NATURAL RESOURCES ASSESSMENT, INC.

General Biological Resources Assessment
Lake Arrowhead Service Station
Lake Arrowhead, California

Prepared for:

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Project Number: LIL19-119

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CERTIFICATION

I hereby certify that the statements furnished below and in the attached exhibits present data and information required for this jurisdictional delineation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

Karen Kirtland

NATURAL RESOURCES ASSESSMENT, INC

January 8, 2020

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1.0 Introduction

Natural Resources Assessment, Inc. (NRAI) has prepared this general biological assessment for a proposed commercial project located along State Highway 173 in the San Bernardino Mountains, California (APN 0335-122-10). The project proponent is proposing to construct a gas station, convenience store and car wash on a 0.47-acre lot in the community of Lake Arrowhead.

2.0 Location and Description of the Property

The project is located on Highway 173 southeast of Loch Leven Road and on the northeast side of the Lake Arrowhead California Realty offices (Figures 1 and 2). It lies in Section 21, Township 2 north and Range 3 west of the Harrison Mountain U.S. Geological Survey (USGS) 7.5' topographic map, San Bernardino baseline and meridian (Figure 2).

The proposed project is a service station, convenience store and car wash.

3.0 Methods

3.1 Data Review

A data search was conducted to provide information on the known occurrence of plant and wildlife species within the vicinity of the project. This review included biological texts on general and specific biological resources, and those resources considered to be sensitive by various wildlife agencies, local governmental agencies and interest groups. The documents reviewed include:

- General texts and other documents identifying potential resources that were found within or near the project.
- A review of collection records from participating herbaria in California available through the Consortium of California Herbaria, 2019;
- Documented rare plant occurrences compiled in the California Natural Diversity Data Base (CNDDB) by the California Department of Fish and Wildlife, 2019 for the project quadrangle and surrounding eight quadrangles;
- A review of documented occurrences of common and rare plants from Calflora, 2019;
- Species descriptions from the Jepson Online Interchange, 2019;
- A review of (IPaC) results, 2019
- Geological maps available from the US Geological Survey (Morton and Miller 2003);
- Soils data from the Natural Resources Conservation Service and available from the Web Soil Survey, 2019; and,

- Aerial photographs from Google Earth, ESRI, Digital Globe, GeoEye, US Department of Agriculture, US Geological Survey, i-cubed, Aerogrid and Getmapping.

NRAI also reviewed other available technical information on the biological resources in the region occupied by the project. We used the information to focus our survey efforts in the field.

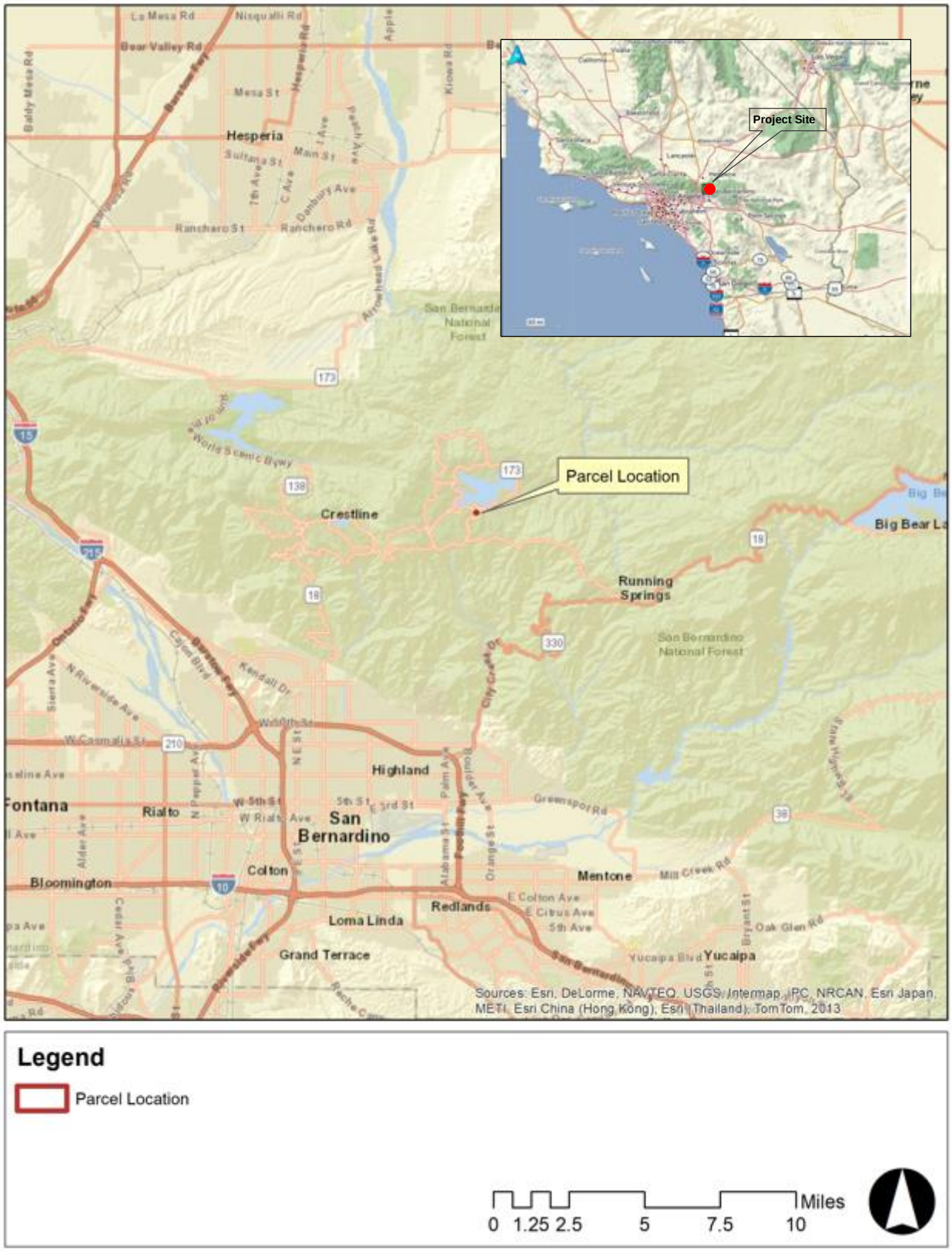

Figure 1. State and Regional Location of the Property

Figure 2. Aerial Showing Property Site and Condition (Date Unknown)

