A BIOLOGICAL RESOURCES SURVEY REPORT
FOR THE
RENTERIA TPM PROJECT
TPM 21107 RPL2, ER 07-19-009
APN 599-052-01
JAMUL
COUNTY OF SAN DIEGO

Prepared for

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GLOSSARY OF STANDARD TERMS AND ACRONYMS

ACOE: Army Corps of Engineers

Adaptive Management: A systematic process for continually improving management policies and practices by learning from the outcomes of operational programs.

Alluvium: Material, including clay, silt, sand, gravel, or similar unconsolidated sediments, deposited by a streambed or other body of running water.

Biological Open Space Easement (BOSE): An easement dedicated to the County of San Diego or other jurisdictional body for the purposes of the preservation of natural resources.

Blue-line Stream: A watercourse shown as a blue line on a U.S. Geological Service topographic quadrangle map.

BLM: Bureau of Land Management

BMPs: Best Management Practices

Buffer Zone: An area of land separating two distinct land uses that acts to soften or mitigate the effects of one land use on the other.

California Department of Fish and Wildlife (**CDFW):** a department of the California Resources Agency.

California Endangered Species Act (CESA): The California Endangered Species Act (California Fish and Game code, Section 2050, et seq.) and all rules, regulations and guidelines promulgated hereunder, as amended.

California Environmental Quality Act (CEQA): The California Environmental Quality Act (California Public Resources Code, Section 21000, et seq.) and all guidelines promulgated hereunder, as amended.

CCC: California Coastal Commission

CFGC: California Fish and Game Code

CNDDB: California Natural Diversity Data Base

CNPPA: California Native Plant Protection Act

CNPS: California Native Plant Society

CWA: the federal Clean Water Act (1977)

Candidate Species: Any species of animal or plant or population thereof for which the USFWS currently has on file substantial information on their biological vulnerability and threat(s) to support proposals to list them as endangered or threatened species. Issuance of proposed rules for listing is presently precluded by other higher priority listing actions.

Canopy Cover: The cover of leaves and branches formed by the tops or crowns of plants as viewed from above.

Carrying Capacity: Maximum stocking rate possible without inducing damage to vegetation or related resources. It may vary from year to year on the same area due to fluctuating weather conditions and forage production (see grazing capacity).

Community: A group of plants and animals living together in a common area and having close interactions.

Conservation Easement: A legal agreement between a landowner and a land trust or government agency, such as the CDFG, that permanently limits uses of the land in order to protect its conservation values (California Government Code Section 27255)

Conserve: To use "all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to the Endangered Species Act are no longer necessary...."

Conserved Land: Land that is permanently protected and managed for the benefit of natural resources under legal arrangements, including a Conservation Easement that prevent its conversion to other uses and the institutional arrangements that provide for its ongoing management.

Constrained Linkage: A constricted connection expected to provide for movement of identified species between core areas, where options for assembly of the connection are limited due to existing patterns of land use.

Consult/Consultation: A cooperative effort established by the FESA between Federal agencies and the USFWS. The purpose is to ensure that agency actions conserve listed species, aid in recovery of listed species, and protect critical habitat.

GLOSSARY OF STANDARD TERMS AND ACRONYMS

Core Area: A block of habitat of appropriate size, configuration, and vegetation characteristics to generally support the life history requirements of one or more Covered Species.

Corridor: A direct or indirect connection that links separate patches of habitat.

Covered Species: Those species within a Subarea Planning Area that will be "adequately conserved" by the Plan when the Plan is implemented.

Covered Species Adequately Conserved: Covered Species that are adequately conserved by a Subarea Plan and which are provided in the Incidental Take Coverage Section 10(a) Permit and NCCP Permit and for animals through the Section 10(a) permit issued in conjunction with an Implementing Agreement.

Cumulative Impact: As used in CEQA, the total impact resulting from the accumulated impacts of individual projects or programs over time.

Dedication: The turning over by an owner or developer of private land for public use, and the acceptance of land for such use by the governmental agency having jurisdiction over the public function for which it will be used. Dedications for roads, parks, school sites, or other public uses often are made conditions for approval of a development by a city or county.

Easement: Usually the right to use property owned by another for specific purposes or to gain access to another property. For example, utility companies often have easements on the private property of individuals to be able to install and maintain utility facilities.

Edge Effects: Adverse direct and indirect effects to species, habitats and vegetation communities, generally along the natural wildlands/urban interface.

Endangered: A formal designation under CESA and FESA. Under CESA, a taxon which is "in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes" (CFGC § 2062). Under FESA, a taxon which is "in danger of extinction throughout all or a significant portion of its range" (FESA § 3 (6)).

Endangered Species: Those species listed as Endangered under FESA and/or CESA.

Environment: CEQA defines environment as "the physical conditions which exist within the area which will be affected by a proposed project, including land, air, water, mineral, flora, fauna, noise, and objects of historic or aesthetic significance."

Environmental Impact Report (EIR): A report required pursuant to CEQA which assesses all the environmental characteristics of an area, determines what effects or impacts will result if the area is altered or disturbed by a proposed action, and identifies alternatives or other measures to avoid or reduce those impacts.

Exotic Species: A species of plant or animal that is not indigenous, native, or naturalized to the area where it is found.

Federal Endangered Species Act (FESA): The Federal Endangered Species Act (16 U.S.C., Section 1531, et seq.) and all rules and regulations promulgated hereunder, as amended.

Forb: Any herbaceous plant other than those in the Gramineae (true grasses), Cyperaceae (sedges), and Juncaceae (rushes) families, i.e. any non-grasslike plant having little or no woody material on it. A broad-leaved plant with above ground stems that do not become woody or persistent.

FPA: Focused Planning Area

FSC: Federal Species of Concern

Ground Cover: Surface materials including the basal areas of grass and forbs, and aerial coverage of shrubs that provide protection to the soils surface.

Habitat: The combination of environmental conditions of a specific place providing for the needs of a species or a population.

Habitat Conservation Plan (HCP): An area-specific plan prepared pursuant to Section 10(a)(2) of FESA that is a mandatory component of an incidental take permit for a project with no Federal nexus for a listed species, designed to minimize and mitigate the authorized take of the species.

Habitat Requirements: A specific set of physical and biological conditions that surround a single species, group of species, or community of species upon which the species or associations are dependent for their existence. In wildlife management the major components of habitat are considered to be food, water, cover, and living space.

Herbaceous: Vegetation with little or no woody component, such as grasses and forbs.

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Implementing Agreement (IA): A contractual obligation between individual jurisdictions within a Subarea and the Wildlife Agencies to implement the requirements of a Subarea Plan.

Incidental Take: Take which is incidental to the pursuit of an otherwise legal activity. Legal incidental take is set forth by the USFWS in a biological opinion under Section 7 of FESA.

Incidental Take Permit/Incidental Take Authorization: The authorization from the USFWS for taking of a federally listed wildlife species, if such taking is incidental to and not the purpose of carrying out otherwise lawful activities.

Indicator: Quantitative measure of an ecosystem element which is used to describe the condition of an ecosystem; changes in indicators over relatively short periods of time are used to measure the effects of management.

Lead Agency: Under CEQA, the public agency that has the primary responsibility for approving the proposed project/action.

Linkage: A connection between Core Areas with adequate size, configuration, and vegetation characteristics to generally provide biological viability and/or provide for genetic flow for identified species.

List 1A. A CNPS ranking applied to plants presumed extinct in California.

List 1B. A CNPS ranking applied to plants rare, threatened, or endangered in California and elsewhere.

List 2. A CNPS ranking applied to plants rare, threatened, or endangered in California, but more common elsewhere.

List 3. A CNPS ranking applied to plants about which we need more information—a “review” list.

List 4. A CNPS ranking applied to plants of limited distribution—a “watch” list.

Limited Building Zone (LBZ): A structural setback easement established by the County of San Diego that prohibits the construction of habitable structures. The LBZ extends from the edge of conserved habitat in the direction of development.

Listed Species: A taxon that is protected under the FESA or CESA. Listing categories include: Threatened, Endangered, Species of Special Concern, State Protected Species, Federally Proposed Threatened or Endangered, and Federally Petitioned Threatened or Endangered.

Migratory Bird Treaty Act (MBTA): The Federal Migratory Bird Treaty Act (50 C.F.R., Section 21, et seq.) and all rules and regulations promulgated hereunder, as amended.

MHCOSP: County of San Diego Multiple Habitat Conservation and Open Space Program

MHCP: County of San Diego Multiple Habitat Conservation Program, a Subregional Plan

MOU: Memorandum of Understanding

MSCP: A Subregional Plan. Also refers to the County of San Diego’s Multiple Species Conservation Program Subarea Plan or City of San Diego’s Multiple Species Conservation Program Subarea Plan.

Mean Sea Level (MSL): The average altitude of the sea surface for all tidal stages.

Mima Mound : A hump of soil in a vernal pool grassland. Mima mounds can be a few inches to a few feet high.

Mitigation: In general, a combination of measures to lessen the impacts of a project or activity on an element of the natural environment or various other cultural or historic values. More specifically, as defined by the Council on Environmental Quality in its regulations for implementing NEPA, mitigation includes: (a) avoiding the impact, (b) minimizing the impact, (c) rectifying (i.e., repairing, rehabilitating, or restoring) the impact (d) reducing or eliminating the impact through operations during the life of the project, or (e) compensating by replacing or substituting resources.

Monitoring: The timed collection of information to determine the effects of resource management and to identify changing resource conditions or needs.

Narrow Endemic Species: Species that are highly restricted by their habitat affinities, soil requirements, or other ecological factors.

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Native Plant Protection Act (NPPA): A 1977 law which gave the California Fish and Wildlife Commission the authority to designate native plants as endangered or rare, and to require permits for collecting, transporting, or selling such plants (CFGC §§ 1900-1913).

Native (Indigenous) Species: A species of plant or animal that naturally occurs in an area and that was not introduced by humans.

Natural Community Conservation Planning Act: A habitat conservation program instituted by the State of California in 1991 to encourage the preservation of natural communities before species within those communities are threatened with extinction.

Natural Community Conservation Plan (NCCP): A plan prepared under the Natural Community Conservation Planning Program designed to conserve natural communities at the ecosystem scale while accommodating compatible land use.

NCCP Permit: The Permit issued in accordance with the IA by CDFW under the NCCP to permit the take of identified species, including rare species, species listed under CESA as threatened or endangered, species that are candidates for listing, and unlisted species.

Natural State: The condition existing prior to development.

Non-contiguous Habitat Block: A block of habitat not connected to other habitat areas.

Occurrence: A location where an element (plant, animal, or natural community) is found. The occurrence can consist of a single population or several colonies in the nearby vicinity. The separation distance between discrete occurrences as per CNDDB is 0.25 miles in California.

Perennial Plant Species: A plant that has a life cycle of three years or more.

Plant Community: Assemblage of plant populations in a defined area or physical habitat; an aggregation of plants similar in species composition and structure, occupying similar habitats over the landscape.

Population: A group of individuals of a given species that inhabits a relatively well-defined geographic area and has the opportunity to interbreed freely.

Pre-Approved Mitigation Area (PAMA): Lands that have been identified through an extensive computer modeling process and independent scientific review as being of high biological importance. PAMA lands are “pre-approved” as being suitable for conservation.

Preserve: Noun: an area set apart for the protection of wildlife and natural resources. Verb: to keep intact or unimpaired; maintain.

Proposed Species: A species of plant or animal formally proposed by the USFWS to be listed as threatened or endangered under FESA.

Raptor: Any predatory bird (such as falcon, hawk, eagle, vulture, or owl) that has feet with sharp talons or claws adapted for seizing prey and a hooked beak for shearing flesh.

Rare: A species of plant or animal existing in such small numbers throughout all or a significant portion of its range that it may become endangered or threatened (as defined by CESA or FESA) if its environment worsens.

Recovery: Improvement in the status of a Listed Species to the point at which listing is no longer appropriate under the criteria set forth in Section 4 of FESA. Also, the process by which species and/or their ecosystems are restored to be self-sustaining.

Recruitment: Addition to a plant or animal population from all sources, including reproduction, immigration, and stocking.

Regional: Pertaining to activities or economies at a scale affecting a broad geographic area.

Resource Management Plan (RMP): An activity plan for wildlife resources for a specific geographical area of land. It identifies wildlife habitat and related objectives, establishes the sequence of actions for achieving objectives, and outlines procedures for evaluating accomplishments.

Resource Protection Ordinance (RPO): San Diego County Ordinance No. 9842 relating to wetlands, prehistoric and historic sites, agricultural operations, enforcement, and other matters

GLOSSARY OF STANDARD TERMS AND ACRONYMS

Riparian: In reference to the transitional area between an aquatic ecosystem and an adjacent terrestrial ecosystem identified by soil characteristics or distinctive vegetation communities that require significant hydration.

Section 7: The section of FESA that requires all federal agencies, in consultation with USFWS, to insure that their actions are not likely to jeopardize the continued existence of Listed Species or result in destruction or adverse modification of critical habitat.

SCS: Soils Conservation Service

SLRR: The San Luis Rey River, a major riverine system in northern San Diego County

Species: A fundamental category of plant or animal classification.

SSC: Species of Special Concern (State of California)

Special Status Species: Plant or animal species listed as endangered, threatened, candidate, or sensitive by federal, state, or local governments.

Subarea: Pertaining to a portion of a Subregion. Generally used to mean a discrete planning area under a single jurisdiction.

Subdivision: The division of a tract of land into defined lots, either improved or unimproved, which can be separately conveyed by sale or lease, and which can be altered or developed..

Subregional: Pertaining to a portion of a region. Generally used to mean a discrete planning area under multiple jurisdictions.

Successional: Reference to the constantly occurring process of community change; the sequence of communities that replace one another in a given area over time.

Take: Under FESA and CESA: to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct relative to a Listed Species.

Taxon: A taxonomic category or group, such as a phylum, order, family, genus, species, subspecies, or variety.

Third Party Take Authorization: Take Authorization received by a landowner, developer, or other public or private entity pursuant to an IA, thereby allowing the Incidental Take of Covered Species.

Threatened Species: Any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range, and as further defined by FESA and the CESA.

T&E: Threatened and Endangered (Species)

Upland: Land at a higher elevation than the alluvial plain or low stream terrace; all lands outside the riparian-wetland and aquatic zones.

USFS: United States Forest Service

United States Fish and Wildlife Service (FWS/USFWS): An agency of the United States Department of the Interior.

USGS: United States Geological Survey

Vegetative Community: Refers to the species or various combinations of species which dominate or appear to dominate an area of habitat (see plant community).

Viable Populations: Populations of plants and/or animals that persist for a specified period of time across their range despite normal fluctuations in population and environmental conditions.

Watershed: The total area above a given point on a watercourse that contributes water to its flow; the entire region drained by a waterway or watercourse that drains into a lake, or reservoir.

Wetlands: An area that is inundated or saturated by surface or groundwater at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions.

Wildlife Agencies: The USFWS and CDFW, collectively.

Wildlife Corridor: A landscape feature that allows animal movement between two patches of habitat or between habitat and sources of essential resources.

SUMMARY

The Renteria Tentative Parcel Map (TPM) project (TPM 21107 RPL2, ER 07-19-009) consists of the subdivision of the approximately 59-acre Renteria property (APN 599-052-01) into 4 legal residential lots, to be developed in the future with single family homes. Approval and implementation of the TPM 21107 RPL2 project will result in the entirety of the site that is not conserved in a dedicated Biological Open Space Easement being impacted or potentially impacted by grading for pad and road construction and future build out, including homes, landscaping, fire clearing, and related site improvements. The project includes minor offsite public road improvements to Skyline Truck Trail. Primary access will be provided off of Skyline Truck Trail, to the south. Habitats presently found on the property and in the footprint of the proposed offsite improvements include Southern Mixed Chaparral, Southern Coast Live Oak Riparian Forest, Freshwater Seep, Non-native Grassland, Urban/Developed, and Disturbed Habitat. No biological mitigation for impacts to Disturbed Habitat or Urban/Developed will be necessary. However, any impacts (direct, indirect, or cumulative) to Southern Mixed Chaparral, Southern Coast Live Oak Riparian Forest, Freshwater Seep, or Non-native Grassland require compensatory mitigation at ratios specified in this report. Mitigation must take place either onsite and/or offsite in a County-approved location. The most biologically sensitive areas of the site, including all areas where Hermes Copper Butterflies were observed, will be preserved in a dedicated Biological Open Space Easement. An avian nesting survey and/or seasonal restrictions on site development are recommended to provide project consistency with the Migratory Bird Treaty Act, the Federal Endangered Species Act and the California Fish and Game Code.

1.0 INTRODUCTION

1.1 Purpose of the Report

The purpose of this report is to document the biological resources identified as present or potentially present on the project site, identify potential biological resource impacts resulting from the proposed project, and recommend measures to avoid, minimize, and/or mitigate significant impacts consistent with federal, state, and local rules and regulations, including the Federal Endangered Species Act (FESA), the California Environmental Quality Act (CEQA), and the County of San Diego's Multiple Species Conservation Program (MSCP) Metro-Lakeside-Jamul Subarea Plan, the Resource Protection Ordinance (RPO), and the Biological Mitigation Ordinance (BMO).

1.2 Project Location and Description

The project site is located at 17120 Skyline Truck Trail in the Jamul-Dulzura Community Planning Group within unincorporated San Diego County (Figure 1). The property is in the Metro-Lakeside-Jamul segment of the County of San Diego's MSCP Subarea Plan, under which the majority of the site is designated as "State and Federal Pre-approved Mitigation Area" (PAMA).

The TPM 21107 RPL2 project proposes a Tentative Parcel Map subdivision of the approximately 59-acre Renteria property, creating 4 residential lots (Figure 2). It is anticipated that each of these lots will be developed in the future with single family homes. The project includes grading for pad and driveway construction. Primary access to the property would be from the south, off Skyline Truck Trail. Offsite improvements are limited to the very minor widening of Skyline Truck Trail at the point where two private access roads are proposed.

