m Perennial Herb January - August	LOW POTENTIAL Occurs in closed-cone coniferous forest, chaparral, coastal sage, valley and foothill grasslands, and recent burn or disturbed areas usually in association with sandstone with carbonate layers or down-wash sites (into which the seeds have drifted). Carbonate outcrops are extremely rare within its current range, and as a result, is naturally rare. There are no suitable habitat elements along and adjacent the proposed trail. The property lacks sandstone outcrops.
Astragalus pycnostachyus Gray var. *lanosissimus* (Rydb.) Munz & McBurn. Ventura marsh milk-vetch	FE May 2001	SE April 2000	1B.1 G2T12/S1	1 m - 35 m Perennial Herb June - October	NOT EXPECTED Rediscovered near Oxnard in 1997 and known from only one natural occurrence composed of 30-50 reproductive plants. This species occurs in coastal dunes and edges of salt or brackish marshes and swamps. There are no suitable habitat elements along and adjacent the proposed trail.
Astragalus tener Gray var. *titi* (Eastw.) Barneby Coastal dunes milk-vetch	FE August 1998	SE February 1982	1B.1 G2T1/S1	1 m - 50 m Annual Herb March - May	NOT EXPECTED This species is found in coastal bluff scrub with sandy soils, coastal dune, and mesic coastal prairie habitats. There are no suitable habitat elements along and adjacent the proposed trail.
Atriplex coulteri (Moq.) D. Dietr. Coulter's saltbush	--	--	1B.2 G2/S2	3 m - 460 m Perennial Herb March - October	MODERATE POTENTIAL This species is associated with coastal dune, coastal scrub, coastal bluff scrub, and valley and foothill grassland habitats with alkaline or clay soils. There are suitable habitat elements along and adjacent the proposed trail.

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Atriplex parishii Wats. Parish's brittlescale	--	--	1B.1 G1G2/S1	25 m - 1900 m Annual Herb June - October	NOT EXPECTED This species is associated with chenopod scrub, playas, and vernal pool habitats on alkaline substrates. There are no suitable habitat elements along and adjacent the proposed trail.
Atriplex serenana A. Nels. var. *davidsonii* (Standl.) Munz Davidson's saltscale	--	--	1B.2 G5T1/S1	10 m - 200 m Annual Herb April - October	LOW POTENTIAL Associated with coastal bluff scrub and coastal scrub on alkaline substrates. The only record of this taxon in the Santa Monica Mountains is from Malibu Canyon. There are suitable habitat elements along and adjacent the proposed trail. The biologists did not observe Atriplex during the site visits.
Baccharis malibuensis Beauchamp & Henrickson Malibu baccharis	--	--	1B.1 G1/S1	150 m - 305 m Perennial Shrub (Deciduous) August	NOT EXPECTED Associated with coastal scrub, chaparral, cismontane woodland, and riparian woodland on Conejo Volcanic exposures[1] in the upper Malibu Creek watershed. There are no suitable habitat elements along and adjacent the proposed trail. The property lacks volcanic outcrops. The biologists did not observe the species during the site visits. It is a perennial shrub and identifiable year round.

[1] Conejo Volcanics occur in western Simi Valley from Big Mountain south through Mountclef Ridge in Santa Rosa Valley, the Conejo Hills, and the western Santa Monica Mountains to the ocean and west through the Malibu Creek watershed and upper Topanga Creek watershed. Skeletal limestone occurs as interbeds and neptunian dikes within the sequence of submarine andesitic / basaltic flows and hyalobreccias of the Conejo Volcanics. The Calabasas Formation, which overlies it, is made up of alternating layers of clayey to silty sandstone and silty shale with some areas having layers of breccia and lenses of chert in the shale.