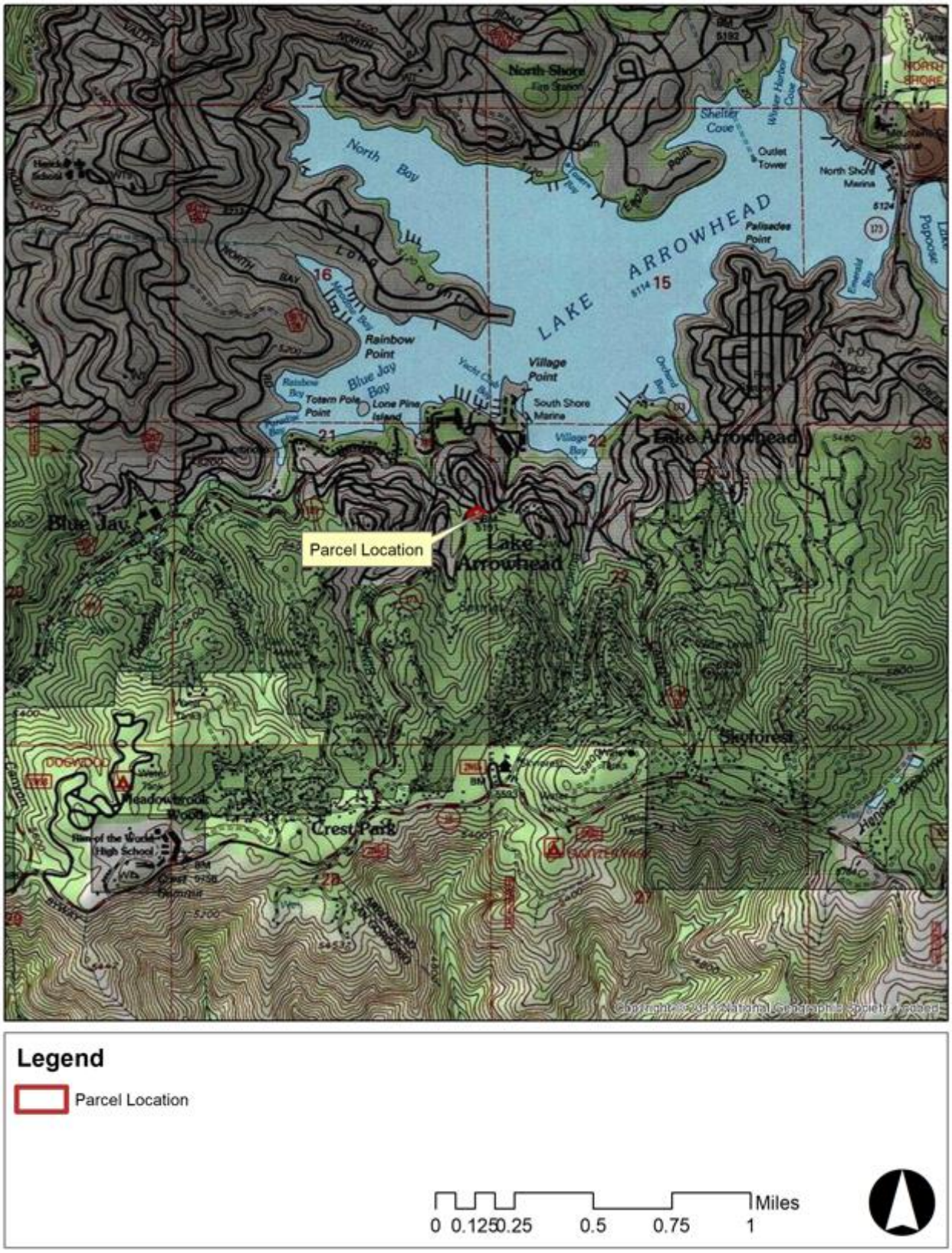

Figure 3. Topographic Map Showing Property Site and Condition (Date Unknown)

3.2 Field Surveys

Ms. Karen Kirtland of NRAI and Mr. Ricardo Montijo (subconsultant to NRAI) conducted a survey on December 11, 2019. The field survey included searches for sensitive biological resources and observations of potential habitat for sensitive species. Sign surveyed for included nests, tracks, scat, burrows, skeletal remains, and live animals.

3.3 Jurisdiction Waters and Wetland Evaluation

The field team evaluated the property for drainages subject to jurisdiction by the U. S. Army Corps of Engineers (Corps) under Section 404 of the Clean Water Act, CDFW under Sections 1600 et seq. of the California Fish and Game Code, and the water act regulations of the State Water Resources Control Board.

4.0 Results

4.1 Listed and Protected Species

The USFWS identified 23 federal resources of concern in the vicinity of the project, and the CNDDB identified 211 records of sensitive resources on the Harrison Mountain quadrangle and the surrounding eight quadrangles.

The CNDDB identified 10 resources of concern on the Harrison Mountain quadrangle. There is overlap on the species identified by both the USFWS and the CNDDB. Of these, seven are listed as either endangered or threatened.

The two data sets combined list a total of eighteen species formally listed as candidate, rare, threatened or endangered species found in the vicinity or have been recorded on the topographic map for the area.

The USFWS identified the mountain yellow-legged frog (*Rana mucosa*), California red-legged frog (*Rana draytonii*), California condor (*Gymnogyps californianus*), coastal California gnatcatcher (*Polioptila californica californica*), least Bell's vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax traillii extimus*), San Bernardino Merriam's kangaroo rat (*Dipodomys merriami parvus*) and Santa Ana sucker (*Catostomus santaanae*) as listed species known or expected to occur within the general region occupied by the project. Suitable habitat for these species is not found on site.

The CDFW listed the southern mountain yellow-legged frog, southern rubber boa (*Charina umbratica*), California condor, western yellow-billed cuckoo (*Coccyzus americanus occidentalis*), least Bell's vireo, southwestern willow flycatcher, bald eagle (*Haliaeetus luecocephaalus*) San Bernardino kangaroo rat, Crotch bumblebee (*Bombus crotchii*), and Nevin's barberry (*Berberis nevinii*) as recorded on the Harrison Mtn. quadrangle. There is no suitable habitat for these species on the property.

Many of the resources identified by the agencies include either species for which habitat does not exist on site (such as the Santa Ana sucker) or they are wide-ranging species such as golden eagle, that may forage or move over the site, but would not be resident.

