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BIOLOGY LETTER REPORT

Biological Resources, Project Impacts, and Proposed Mitigation
The Harbison Canyon TPM Project
PDS2022-TPM-21316
APN 513-101-11
Applicant: Nagham Sabah
1233 Pfeifer Lane
El Cajon, CA 92020

Final July 2025
Revised December 2024
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Summary

The Harbison Canyon TPM Project consists of an application to subdivide a 12.37-acre parcel into four single-family lots with a remainder. The site is located within the County's Multiple Species Conservation Program (MSCP) in land designated as outside of the Pre-Approved Mitigation Area (PAMA). It currently supports mostly Non-native Grassland and Disturbed/Developed Habitat (two homes), with much smaller areas of Non-native Vegetation, Southern Coast Live Oak Riparian Forest, Coastal Sage Scrub (disturbed), and Coastal Sage-Chaparral Scrub. Future development to construct new homes and related infrastructure improvements would result in direct habitat impacts. Habitat-based mitigation and impact avoidance is required by the Biological Mitigation Ordinance (BMO) to reduce potential development impacts to less than significant as defined by the California Environmental Quality Act (CEQA). An avian nesting survey and/or seasonal restrictions on site development are recommended to ensure project consistency with the Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code (CFGC).

Introduction, Project Description, Location, and Setting

The Harbison Canyon TPM Project is an applicant for a Tentative Parcel Map subdivision of the 12.37-acre (APN 513-101-11) property which would allow the construction of a new 40' private road, three new residential pads, and eventually three new homes with associated improvements. The site is currently partially developed with two single family homes to remain; one on proposed parcel 4 and a second on the proposed remainder. The project site is located at 2030 Harbison Canyon Road in the Crest-Dehesa Community Planning Area, within unincorporated San Diego County. Access would be provided by the new private street (Private Street "A") connecting to Harbison Canyon Road to the east.

The vegetation onsite consists of Non-native Grassland, Disturbed/Developed Habitat, Non-native Vegetation, Southern Coast Live Oak Riparian Forest, disturbed Coastal Sage Scrub, and Coastal Sage-Chaparral Scrub. Three similar soil-types are found onsite. These are Placentia sandy loam (PeD2), 9 to 15 percent slopes, Fallbrook sandy loam (FaE2), 15 to 30 percent slopes, and Visalia sandy loam (VaA), 0 to 2 percent slopes. These soil types are not known to support specific edaphic rare or endangered plant species. Due to the disturbed condition of the most of the property and the surrounding area, no sensitive edaphics are expected. The property ranges between approximately 580 and 665 feet in elevation above MSL.

The site is located within the County's "South County" MSCP Subarea Planning Area. The project is in unincorporated lands within the Metro-Lakeside-Jamul segment, outside of the PAMA. The site does not qualify as a Biological Resource Core Area (BRCA). There are no conserved lands on or adjacent to the property, although open space is present to the north, west, and east within one mile of the site. As mentioned, the vegetation onsite is largely historically disturbed and developed. The project must comply with the BMO) the County ordinance for implementing the MSCP, and the County's Resource Protection Ordinance (RPO). By the project's conformance with the BMO, the project complies with the Federal and State Endangered Species Acts for species covered by MSCP.

Methods

The author (Vincent Scheidt) and Brandon Myers, Associate Biologist, conducted a field survey of the property on 28 November 2023 from approximately 09:30 to 11:45. Weather conditions during the survey were suitable for field surveying, with clear skies, temperatures in the mid to high 60^{o}s, and a slight 2-5mph breeze from the west.

All plants, animals, and habitats encountered during the surveys were recorded in the field. Adjoining offsite areas were examined concurrent with the baseline site surveying. The limits of each habitat-type were mapped in the field utilizing a recent aerial photograph of the property. All plants and animals identified in association with the project site are listed in Table 1, attached. Plants were identified in situ, or based on characteristic floral parts collected and later examined in detail. Floral nomenclature used in this letter follows Hickman (1993) and others. Plant communities, as designated by numerical code, follow Holland (1996, as amended). Wildlife observations were made opportunistically. Binoculars were used to aid in observations and all wildlife species detected were noted. Animal nomenclature used in this report is taken from Stebbins (2003) for reptiles and amphibians, American Ornithologist's Union (1998, as updated) for birds, and Jones, et. al (1992) for mammals.

Vegetation Communities, Flora/Fauna, and Special Status Species

The Harbison Canyon TPM Project site supports six generally discrete plant associations or habitats. These are: Non-native Grassland, Disturbed/Developed Habitat, Non-native Vegetation, Southern Coast Live Oak Riparian Forest, disturbed Coastal Sage Scrub, and Coastal Sage-Chaparral Scrub (Figures 3 & 4). Each of these habitats are assigned an MSCP "tier" ranking based on the County's BMO and evaluated with respect to biological resource value per the County's Biology Guidelines.

Vegetation Communities

The following vegetation-types are found onsite:

Non-native Grassland - Tier III (Holland Code 42200) – 8.4 acres

Non-native Grassland (NNG) occurs over most of the property. This vegetation is likely the result of past agricultural uses and continually brushing/mowing. Non-native, weedy grasses and forb species dominate the habitat. Indicators include Ripgut Brome *(Bromus diandrus),* Turkey Mullein (*Croton setiger),* Red Brome *(Bromus rubens),* and various other annual weeds. Non-native Grassland, an MSCP Tier III habitat-type, is considered a sensitive biological resource in San Diego County, as defined by the County's BMO. The biological resource value of this habitat is considered moderate.

Disturbed/Developed Habitat - Tier IV (Holland Code 11300/12000) – 3.0 acres

Disturbed/Developed Habitat (DDH) dominates the central and eastern portions of the project site. This area supports two existing residences along with associated infrastructure and a remnant old water storage tank pad, etc. as well as areas of bare dirt supporting little to no vegetative cover. Disturbed/Developed Habitat, an MSCP Tier IV habitat-type, is not considered a sensitive biological resource in San Diego County, as defined by the County's BMO. The biological resource value of this habitat is considered low.

Non-native Vegetation – Tier IV (Holland Code 11000) –0.3 acre

Non-native Vegetation (NNV) is mainly found in the form of planted trees within the central portion of the property and along the site's perimeter. Indicators include Pine *(Pinus* sp.*),* Brazilian Pepper Tree (*Schinus terebinthifolia),* Peruvian Pepper Tree (*Schinus molle*), and others. NNV, an MSCP Tier IV habitat-type, is not considered a sensitive biological resource in San Diego County, as defined by the County's BMO. The biological resource value of this habitat is considered low.

Southern Coast Live Oak Riparian Forest - Tier I (Holland Code 61310) – 0.29 acre

A small patch of vegetation that best qualifies as Southern Coast Live Oak Riparian Forest (SCLORF) is found at the northeast corner of the property. This habitat, growing at the base of a steep slope, is indicated by mature California Live Oaks *(Quercus agrifolia agrifolia)* with Western Sycamores *(Platanus racemosa)* and non-native trees including Olive (*Olea europaea*) and Black Walnut *(Juglans hindsii).* These trees grow over an understory of mostly weedy forbs and grasses. SCLORF, an MSCP Tier I habitat-type, is considered a high value biological resource in San Diego County, as defined by the County's BMO.

Disturbed Coastal Sage Scrub - Tier II (Holland Code 32500) – 0.1 acre

The property supports two small patches of disturbed Coastal Sage Scrub (dCSS) along the site's eastern edge. Indicators include California Sagebrush *(Artemisia californica)* and California Buckwheat (*Eriogonum fasciculatum*), along with non-native weeds such as Shortpod Mustard (*Hirschfeldia incana*) and brome grasses (*Bromus* spp). Coastal Sage Scrub (disturbed) is a Tier II habitat-type in San Diego County, as defined by the County's BMO. The biological resource value of this habitat is considered low to moderate due to patch size and edge effects.

Coastal Sage – Chaparral Scrub - Tier II (Holland Code 37G00) – 0.2 acre

A small area of Coastal Sage – Chaparral Scrub (CSCS) is found near the northern end of the property, along a north facing slope. CSCS is an ecotonal habitat-type, indicated by a mixture of hard- and soft-woody shrubs. Species found in the CSCS include California Sagebrush, Chamise (*Adenostoma fasciculatum),* Chaparral Beardtongue *(Keckiella antirrhinoides)*, California Scrub Oak (*Quercus berberidifolia),* and others. CSCS is a Tier II habitat-type in San Diego County, as defined by the County's BMO. The biological resource value of this habitat is considered low to moderate due to patch size and edge effects.

