APPENDIX 3

BIOLOGICAL RESOURCES ASSESSMENT

BIOLOGICAL RESOURCES ASSESSMENT
FOR THE BEAR VALLEY UNIFIED SCHOOL DISTRICT EDUCATION FOUNDATION
MAPLE HILL FIELDS COMPLEX PROJECT

Unincorporated Community of Sugarloaf, San Bernardino County, California
USGS – *Big Bear City* Quadrangle
Section 13 of Township 2 North, Range 1 East

Date Prepared: February 2021

Prepared for:

Bear Valley Unified School District
Education Foundation
PO Box 1529
Big Bear Lake, CA 92315

On Behalf of:

Tom Dodson and Associates
2150 N Arrowhead Avenue
San Bernardino, CA 92405

Prepared by:

Jacobs Engineering Group, Inc.
55616 Pipes Canyon Road
Yucca Valley, California 92284

CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.



Lisa Patterson, National Senior Environmental Project Manager

Table of Contents

1 INTRODUCTION 1

1.1 PROJECT DESCRIPTION 1
1.2 LOCATION 4
1.3 ENVIRONMENTAL SETTING 8

2 ASSESSMENT METHODOLOGY 9

2.1 BIOLOGICAL RESOURCES ASSESSMENT 9
2.2 JURISDICTIONAL DELINEATION 10

3 RESULTS 12

3.1 EXISTING BIOLOGICAL AND PHYSICAL CONDITIONS 12
3.1.1 Habitat *12*
3.1.2 Wildlife *12*
3.2 SPECIAL STATUS SPECIES AND HABITATS 12
3.2.1 Special Status Species *13*
3.2.2 Special Status Habitats *18*
3.3 JURISDICTIONAL DELINEATION 19

4 CONCLUSIONS AND RECOMMENDATIONS 21

4.1 SENSITIVE BIOLOGICAL RESOURCES 21
4.2 JURISDICTIONAL WATERS 22

5 REFERENCES 23

Table 2. CNDDB Species and Habitats Documented Within the *Big Bear Lake, Big Bear City, Fawnskin* and *Moonridge* USGS 7.5-Minute Quadrangles

Site Photographs

Appendix A – Regulatory Framework

Appendix B – Botany Report for the Proposed School Trails Project (2019)

1 INTRODUCTION

In 2018 RCK Properties, Inc. donated approximately 213 acres of land to the Bear Valley Unified School District (BVUSD or District). BVUSD subsequently donated the property to the Bear Valley Unified School District Education Foundation in February 2020 for the purposes of developing outdoor recreation and educational opportunities for their students and the community. A system of trails is currently under construction on the property. The proposed Maple Hill Fields Complex Project (Project) would develop a sports field complex that covers approximately 15 acres of the donated property (Figure 1).

On behalf of Tom Dodson and Associates (TDA), Jacobs Engineering Group, Inc. (Jacobs) has prepared this Biological Resources Assessment (BRA) report for the proposed Project. The BRA fieldwork was conducted by Jacobs biological field technician Daniel Smith in November 2020. Additionally, a focused botanical field survey was conducted by Brigit Laughlin and Joseph Esparza for the larger 213-acre property in July of 2019 and the Botany Report for the Proposed School Trails Project was prepared under separate cover and reviewed by Scott Eliason and Dr. Tim Krantz (Appendix B). The result of the 2019 focused botanical survey is included in this BRA report. The purpose of the BRA was to address potential effects of the Project to designated Critical Habitats and/or any species currently listed or formally proposed for listing as endangered or threatened under the federal Endangered Species Act (ESA) and the California Endangered Species Act (CESA) or species designated as sensitive by the California Department of Fish and Wildlife (CDFW [formerly California Department of Fish and Game]) and/or the California Native Plant Society (CNPS).

The Project Area was assessed for sensitive species known to occur locally. Attention was focused on those state and/or federally listed as threatened or endangered species and California Fully Protected species that have been documented in the Project vicinity, whose habitat requirements are present within or adjacent to the Project Area. Results of the habitat assessment are intended to provide sufficient baseline information to the Project proponent and, if required, to County planning officials and federal and state regulatory agencies, including the U.S. Fish and Wildlife Service (USFWS) and CDFW, respectively, to determine if the proposed Project is likely to result in any adverse effects on sensitive biological resources and to identify mitigation measures to offset those effects.

In addition to the BRA and focused botanical field survey, Jacobs biological field technician Daniel Smith assessed the Project Area for the presence of state and/or federal jurisdictional waters potentially subject to regulation by the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA), Regional Water Quality Control Board (RWQCB) under Section 401 of the CWA and Porter Cologne Water Quality Control Act, and CDFW under Section 1602 of the California Fish and Game Code (FGC), respectively.

1.1 Project Description

The proposed Project would construct a 15-acre, three field multi-use sports complex. The sports complex would, as shown on Figure 1, include fields that would accommodate baseball, softball, and soccer. The sports complex would be installed north of Baldwin Lane Elementary School in the unincorporated community of Sugarloaf within San Bernardino County. Access for the complex will be from Baldwin Lane via a newly constructed 800-foot access road. The proposed Project would provide approximately 140 parking spaces near the fields. The access road and parking will create approximately 80,000 square feet (SF) of impervious area. The proposed Project would include several improvements, including three backstops with associated fencing, as well as an approximately 1,000 SF prefabricated restroom, snack bar, and equipment storage building. The three fields will comprise approximately 250,000 SF of turf area. This turf is planned to be natural turf, but artificial turf will be considered depending on funding availability.

The fields will contain lighting throughout the project site, which will be controlled to focus the light on the fields and minimize light spillage on the surrounding area.

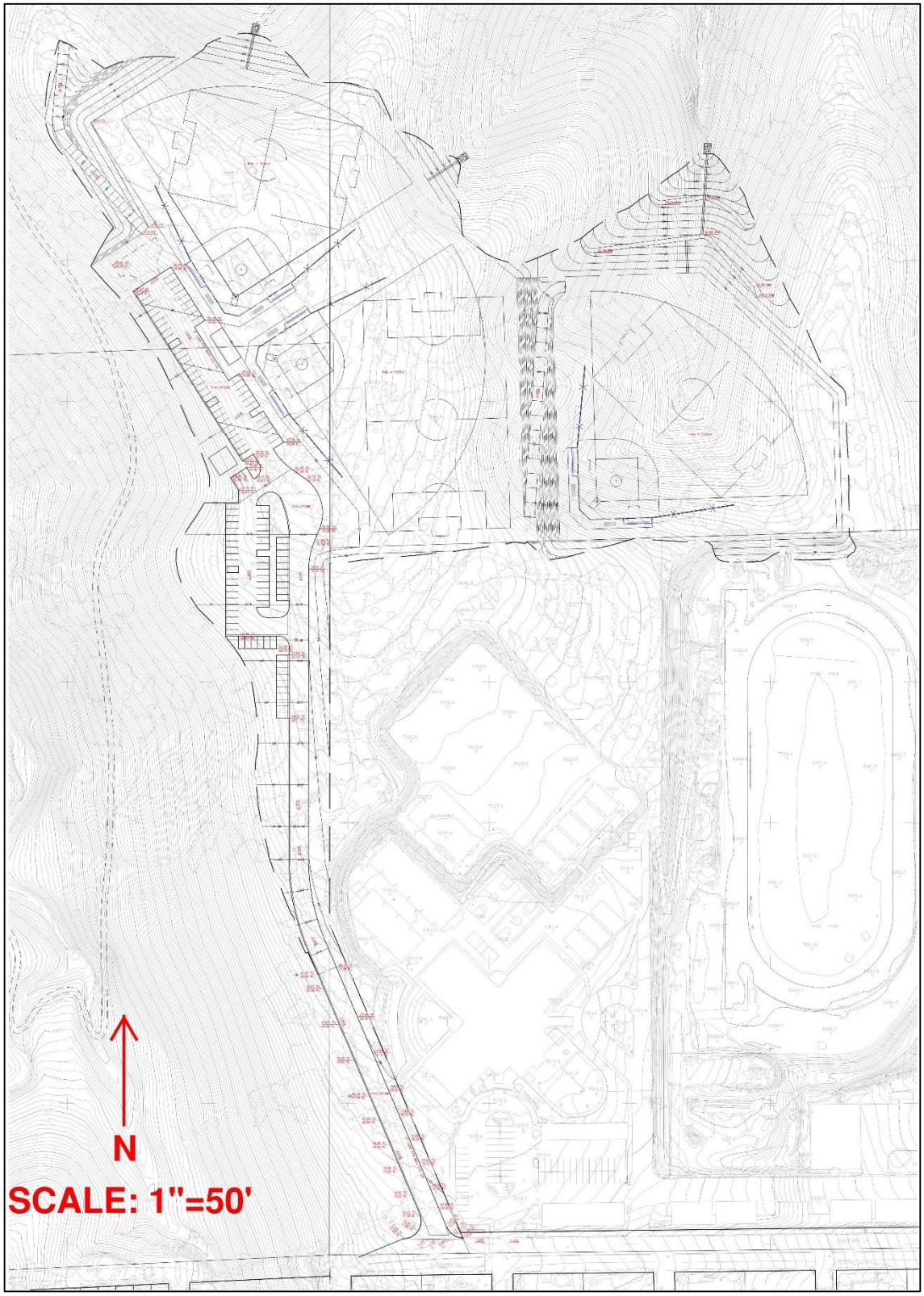
Utility Connections

The Project site is not currently served by any public utilities. Electric service is available on Baldwin Lane from Bear Valley Electric Service. Water service is available in Baldwin Lane from the City of Big Bear Lake, Department of Water and Power (DWP); however, the property is outside of the DWP service area. This will require DWP, the Big Bear City Community Services District (BBCCSD), and the San Bernardino County Local Agency Formation Commission (LAFCO) to agree to an Out of Service Area Agreement to allow the DWP to provide water service to the project. The DWP and the BBCCSD Boards have approved the agreement. Sewer and Solid Waste service will be provided by the BBCCSD.

Construction Scenario

The proposed Project is expected to begin construction for the sports complex in June of 2021. It is estimated that construction of the Maple Hill Community Fields Project will be completed by approximately October 2022, if grant funding is available. The Project will require clearing, re-grading and compacting approximately 200,000 cubic yards (CY) of native soil on 15 acres of undeveloped land. Figure 1 outlines the areas of cut and fill that will be required as part of project development. Vegetation that requires removal will be trucked to the Big Bear Transfer Station for recycling. All trees within the cut and fill areas and the roadway will be removed. The final alignment of the access road will be developed to minimize the need for tree removal. It is anticipated that a maximum number of 25 employees will be required to support the construction of the Project each day. Grading will be by traditional mechanized grading and compaction equipment. Equipment utilized will be traditional site development equipment of scrapers, wheel compactors, vibratory compactors, water trucks, petroleum powered forklifts, and various hand tools traditional to grading operations. For the areas that require paving, such as the new parking area, the asphalt or concrete will be delivered to the site and applied to these areas in a routine manner. It is the intent of the Project proponent to attenuate noise, traffic, and dust during the course of construction.

The Project impact area is defined as all areas that may be impacted directly or indirectly by the Project. It encompasses the geographic extent of environmental changes (i.e. the physical, chemical and biotic effects) that will result directly and indirectly from the Project.



SOURCE: Tom Dodson and Associates

FIGURE 1

Site Grading Plan

BVUSD Education Foundation – Maple Hill Fields Complex Project

1.2 Location

The Project Area is generally located east of Big Bear Lake in Section 13, Township 2 North, Range 1 East, San Bernardino Base Meridian (SBBM), just east/southeast of the City of Big Bear Lake, San Bernardino County, California (Figures 2&3). The Project Area is depicted on the *Big Bear City* U. S. Geological Survey's (USGS) 7.5-Minute Series Quadrangle map. Specifically, the Project site is located at 44500 Baldwin Lane in the unincorporated community of Sugarloaf, approximately 0.38 miles south of E Big Bear Boulevard and 0.67 miles west of Greenspot Boulevard, adjacent the east/northeast side of the existing Baldwin Lane Elementary School (Figure 2&3).



SOURCE: Google Earth

FIGURE 2

JACOBS

Regional Location

BVUSD Education Foundation – Maple Hill Fields Complex Project



SOURCE: Google Earth and USGS

FIGURE 3

Topographic Map of Project Location
BVUSD Education Foundation – Maple Hill Fields Complex Project

r



SOURCE: Google Earth

FIGURE 4

Aerial Photograph of Project Area
BVUSD Education Foundation – Maple Hill Fields Complex Project

1.3 Environmental Setting

The Project Area is within the Sugarloaf area of unincorporated San Bernardino County, which is east/southeast of Big Bear Lake and situated near the western end of Big Bear Valley in the San Bernardino Mountains. The Big Bear Valley area is subject to both seasonal and annual variations in temperature and precipitation. Average annual maximum temperatures peak at 80.8 degrees Fahrenheit (° F) in July and fall to an average annual minimum temperature of 20.3° F in January. Average annual precipitation is greatest from November through April and reaches a peak in January (4.49 inches). Precipitation is lowest in the month of June (0.14 inches). Annual total precipitation averages 21.84 inches and annual total snowfall averages 62.6 inches.

The Project site is situated on a long, relatively flat hilltop (ridge) and the topography of the Project Area ranges from steeply sloped on the east side of the Project site to flat through the middle of the site. The elevation of the Project site ranges from approximately 6,980 feet above mean sea level (amsl) along the easternmost slope of the Project site to 7,080 feet amsl at the northern end of the Project site.

Hydrologically, the Project Area is situated within the Baldwin Hydrologic Sub-Area (HSA 801.73). The Baldwin HSA comprises a 22,789-acre drainage area, within the larger Santa Ana Watershed (HUC 18070203). The Santa Ana River is the major hydrogeomorphic feature within the Santa Ana Watershed. One of several tributaries to the Santa Ana River is Bear Creek, which outflows from Big Bear Lake from the Bear Valley Dam located at the westernmost (downstream) end of Big Bear Lake. Big Bear Lake is one of the head waters of the Santa Ana River Watershed.

Soils within the Project Area are comprised of Garloaf-Cariboucreek complex, 15 to 30 percent slopes and Garloaf-Urban land complex, 4 to 9 percent slopes. Garloaf family soils consist of very cobbly loam to very cobbly clay loam that is comprised of alluvium derived from granitoid. This soil type is well drained and does not have a hydric soil rating. Cariboucreek family soils consist of clay loam that is comprised of mixed alluvium. This soil type is well drained and does not have a hydric soil rating.

Sugarloaf is a mountain community situated east/southeast of Big Bear Lake that consists mostly of residential development surrounded by undeveloped montane conifer forest (Figures 3&4). Existing land use surrounding the Project Area consists of single-family residential development and Baldwin Lane Elementary School to the south, Big Bear High School to the east, undeveloped land and residential development to the north, and undeveloped land to the west.

2 ASSESSMENT METHODOLOGY

2.1 Biological Resources Assessment

Data regarding biological resources in the Project Area were obtained through literature review and field investigation. Prior to performing the survey, available databases and documentation relevant to the Project Area were reviewed for documented occurrences of sensitive species in the Project vicinity (approximately 3 miles). The USFWS threatened and endangered species occurrence data overlay, USFWS Information for Planning and Consultation (IPaC) database and the most recent versions of the California Natural Diversity Database (CNDDB) and California Native Plant Society Electronic Inventory (CNPSEI) databases were searched for sensitive species data in the *Big Bear Lake*, *Big Bear City*, *Fawnskin* and *Moonridge* USGS 7.5-Minute Series Quadrangles. These databases contain records of reported occurrences of state and federally listed species or otherwise sensitive species and habitats that may occur within the vicinity of the Project site (approximately 3 miles). Other available technical information on the biological resources of the area was also reviewed including previous surveys and recent findings.