The remaining resources included species of special concern, fully protected species, watch list species (for plants) and species of no special status. These latter species are included in the CNDDB printout because they were observed and recorded on the Harrison Mountain 7.5 USGS topographic quadrangle and/or the surrounding quadrangles, not necessarily because of any particular legal status. They include such relatively common species as Nuttall's woodpecker (*Picoides nuttallii*). Table 1 in Appendix B discusses the species, their habitat and distribution, activity period (when they can be observed), their local, state and federal status and the probability of their occurrence on the Lake Arrowhead property.

Findings

Plant Species

Seven plant species are potentially present on the property. They are:

- Heckard's paintbrush
- Southern Sierra woolly sunflower
- Johnston's bedstraw
- Johnston's monkeyflower
- Johnston's bedstraw
- Chickweed oxytheca
- Laguna Mountains jewel-flower

None of the species listed above were visible during the survey. However, all of them are on the watchlist, List 4, of the CNPS Inventory. List 4 is composed of sensitive plant species of lowest concern. If these species are present on site, the impacts from project development are not expected to be significant.

4.2 Field Surveys

4.2.1 Weather Conditions, Topography and Soils

At the beginning of the survey, the skies were overcast, 41 degrees Fahrenheit and winds averaging one to two miles per hour (mph). At the end of the survey the skies were still overcast, 48 degrees Fahrenheit and winds remaining at one to two mph.

The property is mostly flat and has been graded in the past. There are two small dry drainages in the northeastern corner of the property.

The average elevation of the property is 5100 feet.

Soils are mapped as urban land (Figure 4). Urban land is found on alluvial fans. No other soil characteristics are present.

4.2.2 Vegetation

The plant communities on site are distinctly divided between a small stand of westside ponderosa pine forest along the southern border, open herbaceous and disturbed habitat that makes up the rest of the property.

Ponderosa pine (*Pinus ponderosa*) is the dominant species in the westside ponderosa pine forest stand (Holland 1986) (Photo 1). Other species found during the survey includes sugar pine (*Pinus lambertiana*), white fir (*Abies concolor*) and California laurel (*Umbellularia californica*).

Figure 4. Soil Type Found on the Property.

Photo 1. Westside ponderosa pine forest.

Photo 2. Herbaceous cover in and under the pine forest.

Non-native plant species found by the field team were mostly grasses such as ripgut brome (*Bromus diandrus*) and cheat grass (*Bromus tectorum*). Other weedy non-natives include prickly lettuce (*Lactuca serriola*) and Russian thistle (*Salsola tragus*).

The disturbed habitat is represented by a graded area that is unvegetated (Photo 3).

Photo 3. Disturbed area.

A complete list of plant species observed is provided in Appendix A.

4.2.3 Wildlife

No amphibians were observed because there is no suitable habitat. Suitable habitat for reptile species is present, but no animals were observed because of the cold weather. Bird species observed included Steller's jay (*Cyanocitta stelleri*), tufted titmouse (*Baeolophus bicolor*) and acorn woodpecker (*Melanerpes formicivorus*). Western gray squirrel was the only mammal species observed (*Sciurus griseus*).

A complete list of wildlife observed is provided in Appendix A.

4.3 Streambeds and Wetlands

4.3.1 Army Corps of Engineers

The Corps regulates discharges of dredged or fill material into waters of the United States. These watersheds include wetlands and non-wetland bodies of water that meet specific criteria. The lateral limit

of Corps jurisdiction extends to the Ordinary High-Water Mark (OHWM) and to any wetland areas extending beyond the OHWM; thus, the maximum jurisdictional area is represented by the OHWM or wetland limit, whichever is greater.

Corps regulatory jurisdiction pursuant to Section 404 of the Clean Water Act is founded on a connection or nexus between the water body in question and interstate (waterway) commerce. This connection may be direct, through a tributary system linking a stream channel with traditional navigable waters used in interstate or foreign commerce, or may be indirect, through a nexus identified in the Corps regulations.

4.3.2 Regional Water Quality Control Board

The Corps has delegated the authority for use of 404 permits to each individual state. The use of a 404 permit in California is regulated by the State Water Resources Control Board (SWRCB) under Section 401 of the Clean Water Act regulations. The Board has authority to issue a 401 permit that allows the use of a 404 permit in the state, with the authority in the state being vested in regional offices known as Regional Water Quality Control Boards (RWQCB).

Under the Porter-Cologne Act of 2003, the SWRCB has extended its responsibilities to include impacts to water quality from non-point source pollution.

In addition, the SWRCB has the responsibility to require that projects address ground water and water quality issues, which would be evaluated as part of the geotechnical and hydrology studies. Their authority extends to all waters of the State (of California).

4.3.3 California Department of Fish and Wildlife

The California Department of Fish and Wildlife (CDFW), through provisions of State of California Administrative Code, is empowered to issue agreements for any alteration of a river, stream or lake where fish or wildlife resources may adversely be affected. Streams (and rivers) are defined by the presence of a channel bed and banks, and at least an intermittent flow of water. Lateral limits of the jurisdiction are not clearly defined, but generally include any riparian resources associated with a stream or lake, CDFW regulates wetland areas only if those wetlands are part of a river, stream or lake as defined by CDFW.

Findings

There is no riparian or wetland habitat present on the property. The property does not support any recognizable drainages that meet the criteria for either jurisdictional water or wetlands under the Corps.

In our professional judgement, there are no drainages or other areas of watered habitat that would come under the jurisdiction of the RWQCB or provide any Beneficial Uses (BUs) that might come under the RWQCB protection. No impacts are expected, and no mitigation is required.

There are two small drainages (Figure 5) in the northeastern corner of the property that have definable beds and banks (Photos 4 and 5) There is no riparian habitat along either drainage; however, the evidence of

water flow indicates that these drainages may meet the definition of a jurisdictional CDFW stream. We recommend the project proponent consult with the CDFW to determine whether these drainages meet the definition of State jurisdictional waters and whether a Streambed Alteration Agreement is required.

4.4 Raptors and Migratory Birds Nesting Habitat

Most of the raptor species (eagles, hawks, falcons and owls) are experiencing population declines because of habitat loss. Some, such as the peregrine falcon, have also experienced population losses because of environmental toxins affecting reproductive success, animals destroyed as pests or collected for falconry, and other direct impacts to individuals. Only a few species, such as the red-tailed hawk and barn owl, have expanded their range despite or a result of human modifications to the environment. As a group, raptors are of concern to state and federal agencies.