Flora and Fauna

Seventy-one species of vascular plants and fifteen species of vertebrate animals were detected on the Harbison Canyon TPM Project site during the survey. The species observed typify the diversity normally found on rural properties in interior foothills areas of San Diego County. Table 1 presents a complete list of the plants and animals observed, not including horticultural plants directly associated with the onsite residences. This list would be expected to represent at least 70 percent of the naturalized plants occurring on this property. Many animals are cryptic, seasonal, or nocturnal, however and at least dozens of species of animals are expected to use the site, at least on an occasional basis.

Special Status Species

Four special status or "sensitive" species were detected during the survey. These are San Diego County Viguiera (*Bahiopsis laciniata*), Campo Clarkia *(Clarkia delicata),* Orange-throated Whiptail *(Aspidoscelis hyperythrus beldingi),* and Red-shouldered Hawk *(Buteo lineatus)*. Sensitive plants and animals are those listed as "Rare", "Endangered", "Threatened", "of Special Concern", or otherwise considered noteworthy by the County, the California Department of Fish and Wildlife, and the U.S. Fish and Wildlife Service.

San Diego County Viguiera (*Bahiopsis laciniata)*
Listing: County status: San Diego County Sensitive Plant List, List D (PDS, 2010)
CDFW/CNPS status: California Rare Plant Rank List 4.2
Federal/State status: none
Distribution: This distinctive species occurs from about Mission Valley in central San Diego County south to adjacent areas in northern Baja California along the coast and in foothill areas. Many populations are threatened by development, although it remains common where it occurs. Also found in Orange County and elsewhere where it has been introduced by horticulture and hydroseeding.
Habitat: Occurs in coastal sage scrub, maritime scrub, and xeric chaparral, occasionally as a co-dominant.
Status on Site: Two individual San Diego County Viguiera shrubs were detected onsite during the survey near the northern edge of the property. Others may be present in very low numbers. This species was formerly assigned to the genus *Viguiera.*

Delicate Clarkia (*Clarkia delicata)*
Listing: County status: San Diego County Sensitive Plant List, List A (PDS, 2010)
CDFW/CNPS status: California Rare Plant Rank List 1B.2
Federal/State status: none
Distribution: Found in interior foothill areas of the County and adjacent Baja California.

Habitat(s): Occurs on fringes of oak woodlands and in sheltered chaparral vegetation.
Status on Site: A handful of flowering specimens was observed at the base of the slope near the northeastern edge of the property.

Orange-throated Whiptail *(Aspidoscelis hyperythrus beldingi)*
Listing: County status: San Diego County Sensitive Reptiles, Group 2 (PDS, 2010)
California Department of Fish and Wildlife "Watch List" (CDFW, 2020)
Federal status: none
Distribution: Extreme southwestern California; from Orange and Riverside Counties south into northern Baja California.
Habitat(s): Inhabits coastal sage scrub, chaparral and areas of open brush with loose soils. May also be found in open, dry riparian areas. Sea level to about 1,800 feet MSL, occasionally higher on hot, south-facing slopes.
Status on Site: A single Orange-throated Whiptail was observed onsite in association with open areas near the southern residence. Likely well-distributed at the edges of open areas.
Comments: This species was formerly assigned to the genus *Cnemidophorus.*

Red-shouldered Hawk *(Buteo lineatus)*
Listing: County status: San Diego County Sensitive Bird List, Group 1 (PDS, 2011)
Federal/state status: none
Distribution: Central and southern California west of the Sierras. Also, Mexico, southeastern Canada, and the eastern United States.
Habitat(s): Mainly inhabits a variety of woodland habitats, including oak woodlands and larger eucalyptus stands.
Status on Site: Male specimen heard calling and observed soaring offsite to the east. Raptor nesting possible in some of the larger trees, although no nests were observed.

Habitat Evaluation for California Gnatcatcher

Due to the presence of scrub vegetation onsite and records of California Gnatcatchers within 5 miles of the project site, a direct habitat evaluation for California Gnatcatcher *(Polioptila californica)*, a rare and federally-listed threatened species was conducted as part of the site survey work. It was determined that insufficient habitat was present onsite to warrant protocol surveys and the site is considered "unoccupied" by this species. The scrub vegetation on and adjacent to the Harbison Canyon TPM Project site consists of small patches that are isolated by rural residential developments and disturbed lands.

Habitat Evaluation for Quino Checkerspot Butterfly

Quino Checkerspot Butterfly *(Euphydryas editha quino)* is a federally-listed Endangered invertebrate known to occur in portions of San Diego and Riverside County. This butterfly is apparently restricted to open habitats supporting at least one of several larval food-plants, including Dot-seed Plantain *(Plantago erecta)*, Owl's Clover *(Castilleja* sp.*)*, and other plants in the Scrophulariaceae family. Quino is also dependent on several specific habitat features, in addition to the presence of appropriate larval food-plants, such as nectaring sites for adult butterflies, specific physiographic site features, and openings in the vegetation. The subject property does not support any features that might constitute Quino "indicators". For this reason, the Harbison Canyon site is the site is considered "unoccupied" by this species. This conclusion is based primarily on the absence of Dot-seed Plantain or other larval food plants and the overall density of the groundcover over most of the site.

Other sensitive plants and animals known from the general vicinity of the property, along with an assessment of the probability of occurrence onsite, are presented in tabular form in Table 3, attached. Most of these are either associated with habitats not found here (such as vernal pools or native grasslands) or are large and distinctive species, which would not have been missed if encountered onsite. A few have a limited potential to occur onsite, but none of these are anticipated to be resident species in significant numbers. The site supports potential raptor foraging habitat and one sensitive raptor species was detected. Raptor nesting could occur offsite, although no evidence of raptor nesting was detected.

Focused Survey for Crotch's Bumble Bee

Crotch's Bumble Bee *(Bombus crotchii)* is currently in candidacy to become state listed as California Endangered or Threatened Species. *B. crotchii* is a distinctive but poorly known species known to occur in San Diego County generally west of the desert, and across other parts of the state into northern Baja California, Mexico.

Crotch's Bumble Bee could theoretically forage on the Harbison Canyon TPM site based on the presence of nectar plants and relatively open vegetation. Specimens have been observed within a few miles of the site in the past. Therefore, presence/absence surveys were completed in May and June of 2025. The results of this survey are presented in Attachment A.

Jurisdictional Wetlands and Waterways

A minor swale feature runs mostly offsite along the northern edge of the project site. This upland swale exhibits no clear hydrology indicators; neither a bed-and-bank nor any kind of ordinary high water mark. The swale originates from and currently appears to carry entirely sheet flow. However, it was carefully examined to determine federal, state, and county jurisdictional status.

The onsite swale does not qualify as a wetland or waters based on an absence of hydrophytes, hydric soils, or evident hydrology. The dominant plants within the swale consist of upland native and non-native species such as California Sagebrush, Maltese Star-Thistle (*Centaurea melitensis*), Shortpod Mustard and large native and non-native trees near Harbison Canyon Road including Western Sycamore, California Live Oak, Olive, and Black Walnut. No other swales or drainage features are present onsite.

Other Unique Features/Resources

Because of the property's mostly-disturbed nature, it lacks unique features or resources that would enhance its local or regional biological significance. For these reasons, regional wildlife corridors and/or linkages are not present onsite, and there is little potential for large mammals to use the site, other than urban-tolerant species (skunks, coyotes, etc.) Also, for these reasons, there is little potential for native wildlife nursery sites to be present on the property.

The project site does not qualify as a BRCA under the County of San Diego's BMO. This is because the project site is not part of the Wildlife Agencies' Pre-Approved Mitigation Area (PAMA), it is not located within an area of habitat that contains biological resources that support or contribute to the long-term survival of

sensitive species, it is not part of a regional linkage/corridor, it is not shown as very high or high habitat value on the Habitat Evaluation Map, it does not consist of or is within a block of habitat greater than 500 acres in area, and it does not support a high number of sensitive species or soils known to support sensitive species.

Project NCCP and BMO Compatibility

The conversion of natural habitats in the unincorporated County of San Diego is currently regulated through its Subarea Planning efforts in compliance with the Natural Communities Conservation Program (NCCP) process. The intent of these efforts is to retain large blocks of native habitats in order to preserve habitat values and reduce the endangerment of "covered" species through the retention of essential biotic variability and long-term habitat viability.