In addition, the project proposes the dedication of a Biological Open Space Easement over the most biologically sensitive portions of the site. Much of the land that will be included in the BOSE is currently in a natural state. No activities or uses are proposed within the BOSE. In order to prevent fire clearing impacts to the BOSE, Limited Building Zone Easements (LBZ) are required. These easements are at least 100 feet wide and extend outward towards development from the open space boundaries. The LBZs shall prohibit the construction of houses, barns, or other habitable structures that would require fire clearing into the BOSE. The LBZs have been designed to overlap, to the extent feasible, the Fuel Modification Zone (FMZ). In no case does the FMZ encroach beyond the LBZ into the BOSE.

During construction, all heavy equipment and construction materials will be staged in areas that will be subject to grading. No staging of materials or equipment will be allowed in any of the undisturbed areas of the site, including any part of the BOSE.

1.3 Survey Methodologies

Literature that was reviewed prior to initiation of the site surveys included: U.S. Department of Agriculture (USDA) Soil Conservation Service (SCS) mapping for the project area; a database query of potential on-site sensitive species based on a determination of the site's physical characteristics (*e.g.*, location, elevation, soils/substrate, and topography); documentation of California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) records for the project vicinity; and previous biology reports prepared for the project area, including reports prepared by the author.

A baseline biological field survey of the TPM 21107 RPL2 property was completed on August 14, 2006, between the hours of approximately 08:00 and 12:00, by Shannon M. Allen, Biological Consultant (SA). Weather conditions during the field survey were characterized by clear skies, temperatures 60-65° Fahrenheit, and a light breeze blowing 2-5 mph.

All plants, animals, and habitats encountered during the field survey were noted in the field. The limits of each habitat-type were mapped in the field utilizing an aerial photograph of the property. All plants and animals identified in association with the property are listed in Tables 3 and 4 at the end of this report.

Plants were identified *in situ*, or based on characteristic floral parts collected and later examined in detail. Floral nomenclature used in this report 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 (1985) for reptiles and amphibians, American Ornithologist's Union (1983, as updated) for birds, and Jones, et. al (1992) for mammals.

A Focused Presence/Absence Survey for Hermes Copper Butterfly, a directed Habitat Evaluation for Quino Checkerspot Butterfly, and habitat evaluations for various other sensitive species known from the vicinity (Table 5 and 6) were conducted in conjunction with the biological study of this property. These surveys followed approved methodologies to maximize detection of the target species, if present.

1.3.1 Directed Habitat Evaluation for Quino Checkerspot Butterfly

Quino Checkerspot Butterfly *(Euphydryas editha quino)* is a federally listed Endangered Species known to occur in portions of San Diego and Riverside County. This distinctive and colorful, medium-sized butterfly is apparently restricted to open habitats supporting at least one of several larval food-plants, including Plantain *(Plantago erecta)*, Owl's Clover *(Orthocarpus purpurascens)*, and other plants in the Scrophulariaceae family. The best understood Quino indicator is *Plantago erecta*, a very common annual forb associated with numerous open habitats. *P. erecta* is normally associated with sandy, clay, or serpentine soils. This small plant occurs throughout the California Floristic

Province (west of the deserts) from Oregon to Baja California, below about 2,300 feet MSL. It is extremely abundant in Southern California in suitable habitats. 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 features, openings in the vegetation, and possibly cryptogamic crust soils. Our understanding of this poorly known species suggests that Quinos are dependent on these certain site features; in their absence, it is unlikely that Quino would be a resident species.

The subject property supports certain features that might constitute Quino "indicators", including small "hilltopping" sites and openings in the dense brush. None of these are present in a configuration that would suggest the presence of Quino, however. *Plantago erecta*, the most evident host plant, does not appear to be present onsite.

A few small, potential "hilltopping" sites were observed on the TPM 21107 RPL2 project site. These were evaluated from a regional perspective, following the USFWS Habitat Evaluation protocol. Hilltopping sites are areas where butterflies of many species concentrate for breeding/territorial displays. Surrounding the property to the north, east, and west are numerous more suitable "hilltopping sites" including low, rocky ridges, knolls, and open peaks. The potential hilltopping sites on the subject property are not considered a sufficient Quino indicator to suggest presence.
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The results of this study suggest that the TPM 21107 RPL2 site has a low probability of supporting *E. editha quino*. This conclusion is based primarily on the absence of *P. erecta*, the scarcity of other larvael food plants, and the overall density of the vegetative cover over most of the site. A protocol presence/absence survey of the adjoining property to the east, with similar physiographic features and habitats (DPW Project No. L-14057) was negative when conducted in 2006. The assessment completed for this report conforms to the USFWS protocol pursuant to TE788133.

1.3.2 Focused Survey for Hermes Copper Butterfly

A series of three focused presence/absence surveys for Hermes Copper Butterfly (*Lycaena hermes*) were conducted on the property in June and July of 2009. Hermes Copper Butterflies were observed on the property during the first two of these surveys, and the site is therefore considered “occupied” by this rare butterfly. The complete results of this focused study are included in Attachment B.

As a follow-up to the 2009 Hermes Copper Butterfly presence/absence survey, the County of San Diego required a focused survey for Redberry (*Rhamnus crocea*) and Flat-top Buckwheat (*Eriogonum fasciculatum*) was conducted on the project site in August of 2010. The results of that survey, including an exhibit that shows the locations of the Redberry and Flat-top Buckwheat onsite, have been included in Attachment B.

1.4 Environmental Setting (Current Conditions)

Most of the project site supports native vegetation. A USGS “blue-line” drainage crosses the western portion of the site. Elevations onsite range between approximately 2450 feet MSL and 2625 feet MSL. Soil types found onsite include Arlington coarse sandy loam (AvC) on slopes between 2 and 9 percent, Fallbrook sandy loam (FaD2) on eroded slopes between 9 and 15 percent, and Cieneba very rocky coarse sandy loam soils (CmrG) on slopes between 30 and 75 percent. These soil-types are not known to support significant populations of narrow endemics or other very rare plants or animals. The climate of Jamul is generally mild, with warm, dry summers and cool, wet winters.

The TPM 21107 RPL2 property is located in a rural part of San Diego County. The property is currently undeveloped and mostly supports native vegetation, although portions of it were cleared at one time and it supports a paved road that is used to access the Skyline Ranch R.V. Park, which is immediately north of the property. Land uses on surrounding parcels include rural residential to the west and south, the Skyline Ranch R.V. Park to the north, and undisturbed areas to the northeast and east. All adjoining lands are under private ownership. No preserved lands adjoin or are contiguous with the project site.

1.4.1 Regional Context

As mentioned above, the property is in the Metro-Lakeside-Jamul segment of the County of San Diego’s MSCP Subarea Plan, under which the majority of the site is designated as PAMA land. As such, the project site qualifies as a Biological Resource Core Area (BRCA). The site is not directly adjacent to any national forest lands, BLM lands, or sovereign Native American lands. A Biological Open Space Easement dedicated to the County of San Diego adjoins the property to the east. Also, the Cleveland National Forest is located approximately 1.6 miles to the east of the project site. A historic U.S.G.S. “blue-line” stream crosses the property, a portion of which qualifies as a jurisdictional waterway. The site is located within the Sweetwater River watershed. Please refer to Figures 3 and 4, which show the relationship of the project site with surrounding lands.

1.4.2 Habitat Types/Vegetation Communities

The TPM 21107 RPL2 property supports several native upland and wetland plant associations. Also present are developed and disturbed areas. The onsite habitats consist of the following: Southern Mixed Chaparral, Southern Coast Live Oak Riparian Forest, Freshwater Seep, Non-native Grassland, Urban/Developed, and Disturbed Habitat. Similar habitat-types are found offsite on surrounding lands. Portions of the site are flat and relatively open, while other areas are steep and covered with a closed canopy of trees or dense brush. The most significant of the onsite habitats with respect to conservation value (in terms of regional and local importance relative to other areas of similar habitat offsite) are the Southern Coast Live Oak Riparian Forest, Freshwater Seep, and Southern

Mixed Chaparral. The least significant habitat-types from a regional and local importance context are the Non-native Grassland and the Disturbed/Developed areas. The approximate configuration of each of the onsite habitats is shown in Figure 2. Habitat-types present onsite are described below:

Southern Mixed Chaparral (Holland Code 37120) – 47.2 acres

Southern Mixed Chaparral (SMC) covers the majority of the TPM 21107 RPL2 project site. Indicators in this dense, brushy habitat include Chamise *(Adenostoma fasciculatum)*, Manzanita *(Arctostaphylos* sp.*)*, San Diego Mountain Mahogany (*Cercocarpus minutiflorus*), Interior Scrub Oak (*Quercus berberidifolia*), Mission Manzanita (*Xylococcus bicolor*), Ceanothus (*Ceanothus* spp.), and other hard-woody shrubs. Portions of the SMC are successional, and these areas support Flat-top Buckwheat, California Sagebrush (*Artemisia californica*), California Matchweed (*Gutierrezia californica*), Fragrant Everlasting (*Gnaphalium canescens*), with occasional large chaparral shrubs. The SMC onsite exhibits large-block habitat connectivity with additional SMC offsite to the northwest, northeast, and east. SMC is a Tier III habitat in San Diego County as defined by the County of San Diego's Biological Mitigation Ordinance (BMO). The biological resource value of SMC onsite is moderate.

Southern Coast Live Oak Riparian Forest (Holland Code 61310) – 0.84 acre

Several patches of Southern Coast Live Oak Riparian Forest (SCLORF) are found on the central northern part of the property. This habitat is indicated by mature Coast Live Oak trees *(Quercus agrifolia)* with mature and Arroyo Willows (*Salix lasiolepis*) over an understory of Poison Oak *(Toxicodendron diversilobum)*, San Diego Sagewort (*Artemisia palmeri*), San Diego Mountain Mahogany, and numerous others. SCLORF is a Tier I habitat in San Diego County as defined by the BMO. The SCLORF onsite is of high biological resource value, although it is small and isolated.

Freshwater Seep (Holland Code 45400) – 0.59 acre

An area of Freshwater Seep (FS) habitat is present near the center of the site in an area with a perched water table. Dominants in this habitat-type include Rush (*Juncus* sp.), Curly Dock (*Rumex crispus*), Western Ragweed (*Ambrosia psilostachya*), and other herbaceous hydrophytes. During the most recent field survey, conducted in August of 2010, an additional area of FS was discovered near the center of the property. This area consists of a seep that drains down the face of a large rock outcrop. The portion of the seep that drains over the rock outcrop is unvegetated, but the source of the seep is vegetated with annual forbs and grasses. The location of this feature has been added to Figure 2. Due to the very small size of this second area of FS, the overall acreage for this habitat-type has not been changed. FS is a Tier I habitat in San Diego County as defined by the BMO. The biological resource value of this habitat-type is high.

Non-native Grassland (Holland Code 42200) – 9.7 acres

Non-native Grassland (NNG) covers the central southern portion of the property. This habitat-type is indicated by weedy Eurasian annual grasses, including the various Brome grasses *(Bromus* spp.*)*, Foxtail Fescue (*Festuca megalura*), Tocalote (*Centaurea melitensis*), Dove Weed (*Eremocarpus setigerus*), and other grasses and ruderal

forbs. At the time of the baseline biology survey (2006), Flat-top Buckwheat was occasional in the NNG. However, during the Hermes Copper Butterfly field surveys of 2009, it was noted that Flat-top Buckwheat has become co-dominant in much of the area mapped as NNG. These areas are also recruiting with additional native species, such as seedling Redberry, stands of White Sage (*Salvia apiana*), and Our Lord's Candle (*Yucca whipplei*). For analysis purposes, however, these areas will continue to be considered part of the NNG. NNG is a Tier III habitat in San Diego County as defined by the BMO. The biological value of NNG onsite is considered moderate, as it provides foraging habitat for local raptors and other native species, including Hermes Copper.

Urban/Developed (Holland Code 12000) – 0.5 acre

As discussed above, a paved road used to access Skyline Ranch R.V. Park, which is immediately to the north of the property, crosses the western portion of the site. This road qualifies as Urban/Developed (U/D). Areas to the north, west, and south of the property also support U/D habitat, in the form of roads, homes, and the R.V. Park. U/D is a Tier IV habitat in San Diego County as defined by the BMO. The biological resource value of this habitat-type is low to non-existent.

Disturbed Habitat (Holland Code 11300) – 0.3 acre

Disturbed Habitat (DH) is found in the form of a dirt road that crosses the western portion of the site. This road supports mostly bare dirt. DH is a Tier IV habitat in San Diego County as defined by the BMO. The biological value of DH is low.

1.4.3 Flora

Eighty species of vascular plants were detected on the TPM 21107 RPL2 property. The plant species observed typify the diversity normally found in chaparral, riparian areas, and disturbed/developed areas in this part of San Diego County. A complete list of the plants detected, listed alphabetically, can be found in Table 3, attached. This list would be expected to represent at least 80 percent of the naturalized plants occurring on this site.

1.4.4 Fauna

Forty species of animals were observed using the TPM 21107 RPL2 project site. These are mostly common species, abundant in the site's general vicinity. Animals observed onsite are listed in Table 4, attached. This list is generally representative of the native fauna that resides onsite, although many additional species are anticipated. In particular, the invertebrate fauna of this site is anticipated to consist of at least hundreds of species.

1.4.5 Sensitive Plant Species

One sensitive plant species was observed on the TPM 21107 RPL2 property during the field surveys. This is San Diego Sagewort (see below). Sensitive plants are those listed as "Rare", "Endangered", "Threatened", "of Special

Concern", or otherwise considered noteworthy by the County of San Diego, the CDFW, the USFWS, the CNPS, or other conservation agencies, organizations, or local botanists. A number of additional sensitive plant species are known to occur in the general vicinity of this property. These are listed in an annotated form in Table 5.

San Diego Sagewort / ***Artemisia palmeri***
Listing: CNPS List 4.2
County status: San Diego County Sensitive Plant List, Group D (DPLU, 2006)
Federal/State status: none
Distribution: Ranges from northern San Diego County south into northern Baja California, Mexico.
Habitat(s): This plant occurs in semi-xeric riparian habitats, including riparian woodlands, sheltered but dry drainages, and in chaparral on north-facing slopes in interior areas.
Status on Site: Several hundred specimens are found onsite in mesic locations along the existing paved road.

1.4.6 Sensitive Animal Species

Six species of sensitive animal were observed on the TPM 21107 RPL2 project site during the field surveys. These are Hermes Copper Butterfly, Cooper's Hawk, Turkey Vulture, Bobcat, San Diego Coast Horned Lizard, and Coastal Western Whiptail. Sensitive animals are those listed as "Rare", "Endangered", "Threatened", "of Special Concern" or otherwise noteworthy by the CDFW, the USFWS, the National Audubon Society, the County of San Diego, or other conservation agencies, organizations, or local zoologists.

Other sensitive animals known from the general vicinity of the property are listed in Table 6. A few of these probably occur onsite, at least on an occasional basis, particularly other wide-ranging foragers, such as various species of rare bats, raptors, reptiles, etc. Where applicable, CNDDB Forms for each of the resident sensitive species below can be found in Attachment C.

Hermes Copper Butterfly / *Lycaena hermes*
Listing: County status: San Diego County Sensitive Animal List, Group 1 (DPLU, 2006)
Federal/State status: none
Distribution: This species is endemic to portions of San Diego County and adjacent northwestern Baja California, Mexico
Habitat(s): Hermes Copper is dependent on mature stands of *Rhamnus crocea* as its apparent sole larval host plant. *R. crocea* is a shrub commonly found in coastal sage scrub and chaparral habitats. Hermes Coppers occur in colonies where their host and nectar plants (*Eriogonum fasciculatum*, *Adenostoma fasciculatum*, *Toxicodendron diversilobum*, others) are intermixed or growing in close proximity to each other.
Status on Site: A total of eight sightings of this species took place over the course of two separate survey periods. Sightings were restricted to areas of suitable habitat in the southern and central portions of the site.
Comments: Only 15 populations of the Hermes Copper are known to remain in existence in the United States, with an additional three populations presumed extant in Baja California. The U.S. populations were formerly centered primarily in the “urban core” area of the City of San Diego. Present locations are fragmented in the Jamul to Fallbrook foothills area. This species is currently petitioned for listing as an Endangered or Threatened Species under the Federal Endangered Species Act.

Cooper's Hawk / *Accipiter cooperii*
Listing: "Species of Local Concern" (Tate, 1986)
County status: San Diego County Sensitive Animal List, Group 1 (DPLU, 2006)
State status: "Watch List" (CDFW, 2008)
Federal status: none
Distribution: Occurs throughout most of North America, from northern Mexico to southern Canada
Habitat(s): Inhabits a variety of woodlands, including oak woodlands, riparian and coniferous forests
Status on Site: Single specimen observed flying over the SCLORF.
Comments: Cooper's Hawk is tolerant of human presence and population numbers are considered stable in San Diego County.

Turkey Vulture / *Cathartes aura*
Listing: "Blue-list" (Tate, 1986)
"Declining" (Unitt, 1984)
County status: San Diego County Sensitive Animal List, Group 1 (DPLU, 2006)
Federal/State status: none
Distribution: Ranges from southern Canada to Argentina
Habitat(s): Open areas, farmlands, grasslands. Usually seen soaring overhead or sometimes perched on poles, dead trees, or on the ground.
Status on Site: Several adult specimens observed soaring over the property. Nesting habitat is not present, although specimens could nest on nearby properties supporting suitable rocky escarpments.

