

Habitat Assessment Survey Report of an 81-Acre Property at Twin Peaks, San Bernardino County, California

Submitted to:

Michelle Genin
PO Box 2239
Running Springs, CA 92382

Submitted by:



ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

215 North Fifth Street
Redlands, CA 92374

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SUMMARY

This report documents the results of a biological survey and habitat assessment conducted by ECORP at a proposed 81-acre undeveloped property at Twin Peaks, California. Currently, the property contains natural habitat consisting of mixed black oak coniferous forest. There are no developments on the property, nor has it been recently disturbed except for a few dirt trails that traverse through the site. The proposed project would include a main house and guest house located in the southwest corner of the property, in addition to access drives to the residences on the site. ECORP Consulting, Inc. conducted a biological reconnaissance survey in order to evaluate presence and/or potential for sensitive species, particularly the southern rubber boa (*Charina umbratica*) and San Bernardino flying squirrel (*Glaucomys sabrinus californicus*), evaluate habitat quality, and to assess jurisdictional waters on the project site.

No sensitive species were directly observed during the site visit. A complete list of plant and animal species observed during the site visit is presented in Appendices A and B, respectively, and a list of sensitive species previously documented in the property region with potential for presence on the site is presented in Appendix C.

Rock outcroppings are present throughout the lower portions of the property along an ephemeral stream within a canyon that runs east to west through the site. The outcroppings contain a few granitic rock and boulder outcrops, mostly embedded in the canyon walls, along with downed logs and leaf litter potentially suitable for sensitive reptiles. Breeding and roosting sites for bird species are present in the numerous mature black oaks found on the property, and several other trees. There were no external tree nests or flying squirrel dreys observed in the trees on the site. No species listed as endangered or threatened were observed on the property.

A small seasonal drainage traverses the site, and would be considered to be jurisdictional to the U.S. Army Corps of Engineers, California Department of Fish and Wildlife and State Water Resources Control Board. This drainage is designated as Dart Creek and is shown as a blue-line stream on National Wetland Inventory mapping. The proposed site plan does not appear to impact this drainage feature, but it is noted that any alteration of the stream channel would require regulatory permitting with state and federal agencies prior to impact.

It is recommended that the project avoid tree clearing during the breeding season for migratory bird species such as raptors and other tree-nesting species, from March 1 through August 31. If avoidance of this timeframe is not possible a clearance survey should be conducted of the property and if any flying squirrel or active migratory bird (or raptor) nests are threatened by tree removal or other development activities, these impacts should be avoided until the nests have been vacated. The County of San Bernardino also must provide approval for the clearing of native trees on the property, as indicated in its ordinances.

1.0 INTRODUCTION

ECORP Consulting, Inc. (ECORP) conducted a biological reconnaissance survey of an 81-acre parcel of land at Twin Peaks, California. There are four parcels within the subject property, consisting of three 5-acre parcels (Parcels B, C, and D) and a 66-acre remainder parcel (Parcel A). The property is currently undergoing review by San Bernardino County for a proposed residential development use of the site. The purpose of the biological reconnaissance survey was primarily to conduct a habitat assessment for the southern rubber boa (*Charina umbratica*) and San Bernardino flying squirrel (*Glaucomys sabrinus californicus*) but also to determine any biological constraints to the proposed project due to sensitive habitats, sensitive plant and animal species or jurisdictional waters. Information on biological resources present at the site were collected during a site visit and a database search was completed to determine if habitat for sensitive plant and wildlife species could occur on the property or in the property vicinity.

1.1 Regional Setting

Twin Peaks has a permanent resident population of about 5,000 people, and hosts a population of part-timers that bolsters this amount to around 10,000 during busy seasons. It lays at an average elevation of about 1,439 meters (4,720 ft) on the southern slopes of the San Bernardino Mountains (city-data.com 2018). The climate of the area is typified by about 40 inches of rainfall, and 80 inches of snow annually. Temperatures range from below freezing in the winter to summer highs in the 80's Fahrenheit.

1.2 Project Location

The property is located in the community of Twin Peaks along North Road between Twin Peaks and Crestline, San Bernardino County, California. The property is accessible by North Road, as well as Chamois Drive, Chillon Drive, Chateau Drive and Jewell Drive. The approximately 81-acre property lies in the southeast quadrant of Section 24, Township 2 north, Range 4 west on the Harrison Mtn. USGS 7.5' quadrangle, San Bernardino baseline and meridian (Figure 1).

1.3 Site characteristics

The site is an undeveloped property with natural habitat consisting of mixed black oak coniferous forest. There are no developments on the property, nor has it been recently disturbed except for a few dirt trails that traverse through the site. Rock outcroppings are present throughout the lower portions of the property along an ephemeral stream within a canyon that runs east to west through the site. Dart Creek, an ephemeral stream, traverses the site. Land uses in the project vicinity are developed with low density, rural residential developments to the west and south with undeveloped lands to the north and east.