Project Compliance with the Biological Mitigation Ordinance

The Project complies with the requirements of the Subregional Multiple Species Conservation Program (MSCP) and the County of San Diego's South County Subarea MSCP Plan. The project also complies with the requirements of the County of San Diego's BMO and the County's interpretation of the California Environmental Quality Act (CEQA). The MSCP and the BMO require certain preserve design elements, the avoidance of certain sensitive species, and application of specific mitigation ratios.

Significance of Project Impacts and Proposed Mitigation

Potential development-related impacts associated with future build-out of the Harbison Canyon TPM Project site are subject to review under CEQA per the County's CEQA Guidelines. This means that the County requires that all project-related impacts to the site's native and naturalized flora, fauna, and habitats be assessed, and that mitigation be provided in the instance that impacts are considered "significant", as defined by CEQA. Mitigation is designed to reduce the effects of development, keeping all impacts at a level that is "less than significant". Project impacts and required mitigation, per the requirements of the BMO, are summarized in Table 2.

Direct, Indirect, and Cumulative Impacts

Measurable direct and indirect impacts would result from the development of Harbison Canyon TPM Project site. Direct impacts result from the actual removal of habitat, plants, and animals from the site through grading and brushing clearing or thinning for fire protection purposes, agriculture, etc. These direct impacts are considered permanent, because they result in a conversion of habitats to landscaped areas, structures, parks, roads, etc. Indirect impacts also affect habitats, plants, and/or animals residing on or near the project site. These are not the direct result of grading or development. Examples of indirect impacts include introduction of exotic species, human or pet intrusions into natural areas, lighting, traffic, and noise. Indirect impacts are often called "edge effects". Cumulative impacts are those that contribute to the regional loss of natural resources, even though they may be minor to negligible in their own right.

Direct Impacts

Approval of the Harbison Canyon TPM project and future site development could result in the following direct habitat impacts:

(1) Development could result in impacts to 3.0 acres of Disturbed/Developed Habitat. This impact is considered **less than significant**, as defined by CEQA.

(2) Development could result in impacts to 0.3 acre of Non-native Vegetation. This impact is considered **less than significant**, as defined by CEQA.

(3) Development could result in impacts to up to 0.29 acre of Southern Coast Live Oak Riparian Forest. This impact is considered **significant**, as defined by CEQA.

(4) Development could result in impacts to up to 0.1 acre of disturbed Coastal Sage Scrub. This impact is considered **significant**, as defined by CEQA.

(5) Development could result in impacts to up to 0.2 acre of Coastal Sage-Chaparral Scrub. This impact is considered **significant**, as defined by CEQA.

(6) Development could result in impacts to up to 8.0 acres of Non-native Grassland. This impact is considered **significant**, as defined by CEQA. An additional 0.4 acre of Non-native Grassland is considered Impact Neutral, per County policy, because it is within 100 feet of onsite or offsite habitable structures.

(7) Development could result in impacts to two specimens of San Diego County Viguiera and a few specimens of Campo Clarkia growing near the northern edge of the property. This impact is considered **significant**, as defined by CEQA.

(8) Development could result in impacts foraging habitat for Red-shouldered Hawk, which was observed soaring in the vicinity and habitat occupied by Orange-throated Whiptails. This impact is considered **significant**, as defined by CEQA.

Indirect Impacts

Some indirect impacts resulting from changes in land use are anticipated. These are primarily "edge effects" impacting remaining natural areas nearby. Because the development area is relatively small and already significantly impacted by edge effects from the adjacent road and surrounding developments, these indirect impacts are considered **less than significant.** No specific mitigation is recommended or required for indirect impacts.

Cumulative Impacts

The County of San Diego may determine that the project qualifies for a "partial exemption" pursuant to CEQA section 15183. CEQA section 15183 allows qualifying projects to rely on the cumulative analysis contained within a certified Environmental Impact Report prepared for a General Plan. The County of San Diego Board

of Supervisors certified the General Plan Update EIR on August 3, 2011, which comprehensively evaluated environmental impacts that would result from plan implementation, including information related to existing site conditions, analyses of the types and magnitude of individual and cumulative environmental impacts, and feasible mitigation measures that could reduce or avoid environmental impacts. Consequently, no additional review of cumulative impacts would be required under CEQA, and no specific mitigation would be required.

Proposed Mitigation

In order to reduce project all impacts to "less than significant", the following mitigation measures are recommended:

1. The loss of 0.1 acre of DDH is considered "less than significant". Mitigation for this loss is not required pursuant to the County's Guidelines or the BMO.

2. The loss of 0.2 acre of NNV is considered "less than significant". Mitigation for this loss is not required pursuant to the County's Guidelines or the BMO.

3. The loss of up to 0.1 acre of dCSS is considered "significant" and requires mitigation. This 0.1-acre loss must be mitigated at a 1:1 ratio, per the County's Biology Guidelines and the BMO. This would require that 0.1 acre of Tier II or "better" habitat be mitigated within an approved offsite conservation bank.

4. The loss of up to 0.2 acre of CSCS are considered "significant" and requires mitigation. This 0.2- acre loss must be mitigated at a 1:1 ratio, per the County's Biology Guidelines and the BMO. This would require that 0.2 acre of Tier II or "better" habitat be mitigated within an approved offsite conservation bank.

5. The loss of up to 8.0 acres of NNG is considered "significant" and requires mitigation. This 8.0 acre loss must be mitigated at a 0.5:1 ratio, per the County's Biology Guidelines and the BMO. This would require that 4.0 acres of Tier III or "better" habitat be mitigated within an approved offsite conservation bank. The remaining 0.4 acre of NNG associated with the site is considered Impact Neutral, requiring no specific mitigation.

6. The loss of up to 0.29 acre of SCLORF is considered "significant" and requires mitigation. This 0.29-acre loss must be mitigated at a 1:1 ratio, per the County's Biology Guidelines and the BMO. This would require that 0.29 acres of Tier I or "better" habitat be mitigated within an approved offsite conservation bank.

7. Impacts to Red-shouldered Hawk, Orange-throated Whiptail, Campo Clarkia, and San Diego County Viguiera are considered "significant" and require mitigation. Mitigation shall be provided in conjunction with the habitat mitigation measures above.

8. Any site brushing, grading, and/or the removal of native vegetation within 300 feet of any potential migratory songbird or 500 feet of raptor nesting habitat should not take place during the spring/summer songbird breeding season, defined as from 1 February to 31 August of each year.

This is recommended in order to ensure compliance with the Sections 3503, 3503.5 and 3513 of the California Fish and Game Code, which prevents the "take" of eggs, nests, feathers, or other parts of most native bird species, and the Endangered Species Act. Limiting brushing and grading to the non-breeding season will minimize chances for the incidental take of migratory songbirds or raptors. Should it be necessary to conduct brushing, grading, or other construction activities during the bird breeding season, a preconstruction nesting survey of all areas within 300 feet of the proposed activity will be required. The results of the survey will be provided in a report to the Director; Planning and Development Services and the Wildlife Agencies (California Department of Fish and Wildlife, U.S. Fish and Wildlife Service) for concurrence with the conclusions and recommendations.

No other biological mitigation associated with the Harbison Canyon TPM Project is recommended.

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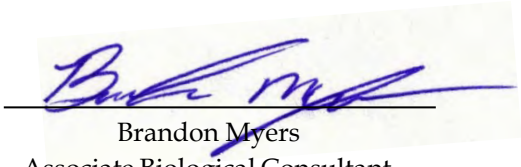

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Attachments

Table 1. Plants and Animals Observed
Table 2. Habitat Impacts/Mitigation Analysis
Table 3. Sensitive Species Known from the Vicinity

Figure 1. Regional Location
Figure 2. Recent Aerial Photo
Figure 3. Biological Resources on Aerial Photo
Figure 4. Biological Resources on Preliminary Grading Plan