Coastal Western Whiptail / *Cnemidophorus tigris multiscutatus*
Listing: County status: San Diego County Sensitive Animal List, Group 2 (DPLU, 2006)
State status: none
Federal status: Former Federal Endangered Species Candidate; C2 (USFWS, 1996)
Distribution: Cismontane areas of southern California south into Baja California Norte, Mexico
Habitat(s): Mainly inhabits coastal sage scrub and chaparral where it occurs in areas of friable soils on hillsides and in canyons but also may be found in open, dry riparian areas.
Status on Site: Numerous specimens observed onsite in open areas of the chaparral.

Bobcat / *Lynx rufus*
Listing: County status: none
State status: "Regulated Furbearer" (CDFW, 2003)
Federal status: none
Distribution: Southern Canada to central Mexico
Habitat(s): Brushy areas, including chaparral, sage scrub, woodlands, and forests. Rarely seen during daylight hours. Secretive and often occurs on properties without being readily detected.
Status on Site: Scats characteristic of this species observed in various areas, indicating movement throughout most of the property.

San Diego Coast Horned Lizard / *Phrynosoma coronatum blainvillei*
Status: "Endangered" (San Diego Herpetological Society, 1980)
County status: San Diego County Sensitive Animal List, Group 2 (DPLU, 2006)
State status: "Species of Special Concern" (CDFW, 2008)
Federal status: none
Distribution: Ventura County south into northern Baja California Norte. Specimens found from sea level to mountain elevations and down desert slopes to the edge of the low desert.
Habitat(s): Open sage scrub, grassland, forested areas and chaparral.
Status on Site: Two juvenile specimens observed onsite, both at the edges of dirt roads. This cryptic species is probably relatively common onsite and in the vicinity of this property.

In addition to the sensitive species listed above, there are four other sensitive species with a high probability of occurrence on the TPM 21107 RPL2 (Table 6). These are Monarch Butterfly (*Danaus plexippus*), San Diego Ringneck Snake (*Diadophis punctatus similis*), Coronado Skink *(Eumeces skiltonianus interparietalis)*, and Coast Patched-nosed Snake *(Salvadora hexalepis virgultea)*. Monarch Butterflies certainly fly across this property on occasion, probably roosting on trees or larger shrubs during their movements. The anticipated reptiles (San Diego Ringneck Snake, Coronado Skink, and Coast Patch-nosed Snake) would occur in many areas of the site, residing in most habitats except for the wetland areas. The onsite populations of each of these species are not anticipated to be locally or regionally significant, as all of these species occur throughout cismontane southern California in areas of suitable habitat.

1.4.7 Environmentally Sensitive Lands

The TPM 21107 RPL2 project site supports Environmentally Sensitive Lands in the form of Wetlands (see Section 1.4.8). It also may support other Sensitive Habitat Lands as defined by the RPO. Sensitive Habitat Lands Land are areas which supports unique vegetation communities, or the habitats of rare or endangered species or sub-species of animals or plants as defined by Section 15380 of the State California Environmental Quality Act (CEQA) Guidelines (14 Cal. Admin. Code Section 15000 et seq.), including the area which is necessary to support a viable population of any of the above species in perpetuity, or which is critical to the proper functioning of a balanced natural ecosystem or which serves as a functioning wildlife corridor.

1.4.8 Wetlands/Jurisdictional Waters

As mentioned above, a historic, unnamed U.S.G.S. “blue-line” stream crosses the TPM 21107 RPL2 property. The northern portion of this drainage supports SCLORF and FS vegetation. The floodway of the drainage qualifies as federal (ACOE-defined), state (CDFW-defined), and county (RPO) wetlands, as well as “waters of the State” and “waters of the United States”. The areas of SCLORF and FS onsite that are outside of the floodway but within the floodplain of the drainage qualify, at a minimum, as state wetlands, “waters of the State”, and “waters of the United States”. Approximately 1.43 acres of federal, state, and/or county wetlands and waters are present onsite. In many cases, the boundaries of these jurisdictional lands coincide. The current definitions utilized by these agencies with respect to wetlands regulation are as follows:

Federal Wetland Definitions

The federal regulations that implement Section 404 of the Clean Water Act (CWA), which was enacted in 1977, define “wetlands” as follows:

“Those areas that are inundated or saturated by surface or ground water (hydrology) at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation (hydrophytes)

typically adapted for life in saturated soil conditions (hydric soils). Wetlands generally include swamps, marshes, bogs, and similar areas." (40 CFR 232.2(r).

Federal jurisdictional wetlands that are regulated by the ACOE under Section 404 of the CWA must exhibit all three of the above characteristics: hydrology, hydrophytes, and hydric soils (ACOE, 1987). Areas that may function as wetlands ecologically, but exhibit one or two of the three characteristics, do not currently qualify as federal jurisdictional wetlands, thus activities in these wetlands are not regulated under Section 404.

The ACOE also regulates the discharge of dredge and/or fill material into non-wetland "waters of the United States". The term "waters of the United States" is defined by Corps regulations at 33 CFR Part 328.3 9(a) as:

1) *All waters that are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;*
2) *All interstate waters including interstate wetlands;*
3) *All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters:*
   (i) which are or could be used by interstate or foreign travelers for recreational or other purposes; or
   (ii) from which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
   (iii) which are used or could be used for industrial purpose by industries in interstate commerce;
4) *All impoundments of waters otherwise defined as waters of the United States under the definition;*
5) *Tributaries of waters identified in paragraphs (a)(1)-(4) of this section;*
6) *The territorial seas;*
7) *Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a)(1)-(6) of this section.*

The ACOE also takes jurisdiction in non-tidal waters when wetlands are not present according to the ordinary high water mark (OHWM). This is defined as:

> *"…that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas."*

State Wetland Definitions

According to the definition used by the CDFW, wetlands are *"lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface, or the land is covered by shallow water,"* and they exist where any one of the following conditions are present:

A) *Predominantly undrained hydric soils (soils with low concentrations of oxygen in the upper layers during the growing season);*
B) *a predominance, at least periodically, of hydrophytic plants (plants that have adapted to the low availability of oxygen and others stresses in saturated soils);*

C) a nonsoil substrate (such as a rocky shore) that is saturated with water or covered by shallow water each year at some point during the growing season.

The California version of CWA is the Porter-Cologne Act, which established the State Water Resources Control Board (SWRCB) and the California Regional Water Quality Control Boards (CRWQCB) to oversee use and protection of the "waters of the state". In California, all surface waters and groundwater are "waters of the state".

County Wetland Definitions

The County of San Diego's recently amended (2007) RPO defines "Wetlands" as follows:

(1) Lands having one or more of the following attributes are "wetlands":
(aa) At least periodically, the land supports a predominance of hydrophytes (plants whose habitat is water or very wet places);
(bb) The substratum is predominantly undrained hydric soil; or
(cc) An ephemeral or perennial stream is present, whose substratum is predominately non-soil and such lands contribute substantially to the biological functions or values of wetlands in the drainage system.

(2) Notwithstanding paragraph (1) above, the following shall not be considered "Wetlands":
(aa) Lands which have attribute(s) specified in paragraph (1) solely due to man-made structures (e.g., culverts, ditches, road crossings, or agricultural ponds), provided that the Director of Planning and Land Use determines that they:
(i) Have negligible biological function or value as wetlands;
(ii) Are small and geographically isolated from other wetland systems;
(iii) Are not Vernal Pools; and,
(iv) Do not have substantial or locally important populations of wetland dependent sensitive species.
(bb) Lands that have been degraded by past legal land disturbance activities, to the point that they meet the following criteria as determined by the Director of Planning and Land Use:
(i) Have negligible biological function or value as wetlands even if restored to the extent feasible; and,
(ii) Do not have substantial or locally important populations of wetland dependent sensitive species.

"Waters" are not specifically discussed in the County's amended RPO, and the County of San Diego does not apparently recognize "waters" as a County-regulated resource.

The onsite wetlands are composed of those areas that support SCLORF and FS. The dominant plant species in these areas are listed above in Section 1.4.2. Observed and anticipated wildlife species present include a diversity of riparian birds, fish, amphibians and others.

The wetland habitat on the TPM 21107 RPL2 project site can be described in terms of disturbance, canopy cover, species diversity, and connectivity to offsite habitat. Two habitat-types qualify as supporting wetlands – the SCLORF and the FS. Both of these habitat-types support high-value wetland habitat with only limited signs of disturbance. The vegetative canopy is mostly closed, and the species diversity (with respect to hydrophytes) is moderate to relatively high.

Wetland functions, including biophysical benefits, such as groundwater recharge and discharge, sediment stabilization, erosion control, toxicant retention, nutrient removal and cycling, and wildlife habitat for diversity and abundance, are provided by most of the wetland areas on the TPM 21107 RPL2 site. Flood control functioning is generally not relevant, as the wetland areas of the project site are a function of elevated groundwater levels. However, wetland values provided by the FS habitat on the TPM 21107 RPL2 property are high, as the habitat provides moist areas in an otherwise dry environment.

1.4.9 Habitat Connectivity and Wildlife Corridors

The TPM 21107 RPL2 project site does not appear to provide any locally important or regionally important wildlife corridors, although the project site has been identified as a regional biological linkage within the MSCP. Local corridors facilitate wildlife movement from nesting or sheltering areas to nearby sources of food, water, or similar daily necessities. Regional corridors provide movement areas between large habitat blocks, facilitating animal migration on a larger scale.

Although the project site does not support significant wildlife corridors, habitat connectivity with significant areas of like-kind vegetation exist to the east, west, northeast and northwest. Development is present to the south (Skyline Truck Trail) and partially to the north (residences). Thus, habitat connectivity is blocked in those areas. As mentioned above, the majority of the property has been designated as PAMA lands, which means that the site is pre-approved by the Wildlife Agencies to be part of the regional preserve system.

Many species of wildlife are dependent on the ecological functions provided by the TPM 21107 RPL2 site. Mammals using the TPM 21107 site are mostly small, resident species, including various rodents and lagomorphs, with the only evidence of larger mammals being Coyotes *(Canis latrans)* and Bobcats *(Lynx rufus),* although other species, such as Gray Fox *(Urocyon cinereoargenteus),* are anticipated.

1.5 Applicable Regulations

Development of the TPM 21107 RPL2 property is subject to discretionary environmental review in compliance with CEQA, the MSCP, the BMO, FESA, the CWA and other applicable environmental regulations. The purpose of this review is to ensure that the project will not result in significant, adverse, unmitigated impacts to the environment. In this case, it applies specifically to endangered species, protected habitats, wetlands, and other sensitive biological resources.

2.0 PROJECT EFFECTS

Anticipated impacts to habitats were calculated by determining the acreage of each habitat affected by the site development, including future grading, estimated fire clearing, road and home construction, and landscaping. These are summarized below in Table 1. This analysis assumes full development of all areas not specifically conserved within the proposed open space easements, as shown on the Preliminary Grading Plan (Figure 2).

Measurable impacts would result from the development of the TPM 21107 RPL2 property. Direct impacts result from the 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, roads, etc. Indirect impacts also affect plants, animals, and habitats that occur on or near a project site. These are not the direct result of grading or development, but are the result of changes in land use as a by-product of adjacency. Examples of indirect impacts include the introduction of exotic species, human or pet intrusions into natural areas, lighting, traffic, and noise. Indirect impacts are often called "edge effects".

Species Impacts

Six sensitive species were detected on the TPM 21107 RPL2 project site: San Diego Sagewort, Hermes Copper Butterfly, Cooper's Hawk, Turkey Vulture, Coastal Western Whiptail, San Diego Coast Horned Lizard, and Bobcat. Four additional sensitive species have a high probability of occurring onsite: Monarch Butterfly, San Diego Ringneck Snake, Coronado Skink, and Coast Patched-nosed Snake. All resident sensitive species, as well as non-sensitive species, would be directly and/or indirectly impacted by the project. As mentioned, direct impacts result from the actual removal of plants and animals from the site as a product of the removal of their habitat. Indirect impacts would primarily consist of edge effects impacting natural areas onsite and adjoining offsite areas that are utilized by the resident plant and animal species.

Impacts to Wildlife Corridors, Linkages and Nursery Sites

The TPM 21107 RPL2 project will have minimal adverse effects on wildlife corridors or nursery sites. No evidence was found that these features are present on the subject property, The TPM 21107 RPL2 project site does not appear to provide any locally important or regionally important wildlife corridors, although the project site has been identified as a regional biological linkage within the MSCP. The project preserves this linkage, to the extent feasible, through the dedication of a biological open space easement over the western half of the property, where the highest value habitats are located.

Table 1. Habitat Impacts

Habitat	Existing Acres	Impact Acres	Preserved Acres	Impact Neutral Acres
Southern Mixed Chaparral	47.2	19.2	28.0	none
Southern Coast Live Oak Riparian Forest	0.84	none	none	0.84
Freshwater Seep	0.59	none	none	0.59
Non-native Grassland	9.7	0.1	9.6	none
Urban/Developed	0.5	0.5	none	none
Disturbed Habitat	0.3	0.3	none	none
TOTAL	59.1	20.1	37.6	1.43

3.0 SPECIAL STATUS SPECIES

3.1 Guidelines for the Determination of Significance

Impacts to Special Status Species associated with the TPM 21107 RPL2 project are assessed as being either "significant" or "less than significant", as defined by CEQA. The determination of impact significance is based on the following criteria:

> *Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?*

Any of the following conditions would be considered significant:

3.1.A *The project would impact one or more individuals of a species listed as federally or state endangered or threatened.*

3.1.B *The project would impact the regional long-term survival of a County Group A or B plant species, or a County Group I animal species, or a species listed as a state Species of Special Concern.*

3.1.C *The project would impact the regional long-term survival of a County Group C or D plant species or a County Group II animal species.*

3.1.D *The project may impact Arroyo Toad aestivation or breeding habitat.*

3.1.E *The project would impact Golden Eagle habitat.*

3.1.F *The project would result in a loss of functional foraging habitat for raptors.*

3.1.G *The project would increase noise and/or nighttime lighting to a level above ambient proven to adversely affect sensitive species.*

3.1.H *The project would impact the viability of a core wildlife area, defined as a large block of habitat (typically 500 acres or more not limited to project boundaries, though smaller areas with particularly valuable resources may also be considered a core wildlife area) that supports a viable population of a sensitive wildlife species or an area that supports multiple wildlife species.*

3.1.I *The project would increase human access or predation or competition from domestic animals, pests or exotic species to levels that would adversely affect sensitive species.*

3.1.J *The project would impact nesting success of sensitive animals (as listed in the Guidelines for Determining Significance) through grading, clearing, modification, and/or noise generating activities such as construction.*

3.2 Analysis of Project Effects

The TPM 21107 RPL2 project will also have **significant indirect impacts** to special status species pursuant to the above significance guidelines for the following reasons:

3.1.I The project could increase human access or predation or competition from domestic animals, pests or exotic species to levels that would adversely affect sensitive species. Increased human use of the site could result in access, predation and/or competition impacts to special status species.
3.1.J The project could impact nesting success of sensitive animals through grading, clearing, modification, and/or noise generating activities such as construction.

The following significance guidelines **do not apply** to the TPM 21107 RPL2 project for the following reasons:

3.1.A. The project site does not support any species listed as federally or state endangered or threatened.
3.1.B Although the project will impact Hermes Copper Butterfly, Cooper's Hawk, and Turkey Vulture, which are County Group I animal species, those impacts will not affect the regional long-term survival of any of these species.
3.1.C Although the project will impact San Diego Sagewort, a County List D plant species, and Coastal Western Whiptail and San Diego Coast Horned Lizard, which are County Group II animal species, those impacts will not affect the regional long-term survival of any of these species.
3.1.D Arroyo Toad aestivation or breeding habitat is not found on this site.
3.1.E Golden Eagle habitat is not found on this site
3.1.F Although the project will result in a loss of some foraging habitat for raptors, this loss is not sufficient to result in regionally-significant, adverse impacts
3.1.G The project will not increase noise and/or nighttime lighting to a level that has been proven to adversely affect sensitive species.
3.1.H The project site does not constitute a core wildlife area.

3.3 Cumulative Impact Analysis

Although Special Status Species will be indirectly impacted by the project, mitigation reducing impacts to a level that is below significance will ensure that approval of the TPM 21107 RPL2 project will not have cumulatively considerable impacts when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects affecting the same resource. Other proposed projects affecting some of the same Special Status Species found on the TPM 21107 RPL2 project site include L-14057, TM 5002RPL1, L14770, CA5178A, and TPM 20781. All of these projects have either minimal impacts, or have significant impacts that provide mitigation that reduces all impacts to less than significant. Other projects specifically supporting Hermes Copper Butterfly include TPM 20720, TPM 21060, the Sunrise Powerlink project, and others. These projects generally provide avoidance of impacts to known populations, and mitigation where appropriate.

3.4 Mitigation Measures and Design Considerations

Impacts to Special Status Species shall be mitigated for through the preservation of the most biologically significant areas (supporting most specimens of the Special Status Species residing on this site) in open space. This mitigation measure will require the dedication and recordation of Biological Open Space Easements over portions of the TPM 21107 RPL2 project site. Habitat supporting sensitive species, such as San Diego Sagewort, which is a County Group D plant species, and Hermes Copper Butterfly, Cooper's Hawk, Turkey Vulture, Coastal Whiptail, San Diego Coast Horned Lizard, (which are County Group I and II animal species), Bobcat, and others that are anticipated to occur onsite, such as Monarch Butterfly, San Diego Ringneck Snake, Coronado Skink, and Coast Patched-nosed Snake (all County Group I and II species), will be conserved in the open space easement areas to ensure long-term viability of the habitat for these and other sensitive species. All onsite areas where Hermes Copper Butterflies were observed will be conserved in Biological Open Space (see Figure 3).

3.5 Conclusions

Implementation of the proposed mitigation measures will reduce the significance level of all significant impacts to Special Status Species to **less than significant**.