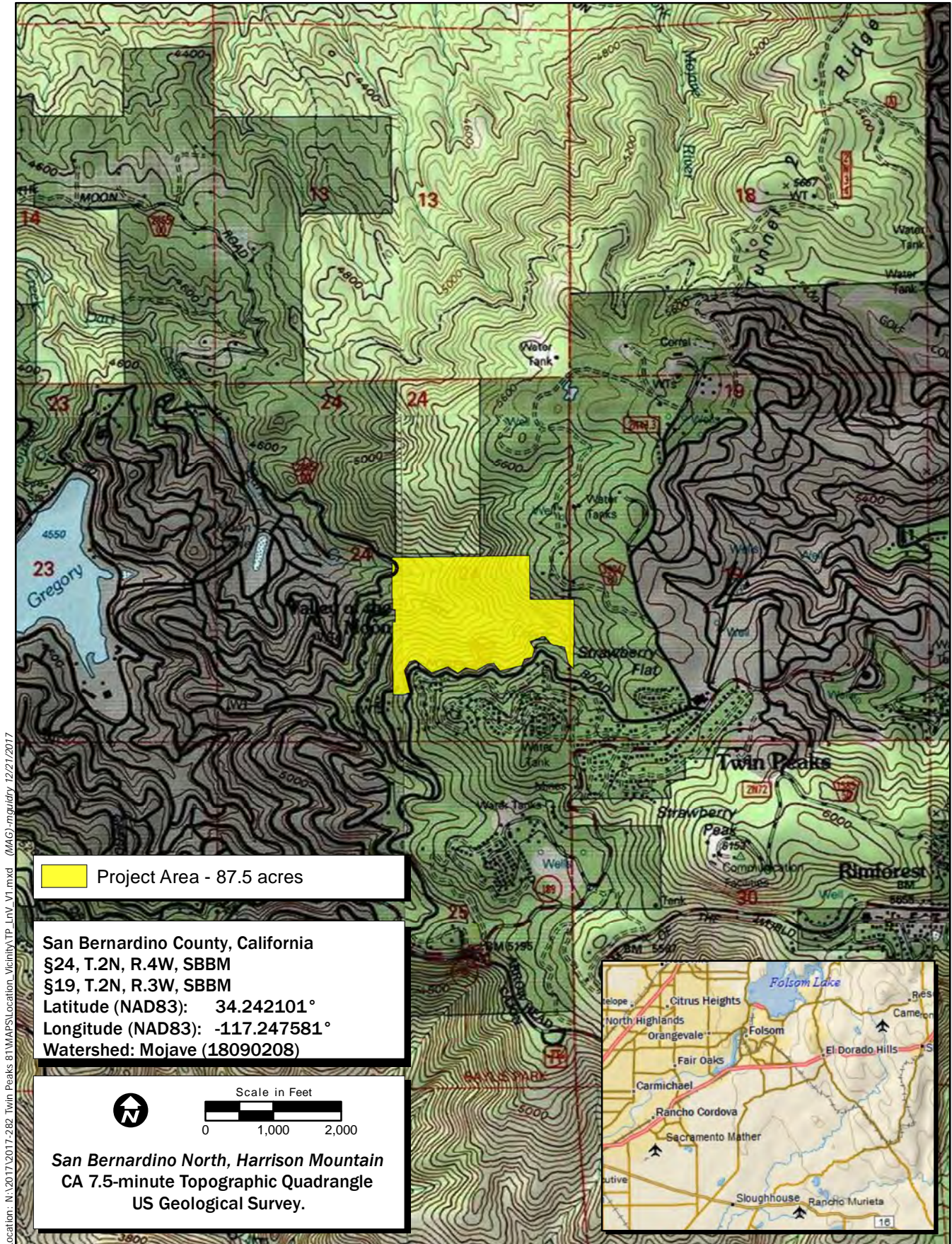


Figure 1. Project Vicinity and Location

1.4 Project Description

The proposed project will develop a residential housing on the property comprised of a primary residence and a guest house with access driveways from Chillon Drive. A dirt drive would come off of Chillon Drive and traverse two graded pad areas for structures. The main house would be 2,200 square feet while the guest house would be 1,100 square feet. The project will require the removal of native vegetation including mature oaks and pines, and grading will also be necessary.

2.0 METHODS

2.1 Literature Search

Prior to conducting the field assessment, a biological resources literature search was conducted for the project area utilizing the California Department of Fish and Wildlife (CDFW) California Native Diversity Data Base (CNDDDB 2018) and the California Native Plant Society (CNPS) Rare Plant Inventory (CNPS 2018) to determine the special-status species that had been documented in the Harrison Mtn. 7.5' minute topographic quadrangle. The search was also extended to the 8 quadrangles surrounding it, to account for other species that had been recorded in similar habitats in the region. Additional species information was obtained from the San Bernardino National Forest Management Plan (USDA 2005).