Attachment A. Crotch's Bumble Bee Survey Report

Table 1. Plants and Animals Observed – The Harbison Canyon TPM Project

Scientific Name	Common Name
Plants	
Acmispon glaber brevialatus	Short-Winged Deerweed
Adenostoma fasciculatum	Chamise
Amaranthus albus	Prostrate Pigweed
Ambrosia confertiflora	Slimleaf Bursage
Artemisia californica	California Sagebrush
Avena barbata *	Slender Wild Oat
Baccharis sarothroides	Desert Broom
Bahiopsis laciniata	**San Diego County Viguiera**
Brassica tournefortii *	Saharan Mustard
Bromus diandrus *	Ripgut Brome
Bromus hordeaceus *	Common Soft Brome
Bromus rubens *	Red Brome
Camissoniopsis sp.	Suncup
Carduus pycnocephalus *	Italian Thistle
Centaurea melitensis *	Maltese Star-Thistle
Chenopodiastrum murale	Nettle-Leaved Goosefoot
Clarkia delicata	**Campo Clarkia**
Corethrogyne filaginifolia filaginifolia	Common Sand Aster
Croton setiger	Turkey Mullein
Cucurbita foetidissima	Buffalo Gourd
Cynodon dactylon *	Bermuda Grass
Datura wrightii	Sacred Datura
Daucus pusillus	American Wild Carrot
Dittrichia graveolens *	Stinkwort
Epilobium brachycarpum	Panicled Willowherb
Eriogonum fasciculatum	California Buckwheat
Eriogonum gracile	Slender Woolly Buckwheat
Eriophyllum confertiflorum confertiflorum	Golden Yarrow
Erodium cicutarium *	Redstem Stork's-Bill
Erodium moschatum *	Musk Stork's-Bill
Euphorbia maculata *	Spotted Spurge
Funastrum heterophyllum	Hartweg's Climbing Milkweed
Glebionis coronaria *	Garland Daisy
Gutierrezia californica	California Matchweed
Hazardia squarrosa	Saw-Toothed Goldenbush
Heteromeles arbutifolia	Toyon
Heterotheca grandiflora	Telegraphweed
Hirschfeldia incana *	Shortpod Mustard
Jacaranda mimosifolia *	Blue Jacaranda
Juglans hindsii. *	Black Walnut
Keckiella antirrhinoides	Chaparral Beardtongue
Logfia gallica *	Narrowleaf Cottonrose
Lonicera subspicata denudata	Johnston's Honeysuckle
Malosma laurina	Laurel Sumac
Malva parviflora *	Cheeseweed Mallow
Marah macrocarpa	Chilicothe
Marrubium vulgare *	White Horehound

Table 1. Plants and Animals Observed – The Harbison Canyon TPM Project

Scientific Name	Common Name
Plants (cont)	
Nicotiana glauca *	Tree Tobacco
Olea europaea *	Olive
Oloptum miliaceum *	Smilo Grass
Opuntia sp.	Prickly Pears
Parkinsonia aculeata *	Mexican Palo Verde
Pellaea andromedifolia	Coffee Fern
Pentagramma triangularis	Goldback Fern
Pinus sp. *	Pine
Platanus racemosa	Western Sycamore
Polygonum aviculare *	Prostrate Knotweed
Pseudognaphalium biolettii	Two-Color Rabbit Tobacco
Pseudognaphalium californicum	California Cudweed
Quercus agrifolia agrifolia	California Live Oak
Quercus berberidifolia	California Scrub Oak
Rhamnus crocea	Redberry Buckthorn
Rumex crispus *	Curly Dock
Salsola sp.*	Russian Thistles
Salvia apiana	White Sage
Schinus molle *	Peruvian Pepper Tree
Schinus terebinthifolia *	Brazilian Pepper
Sisymbrium orientale *	Eastern Rocket
Stephanomeria virgata	Rod Wirelettuce
Torilis arvensis	Common Hedge Parsley
Washingtonia robusta *	Mexican Fan Palm
Reptiles	
Aspidoscelis hyperythrus beldingi	**Orange-throated Whiptail**
Birds	
Buteo jamaicensis	Red-tailed Hawk
Buteo lineatus	**Red-shouldered Hawk**
Corvus brachyrhynchos	Common Crow
Dendroica coronata	Audubon's Warbler
Falco sparverius	American Kestrel
Gallus gallus domesticus *	Domestic Chicken
Psaltriparus minimus	Bushtit
Sayornis saya	Say's Phoebe
Selasphorus sp.	Hummingbird
Zenaida macroura	Mourning Dove
Mammals	
Felis catus *	Domestic Cat (carcass)
Spermophilus beecheyi	California Ground Squirrel
Sylvilagus audubonii	Desert Cottontail
Thomomys bottae	Valley Pocket Gopher

Total: 71 species of plants and 15 species of vertebrate animals detected

* = Non-native Species **Bold**= Sensitive Species

Table 2. Vegetation Community Impact/Mitigation Analysis – The Harbison Canyon TPM Project

Vegetation Community/ MSCP Tier	Total Acres Onsite [1]	Acres Impacted	Mitigation Ratio	Mitigation Recommended
Disturbed Coastal Sage Scrub MSCP Tier II	0.1 acre	0.1 acre	1:1	0.1 acre of MSCP Tier II or "better" habitat
Coastal Sage-Chaparral Scrub MSCP Tier II	0.2 acre	0.2 acre	1:1	0.2 acre of MSCP Tier II or "better" habitat
Non-native Grassland MSCP Tier III	8.4 acres	8.0 acres [2]	0.5:1	4.0 acres of MSCP Tier III or "better" habitat
Southern Coast Live Oak Riparian Forest MSCP Tier I	0.29 acre	0.29	1:1	0.29 acres of MSCP Tier I habitat
Non-native Vegetation MSCP Tier IV	0.3 acre	0.3 acre	n/a	none
Disturbed/Developed MSCP Tier IV	3.0 acres	3.0 acres	n/a	none
TOTALS	**12.29 acres**	**12.29 acres**	**--**	**4.59 acres offsite**

[1] *Acreages rounded per County requirements.*

[2] *Acreages within 100 feet of existing onsite and offsite habitable structures are considered impact neutral*

Table 3. Sensitive Species Known from the Vicinity – The Harbison Canyon TPM Project

Latin Name / Common Name	Federally Endangered	Federally Threatened	State Endangered	State Threatened	State Rare	MSCP Narrow Endemic	County Sensitive Plant List	Coastal Sage Scrub	Mixed Chaparral	Grassland	Riparian	Oak Woodland	Chamise Chaparral	Mixed Conifer	Close Cone Forest	Pinon-Juniper	Freshwater Marsh	Desert Scrub	Desert Wash	Salt or Alkali Marsh	Vernal Pools	Montane Meadow	Coastal or Desert Dune	Lakes and Bays	Extensive Agriculture	Probability of Occurrence	Basis for Determination
Acanthomintha ilicifolia San Diego Thornmint		X	X			X	A	X		X			X								X					L	1a
Artemisia palmeri Palmer's Sage							D	X			X															L	1b
Astragalus deanei Dean's Milkvetch							A	X		X	X		X													L	1a
Bergerocactus emoryi Golden Snake Cactus							B	X																		L	1a
Brodiaea orcuttii Orcutt's Brodiaea							A			X	X	X	X								X					L	1a
Caulanthus stenocarpus Slender Pod Jewellflower					X		--	X	X				X													L	2a
Chorizanthe procumbens Prostrate Spineflower							--	X	X				X													L	2a
Comarostaphylos diversifolia Summer Holly							A		X						X											L	1b
Cupressus forbesii Tecate Cypress							A		X						X											L	1b
Dichondra occidentalis Western Dichondra							D	X	X				X													L	1a
Dudleya variegata Variegated Dudleya						X	A	X													X					L	1a
Ericameria palmeri palmeri Palmer's Goldenbush						X	B	X			X															L	1b
Fremontodendron mexicanum Mexican Flannelbush	X				X		A		X						X											L	1b

Latin Name / Common Name	Federally Endangered	Federally Threatened	State Endangered	State Threatened	State Rare	MSCP Narrow Endemic	County Sensitive Plant List	Coastal Sage Scrub	Mixed Chaparral	Grassland	Riparian	Oak Woodland	Chamise Chaparral	Mixed Conifer	Close Cone Forest	Pinon-Juniper	Freshwater Marsh	Desert Scrub	Desert Wash	Salt or Alkali Marsh	Vernal Pools	Montane Meadow	Coastal or Desert Dune	Lakes and Bays	Extensive Agriculture	Probability of Occurrence	Basis for Determination
Harpagonella palmeri Palmer's Grappling Hook							D	X		X			X													L	1a
Muilla clevelandii San Diego Goldenstar							A	X		X			X								X					L	1a
Nolina interrata Dehesa Beargrass			X			X	A		X				X													L	1b
Ophioglossum californicum CA Adder's Tongue Fern							D		X	X											X					L	1a
Pentachaeta aurea Golden-Rayed Pentachaeta							D	X	X				X								X					L	2a
Piperia leptopetala Narrow-Petaled Rein Orchid							D		X			X	X	X												L	1a
Quercus cedrosensis Cedros Island Oak							A		X						X											L	1b
Salvia munzii Munz Sage							B	X																		L	1b
Bahiopsis laciniata San Diego County Viguiera							D	X																		--	O
Accipiter cooperi Cooper's Hawk								X	X	X	X	X	X	X	X							X				M	2a
Accipiter striatus Sharp-Shinned Hawk								X	X		X	X	X	X	X											L	2a
Aimophila ruficeps canescens Rufous-Crowned Sparrow								X					X													L	2a
Ammodramus savannarum Grasshopper Sparrow										X																L	1a