4.0 RIPARIAN HABITAT OR SENSITIVE NATURAL COMMUNITIES

4.1 Guidelines for the Determination of Significance

Impacts to Riparian Habitats or Other Sensitive Natural Communities associated with the TPM 21107 RPL2 project are assessed as being either "significant" or "less than significant", as defined by CEQA. The determination of impact significance is based on the following criteria:

Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Any of the following conditions would be considered significant:

4.1.A *Project-related construction, grading, clearing, construction or other activities would temporarily or permanently remove sensitive native or naturalized habitat on or off the project site.*

4.1.B *Any of the following will occur to or within jurisdictional wetlands and/or riparian habitats as defined by ACOE, CDFW and the County of San Diego: removal of vegetation; grading; obstruction or diversion of water flow; adverse change in velocity, siltation, volume of flow, or runoff rate; placement of fill; placement of structures; construction of a road crossing; placement of culverts or other underground piping; any disturbance of the substratum; and/or any activity that may cause an adverse change in native species composition, diversity and abundance.*

4.1.C *The project would draw down the groundwater table to the detriment of groundwater-dependent habitat, typically a drop of 3 feet or more from historical low groundwater levels.*

4.1.D *The project would increase human access or competition from domestic animals, pests or exotic species to levels proven to adversely affect sensitive habitats.*

4.1.E *The project does not include a wetland buffer adequate to protect the functions and values of existing wetlands.*

4.2 Analysis of Project Effects

The TPM 21107 RPL2 project will result in **significant direct impacts** to Sensitive Natural Communities, but not Riparian Habitats, pursuant to the above significance guidelines for the following reasons:

4.1.A Project-related construction, grading, clearing, or other activities will permanently remove sensitive native or naturalized habitat on the project site. That is, the project will directly impact 19.2 acres of SMC and 0.1 acres of NNG.

The following significance guidelines **do not apply** to the TPM 21107 RPL2 project for the following reasons:

4.1.B Project-related construction, grading, clearing, or other activities will not result in impacts to jurisdictional wetlands and/or riparian habitats as defined by ACOE, CDFW, and the County of San Diego. This is because the project does not propose the removal of vegetation; grading; obstruction or diversion of water flow; placement of fill; placement of structures; construction of a road crossing; placement of culverts or other underground piping; any disturbance of the substratum; and/or any activity that would cause a measurable, adverse change in native species composition, diversity, and abundance.

4.1.C The project will not draw down the groundwater table to the detriment of groundwater-dependent habitat

4.1.D The project will not increase human access or competition from domestic animals, pests or exotic species to levels proven to adversely affect sensitive habitats.

4.1.E The project includes wetland buffers that are adequate to protect the functions and values of existing wetlands.

4.3 Cumulative Impact Analysis

The TPM 21107 RPL2 project will contribute to the cumulative loss of Sensitive Natural Communities. Project-related construction, grading, clearing, or other activities will permanently remove sensitive native or naturalized habitat on the project site. That is, the project will directly impact 19.2 acres of SMC and 0.1 acres of NNG. However, due to the extent of these habitats onsite, as well as the fact that all impacts to these habitats will be mitigated for to a level that is below significance, approval of the TPM 21107 RPL2 project will not have cumulatively considerable impacts when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects affecting the same resource. Other proposed projects affecting some of the same Riparian Habitats or Other Sensitive Natural Communities found on the TPM 21107 RPL2 project site include L-14057, TM 5002RPL1, L14770, CA5178A, and TPM 20781. All of these projects have either minimal impacts, or have significant impacts that provide mitigation that reduces all impacts to less than significant.

4.4 Mitigation Measures and Design Considerations

Impacts to 19.2 acres of SMC will be mitigated for at a 1-to-1 ratio and impacts to 0.1 acres of NNG will be mitigated for at a ½-to-1 ratio. That is, 19.2 acres of SMC and 0.05 acres of NNG must be preserved, either onsite in biological open space and/or offsite in County-approved location. These mitigation ratios assume that both impacts and mitigation are occurring within a BRCA. The onsite BOSE includes 28.0 acres of SMC and 9.6 acres of NNG that are available for use as mitigation for project impacts. This is sufficient acreage to accomplish all mitigation for impacts to Sensitive Natural Communities onsite.

4.5 Conclusions

Implementation of the proposed mitigation measures will reduce the significance level of all significant impacts to Sensitive Natural Communities to **less than significant**.

5.0 JURISDICTIONAL WETLANDS AND WATERWAYS

5.1 Guidelines for the Determination of Significance

Impacts to Jurisdictional Wetlands and Waterways associated with the TPM 21107 RPL2 project are assessed as being either "significant" or "less than significant", as defined by CEQA. The determination of impact significance is based on the following criteria:

Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption or other means?

Any of the following conditions would be considered significant:

5.1.A *Project-related construction, grading, clearing, construction or other activities would temporarily or permanently remove sensitive native or naturalized habitat on or off the project site.*

5.1.B *Any of the following will occur to or within jurisdictional wetlands and/or riparian habitats as defined by ACOE, CDFW and the County of San Diego: removal of vegetation; grading; obstruction or diversion of water flow; adverse change in velocity, siltation, volume of flow, or runoff rate; placement of fill; placement of structures; construction of a road crossing; placement of culverts or other underground piping; any disturbance of the substratum; and/or any activity that may cause an adverse change in native species composition, diversity and abundance.*

5.1.C *The project would draw down the groundwater table to the detriment of groundwater-dependent habitat, typically a drop of 3 feet or more from historical low groundwater levels.*

5.1.D *The project would increase human access or competition from domestic animals, pests or exotic species to levels proven to adversely affect sensitive habitats.*

5.1.E *The project does not include a wetland buffer adequate to protect the functions and values of existing wetlands.*

5.2 Analysis of Project Effects

The TPM 21107 project will **not** result in significant impacts to Jurisdictional Wetlands or Waterways. The following significance guidelines **do not apply** to the TPM 21107 RPL2 project for the following reasons:

5.1.A Although project-related construction, grading, clearing, or other activities will permanently remove sensitive native or naturalized habitat on the project site, the habitats that are being impacted do not qualify as jurisdictional wetlands or waters.

5.1.B Project-related construction, grading, clearing, or other activities will not result in impacts to jurisdictional wetlands and/or riparian habitats as defined by ACOE, CDFW, and the County of San Diego. This is because the project does not propose the removal of vegetation; grading; obstruction or diversion of water flow; placement of fill; placement of structures; construction of a road crossing; placement of culverts or other underground piping; any disturbance of the substratum; and/or any activity that may cause a measurable, adverse change in native species composition, diversity and abundance.

5.1.C The project will not draw down the groundwater table to the detriment of groundwater-dependent habitat

5.1.D The project will not increase human access or competition from domestic animals, pests or exotic species to levels proven to adversely affect sensitive habitats because all areas conserved in open space will be adequately protected per the requirements of an approved and implemented RMP, which will include measures to preclude such impacts.

5.1.E The project includes wetland buffers that are adequate to protect the functions and values of existing wetlands.

5.3 Cumulative Impact Analysis

As stated above, the TPM 21107 RPL2 project will not result in significant adverse impacts to Jurisdictional Wetlands or Waterways. Therefore, approval of the TPM 21107 RPL2 project will not have cumulatively considerable impacts when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects affecting the same resource. No other proposed projects affecting similar Jurisdictional Wetlands or Waterways to those found on the TPM 21107 RPL2 project site are found in the immediate vicinity of the project site.

5.4 Mitigation Measures and Design Considerations

As discussed above, the project will have no significant impacts to Jurisdictional Wetlands or Waterways. Therefore, no mitigation for impacts to Jurisdictional Wetlands or Waterways is necessary.

5.5 Conclusions

As stated above, the project will **not** significantly impact Jurisdictional Wetlands or Waterways.

6.0 WILDLIFE MOVEMENT AND NURSERY SITES

6.1 Guidelines for the Determination of Significance

Impacts to Wildlife Movement and Nursery Sites associated with the TPM 21107 RPL2 project are assessed as being either "significant" or "less than significant", as defined by CEQA. The determination of impact significance is based on the following criteria:

Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Any of the following conditions would be considered significant:

6.1.A *The project would prevent wildlife access to foraging habitat, breeding habitat, water sources, or other areas necessary for their reproduction.*

6.1.B *The project would substantially interfere with connectivity between blocks of habitat, or would potentially block or substantially interfere with a local or regional wildlife corridor or linkage.*

6.1.C *The project would create artificial wildlife corridors that do not follow natural movement patterns.*

6.1.D *The project would increase noise and/or nighttime lighting in a wildlife corridor or linkage to levels proven to affect the behavior of the animals identified in a site specific analysis of wildlife movement.*

6.1.E *The project does not maintain an adequate width for an existing wildlife corridor or linkage and/or would further constrain an already narrow corridor through activities such as (but not limited to) reduction of corridor width, removal of available vegetative cover, placement of incompatible uses adjacent to it, and placement of barriers in the movement path.*

6.1.F *The project does not maintain adequate visual continuity (i.e., long lines-of-site) within wildlife corridors or linkage.*

6.2 Analysis of Project Effects

The TPM 21107 RPL2 project will **not** result in significant impacts to Wildlife Movement or Nursery Sites. The following significance guidelines **do not apply** to the TPM 21107 RPL2 project for the following reasons:

6.1.A The project will not prevent wildlife access to foraging habitat, breeding habitat, water sources, or other areas necessary for their reproduction because most areas onsite that are used by wildlife will be protected by a dedicated BOSE, to be placed over the western half of the property.

6.1.B The project will not substantially interfere with connectivity between blocks of habitat and will not potentially block or substantially interfere with a local or regional wildlife corridor or linkage. This is because the project preserves the identified MSCP regional biological linkage by placing a dedicated BOSE over the western half of the property.

6.1.C The project will not create artificial wildlife corridors that do not follow natural movement patterns.

6.1.D The project will not increase noise and/or nighttime lighting in a wildlife corridor, linkage, or nursery to levels proven to affect the behavior of the animals identified in a site specific analysis of wildlife movement. This is because development will be clustered on the eastern portion of the property, well away from the identified MSCP regional biological linkage on the western portion of the property.

6.1.E The project will maintain an adequate width for an existing wildlife corridor or linkage and will not further constrain an already narrow corridor. The proposed biological open space easement maintains the 1,000-foot width of the identified MSCP regional biological linkage.

6.1. F The project maintains adequate visual continuity within wildlife corridors or linkages. The identified MSCP regional biological linkage will be preserved in its natural state in a dedicated biological open space easement, and visual continuity will not be blocked at any point within the linkage.

6.3 Cumulative Impact Analysis

As stated above, the TPM 21107 RPL2 project will not result in significant adverse impacts to Wildlife Movement or Nursery Sites. Therefore, approval of the TPM 21107 RPL2 project will not have cumulatively considerable impacts when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects affecting the same resource. Proposed projects affecting some of the same potential Wildlife Movement and Nursery Sites as are found on the TPM 21107 RPL2 project site include L-14057, TM 5002RPL1, L14770, CA5178A, and TPM 20781. All of these projects have either minimal impacts, or have significant impacts that provide mitigation that reduces all impacts to less than significant.

6.4 Mitigation Measures and Design Considerations

As discussed above, the project will have no significant impacts to Wildlife Movement or Nursery Sites. Therefore, no mitigation for impacts to Wildlife Movement or Nursery Sites is necessary.

6.5 Conclusions

As stated above, the project will **not** significantly impact Wildlife Movement or Nursery Sites.

7.0 LOCAL POLICIES, ORDINANCES, ADOPTED PLANS

7.1 Guidelines for the Determination of Significance

Impacts to Local Policies, Ordinances, and Adopted Plans in association with the TPM 21107 RPL2 project are assessed as being either "significant" or "less than significant", as defined by CEQA. The determination of impact significance is based on the following criteria:

Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan?

Any of the following conditions would be considered significant:

7.1.A *For lands outside of the MSCP, the project would impact coastal sage scrub (CSS) vegetation in excess of the County's 5% habitat loss threshold as defined by the Southern California Coastal Sage Scrub Natural Communities Conservation Planning Process (NCCP) Guidelines.*

7.1.B *The project would preclude or prevent the preparation of the subregional Natural Communities Conservation Planning Process (NCCP). For example, the project proposes development within areas that have been identified by the County or resource agencies as critical to future habitat preserves.*

7.1.C *The project will impact any amount of sensitive habitat lands as outlined in the Resource Protection Ordinance (RPO).*

7.1.D *The project would not minimize and/or mitigate coastal sage scrub habitat loss in accordance with Section 4.3 of the Natural Communities Conservation Planning Process (NCCP) Guidelines.*

7.1.E *The project does not conform to the goals and requirements as outlined in any applicable Habitat Conservation Plan (HCP), Habitat Management Plan (HMP), Special Area Management Plan (SAMP), Watershed Plan, or similar regional planning effort.*

7.1.F *For lands within the Multiple Species Conservation Program (MSCP), the project would not minimize impacts to Biological Resource Core Areas (BRCAs), as defined in the Biological Mitigation Ordinance (BMO).*

7.1.G *The project would preclude connectivity between areas of high habitat values, as defined by the Southern California Coastal Sage Scrub Natural Communities Conservation Planning Process (NCCP) Guidelines.*

7.1.H *The project does not maintain existing movement corridors and/or habitat linkages as defined by the Biological Mitigation Ordinance (BMO).*

7.1.I *The project does not avoid impacts to MSCP narrow endemic species and would impact core populations of narrow endemics.*

7.1.J *The project would reduce the likelihood of survival and recovery of listed species in the wild.*

7.1.K *The project would result in the killing of migratory birds or destruction of active migratory bird nests and/or eggs (Migratory Bird Treaty Act).*

7.1.L *The project would result in the take of eagles, eagle eggs or any part of an eagle (Bald and Golden Eagle Protection Act).*

7.2 Analysis of Project Effects

The TPM 21107 RPL2 project will result in **significant** impacts to Local Policies, Ordinances, and Adopted Plans under the following guidelines for the following reasons:

7.1.C The project will impact a measurable amount of sensitive habitat lands as defined by the RPO.

7.1.K The project could result in the killing of migratory birds or destruction of active migratory bird nests and/or eggs (Migratory Bird Treaty Act).

The following significance guidelines with respect to Local Policies, Ordinances, and Adopted Plans **do not apply** to the TPM 21107 RPL2 project for the following reasons:

7.1.A The project site is located within the MSCP and does not support coastal sage scrub vegetation.

7.1.B The project does not propose development within any area that has been identified by the County or resource agencies as critical to future habitat preserves.

7.1.D The project site does not support coastal sage scrub vegetation.

7.1.E The project site is located within the MSCP, an area subject to the goals and requirements outlined in the MSCP Subarea Plan, an approved HCP. However, the project will conform to all of the goals and requirements of this plan.

7.1.F The project minimizes impacts to BRCAs, to the extent feasible, as defined in the BMO. The project has made every effort to minimize impacts to BRCAs, while preserving it to the maximum extent practicable. The project achieves this by proposing the preservation of the western half of the property in dedicated biological open space, thereby creating a significant block of preserved habitat with reduced edge effects and preserving the biological integrity of the identified MSCP regional biological linkage. Furthermore, the project includes clustering to the maximum extent practicable, as the proposed development is restricted to the eastern half of the project site.

7.1.G The project will not preclude connectivity between areas of high habitat values, as defined by the NCCP Guidelines.

7.1.H The project maintains existing habitat linkages, as defined by the BMO.

7.1.I MSCP narrow endemic species are not found on the project site. Therefore, the project will not impact any core populations of narrow endemic species.

7.1.J The project will have no affect on the likelihood of survival and recovery of listed species in the wild.
7.1.L The project site does not support eagles, eagle eggs, or any part of an eagle.

7.3 Cumulative Impact Analysis

Due to the fact that all impacts to Local Policies, Ordinances, or Adopted Plans will be mitigated for to a level that is below significance, approval of the TPM 21107 RPL2 project will not have cumulatively considerable impacts when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects affecting the same resource. Other proposed projects affected by some of the same Local Policies, Ordinances, or Adopted Plans as TPM 21107 RPL2 include L-14057, TM 5002RPL1, L14770, CA5178A, and TPM 20781. All of these projects have either minimal impacts, or have significant impacts that provide mitigation that reduces all impacts to less than significant.

7.4 Mitigation Measures and Design Considerations

Impacts to migratory birds and the destruction of active migratory bird nests and/or eggs will be prevented by the implementation of seasonal restrictions on the removal of potential nesting areas (trees and shrubs) in conjunction with site build-out. This will ensure consistency with the MBTA and the CFGC, and keep impacts to Local Policies, Ordinances, or Adopted Plans to a level that is less than significant. Impacts to RPO sensitive habitat lands will be mitigated for by conserving the most biologically sensitive areas of the site, including wetlands, habitat for sensitive species in a large-block, connected biological open space within a 1,000-foot wide corridor that has been identified as an MSCP regional biological linkage.

7.5 Conclusions

As discussed in the previous sections, future development of the project site, as presently proposed, could result in **significant** impacts to Local Policies, Ordinances, or Adopted Plans. However, all significant impacts to Local Policies, Ordinances, or Adopted Plans shall be mitigated for, reducing them to a level that is **less than significant**.

8.0 SUMMARY OF PROJECT IMPACTS AND MITIGATION

As discussed above, the following **significant** impacts area associated with the TPM 21107 RPL2 project:

- The project could increase human access or predation or competition from domestic animals, pests or exotic species to levels that would adversely affect sensitive species. (Sec. 3.1.I)
- The project could impact nesting success of sensitive animals through grading, clearing, modification, and/or noise generating activities such as construction (Sec. 3.1.J)
- Project-related construction, grading, clearing, or other activities will permanently remove sensitive native or naturalized habitat on the project site. That is, the project will directly impact 19.2 acres of SMC and 0.1 acres of NNG. (Sec. 4.1.A)
- The project will impact sensitive habitat lands as defined by the Resource Protection Ordinance (RPO).
- The project could result in the killing of migratory birds or destruction of active migratory bird nest and/or eggs (Migratory Bird Treaty Act). (Sec. 7.1.K)

The project could impact the nesting success of sensitive animals through grading, clearing, modification, and/or noise generating activities such as construction. Mitigation for this impact shall include seasonal restrictions on grading, clearing, modification, and construction and/or preconstruction breeding surveys of all areas within a 500 foot distance of the proposed activities.