Species status was determined from the CDFW Special Plants List (CDFW 2018a) and CDFW Special Animals List (CDFW 2018b). Using documented occurrence information, in addition to observations obtained in the field, a list of special-status plant and animal species that may have a potential to occur within the project area is provided in Appendix C. For the purpose of this biological assessment, special-status species are defined as: Plants or animals that have been designated as either rare, threatened, or endangered by CDFW or the U.S. Fish and Wildlife Service (USFWS), and are protected under either the California or Federal Endangered Species Act (ESA); are candidate species being considered or proposed for listing under these same acts; or are fully protected by the California Fish and Game Code, Sections 3511, 4700, 5050, and/or 5515.

Soil types were determined using the Natural Resource Conservation Service's (NRCS's) Web Soil Survey that can be found online at <http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>.

2.1 Biological Reconnaissance Survey

The biological reconnaissance survey was conducted during the day on December 12, 2017 by ECORP biologist Scott Taylor. Plant communities, dominant plant species, wildlife species, and wildlife signs (detections of tree cavities, burrows, scat, tracks, vocalizations, etc.) observed on the project site and in immediately adjacent areas were recorded. During the survey, the site was also searched for areas jurisdictional to the U.S. Army Corps of Engineers (USACE) and/or CDFW as well as State Water Resources Control Board (SWRCB). Weather conditions during the survey are summarized below in Table 1.

Table 1
Weather Conditions during Field Survey

Date	Time		Temperature (°F)		Cloud Cover (%)		Wind Speed
	Start	End	Start	End	Start	End	
12/12/2017	0800	1000	55	60	0	0	0-2 m.p.h.

Plant and wildlife species were identified using a variety of sources, such as:

- *Western Amphibians and Reptiles* (Stebbins 2003),
- *Biotic Communities: Southwestern United States and Northwestern Mexico* (Turner 1994)
- *The Jepson manual* (Hickman 1993)
- *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986)
- *The Sibley Guide to Birds* (Sibley 2000).

3.0 RESULTS

3.1 Soil Characteristics

According to the USDA Natural Resources Conservation Service soil survey, the soils on site are primarily of the Wapi-Pacífico families-Rock outcrop complex, 50 to 75 percent slopes. A hybrid of the Wapi and Pacífico series, this soil type contains 35 and 30 percent respectively of these soil families. The remainder is composed of granitic rock outcroppings. Parent material of this soil is residuum derived from granodiorite. It is usually a soil type that is excessively drained and contains paralithic bedrock at relatively shallow depths.

The project site also contains a small amount of the MbE type Morical-Wind River complex, which is present on 15 to 30 percent slopes in the east and south portions of the property. This soil is derived from alluvial granite, formed through wind and water erosion. It usually also has an ash or loess component from wildfires. These soils are well-drained with moderate to rapid permeability.

Neither of these soil types is considered to be hydric in nature.

3.2 Plant Communities and Plants

The entire 81-acre site consists of open canopy pine-conifer forest and black oak woodland. Dominant tree species on the property in this community include Jeffrey pine (*Pinus jeffreyi*), Ponderosa pine (*Pinus ponderosa*), white fir (*Abies concolor*) and black oak (*Quercus kelloggii*). Along Dart Creek there were also white alders (*Alnus rhombifolia*) and big-leaf maple (*Acer macrophyllum*) present.

Dominant shrubs include coffeeberry (*Frangula californica*), Sierra current (*Ribes nevadense*) and mountain mahogany (*Cercocarpus betuloides*). The herbaceous understory was comprised of abundant oak leaf and pine needle litter, with a few open disturbed areas near North Road. Common understory forbs such as goldenstars (*Bloomeria crocea*) and mountain iris (*Iris hartwegii*), and flea bane aster (*Erigeron foliosus*) were detected on the property, as well as mugwort (*Artemisia douglasiana*). Non-native species observed on the site included cheatgrass (*Bromus tectorum*). Appendix A contains a list of plant species observed during the survey. Representative photographs of the site can be found in Appendix E.

3.4 Wildlife

Wildlife species observed or detected on the project site were mostly natives typical of the San Bernardino National Forest lands. Birds detected on the project site included the Stellar's Jay (*Cyanocitta stelleri*), mountain chickadee (*Parus gambeli*), acorn woodpecker (*Melanerpes formicivorus*) and oak titmouse (*Baeolophus inornatus*). Mammals identified included grey squirrel (*Sciurus carolinensis*), Merriam's chipmunk (*Tamias merriami*) and black bear (*Ursus americanus*). A list of wildlife species observed or detected on the project site is included as Appendix B.

3.4 Sensitive Biological Resources

No listed special-status species were observed on the project site during the site survey. The CNDDDB and CNPSEI biological database single quad search identified a total of 72 sensitive species within the project region. Most of these species are not expected or assumed absent due to lack of suitable habitat on the property or due to elevational restrictions on their distributional ranges. Many species that came up in the search are restricted to wet meadows, seeps, carbonate soils, talus slopes, pebble plain habitats, rivers, or other specialized habitat areas that are absent from the property. Others are not found within the property's elevation range.