Latin Name / Common Name	Federally Endangered	Federally Threatened	State Endangered	State Threatened	State Rare	MSCP Narrow Endemic	County Sensitive Plant List	Coastal Sage Scrub	Mixed Chaparral	Grassland	Riparian	Oak Woodland	Chamise Chaparral	Mixed Conifer	Close Cone Forest	Pinon-Juniper	Freshwater Marsh	Desert Scrub	Desert Wash	Salt or Alkali Marsh	Vernal Pools	Montane Meadow	Coastal or Desert Dune	Lakes and Bays	Extensive Agriculture	Probability of Occurrence	Basis for Determination
Amphispiza belli belli Bell's Sage Sparrow								X	X				X													L	1a
Anniella pulchra pulchra Silvery Legless Lizard								X		X	X												X			L	1a
Antrozous pallidus Pallid Bat								X	X	X	X	X	X	X	X	X		X	X			X				L	2a
Aquila chrysaetos Golden Eagle						X		X	X	X		X	X	X	X	X										L	2a
Ardea herodias Great Blue Heron										X							X							X		L	1a
Bassariscus astutus Ringtail									X		X	X	X													L	1a
Cathartes aura Turkey Vulture								X	X	X	X	X	X	X	X											M	2a
Chaetodipus c. femoralis Dulzura CA Pocket Mouse								X	X	X		X	X	X												L	1a
Chaetodipus fallax fallax Norhtwest SD Pocket Mouse								X	X	X			X					X	X							L	2a
Charina trivirgata roseofusca Coastal Rosy Boa								X	X			X	X													L	1a
Circus cyaneus hudsonius Northern Harrier								X		X							X			X					X	L	2a
Cnemidophorus hyperythrus Orange-Throated Whiptail								X	X	X	X		X													--	O

Latin Name / Common Name	Federally Endangered	Federally Threatened	State Endangered	State Threatened	State Rare	MSCP Narrow Endemic	County Sensitive Plant List	Coastal Sage Scrub	Mixed Chaparral	Grassland	Riparian	Oak Woodland	Chamise Chaparral	Mixed Conifer	Close Cone Forest	Pinon-Juniper	Freshwater Marsh	Desert Scrub	Desert Wash	Salt or Alkali Marsh	Vernal Pools	Montane Meadow	Coastal or Desert Dune	Lakes and Bays	Extensive Agriculture	Probability of Occurrence	Basis for Determination
Cnemidophorus t. multiscutatus Coastal Western Whiptail									X		X	X	X													L	2a
Coleonyx variegatus abbottii San Diego Banded Gecko								X		X			X													L	2a
Corynorhinus townsendii Townsend's Big-Eared Bat									X	X	X	X	X	X	X	X		X	X			X				L	2a
Crotalus ruber ruber Red Diamond Rattlesnake								X	X				X			X		X								L	2a
Danaus plexippus Monarch Butterfly									X	X		X										X				M	2a
Diadophis punctatus similis San Diego Ringneck Snake								X	X		X	X	X	X	X											L	2a
Elanus caeruleus Black-Shouldered Kite										X	X															L	2a
Eremophila alpestris actis Horned Lark										X												X				L	2a
Eumops perotis californicus Greater Western Mastiff Bat								X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X		L	2a
Euphydryas editha quino Quino Checkerspot Butterfly	X					X		X	X	X			X					X			X					L	1a
Euphys vestris harbisoni Dun Skipper						X			X		X	X					X									L	1a
Falco mexicanus Prairie Falcon										X								X	X							L	1a
Felis concolor Mountain Lion								X	X		X	X	X	X	X	X		X	X			X				L	1a

Latin Name / Common Name	Federally Endangered	Federally Threatened	State Endangered	State Threatened	State Rare	MSCP Narrow Endemic	County Sensitive Plant List	Coastal Sage Scrub	Mixed Chaparral	Grassland	Riparian	Oak Woodland	Chamise Chaparral	Mixed Conifer	Close Cone Forest	Pinon-Juniper	Freshwater Marsh	Desert Scrub	Desert Wash	Salt or Alkali Marsh	Vernal Pools	Montane Meadow	Coastal or Desert Dune	Lakes and Bays	Extensive Agriculture	Probability of Occurrence	Basis for Determination
Lanius ludovicianus Loggerhead Shrike								X		X	X	X						X	X							L	2a
Larus californicus California Gull (Non-Breeding)										X							X			X		X	X	X		L	1a
Lepus californicus bennettii SD Black-Tailed Jackrabbit								X	X	X		X	X	X	X											L	2a
Lycaena hermes Hermes Copper								X	X				X													L	1a
Myotis ciliolabrum Small-Footed Myotis									X		X	X	X	X	X	X			X			X				L	2a
Myotis yumanensis Yuma Myotis								X	X	X	X	X	X	X	X	X	X			X	X	X		X		L	2a
Neotoma lepida intermedia San Diego Desert Woodrat								X	X		X	X	X													L	1a
Nyctinomops macrotis Big Free-Tailed Bat								X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X		L	2a
Nyctinomops femorosaccus Pocketed Free-Tailed Bat								X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X		L	2a
Odocoileus hemionus Southern Mule Deer								X	X	X	X	X	X	X	X	X		X	X			X				M	1a
Onychomys torridus ramona Southern Grasshopper Mouse								X	X	X			X													L	2a
Phrynosoma blainvillei San Diego Horned Lizard								X	X	X			X													M	2a
Polioptila californica California Gnatcatcher		X						X																		L	1a

Latin Name / Common Name	Federally Endangered	Federally Threatened	State Endangered	State Threatened	State Rare	MSCP Narrow Endemic	County Sensitive Plant List	Coastal Sage Scrub	Mixed Chaparral	Grassland	Riparian	Oak Woodland	Chamise Chaparral	Mixed Conifer	Close Cone Forest	Pinon-Juniper	Freshwater Marsh	Desert Scrub	Desert Wash	Salt or Alkali Marsh	Vernal Pools	Montane Meadow	Coastal or Desert Dune	Lakes and Bays	Extensive Agriculture	Probability of Occurrence	Basis for Determination
Salvadora hexalepis virgultea Coast Patch-Nosed Snake								X	X				X			X										L	1a
Scaphiopus hammondii Western Spadefoot Toad								X	X	X	X	X	X				X				X					L	1a
Taxidea taxus American Badger								X	X	X		X	X	X		X		X	X			X				L	1a

Probability of Occurrence Codes:

L – Low Probability
M – Moderate Probability
H – High Probability
O – Observed; see text for detailed discussion.

Factual Basis for Determination:

1a - no significant habitat (animal or plant)
1b - distinctive perennial that would not have been missed if present onsite (plant)

2a - might be expected to occur onsite based on known habitat suitability and quality (plant or animal);
2b - might be expected to occur onsite, but very rare or cryptic (animal), and/or poorly known (plant or animal)

3a - nearly certain to occur onsite based on habitat suitability and quality (plant or animal)
3b - ephemeral species known from the immediate vicinity and very likely to occur onsite, but seasonal in occurrence (plant)

Figure 1. Regional Location – Harbison Canyon TPM Project
U.S.G.S. Alpine, California 7.5′ Quadrangle