Project-related construction, grading, clearing, or other activities will permanently remove sensitive native or naturalized habitat on the project site. Impacts to 19.2 acres of SMC will be mitigated for at a 1-to-1 ratio and impacts to 0.1 acres of NNG will be mitigated for at a ½-to-1 ratio. That is, 19.2 acres of SMC and 0.05 acres of NNG must be preserved, either onsite in biological open space and/or offsite in County-approved location. These ratios assume that both impacts and mitigation are occurring within a BRCA. The onsite BOSE includes 28.0 acres of SMC and 9.6 acres of NNG that are available for use as mitigation for project impacts. This is sufficient acreage to accomplish all mitigation for impacts to sensitive native or naturalized habitat onsite. The onsite BOSE is intended to preclude the removal or addition of any thing, including structures and vegetation. In order to prevent fire clearing impacts to the BOSE, suitable LBZs are required. These easements shall extend outward towards development from the BOSE boundaries and will prohibit the construction of houses, barns, or other habitable structures that would require fire clearing into the biological open space.

No direct project impacts to RPO wetlands are anticipated, thus ensuring consistency with the RPO. The RPO also requires buffers on all RPO wetlands. To that end, the project has been designed to incorporate appropriate wetland buffers, with protection from future fire clearing through the dedication of LBZs.

Impacts to RPO sensitive habitat lands will be mitigated for by conserving the most biologically sensitive areas of the site, including wetlands, habitat for sensitive species, and a corridor no less than 1,000-feet in width in large-block, connected BOSE.

Table 2. Habitat Impacts and Mitigation Analysis

Habitat	Existing Acres	Impact Acres	Mitigation Ratio	Mitigation Required	Preserved Onsite	Impact Neutral	Additional Mitigation
Southern Mixed Chaparral	47.2	19.2	1:1	19.2	28.0	none	none
Southern Coast Live Oak Riparian Forest	0.84	none	n/a	none	none	0.84	none
Freshwater Seep	0.59	none	n/a	none	none	0.59	none
Non-native Grassland	9.7	0.1	0.5:1	0.05	9.6	none	none
Disturbed Habitat	0.28	none	none	none	0.28	none	none
Urban/Developed	0.50	0.50	none	none	none	none	none
TOTAL	**59.1**[1]	**20.1**	**--**	**19.25**	**37.6**	**1.43**	**none**

[1] *Includes offsite road*

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10.0 LIST OF PREPARERS AND PERSONS/ORGANIZATIONS CONTACTED

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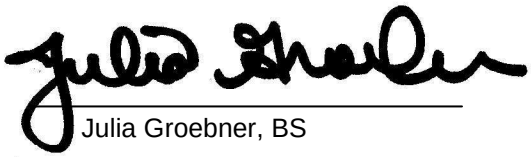


Julia Groebner, BS
Associate Biologist

FIGURE 1. REGIONAL LOCATION
PORTION OF THE U.S.G.S. "DULZURA, CALIFORNIA" 7.5' QUADRANGLE

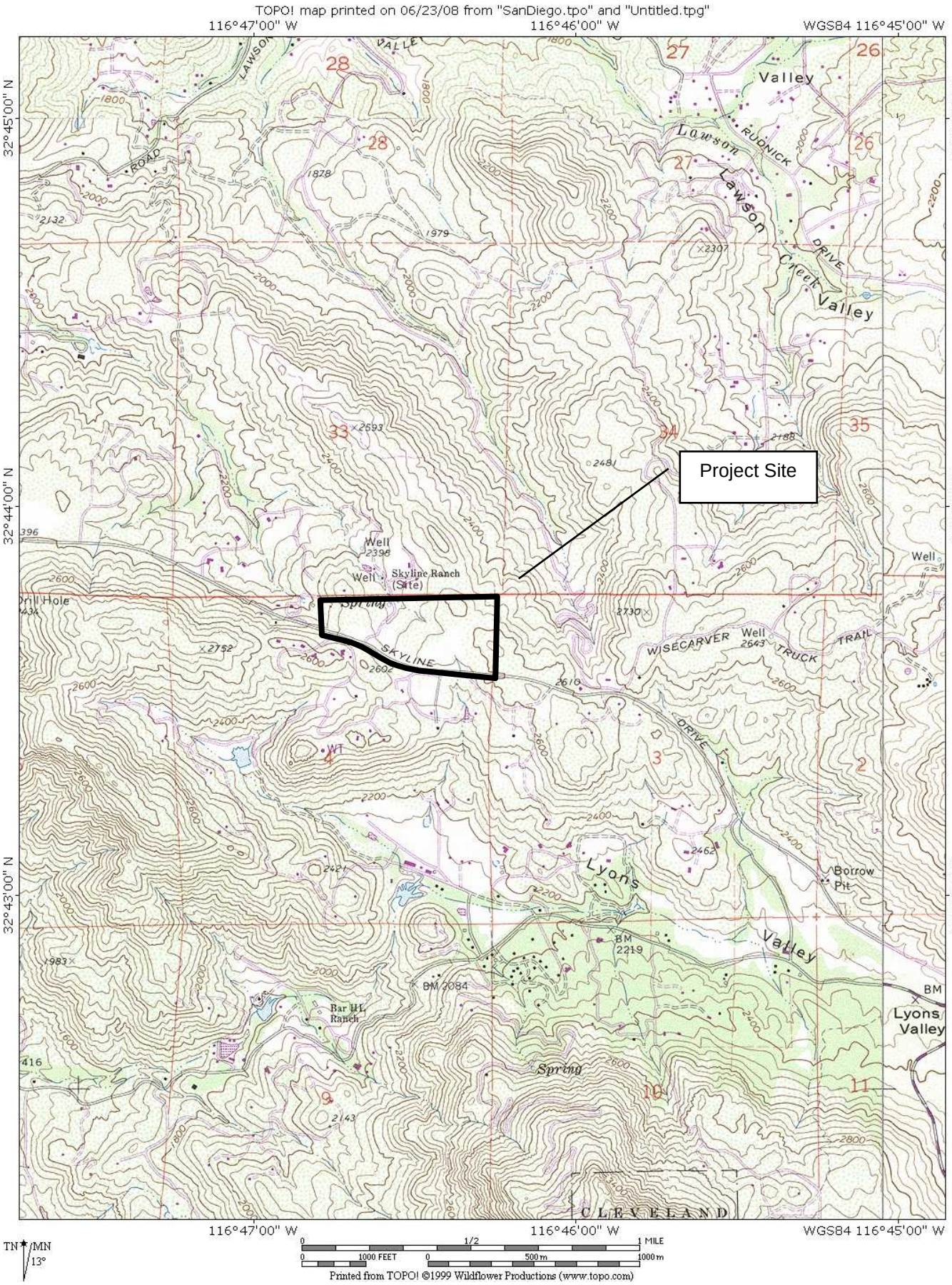
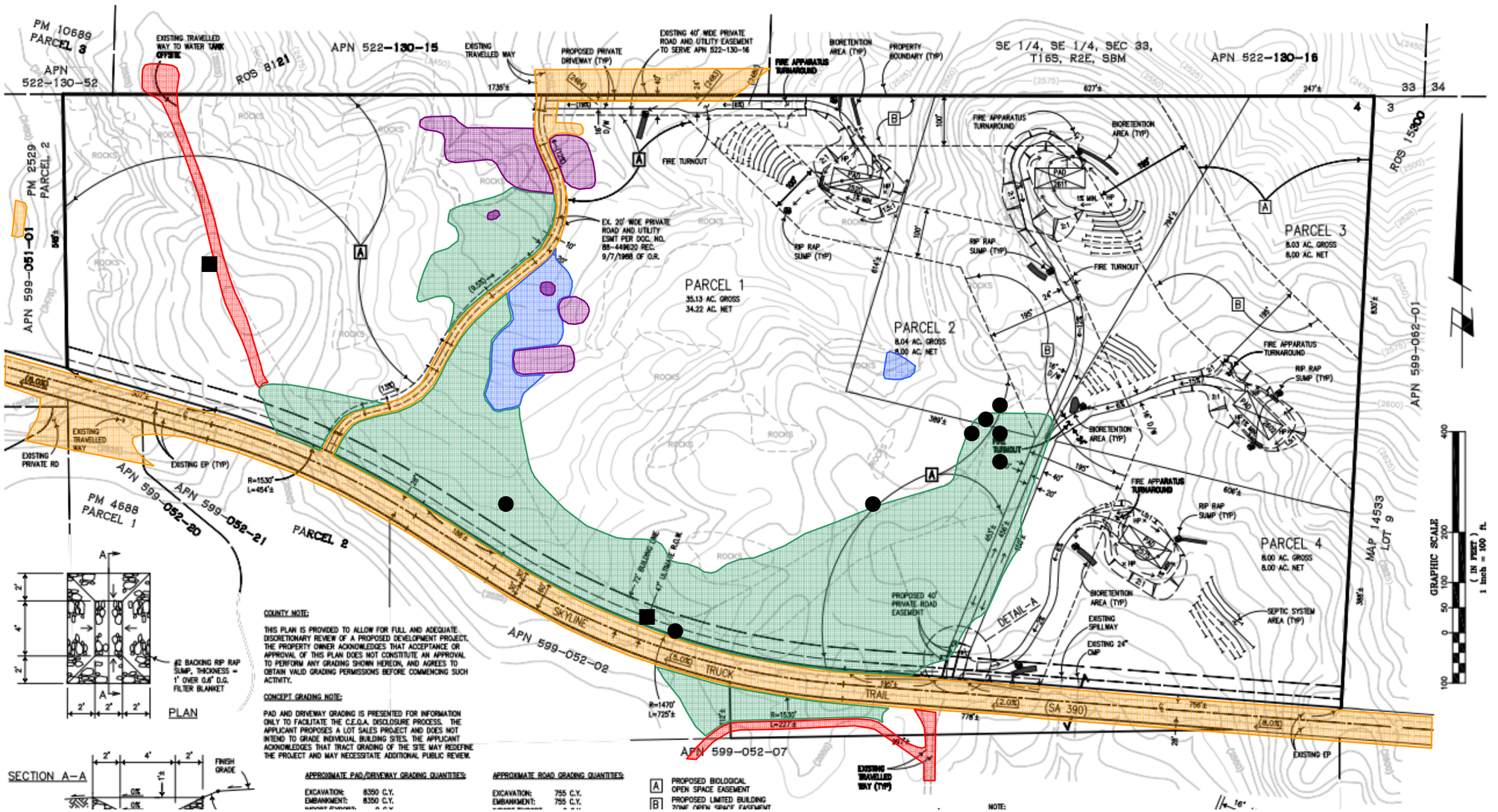


FIGURE 2. BIOLOGICAL RESOURCES ON PROJECT PRELIMINARY GRADING PLAN (PGP)



Legend

- = Southern Mixed Chaparral
- = Urban/Developed
- = Disturbed Habitat
- = Southern Coast Live Oak Riparian Forest
- = Freshwater Seep
- = Non-native Grassland
- = Hermes Copper Butterfly
- = S.D. Coast Horned Lizard

Not shown:

* San Diego Sagewort – *occasional in mesic locations along existing paved road*
* Cooper's Hawk – *flying over woodland area of site*
* Turkey Vulture – *soaring over site*
* Bobcat – *scat in various areas*
* Coastal Western Whiptail – *widely distributed in open areas*

FIGURE 3. OPEN SPACE EXHIBIT SHOWING HERMES COPPER OBSERVATION POINTS ON PROJECT PGP

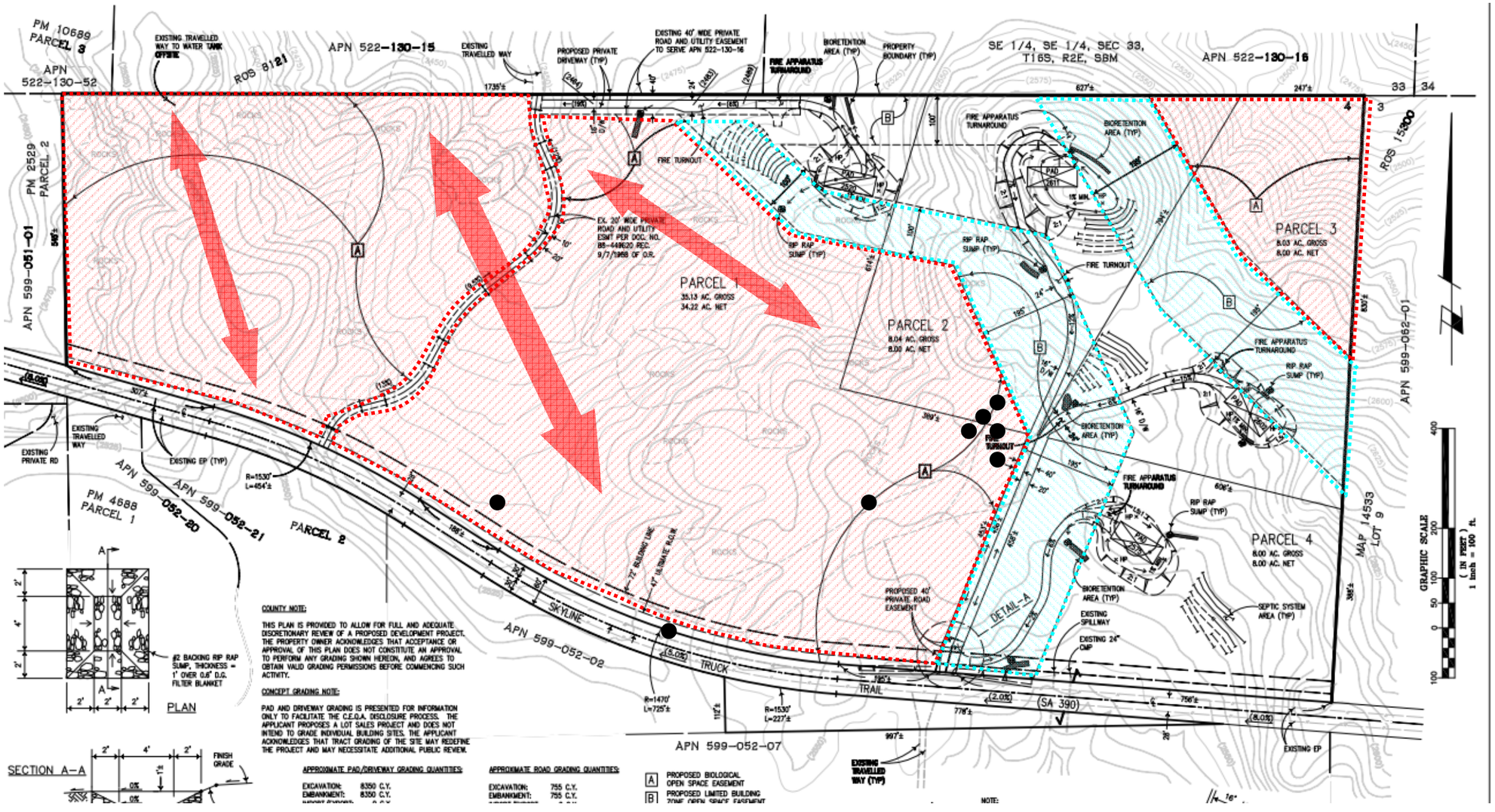


FIGURE 4. HIGH ELEVATION AERIAL PHOTO SHOWING PROJECT SITE AND SURROUNDING LANDS

FIGURE 5. LOW ELEVATION AERIAL PHOTO SHOWING PROJECT SITE AND SURROUNDING LANDS

TABLE 3. OBSERVED SPECIES LIST – FLORA

Scientific Name	Common Name	Vegetation Community
Adenostoma fasciculatum	Chamise	SMC
Ambrosia psilostachya	Western Ragweed	FS
Amsinckia intermedia	Fiddleneck	NNG
Apium graveolens *	Common Celery	FS
Arctostaphylos sp.	Manzanita	SMC
Artemisia californica	California Sagebrush	SMC
Artemisia palmeri	**San Diego Sagewort**	**SCLORF**
Asclepias fasciculatus	Slender-leaved Milkweed	NNG
Avena barbata *	Slender Wild Oat	NNG
Baccharis sarothroides	Broom Baccharis	SMC
Brassica geniculata *	Perennial Mustard	NNG
Bromus diandrus *	Ripgut Brome	NNG
Bromus mollis *	Soft Brome	NNG
Bromus rubens *	Foxtail Brome	NNG
Calycadenia ternata	Rosin Weed	SMC
Carduus tenuiflorus	Italian Thistle	NNG
Ceanothus crassifolius	Thick-leaved Ceanothus	SMC
Ceanothus leucodermis	Buck-brush Lilac	SMC
Centaurea melitensis *	Tocalote	NNG
Cercocarpus minutiflorus	San Diego Mountain Mahogany	SMC
Cirsium vulgare *	Bull Thistle	NNG
Clarkia sp.	Clarkia	SCLORF
Conyza canadensis *	Common Horseweed	NNG
Cordylanthus filifolius	Chaparral Bird's-beak	SMC
Cynara cardunculus *	Wild Artichoke	NNG
Daucus pusillus	Rattlesnake Weed	NNG
Eremocarpus setigerus	Dove Weed	NNG
Ericameria sp.	Goldenbush	SMC
Eriodictyon crassifolium	Hairy-leaf Yerba Santa	SMC
Eriogonum fasciculatum	Flat-top Buckwheat	SMC
Eriophyllum confertiflorum	Golden Yarrow	SMC
Erodium sp.	Stork's-bill	NNG
Festuca megalura *	Foxtail Fescue	NNG