Figure 5. Potential Jurisdictional Waters

Photo 4. Drainage along the northern boundary of the property.

Photo 5. Potential drainage along the center of the northeastern section of the property.

Raptors and all migratory bird species, whether listed or not, also receive protection under the Migratory Bird Treaty Act (MBTA) of 1918. The MBTA prohibits individuals to kill, take, possess or sell any migratory bird, bird parts (including nests and eggs) except per regulations prescribed by the Secretary of the Interior Department (16 U. S. Code 703).

Additional protection is provided to all bald and golden eagles under the Bald and Golden Eagle Protection Act of 1940, as amended. State protection is extended to all birds of prey by the CDFW Code, Section 2503.5. No take is allowed under these provisions except through the approval of the agencies or their designated representatives.

Findings

At the time of the survey, there was suitable tree and ground nesting habitat on and adjacent to the property for nesting birds. There is a potential for direct impacts to nesting birds in these areas. In addition, tlthough most of the trees may not be removed, there is the potential for indirect impacts to nesting birds from increased noise and activity on the project site. The following measures shall be implemented to address potential impacts from construction.

- If start of construction occurs between February 1 and August 31, then a qualified biologist shall conduct a breeding bird survey no more than three days prior to the start of construction to determine if nesting is occurring. This survey can be conducted as part of the burrowing owl surveys.
- If occupied nests are found, they shall not be disturbed unless the qualified biologist verifies through non-invasive methods that either (a) the adult birds have not begun egg-laying and incubation; or (b) the juveniles from the occupied nests are capable of independent survival.
- If the biologist is not able to verify one of the above conditions, then no disturbance shall occur within a distance specified by the qualified biologist for each nest or nesting site. The qualified biologist will determine the appropriate distance in consultation with the California Department of Fish and Wildlife and the U.S. Fish and Wildlife Service.

“Construction” includes selection of staging areas, demolition, tree, trash and debris removal, placement of equipment and machinery on to the site preparatory to grading, and any other project-related activity that increases noise and human activity on the project site beyond existing levels. Emergency measures are exempt from this definition.

4.5 Habitat Fragmentation and Wildlife Movement

Wildlife movement and the fragmentation of wildlife habitat are recognized as critical issues that must be considered in assessing impacts to wildlife. In summary, habitat fragmentation is the division or breaking up of larger habitat areas into smaller areas that may or may not be capable of independently sustaining wildlife and plant populations.

Wildlife movement (more properly recognized as species movement) is the temporal movement of individuals (plants and animals) along diverse types of corridors. Wildlife corridors are especially important for connecting fragmented habitat areas.

Findings

The property is in an area where wildlife movement is restricted by roads, houses and commercial development. Impacts to regional wildlife movement are not expected. The site is in a developed area where habitat fragmentation has already occurred.

5.0 References

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Appendix A - Species Observed

Common Name	Scientific Name	Native
	Gymnosperms - Gymnospermae	
Cypress Family	**Cuppressaceae**	
Incense Cedar	*Calocedrus decurrens*	Y
Pine Family	Pinaceae	
White Fir	*Abies concolor*	Y
Sugar Pine	*Pinus lambertiana*	Y
Yellow Pine	*Pinus ponderosa*	Y
	Angiosperms - Angiospermae	
Dicots - Dicotyledonae		
Moschatel Family	**Adoxaceae**	
Mexican Elderberry	*Sambucus nigra* ssp. *caerulea*	Y
Sunflower Family	**Asteraceae**	
Common Yarrow	*Achillea millefolium*	Y
Prickly Lettuce	*Lactuca serriola*	Y
Twiggy Wreath Plant	*Stephanomeria virgata* var. *virgata*	Y
Goosefoot Family	**Chenopodiaceae**	
Goosefoot	*Chenopodium* sp.	U
Russian Thistle	*Salsola tragus*	N
Pea Family	**Fabaceae**	
Spanish Lotus	*Acmispon americanus*	Y
Spanish Broom	*Spartium juncaeum*	N
Oak and Beech Family	**Fagaceae**	
California Black Oak	*Quercus kellogii*	Y
Geranium Family	**Geraniaceae**	
Red-stemmed Filaree	*Erodium cicutarium*	N
Laurel Family	**Lauraceae**	
California Bay	*Umbellularia californica*	Y
Buckwheat Family	**Polygonaceae**	
Buckwheat	*Eriogonum* sp.	U
Rose Family	**Rosaceae**	
Common Cinquefoil	*Drymocallis glandulosa*	Y
Monocots - Monocotyledonae		
Grass Family	**Poaceae**	
Ripgut Brome	*Bromus diandrus*	N
Cheatgrass	*Bromus tectorum*	N
Beardless Rye	*Elymus triticoides*	Y
Red Fescue	*Festuca rubra*	Y
Bulbous Bluegrass	*Poa bulbosa*	N
Kentucky Blue Grass	*Poa pratensis*	N

BIRDS - AVES	
Crows and Jays	**Corvidae**
Common Raven	*Corvus corax*
Steller's Jay	*Cyanocitta stelleri*
New World Sparrows	**Emberizidae**
Dark-eyed Junco	*Junco hyemalis*
Tits, Chickadees, Titmice	**Paridae**
Tufted Titmouse	*Baeolophus bicolor*
Woodpeckers	**Picidae**
Northern Flicker	*Colaptes auratus*
Acorn Woodpecker	*Melanerpes formicivorus*
MAMMALS - MAMMALIA	
Squirrels	**Sciuridae**
Western Gray Squirrel	*Sciurus griseus*