Biological Resources Assessment

Jacobs biological field technician Daniel Smith conducted a biological resources assessment of the Project Area on November 6, of 2020. The assessment included both desktop review of Google Earth aerial imagery and field survey. The field survey consisted of a reconnaissance-level pedestrian survey of the Project site, as well as the immediate surrounding area where feasible and appropriate. Wildlife species were detected during field survey by sight, calls, tracks, scat, or other sign. In addition to species observed, expected wildlife usage of the site was determined based on known habitat preferences of regional wildlife species and knowledge of their relative distributions in the area. The focus of the faunal species survey was to identify potential habitat for special status wildlife within the Project Area.

Focused Botanical Field Survey

A focused botanical field survey was conducted by Brigit Laughlin and Joseph Esparza on July 16, 2019 (Appendix B). The Project Area was surveyed for sensitive plant species as part of a proposed school trails project that encompassed the larger 213 acres of donated land. The focused botanical field survey was conducted during the appropriate time of year, when the target species were both evident and identifiable. The target species consisted of those state and/or federally listed or other rare, sensitive, and protected plant species that are known or suspected to occur in the vicinity of the school trails project. Target species included:

- Ash-gray paintbrush (*Castilleja cinerea*) – threatened (federal);
- Mountain paintbrush (*Castilleja montigena*) – CNPS 4.3 (limited distribution);
- Big Bear Valley sandwort (*Eremogone ursina*); – threatened (federal);
- Southern mountain buckwheat (*Eriogonum kennedyi* var. *austromontanum*); – threatened (federal);
- Silver-haired ivesia (*Ivesia argyrocoma* var. *argyrocoma*) – CNPS 1B.2 (rare, threatened, or endangered in California and elsewhere); and
- Big Bear Valley phlox (*Phlox dolichantha*) – CNPS 1B.2 (rare, threatened, or endangered in California and elsewhere).

Prior to conducting the survey, nearby reference populations were visited to determine whether the target species were identifiable at the time of the survey. All six target species were readily detectable and identifiable at the time of survey, based on observations at nearby reference populations.

2.2 Jurisdictional Delineation

On November 6, of 2020, Mr. Smith also evaluated the Project Area for the presence of riverine/riparian/wetland habitat and jurisdictional waters, i.e. Waters of the U.S. (WOTUS), as regulated by the USACE and RWQCB, and/or jurisdictional streambed and associated riparian habitat as regulated by the CDFW.

Prior to the field visit, aerial photographs of the Project Area were viewed and compared with the surrounding USGS 7.5-Minute Topographic Quadrangle maps to identify drainage features within the survey area as indicated from topographic changes, blue-line features, or visible drainage patterns. The USFWS National Wetland Inventory and Environmental Protection Agency (EPA) Water Program "My Waters" Google Earth Pro data layer were also reviewed to determine whether any hydrologic features and wetland areas had been documented within the vicinity of the site. Similarly, the United States Department of Agriculture (USDA) – Natural Resources Conservation Service (NRCS) Web Soil Survey was reviewed for soil types found within the Project Area to identify the soil series in the area and to check these soils to determine whether they are regionally identified as hydric soils. Upstream and downstream connectivity of waterways (if present) were reviewed on Google Earth Pro aerial photographs and topographic maps to determine jurisdictional status. The lateral extent of potential USACE jurisdiction was measured at the Ordinary High Watermark (OHWM) in accordance with regulations set forth in 33CFR part 328 and the USACE guidance documents listed below:

- *USACE Wetlands Research Program Technical Report Y-87-1 (on-line edition), Wetlands Delineation Manual, Environmental Laboratory, 1987 (Wetland Delineation Manual).*
- *USACE Minimum Standards for Acceptance of Preliminary Wetlands Delineations, November 30, 2001 (Minimum Standards).*
- *USACE Jurisdictional Determination Form Instructional Guidebook, May 30, 2007 (JD Form Guidebook).*
- *USACE Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0), May 2010.*
- *USACE A Guide to Ordinary High-Water Mark (OHWM) Delineation for Non-Perennial Streams in the Western Mountains, Valleys, and Coast Region of the United States, August 2014 (Delineation Manual).*
- *The Environmental Protection Agency (EPA) and the Department of the Army's "Navigable Waters Protection Rule: Definition of 'Waters of the United States,'" April 21, 2020 (effective June 22, 2020) (85 FR 22250).*

To be considered a *jurisdictional wetland* under the federal CWA, Section 404, an area must possess three (3) wetland characteristics: hydrophytic *vegetation*, hydric *soils*, and wetland *hydrology*.

- *Hydrophytic vegetation*: Hydrophytic vegetation is plant life that grows, and is typically adapted for life, in permanently or periodically saturated soils. The hydrophytic vegetation criterion is met if more than 50 percent of the dominant plant species from all strata (tree, shrub, and herb layers) is considered hydrophytic. Hydrophytic species are those included on the *2016 National Wetland Plant List (Western Mountains, Valleys & Coast Region)* (Lichvar, 2016). Each species on the list is rated with a wetland indicator category, as shown in Table 1. To be considered hydrophytic, the species must have *wetland indicator status*, i.e., be rated as OBL, FACW or FAC.

Table 1. Wetland Indicator Vegetation Categories

Category	Probability
Obligate Wetland (OBL)	Almost always occur in wetlands (estimated probability >99%)
Facultative Wetland (FACW)	Usually occur in wetlands (estimated probability 67 to 99%)
Facultative (FAC)	Equally likely to occur in wetlands and non-wetlands (estimated probability 34 to 66%)
Facultative Upland (FACU)	Usually occur in non-wetlands (estimated probability 67 to 99%)
Obligate Upland (UPL)	Almost always occur in non-wetlands (estimated probability >99%)

- *Hydric Soil*: Soil maps from the USDA-NRCS Web Soil Survey (USDA 2021) were reviewed for soil types found within the Project Area. Hydric soils are saturated or inundated long enough during the growing season to develop anaerobic conditions that favor growth and regeneration of hydrophytic vegetation. There are several indirect indicators that may signify the presence of hydric soils including hydrogen sulfide generation, the presence of iron and manganese concretions, certain soil colors, gleying, and the presence of mottling. Generally, hydric soils are dark in color or may be gleyed (bluish, greenish, or grayish), resulting from soil development under anoxic (without oxygen) conditions. Bright mottles within an otherwise dark soil matrix indicate periodic saturation with intervening periods of soil aeration. Hydric indicators are particularly difficult to observe in sandy soils, which are often recently deposited soils of flood plains (entisols) and usually lack sufficient fines (clay and silt) and organic material to allow use of soil color as a reliable indicator of hydric conditions. Hydric soil indicators in sandy soils include accumulations of organic matter in the surface horizon, vertical streaking of subsurface horizons by organic matter, and organic pans.

  The hydric soil criterion is satisfied at a location if soils in the area can be inferred or observed to have a high groundwater table, if there is evidence of prolonged soil saturation, or if there are any indicators suggesting a long-term reducing environment in the upper part of the soil profile. Reducing conditions are most easily assessed using soil color. Soil colors are evaluated using the Munsell Soil Color Charts (Gretag/Macbeth, 2000). Soil pits (when necessary) are dug to an approximate depth of 16-20 inches to evaluate soil profiles for indications of anaerobic and redoximorphic (hydric) conditions in the subsurface.

- *Wetland Hydrology*: The wetland hydrology criterion is satisfied at a location based upon conclusions inferred from field observations that indicate an area has a high probability of being inundated or saturated (flooded, ponded, or tidally influenced) long enough during the growing season to develop anaerobic conditions in the surface soil environment, especially the root zone (USACE, 1987 and 2008b).

Evaluation of CDFW jurisdiction followed guidance in the FGC. Specifically, CDFW jurisdiction would occur where a stream has a definite course showing evidence of where waters rise to their highest level and to the extent of associated riparian vegetation.

3 RESULTS

3.1 Existing Biological and Physical Conditions

The Project Area consists of an approximately 15-acre undeveloped site upon which will be constructed a three field multi-use sports complex. The Project Area is surrounded by single-family residential development and Baldwin Lane Elementary School to the south, Big Bear High School to the east, undeveloped land and residential development to the north, and undeveloped land to the west. Disturbances on site include historic and ongoing OHV and pedestrian impacts, unauthorized wood cutting, and illegal dumping. Adjacent disturbances include pedestrian and vehicular traffic, Baldwin Lane Elementary School and other human disturbances associated with the surrounding developments.

3.1.1 Habitat

Habitat within the Project Area consists of mixed *Pinus monophyla* – (*Juniperus osteosperma*) Woodland Alliance (singleleaf pinyon – Utah juniper woodlands) and *Artemisia tridentata* Shrubland Alliance (big sagebrush) habitats, with a relatively open tree canopy and sparse to moderately dense understory. Within the Project Area, single leaf pinyon – Utah juniper woodlands habitat is dominated by single leaf pinyon pine (*Pinus monophylla*), Sierra juniper (*Juniperus grandis*) and Jeffrey pine (*Pinus jeffreyi*). Other trees/large shrub species conspicuous within the Project Area include pale leaved serviceberry (*Amelanchier utahensis*), curl leaved mountain mahogany (*Cercocarpus ledifolius* var. *intermontanus*) and California fremontia (*Fremontodendron californicum*). The shrub layer on site is dominated by big sagebrush (*Artemisia tridentata*) and rubber rabbitbrush (*Ericameria nauseosa*). Other shrub species common within Project site include mountain whitethorn (*Ceanothus cordulatus*), hairy yerba santa (*Eriodictyon trichocalyx*), Wright's buckwheat (*Eriogonum wrightii* var. *subscaposum*) and beavertail cactus (*Opuntia basilaris*).

3.1.2 Wildlife

The Project Area is adjacent an elementary school and residential community, and due to disturbances on site and adjacent, only those wildlife species at least partially adapted to urban environments are expected to occur. The only wildlife species observed or otherwise detected within the Project Area during the reconnaissance-level field survey were California scrub jay (*Aphelocoma californica*), common raven (*Corvus corax*), Steller's jay (*Cyanocitta stelleri*), dark-eyed junco (*Junco hyemalis*), mountain chickadee (*Poecile gambeli*), pygmy nuthatch (*Sitta pygmaea*) and woodrat (*Neotoma* sp.). Additionally, domestic dogs were observed in the Project Area. No focused faunal surveys were conducted, and no small mammal trapping was performed.

3.2 Special Status Species and Habitats

According to the CNDDB, CNPSEI, and other relevant literature and databases, 101 sensitive species (72 plant species, 29 animal species) and two sensitive habitats have been documented in the *Big Bear Lake*, *Big Bear City*, *Fawnskin* and *Moonridge* USGS 7.5-Minute Series Quadrangles. This list of sensitive species and habitats includes any state and/or federally listed threatened or endangered species, California Fully Protected species, CDFW designated Species of Special Concern (SSC), and otherwise Special Animals. "Special Animals" is a general term that refers to all the taxa the CNDDB is interested in tracking, regardless of their legal or protection status. This list is also referred to as the list of "species at risk" or "special status species." The CDFW considers the taxa on this list to be those of greatest conservation need.

Of the 20 state and/or federally listed species documented within the *Big Bear Lake, Big Bear City, Fawnskin* and *Moonridge* quads, the following 13 state and/or federally listed species have been documented in the Project vicinity (within approximately 3 miles):

- ash-gray paintbrush (*Castilleja cinerea*)
- southern rubber boa (*Charina umbratica*)
- Big Bear Valley sandwort (*Eremogone ursina*)
- southern mountain buckwheat (*Eriogonum kennedyi* var. *austromontanum*)
- Cushenbury buckwheat (*Eriogonum ovalifolium* var. *vineum*)
- unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*)
- bald eagle (*Haliaeetus leucocephalus*)
- San Bernardino Mountains bladderpod (*Physaria kingii* ssp. *bernardina*)
- San Bernardino blue grass (*Poa atropurpurea*)
- southern mountain yellow-legged frog (*Rana muscosa*)
- bird-foot checkerbloom (*Sidalcea pedata*)
- California dandelion (*Taraxacum californicum*)
- slender-petaled thelypodium (*Thelypodium stenopetalum*)

However, the aquatic habitats required by unarmored threespine stickleback and southern mountain yellow-legged frog are absent from the Project Area. Additionally, the mesic meadow habitats associated with San Bernardino blue grass, bird-foot checkerbloom, California dandelion and slender-petaled thelypodium are absent from the Project Area and immediate vicinity. Therefore, no further discussion of these species is warranted.

Although not a state or federally listed species, the California spotted owl (*Strix occidentalis occidentalis*) and San Bernardino flying squirrel (*Glaucomys sabrinus californicus*) are both CDFW SSC and are considered particularly sensitive species within the region. Furthermore, these species have been documented in the Project vicinity (within approximately 3 miles). Therefore, California spotted owl (SPOW) and flying squirrel will be included in the discussion below.

An analysis of the likelihood for occurrence of all CNDDB sensitive species documented in the *Big Bear Lake, Big Bear City, Fawnskin* and *Moonridge* quad is provided in Table 2. This analysis considers species' range as well as documentation within the vicinity of the Subject Parcel and includes the habitat requirements for each species and the potential for their occurrence on site, based on required habitat elements and range relative to the current site conditions.

3.2.1 Special Status Species

One federally listed endangered plant species (San Bernardino Mountains bladderpod) has been documented in the immediate Project vicinity. No other state or federally listed threatened or endangered species have been documented in the Project Area and none were observed on site during the BRA and focused botanical field surveys.

Pebble Plain Species

The federally listed as threatened ash-gray paintbrush, Big Bear Valley sandwort and southern mountain buckwheat have all been documented in the Project vicinity and there is some suitable pebble plain-like habitat for these species in the Project Area. However, these species were not detected on site during the focused botanical field survey conducted by Laughlin and Esparza in 2019 (see Appendix B). Ash-gray paintbrush, Big Bear Valley sandwort and southern mountain buckwheat were observed during the 2019

focused botanical field survey approximately 0.25 miles west of the Project site at the Dixie Lee Pebble Plain, along with other rare pebble plain associated species (Laughlin and Esparza 2019). Therefore, ash-gray paintbrush, Big Bear Valley sandwort and southern mountain buckwheat are considered absent from the Project Area at the time of survey and the Project is not likely to adversely affect these species.

San Bernardino Mountains bladderpod – Endangered (Federal)

The federally listed as endangered San Bernardino Mountains bladderpod is a silvery, short-lived perennial in the mustard family (Brassicaceae), that reaches approximately 5 to 15 centimeters (2 to 6 inches) in height (USFWS 2009a). The outer basal leaves are diamond-shaped to round, and the inner leaves are elliptic with petioles 2 to 5 centimeters (0.8 to 2 inches) long. The flower petals are yellow, and the fruits are spherical, pubescent, two-chambered, and contain 2 to 4 seeds per chamber (USFWS 2009a). This species is typically found within single leaf pinyon-mountain juniper and white fir forest on limestone and dolomite soils and gentle to moderate slopes at elevations between 2,098 and 2,700 meters (6,883 and 8,800 feet) in the San Bernardino Mountains (USFWS 2009a). This species typically blooms from May to June (Calflora 2021).