The species which were identified in the search that were evaluated for their potential to occur on the property based on the site being within elevational range, having suitable habitat and/or nearness of recorded sightings) included California bedstraw (*Galium californicum* ssp. *primum*), lemon lily (*Lilium parryi*), Andrew's marble butterfly (*Euchloe hyantis andrewsi*), mountain yellow-legged frog (*Rana muscosa*), southern rubber boa (*Charina umbratica*), San Bernardino ringneck snake (*Diadophis punctatus modestus*), mountain kingsnake (*Lampropelta zonata*), two-striped garter snake (*Thamnophis hammondi*), northern goshawk (*Accipiter gentiles*), sharp-shinned hawk (*Accipiter striatus*), California spotted owl (*Strix occidentalis*), oak titmouse, western red bat (*Lasiurus blossevillei*), Yuma myotis (*Myotis yumanensis*), pallid bat (*Antrozous pallidus*), Townsend's big-eared bat (*Corynorhinus townsendii*), big free-tailed bat (*Nyctinomops macrotis*), San Bernardino flying squirrel and white-eared pocket mouse (*Perognathus alticolus alticolus*). A detailed list of these species, including the likelihood of presence or absence on the site for each species, is presented in Appendix C below.

In this list, the only two species that are of higher sensitivity are the southern rubber boa and mountain yellow-legged frog. These species are discussed below.

Southern Rubber Boa

The southern rubber boa is generally associated with rocky outcrops in stream corridors in coniferous forests at elevations up to 9040 ft (2,755 m) from the San Bernardino and San Jacinto Mountains. It tends to utilize mesic locations where there is ample shade and refugia. It is listed by the State of California as threatened. The species has been threatened by habitat destruction, collecting, and climate change.

Historically the boa was considered to have occupied all of the San Bernardino Mountain range where suitable habitat was present, including the area currently known as Twin Peaks. San Bernardino County mapping of the range has the westernmost portions limited to the strip of land following the southern shore of Lake Gregory. The species has currently (over the past 50 years) been documented in 35 localities within the San Bernardino Mountains, within Big Bear and between Rim Forest and Green Valley Lake. The nearest most recent (past 10 years) recorded sightings of southern rubber boas are to the east closer to the communities of Arrowbear and Big Bear.

The project area does contain suitable habitat for this species particularly along Dart Creek (Figure 2) and it is within the expected elevation range for this species and the range, according to San Bernardino County mapping. However due to the lack of recent nearby sightings and due to the surrounding development, the boa is considered to have a low probability to occur on the property. The proposed site plan is also not anticipated to impact any of the rock outcropping areas within Dart Creek canyon.

Due to the potential presence of the southern rubber boa, we recommend protection-in-place of existing rock outcrops and other habitat (downed logs, etc.) during site preparation and grading.

Mountain Yellow-Legged Frog

The mountain yellow-legged frog is associated with perennial streams and other sources of permanent waters. Populations of the mountain yellow-legged frog in the San Gabriel, San Bernardino, and San Jacinto Mountains are federally-listed as endangered, and all populations of this species are listed as a California Species of Concern. This species is found within a few feet of permanent water sources, particularly in the San Jacinto River tributaries (N. Fork and So. Fork) in the San Jacinto Mountains and the San Bernardino Mountains at City Creek and Mill Creek (USGS, 2001). Due to mountain yellow-legged frog dependency on the presence of permanent surface waters, and the lack of it in the project area, the mountain yellow-legged frogs is assumed to be absent from the property.