Appendix B - Sensitive Biological Resources

Table 1. Sensitive Biological Resources Identified for the Project Area

Resource	Habitat and Distribution	Activity Period	Status Designation	Occurrence Probability
Plants				
Cienega seca oxytheca *Acanthoscyphus parishii* var. *cienegensis*	Annual herb. Prefers sandy soils (carbonates and granitics) and dry gravely banks in upper montane coniferous forest and pinyon-juniper woodlands. Eastern San Bernardino Mountains. Known elevation range is from 2100 to 2500 meters 6890 to 8200 feet). Known from about `9 occurrences from in the San Bernardino Mountains, all from Cienega Seca and Coon Creeks.	June - Sep flowering period	FED: ND STATE: ND CNPS: 1B.3	None. The property lacks suitable sandy sands and dry gravely bank habitat. In addition, the property is below the known elevation range of this species and is located in the western San Bernardino Mountains.
Rock sandwort *Arenaria lanuginosa* ssp. *saxosa*	Perennial herb. Moist, sandy soils along streams. Subalpine coniferous to upper montane coniferous habitats. 1800 to 2600 meters (5900 to 8500 feet)	July - Aug flowering period	FED: ND STATE: ND CNPS: 2B.3	None. Suitable moist habitat does not exist on site.
Scalloped moonwort *Botrychium crenulatum*	Rhizomatous herb. Found in bogs and fens, meadows and freshwater marshes in lower montane coniferous forest. Prefers moist meadows near creeks. 4900 to 8800 feet.	Jun – Sept flowering period	FED: ND STATE: ND CNPS: 2B.2	None. Suitable moist habitat does not exist on site.
Orcutt's brodiaea *Brodiaea orcutti*	Near streams, in vernal pools and seeps, up to 5500 feet elevation. Chaparral, yellow pine forest, primarily San Diego Co.	April - July flowering period	FED: C2* STATE: ND CNPS: 1B.1	None. Suitable mesic habitats not present on site.
Palmer's mariposa lily *Calochortus palmeri* var. *palmeri*	Meadows and moist places in early spring. 3500 to 6500 feet. Chaparral and yellow pine forest. San Bernardino Mts. to Tehachapi Mts. East San Luis Obispo.	May - July flowering period	FED: C2* STATE: ND CNPS: List 1B.2	None. The project site does not support meadows or moist places.

Table 1. Sensitive Biological Resources Identified for the Project Area

Resource	Habitat and Distribution	Activity Period	Status Designation	Occurrence Probability
San Bernardino Mountains owl's clover *Castilleja lasiorhyncha*	Annual. Meadows from 4600 to 7400 feet. Yellow pine forest. San Bernardino Mountains to Cuyamaca Mountains.	June - July flowering period	FED: C2* STATE: ND CNPS: 1B.2	None. The project site does not support meadows.
Heckard's paintbrush *Castilleja montigena*	Perennial hemi-parasitic plant. Upper montane to montane coniferous forests, pinyon and juniper woodlands in the eastern San Bernardino Mountains. 1950 to 2800 meters (6400 to 9200 feet).	May – Aug flowering period	FED: ND STATE: ND CNPS: 4.3	Unknown. The habitat description is fairly broad. However, the property is below the known elevation range of this species and is located in the western San Bernardino Mountains.
Johnston's monkeyflower *Diplacus johnstonii*	Annual herb. Lower montane coniferous forest. Roadsides, especially on scree, disturbed areas, rocky or gravelly soils. 975 - 2920 (3100 to 9600 feet).	May - Aug flowering period	FED: ND STATE: ND CNPS: 4.3	Unknown. This plan likes disturbed areas. Might be present along the northeastern border of the property.
Southern Sierra woolly sunflower *Eriophyllum lanatum* var. *obovatum*	Perennial herb. On sandy or loamy soils in montane coniferous forest to upper montane coniferous forest. 1114 to 2500 meters (3600 to 8200 feet).	June – July flowering period	FED: ND STATE: ND CNPS: 4.3	Unknown. The property has some loamy soils, however, the level of disturbance makes it unlikely this species is present.
Pine woods fritillary *Fritillaria pinetorum*	Perennial herb. Yellow pine forest, red fir forest, lodgepole, forest, subalpine forest. Found on shaded granitic slope. Elevation range is 1800—3200 m. (5900 to 10, 500 feet).	Msy – July flowering period	FED: ND STATE: ND CNPS: 4.3	None. The property does not have shaded granitic slopes.
Jepson's bedstraw *Galium jepsonii*	Rhizomatous herb. On granitic rocky or gravelly soil. Lower montane coniferous forest to upper montane coniferous. 1540 to 2500 meters (5000 to 8200 feet).	July - Aug flowering period	FED: ND STATE: ND CNPS: 4.3	None. The property doesn't support granitic rocky or gravelly soil. In addition, the property has been partially graded and is somewhat disturbed.
Johnston's bedstraw *Galium johnstonii*	Perennial herb. Dry slopes in chaparral, lower montane coniferous forest, pinyon and juniper woodland, riparian woodland. 1220 - 2300 meters (4000 to 7500 feet).	June – July flowering period	FED: ND STATE: ND CNPS: 4.3	Unknown. Habitat description is not well-defined. However, property lacks dry slopes so this species is probably not present.

Table 1. Sensitive Biological Resources Identified for the Project Area

Resource	Habitat and Distribution	Activity Period	Status Designation	Occurrence Probability
San Bernardino gilia *Gilia leptantha* ssp. *leptantha*	Annual herb. Sandy or gravelly soils in lower montane coniferous forest. Extreme eastern San Bernardino Mtns. 1500 - 2560 meters (4900 to 8400 feet).	June - August flowering period	FED: ND STATE: ND CNPS: 1B.3	None. Sandy soils exist on site, but the closes known populations are east of Big Bear Lake.
Los Angeles sunflower *Helianthus nuttalli* ssp. *parishii*	Rhizomatous herb. Found in marshes and swamps. Both coastal salt marshes and freshwater marshes. Found at elevations from 10 - 1675 meters (33 to 5500 feet).	August - October flowering period	FED: ND STATE: ND CNPS: 1A	None. Site lacks marsh and swamp habitats.
Urn-flowered alumroot *Heuchera caespitosa*	Perennial herb. Found in rocky areas in red fir and yellow pine forest. The known elevation range is 1900 to 2300 m (6234 – 7545 feet).	May – August flowering period	FED: ND STATE: ND CNPS: 4.3	None. No rocky areas on the property.
Parish's alumroot *Heuchera parishii*	Perennial herb. Alpine boulder and rock fields, lower to subalpine coniferous forests. Occasional on carbonate soil. Rocky places, 4900 to 12,500 feet. Montane coniferous forest. San Bernardino Mountains.	June - August flowering period	FED: ND STATE: ND CNPS: 1B.3	None. Property is not located in alpine boulder or rock field habitats.
Parry's hulsea *Hulsea vestita* ssp. *parryi*	Perennial herb. Open gravel, talus slopes. Sagebrush to lodgepole forest, red Fir forest, yellow pine forest. 2000 - 2500 m. (6550 – 8200 feet).	April – August flowering period	FED: ND STATE: ND CNPS: 4.3	None. Property does not have open gravel or talus slopes.
Silver-haired ivesia *Ivesia argyrocoma*	Perennial. Dry meadows from 6500 to 7500 feet. Montane coniferous forest. San Bernardino Mountains.	June - August flowering period	FED: C2* STATE: ND CNPS: 1B.2	None. As a perennial, it should have been observable during the field surveys. Site is lower than the known elevation range.
Duran's rush *Juncus duranii*	Rhizomatous herb. In mesic conditions in lower montane coniferous forest, meadows and seeps, upper montane coniferous forest. 1768 - 2804 meters (5800 to 9200 feet).	July - Aug flowering period	FED: ND STATE: ND CNPS: 4.3	None. Site lacks suitable mesic habitats.