> *Findings*: According to the literature review, the nearest documented San Bernardino Mountains bladderpod occurrence is a 1996 collection mapped north of Sugarloaf and immediately west of Maple Lane, in the SE ¼ of Section 13 (CNDDB 2021). The description of the location likely puts this occurrence somewhere within 0.5 mile east of the Project site, in the vicinity of Big Bear High School. The next nearest documented San Bernardino Mountains bladderpod occurrence to the Project Area is approximately 2.3 miles northwest of the Project site, northeast of Big Bear Lake on substrate described as "carbonate hills" (CNDDB 2021).
>
> The USFWS lists the primary constituent elements (PCEs) for San Bernardino Mountains bladderpod designated critical habitat as:
>
> 1. Soils derived primarily from Bonanza King Formation and Undivided Cambrian parent materials that occur on hillsides or on large rock outcrops at elevations between 6,883 and 8,800 feet (2,098 and 2,700 meters);
> 2. Soils with intact, natural surfaces that have not been substantially altered by land use activities (e.g., graded, excavated, re-contoured, or otherwise altered by ground-disturbing equipment); and
> 3. Associated plant communities that have areas with an open canopy cover and little accumulation of organic material (e.g., leaf litter) on the surface of the soil (USFWS 1994).
>
> Although the soils on site are relatively undisturbed, PCE 1 is absent from the Project Area. The carbonate soils San Bernardino Mountains bladderpod requires do not occur within the Project Area. Furthermore, San Bernardino Mountains bladderpod was not detected on site during the focused botanical field survey conducted by Laughlin and Esparza in 2019 (see Appendix B). Therefore, San Bernardino Mountains bladderpod is considered absent from the Project Area at the time of survey and the Project is not likely to adversely affect this species.

Cushenbury Buckwheat

The federally listed as endangered Cushenbury buckwheat is a low, densely-matted perennial in the buckwheat family (Polygonaceae) that reaches approximately 10 centimeters (4 inches) in height and forms a mat up to 51 centimeters (20 inches) in diameter (USFWS 2009b). This species is typically found within

pinyon woodland, pinyon-juniper woodland, Joshua tree woodland, and blackbush scrub habitats on limestone or other carbonate soils at elevations between 1,400 and 2,400 meters (4,600 and 7,900 feet) in the San Bernardino Mountains (USFWS 2009b). This species typically blooms from May to August (Calflora 2021).

Findings: According to the literature review, the nearest documented Cushenbury buckwheat occurrence (2012) is approximately 2 miles northwest of the Project site, northeast of Big Bear Lake on limestone marble and dolomitic limestone soils (CNDDB 2021).

The USFWS lists the primary constituent elements (PCEs) for Cushenbury buckwheat designated critical habitat as:

1. Soils derived primarily from the upper and middle members of the Bird Spring Formation and Bonanza King Formation parent materials that occur on hillsides at elevations between 4,600 to 7,900 feet (1,400 to 2,400 meters);
2. Soils with intact, natural surfaces that have not been substantially altered by land use activities (e.g., graded, excavated, re-contoured, or otherwise altered by ground-disturbing equipment); and
3. Associated plant communities that have areas with an open canopy cover (generally less than 15 percent cover) and little accumulation of organic material (e.g., leaf litter) on the surface of the soil (USFWS 1994).

Although the soils on site are relatively undisturbed, PCE 1 is absent from the Project Area. The carbonate soils Cushenbury buckwheat requires do not occur within the Project Area. Furthermore, Cushenbury buckwheat was not detected on site during the focused botanical field survey conducted by Laughlin and Esparza in 2019 (see Appendix B). Therefore, Cushenbury buckwheat is considered absent from the Project Area at the time of survey and the Project is not likely to adversely affect this species.

Southern Rubber Boa – Threatened (State)

The state listed as threatened southern rubber boa (rubber boa) is a small, rather stout-bodied snake with smooth scales and a blunt head and tail (Stewart et al. 2005). Adults grow to about 49.5-55.9 centimeters (19.5-22 inches) in length. Adult rubber boas are light brown or tan in dorsal color with an unmarked yellow venter; juveniles are pale without a distinct margin between dorsal and ventral coloration (Stewart et al. 2005). Rubber boas are primarily fossorial and are rarely encountered on the surface, except on days and nights of high humidity and overcast sky. During warm months, this snake is typically active at night and on overcast days. Rubber boas hibernate during the winter, usually in crevices in rocky outcrops. Other potential hibernacula for this species may include rotting stumps.

Typical southern rubber boa habitat is mixed conifer-oak forest or woodland dominated by two or more of the following species: Jeffrey pine (*Pinus jeffreyi*), yellow pine (*P. ponderosa*), sugar pine (*P. lambertiana*), incense cedar (*Calocedrus decurrens*), white fir (*Abies concolor*), and black oak (*Quercus kelloggii*) (Stewart et al., 2005). Rubber boas are usually found near streams or wet meadows or within or under surface objects with good moisture retaining properties such as rotting logs (CDFW 2014). Much of the literature suggests that the rubber boa prefers moist conifer-oak forests and woodlands between 5,000 and 8,000 feet in elevation, especially in canyons and on cool, north facing slopes (CDFW 1987). However, the factors of overriding importance seem to be access to hibernation sites below the frost line and access to damp soil (Keasler 1982). In all habitat types, rock outcrops and surface materials (i.e. rocks, logs, and a well-developed duff layer) are important habitat components because they provide cover and maintain

soil moisture (Loe 1985, as cited in Stewart et al. 2005).

> *Findings*: According to the literature review, the nearest documented southern rubber boa occurrence (2013) is approximately 1.4 miles north of the Project Area, north of Big Bear City and State Route 18 (SR 18) (CDFW pers. comm.). Southern rubber boa have not been documented in the Project Area and the conditions on site are not suitable to support this species. The Project Area is devoid of rock outcrops and there is little to no ground cover (i.e. rotting stumps/logs, duff layer) that could provide sufficient soil moisture or potential rubber hibernacula and refugia. The site is very open and dry, with poorly developed soils that do not provide the mesic conditions and friable substrates for burrowing that rubber boa require. Furthermore, the moist conifer-oak forest and woodland habitats this species is typically associated with are absent from the Project Area. Therefore, the Project is not likely to impact rubber boa and no further investigation relative to this species is warranted or recommended.

Bald Eagle – Delisted (Federal)/Endangered (State)

The bald eagle (BAEA) was a federally listed species until 2007 when it was delisted because of the increase in population. However, it remains a state listed endangered species and is covered under the federal Migratory Bird Treaty Act (MBTA) of 1918, as well as the Bald and Golden Eagle Protection Act of 1940, as amended in 1962. BAEA are distinguished by a white head and white tail feathers, are powerful, brown birds that may weigh 14 pounds and have a wingspan of 8 feet. Male eagles are smaller, weighing as much as 10 pounds and have a wingspan of 6 feet. Sometimes confused with Golden Eagles, BAEA are mostly dark brown until they are four to five years old and acquire their characteristic coloring. They live near rivers, lakes, and marshes where they can find fish, their staple food. BAEA will also feed on waterfowl, turtles, rabbits, snakes, and other small animals and carrion. BAEA require a good food base, perching areas, and nesting sites. Their habitat includes estuaries, large lakes, reservoirs, rivers, and some seacoasts (CDFW 2016). In winter, the birds congregate near open water in tall trees for spotting prey and night roosts for sheltering (CDFW 1999). They mate for life, choosing the tops of large trees to build nests, which they typically use and enlarge each year. In most of California, the breeding season lasts from about January through July or August (CDFW 2016). Nests may reach 10 feet across and weigh a half ton. They may also have one or more alternate nests within their breeding territory (CDFW 2016). The young eagles are flying within three months and are on their own about a month later.

Perches in the immediate vicinity of lakeshores form an essential habitat requirement for BAEA in the Big Bear Valley and the major threat to the continued existence of wintering BAEA in this area comes from development and modification of habitat near the shoreline (Walter and Garrett 1981).

> *Findings*: The U.S. Forest Service (USFS) conducts annual surveys for BAEA in the San Bernardino Mountains. Migrating BAEA have long been documented to overwinter at Big Bear Lake. During a two-year study of the wintering BAEA population in the Big Bear Valley, it was estimated that about 30 individuals wintered in the Big Bear Valley. The wintering period for migrating BAEA in the Big Bear Valley area is generally December through March, with the first eagles arriving in mid-November and the last eagles leaving in early April (Walter and Garrett 1981). The highest numbers of wintering eagles in the area is in January and early February (Walter and Garrett 1981).
>
> Since 2012, at least one resident pair has been documented in the Big Bear Valley, which first nested successfully in 2012 and 2015. These eagles typically nest to the west of Grout Bay in the Fawnskin area, approximately 7 miles northwest of the Project Area.

Although BAEA do nest in the Fawnskin area and Big Bear and Baldwin lakes support overwintering migratory BAEA, the Project Area does not provide habitat suitable to support nesting or foraging BAEA. Given the existing human disturbance within the Project Area, consisting mostly of residential development, BAEA are not likely to nest within the Project Area. Furthermore, there is no lake shoreline perching/foraging habitat for this species within the Project Area, which is situated approximately 0.6 mile away from the Baldwin Lake shoreline. Therefore, the Project is not likely to impact BAEA and no further investigation relative to this species is warranted or recommended.

California Spotted Owl – SSC

The California spotted owl (SPOW) is considered an SSC by the CDFW and is listed as a Sensitive Species by the U.S. Forest Service. The SPOW breeds and roosts in forests and woodlands with large old trees and snags, high basal areas of trees and snags, dense canopies (≥70% canopy closure), multiple canopy layers, and downed woody debris (Verner et al. 1992a, as cited in Davis and Gould 2008). Large, old trees are the key component; they provide nest sites and cover from inclement weather and add structure to the forest canopy and woody debris to the forest floor. These characteristics typify old-growth or late-seral-stage habitats (Davis and Gould 2008). Because the SPOW selects stands that have higher structural diversity and significantly more large trees than those generally available, it is considered a habitat specialist (Moen and Gutiérrez 1997, as cited in Davis and Gould 2008). In southern California, SPOW principally occupy montane hardwood and montane hardwood-conifer forests, especially those with canyon live oak (*Quercus chrysolepis*) and bigcone Douglas-fir (*Pseudotsuga macrocarpa*), at mid to high elevations (Davis and Gould 2008).

SPOW prey on small mammals, particularly dusky-footed woodrats (*Neotoma fuscipes*) at lower elevations (oak woodlands and riparian forests) and throughout southern California (Verner et al. 1992a, as cited in Davis and Gould 2008). The SPOW breeding season occurs from early spring to late summer or fall. Breeding spotted owls begin pre-laying behaviors, such as preening and roosting together, in February or March and juvenile owl dispersal likely occurs in September and October (Meyer 2007). The SPOW does not build its own nest but depends on finding suitable, naturally occurring sites in tree cavities or on broken-topped trees or snags, on abandoned raptor or common raven (*Corvus corax*) nests, squirrel nests, dwarf mistletoe (*Arceuthobium* spp.) brooms, or debris accumulations in trees (Davis and Gould 2008). In the San Bernardino Mountains, platform nests predominate (59%) and were in trees with an average diameter at breast height (dbh) of 75 cm, whereas cavity nest trees and broken-top nest trees were significantly larger (mean dbh of 108.3 cm and 122.3 cm, respectively) (LaHaye et al. 1997, as cited in Davis and Gould 2008).

According to LaHaye and Gutierrez (2005), urbanization in the form of primary and vacation homes has degraded or consumed some forest in most mountain ranges. The results of spotted owl surveys conducted between 1987 and 1998 in the San Bernardino Mountains indicated that a large area of potentially-suitable spotted owl habitat, enough to support 10-15 pairs, existed between Running Springs and Crestline (LaHaye and others 1999, as cited in LaHaye and Gutierrez 2005). However, only four pairs have been found in this area, and owls were found only in undeveloped sites. Thus, residential development within montane forests may preclude spotted owl occupancy, even when closed-canopy forest remains on developed sites (LaHaye and Gutierrez 2005).

Findings: According to the CNDDB Spotted Owl Observations Database (2021), the nearest documented SPOW observation is a nesting site located approximately 2.3 mile southeast of the Project Area. The Project Area is within an urban area consisting primarily of residential development and is subject to adjacent human disturbances. Additionally, the Project Area does not support the montane hardwood and montane hardwood-conifer forests that SPOW typically

occupy in the region. Therefore, SPOW are not likely to occur within the Project Area and the Project is not likely to impact this species. No further investigation relative to this species is warranted or recommended.

San Bernardino Flying Squirrel – SSC

The San Bernardino flying squirrel (flying squirrel) is considered an SSC by the CDFW and is listed as a Sensitive Species by the U.S. Forest Service. The flying squirrel is a nocturnally active, arboreal squirrel that is distinguished by the furred membranes extending from wrist to ankle that allow squirrels to glide through the air between trees at distances up to 91 meters (300 feet) (Wolf 2010). The San Bernardino flying squirrel is the most southerly distributed subspecies of northern flying squirrel (*Glaucomys sabrinus*) and is paler in color and smaller than most other northern flying squirrel subspecies. It inhabits high-elevation mixed conifer forests comprised of white fir, Jeffrey pine, and black oak between ~4,000 to 8,500 feet. It has specific habitat requirements that include associations with mature forests, large trees and snags, closed canopy, downed woody debris, and riparian areas, and it is sensitive to habitat fragmentation. It specializes in eating truffles (e.g. hypogeous mycorrhizal sporocarps) buried in the forest floor as well as arboreal lichens in winter when truffles are covered with snow and unavailable (Wolf 2010). This flying squirrel historically occurred as three isolated populations in the San Gabriel, San Bernardino, and San Jacinto mountain forests.

Flying squirrel populations are adversely affected by habitat fragmentation. Rosenberg and Raphael (1984) found that in northwestern California, the abundance of squirrels increased with stand size, they were generally absent in stands smaller than 20 hectares (ha), and approximately 75% of stands over 100 ha had flying squirrels. An additional problem with fragmented habitats is the constraints that open spaces pose to the movements of individuals and the colonization of unoccupied habitat patches. Mowrey and Zasada (1982) reported an average gliding distance of about 20 meters in *sabrinus*, with a maximum of 48 meters, and concluded that movements are unimpeded in areas with average openings of 20 meters and occasional openings of 30 to 40 meters (Bolster 1998).

Findings: The Flying Squirrels of Southern California is a project of the San Diego Natural History Museum (SDNHM), in collaboration with the U.S. Forest Service and the USFWS, to try to determine the distribution and habitat use of the flying squirrel in southern California. According to the SDNHM database, the nearest documented flying squirrel occurrences (2015) is approximately 1 mile southeast of the Project Site. However, the Project Area is within an urban area consisting primarily of residential development and is subject to adjacent human disturbances. Additionally, the Project Area does not support the mixed conifer forests comprised of white fir, Jeffrey pine, and black oak this species typically inhabits and the closed canopy, downed woody debris, and riparian areas typically associated with suitable habitat for this species are absent from the Project Area. Therefore, flying squirrel are not likely to occur within the Project Area and the Project is not likely to impact flying squirrel. No further investigation relative to this species is warranted or recommended.