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Berberis nevinii Nevin's barberry	FE Octiber 1998	SE January 1987	1B.1	295 m - 825 m Shrub (Evergreen) March - June	NOT EXPECTED Chaparral, cismontane, coastal scrub, and riparian scrub habitats with sandy or gravelly soils. Species is not known to occur in the Santa Monica Mountains.
California macrophylla (Hook.&Arn.) Aldas, Navarro, Vargas, Saez & Aedo Round-leaved filaree	--	--	1B.1 G2/S2	10 m - 1220 m Annual Herb March - May	NOT EXPECTED This species is associated with clay soils in cismontane woodland and grassland. Grass cover is generally low. The property lacks suitable habitat elements.
Calochortus clavatus S. Watson var. *gracilis* Ownbey Slender mariposa lily	--	--	1B.2 G4T2T3/S2S3	320 m - 1000 m Perennial Herb (Bulbiferous) March - June	NOT EXPECTED This species occurs in shaded canyons and grassy slopes in chaparral and oak woodlands habitats, often associated with serpentinite soils. There are suitable habitat elements along and adjacent the proposed trail; however, it is well below the species known range.
Calochortus fimbriatus H. P. McDonald Late-flowered mariposa lily	--	--	1B.3 G3/S3	275 m - 1905 m Perennial Herb (Bulbiferous) June - August	NOT EXPECTED This species occurs in chaparral, cismontane woodland, and riparian woodland often on serpentinite. There are suitable habitat elements along and adjacent the proposed trail; however, it is well below the species known range.
Centromadia parryi (Greene) Greene ssp. *australis* (Keck) B.G. Baldwin Southern tarplant	--	--	1B.1 G3T2/S2	0 m - 425 m Annual Herb May - November	NOT EXPECTED This species occurs along margins of salt marsh and swamps, vernal pools, and vernally mesic valley and foothill grasslands. There are no suitable habitat elements along and adjacent the proposed trail..

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Chaenactis glabriuscula DC var. *orcuttiana* (Greene) H.M. Hall Orcutt's pincushion	--	--	1B.1 G5T1/S1	< 100 m Annual Herb January - August	NOT EXPECTED This species occurs on coastal dunes and in sandy coastal bluff scrub. There are no coastal dune or coastal bluff scrub habitats on the property.
Chloropyron maritimum (Benth.) A. Heller ssp. *maritimum* Salt marsh bird's-beak	FE September 1978	SE July 1979	1B.2 G4?T1/S1	0 m - 30 m Annual Herb (Hemiparasitic) May - October	NOT EXPECTED This taxon occurs in coastal dunes, salt marshes and swamps. There are no coastal dunes, salt marshes, or swamps on the property.
Chorizanthe parryi Wats. var. *fernandina* (Wats.) Jeps. San Fernando Valley spineflower	FC May 2004	SE August 2001	1B.1 G2T1/S3	150 m - 1035 m Annual Herb April - June	NOT EXPECTED This species occurs in open coastal scrub and grassland on sandy soil. The habitat along and adjacent the proposed trail is not open.
Chorizanthe parryi S. Watson var. *parryi* Parry's spineflower	--	--	1B.1 G3T3/S3	Wide Elevation Range Annual Herb May - June	MODERATE POTENTIAL This species occurs on dry slopes and flats in sandy soil, typically in coastal scrub, chaparral, grassland, and oak woodland or in edges between these habitats. There are suitable habitat elements along and adjacent the proposed trail.
Deinandra minthornii (Jeps.) B.G. Baldwin Santa Susana tarplant	--	SR November 1978	1B.2 G2/S2	280 m - 760 m Shrub (Deciduous) July - October	NOT EXPECTED This species occurs in chaparral and coastal scrub habitats in association with sandstone outcrops. There are no sandstone outcrops. The species is identifiable throughout the year. The biologists did not obseve the species during the site visits.