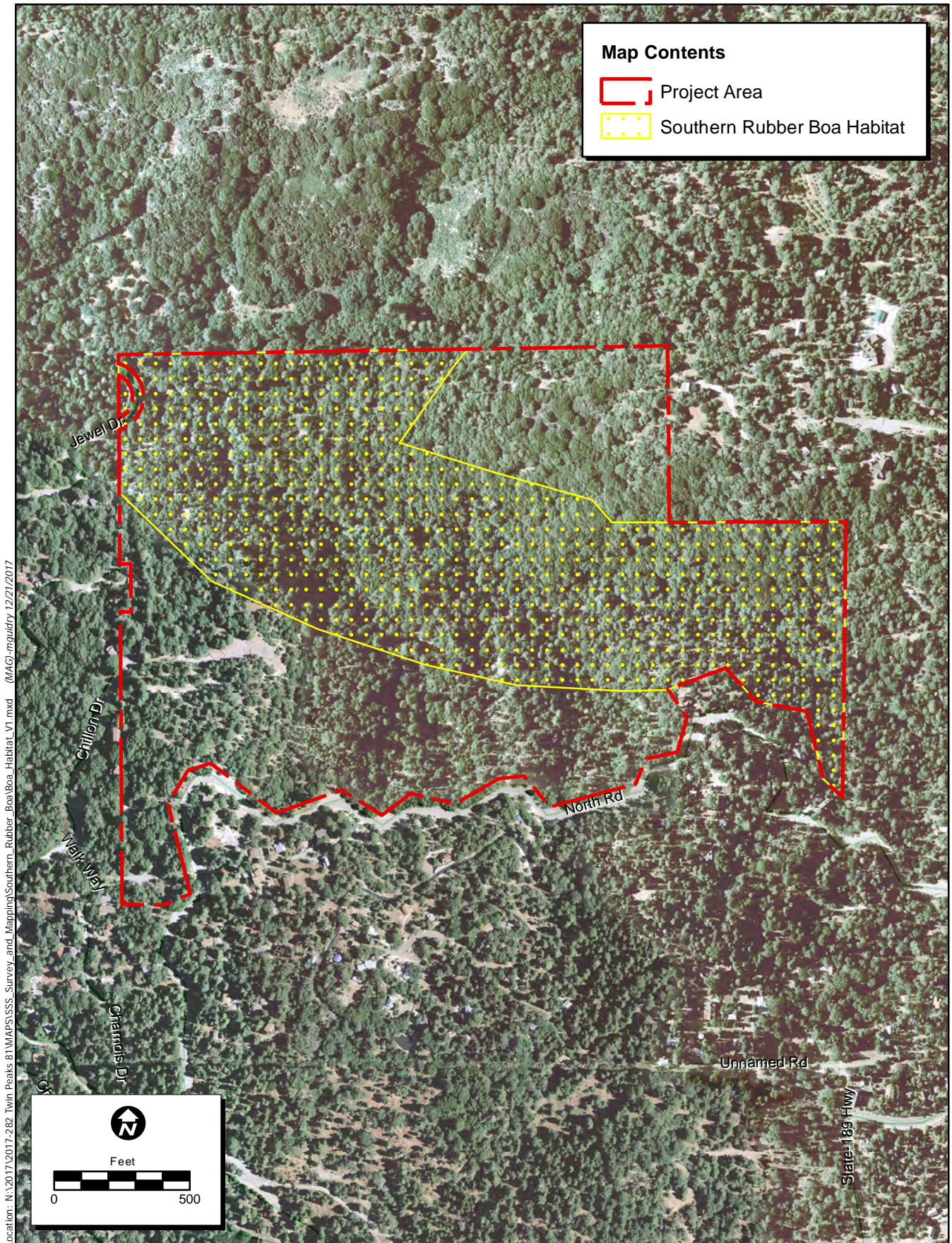


Figure 2. Southern Rubber Boa Habitat

2017-282 Twin Peaks 81

San Bernardino Flying Squirrel

The San Bernardino flying squirrel is associated with forested portions of the San Bernardino National Forest and is known to inhabit areas with low-density residential, where trees are present. Populations of the squirrel within the San Bernardino Mountains are not listed at either federal or state levels, but it is listed as a California Species of Concern. This species has been recently recorded within communities of Running Springs, Lake Arrowhead, Twin Peaks, and Crestline. Due to the potential habitat throughout the property, the flying squirrel is assumed to be potentially present on the property. Protections for the flying squirrel are recommended if trees are to be removed during site preparation and grading. These recommendations are detailed below.

Migratory Bird Species

The federal Migratory Bird Treaty Act (and California Department of Fish and Game (CDFW) code) protects migratory bird species from impacts to their nesting activities. Breeding and roosting sites for bird species are present in the numerous mature black oaks found on the property, and several tree cavities are present of the type typically made by woodpeckers. Generally, these regulations require that a nesting survey be conducted prior to construction or ground disturbance of a property to ensure that no migratory bird species nests are affected by a proposed development during their breeding season. The breeding season generally lasts from March 1 through August 31.

Bat Species

In addition to woodpecker holes, the oaks and some of the pines also contain exfoliating bark which may provide roosting spaces for sensitive bat species.

3.5 Jurisdictional Waters

The USACE, the CDFW and the SWRCB regulate a project's effects on aquatic resources. The regulatory authority of the USACE comes from Section 404 of the Clean Water Act. Section 404 of the Clean Water Act requires USACE authorization for work involving intentional or unintentional placement of fill or discharge of dredged materials into any Waters of the U.S.

USACE jurisdiction extends up to the ordinary high water mark for non-tidal waters. A federal Clean Water Act Section 401 Water Quality Certification from the SWRCB is required for every federal permit action that may result in a discharge into any Waters of the U.S.

The CDFW requires a 1602 (formerly 1603) Streambed Alteration Agreement (SAA) for projects that will divert or obstruct the natural flow of water, change the bed, channel or bank of any stream, remove riparian vegetation or use any material from a streambed.

There was one streambed found to be present on the property along Dart Creek that is likely jurisdictional to the USACE, CDFW and SWRCB. Dart Creek runs across the site, exiting along the

western boundary, and then heading to the north and west to join with Houston Creek north of Lake Gregory. Fill or other modifications are not being proposed to Dart Creek, based on the site plans.