3.2.2 Special Status Habitats

The Project Area does not contain any sensitive habitats, including any USFWS designated Critical Habitat for any federally listed species. The nearest Critical Habitat unit is approximately 0.25 mile west of the Project site. This Critical Habitat unit is part of the Sawmill Pebble Plain Complex and consists of USFWS designated Critical Habitat for the federally listed as threatened ash-gray paintbrush, Bear Valley sandwort and southern mountain buckwheat. However, no portion of the Project Area is within or adjacent this Critical Habitat unit, or any other sensitive habitats. Therefore, the Project will not result in any loss or

adverse modification of USFWS designated Critical Habitat, or any other special status habitats.

3.3 Jurisdictional Delineation

The Project Area is within the Baldwin Hydrologic Sub-Area (HSA 801.73). The Baldwin HSA comprises a 22,789-acre drainage area, within the larger Santa Ana Watershed (HUC 18070203). This watershed is primarily within San Bernardino County and includes Riverside and Orange Counties with a small portion of Los Angeles Counties. The Santa Ana Watershed is bound on the north by the Mojave and Southern Mojave Watersheds, on the southeast by the Whitewash and San Jacinto Watersheds, and on the west by the San Gabriel, Seal Beach, Newport Bay, and Aliso-San Onofre Watersheds. The Santa Ana Watershed encompasses a portion of the San Gabriel and San Bernardino Mountains in the south and is approximately 3,000 square miles in area. The Santa Ana River is the major hydrogeomorphic feature within the Santa Ana Watershed. One of several tributaries to the Santa Ana River is Bear Creek, which outflows from Big Bear Lake from the Bear Valley Dam located at the westernmost (downstream) end of Big Bear Lake. Big Bear Lake is one of the head waters of the Santa Ana River Watershed.

Waters of the U.S.

The USACE has authority to permit the discharge of dredged or fill material in WOTUS under Section 404 CWA. According to the EPA and the Department of the Army's April 21, 2020 (effective June 22, 2020) "Navigable Waters Protection Rule: Definition of 'Waters of the United States,'" WOTUS are defined as: "The territorial seas and traditional navigable waters; perennial and intermittent tributaries that contribute surface water flow to such waters; certain lakes, ponds, and impoundments of jurisdictional waters; and wetlands adjacent to other jurisdictional waters." (85 FR 22250). The Navigable Waters Protection Rule specifically excludes from the definition of WOTUS:

- "Groundwater, including groundwater drained through subsurface drainage systems;
- ephemeral features that flow only in direct response to precipitation, including ephemeral streams, swales, gullies, rills, and pools;
- diffuse stormwater runoff and directional sheet flow over upland;
- ditches that are not traditional navigable waters, tributaries, or that are not constructed in adjacent wetlands, subject to certain limitations;
- prior converted cropland;
- artificially irrigated areas that would revert to upland if artificial irrigation ceases;
- artificial lakes and ponds that are not jurisdictional impoundments and that are constructed or excavated in upland or non-jurisdictional waters;
- water-filled depressions constructed or excavated in upland or in non-jurisdictional waters incidental to mining or construction activity, and pits excavated in upland or in non-jurisdictional waters for the purpose of obtaining fill, sand, or gravel;
- stormwater control features constructed or excavated in upland or in non-jurisdictional waters to convey, treat, infiltrate, or store stormwater run-off;
- groundwater recharge, water reuse, and wastewater recycling structures constructed or excavated in upland or in non-jurisdictional waters; and
- waste treatment systems." (85 FR 22250).

There are no features within the Project Area that would meet the definition of WOTUS. Therefore, the Project will not result in any impacts (temporary or permanent) to jurisdictional waters subject to regulation by the USACE or RWQCB under Sections 404/401 of the CWA.

USACE Wetlands

Areas meeting all three wetland parameters (i.e. hydrophitic vegetation, hydric soils and wetland hydrology) and are adjacent to other jurisdictional waters would be designated as USACE wetlands. Hydrophitic vegetation, hydric soil indicators and wetland hydrology are absent from the Project Area. Therefore, the Project site does not meet all three wetland characteristics and does not contain any USACE wetlands.

Waters of the State

The Project Area does not contain any lakes, streams or riparian/riverine habitats subject to regulation by the CDFW under Section 1602 of the FGC, or by the RWQCB under the Porter Cologne Water Quality Control Act and the Project will not result in any impacts (temporary or permanent) to "waters of the State".

4 CONCLUSIONS AND RECOMMENDATIONS

4.1 Sensitive Biological Resources

A BRA survey was conducted by Jacobs in November 2020 to identify potential habitat for special status wildlife within the Project Area. No special status wildlife species, including state and/or federally listed threatened or endangered species, were observed within the Project Area during the reconnaissance-level assessment survey and none are expected to occur. Due to the environmental conditions on site and the adjacent disturbances, the Project Area is likely not suitable to support any of the special status wildlife species that have been documented in the Project vicinity (within approximately 3 miles), including the state listed as threatened southern rubber boa, the federally delisted and state listed as endangered bald eagle, and the California SSC San Bernardino flying squirrel and California spotted owl.

A focused botanical field survey was conducted by Brigit Laughlin and Joseph Esparza for the larger 213-acre property in July of 2019 to determine whether any of the special status plant species documented in the Project vicinity were present within the site (see Appendix B). The result of the focused botanical field survey was that no state or federally listed plant species were found within the Project Area. The nearest ash-gray paintbrush, Big Bear Valley sandwort and southern mountain buckwheat were observed at the Dixie Lee Pebble Plain, approximately 0.25 mile west of the Project site (Laughlin and Esparza 2019). Additionally, the Project Area is not suitable to support the federally listed as endangered San Bernardino Mountains bladderpod or Cushenbury buckwheat.

The Project Area does not contain any sensitive habitats, including any USFWS designated Critical Habitat for any federally listed species, and the Project will not result in any loss or adverse modification of Critical Habitat.

Nesting Birds

There is habitat within the Project Area that is suitable to support nesting birds, including both natural and urban environments. Most native bird species are protected from unlawful take by the MBTA (Appendix A). In December 2017, the Department of the Interior (DOI) issued a memorandum concluding that the MBTA's prohibitions on take apply "[…] only to affirmative actions that have as their purpose the taking or killing of migratory birds, their nests, or their eggs" (DOI 2017). Then in April 2018, the USFWS issued a guidance memorandum that further clarified that the take of migratory birds or their active nests (i.e., with eggs or young) that is incidental to, and not the purpose of, an otherwise lawful activity does not constitute a violation of the MBTA (USFWS 2018).

However, the State of California provides additional protection for native bird species and their nests in the FGC (Appendix A). Bird nesting protections in the FGC include the following (Sections 3503, 3503.5, 3511, 3513 and 3800):

- Section 3503 prohibits the take, possession, or needless destruction of the nest or eggs of any bird.
- Section 3503.5 prohibits the take, possession, or needless destruction of any nests, eggs, or birds in the orders Falconiformes (new world vultures, hawks, eagles, ospreys, and falcons, among others), and Strigiformes (owls).
- Section 3511 prohibits the take or possession of Fully Protected birds.
- Section 3513 prohibits the take or possession of any migratory nongame bird or part thereof, as

designated in the MBTA. To avoid violation of the take provisions, it is generally required that Project-related disturbance at active nesting territories be reduced or eliminated during the nesting cycle.

- Section 3800 prohibits the take of any any non-game bird (i.e., bird that is naturally occurring in California that is not a gamebird, migratory game bird, or fully protected bird).

In general, impacts to all bird species (common and special status) can be avoided by conducting work outside of the nesting season, which is generally February 1st through August 31st. However, if all work cannot be conducted outside of nesting season, the following is recommended:

Ø To avoid impacts to nesting birds (common and special status) during the nesting season, a qualified Avian Biologist should conduct pre-construction nesting bird surveys prior to Project-related disturbance to suitable nesting areas to identify any active nests. If no active nests are found, no further action would be required. If an active nest is found, the biologist should set appropriate no-work buffers around the nest which would be based upon the nesting species, its sensitivity to disturbance, nesting stage and expected types, intensity and duration of disturbance. The nest(s) and buffer zones should be field checked weekly by a qualified biological monitor. The approved no-work buffer zone should be clearly marked in the field, within which no disturbance activity should commence until the qualified biologist has determined the young birds have successfully fledged and the nest is inactive.

4.2 Jurisdictional Waters

In addition to the BRA and focused botanical field survey, Jacobs also assessed the Project Area for the presence of any state and/or federal jurisdictional waters. The result of the jurisdictional waters assessment is that there are no wetland or non-wetland WOTUS or waters of the State potentially subject to regulation by the USACE under Section 404 of the CWA, the RWQCB under Section 401 of the CWA and/or Porter Cologne Water Quality Control Act, or the CDFW under Section 1602 of the California Fish and Game Code (FGC), respectively. Therefore, the Project will not impact and jurisdictional waters and no state or federal jurisdictional waters permitting will be required.

5 REFERENCES

Bolster, B.C., editor. 1998. Terrestrial Mammal Species of Special Concern in California. Draft Final Report prepared by P.V. Brylski, P.W. Collins, E.D. Pierson, W.E. Rainey and T.E. Kucera. Report submitted to California Department of Fish and Game Wildlife Management Division, Nongame Bird and Mammal Conservation Program for Contract No. FG3146WM.

Butler, R., C. Schiffer, and A. Mann, 1991. Final report - San Bernardino flying squirrel. Unpublished report, U.S.D.A. Forest Service, San Bernardino Ranger District. 1-29 pp.

California Department of Fish and Wildlife (CDFW). 1987. Five Year Status Report: Southern Rubber Boa (*Charina bottae umbratica*). July 1, 1987.

California Department of Fish and Wildlife (CDFW). Bald Eagles in California. Retrieved from: https://www.wildlife.ca.gov/Conservation/Birds/Bald-Eagle.

California Department of Fish and Game (CDFW). California Interagency Wildlife Task Group. 1999. Life History Account for Bald Eagle. Sacramento, California.

Calflora: Information on California plants for education, research and conservation. [web application]. 2021. Berkeley, California: The Calflora Database [a non-profit organization]. Available at: http://www.calflora.org/. (Accessed: February 11, 2021).

California Native Plant Society, Rare Plant Program. 2021. Inventory of Rare and Endangered Plants of California [online edition, v8-03 0.45]. Available at: http://www.rareplants.cnps.org. (Accessed: February 11, 2021).

California Natural Diversity Database (CNDDB). 2021. *RareFind 5* [Internet]. California Department of Fish and Wildlife, Version 5.2.14. Available at: https://wildlife.ca.gov/Data/CNDDB/Maps-and-Data. (Accessed: February 11, 2021).

Davis, J., and Gould Jr., G. 2008. California Spotted Owl (*Strix occidentalis occidentalis*). In W.D. Shuford and T. Gardali (Eds.), *California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1*. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento.

Environmental Laboratory. 1987. "Corps of Engineers Wetlands Delineation Manual," Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, Miss.

Jepson Flora Project (eds.) 2021, *Jepson eFlora*. Available at: http://ucjeps.berkeley.edu/eflora/. (Accessed: February 11, 2021).

Keasler, Gary L. 1982. Eastern San Bernardino Mountain southern rubber boa survey. Report prepared for the U.S. Department of Agriculture, Forest Service, San Bernardino National Forest, San Bernardino, California; 22 p. and 2 maps.

LaHaye, William S. and Gutiérrez, R. J. 2005. The Spotted Owl in Southern California: Ecology and Special Concerns for Maintaining a Forest-Dwelling Species in a Human-Dominated Desert Landscape. In Barbara E. Kus and Jan L. Beyers (technical coordinators), *Planning for Biodiversity: Bringing Research and Management Together*. Gen. Tech. Rep. PSW-GTR-195. Albany, CA: Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture; 274 p.

Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. *The National Wetland Plant List*: 2016 wetland ratings. Phytoneuron 2016-30: 1-17. Published 28 April 2016. ISSN 2153 733X.

Natural Resources Conservation Service (NRCS). 2021. Web Soil Survey. Map Unit Descriptions. San Bernardino County Area, California. Available at: http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm. (Accessed: February 11, 2021).

Rosenberg, K. V., and M. G. Raphael. 1984. Effects of forest fragmentation on vertebrates in douglas-fir forests. Pp. 263-272 In: Wildlife 2000: Modeling habitat relationships of terrestrial vertebrates, (J. Verner, M. L. Morrison, and C. J. Ralph, eds). Univ. Wisconsin Press, Madison, WI. 1-470 pp.

Sawyer, John O., Keeler-Wolf, Todd, and Evens, Julie M. 2009. A manual of California vegetation. Second Edition. California Native Plant Society, Sacramento, California, USA. 1,300 pages.

Skinner, M.W. and B. M. Pavlik, eds. 1994. *Inventory of Rare and Endangered Vascular Plants of California*, 5th edition. California Native Plant Society, Sacramento, California.

Stewart, Glenn R. 1988. The rubber boa (*Charina bottae*) in California, with particular reference to the southern subspecies, *C. b. umbratica*. In: De Lisle, H. F.; Brown, P. R.; Kaufman, B.; McGurty, B.M., editors. Proceedings of the conference on California herpetology. Southwestern Herpetologists Society, Special Publication (4); 131-138.

Stewart, Glenn R., Jennings, Mark R., and Goodman Jr., Robert H. 2005. Sensitive Species of Snakes, Frogs, and Salamanders in Southern California Conifer Forest Areas: Status and Management. USDA Forest Service Gen. Tech. Rep. PSW-GTR-195. 2005.

Stewart, Glenn R. 2007. Letter report for the "62-acre 'Moon Camp Tract' in Fawnskin" southern rubber boa Habitat Assessment. Appendix J (Habitat Assessment) of the Final Environmental Impact Report Moon Camp 50-lot Residential Subdivision, TT No. 16136 (Based on the Revised Site Plan) Big Bear Lake, San Bernardino County, California SCH No. 2002021105. (FEIR prepared by FirstCarbon Solutions for the San Bernardino County Advance Planning Division Land Use Services Department).

U.S. Army Corps of Engineers (USACE). 2001. USACE Minimum Standards for Acceptance of Preliminary Wetlands Delineations, November 30, 2001 (Minimum Standards).

U.S. Army Corps of Engineers (USACE). 2007. Jurisdictional Determination Form Instructional Guidebook (JD Form Guidebook). May 30.

U.S. Army Corps of Engineers (USACE). 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0), ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-10-3. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

U.S. Army Corps of Engineers (USACE). 2014. A Guide to Ordinary High Water Mark (OHWM) Delineation for Non-Perennial Streams in the Western Mountains, Valleys, and Coast Region of the United States (OHWM Manual). August 2014.

U.S. Department of the Interior (DOI). 2017. Memorandum to the Secretary, Deputy Secretary, Assistant Secretary for Land and Minerals Management and Assistant Secretary for Fish and Wildlife and Parks from the Principal Deputy Solicitor Exercising the Authority of the Solicitor Pursuant to Secretary's Order 3345, Subject: The Migratory Bird Treaty Act Does Not Prohibit Incidental Take. M-37050.

U.S. Fish and Wildlife Service (USFWS). National Wetlands Inventory. Available at: http://wetlands.fws.gov. (Accessed: February 11, 2021).

U.S. Fish and Wildlife Service (USFWS). 1994. Endangered and threatened wildlife and plants; five plants from the San Bernardino Mountains in southern California determined to be threatened or endangered; final rule. Federal Register 59:43652–43664.