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Didymodon norrisii Norris' beard moss	--	--	2.2	600 m - 1973 m Bryophyte N/A	NOT EXPECTED Occurs in seasonally wet sheet drainages within cismontane woodland and lower montane coniferous forest. There are no wet sheet drainages on the property.
Dodecahema leptoceras (Gray) Rev. & Hardham Slender-horned spineflower	FE	SE	1B.1	200 m - 760 m Annual Herb April - June	NOT EXPECTED This species occurs in chaparral and coastal scrub (alluvian fan). There are no occurrencies in the Santa Monica Mountains.
Delphinium parryi Gray ssp. *blochmaniae* (Greene) Lewis & Epl. Dune larkspur	--	--	1B.2 G4T2/S2	0 m - 200 m Perennial Herb April - May	NOT EXPECTED This taxon is associated with maritime chaparral and coastal dune habitats. The property lacks maritime chaparral and coastal dune habitats.
Dithyrea maritima A. Davids. Beach spectaclepod	--	ST February 1990	1B.1 G2/S1	3 m - 50 m Perennial Herb (Rhizomatous) March - May	NOT EXPECTED This species is found in coastal dune and coastal scrub habitats with sandy soils. The property lacks suitable habitat elements.
Dudleya blochmaniae (Eastw.) Moran ssp. *blochmaniae* Blochman's dudleya	--	--	1B.1 G2T2/S2	5 m - 450 m Perennial Herb April - June	LOW POTENTIAL It mostly occurs in coastal bluff scrub, coastal scrub, and grasslands on open, rocky slopes in shallow clays derived from ultramafic rocks, over serpentinite.[2] There are suitable habitat elements along and adjacent the proposed trail. The biologists did not observe *Dudleya* sp. during any of the site visits.

[2] Serpentine rock is apple green to black and often mottled with light and dark colored areas. It has a shiny or wax-like appearance and slightly soapy feel.

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Dudleya cymosa (Lemaire) Britton & Rose ssp. *agourensis* K. Nakai Agoura Hills dudleya	FT January 1997	--	1B.2 G5T1/S2	200 m - 500 m Perennial Herb May - June	NOT EXPECTED This species is restricted to a band of late Pleistocene dissected gravels at road level, east of Kanan Rd, which climbs in elevation west to ~405 meters near Reyes Adobe Rd in an area dominated by chaparral and cismontane woodland habitat. The property is well beyond the species known range, which is very restricted. The biologists did not observe *Dudleya* sp. during any of the site visits.
Dudleya cymosa (Lem.) Britt. & Rose ssp. *marcescens* Moran Marcescent dudleya	FT January 1997	SR November 1978	1B.2 G5T2/S2	150 m - 520 m Perennial Herb April - July	NOT EXPECTED Associated with chaparral on lower reaches of sheer volcanic rock surfaces and canyon walls adjacent perennial streams dominated by live oak woodland, often with California Bay. In most locations, topographic relief has prevented deep soil formation; therefore, this dudleya may be the only flowering plant occurring in microhabitat otherwise dominated by mosses, lichens, and ferns. The property lacks sheer volcanic rock surfaces. The biologists did not observe *Dudleya* sp. during any of the site visits.
Dudleya cymosa (Lem.) Britt. & Rose ssp. *ovatifolia* (Britt.) Moran Santa Monica Mountains dudleya	FT January 1997	--	1B.2 G5T1/S1	150 m - 1675 m Perennial Herb March - June	NOT EXPECTED Occurs on shaded slopes and canyon bottoms on volcanic and sedimentary conglomerate rock on exposed north-facing slopes from near Westlake Village to Agoura Hills and deep canyon bottoms along lower Malibu Creek and Topanga Creek. Volcanic exposures appear to be lacking and there are no sedimentary conglomerates on the property. The biologists did not observe *Dudleya* sp. during any of the site visits.