TABLE 3. OBSERVED SPECIES LIST – FLORA (continued)

Scientific Name	Common Name	Vegetation Community
Filago gallica *	Narrow-leaf Filago	NNG
Gastridium ventricosum *	Nitgrass	FS
Gnaphalium californicum	California Cudweed	SMC
Gnaphalium canescens	Fragrant Everlasting	SMC
Gutierrezia californica	California Matchweed	SMC
Haplopappus squarrosus	Hazardia	NNG
Helianthus annuus *	Common Sunflower	DH
Heteromeles arbutifolia	Toyon	SMC
Heterotheca grandiflora *	Telegraph Weed	NNG
Juncus sp.	Rush	FS
Lactuca serriola *	Wild Lettuce	DH
Lamarckia aurea *	Goldentop	SMC
Lonicera subspicata	Wild Honeysuckle	SMC
Lotus hamatus	Grab Lotus	NNG
Lotus purshianus	Spanish Clover	NNG
Lotus scoparius	Deerweed	NNG
Malosma laurina	Laurel Sumac	SMC
Muhlenbergia rigens	Deer Grass	FS
Navarretia hamata	Skunkweed	SMC
Pellaea mucronata	Bird's-foot Fern	SMC
Pennisetum setaceum *	African Fountain Grass	DH
Penstemon sp.	Penstemon	SMC
Phacelia cicutaria hispida	Caterpillar Phacelia	SMC
Pityrogramma triangularis var. *viscosa*	Silverback Fern	SMC
Potentilla glandulosa	Cinquefoil	SCLORF
Prunus ilicifolia	Holly-leaf Cherry	SMC
Quercus agrifolia	Coast Live Oak	SCLORF
Quercus berberidifolia x engelmannii	Hybrid Oak	SMC
Quercus berberidifolia	Interior Scrub Oak	SMC
Rhamnus crocea	Redberry	SMC
Rhus ovata	Sugarbush	SMC
Ribes indecorum	Winter Currant	SMC
Rumex crispus *	Curly Dock	FS

TABLE 3. OBSERVED SPECIES LIST – FLORA (continued)

Scientific Name	Common Name	Vegetation Community
Salix lasiolepis	Arroyo Willow	SCLORF
Salvia apiana	White Sage	SMC
Salvia columbariae	Chia	SMC
Sambucus mexicanus	Elderberry	SMC
Corethrogyne filaginifolia var. *virgata*	Sand Aster	SMC
Scrophularia californica ssp. floribunda	Bee Plant	SMC
Selaginella bigelovii	Bigelow's Spikemoss	SMC
Stachys rigida	Stachys	NNG
Stephanomeria virgata	Stephanomeria	NNG
Stipa lepida	Foothill Stipa	SMC
Toxicodendron diversilobum	Poison Oak	SCLORF
Trichostema lanceolatum	Vinegar Weed	NNG
Xylococcus bicolor	Mission Manzanita	SMC
Yucca whipplei	Our Lord's Candle	SMC

Total = 80 species of plants detected

* = non-native taxon

bold = sensitive taxon (1 species)

Vegetation community codes:

NNG – Non-native Grassland

SCLORF – Southern Coast Live Oak Riparian Forest

DH – Disturbed Habitat

FS – Freshwater Seep

SMC – Southern Mixed Chaparral

U/D – Urban/Developed Habitat

TABLE 4. OBSERVED SPECIES LIST – FAUNA

Scientific Name	Common Name
Birds	
Accipiter cooperii	**Cooper's Hawk**
Aphelocoma coerulescens	Scrub Jay
Archilochus anna	Anna's Hummingbird
Carduelis psaltria	Lesser Goldfinch
Carpodacus mexicanus	Housefinch
Cathartes aura	**Turkey Vulture**
Chamaea fasciata	Wrentit
Hirundo pyrrhonota	Cliff Swallow
Phainopepla nitens	Phainopepla
Pipilo crissalis	California Towhee
Pipilo erythrophthalmus	Rufous-sided Towhee
Thryomanes bewickii	Bewick's Wren
Toxostoma redivivum	California Thrasher
Mammals	
Canis latrans	Coyote
Lynx rufus	**Bobcat**
Neotoma sp.	Woodrat
Spermophilus beecheyi	California Ground Squirrel
Sylvilagus audubonii	Desert Cottontail
Thomomys bottae	Valley Pocket Gopher
Reptiles	
Cnemidophorus tigris multiscutatus	**Coastal Western Whiptail**
Phrynosoma coronatum blainvillei	**San Diego Coast Horned Lizard**
Sceloporus occidentalis	Western Fence Lizard
Butterflies	
Adelpha bredowii californica	California Sister
Apodemia mormo virgulti	Behr's Metalmark
Artogeia rapae	Cabbage White
Charidryas gabbii	Gabb's Checkerspot

TABLE 4. OBSERVED SPECIES LIST – FAUNA

Scientific Name	Common Name
Butterflies (cont)	
Colias eurytheme	Alfalfa Butterfly
Erynnis sp.	Duskywing
Erynnis funeralis	Funereal Duskywing
Icaricia acmon	Acmon Blue
Incisalia augusta	Brown Elfin
Leptotes marina	Marine Blue
Lycaeides melissa	Melissa Blue
Lycaena hermes	**Hermes Copper**
Junonia coenia	Buckeye
Papilio rutulus	Western Tiger Swallowtail
Papilio eurymedon	Pale Swallowtail
Pontia protodice	Common White
Satyrium tetra	Mountain Mahogany Hairstreak
Vanessa virginiensis	Virginia Lady

Total = 40 animals (13 birds, 6 mammals, 3 reptiles, and 18 butterflies) detected

bold = sensitive taxon (6 species)

TABLE 5. POTENTIAL SENSITIVE SPECIES – FLORA

Scientific Name	Common Name	Sensitivity Code & Status	Coastal Sage Scrub	Mixed Chaparral	Grassland	Riparian	Oak Woodland	Chamise Chaparral	Mixed Conifer	Closed Cone Forest	Piñon-Juniper	Freshwater Marsh	Desert Scrub	Desert Wash	Salt or Alkali Marsh	Vernal Pools	Montane Meadow	Coastal or Desert Dune	Lakes and Bays	Verified Onsite / Focused Survey Results	Potential to Occur Onsite	Factual Basis for Determination
Acanthomintha ilicifolia	San Diego Thornmint	Federal, State, County Group A, Narrow Endemic	X		X			X								X			X	**Neg**	**L**	**1a**
Arctostaphylos otayensis	Otay Manzanita	County Group A		X						X										**Neg**	**L**	**1a**
Astragalus deanei	Dean's Milkvetch	County Group A	X		X	X		X											X	**Neg**	**L**	**1a**
Brodiaea orcuttii	Orcutt's brodiaea	County Group A			X	X	X	X								X				**Neg**	**M**	**3a**
Calochortus dunnii	Dunn's mariposa lily	State, County Group A, Narrow Endemic		X				X		X										**Neg**	**L**	**1a**
Chamaebatia australis	Southern mountain misery	County Group D		X				X												**Neg**	**L**	**1a**
Chorizanthe leptotheca	Peninsular spine flower	County Group D		X				X												**Neg**	**L**	**1a**
Clarkia delicata	Campo clarkia	County Group A					X													**Neg**	**M**	**2b**
Comarostaphylos diversifolia	Summer holly	County Group A		X						X										**Neg**	**L**	**1b**
Cupressus forbesii	Tecate cypress	County Group A		X						X										**Neg**	**L**	**1b**
Gilia caruifolia	Caraway leaved gilia	County Group D			X			X	X											**Neg**	**L**	**1a**
Harpagonella palmeri	Palmer's grappling hook	County Group D	X		X			X											X	**Neg**	**L**	**1b**
Hemizonia floribunda	Tecate tarplant	County Group A			X	X														**Neg**	**L**	**1b**

TABLE 5. POTENTIAL SENSITIVE SPECIES – FLORA

Scientific Name	Common Name	Sensitivity Code & Status	Coastal Sage Scrub	Mixed Chaparral	Grassland	Riparian	Oak Woodland	Chamise Chaparral	Mixed Conifer	Closed Cone Forest	Piñon-Juniper	Freshwater Marsh	Desert Scrub	Desert Wash	Salt or Alkali Marsh	Vernal Pools	Montane Meadow	Coastal or Desert Dune	Lakes and Bays	Verified Onsite / Focused Survey Results	Potential to Occur Onsite	Factual Basis for Determination
Horkelia truncata	Ramona horkelia	County Group A		X																**Neg**	**L**	**1a**
Lathyrus splendens	Pride of California	County Group D		X		X		X												**Neg**	**L**	**1a**
Lepechinia ganderi	Gander's pitcher sage	County Group A, Narrow Endemic		X																**Neg**	**L**	**1b**
Lotus crassifolius otayensis	Otay mountain lotus	County Group A		X						X										**Neg**	**L**	**1a**
Monardella hypoleuca lanata	Felt leaved rock mint	County Group A		X				X												**Neg**	**L**	**1a**
Nolina interrata	Dehesa beargrass	State, County Group A, Narrow Endemic		X				X												**Neg**	**L**	**1a**
Piperia leptopetala	Narrow-petaled rein orchid	County Group D		X			X	X	X											**Neg**	**L**	**2b**
Polygala cornuta fishiae	Fish's milkwort	County Group D		X				X												**Neg**	**L**	**1b**
Quercus cedrosensis	Cedros Island oak	County Group A		X						X										**Neg**	**L**	**1b**
Quercus engelmannii	Engelmann oak	County Group D				X	X													**Neg**	**L**	**1b**
Ribes canthariforme	Morena currant	County Group A		X																**Neg**	**L**	**1b**
Satureja chandleri	San Miguel savory	County Group A		X				X												**Neg**	**L**	**1a**
Senecio ganderi	Gander's butterweed	State, County Group A		X				X												**Neg**	**L**	**1a**
Tetracoccus dioicus	Parry's tetracoccus	County Group A		X				X												**Neg**	**L**	**1a**

TABLE 6. POTENTIAL SENSITIVE SPECIES – FAUNA

Scientific Name	Common Name	Sensitivity Code & Status	Coastal Sage Scrub	Mixed Chaparral	Grassland	Riparian	Oak Woodland	Chamise Chaparral	Mixed Conifer	Closed Cone Forest	Piñon-Juniper	Freshwater Marsh	Desert Scrub	Desert Wash	Salt or Alkali Marsh	Vernal Pools	Montane Meadow	Coastal or Desert Dune	Lakes and Bays	Verified Onsite / Focused Survey Results	Potential to Occur Onsite	Factual Basis for Determination
Accipiter cooperi	Cooper's hawk	County	X	X	X	X	X	X	X	X							X			**Pos / Direct**	**O**	**--**
Accipiter striatus	Sharp-shinned hawk	County	X	X		X	X	X	X	X										**Neg**	**M**	**2a**
Agelaius tricolor	Tricolored blackbird	County			X	X						X								**Neg**	**L**	**1a**
Ammodramus savannarum	Grasshopper sparrow	County			X															**Neg**	**1**	**1a**
Amphispiza belli belli	Bell's sage sparrow	County	X	X				X												**Neg**	**M**	**2a**
Anniella pulchra pulchra	Silvery legless lizard	County	X		X	X												X		**Neg**	**L**	**1a**
Antrozous pallidus	Pallid bat	County	X	X	X	X	X	X	X	X	X		X	X			X			**Neg**	**M**	**2a**
Aquila chrysaetos	Golden eagle	County, Narrow Endemic	X	X	X		X	X	X	X	X									**Neg**	**L**	**1a**
Bassariscus astutus	Ringtail	County		X		X	X	X												**Neg**	**M**	**2a**
Buteo lineatus	Red-shouldered hawk	County				X	X													**Neg**	**M**	**2a**
Cathartes aura	Turkey vulture	County	X	X	X	X	X	X	X	X										**Pos / Direct**	**O**	**--**
Chaetodipus californicus femoralis	Dulzura California pocket mouse	County	X	X	X		X	X	X											**Neg**	**M**	**2a**
Chaetodipus fallax fallax	Northwestern San Diego pocket mouse	County	X	X	X			X					X	X						**Neg**	**L**	**1a**
Charina trivirgata roseofusca	Coastal rosy boa	County	X	X			X	X												**Neg**	**M**	**2a**

TABLE 6. POTENTIAL SENSITIVE SPECIES – FAUNA

Scientific Name	Common Name	Sensitivity Code & Status	Coastal Sage Scrub	Mixed Chaparral	Grassland	Riparian	Oak Woodland	Chamise Chaparral	Mixed Conifer	Closed Cone Forest	Piñon-Juniper	Freshwater Marsh	Desert Scrub	Desert Wash	Salt or Alkali Marsh	Vernal Pools	Montane Meadow	Coastal or Desert Dune	Lakes and Bays	Verified Onsite / Focused Survey Results	Potential to Occur Onsite	Factual Basis for Determination
Circus cyaneus hudsonius	Northern harrier	County	X		X							X			X					**Neg**	**M**	**2a**
Cnemidophorus hyperythrus	Orange-throated whiptail	County	X	X	X	X		X												**Neg**	**L**	**1a**
Cnemidophorus tigris multiscutatus	Coastal western whiptail	County		X		X	X	X												**Pos / Direct**	**O**	**--**
Corynorhinus townsendii	Townsend's big-eared bat	County		X	X	X	X	X	X	X	X		X	X			X			**Neg**	**M**	**2a**
Crotalus ruber ruber	Northern red diamond rattlesnake	County	X	X				X			X		X							**Neg**	**M**	**2a**
Danaus plexippus	Monarch butterfly	County		X	X		X										X			**Neg**	**H**	**3a**
Diadophis punctatus similis	San Diego ringneck snake	County	X	X		X	X	X	X	X										**Neg**	**H**	**3a**
Elanus caeruleus	Black-shouldered kite	County			X	X														**Neg**	**M**	**2a**
Ensatina eschscholtzii klauberi	Large-blotched salamander	County				X	X		X											**Neg**	**L**	**1a**
Eumeces skiltonianus interparietalis	Coronado Skink	County	X	X		X	X	X	X	X										**Neg**	**H**	**3a**
Eumops perotis californicus	Greater western mastiff bat	County	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	**Neg**	**M**	**2a**
Euphydryas editha quino	Quino checkerspot butterfly	Federal, County, Narrow Endemic	X	X	X			X					X			X				**Neg**	**M**	**2a**
Felis concolor	Mountain lion	County	X	X		X	X	X	X	X	X		X	X			X			**Neg**	**M**	**2a**
Lanius ludovicianus	Loggerhead shrike	County	X		X	X	X						X	X						**Neg**	**M**	**2a**

TABLE 6. POTENTIAL SENSITIVE SPECIES – FAUNA

Scientific Name	Common Name	Sensitivity Code & Status	Coastal Sage Scrub	Mixed Chaparral	Grassland	Riparian	Oak Woodland	Chamise Chaparral	Mixed Conifer	Closed Cone Forest	Piñon-Juniper	Freshwater Marsh	Desert Scrub	Desert Wash	Salt or Alkali Marsh	Vernal Pools	Montane Meadow	Coastal or Desert Dune	Lakes and Bays	Verified Onsite / Focused Survey Results	Potential to Occur Onsite	Factual Basis for Determination
Larus californicus	California gull (Non-breeding)	County			X							X			X		X	X	X	**Neg**	**L**	**1a**
Lepus californicus bennettii	San Diego black-tailed jackrabbit	County				X	X		X	X							X			**Neg**	**L**	**1a**
Lycaena hermes	Hermes copper	County	X	X	X		X	X	X	X										**Pos / Direct**	**O**	**--**
Myotis ciliolabrum	Small-footed myotis	County	X	X				X												**Neg**	**M**	**2a**
Myotis evotis	Long eared myotis	County		X		X	X	X	X	X	X			X			X			**Neg**	**M**	**2a**
Myotis thysanodes	Fringed myotis	County		X		X	X	X	X	X	X						X			**Neg**	**M**	**2a**
Myotis volans	Long legged myotis	County		X		X	X	X	X	X	X						X			**Neg**	**M**	**2a**
Myotis yumanensis	Yuma myotis	County		X		X	X	X	X	X	X						X			**Neg**	**M**	**2a**
Neotoma lepida intermedia	San Diego desert woodrat	County	X	X	X	X	X	X	X	X	X	X			X	X	X		X	**Neg**	**M**	**2a**
Nyctinomops macrotis	Big free-tailed bat	County	X	X		X	X	X												**Neg**	**M**	**2a**
Nyctinomops femorosaccus	Pocketed free-tailed bat	County	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	**Neg**	**M**	**2a**
Odocoileus hemionus	Southern mule deer	County	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	**Neg**	**M**	**2a**
Onychomys torridus ramona	Southern grasshopper mouse	County	X	X	X	X	X	X	X	X	X		X	X			X			**Neg**	**M**	**2a**
Phrynosoma coronatum blainvillei	San Diego coast horned lizard	County	X	X	X			X												**Pos / Direct**	**O**	**--**

TABLE 6. POTENTIAL SENSITIVE SPECIES – FAUNA

Scientific Name	Common Name	Sensitivity Code & Status	Coastal Sage Scrub	Mixed Chaparral	Grassland	Riparian	Oak Woodland	Chamise Chaparral	Mixed Conifer	Closed Cone Forest	Piñon-Juniper	Freshwater Marsh	Desert Scrub	Desert Wash	Salt or Alkali Marsh	Vernal Pools	Montane Meadow	Coastal or Desert Dune	Lakes and Bays	Verified Onsite / Focused Survey Results	Potential to Occur Onsite	Factual Basis for Determination
Salvadora hexalepis virgultea	Coast patch-nosed snake	County	X	X	X			X												**Neg**	**H**	**3a**
Scaphiopus hammondii	Western spadefoot toad	County	X	X				X			X									**Neg**	**M**	**2a**
Sialia mexicana	Western bluebird	County				X	X		X											**Neg**	**M**	**2a**
Taxidea taxus	American badger	County	X	X	X		X	X	X		X		X	X			X			**Neg**	**M**	**2a**

;

Probability of Occurrence Codes for Tables 5 and 6:

L – Low Probability; rare species in area. Most of these species occur on habitat not found on the TM 5421 site, including vernal pools, coastal dunes , etc. California Red-legged Frogs and Tricolored Blackbird are two examples of species that fit into this category. Both are very rare in southern California.