U.S. Fish and Wildlife Service (USFWS). 2009a. *Physaria (Lesquerella) kingii* subsp. *bernardina* (San Bernardino Mountains Bladderpod) 5-Year Review: Summary and Evaluation. Carlsbad Fish and Wildlife Office, Carlsbad, California. 18 pp.

U.S. Fish and Wildlife Service (USFWS). 2009b. *Eriogonum ovalifolium* var. *vineum* (Cushenbury buckwheat) 5-Year Review: Summary and Evaluation. Carlsbad Fish and Wildlife Office, Carlsbad, California. 19 pp.

U.S. Fish and Wildlife Service (USFWS). 2013. *Castilleja cinerea* (Ash-gray Paintbrush) 5-Year Review: Summary and Evaluation. Carlsbad Fish and Wildlife Office, Carlsbad, California. 44 pp.

U.S. Fish and Wildlife Service (USFWS). 2015. *Eremogone ursina* (Bear Valley sandwort) 5-year Review: Summary and Evaluation. Carlsbad Fish and Wildlife Office, Carlsbad, California. 47 pp.

U.S. Fish and Wildlife Service (USFWS). 2015. *Eriogonum kennedyi* var. *austromontanum* (southern mountain wild buckwheat) 5-year Review: Summary and Evaluation. Carlsbad Fish and Wildlife Office, Carlsbad, California. 49 pp.

U.S. Fish and Wildlife Service (USFWS). 2018. Memorandum to the Service Directorate from the Principal Deputy Director, Subject: Guidance on the recent M-Opinion affecting the Migratory Bird Treaty Act.

Walter, Hartmut, PhD. and Garrett, Kimbal L. 1981. The Effects of Human Activity on Wintering Bald Eagles in the Big Bear Valley, California. Unpublished report to U.S. Forest Service, 89 pp.

Western Regional Climate Center. Period of Record Monthly Climate Summary for Big Bear Lake, California (040741). Available at: https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca0741. (Accessed: February 11, 2021).

Table 2 –
CNDDB Species
Occurrence Potential

Table 2. CNDDB Species and Habitats Documented Within the *Big Bear Lake, Big Bear City, Fawnskin* and *Moonridge* USGS 7.5-Minute Quadrangles