3.6 Other Considerations

San Bernardino County Ordinances require that approval from the County is required for removal of native trees in mountain communities that are six inches or greater in diameter-at-breast-height (Mountain Forest and Valley Plant Protection and Management Ordinance 89.0315). The site has several native trees and would need this approval prior to tree-clearing on the site.

4.0 CONCLUSIONS AND RECOMMENDATIONS

Based on our assessment, there is a low to moderate potential that some sensitive species of very low sensitivity may occur on the property. None these species are considered to have high levels of sensitivity, however most of the birds likely to use the site for breeding would be protected from disturbance during bird maternity season (February through August) if nesting on-site. If present, avoidance during this period as per CDFW code and the Federal Migratory Bird Treaty Act may be necessary.

Although impacts to potentially occurring species could be adverse, the impacts would not be considered significant under the California Environmental Quality Act because of the abundance of habitats in the property vicinity that would remain after construction and because of the species low level of sensitivity (Species of Special Concern).

There are stream channels on site jurisdictional to the USACE or CDFW, although there are currently no foreseeable impacts to these resources.

Recommendations for the property are as follows:

- If tree removals/construction is proposed to occur from March 1 through August 31, conduct a preconstruction survey for San Bernardino flying squirrels and migratory bird species (including raptor species).
- If active flying squirrel dreys or migratory bird (or raptor) nests are threatened by tree removal or other development activities, these impacts should be avoided until the birds have fledged young from their nests.
- Due to the potential for southern rubber boa within portions of the property near Dart Creek, we recommend avoidance of all rock outcrops and protection-in-place of downed wood piles and similar habitat areas within the vicinity of Dart Creek (see Figure 2)

Approval from the County is required prior to the removal of native trees on the property, including the black oaks and pine species.

5.0 CERTIFICATION

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief. Field work conducted for this assessment was performed by me or under my direct supervision. I certify that I have not signed a non-disclosure or consultant confidentiality agreement with the project applicant or applicant's representative and that I have no financial interest in the project.

DATE:____November 7, 2018_____

SIGNED: 

Mr. Scott Taylor

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Appendix A

Plant Species Observed

Scientific Name	Common Name
VASCULAR PLANTS	
<i>GYMNOSPERMS</i>	
CUPRESSACEAE	CEDAR FAMILY
<i>Calocedrus decurrens</i>	incense cedar
PINACEAE	PINE FAMILY
<i>Abies concolor</i>	white fir
<i>Pinus jeffreyi</i>	Jeffrey pine
<i>Pinus ponderosa</i>	ponderosa pine
<i>ANGIOSPERMS (DICOTYLEDONS)</i>	
ACERACEAE	MAPLE FAMILY
<i>Acer macrophyllum</i>	big-leaf maple
ASTARACEAE	SUNFLOWER FAMILY
<i>Achillea millefolium</i>	yarrow
<i>Artemisia douglasiana</i>	mugwort
<i>Machaeranthera canescens</i>	hoary aster
<i>Solidago californica</i>	California goldenrod
BETULACEAE	ALDER FAMILY
<i>Alnus rhombifolia</i>	white alder
BORAGINACEAE	BORAGE FAMILY
<i>Cryptantha sp.</i>	forget-me-not
BRASSICACEAE	MUSTARD FAMILY
<i>Erysimum capitatum</i>	western wallflower
CHENOPODIACEAE	GOOSEFOOT FAMILY
<i>Chenopodium alba</i> *	lambsquarters
ERICACEAE	HEATH FAMILY
<i>Pterospora Andromeda</i>	pinedrops
<i>Arctostaphylos glauca</i>	manzanita
FAGACEAE	OAK FAMILY
<i>Quercus kelloggii</i>	black oak
<i>Quercus chrysolepis</i>	Interior live oak
GROSSULARACEAE	CURRENT FAMILY
<i>Ribes nevadense</i>	Sierra current

<i>Ribes roezli</i>	Sierra gooseberry
HYDROPHYLLACEAE	WATERLEAF FAMILY
<i>Phacelia imbricate</i>	montane phacelia
RHAMNACEAE	BUCKTHORN FAMILY
<i>Fragula californica</i>	coffeeberry
ROSACEAE	ROSE FAMILY
<i>Cercocarpus betuloides</i>	mountain mahogany
<i>Rosa californica</i>	California rose
VISCACEAE	MISTLETOE FAMILY
<i>Phoradendron macrophyllum</i>	big-leaf mistletoe
ANGIOSPERMS (MONOCOTYLEDONS)	
IRIDACEAE	IRIS FAMILY
<i>Iris hartwegii</i>	mountain iris
LILIACEAE	LILY FAMILY
<i>Bloomeria crocea</i>	goldenstars
POACEAE	GRASS FAMILY
<i>Avena sp.*</i>	wild oat
<i>Bromus tectorum*</i>	cheatgrass