M – Moderate Probability. Most of these species occur in habitat similar to that found onsite, although they may or may not utilize the TM 5421 property. Native bats and uncommon but cryptic reptiles are examples of species that have a moderate probability of occurring onsite

H – High Probability. Most of these species are expected to use the site, but are difficult to reliably detect. Examples include fossorial reptiles, wide-ranging birds of prey, etc.

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 - could be expected to occur onsite on at least an occasional basis, based on habitat quality (animal);

2b - could occur onsite but rare; habitat poorly known by science (plant)

3a - nearly certain to occur onsite on a regular basis (animals), but cryptic;

3b - ephemeral species known from the immediate vicinity, but seasonal in occurrence (plant)

ATTACHMENT A

CALIFORNIA NATURAL DIVERSITY DATA BASE FORMS
AS SUBMITTED TO THE CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

Mail to:
California Natural Diversity Database
Department of Fish and Game
1807 13th Street, Suite 202
Sacramento, CA 95814
Fax: (916) 324-0475 email: CNDDB@dfg.ca.gov

Date of Field Work (mm/dd/yyyy): 06/19/2009

For Office Use Only
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Lycaena hermes*

Common Name: Hermes Copper

Species Found? ☑ Yes ☐ No _____ If not, why?

Total No. Individuals 4 Subsequent Visit? ☐ yes ☑ no

Is this an existing NDDB occurrence? _____ Yes, Occ. # ☑ no ☐ unk.

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Vince Scheidt
Address: 3158 Occidental Street
San Diego CA 92122
E-mail Address: vince@san.rr.com
Phone: (858) 457-3873

Plant Information

Phenology: _____% vegetative _____% flowering _____% fruiting

Animal Information

4 # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown

☐ breeding ☐ wintering ☐ burrow site ☐ rookery ☐ nesting ☐ other

Location Description ***(please attach map AND/OR fill out your choice of coordinates, below)***

County: Dulzura, California Landowner / Mgr.: Private
Quad Name: Rancho Santa Fe 7.5' Elevation: ~2,500' MSL
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): GPS
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ GPS Make & Model Iphone 4S
DATUM: NAD27 ☐ NAD83 ☐ WGS84 ☐ Horizontal Accuracy 60' meters/feet
Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☐ ***OR*** Geographic (Latitude & Longitude) ☑
Coordinates: 32°43'36.87"N
116°46'28.11"W

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Four specimens observed necturing on buckwheat shrubs in the nearby presence of redberry shrubs. Surrounding mixed chaparral with some non-native grassland vegetation. Site relatively flat.

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): ☐ Excellent ☑ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use:

Visible disturbances: Trailers and brush clearing in some areas.

Threats: Site to be developed for single family homes.

Comments: Single scape observed, but probably ~20 corms in this location. Many others are located to the northwest in a larger patch of native grassland.

Determination: *(check one or more, and fill in blanks)*

- ☐ Keyed (cite reference): _____
- ☐ Compared with specimen housed at: _____
- ☐ Compared with photo / drawing in: _____
- ☐ By another person (name): _____
- ☐ Other: _____

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	☐	☐	☑
Habitat	☐	☐	☑
Diagnostic feature	☐	☐	☑

May we obtain duplicates at our expense? yes ☑ no ☐

Mail to:
California Natural Diversity Database
Department of Fish and Game
1807 13th Street, Suite 202
Sacramento, CA 95814
Fax: (916) 324-0475 email: CNDDB@dfg.ca.gov

Date of Field Work (mm/dd/yyyy): 06/19/2009

For Office Use Only
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Artemisia palmeri*

Common Name: San Diego Sagewort

Species Found? ☑ Yes ☐ No _____ If not, why?

Total No. Individuals 300+ Subsequent Visit? ☐ yes ☑ no

Is this an existing NDDB occurrence? _____ Yes, Occ. # ☑ no ☐ unk.

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Vince Scheidt
Address: 3158 Occidental Street
San Diego CA 92122
E-mail Address: vince@san.rr.com
Phone: (858) 457-3873

Plant Information

Phenology: 100 % vegetative _____ % flowering _____ % fruiting

Animal Information

_____ # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown

☐ breeding ☐ wintering ☐ burrow site ☐ rookery ☐ nesting ☐ other

Location Description ***(please attach map AND/OR fill out your choice of coordinates, below)***

County: Dulzura, California Landowner / Mgr.: Private
Quad Name: Rancho Santa Fe 7.5' Elevation: ~2,500' MSL
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): GPS
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ GPS Make & Model Iphone 4S
DATUM: NAD27 ☐ NAD83 ☐ WGS84 ☐ Horizontal Accuracy 60' meters/feet
Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☐ ***OR*** Geographic (Latitude & Longitude) ☑
Coordinates: 32°43'43.90"N
116°46'34.23"W

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

This plant occurs in semi-xeric riparian habitats, including riparian woodlands, sheltered but dry drainages, and in chaparral on north-facing slopes in interior areas. Several hundred specimens are found onsite in mesic locations along the existing paved road. Surrounding vegetation is oak woodland, southern mixed chaparral, and some non-native grassland vegetation. Site is gently sloping.

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): ☐ Excellent ☑ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use:

Visible disturbances: Trailers and brush clearing in some areas.

Threats: Road bisects population

Comments:

Determination: *(check one or more, and fill in blanks)*

☐ Keyed (cite reference): _____
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☐ Other: _____

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	☐	☐	☑
Habitat	☐	☐	☑
Diagnostic feature	☐	☐	☑

May we obtain duplicates at our expense? yes ☑ no ☐

Mail to:
California Natural Diversity Database
Department of Fish and Game
1807 13th Street, Suite 202
Sacramento, CA 95814
Fax: (916) 324-0475 email: CNDDB@dfg.ca.gov

Date of Field Work (mm/dd/yyyy): 06/24/2009

For Office Use Only
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Phrynosoma coronatum blainvillei*

Common Name: San Diego Coast Horned Lizard

Species Found? ☑ Yes ☐ No _____ If not, why?

Total No. Individuals 2 Subsequent Visit? ☐ yes ☑ no

Is this an existing NDDB occurrence? _____ Yes, Occ. # ☑ no ☐ unk.

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Vince Scheidt
Address: 3158 Occidental Street
San Diego CA 92122
E-mail Address: vince@san.rr.com
Phone: (858) 457-3873

Plant Information

Phenology: _____% vegetative _____% flowering _____% fruiting

Animal Information

# adults	# juveniles	# larvae	# egg masses	# unknown
	2			

☐ breeding ☐ wintering ☐ burrow site ☐ rookery ☐ nesting ☐ other

Location Description ***(please attach map AND/OR fill out your choice of coordinates, below)***

County: Dulzura, California Landowner / Mgr.: Private
Quad Name: Rancho Santa Fe 7.5' Elevation: ~2,500' MSL
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): GPS
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ GPS Make & Model Iphone 4S
DATUM: NAD27 ☐ NAD83 ☐ WGS84 ☐ Horizontal Accuracy 60' meters/feet
Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☐ ***OR*** Geographic (Latitude & Longitude) ☑
Coordinates: 32°43'42.84"N
116°46'42.18"W

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Two juvenile specimens observed on dirt roads with surrounding vegetation consisting of southern mixed chaparral and non-native grassland. Site is flat to gently sloping.

Other rare taxa seen at THIS site on THIS date:
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): ☐ Excellent ☑ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use:

Visible disturbances: Trailers and brush clearing in some areas.

Threats: Road bisects population

Comments:

Determination: *(check one or more, and fill in blanks)*

- ☐ Keyed (cite reference): _____
- ☐ Compared with specimen housed at: _____
- ☐ Compared with photo / drawing in: _____
- ☐ By another person (name): _____
- ☐ Other: _____

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	☐	☐	☑
Habitat	☐	☐	☑
Diagnostic feature	☐	☐	☑

May we obtain duplicates at our expense? yes ☑ no ☐

ATTACHMENT B

REPORT OF A FOCUSED PRESENCE/ABSENCE SURVEY
FOR HERMES COPPER BUTTERFLY

REPORT OF A FOCUSED PRESENCE/ABSENCE SURVEY FOR HERMES COPPER BUTTERFLY (*LYCAENA HERMES*)

THE RENTERIA TPM PROJECT, TPM 21107 RPL2

JAMUL, CALIFORNIA

Prepared for

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INTRODUCTION

This report presents the results of a presence/absence survey for Hermes Copper Butterfly (*Lycaena hermes*), conducted on the Renteria Tentative Parcel Map (TPM) project site. The subject project site is located at 17120 Skyline Truck Trail in the Jamul-Dulzura Community Planning Group area within unincorporated San Diego County, California (Figure 1). The Renteria TPM (TPM 21107 RPL2) project proposes the subdivision of the approximately 59-acre APN 599-052-01 property into four legal lots and a remainder lot. Habitat-types found onsite are Southern Mixed Chaparral (SMC), Southern Coast Live Oak Riparian Forest, Freshwater Seep, Non-native Grassland (NNG), Urban/Developed, and Disturbed Habitat.

Hermes Copper Butterfly is a rare and sensitive butterfly species that is restricted in range to portions of San Diego County and adjacent northwestern Baja California, Mexico. Only 15 populations of the Hermes Copper are known to remain in existence in the United States, with an additional three populations presumed extant in Baja California. This species is currently petitioned for listing under the Federal Endangered Species Act. The subject property is within the known range of the Hermes Copper and supports habitat that is potentially suitable for this species. Therefore, the site was surveyed for the presence or absence of this rare butterfly.

GOAL OF STUDY

The goal of this study was to survey the Renteria TPM project site for the presence or absence of Hermes Copper Butterfly. Any other sensitive species detected during the surveys would be documented. This study has been provided in response to a letter from the San Diego County Department of Planning and Land Use, dated June 8, 2009 and titled “Renteria Minor Subdivision (4 lots); Tentative Parcel Map; TPM 21107 RPL2; ER 07-190-09, FIRST ITERATION REVIEW OF INITIAL STUDIES/INFORMATION”. This letter states, “Hermes Copper has been identified on adjacent properties within 8,000 and 2,000 feet from the subject property. The host plant also occurs onsite, therefore please conduct focused surveys for this species” (Katie Hughes, 2009). This study fulfills that requirement.

METHODS

Although there is no formal U.S. Fish and Wildlife Service survey protocol for Hermes Copper Butterfly, “Hermes Copper (*Lycaena hermes*) Draft Survey Protocol” (Dave K. Faulkner, Michael Klein, and Ken Osborne, May 2008) was used as a general guideline 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. All field surveys were conducted by the author (VS) and Julia Groebner (JG), Field Biologist. Field surveys were completed by slowly walking random transects through all areas of potential habitat on the property. Specimens were visually searched for at all times. Weather conditions were conducive to Hermes Copper Butterfly field surveying on each of the selected dates. Particular attention was paid to areas that had the highest probability of supporting this species (Figure 2), based on the experience of the surveyors. The author has detected other populations of this rare species in the vicinity of the subject project site. Binoculars were used to aid in observations, and all butterfly species detected were noted (Table 2).

A follow-up survey to the 2009 Hermes Copper Butterfly presence/absence survey was conducted in August of 2010. The date and weather conditions of this survey have been added to Table 1. The purpose of this survey was to search for and map the locations of all Redberry (*Rhamnus crocea*) and Flat-top Buckwheat (*Eriogonum fasciculatum*) shrubs present onsite (Figure 4). In order to complete this survey, all accessible areas of the property were slowly walked and the locations of any Redberry or Flat-top Buckwheat shrubs were mapped in the field using a recent aerial photograph of the property. Inaccessible areas were surveyed with binoculars whenever feasible.

Table 1. Field Survey Data – Renteria TPM Project

Date	Hours	Personnel	Conditions
19 June 2009	09:00 – 15:00	VS, JG	clear skies; light westerly wind; temps in the low 80°s
24 June 2009	09:30 – 13:00	VS, JG	clear skies; light westerly wind; temps in the low to high 70°s
6 July 2009	07:45 – 12:30	VS, JG	clear skies; no wind; temps in the low 80°s
31 August 2010	08:30 – 16:30	VS, JG	clear skies; no wind; temps in the low to high 70°s

RESULTS

Hermes Copper Butterfly Habitat Assessment

Hermes Copper Butterfly is species that is endemic to San Diego County and northwestern Baja California, Mexico. This butterfly is dependent on mature stands of Redberry, its only known larval host plant. Redberry is a common hard-woody shrub found in coastal sage scrub and chaparral habitats throughout cismontane southern California and Baja California. Adult Hermes Coppers primarily nectar on Flat-top Buckwheat, but have also been observed nectaring on Chamise (*Adenostoma fasciculatum*), Poison Oak (*Toxicodendron diversilobum*), Golden Yarrow (*Eriophyllum confertiflorum*), Slender Sunflower (*Helianthus gracilentus*), and Short-pod Mustard (*Hershfeldia incana*). Hermes Coppers occur in colonies where their host and nectar plants are intermixed or growing in close proximity to each other.

The Renteria TPM project site supports many patches of Flat-top Buckwheat growing intermixed with or in close proximity to Redberry (Figures 2 & 4). These areas also support lesser numbers of Poison Oak, Chamise, and Golden Yarrow. As shown on Figure 4, the majority of the Flat-top Buckwheat and Redberry shrubs present onsite occur in open, disturbed areas, along trails, or around rock outcrops. These species do not appear to be common in the dense SMC that occurs over most of the property. Flat-top Buckwheat is a dominant or co-dominant species in several areas located mostly along the southern boundary of the property. The majority of the Hermes Copper habitat on the Renteria TPM project site was mapped as NNG in 2006, although the

fringes of the SMC and areas of the SMC that have been disturbed in the past also qualify as suitable habitat. With respect to Hermes Copper occupancy, the quality of the potential onsite habitat is high.

Hermes Copper Butterfly Protocol Surveys

Hermes Copper Butterfly was observed onsite within areas of potential habitat on the first two survey days. On each of these survey days, four Hermes Copper Butterflies were observed, all occurring on the southern and central portions of the property (Figure 3). Butterfly activity was greatly diminished by the third survey day, likely due to high temperatures and the lateness of the season. The property is therefore considered “occupied” by this sensitive species.

Table 2. Butterfly Species Detected – Renteria TPM Project

Scientific Name	Common Name
Adelpha bredowii californica	California Sister
Apodemia mormo virgulti	Behr's Metalmark
Artogeia rapae	Cabbage White
Charidryas gabbii	Gabb's Checkerspot
Colias eurytheme	Alfalfa Butterfly
Erynnis funeralis	Funereal Duskywing
Icaricia acmon	Acmon Blue
Incisalia augusta	Brown Elfin
Leptotes marina	Marine Blue
Lycaeides melissa	Melissa Blue
Lycaena hermes	**Hermes Copper**
Junonia coenia	Buckeye
Papilio rutulus	Western Tiger Swallowtail
Papilio eurymedon	Pale Swallowtail
Pontia protodice	Common White
Satyrium tetra	Mountain Mahogany Hairstreak
Vanessa virginiensis	Virginia Lady

Figure 1. Regional Location – Renteria TPM Project
Portion of the U.S.G.S. "Dulzura, California" 7.5' Quadrangle Map