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
Acanthoscyphus parishii var. *cienegensis*	Cienega Seca oxytheca	None/ None	G4?T2; S2; CNPS: 1B.3	Upper montane coniferous forest, pinyon and juniper woodland, Joshua tree woodland. Dry gravelly banks and granitic sand. 1920-2560 m.	Some of the habitat this species is associated with is present within the Project Area. However, this species was not detected during the focused botanical field survey conducted by Laughlin and Esparza July in 2019. Occurrence potential is **low**.
Acanthoscyphus parishii var. *goodmaniana*	Cushenbury oxytheca	Endangered/ None	G4?T1; S1; CNPS: 1B.1	Pinyon and juniper woodland. On limestone talus and rocky slopes. 1400-2350 m.	Some of the habitat this species is associated with is present within the Project Area. However, the nearest documented occurrence for this species is approx. 5.3 miles N of the Project site and this species was not detected during the focused botanical field survey conducted by Laughlin and Esparza in July 2019. Occurrence potential is **low**.
Accipiter cooperii	Cooper's hawk	None/ None	G5; S4; CDFW: WL	Woodland, chiefly of open, interrupted or marginal type. Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river floodplains; also, live oaks.	No suitable nesting habitat for this species exists within the Project Area. Occurrence potential is **low**.
Anniella stebbinsi	Southern California legless lizard	None/ None	G3; S3; CDFW: SSC	Generally, south of the Transverse Range, extending to northwestern Baja California. Occurs in sandy or loose loamy soils under sparse vegetation. Disjunct populations in the Tehachapi and Piute Mountains in Kern County. Variety of habitats; generally, in moist, loose soil. They prefer soils with a high moisture content.	The Project Area is open and dry, and there is very little cover on site that could retain moisture. Occurrence potential is **low**.
Antennaria marginata	white-margined everlasting	None/ None	G4G5; S1; CNPS: 2B.3	Lower montane coniferous forest, upper montane coniferous forest. Dry woods. 2070-3355 m.	Some of the habitat this species is associated with is present within the Project Area. However, this species was not detected during the focused botanical field survey conducted by Laughlin and Esparza in July 2019. Occurrence potential is **low**.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
Aquila chrysaetos	golden eagle	None/ None	G5; S3; CDFW: FP	Rolling foothills, mountain areas, sage-juniper flats, and desert. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.	The nearest documented occurrence for this species is approx. 6.1 miles N of the Subject Parcel, north slopes of the San Bernardino Mountains. This species has not been documented nesting in the Big Bear Valley area. Occurrence potential is **low**.
Arenaria lanuginosa var. *saxosa*	rock sandwort	None/ None	G5T5; S2; CNPS: 2B.3	Subalpine coniferous forest, upper montane coniferous forest. Mesic, sandy sites. 1920-2935 m.	The microhabitat this species is associated with (i.e. mesic, sandy sites) is absent from the Project Area. Occurrence potential is **low**.
Astragalus albens	Cushenbury milk-vetch	Endangered/ None	G1; S1; CNPS: 1B.1	Joshua tree woodland, Mojavean desert scrub, pinyon and juniper woodland. Sandy or stony flats, rocky hillsides, canyon washes, and fans, on carbonate or mixed granitic-calcareous debris. 1185-1950 m.	Some of the habitat this species is associated with is present within the Project Area. However, the nearest documented occurrence for this species is approx. 4.2 miles NE of the Project site and this species was not detected during the focused botanical field survey conducted by Laughlin and Esparza in July 2019. Occurrence potential is **low**.
Astragalus bernardinus	San Bernardino milk-vetch	None/ None	G3; S3; CNPS: 1B.2	Joshua tree woodland, pinyon and juniper woodland. Granitic or carbonate substrates. 290-2290 m.	Some of the habitat this species is associated with is present within the Project Area. However, this species was not detected during the focused botanical field survey conducted by Laughlin and Esparza in July 2019. Occurrence potential is **low**.
Astragalus lentiginosus var. *sierrae*	Big Bear Valley milk-vetch	None/ None	G5T2; S2; CNPS: 1B.2	Mojavean desert scrub, meadows and seeps, pinyon and juniper woodland, upper montane coniferous forest. Stony meadows and open pinewoods; sandy and gravelly soils in a variety of habitats. 1710-3230 m.	Some of the habitat this species is associated with is present within the Project Area. However, this species was not detected during the focused botanical field survey conducted by Laughlin and Esparza in July 2019. Occurrence potential is **low**.
Astragalus leucolobus	Big Bear Valley woollypod	None/ None	G2; S2; CNPS: 1B.2	Lower montane coniferous forest, pebble plain, pinyon and juniper woodland, upper montane coniferous forest. Dry pine woods, gravelly knolls among sagebrush, or stony lake shores in the pine belt. 1460-2895 m.	Some of the habitat this species is associated with is present within the Project Area. However, this species was not detected during the focused botanical field survey conducted by Laughlin and Esparza in July 2019. Occurrence potential is **low**.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
Astragalus tidestromii	Tidestrom's milk-vetch	None/ None	G4; S2; CNPS: 2B.2	Mojavean desert scrub. Washes, in sandy or gravelly soil. On limestone. 765-1575 m.	The Project Area is outside the known elevation range for this species and the habitats this species is associated with are absent from the Project Area. Therefore, this species is considered **absent** from the Subject Parcel.
Atriplex parishii	Parish's brittlescale	None/ None	G1G2; S1; CNPS: 1B.1	Vernal pools, chenopod scrub, playas. Usually on drying alkali flats with fine soils. 4-1420 m.	The Project Area is outside the known elevation range for this species and the habitats this species is associated with are absent from the Project Area. Therefore, this species is considered **absent** from the Subject Parcel.
Berberis fremontii	Fremont barberry	None/ None	G5; S3; CNPS: 2B.3	Pinyon and juniper woodland, Joshua tree woodland. Rocky, sometimes granitic. 1140-1770 m.	The Project Area is outside the known elevation range for this species. Occurrence potential is **low**.
Boechera dispar	pinyon rockcress	None/ None	G3; S3; CNPS: 2B.3	Joshua tree woodland, pinyon and juniper woodland, Mojavean desert scrub. Granitic, gravelly slopes and mesas. Often under desert shrubs which support it as it grows. 1005-2805 m.	Some of the habitat this species is associated with is present within the Project Area. However, this species was not detected during the focused botanical field survey conducted by Laughlin and Esparza in July 2019. Occurrence potential is **low**.
Boechera lincolnensis	Lincoln rockcress	None/ None	G4G5; S3; CNPS: 2B.3	Chenopod scrub, Mojavean desert scrub. On limestone. 880-2410 m.	The habitats this species is associated with are absent from the Project Area. Occurrence potential is **low**.
Boechera parishii	Parish's rockcress	None/ None	G2; S2; CNPS: 1B.2	Pebble plain, pinyon and juniper woodland, upper montane coniferous forest. Generally found on pebble plains on clay soil with quartzite cobbles; sometimes on limestone. 1825-2805 m.	Some of the habitat this species is associated with is present within the Project Area. However, this species was not detected during the focused botanical field survey conducted by Laughlin and Esparza in July 2019. Occurrence potential is **low**.
Boechera shockleyi	Shockley's rockcress	None/ None	G3; S2; CNPS: 2B.2	Pinyon and juniper woodland. On ridges, rocky outcrops and openings on limestone or quartzite. 875-2515 m.	Some of the habitat this species is associated with is present within the Project Area. However, this species was not detected during the focused botanical field survey conducted by Laughlin and Esparza in July 2019. Occurrence potential is **low**.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
Bombus caliginosus	obscure bumble bee	None/ None	G4?; S1S2	Coastal areas from Santa Barbara county to north to Washington state. Food plant genera include *Baccharis, Cirsium, Lupinus, Lotus, Grindelia* and *Phacelia*.	The Project Area is outside the current known range for this species and the only documented occurrence for this species in the 4-quad CNDDB query (1933) is approx. 8 miles SW of the Project Area. Occurrence potential is **low**.
Bombus crotchii	Crotch bumble bee	None/ Candidate Endangered	G3G4; S1S2	Coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include *Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia,* and *Eriogonum*.	Few food plants for this species are present within the Project Area and the nearest documented occurrence for this species (1999) is approx. 4.3 miles NW of the Project Area. Occurrence potential is **low**.
Bombus morrisoni	Morrison bumble bee	None/ None	G4G5; S1S2	From the Sierra-Cascade ranges eastward across the intermountain west. Food plant genera include *Cirsium, Cleome, Helianthus, Lupinus, Chrysothamnus,* and *Melilotus*.	Few food plants for this species are present within the Subject Parcel and the only documented occurrence for this species in the 4-quad CNDDB query (1999) is approx. 6 miles NW of the Project Area. Occurrence potential is **low**.
Botrychium crenulatum	scalloped moonwort	None/ None	G4; S3; CNPS: 2B.2	Bogs and fens, meadows and seeps, upper montane coniferous forest, lower montane coniferous forest, marshes and swamps. Moist meadows, freshwater marsh, and near creeks. 1185-3110 m.	The microhabitats this species is associated with (i.e. moist meadows, freshwater marsh, and creeks) are absent from the Project Area. Occurrence potential is **low**.
Calochortus palmeri var. *palmeri*	Palmer's mariposa-lily	None/ None	G3T2; S2; CNPS: 1B.2	Meadows and seeps, chaparral, lower montane coniferous forest. Vernally moist places in yellow-pine forest, chaparral. 195-2530 m.	The habitats this species is associated with (i.e. vernally moist places in yellow-pine forest, chaparral) are absent from the Project Area. Occurrence potential is **low**.
Calochortus plummerae	Plummer's mariposa-lily	None/ None	G4; S4; CNPS: 4.2	Coastal scrub, chaparral, valley and foothill grassland, cismontane woodland, lower montane coniferous forest. Occurs on rocky and sandy sites, usually of granitic or alluvial material. Can be very common after fire. 60-2500 m.	Some of the habitat this species is associated with is present within the Project Area. However, this species was not detected during the focused botanical field survey conducted by Laughlin and Esparza in July 2019. Occurrence potential is **low**.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
Calochortus striatus	alkali mariposa-lily	None/ None	G3?; S2S3; CNPS: 1B.2	Chaparral, chenopod scrub, Mojavean desert scrub, meadows and seeps. Alkaline meadows and ephemeral washes. 70-1600m.	The Project Area is outside the known elevation range for this species and the habitats this species is associated with are absent from the Project Area. Therefore, this species is considered **absent** from the Project Area.
Calyptridium pygmaeum	pygmy pussypaws	None/ None	G1G2; S1S2; CNPS: 1B.2	Upper montane coniferous forest, subalpine coniferous forest. Sandy or gravelly sites. 2145-3415 m.	Some of the habitat this species is associated with is present within the Project Area. However, this species was not detected during the focused botanical field survey conducted by Laughlin and Esparza in July 2019. Occurrence potential is **low**.
Carex occidentalis	western sedge	None/ None	G4; S3; CNPS: 2B.3	Lower montane coniferous forest, meadows and seeps. 1645-2320 m.	The microhabitats this species is associated with (i.e. meadows and seeps) are absent from the Project Area. Occurrence potential is **low**.
Castilleja cinerea	ash-gray paintbrush	Threatened/ None	G1G2; S1S2; CNPS: 1B.2	Pebble plains, upper montane coniferous forest, Mojavean desert scrub, meadows and seeps, pinyon and juniper woodland. Endemic to the San Bernardino Mountains, in clay openings; often in meadow edges. 725-2860 m.	There is suitable habitat for this species within the Project Area. However, this species was not detected during the focused botanical field survey conducted by Laughlin and Esparza in July 2019. Occurrence potential is **low**.
Castilleja lasiorhyncha	San Bernardino Mountains owl's-clover	None/ None	G2?; S2?; CNPS: 1B.2	Meadows and seeps, pebble plain, upper montane coniferous forest, chaparral, riparian woodland. Mesic to drying soils in open areas of stream and meadow margins or in vernally wet areas. 1140-2320 m.	Some of the habitat this species is associated with is present within the Project Area. However, this species was not detected during the focused botanical field survey conducted by Laughlin and Esparza in July 2019. Occurrence potential is **low**.
Chaetodipus fallax pallidus	pallid San Diego pocket mouse	None/ None	G5T34; S3S4; CDFW: SSC	Desert border areas in eastern San Diego County in desert wash, desert scrub, desert succulent scrub, pinyon-juniper, etc. Sandy, herbaceous areas, usually in association with rocks or coarse gravel.	No suitable habitat for this species exists within the Project Area. Occurrence potential is **low**.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
Charina umbratica	southern rubber boa	None/ Threatened	G2G3; S2S3	Known from the San Bernardino and San Jacinto mtns; found in a variety of montane forest habitats. Snakes resembling *C. umbratica* reported from Mt. Pinos and Tehachapi mtns group with *C. bottae* based on mtDNA. Further research needed. Found in vicinity of streams or wet meadows; requires loose, moist soil for burrowing; seeks cover in rotting logs, rock outcrops, and under surface litter.	The Project Area is open and dry, and there is very little cover on site that could retain moisture. The habitat within and adjacent the Project Area is likely not suitable to support this species and the nearest documented occurrence for this species (2013) is approx. 1.4 miles N of the Project Area. Occurrence potential is **low**.
Claytonia peirsonii ssp. *bernardinus*	San Bernardino spring beauty	None/ None	G2G3T1; S1; CNPS: 1B.1	Pinyon and juniper woodland, upper montane coniferous forest. Rocky, talus slopes, carbonate, usually openings. 2360-2465 m.	Some of the habitat this species is associated with is present within the Project Area. However, this species was not detected during the focused botanical field survey conducted by Laughlin and Esparza in July 2019. Occurrence potential is **low**.
Claytonia peirsonii ssp. *californacis*	Furnace spring beauty	None/ None	G2G3T1; S1; CNPS: 1B.1	Pinyon and juniper woodland, upper montane coniferous forest. Rocky, talus slopes, carbonate, usually openings. 2300 m.	Some of the habitat this species is associated with is present within the Project Area. However, this species was not detected during the focused botanical field survey conducted by Laughlin and Esparza in July 2019. Occurrence potential is **low**.
Corynorhinus townsendii	Townsend's big-eared bat	None/ None	G3G4; S2; CDFW: SSC	Throughout California in a wide variety of habitats. Most common in mesic sites. Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.	There is a high-level of human disturbance within the Project vicinity and there are no suitable roost sites within the Project site. Occurrence potential is **low**.
Cymopterus multinervatus	purple-nerve cymopterus	None/ None	G4G5; S2; CNPS: 2B.2	Mojavean desert scrub, pinyon and juniper woodland. Sandy or gravelly places. 765-2195 m.	Some of the habitat this species is associated with is present within the Project Area. However, this species was not detected during the focused botanical field survey conducted by Laughlin and Esparza in July 2019. Occurrence potential is **low**.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
Drymocallis cuneifolia var. *cuneifolia*	wedgeleaf woodbeauty	None/ None	G2T1; S1; CNPS: 1B.1	Upper montane coniferous forest, riparian scrub. Sometimes on carbonate. 1520-2220 m.	Some of the habitat this species is associated with is present within the Project Area. However, this species was not detected during the focused botanical field survey conducted by Laughlin and Esparza in July 2019. Occurrence potential is **low**.
Dryopteris filix-mas	male fern	None/ None	G5; S2; CNPS: 2B.3	Upper montane coniferous forest. In granite crevices. 1855-3075 m.	Some of the habitat this species is associated with is present within the Project Area. However, this species was not detected during the focused botanical field survey conducted by Laughlin and Esparza in July 2019. Occurrence potential is **low**.
Dudleya abramsii ssp. *affinis*	San Bernardino Mountains dudleya	None/ None	G4T2; S2; CNPS: 1B.2	Pebble (pavement) plain, upper montane coniferous forest, pinyon and juniper woodland. Outcrops, granite or quartzite, rarely limestone. 1200-2425 m.	There is suitable habitat for this species within the Project Area. However, this species was not detected during the focused botanical field survey conducted by Laughlin and Esparza in July 2019. Occurrence potential is **low**.
Empidonax traillii extimus	southwestern willow flycatcher	Endangered/ Endangered	G5T2; S1	Riparian woodlands in Southern California.	No suitable habitat for this species exists within the Project Area. Occurrence potential is **low**.
Ensatina eschscholtzii klauberi	large-blotched salamander	None/ None	G5T2?; S3; CDFW: WL	Found in conifer and woodland associations. Found in leaf litter, decaying logs and shrubs in heavily forested areas.	The Project Area is open and dry, and there is very little cover on site that could retain moisture. The habitat within and adjacent the Project Area is likely not suitable to support this species. Occurrence potential is **low**.
Eremogone ursina	Big Bear Valley sandwort	Threatened/ None	G1; S1; CNPS: 1B.2	Pebble plain, pinyon and juniper woodland, meadows and seeps. Mesic, rocky sites. 1795-2895 m.	There is suitable habitat for this species within the Project Area. However, this species was not detected during the focused botanical field survey conducted by Laughlin and Esparza in July 2019. Occurrence potential is **low**.
Erigeron parishii	Parish's daisy	Threatened/ None	G2; S2; CNPS: 1B.1	Mojavean desert scrub, pinyon and juniper woodland. Often on carbonate; limestone mountain slopes; often associated with drainages. Sometimes on granite. 1050-2245 m.	There is suitable habitat for this species within the Project Area. However, this species was not detected during the focused botanical field survey conducted by Laughlin and Esparza in July 2019. Occurrence potential is **low**.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
Eriogonum evanidum	vanishing wild buckwheat	None/ None	G2; S1; CNPS: 1B.1	Chaparral, cismontane woodland, lower montane coniferous forest, pinyon and juniper woodland. Sandy sites. 975-2240 m.	There is suitable habitat for this species within the Project Area. However, this species was not detected during the focused botanical field survey conducted by Laughlin and Esparza in July 2019. Occurrence potential is **low**.
Eriogonum kennedyi var. *alpigenum*	southern alpine buckwheat	None/ None	G4T3; S3; CNPS: 1B.3	Alpine boulder and rock fields, subalpine coniferous forest. Dry granitic gravel. 2500-3415 m.	The Project Area is outside the known elevation range for this species and the habitats this species is associated with are absent from the Project Area. Therefore, this species is considered **absent** from the Subject Parcel.
Eriogonum kennedyi var. *austromontanum*	southern mountain buckwheat	Threatened/ None	G4T2; S2; CNPS: 1B.2	Pebble (pavement) plain, lower montane coniferous forest. Usually found in pebble plain habitats. 1765-3020 m.	There is suitable habitat for this species within the Project Area. However, this species was not detected during the focused botanical field survey conducted by Laughlin and Esparza in July 2019. Occurrence potential is **low**.
Eriogonum microthecum var. *johnstonii*	Johnston's buckwheat	None/ None	G5T2; S2; CNPS: 1B.3	Subalpine coniferous forest, upper montane coniferous forest. Slopes and ridges on granite or limestone. 1795-2865 m	There is suitable habitat for this species within the Project Area. However, this species was not detected during the focused botanical field survey conducted by Laughlin and Esparza in July 2019. Occurrence potential is **low**.
Eriogonum microthecum var. *lacus-ursi*	Bear Lake buckwheat	None/ None	G5T1; S1; CNPS: 1B.1	Lower montane coniferous forest, Great Basin scrub. Clay outcrops. 2000-2100 m.	There is suitable habitat for this species within the Project Area. However, this species was not detected during the focused botanical field survey conducted by Laughlin and Esparza in July 2019. Occurrence potential is **low**.
Eriogonum ovalifolium var. *vineum*	Cushenbury buckwheat	Endangered/ None	G5T1; S1; CNPS: 1B.1	Mojavean desert scrub, pinyon and juniper woodland, Joshua tree woodland. Limestone mountain slopes. Dry, usually rocky places. 1430-2440 m.	The carbonate soils this species requires are absent from the Project Area and this species was not detected during the focused botanical field survey conducted by Laughlin and Esparza in July 2019. Occurrence potential is **low**.
Erythranthe exigua	San Bernardino Mountains monkeyflower	None/ None	G2; S2; CNPS: 1B.2	Meadows and seeps, pebble plains, upper montane coniferous forest. Seeps and sandy sometimes disturbed soil in moist drainages of annual streams; clay soils. 2060-2630 m.	The microhabitats this species is associated with (i.e. seeps and moist drainages) are absent from the Project Area. Occurrence potential is **low**.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
Erythranthe purpurea	little purple monkeyflower	None/ None	G2; S2; CNPS: 1B.2	Meadows and seeps, pebble plain, upper montane coniferous forest. Dry clay or gravelly soils under Jeffrey pines, along annual streams or vernal springs and seeps. 2045-2290 m.	The microhabitats this species is associated with (i.e. annual streams or vernal springs and seeps) are absent from the Project Area. Occurrence potential is **low**.
Euchloe hyantis andrewsi	Andrew's marble butterfly	None/ None	G3G4T1; S1	Inhabits yellow pine forest near Lake Arrowhead and Big Bear Lake, San Bernardino Mtns, San Bernardino Co, 5,000-6,000 ft. Hostplants are *Streptanthus bernardinus* and *Arabis holboellii* var. *pinetorum*; larval foodplant is *Descurainia richardsonii*.	The host and food plant species for this species are absent from the Project Area. Occurrence potential is **low**.