*non-native species

Appendix B

Wildlife Species Observed

Scientific Name	Common Name
BIRDS	
<i>Cyanocitta stelleri</i>	Stellar's jay
<i>Euphagus cyanocephalus</i>	Brewer's blackbird
<i>Melanerpes formicivorus</i>	acorn woodpecker
<i>Parus gambeli</i>	mountain chickadee
<i>Patagioenas fasciata</i>	band-tailed pigeon
<i>Baeolophus inornatus</i>	oak titmouse
<i>Sitta carolinensis</i>	white-breasted nuthatch
MAMMALS	
<i>Sciurus carolinensis</i>	grey squirrel
<i>Canis latrans</i>	coyote
<i>Tamias merriami</i>	Merriam's chipmunk
<i>Ursus americanus</i>	black bear
REPTILES	
<i>Sceloporus occidentalis</i>	western fence lizard
INSECTS	
<i>Camponotus</i> spp.	carpenter ant

Appendix C

Potential for Occurrence of Sensitive Species

Scientific Name Common Name	Status	Flowering Period (Plants only)	Habitat/Elevation	Occurrence Probability
PLANTS				
<i>Galium californicum ssp. primum</i> California bedstraw	Fed: none Ca: none CNPS: 1B.2 R-E-D: 3-2-3	May – Jul	Chaparral, Lower montane coniferous forest; granitic, sandy areas; 1,350-1,700 meters.	Low. Suitable habitat on site for this species, none were observed during survey.
<i>Lilium parryi</i> lemon lily	Fed: none Ca: none CNPS: 1B.2 R-E-D: 2-2-2	Jul – Aug	Mesic locations including wet banks: lower montane coniferous forest, meadows and seeps, riparian forest, upper montane coniferous forest; mesic soils; 1,220-2,745 meters.	Moderate. Dart Creek contains moist soils.
<i>Monardella macrantha ssp. hallii</i> Hall's monardella	Fed: none Ca: none CNPS: 1B.3 R-E-D: 2-1-3	Jun – Aug	Broadleafed upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest, Valley and foothill grassland; 730-2,195 meters.	Low. There is \habitat on site. Sightings documented within 5 miles of the property.
INSECTS				
<i>Euchloe hyantis andrewsi</i> Andrew's marble butterfly	Fed: none Ca: none		Yellow pine forest near Lake Arrowhead and Big Bear Lake; <i>Streptanthus bernardinus</i> and <i>Arabis holboellii</i> var. <i>pinetorum</i> hostplants.	Low. Species not observed on site, and it may be too low in elevation for its food plants.
AMPHIBIANS				
<i>Rana muscosa</i> mountain yellow-legged frog	Fed: END Ca: SC		Canyon river areas with deep water.	Assumed absent. No suitable stream habitat on site.
REPTILES				
<i>Charina unbratica</i> southern rubber boa	Fed: none Ca: THR		Areas near streams or wet meadows; loose, moist soil for burrowing, rotting log shelters.	Low. Site contains several bedrock outcrops, however it is fairly dry and void of most logs, loose rock, etc. Site also surrounded by disturbed areas

<i>Scientific Name</i> Common Name	Status	Flowering Period (Plants only)	Habitat/Elevation	Occurrence Probability
<i>Diadophis punctatus modestus</i> San Bernardino ringneck snake	Fed: none Ca: SC		Moist situations in a variety of habitats ranging from forests to grasslands to upper elevation desert plant communities.	Moderate. Site habitat conditions favorable for this species, except high levels of human disturbance (recreation) present on site which may lead to collecting.
<i>Lampropelta Zonata</i> Mountain Kingsnake (San Bernardino population)	Fed: none Ca: SC		Various forest and oak woodland communities to chaparral, debris piles and sunny openings.	Moderate. Site habitat conditions favorable for this species
BIRDS				
<i>Accipiter gentilis</i> Northern goshawk	Fed: none Ca: SC		Inhabits a large variety of coniferous forests and mixed hardwood forests, nesting high in the treetops.	Unlikely. The species has always been uncommon in the San Bernardino Mountains and no recent sightings have been made in the Twin Peaks area.
<i>Accipiter striatus</i> Sharp-shinned hawk	Fed: none Ca: SC		Formerly occurred in San Bernardino Mountains, but current status is unknown. Nesting and habitat areas are typically in coniferous forest and mixed hardwood forests.	Low. Surrounding areas occupied by residential property and human disturbance (recreational use) occurs on site. This would likely be a deterrent for this species to occupy the property.
<i>Strix occidentalis occidentalis</i> California spotted owl	Fed: none Ca: SC		Coniferous forests and mixed hardwood forests, usually old growth areas with abundant downed timber and deep shade.	Low. Habitat too open and disturbed to support species, not old growth. Nearby residences and land uses are likely a deterrent for this species as well.
<i>Baeolophus inornatus</i> Oak titmouse	Fed: none Ca: SC		Oak woodlands and mixed hardwood forests, strongly associated with oak trees.	Moderate. Species is known to be present in the vicinity.
MAMMALS				
<i>Lasiurus blossevillii</i> Western Red Bat	Fed: none Ca: SC		External tree foliage rooster that prefers deciduous trees including oaks (<i>Quercus</i> spp.) and sycamores (<i>Plantus</i> spp.).	Moderate. Western red bats are migratory, and may be present at the project site seasonally between spring to early fall.
<i>Myotis yumanensis</i> Yuma Myotis	Fed: none Ca: SC		Associated with riparian areas, and is also found at more arid desert as well as montane sites containing trees and roosting sites.	Moderate. Suitable roosting habitat occurs in several of the black oaks and ponderosa pines found throughout the property. Species may be seasonally present between spring to early fall.