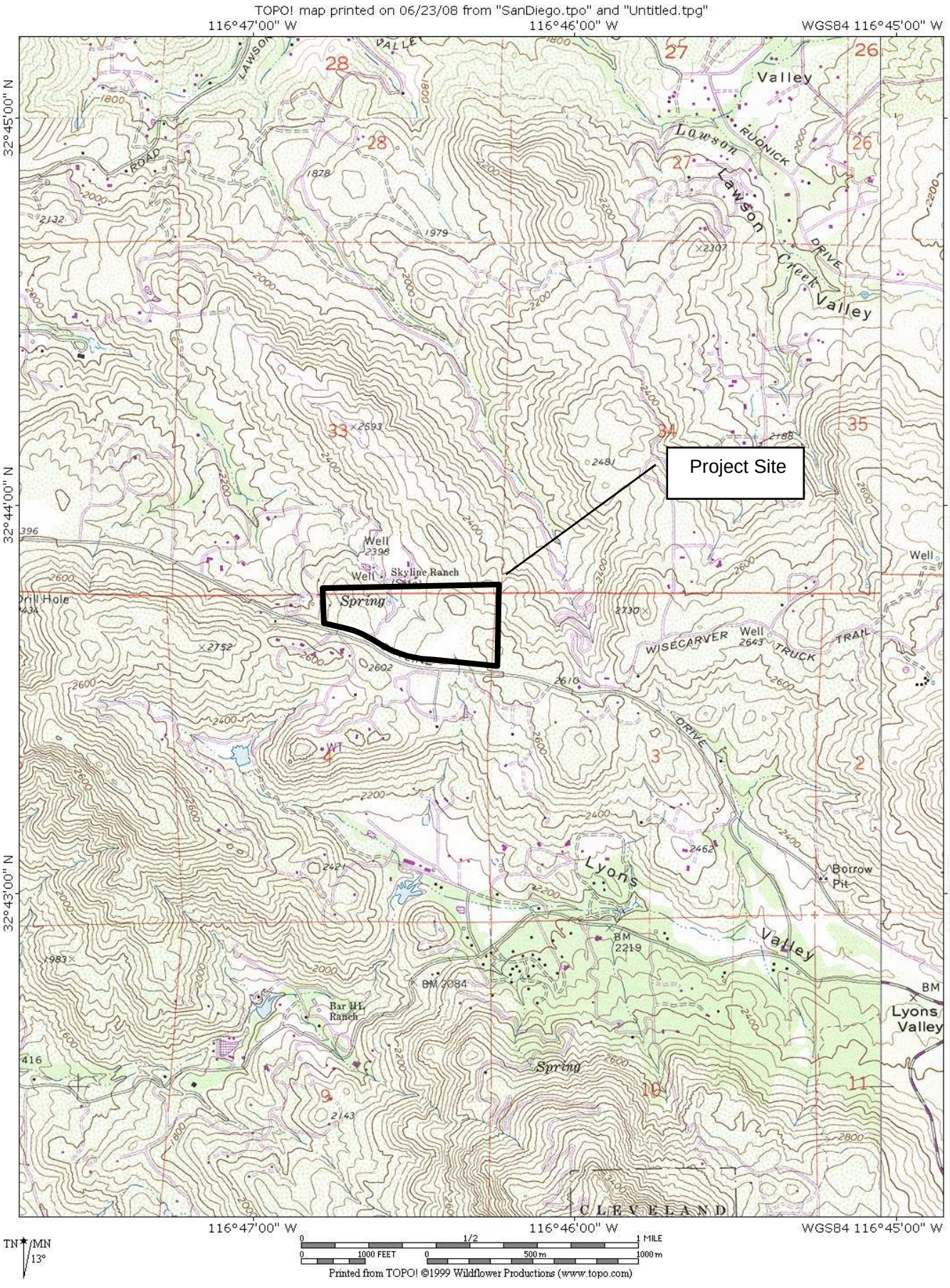


Figure 2. Potential Hermes Copper Butterfly Habitat – Renteria TPM Project

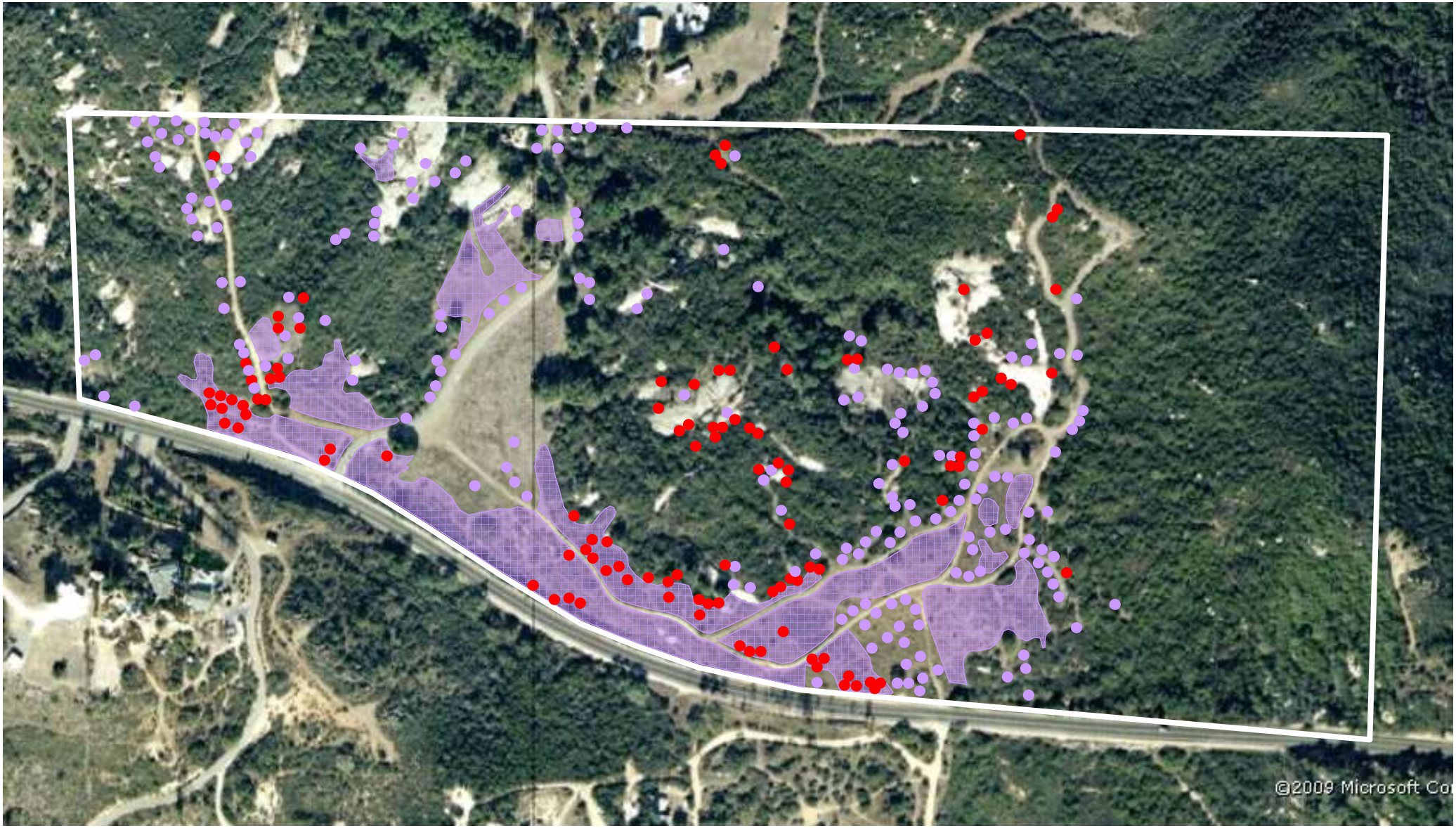
= Existing Potential Hermes Copper Butterfly habitat

Figure 3. Hermes Copper Butterfly Locations – Renteria TPM Project

= Hermes Copper Butterfly sighting – June 19, 2009

= Hermes Copper Butterfly sighting – June 24, 2009

Figure 4. Redberry and Flat-top Buckwheat Locations – Renteria TPM Project



= Redberry Location (may denote the presence of more than one shrub

= Flat-top Buckwheat Location (may denote the presence of more than one shrub

= Area where Flat-top Buckwheat is a dominant or co-dominant species

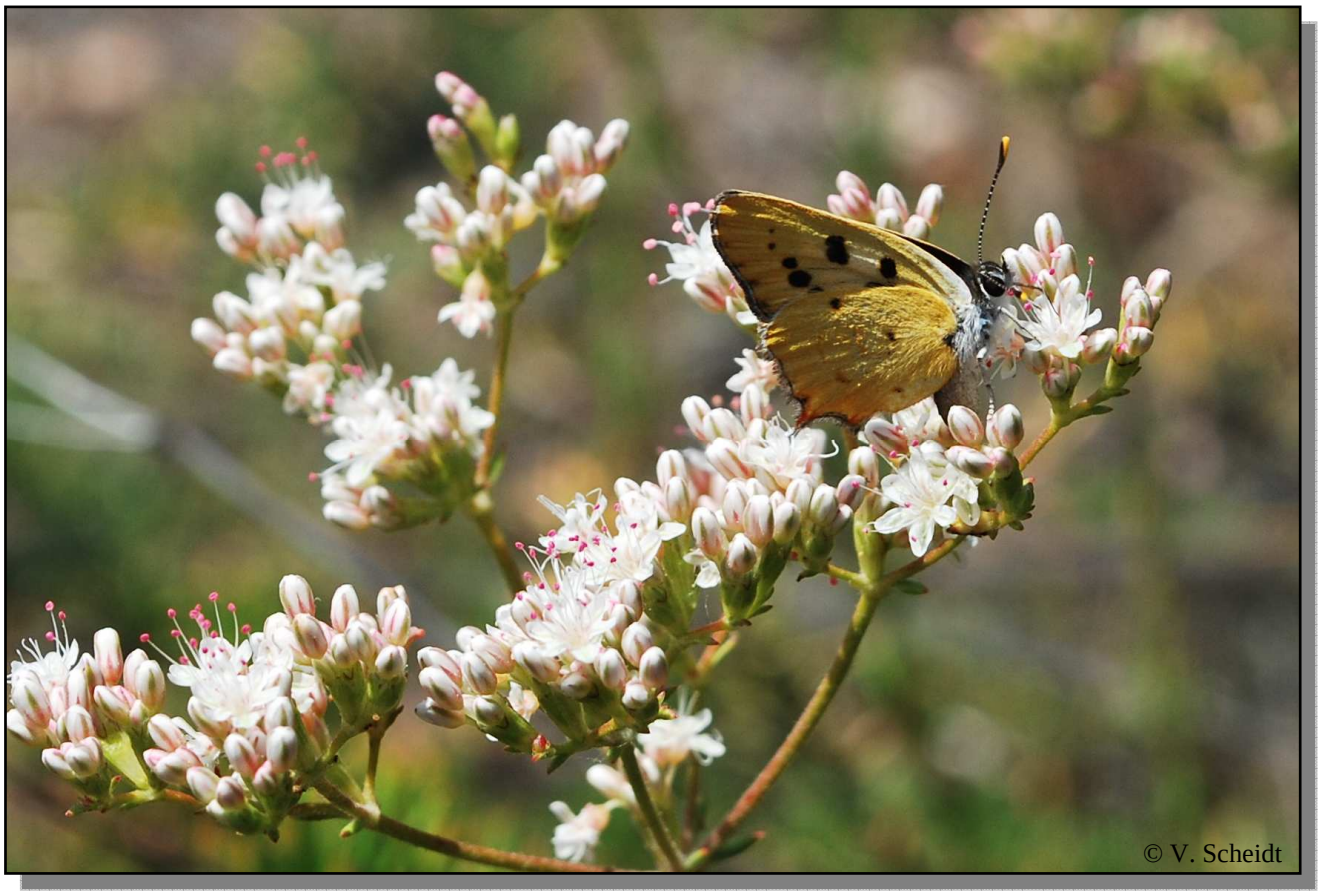


Photo 1. Hermes Copper nectaring on a Flat-top Buckwheat shrub.

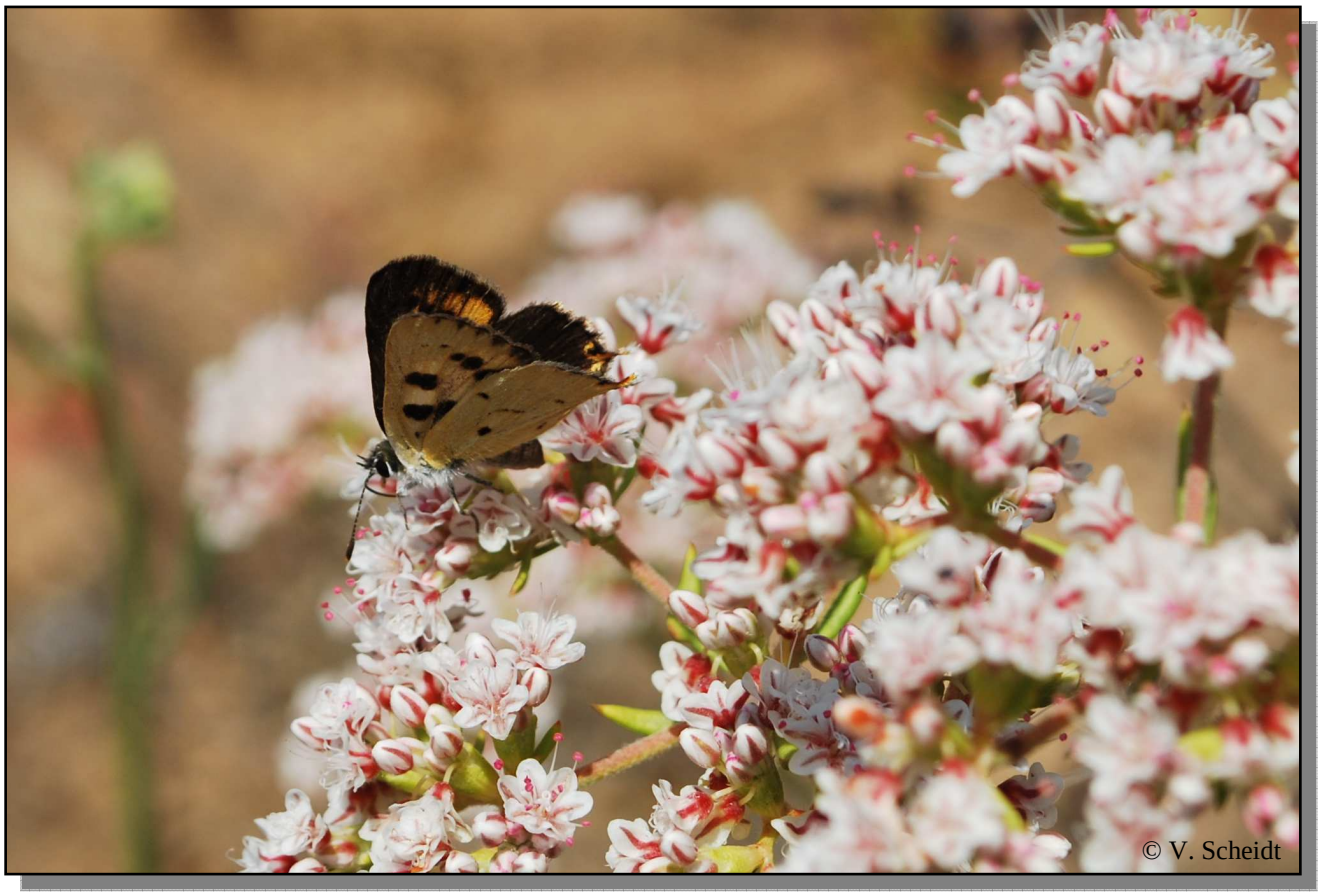


Photo 2. Photo showing the same butterfly depicted above from a different angle.

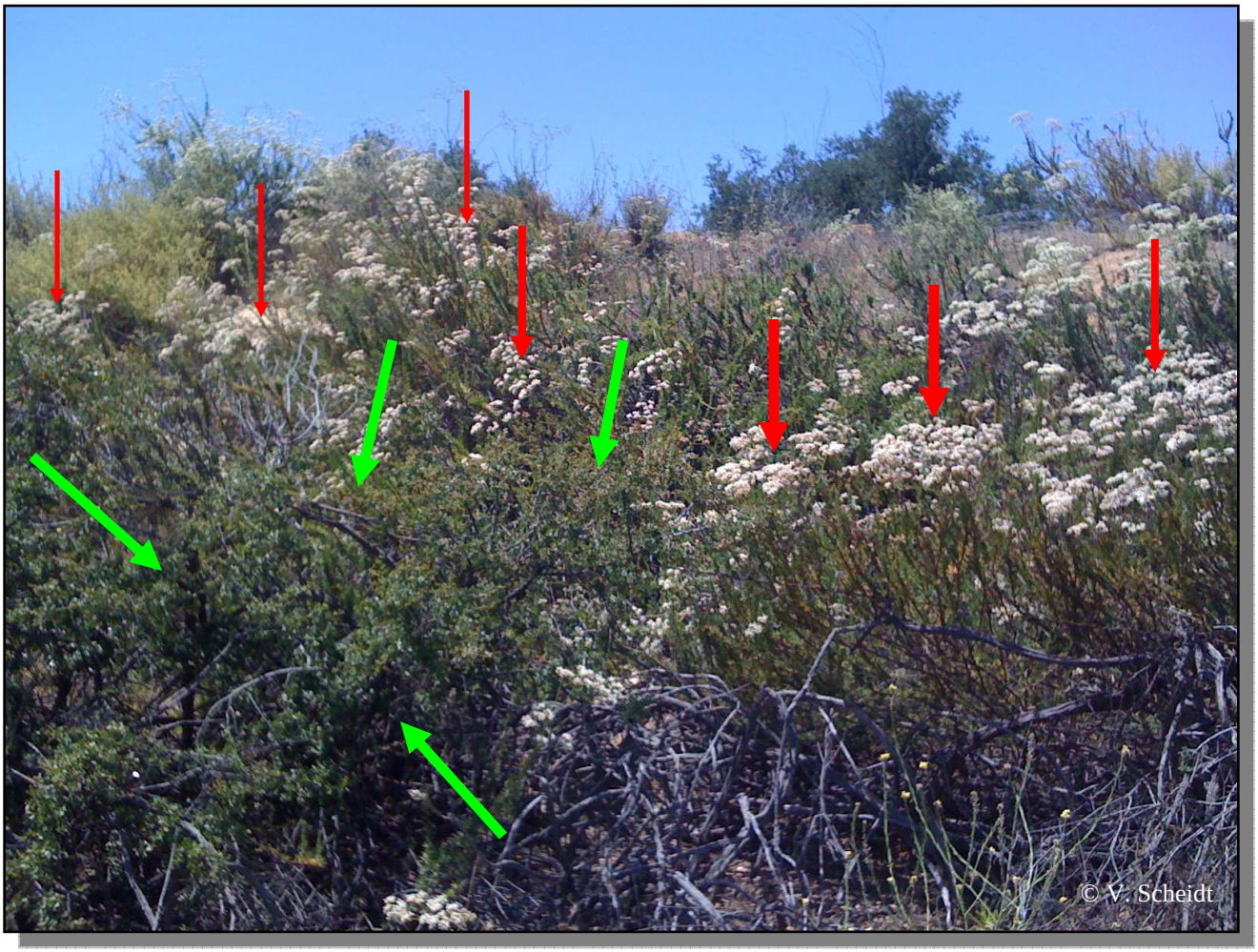


Photo 3. Photo showing a stand of Flat-top Buckwheat shrubs (red arrows - white flowers) immediately adjacent to a Redberry shrub (green arrows - left side of photo).