Euphydryas editha quino	quino checkerspot butterfly	Endangered/ None	G5T1T2; S1S2	Sunny openings within chaparral and coastal sage shrublands in parts of Riverside and San Diego counties. Hills and mesas near the coast. Need high densities of food plants *Plantago erecta, P. insularis,* and *Orthocarpus purpurescens*.	The Project Area is outside the current known range of this species and there is no suitable habitat for this species within the Project Area. Occurrence potential is **low**.
Gasterosteus aculeatus williamsoni	unarmored threespine stickleback	Endangered/ Endangered	G5T1; S1; CDFW: FP	Weedy pools, backwaters, and among emergent vegetation at the stream edge in small Southern California streams. Cool (<24 C), clear water with abundant vegetation.	The aquatic habitats required by this species are absent from the Project Area. Therefore, this species is considered **absent** from the Project Area.
Gentiana fremontii	Fremont's gentian	None/ None	G4; S2; CNPS: 2B.3	Meadows and seeps, upper montane coniferous forest. Wet mountain meadows. 2400-2700 m.	The Project Area is outside the known elevation range for this species and the microhabitats this species is associated with (i.e. wet meadows) are absent from the Project Area. Therefore, this species is considered **absent** from the Project Area.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
Gilia leptantha ssp. *leptantha*	San Bernardino gilia	None/ None	G4T2; S2; CNPS: 1B.3	Lower montane coniferous forest. Sandy or gravelly sites. 1520-2595 m.	Some of the habitat this species is associated with is present within the Project Area. However, this species was not detected during the focused botanical field survey conducted by Laughlin and Esparza in July 2019. Occurrence potential is **low**.
Glaucomys oregonensis californicus	San Bernardino flying squirrel	None/ None	G5T1T2; S1S2; CDFW: SSC	Known from black oak or white fir dominated woodlands between 5,200 – 8,500 ft in the San Bernardino and San Jacinto ranges. May be extirpated from San Jacinto range. Needs cavities in trees/snags for nests and cover. Needs nearby water.	The nearest documented occurrence for this species (2015) is approx. 1 mile SE of the Project Area. However, the Project Area is subject to adjacent human disturbances and does not support the mixed conifer forests comprised of white fir, Jeffrey pine, and black oak this species typically inhabits and the closed canopy, downed woody debris, and riparian areas typically associated with suitable habitat for this species are absent from the Project Area. Occurrence potential is **low**.
Haliaeetus leucocephalus	bald eagle	Delisted/ Endangered	G5; S3; CDFW: FP	Ocean shore, lake margins, and rivers for both nesting and wintering. Most nests within 1 mile of water. Nests in large, old-growth, or dominant live tree with open branches, especially ponderosa pine. Roosts communally in winter.	There is no shoreline habitat suitable to support wintering BAEA within the Project Area. Although this species has been documented nesting in the Fawnskin area, approx. 7 miles NW of the Project site on the west side of Grout Bay, the Project site is in a residential area subject to a significant level of existing human disturbance. Therefore, the Project Area is not likely to support nesting BAEA and occurrence potential is **low**.
Heuchera parishii	Parish's alumroot	None/ None	G3; S3; CNPS: 1B.3	Lower montane coniferous forest, subalpine coniferous forest, upper montane coniferous forest, alpine boulder and rock field. Rocky places. Sometimes on carbonate. 1340-3505 m.	Some of the habitat this species is associated with is present within the Project Area. However, this species was not detected during the focused botanical field survey conducted by Laughlin and Esparza in July 2019. Occurrence potential is **low**.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
Horkelia wilderae	Barton Flats horkelia	None/ None	G1; S1; CNPS: 1B.1	Lower montane coniferous forest, upper montane coniferous forest, chaparral. On rocky, north aspects in openings that hold persistent snowdrifts. 1980-2895 m.	Some of the habitat this species is associated with is present within the Project Area. However, this species has not been documented in the Big Bear Valley and this species was not detected during the focused botanical field survey conducted by Laughlin and Esparza in July 2019. Occurrence potential is **low**.
Hulsea vestita ssp. *pygmaea*	pygmy hulsea	None/ None	G5T1; S1; CNPS: 1B.3	Alpine boulder and rock field, subalpine coniferous forest. Gravelly sites; on granite. 2860-3502 m.	The Project Area is outside the known elevation range for this species and the habitats this species is associated with are absent from the Project Area. Therefore, this species is considered **absent** from the Project Area.
Hydroporus simplex	simple hydroporus diving beetle	None/ None	G1?; S1?	Known from aquatic habitats in Tuolumne and San Bernardino counties.	The aquatic habitats required by this species are absent from the Project Area. Therefore, this species is considered **absent** from the Project Area.
Icteria virens	yellow-breasted chat	None/ None	G5; S3; CDFW: SSC	Summer resident; inhabits riparian thickets of willow and other brushy tangles near watercourses. Nests in low, dense riparian, consisting of willow, blackberry, wild grape; forages and nests within 10 ft of ground.	No suitable habitat for this species exists within the Project Area. Occurrence potential is **low**.
Ivesia argyrocoma var. *argyrocoma*	silver-haired ivesia	None/ None	G2T2; S2; CNPS: 1B.2	Meadows and seeps, pebble plains, upper montane coniferous forest. In pebble plains and meadows with other rare plants. 1490-2960 m.	There is suitable habitat for this species within the Project Area. However, this species was not detected during the focused botanical field survey conducted by Laughlin and Esparza in July 2019. Occurrence potential is **low**.
Lewisia brachycalyx	short-sepaled lewisia	None/ None	G4; S2; CNPS: 2B.2	Lower montane coniferous forest, meadows and seeps. Dry to moist meadows in rich loam. 1400-2290 m.	The microhabitats this species is associated with (i.e. dry to moist meadows) are absent from the Project Area. Occurrence potential is **low**.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
Lilium parryi	lemon lily	None/ None	G3; S3; CNPS: 1B.2	Lower montane coniferous forest, meadows and seeps, riparian forest, upper montane coniferous forest. Wet, mountainous terrain; generally, in forested areas; on shady edges of streams, in open boggy meadows and seeps. 625-2930 m.	The microhabitats this species is associated with (i.e. wet, mountainous terrain; in forested areas; on shady edges of streams, in open boggy meadows and seeps) are absent from the Project Area. Occurrence potential is **low**.
Linanthus killipii	Baldwin Lake linanthus	None/ None	G1; S1; CNPS: 1B.2	Alkaline meadows, pebble plain, pinyon and juniper woodland, Joshua tree woodland. Usually on pebble plains with other rare species. 1645-2645 m.	Some of the habitat this species is associated with is present within the Project Area. However, this species was not detected during the focused botanical field survey conducted by Laughlin and Esparza in July 2019. Occurrence potential is **low**.
Malaxis monophyllos var. *brachypoda*	white bog adder's-mouth	None/ None	G4?T4; S1; CNPS: 2B.1	Meadows and seeps, bogs and fens, upper montane coniferous forest. Hillside bogs and mesic meadows. 2375-2560 m.	The microhabitats this species is associated with (i.e. hillside bogs and mesic meadows) are absent from the Project Area. Occurrence potential is **low**.
Myotis evotis	long-eared myotis	None/ None	G5; S3	Found in all brush, woodland and forest habitats from sea level to about 9,000 ft. Prefers coniferous woodlands and forests. Nursery colonies in buildings, crevices, spaces under bark, and snags. Caves used primarily as night roosts.	Some suitable habitat for this species exists within the Project Area. However, the nearest documented occurrence for this species (1998) is approx. 5.1 miles NW of the Project Area. Occurrence potential is **moderate**.
Myotis thysanodes	fringed myotis	None/ None	G4; S3	In a wide variety of habitats, optimal habitats are pinyon-juniper, valley foothill hardwood and hardwood-conifer. Uses caves, mines, buildings or crevices for maternity colonies and roosts.	Some suitable habitat for this species exists within the Project Area. However, the only documented occurrence for this species in the 4-quad CNDDB query (1998) is approx. 5.1 miles NW of the Project Area. Occurrence potential is **moderate**.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
Myotis volans	long-legged myotis	None/ None	G5; S3	Most common in woodland and forest habitats above 4,000 ft. Trees are important day roosts; caves and mines are night roosts. Nursery colonies usually under bark or in hollow trees, but occasionally in crevices or buildings.	Some suitable habitat for this species exists within the Project Area. The only documented occurrence for this species in the 4-quad CNDDB query (1998) is approx. 11.2 miles NW of the Project Area. Occurrence potential is **low**.
Myotis yumanensis	Yuma myotis	None/ None	G5; S4	Optimal habitats are open forests and woodlands with sources of water over which to feed. Distribution is closely tied to bodies of water. Maternity colonies in caves, mines, buildings or crevices.	There are no water bodies present within the Project Area and the only documented occurrence for this species in the 4-quad CNDDB query (1998) is approx. 5.1 miles NE of the Project Area. Occurrence potential is **low**.
Navarretia peninsularis	Baja navarretia	None/ None	G3; S2; CNPS: 1B.2	Lower montane coniferous forest, chaparral, meadows and seeps, pinyon and juniper woodland. Wet areas in open forest. 1150-2365 m.	Some of the habitat this species is associated with is present within the Project Area. However, this species was not detected during the focused botanical field survey conducted by Laughlin and Esparza in July 2019. Occurrence potential is **low**.
Neotamias speciosus speciosus	lodgepole chipmunk	None/ None	G4T2T3; S2S3	Summits of isolated Piute, San Bernardino, and San Jacinto mountains. Usually found in open-canopy forests. Habitat is usually lodgepole pine forests in the San Bernardino Mts and chinquapin slopes in the San Jacinto Mts.	The lodgepole pine forests this species typically occurs in are absent from the Project Area. Occurrence potential is **low**.
Oncorhynchus mykiss irideus pop. 10	Steelhead – southern California DPS	Endangered/ None	G5T1Q; S1	Federal listing refers to populations from Santa Maria River south to southern extent of range (San Mateo Creek in San Diego County). Southern steelhead likely have greater physiological tolerances to warmer water and more variable conditions.	The aquatic habitats required by this species are absent from the Project Area. Therefore, this species is considered **absent** from the Project Area.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
Oreonana vestita	woolly mountain-parsley	None/ None	G3; S3; CNPS: 1B.3	Subalpine coniferous forest, upper montane coniferous forest, lower montane coniferous forest. High ridges; on scree, talus, or gravel. 800-3370 m.	Some of the habitat this species is associated with is present within the Project Area. However, this species was not detected during the focused botanical field survey conducted by Laughlin and Esparza in July 2019. Occurrence potential is **low**.
Oxytropis oreophila var. *oreophila*	rock-loving oxytrope	None/ None	G5T4T5; S2; CNPS: 2B.3	Alpine boulder and rock field, subalpine coniferous forest. Gravelly or rocky sites. 2615-3505 m.	The Project Area is outside the known elevation range for this species. Occurrence potential is **low**.
Packera bernardina	San Bernardino ragwort	None/ None	G2; S2; CNPS: 1B.2	Meadows and seeps, pebble plains, upper montane coniferous forest. Mesic, sometimes alkaline meadows, and dry rocky slopes. 1615-2470 m.	Some of the habitat this species is associated with is present within the Project Area. However, this species was not detected during the focused botanical field survey conducted by Laughlin and Esparza in July 2019. Occurrence potential is **low**.
	Pebble Plains	None/ None	G1; S1.1		There is some pebble plain-like habitat within the Project Area; however, pebble plain indicator species are **absent** from the Project site.
Perideridia parishii ssp. *parishii*	Parish's yampah	None/ None	G4T3T4; S2; CNPS: 2B.2	Lower montane coniferous forest, meadows and seeps, upper montane coniferous forest. Damp meadows or along streambeds-prefers an open pine canopy. 1470-2530 m.	The microhabitats this species is associated with (i.e. damp meadows or streambeds) are absent from the Project Area. Occurrence potential is **low**.
Phlox dolichantha	Big Bear Valley phlox	None/ None	G2; S2; CNPS: 1B.2	Pebble plains, upper montane coniferous forest. Sloping hillsides, in shade under pines and *Quercus kelloggii*, with heavy pine litter; also, in openings. 1980-2805 m.	This species is **present** within the Project Area.
Phrynosoma blainvillii	coast horned lizard	None/ None	G3G4; S3S4; CDFW: SSC	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects.	This species has not been documented in the Big Bear Valley and the Project Area is likely outside the current range of this species. Occurrence potential is **low**.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
Physaria kingii ssp. *bernardina*	San Bernardino Mountains bladderpod	Endangered/ None	G5T1; S1; CNPS: 1B.1	Pinyon and juniper woodland, lower montane coniferous forest, subalpine coniferous forest. Dry sandy to rocky carbonate soils. 1980-2590 m.	The carbonate soils this species requires are absent from the Project Area and this species was not detected during the focused botanical field survey conducted by Laughlin and Esparza in July 2019. Therefore, occurrence potential is **low**.
Piranga rubra	summer tanager	None/ None	G5; S1; CDFW: SSC	Summer resident of desert riparian along lower Colorado River, and locally elsewhere in California deserts. Requires cottonwood-willow riparian for nesting and foraging; prefers older, dense stands along streams.	No suitable habitat for this species exists within the Project Area. Occurrence potential is **low**.
Poa atropurpurea	San Bernardino blue grass	Endangered/ None	G2; S2; CNPS: 1B.2	Meadows and seeps. Mesic meadows of open pine forests and grassy slopes, loamy alluvial to sandy loam soil. 1255-2655 m.	The habitats this species is associated with (i.e. meadows and seeps) are absent from the Project Area and this species was not detected during the focused botanical field survey conducted by Laughlin and Esparza in July 2019. Occurrence potential is **low**.
Poliomintha incana	frosted mint	None/ None	G5; SH; CNPS: 2A	Lower montane coniferous forest. In boggy soil. 1600-1700 m.	The microhabitat this species is associated with (i.e. boggy soil) is absent from the Project Area. Occurrence potential is **low**.
Psychomastax deserticola	desert monkey grasshopper	None/ None	G1G2; S1S2	Occurs in very arid environments in the vicinity of the San Bernardino Mtns. Known to occur on chamise (*Adenostoma fasciculatum*).	No suitable habitat for this species exists within the Project Area. Occurrence potential is **low**.
Pyrrocoma uniflora var. *gossypina*	Bear Valley pyrrocoma	None/ None	G5T1; S1; CNPS: 1B.2	Pebble plain, meadows and seeps. Meadows, meadow edges, and along streams in or near pebble plain habitat. 2040-2280 m.	The microhabitats this species is associated with (i.e. meadow edges, seeps, and streams) are absent from the Project Area. Occurrence potential is **low**.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
Rana muscosa	southern mountain yellow-legged frog	Endangered/ Endangered	G1; S1; CDFW: WL	Federal listing refers to populations in the San Gabriel, San Jacinto and San Bernardino mountains (southern DPS). Northern DPS was determined to warrant listing as endangered, Apr 2014, effective Jun 30, 2014. Always encountered within a few feet of water. Tadpoles may require 2 - 4 yrs. to complete their aquatic development.	The aquatic habitats required by this species are absent from the Project Area. Therefore, this species is considered **absent** from the Project Area.
Rosa woodsii var. *glabrata*	Cushenbury rose	None/ None	G5T1; S1; CNPS: 1B.1	Mojavean desert scrub. Springs. 1095-1220 m.	The Project Area is outside the known elevation range for this species and the habitats this species is associated with are absent from the Project Area. Therefore, this species is considered **absent** from the Subject Parcel.
Saltugilia latimeri	Latimer's woodland-gilia	None/ None	G3; S3; CNPS: 1B.2	Chaparral, Mojavean desert scrub, pinyon and juniper woodland. Rocky or sandy substrate; sometimes in washes, sometimes limestone. 120-2200 m.	Some of the habitat this species is associated with is present within the Project Area. However, this species was not detected during the focused botanical field survey conducted by Laughlin and Esparza in July 2019. Occurrence potential is **low**.
Sidalcea hickmanii ssp. *parishii*	Parish's checkerbloom	None/ Rare	G3T1; S1; CNPS: 1B.2	Chaparral, cismontane woodland, lower montane coniferous forest. Disturbed burned or cleared areas on dry, rocky slopes, in fuel breaks and fire roads along the mountain summits. 1095-2135 m.	Some of the habitat this species is associated with is present within the Project Area. However, this species was not detected during the focused botanical field survey conducted by Laughlin and Esparza in July 2019. Occurrence potential is **low**.
Sidalcea malviflora ssp. *dolosa*	Bear Valley checkerbloom	None/ None	G5T2; S2; CNPS: 1B.2	Meadows and seeps, riparian woodland, lower montane coniferous forest, upper montane coniferous forest. Known from wet areas within forested habitats. Affected by hydrological changes. 1575-2590 m.	The habitats this species is associated with (i.e. wet areas) are absent from the Project Area and this species was not detected during the focused botanical field survey conducted by Laughlin and Esparza in July 2019. Occurrence potential is **low**.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
Sidalcea pedata	bird-foot checkerbloom	Endangered/ Endangered	G1; S1; CNPS: 1B.1	Meadows and seeps, pebble plains. Vernally mesic sites in meadows or pebble plains. 1840-2305 m.	The habitats this species is associated with (i.e. vernally mesic sites in meadows or pebble plains) are absent from the Project Area and this species was not detected during the focused botanical field survey conducted by Laughlin and Esparza in July 2019. Occurrence potential is **low**.
Sisyrinchium longipes	timberland blue-eyed grass	None/ None	G3G4; S1; CNPS: 2B.2	Meadows and seeps. Mesic areas in meadows; seeps. 2060 m.	The microhabitats this species is associated with (i.e. mesic areas in meadows; seeps) are absent from the Project Area. Occurrence potential is **low**.
	Southern California Threespine Stickleback Stream	None/ None	GNR; SNR		This aquatic habitat is **absent** from the Project Area.
Sphenopholis obtusata	prairie wedge grass	None/ None	G5; S2; CNPS: 2B.2	Cismontane woodland, meadows and seeps. Open moist sites, along rivers and springs, alkaline desert seeps. 15-2625 m.	The microhabitats this species is associated with (i.e. moist sites, along rivers and springs, alkaline desert seeps) are absent from the Project Area. Occurrence potential is **low**.
Streptanthus bernardinus	Laguna Mountains jewelflower	None/ None	G3G4; S3S4; CNPS: 4.3	Chaparral, lower montane coniferous forest. Clay or decomposed granite soils; sometimes in disturbed areas such as stream sides or roadcuts. 1440-2500 m.	Some of the habitat this species is associated with is present within the Project Area. However, this species was not detected during the focused botanical field survey conducted by Laughlin and Esparza in July 2019. Occurrence potential is **low**.
Streptanthus campestris	southern jewelflower	None/ None	G3; S3; CNPS: 1B.3	Chaparral, lower montane coniferous forest, pinyon and juniper woodland. Open, rocky areas. 605-2590 m.	Some of the habitat this species is associated with is present within the Project Area. However, this species was not detected during the focused botanical field survey conducted by Laughlin and Esparza in July 2019. Occurrence potential is **low**.
Symphyotrichum defoliatum	San Bernardino aster	None/ None	G2; S2; CNPS: 1B.2	Meadows and seeps, cismontane woodland, coastal scrub, lower montane coniferous forest, marshes and swamps, valley and foothill grassland. Vernally mesic grassland or near ditches, streams and springs; disturbed areas. 3-2045 m.	Some of the habitat this species is associated with is present within the Project Area. However, this species was not detected during the focused botanical field survey conducted by Laughlin and Esparza in July 2019. Occurrence potential is **low**.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
Taraxacum californicum	California dandelion	Endangered/ None	G1G2; S1S2; CNPS: 1B.1	Meadows and seeps. Mesic meadows, usually free of taller vegetation. 1620-2590 m.	The microhabitats this species is associated with (i.e. mesic meadows) are absent from the Project Area and this species was not detected during the focused botanical field survey conducted by Laughlin and Esparza in July 2019. Occurrence potential is **low**.
Thamnophis hammondii	two-striped garter snake	None/ None	G4; S3S4; CDFW: SSC	Coastal California from vicinity of Salinas to northwest Baja California. From sea to about 7,000 ft elevation. Highly aquatic, found in or near permanent fresh water. Often along streams with rocky beds and riparian growth.	The aquatic habitats required by this species are absent from the Project Area. Therefore, this species is considered **absent** from the Project Area.
Thelypodium stenopetalum	slender-petaled thelypodium	Endangered/ Endangered	G1; S1; CNPS: 1B.1	Meadows and seeps. Seasonally moist alkaline clay soils; associated with seeps and springs in the pebble plains. 2045-2240 m.	The microhabitats this species is associated with (i.e. seeps and springs in pebble plains) are absent from the Project Area and this species was not detected during the focused botanical field survey conducted by Laughlin and Esparza in July 2019. Occurrence potential is **low**.
Viola pinetorum ssp. *grisea*	grey-leaved violet	None/ None	G4G5T3; S3; CNPS: 1B.2	Subalpine coniferous forest, upper montane coniferous forest, meadows and seeps. Dry mountain peaks and slopes. 1580-3700 m.	Some of the habitat this species is associated with is present within the Project Area. However, this species was not detected during the focused botanical field survey conducted by Laughlin and Esparza in July 2019. Occurrence potential is **low**.