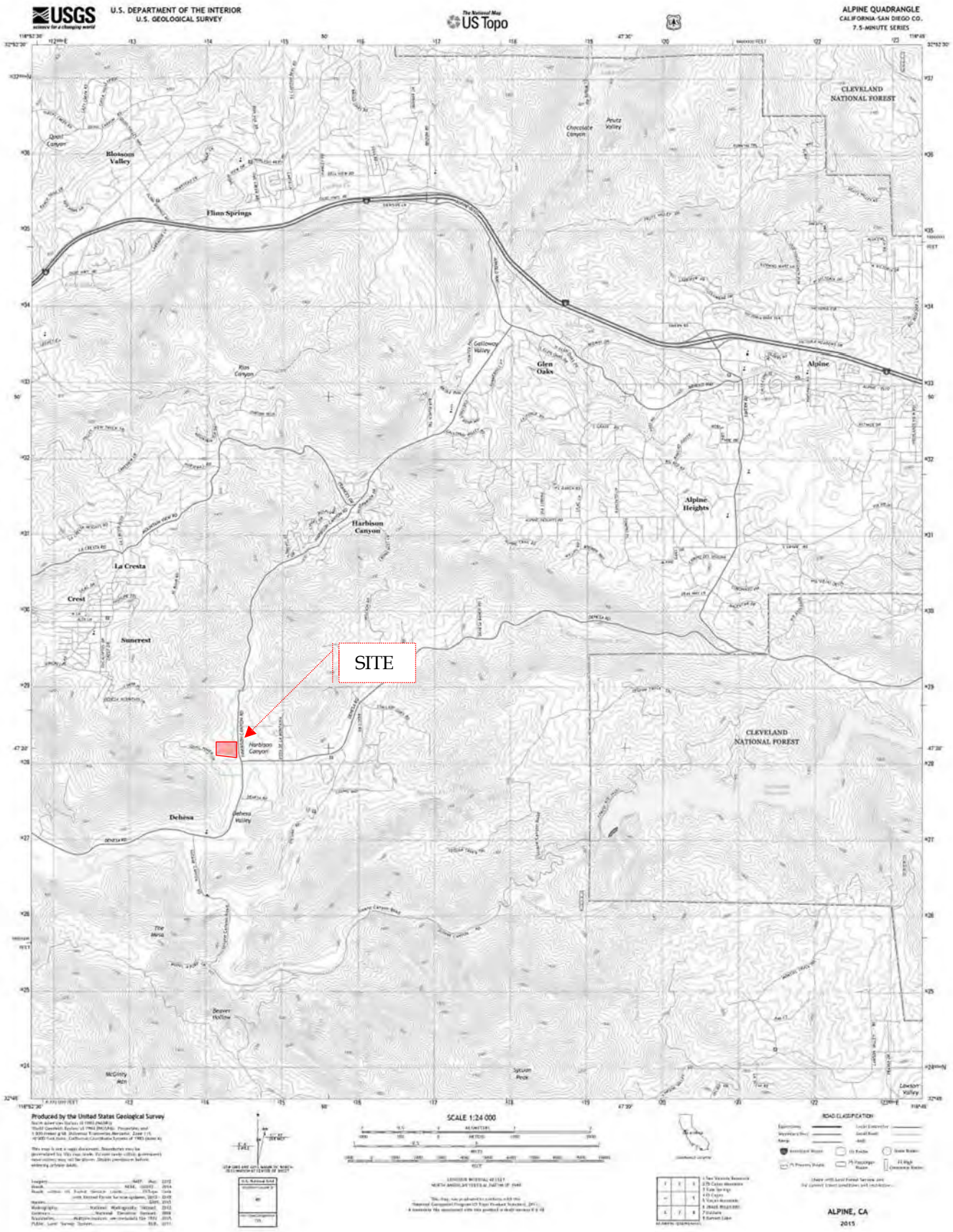


Figure 2. Recent Aerial Photo – Harbison Canyon TPM Project

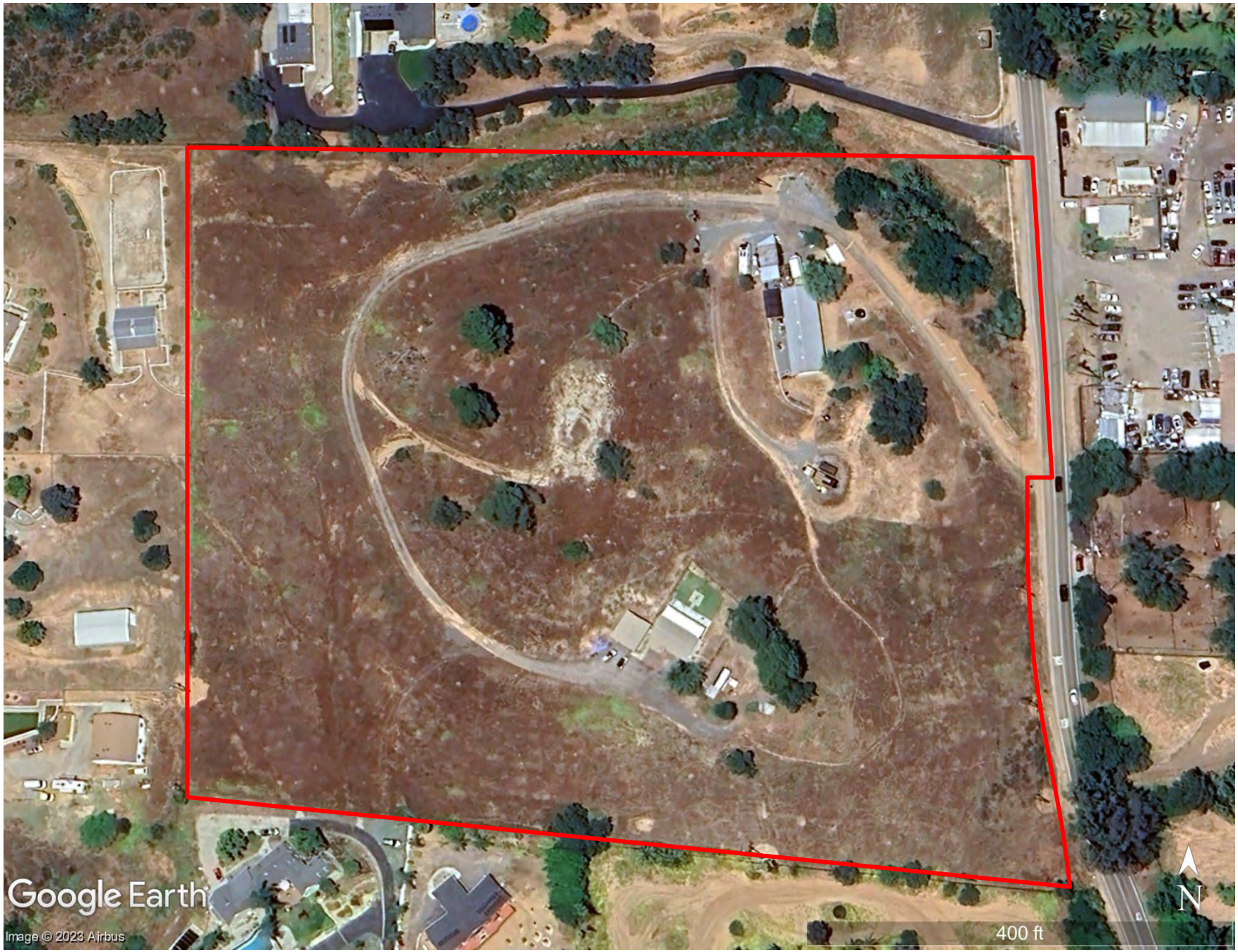


Figure 3. Biological Resources on Aerial Photograph - Harbison Canyon TPM Project