<i>Scientific Name</i> Common Name	Status	Flowering Period (Plants only)	Habitat/Elevation	Occurrence Probability
<i>Antrozous pallidus</i> Pallid Bat	Fed: none Ca: SC		Occur in a variety of habitats from coastal California into the deserts. Roost in rock crevices, mines, caves and tree hollows, also observed using ponderosa snag cavities and oak bole cavities. Summer maternity colonies typically utilize caves and tree hollows. Typically migrate from cooler climates during the winter months.	Moderate. Suitable roosting habitat occurs in several of the black oaks and ponderosa pines found throughout the property. Species may be seasonally present between spring to early fall.
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	Fed: none Ca: SC		Forages in stream and wooded habitats. Typically associated with caves and mines that are larger in extent.	Not expected. No suitable roosting habitat occurs on site.
<i>Nyctinomops macrotis</i> Big free-tailed bat	Fed: none Ca: SC		Wide ranging preference for habitat types from desert to high montane areas, typically preferring rocky cliffs and crevices. This species also uses tree hollows for roosting habitat.	Moderate. Suitable roosting habitat occurs in several of the black oaks and ponderosa pines found throughout the property, therefore there is a moderate probability for this species to be seasonally present between spring to early fall.
<i>Glaucomys sabrinus californicus</i> San Bernardino flying squirrel	Fed: none Ca: SC		Cavities in trees/snags nearby water; black oak or white fir dominated woodlands; 1,580-2,580 meters.	Moderate. Species is known to be present in the vicinity within quarter mile of the project area.
<i>Perognathus alticolus alticolus</i> White-eared pocket mouse	Fed: none Ca: SC		Ponderosa and Jeffrey pine, mixed chaparral and sagebrush habitats; needs loose soil to construct burrows.	Low. This site supports open pine forest and meadow habitat suitable for the species, but records are very scarce in the vicinity and is considered extirpated.

Appendix D

Designations

Federal designations: (Federal Endangered Species Act, USFWS):

END: Federal-listed, endangered.
THR: Federal-listed, threatened.
CAND: Candidate for federal listing.

State designations: (California Endangered Species Act, CDFW)

END: State-listed, endangered.
THR: State-listed, threatened.
RARE: State-listed as rare (Listed "Rare" animals have been re-designated as Threatened, but Rare plants have retained the Rare designation.)
SC: Species of concern.

California Native Plant Society (CNPS) designations: (Note: According to CNPS [Skinner and Pavlik 1994], plants on Lists 1B and 2 meet definitions for listing as threatened or endangered under Section 1901, Chapter 10 of the California Fish and Game Code. This interpretation is inconsistent with other definitions. See text.)

List 1A: Plants presumed extinct in California.
List 1B: Plants rare and endangered in California and throughout their range.
List 2: Plants rare, threatened or endangered in California but more common elsewhere in their range.
List 3: Plants about which we need more information; a review list.
List 4: Plants of limited distribution; a watch list.

CNPS R-E-D Code:

Rarity

- 1: Rare, but found in sufficient numbers and distributed widely enough that the potential for extinction or extirpation is low at this time.
- 2: Occurrence confined to several populations or one extended population.
- 3: Occurrence limited to one or a few highly restricted populations, or present in such small numbers that it is seldom reported.

- 1: Not endangered.
- 2: Endangered in a portion of its range.
- 3: Endangered throughout its range.

Endangerment

- 1: More or less widespread outside California.
- 2: Rare outside California.
- 3: Endemic to California (i.e., does not occur outside California).

Distribution

Source: California Natural Diversity Data Base (CNDDB), California Native Plant Society Electronic Inventory (CNPSEI) Harrison Mountain 7.5 minute quad, 2018

Appendix E

Representative Site Photographs



Photo 1 – Portion of Site along North Road



Photo 2 – Proposed Development Area along North Road



Photo 3 – Rock outcrops along Dart Creek



Photo 4 – Dart Creek



Photo 5 – Rock outcrops along Dart Creek Canyon



Photo 6 – Downed logs and steep slope of the property



ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

INLAND EMPIRE

215 North 5th Street

Redlands, CA 92374

(909) 307-0046

(909) 307-0056 fax

www.ecorpconsulting.com