Table 1. Sensitive Biological Resources Identified for the Project Area

Resource	Habitat and Distribution	Activity Period	Status Designation	Occurrence Probability
Ocellated Humboldt lily *Lilium humboldtii* ssp. *ocelllatum*	Bulbiferous herb in very deep gravelly soils along drainages and canyon bottoms. Found in openings in chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest and riparian woodland. 30 to 800 meters (98 to 1650 feet).	Mar-Jul(Aug) flowering period. Months in parentheses are uncommon activity	FED: ND STATE: ND CNPS: 4.2	None. The property lacks the deep soil and drainages preferred by the species.
Lemon lily *Lilium parryi*	Springy places and wet banks; 4000 to 9000 feet elevation. Montane coniferous forest. San Gabriel Mtns. To San Diego County.	July - Aug flowering period	FED: C2* STATE: ND CNPS: 1B.2	None. Site lacks suitable mesic habitats.
Hall's monardella *Monardella macrantha* spp. *hallii*	Perennial from slender woody rootstocks. Dry slopes and ridges, 2500 - 6000 feet. Chaparral, and woodland. San Gabriel and San Bernardino Mtns. to Cuyamaca and Santa Ana Mtns.	June - Aug flowering period	FED: ND STATE: ND CNPS: 1B.3	None. Not know from montane forest. Known populations are found only along the western slopes of the San Bernardino Mountains.
California muhly *Muhlenbergia californica*	Perennial. Occasional in wet places up to 7000 feet. Coastal sage scrub, chaparral, yellow pine forest. Cismontane especially around the San Bernardino Valley to the edge of the desert.	July - Sept flowering period	FED: ND STATE: ND CNPS: 4.3	None. Suitable mesic habitats not present.
Rock-loving oxytrope *Oxytropis oreophila* var. *oreophila*	Perennial herb. Gravelly or rock soils, alpine boulder and rock field, subalpine coniferous forest. 3400 to 3800 meters (11,100 to 12,500 feet).	June – September flowering period	FED: ND STATE: ND CNPS: 2B.3	None. Property is well below known elevation range, and lacks alpine boulder and rock field habitats.
San Bernardino grass-of-Parnassus *Parnassia cirrata* var. *cirrata*	Perennial herb. Mesic soils, streamsides, meadows and seeps in lower montane coniferous forest, upper montane coniferous forest. Sometimes on calcareous soils. 1250 - 2440 meters (4000 to 8100 feet).	Aug - Sep flowering period	FED: ND STATE: ND CNPS: 1B.3	None. Suitable moist habitat does not exist on site.

Table 1. Sensitive Biological Resources Identified for the Project Area

Resource	Habitat and Distribution	Activity Period	Status Designation	Occurrence Probability
Parish's yampah *Perideridia parishii* ssp. *parishii*	Annual herb. Damp meadows, etc. From 4,000 to 7,500 feet. Large montane coniferous forest. San Bernardino Mountains.	June - July flowering period	FED: ND STATE: ND CNPS: 2B.2	None. No damp meadows exist on the property.
Davidson's stonecrop *Sedum niveum*	Rhizomatous herb. Rocky soils in lower montane coniferous forest, subalpine coniferous forest and upper montane coniferous forest. 2075 - 3000 meters (6800 to 9900 feet).	June – August flowering period	FED: ND STATE: ND CNPS: 4.2	None. Site is below known elevation range. Preferred rocky soils do not occur on site.
Bear Valley checkerbloom *Sidalcea malviflora* ssp. *dolosa*	Perennial herb (rhizomatous). Open pine forest. Occurs usually in wetlands, occasionally in non-wetlands. Known only from a small area in Big Bear Valley in the eastern San Bernardino Mountains. 1500 - 2300 m. (4920 – 7550 feet).	June – August flowering period	FED: ND STATE: ND CNPS: 1B.2	None. Property is located at the west end of the San Bernardino Mountains.
Chickweed oxytheca *Sidotheca caryophylloides*	Annual herb. Occurs on sand or gravel in yellow pine forest. 1300 - 2600 m.(4260 – 8530 feet).	June – Sep flowering period	FED: ND STATE: ND CNPS: 4.3	Unknown. Habitat description is not well-defined. May be present.
Laguna Mountains jewel-flower *Streptanthus bernardinus*	Mostly perennial. Dry slopes from 4000 to 7500 feet. Mostly dry montane coniferous forest, San Gabriel Mountains to Laguna Mountains.	June - July flowering period	FED: ND STATE: ND CNPS: 4.3	Unknown. Might be present in the northeastern corner of the property.
Southern jewelflower *Streptanthus campestris*	Perennial herb. Rocky soils in chaparral, lower montane coniferous forest, pinyon and juniper woodland. 900 - 2300 meters (2900 to 7600 feet).	(Apr), May-Jul. Months in parentheses are uncommon.	FED: ND STATE: ND CNPS: 1B.3	None. Property lacks rocky soil habitats.
San Bernardino aster *Symphyotrichum defoliatum*	Perennial herb (rhizomatous). Grasslands, disturbed places in woodland. Below 2050 m.(6725 feet).	July – Nov. flowering period	FED: ND STATE: ND CNPS: 1B.2	None. Property doesn't have grassland habitats preferred by this species.