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Dudleya multicaulis (Rose) Moran Many-stemmed dudleya	--	--	1B.2 G2/S2	15 m - 790 m Perennial Herb April - July	LOW POTENTIAL Occurs on clay soils in chaparral, coastal scrub, and valley and foothill grasslands. There are suitable habitat elements along and adjacent the proposed trail. The biologists did not observe *Dudleya* sp. during any of the site visits.
Dudleya parva Rose & Davids. Conejo dudleya	FT January 1997	--	1B.2 G2/S2	60 m - 450 m Perennial Herb May - June	NOT EXPECTED Found in coastal scrub and valley and foothill grassland habitats, most commonly in cactus-dominated coastal sage scrub in association with rocky, gravelly, clay, and volcanic substrates derived from the Conejo volcanics from the western Simi Hills, along the Mountclef Ridge north to the Conejo Grade, a distance of about 10 miles. Property is well beyond the species known range. The biologists did not observe *Dudleya* sp. during any of the site visits.
Dudleya verityi K. Nakai Verity's dudleya	FT January 1997	--	1B.1 G1/S1	60 m - 120 m Perennial Herb May - June	NOT EXPECTED Occurs on exposures of Conejo volcanics in chaparral, cismontane woodland, and coastal scrub at Conejo Mountain. There property is well outside the species known range. The biologists did not observe *Dudleya* sp. during any of the site visits.
Eriogonum crocatum A. Davids. Conejo buckwheat	--	SR September 1979	1B.2 G1/S1	50 m - 580 m Perennial Herb April - July	NOT EXPECTED The known distribution of this species is limited to the Conejo Valley and surrounding regions in Ventura County where it is found in openings in chaparral, coastal scrub, and valley and grassland habitats on exposures of Conejo volcanics. The property is well outside the species known range.

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Horkelia cuneata Lindl. var. *puberula* (Rydb.) Ertter & Reveal Mesa horkelia	--	--	1B.1 G4T1/S1	70 m - 810 m Perennial Herb February - September	MODERATE POTENTIAL This species is found in maritime chaparral, cismontane woodland, and coastal scrub habitats with sandy or gravelly soils. There are suitable habitat elements along and adjacent the proposed trail.
Isocoma menziesii (H. & A.) G. Nesom var. *decumbens* (Greene) G. Nesom Decumbent goldenbush	--	--	1B.2 G3G5T2T3/S2	10 m - 135 m Shrub April - November	LOW POTENTIAL This taxon is associated with openings in chaparral and coastal scrub with sandy soils and in disturbed areas. The habitat along and adjacent the proposed trail is not open.
Lasthenia glabrata Lindl. ssp. *coulteri* (Gray) Ornduff Coulter's goldfields	--	--	1B.1 G4T2/S2	1 m - 1220 m Annual Herb February - June	NOT EXPECTED This species is found in coastal salt marshes and swamps, playas, grasslands, and vernal pools, usually on alkaline soils. The property lacks coastal salt marshes, swamps, playas, and vernal pools.
Monardella hypoleuca A. Gray ssp. *hypoleuca* White-veined monardella	--	--	1B.3 G4T2T3/S2S3	50 m - 1525 m Herb April - December	MODERATE POTENTIAL This species occurs in chaparral and cismontane woodland in rich soil of shady canyon bottoms of the southern Santa Monica Mountains, often growing with *Lonicera subspicata*, *Baccharis plummerae*, and *Artemisia douglasiana*. There are suitable habitat elements along and adjacent the proposed trail.
Monardella sinuata Elvin & A.C. Sanders ssp. *sinuata* Southern curly-leaved monardella	--	--	1B.2 G3T2/S2	< 300 m Annual Herb April - September	LOW POTENTIAL This species occurs on sandy soil in chaparral, cismontane woodland, coastal dunes, and openings in coastal scrub. In the database search area the species is only known from Ventura County. The habitat along and adjacent the proposed trail has no openings.