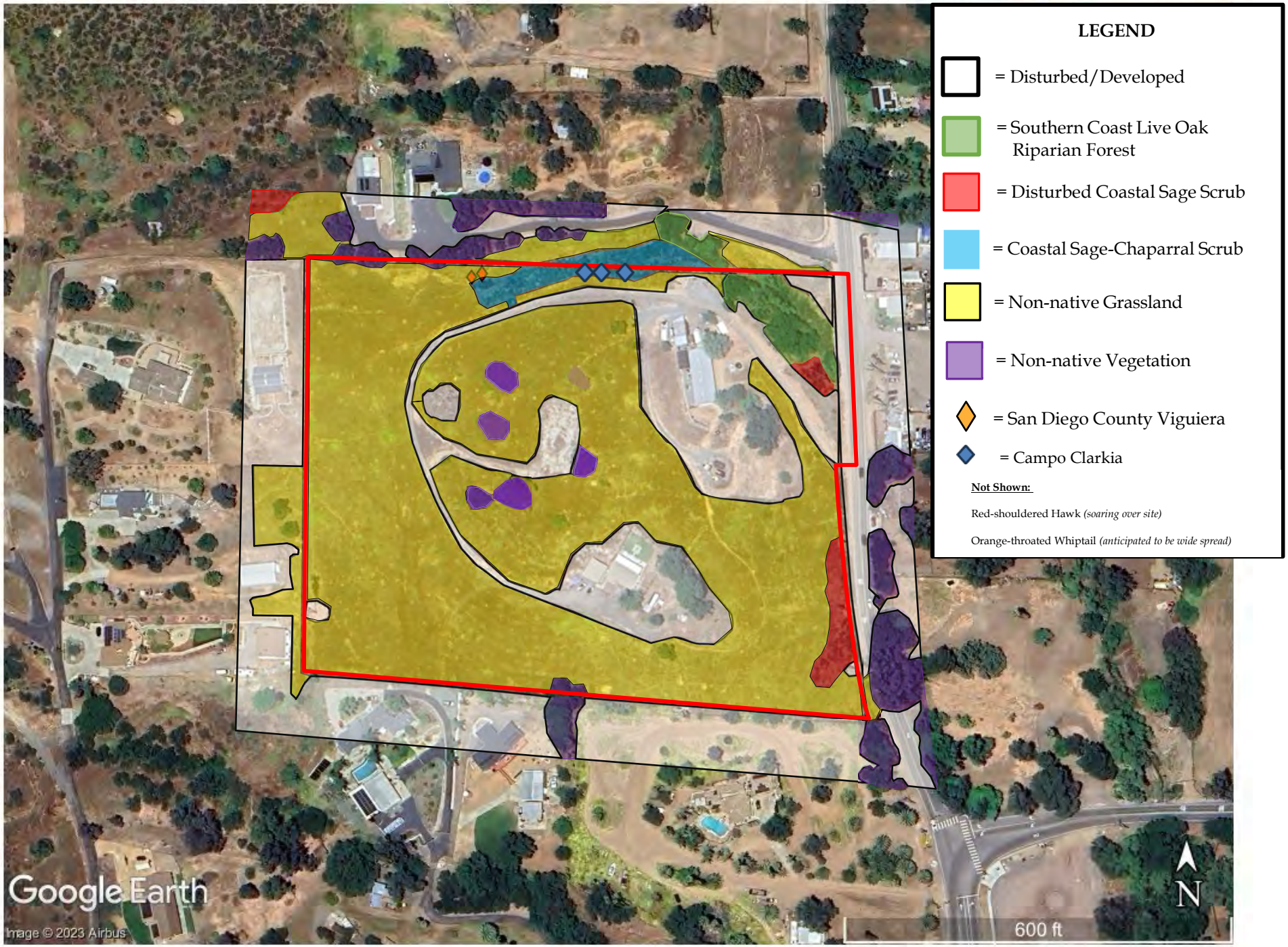
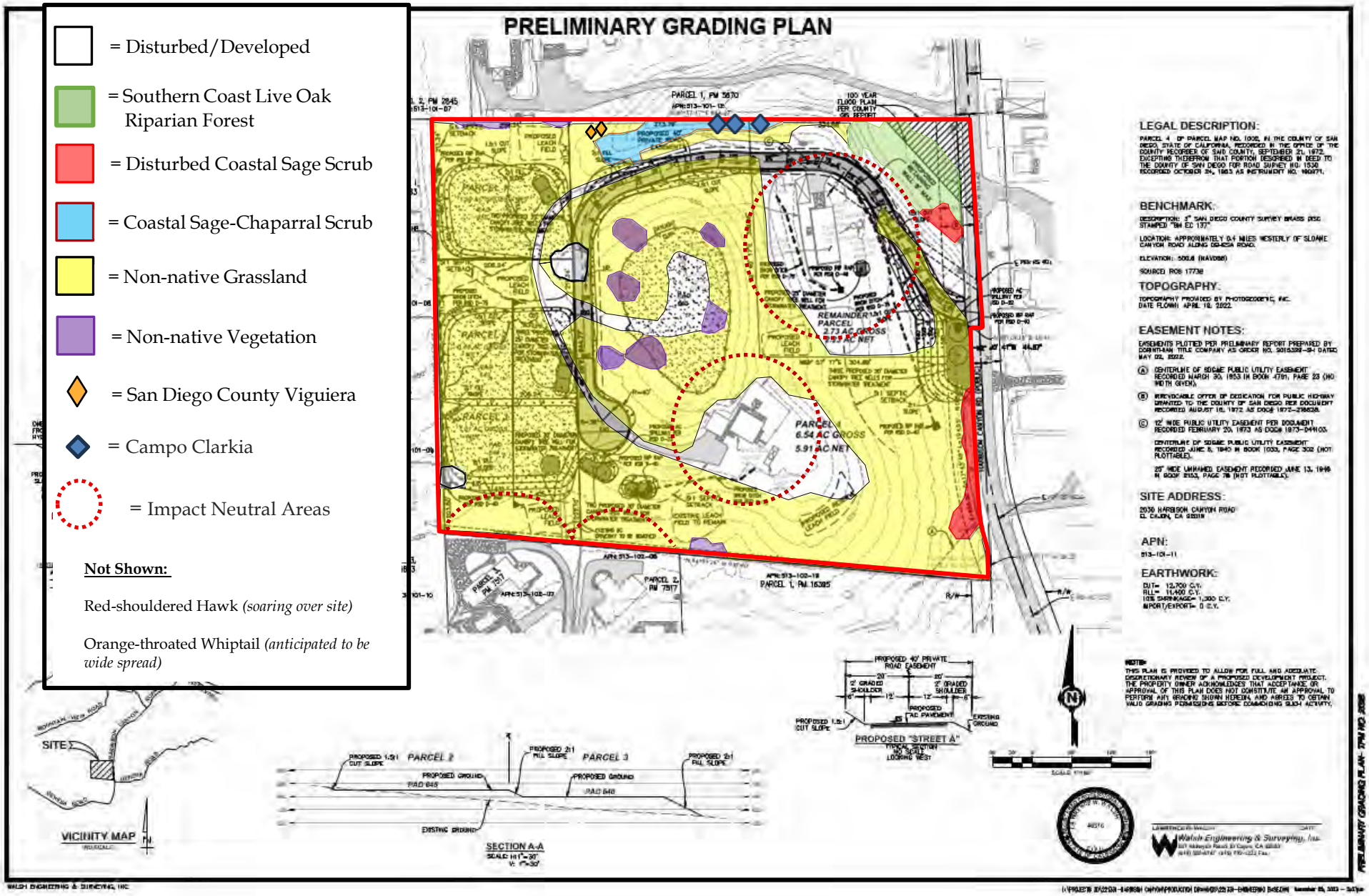


Figure 4. Biological Resources on Site Plan - Harbison Canyon TPM Project



Attachment A
Crotch's Bumble Bee Survey Report

REPORT OF A FOCUSED FIELD SURVEY FOR CROTCH'S BUMBLE BEE (*Bombus crotchii*)

The Harbison Canyon TPM Project
PDS2022-TPM-21316
San Diego County, California

Prepared for

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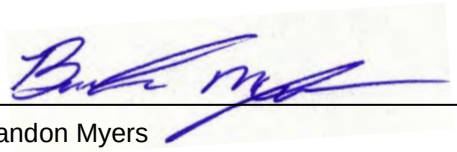
June 2025



Brandon Myers
Associate Biologist

Vincent N. Scheidt, MA
Biological Consultant

INTRODUCTION

This report presents the results of a directed field survey for Crotch's Bumble Bee (*Bombus crotchii*), a candidate for state listing, on the Harbison Canyon TPM Project Site (PDS2022-TPM-21316, APN 513-101-11). The approximately 12.37-acre project site is located at 2030 Harbison Canyon Road in the Crest-Dehesa Community Planning Area, within unincorporated San Diego County (Figure 1). The Harbison Canyon TPM Project site currently supports six relatively discrete habitat-types: Disturbed/Developed Habitat, Non-native Vegetation, Southern Coast Live Oak Riparian Forest, disturbed Diegan Coastal Sage Scrub, Coastal Sage-Chaparral Scrub, and Non-native Grassland. Flowering native and non-native plants are found throughout the undeveloped portions of the property, although they are not found in abundance.

Crotch's Bumble Bee occurs in a diversity of habitats, with a distribution ranging from Ensenada, Mexico in the south to Redding in northern California. Its ecological niche encompasses a variety of habitats, including open grasslands, shrublands, chaparral, and desert margins. The bees also occur in semi-urban and rural settings, apparently being able to thrive in human-altered environments. Crotch's Bumble Bees use abandoned rodent burrows or sometimes debris piles, rock piles, or cavities in trees to nest. Worker bees are active from April to August with the peak of worker activity between May and June. Male bees generally forage from May to September, and queens are active for only two months - from March until May - with maximum activity typically in April.

In June of 2019, the California Fish and Game Commission classified Crotch Bumble Bee as a Candidate for listing under the California Endangered Species Act (CESA). Although a final decision has not been made as to whether or not to list Crotch's Bumble Bee under CESA, the species' status as a Candidate requires that it be evaluated and treated as if it had been formally listed at this time.