Table 1. Sensitive Biological Resources Identified for the Project Area

Resource	Habitat and Distribution	Activity Period	Status Designation	Occurrence Probability
Sonoran maiden fern *Thelypteris puberula* var. *sonorensis*	Occasional in wet shaded canyons below 3000 feet; chaparral, creosote bush scrub. Lower slopes of Peninsular and Transverse mountains to Baja California.	Year round	FED: ND STATE: ND CNPS: 2B.2	None. Site does not contain wet shaded canyons. Site is above known elevation range.
Amphibians				
Southern mountain yellow-legged frog *Rana muscosa*	Always encountered within a few feet of water. Rocky stream courses in southern California. Tadpoles may require up to two years to complete aquatic development.	Mar – May breeding period	FED: END STATE: END	None. No suitable streams within the project site. All known populations have either been extirpated or collected for captive breeding as of this report.
Reptiles				
San Diego mountain kingsnake *Lampropeltis zonata pulchra*	Relatively open stands of mixed coniferous forest. From 4500 feet to 6500 feet, but can occur less commonly at higher and lower elevations. Also in rocky outcrops in bigcone Douglas fir stands in open canyons. Microhabitats are rocky outcrops in partially shaded areas and large downed logs.	Year round	FED: ND STATE: SSC Forest Service Sensitive Species	Low. This species may be present in the vicinity of the property in less disturbed areas.
Birds				
White-tailed kite *Elanus leucurus*	Open country in South America and southern North America. Typically forages over open field and marshlands. Nests in trees	Year-round	FED: ND STATE: ND (nesting) CFP	None. Site is too mountainous for foraging. No suitable nesting habitat on site.
Bald eagle *Haliaeetus leucocephalus*	Winters locally at deep lakes and reservoirs feeding on fish and waterfowl. Locally rare throughout North America.	Nov - Feb	FED: ND STATE: END, CFP	Low. Species is known to winter in the Baldwin and Big Bear lakes areas. Could fly over site during winter migration.
Northern harrier *Circus cyaneus*	Grassland and marshy habitats in Southern California. Uncommonly in open desert and brushlands.	Year round	FED: ND STATE: SSC	None. No nesting or foraging habitat on site.

Table 1. Sensitive Biological Resources Identified for the Project Area

Resource	Habitat and Distribution	Activity Period	Status Designation	Occurrence Probability
Osprey *Pandion haliaetus*	Habitat includes almost any expanse of shallow, fish-filled water, including rivers, lakes, reservoirs, lagoons, swamps, and marshes. Nesting habitat must have adequate supply of accessible fish within a maximum of about 12 miles of the nest. Open, usually elevated nest sites.	Winters along the coast in southern California	STATE: WL	Low. Not observed during the surveys, but are expected to fly infrequently over the property during migration in winter.
Sharp-shinned hawk *Accipiter striatus*	Nests in woodland, coniferous deciduous forest. Winter visitor and migrant to coastal Southern California. Forages over a variety of habitats.	Fall & winter; scarce in summers	FED: ND STATE: SSC	Low. Not observed during the surveys, but are expected to forage infrequently over the property during migration and in winter.
Cooper's hawk *Accipiter cooperi*	Woodland and semi-open habitats, riparian groves and mountain canyons. Uncommon permanent resident in coastal, mountains, and deserts of Southern California. Transients fairly common on coast in fall.	Year round; predominant in summer	FED: ND STATE: WL	Low. Not observed during the surveys, but are expected to forage infrequently over the property.
Golden eagle *Aquila chrysaetos*	Grasslands, brushlands, deserts, oak savannas, open coniferous forests and montane valleys. Nesting primarily in rugged mountainous country. Uncommon resident in Southern California.	Year round diurnal	FED: ND STATE: SSC (nesting and wintering). CFP	None. Not observed during the surveys. Foraging habitat for this species does not. No suitable nesting habitat occurs on site.
Merlin *Falco columbarius*	Frequents several habitats including coastal sage scrub and annual grassland. Forages along the coast, and in montane valleys and open deserts with scattered clumps of trees. Rare fall migrant and winter visitor to Southern California.	Fall & winter	FED: ND STATE: SSC	Low. Not observed during the surveys. Can be expected to forage over the site during migration and in winter. This species is not expected to use the area very infrequently.

Table 1. Sensitive Biological Resources Identified for the Project Area

Resource	Habitat and Distribution	Activity Period	Status Designation	Occurrence Probability
American peregrine falcon *Falco peregrinus anatum*	Wetlands near high cliffs; few known to nest in urban settings on tall buildings. Scattered locations in North America; in California coastal areas and inland mountains.	Fall & Winter (in migration and as winter visitor)	FED: ND STATE: END. CFP	Low. Species passes through region during migration and may winter in region; during migration or winter,
Prairie falcon *Falco mexicanus*	Nest in cliffs or rocky outcrops; forage in open arid valleys, agricultural fields. Throughout the desert and arid interior portions of coastal counties. Uncommon resident in Southern California.	Year round, diurnal	FED: ND STATE: SSC	None. There is no suitable nesting or foraging habitat in the vicinity of the project
California condor *Gymnopgyps californianus*	Sea level up to about 6,000 feet elevation. Open grasslands provide foraging areas. Nesting habitats range from scrubby chaparral to forested mountain regions, with multiple nesting sites.	Year round, diurnal	FED: END STATE: END	None. There is no suitable nesting or foraging habitat on the property size.
California spotted owl *Strix occidentalis occidentalis*	Mature forests with dense, multilayered canopy. Hardwood understory species such as oak also form part of the habitat. Elevation range from below 1000 feet to over 8500 feet. All major mountains ranges of southern California.	Year round	FED: SSC STATE: SSC	None. The property lacks a suitable dense canopy.
Olive-sided flycatcher *Contopus cooperi*	Breeds in montane and northern coniferous forests, at forest edges and openings, such as meadows and ponds. Winters at forest edges and clearings where tall trees or snags are present.	Summer	FED: ND STATE: ND	None. No suitable nesting or foraging habitat exists on site.