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Nama stenocarpum Gray Mud nama	--	--	2B.2 G4G5/S1S2	5 m - 500 m Annual/Perennial Herb January - July	NOT EXPECTED This species is found in muddy margins of freshwater marshes, swamps, lakes, and rivers. The property lacks suitable habitat elements.
Navarretia ojaiensis Elvin, J.M. Porter & L.M. Johnson Ojai navarretia	--	--	1B.1 G1/S1	275 m - 620 m Annual Herb May - July	LOW POTENTIAL This species is associated with openings in chaparral and coastal scrub, and in valley and foothill grassland habitats. The habitat along and adjacent the proposed trail has no openings.
Nolina cismontana Dice Chaparral nolina	--	--	1B.2 G2/S2	140 m - 1275 m Perennial Shrub (Evergreen) March - July	NOT EXPECTED This species is found in coastal sage scrub and chaparral habitats on sandstone and gabbro substrates. There are no sandstone or gabrro substrates on or adjacent the trail.
Orcuttia californica Vasey California Orcutt grass	FE August 1993	SE September 1979	1B.1 G1/S1	15 m - 660 m Annual Herb April - August	NOT EXPECTED This species is found in vernal pools. There are no vernal pools or adjacent the trail.
Pentachaeta lyonii Gray Lyon's pentachaeta	FE January 1997	SE January 1990	1B.1 G2/S2	30 m - 630 m Annual Herb March - August	NOT EXPECTED Occurs mostly in pocket grassland in chaparral, coastal sage scrub, road/trail edges and sites transitional to shrublands with rocky and clay soils of volcanic origin. The habitat along and adjacent the proposed trail has no openings. The biologists did not observe this species during the site visits.

SCIENTIFIC NAME **COMMON NAME**	**STATUS (May 2018)**			**ELEVATION RANGE, LIFE FORM, & FLOWERING PERIOD**	**OCCURRENCE POTENTIAL (See notes at end of table for sources of information)**
	Federal Status	**State Status**	**CNPS Global Rank/ State Rank**		
Quercus dumosa Nutt. Nuttall's scrub oak	--	--	1B.1 G3/S3	15 m - 400 m Shrub February - August	NOT EXPECTED This species is found on sandy soil and clay loam in closed-cone coniferous forest, chaparral, and coastal scrub. The biologists did not observe the species during the site visits.
Senecio aphanactis Greene Chaparral ragwort	--	--	2B.2 G3?/S2	15 m - 800 m Annual Herb January - April	MODERATE POTENTIAL Occurs within woodland, chaparral, and coastal scrub habitats on alkaline flats. There are suitable habitat elements along and adjacent the proposed trail.
Sidalcea neomexicana Gray Salt spring checkerbloom	--	--	2B.2 G4?/S2S3	15 m -1530 m Perennial Herb March - June	LOW POTENTIAL This species is associated with mesic chaparral, coastal scrub, low montane coniferous forest, Mojavean desert scrub, and playas on alkaline substrates. There are suitable habitat elements along and adjacent the proposed trail.
Suaeda esteroa Ferren & Whitmore Estuary seablite	--	--	1B.2 G3/S2	0 m -5 m Perennial Herb May - January	NOT EXPECTED This species occurs in coastal salt marshes and swamps. There are no suitable habitat elements along and adjacent the proposed trail.
Thelypteris puberula (Baker) C. Morton var. *sonorensis* A.R. Smith Sonoran maiden fern	--	--	2B.2 G5T3/S2	50 m - 610 m Perennial Herb (Rhizomatous) N/A	NOT EXPECTED This species is associated with meadows and seeps. There are no meadows or seeps on or adjacent the proposed trail.

SCIENTIFIC NAME **COMMON NAME**	**STATUS (May 2018)**			**ELEVATION RANGE, LIFE FORM, & FLOWERING PERIOD**	**OCCURRENCE POTENTIAL (See notes at end of table for sources of information)**
	Federal Status	**State Status**	**CNPS Global Rank/ State Rank**		
Tortula californica Bartr. California screw moss	--	--	1B.2 G2?/S2	10 m - 1460 m Moss N/A	NOT EXPECTED This species is associated with sandy soil in chenopod scrub and grassland. There are no suitable habitat elements along and adjacent the proposed trail.