The Harbison Canyon TPM Project site is within the known range of Crotch's Bumble Bee and it supports habitat that is potentially suitable for this species. Therefore, upon recommendation of the County of San Diego, the site was surveyed for the presence or absence of this rare bumble bee.

GOAL OF STUDY

The goal of this study was to determine whether the Harbison Canyon TPM Project site supports Crotch's Bumble Bee. Any other sensitive species detected during the surveys would also be documented. This study is being provided in response to concerns expressed to the County of San Diego by the California Department of Fish and Wildlife in connection with the issuance of land development permits. For the reasons stated above, the Department recommends that presence/absence surveys be conducted where suitable habitat is present. This study has been provided in response to that recommendation.

METHODS

Although no formal survey protocol for Crotch's Bumble Bee has been developed, the California Department of Fish and Wildlife provided "Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species" in June of 2023. These considerations were used as general guidelines in designing this study. Fieldwork associated with the study consisted of a series of three field surveys, completed on the dates and under the weather conditions listed

in Table 1. Field surveys were conducted by the author (VS) and Brandon Myers (BM), Associate Biologist. Surveys were completed by slowly walking the site, focusing on flowering resources and other potential bumble bee habitat. Bumble bees examined during this survey were captured with a net, transferred into a sterile vial, and then transferred to cooler to allow subsequent identification, when needed. The bumble bees were then removed from the cooler and vials, and then photographed after spending no more than 15 minutes in the cooler to slow them down. No mortality was incurred, and all specimens were observed to recover and fly away within a few minutes. Weather conditions were conducive to Crotch's Bumble Bee field surveying on each of the selected dates, which was during a period of high bumble bee activity. Most survey time was spent in areas that had the highest probability of supporting Crotch's Bumble Bee (Figure 2), although 100 percent of the site was examined during the surveys.

Table 1. Field Survey Data – Harbison Canyon TPM Project

Date	Hours	Personnel	Conditions
20 May 2025	08:30 – 11:00	VS, BM	Clear skies; light west wind temps mid to high-70°s
28 May 2025	08:00 – 10:00	VS, BM	Overcast skies; no wind; temps in the mid-60°s
4 June 2025	09:00 – 10:45	BM	Overcast skies; no wind; temps mid to high-60°s

RESULTS

Crotch's Bumble Bee Habitat Assessment

The Harbison Canyon TPM Project site is partially developed with two existing single family homes. The majority of the site supports Non-native Grassland with very little flowering nectar sources. Flowering plants are scattered on the property and limited native vegetation is present except for that associated with the scrub and riparian areas along the northern edge of the site (Figure 2). Flying insect activity was moderate during the study, including the location where bees were common. The flowering species provide pollen and nectar that Crotch's Bumble Bee could utilize as a food source. With respect to Crotch's Bumble Bee occupancy, the quality of the potential onsite foraging habitat is considered moderate, warranting presence/absence surveys.

Crotch's Bumble Bee Surveys

Crotch's Bumble Bee was not observed onsite during any of the field surveys. Over the three separate survey weeks, only a single species of bumble bee was observed, and in relatively low numbers: Yellow-faced Bumble Bee (*Bombus vosnesenskii*). Flying insects were active on each survey day, but the most common species (observed in the hundreds) was Western Honey Bee *(Apis mellifera).* Various other flying insects were also observed and recorded during site surveys (Table 2). Because Crotch's Bumble Bee was not detected during a period of relatively high insect activity, the Harbison Canyon TPM Project site is considered "unoccupied" by this species.

Table 2. Flying Insect Species Detected – Harbison Canyon TPM Project

Scientific Name	Common Name
Acaricia acmon	Acmon Blue
Apis mellifera	Western Honey Bee
Bombus vosnesenskii	Yellow-faced Bumble Bee
Closterotomus norwegicus	Potato Mirid
Elateridae sp.	Click Beetle
Eupeodes volucris	Large-tailed Aphideater
Listrus sp.	Listrus Flower Beetle
Musca domestica	Common House Fly
Nymphalis antiopa	Mourning Cloak
Osmia sp.	Mason Bee
Pantarbes sp.	Bee Fly
Scaeva pyrastri	Pied Hoverfly
Xylocopa tabaniformis	Horse-fly Carpenter Bee

Figure 1. Regional Location – Harbison Canyon TPM Project

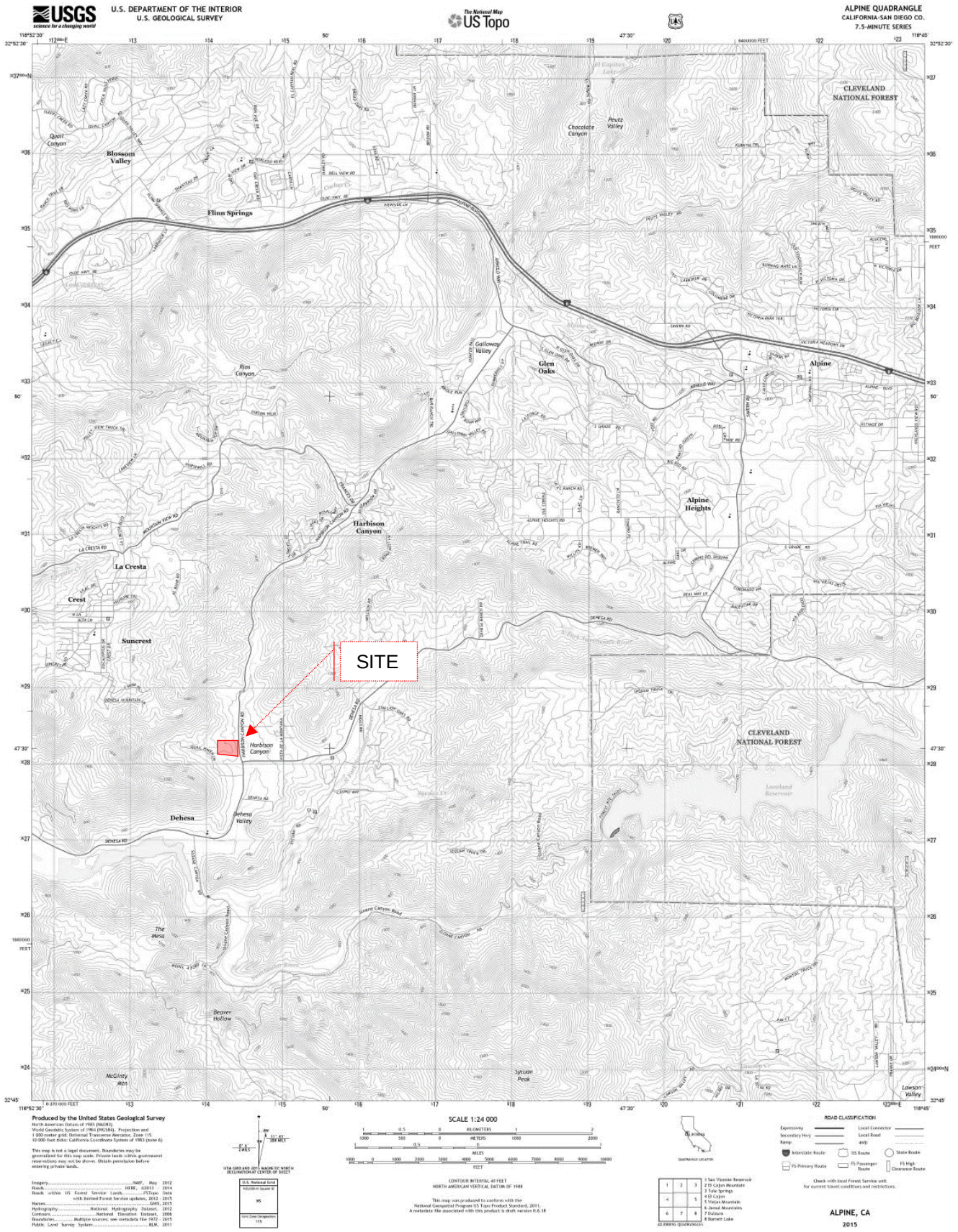


Figure 2. Potential Bumble Bee Foraging Habitat – Harbison Canyon TPM Project

Photo 1. Yellow-faced Bumble *(Bombus vosnesenskii*) observed on May 20, 2025 on Harbison Canyon TPM Project. This specimen was collected near the center of the property. Note yellow facial hairs clearly visible between the antennae.