Table 1. Sensitive Biological Resources Identified for the Project Area

Resource	Habitat and Distribution	Activity Period	Status Designation	Occurrence Probability
Purple martin *Progne subis*	Forage over towns, cities, parks, open fields, dunes, streams, wet meadows, beaver ponds, and other open areas. Nest in cavities in the mountain forests or Pacific lowlands. Wintering grounds are savannas and agricultural fields in Bolivia, Brazil, and elsewhere in South America.	Summer	FED: ND STATE: SSC	None. May fly over site from nest cavities, but no nesting or foraging on site.
Yellow-breasted chat *Icteria virens*	Riparian thickets of willow, brushy tangles near watercourses. Nests in riparian woodland throughout much of western North America. Winters in Central America.	Year round. Nocturnal migrant	FED: ND STATE: SSC	None. Suitable riparian thickets absent from site.
Yellow warbler *Dendroica petechia brewsteri*	Nesting habitat is protected. Riparian plant associations. Prefers willows, cottonwoods, aspens, sycamores, and alders for nesting and foraging. Also found in montane shrubbery in open conifer forests.	Spring and summer for breeding	FED: ND STATE: SSC	None. Suitable riparian habitat not present or nearby.
Mammals				
Townsend's western big-eared bat *Corynorhinus townsendii*	Requires caves, mines, tunnels, buildings or other similar structures for roosting. May use separate sites for night, day, hibernation or maternity roosts. Found in all but subalpine and alpine habitats throughout California.	Year round, nocturnal	FED: ND STATE: SSC	Low. No suitable roost sites on the property limits this species from roosting on the property. However, it may forage over the property if there are roosting sites such as caves in the nearby mountains.
Pallid bat *Antrozous pallidus*	Day roost in caves, crevices, mines and occasionally hollow trees and buildings. Night roosts may be more open sites, such as porches and open buildings. Hibernation sites are probably rock crevices. Grasslands, shrublands, woodlands and forest from sea level through to mixed conifer. Throughout Southern California.	Spring, Summer, Fall Nocturnal, hibernates in winters	FED: ND STATE: SSC	Low. No suitable roost sites on the property limits this species from roosting on the property. However, it may forage over the property if there are roosting sites such as caves in the nearby mountains.

Table 1. Sensitive Biological Resources Identified for the Project Area

Resource	Habitat and Distribution	Activity Period	Status Designation	Occurrence Probability
Spotted bat *Euderma maculatum*	Found in the western North America from southern British Columbia to the Mexican border, at a small number of widely scattered localities. Habitats range from arid deserts and grasslands through mixed conifer forest up to 10,600 foot elevation. Prefers rock crevices in cliffs, also uses caves and buildings.	Spring, Summer, Fall Nocturnal, hibernates in winters	FED: ND STATE: SSC	Low. No suitable roost sites on the property limits this species from roosting on the property. However, it may forage over the property if there are roosting sites such as caves in the nearby mountains.
Big free-tailed bat *Nyctinomops macrotis*	Found from northern South America and the Caribbean Islands northward to the western United States (Williams, 1986). In the southwestern U.S., populations appear to be scattered. Known breeding localities are in parts of Arizona, New Mexico, and Texas. Prefers rocky, rugged terrain. Roosts in crevices in high cliffs or rocky outcrops. Ranges up to 8,000 feet in elevation.	Nocturnal spring – fall. Hibernates in Winters	FED: ND STATE: SSC	Low. Because there are no suitable roost sites in the property limits, this species does not roost on the property. However, it may forage over the property if there are roosting sites such as caves in the nearby mountains.
American badger *Taxidea taxus*	Most abundant in drier, open stages of most shrub, forest and herbaceous habitats. Friable soils for digging, food for foraging and uncultivated ground.	More active in spring and summer	FED: ND STATE: SSC	Expected. Suitable habitat exists on site and in surrounding area. However, does not burrow on site.
San Bernardino flying squirrel *Glaucomy sabrinus californicus*	San Bernardino Mountains, historically in the San Jacinto Mountains. Mid to upper elevation coniferous forest plant communities. Mature, dense conifer forest, typically with white fir close to riparian areas. 5200 to 8500 feet in elevation.	Year round	FED: ND STATE: SSC Forest Service Sensitive Species	None. Suitable habitat is not present.

Table 1. Sensitive Biological Resources Identified for the Project Area

Resource	Habitat and Distribution	Activity Period	Status Designation	Occurrence Probability
White-eared pocket mouse *Perognathus alticola alticola*	Dry, open pine forest with bracken fern. Sagebrush, and other shrubs in ponderosa and Jeffrey pine forests. Uncommonly in mixed chaparral and sagebrush habitats. Scrub or open scrub habitats on sandy soils.	Nocturnal; active late spring to early fall.	FED: ND STATE: SSC	None. Suitable habitat not present.

Legend

FED: Federal Classifications

END	Taxa listed as endangered
THR	Taxa listed as threatened
PE	Taxa proposed to be listed as endangered
PT	Taxa proposed to be listed as threatened
C2*	The U.S. Fish and Wildlife Service (USFWS) revised its classifications of candidate taxa (species, subspecies, and other taxonomic designations). Species formerly designated as "Category 1 Candidate for listing" are now known simply as "Candidate". The former designation of "Category 2 Candidate for listing" has been discontinued. The USFWS will continue to assess the need for protection of these taxa and may, in the future, designate such taxa as Candidates. NRAI has noted the change in species status by marking with an asterisk (*) those C2 candidates that were removed from the list.
C	Candidate for listing. Refers to taxa for which the USFWS has sufficient information to support a proposal to list as Endangered or Threatened and issuance of the proposal is anticipated but precluded at this time.
ND	Not designated as a sensitive species

STATE: State Classifications

END	Taxa listed as endangered
THR	Taxa listed as threatened
CE	Candidate for endangered listing
CT	Candidate for threatened listing
CFP	California Fully Protected. Species legally protected under special legislation enacted prior to the California Endangered Species Act.
CSC	California Species of Special Concern. Taxa with populations declining seriously or that are otherwise highly vulnerable to human development.
SA	Special Animal. Taxa of concern to the California Natural Diversity Data Base regardless of their current legal or protected status.
ND	Not designated as a sensitive species

CNPS: California Native Plant Society Classifications

1A	Plants presumed by CNPS to be extinct in California
1B	Plants considered by CNPS to be rare or endangered in California and elsewhere
2P	Plants considered by CNPS to be rare, threatened or endangered in California, but which are more common elsewhere.
3	Review list of plants suggested by CNPS for consideration as endangered but about which more information is needed.
4	Watch list of plants of limited distribution whose status should be monitored

Occurrence Probabilities

Occurs	Observed on the site during this study or recorded on site by other qualified biologists.
Expected	Not observed or recorded on site, but likely to be present at least during a portion of the year.
High	Known to occur in the vicinity of the project site. Suitable habitat exists on site.
Moderate	Known to occur in the vicinity of the project site. Small areas or marginally suitable habitat exist on site.
Low	No reported sightings within the vicinity of the project. Available habitat limited and rarely used.
None	Focused surveys did not locate the species, or suitable habitat does not exist on site.
Unknown	No data is available on whether species is on or in the vicinity of the site, and information about the species is insufficient to make an accurate assessment of probability occurrence to make an accurate assessment of probability occurrence