Coding and Terms

E = Endangered T = Threatened C = Candidate FP = Fully Protected SSC = Species of Special Concern R = Rare

State Species of Special Concern: An administrative designation given to vertebrate species that appear to be vulnerable to extinction because of declining populations, limited acreages, and/or continuing threats. Raptor and owls are protected under section 3502.5 of the California Fish and Game code: "It is unlawful to take, possess or destroy any birds in the orders Falconiformes or Strigiformes or to take, possess or destroy the nest or eggs of any such bird."

State Fully Protected: The classification of Fully Protected was the State's initial effort in the 1960's to identify and provide additional protection to those animals that were rare or faced possible extinction. Lists were created for fish, mammals, amphibians and reptiles. Fully Protected species may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the bird species for the protection of livestock.

Global Rankings (Species or Natural Community Level):

G1 = Critically Imperiled – At very high risk of extinction due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors.
G2 = Imperiled – At high risk of extinction due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors.
G3 = Vulnerable – At moderate risk of extinction due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors.
G4 = Apparently Secure – Uncommon but not rare; some cause for long-term concern due to declines or other factors.
G5 = Secure – Common; widespread and abundant.

Subspecies Level: Taxa which are subspecies or varieties receive a taxon rank (T-rank**)** attached to their G-rank. Where the G-rank reflects the condition of the entire species, the T-rank reflects the global situation of just the subspecies. For example: the Point Reyes mountain beaver, *Aplodontia rufa* ssp. *phaea* is ranked G5T2. The G-rank refers to the whole species range i.e., *Aplodontia rufa.* The T-rank refers only to the global condition of ssp. *phaea.*

State Ranking:

S1 = Critically Imperiled – Critically imperiled in the State because of extreme rarity (often 5 or fewer populations) or because of factor(s) such as very steep declines making it especially vulnerable to extirpation from the State.
S2 = Imperiled – Imperiled in the State because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the State.
S3 = Vulnerable – Vulnerable in the State due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation from the State.
S4 = Apparently Secure – Uncommon but not rare in the State; some cause for long-term concern due to declines or other factors.
S5 = Secure – Common, widespread, and abundant in the State.

California Rare Plant Rankings (CNPS List):

1A = Plants presumed extirpated in California and either rare or extinct elsewhere.
1B = Plants rare, threatened, or endangered in California and elsewhere.
2A = Plants presumed extirpated in California, but common elsewhere.
2B = Plants rare, threatened, or endangered in California, but more common elsewhere.
3 = Plants about which more information is needed; a review list.
4 = Plants of limited distribution; a watch list.

Threat Ranks:

.1 = Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
.2 = Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
.3 = Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

SITE PHOTOS

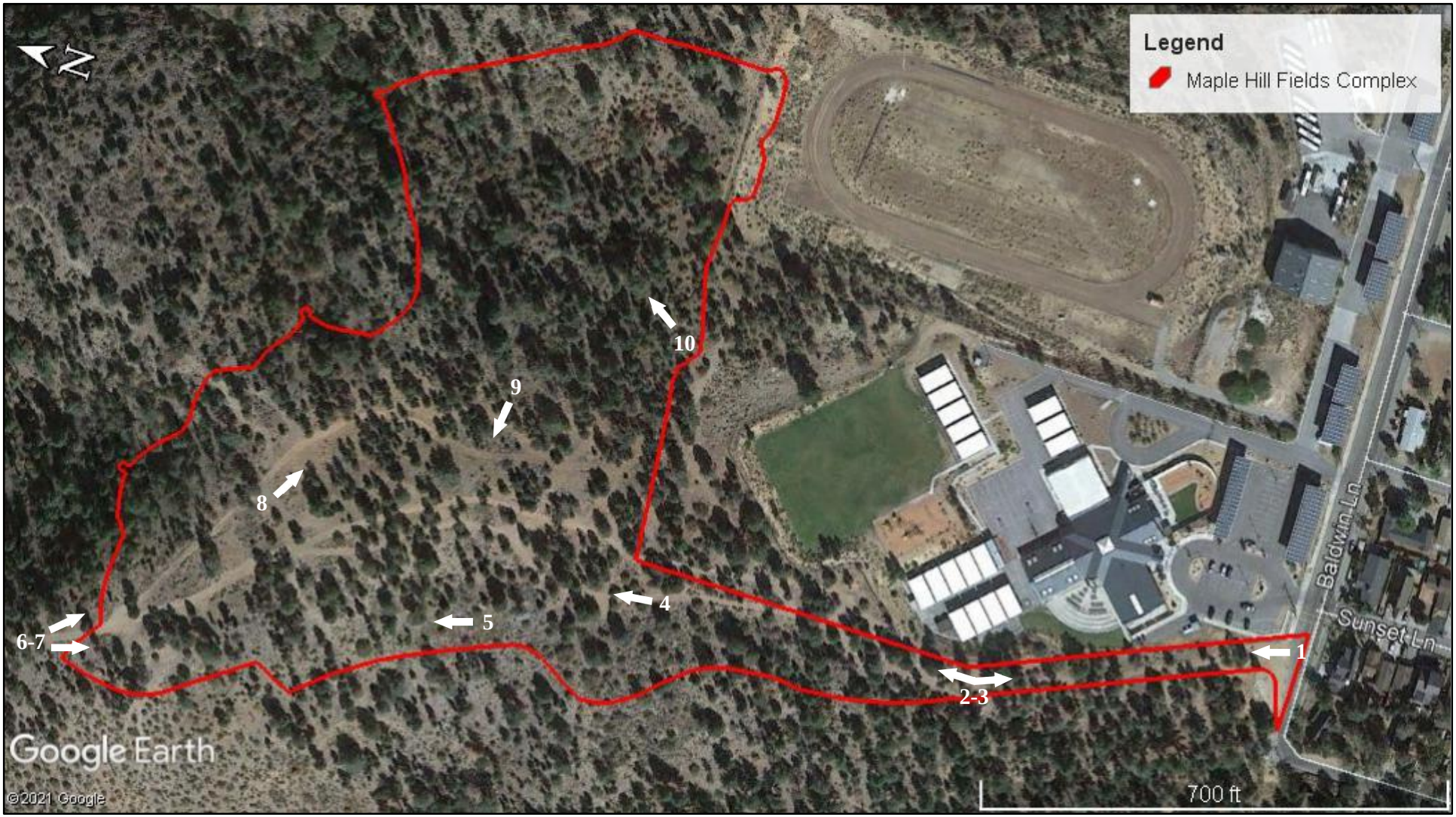

N
Legend
Maple Hill Fields Complex
10
9
8
6-7
5
4
2-3
1
Baldwin Ln
Sunset Ln
Google Earth
©2021 Google
700 ft

	Photo 1. Proposed driveway from Baldwin Lane, looking north.
	Photo 2. Proposed driveway to sports fields complex adjacent the west side of Baldwin Elementary School, looking north. Baldwin Elementary on the right.

	Photo 3. Proposed driveway to sports fields complex adjacent the west side of Baldwin Elementary School, looking south. Baldwin Elementary on the left.
	Photo 4. Proposed parking area, looking north.



Photo 5. Western slope of the Project Area, looking northwest.



Photo 6. Northern end of the Project Area, looking southwest.

	Photo 7. Northern end of the Project Area, looking southeast.
	Photo 8. Northeastern portion of the Project Area, looking southeast.

	Photo 9. Middle of the Project Area, looking west.
	Photo 10. East side of the Project Area, facing northeast.

Appendix A

REGULATORY FRAMEWORK

Federal Regulations

Clean Water Act

The purpose of the Clean Water Act (CWA) of 1977 is to "restore and maintain the chemical, physical, and biological integrity of the nation's waters." Section 404 of the CWA prohibits the discharge of dredged or fill material into "waters of the United States" without a permit from the United States Army Corps of Engineers (USACE). The definition of waters of the United States includes rivers, streams, estuaries, territorial seas, ponds, lakes, and wetlands. Wetlands are defined as those areas "that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 Code of Federal Regulations [CFR] 328.3 7b). The U.S. Environmental Protection Agency (EPA) also has authority over wetlands and may override a USACE permit. Substantial impacts to wetlands may require an individual permit. Projects that only minimally affect wetlands may meet the conditions of one of the existing Nationwide Permits. A Water Quality Certification or waiver pursuant to Section 401 of the CWA is required for Section 404 permit actions; in California this certification or waiver is issued by the Regional Water Quality Control Board (RWQCB).

Federal Endangered Species Act (ESA)

The federal Endangered Species Act (ESA) of 1973 protects plants and wildlife that are listed by the United States Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) as endangered or threatened. Section 9 of the ESA (USA) prohibits the taking of endangered wildlife, where taking is defined as any effort to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct" (50 CFR 17.3). For plants, this statute governs removing, possessing, maliciously damaging, or destroying any endangered plant on federal land and removing, cutting, digging up, damaging, or destroying any endangered plant on non-federal land in knowing violation of state law (16 United States Code [USC] 1538). Under Section 7 of the ESA, federal agencies are required to consult with the USFWS if their actions, including permit approvals or funding, could adversely affect an endangered species (including plants) or its critical habitat. Through consultation and the issuance of a biological opinion, the USFWS may issue an incidental take statement allowing take of the species that is incidental to an otherwise authorized activity, provided the action will not jeopardize the continued existence of the species. The ESA specifies that the USFWS designate habitat for a species at the time of its listing in which are found the physical or biological features "essential to the conservation of the species," or which may require "special Management consideration or protection..." (16 USC § 1533[a][3].2; 16 USC § 1532[a]). This designated Critical Habitat is then afforded the same protection under the ESA as individuals of the species itself, requiring issuance of an Incidental Take Permit prior to any activity that results in "the destruction or adverse modification of habitat determined to be critical" (16 USC § 1536[a][2]).

Interagency Consultation and Biological Assessments

Section 7 of ESA provides a means for authorizing the "take" of threatened or endangered species by federal agencies, and applies to actions that are conducted, permitted, or funded by a federal agency. The statute requires federal agencies to consult with the USFWS or National Marine Fisheries Service (NMFS), as appropriate, to ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of threatened or endangered species or result in the destruction or adverse modification of critical habitat for these species. If a Proposed Project "may affect" a listed species or destroy or modify critical

habitat, the lead agency is required to prepare a biological assessment evaluating the nature and severity of the potential effect.

Habitat Conservation Plans

Section 10 of the federal ESA requires the acquisition of an Incidental Take Permit (ITP) from the USFWS by non-federal landowners for activities that might incidentally harm (or "take") endangered or threatened wildlife on their land. To obtain a permit, an applicant must develop a Habitat Conservation Plan that is designed to offset any harmful impacts the proposed activity might have on the species.

Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act (16 U.S.C. Sections 661 to 667e et seq.) applies to any federal Project where any body of water is impounded, diverted, deepened, or otherwise modified. Project proponents are required to consult with the USFWS and the appropriate state wildlife agency.

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (The Eagle Act) (1940), amended in 1962, was originally implemented for the protection of bald eagles (*Haliaeetus leucocephalus*). In 1962, Congress amended the Eagle Act to cover golden eagles (*Aquila chrysaetos*), a move that was partially an attempt to strengthen protection of bald eagles, since the latter were often killed by people mistaking them for golden eagles. This act makes it illegal to import, export, take (molest or disturb), sell, purchase, or barter any bald eagle or golden eagle or part thereof. The golden eagle, however, is accorded somewhat lighter protection under the Eagle Act than that of the bald eagle.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) of 1918 implements international treaties between the United States and other nations created to protect migratory birds, any of their parts, eggs, and nests from activities, such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. As authorized by the MBTA, the USFWS issues permits to qualified applicants for the following types of activities: falconry, raptor propagation, scientific collecting, special purposes (rehabilitation, education, migratory game bird propagation, and salvage), take of depredating birds, taxidermy, and waterfowl sale and disposal. The regulations governing migratory bird permits can be found in 50 CFR Part 13 General Permit Procedures and 50 CFR part 21 Migratory Bird Permits. The State of California has incorporated the protection of birds of prey in Sections 3800, 3513, and 3503.5 of the California Fish and Game Code (CFGC).

However, on December 22, 2017 the U.S. Department of the Interior (DOI) issued a memorandum concluding that MBTA's prohibitions on take apply "[…] only to affirmative actions that have as their purpose the taking or killing of migratory birds, their nests, or their eggs" (DOI 2017). Therefore, take of migratory birds or their active nests (i.e., with eggs or young) that is incidental to, and not the purpose of, an otherwise lawful activity does not constitute a violation of the MBTA. Then, on April 11, 2018, the USFWS issued a guidance memorandum that provided further clarification on their interpretation:

> "We interpret the M-Opinion to mean that the MBTA's prohibitions on take apply when the purpose of an action is to take migratory birds, their eggs, or their nests. Conversely, the take of birds, eggs or nests occurring as the result of an activity, the purpose of which is not to take birds, eggs or nests, is not prohibited by the MBTA" (USFWS 2018).

Therefore, the MBTA is currently interpreted to prohibit the take of birds, nests or eggs when the *purpose* or *intent* of the action is to take birds, eggs or nests, not when the take of birds, eggs or nests is incidental to but not the intended purpose of an otherwise lawful action.

Executive Orders (EO)

> *Invasive Species – EO 13112 (1999)*: Issued on February 3, 1999, promotes the prevention and introduction of invasive species and provides for their control and minimizes the economic, ecological, and human health impacts that invasive species cause through the creation of the Invasive Species Council and Invasive Species Management Plan.
>
> *Migratory Bird – EO 13186 (2001)*: Issued on January 10, 2001, promotes the conservation of migratory birds and their habitats and directs federal agencies to implement the Migratory Bird Treaty Act. Protection and Enhancement of Environmental Quality—EO 11514 (1970a), issued on March 5, 1970, supports the purpose and policies of the National Environmental Policy Act (NEPA) and directs federal agencies to take measures to meet national environmental goals.

Migratory Bird Treaty Reform Act

The Migratory Bird Treaty Reform Act (Division E, Title I, Section 143 of the Consolidated Appropriations Act, 2005, PL 108–447) amends the Migratory Bird Treaty Act (16 U.S.C. Sections 703 to 712) such that nonnative birds or birds that have been introduced by humans to the United States or its territories are excluded from protection under the Act. It defines a native migratory bird as a species present in the United States and its territories as a result of natural biological or ecological processes. This list excluded two additional species commonly observed in the United States, the rock pigeon (*Columba livia*) and domestic goose (*Anser domesticus*).

Birds of Conservation Concern

Birds of Conservation Concern (BCC) is a USFWS list of bird species identified to have the highest conservation priority, and with the potential for becoming candidates for listing as federally threatened or endangered. The chief legal authority for BCC is the Fish and Wildlife Conservation Act of 1980 (FWCA). Other authorities include the FESA, the Fish and Wildlife Act of 1956, and the Department of the Interior U.S Code (16 U.S.C. § 701). The 1988 amendment to the FWCA (Public Law 100-653, Title VIII) requires the Secretary of the Interior, through the USFWS, to "identify species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become candidates for listing under the Endangered Species Act of 1973" (USFWS, 2008a).

State Regulations

California Fish and Game Code Sections 1600 through 1606 of the CFGC

This section requires that a Streambed Alteration Application be submitted to the CDFW for "any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake." The CDFW reviews the proposed actions and, if necessary, submits to the applicant a proposal for measures to protect affected fish and wildlife resources. The final proposal that is mutually agreed upon by the Department and the applicant is the Streambed Alteration Agreement. Often, Projects that require a Streambed Alteration Agreement also require a permit from the USACE under Section 404 of the CWA. In these instances, the conditions of the Section 404 permit and the Streambed Alteration Agreement may overlap.

California Endangered Species Act

The California Endangered Species Act (CESA) (Sections 2050 to 2085) establishes the policy of the state to conserve, protect, restore, and enhance threatened or endangered species and their habitats by protecting "all native species of fishes, amphibians, reptiles, birds, mammals, invertebrates, and plants, and their habitats, threatened with extinction and those experiencing a significant decline which, if not halted, would lead to a threatened or endangered designation." Animal species are listed by the CDFW as threatened or endangered, and plants are listed as rare, threatened, or endangered. However, only those plant species listed as threatened or endangered receive protection under the California ESA.

CESA mandates that state agencies do not approve a Project that would jeopardize the continued existence of these species if reasonable and prudent alternatives are available that would avoid a jeopardy finding. There are no state agency consultation procedures under the California ESA. For Projects that would affect a species that is federally and State listed, compliance with ESA satisfies the California ESA if the California Department of Fish and Wildlife (CDFW) determines that the federal incidental take authorization is consistent with the California ESA under Section 2080.1. For Projects that would result in take of a species that is state listed only, the Project sponsor must apply for a take permit, in accordance with Section 2081(b).

Fully Protected Species

Four sections of the California Fish and Game Code (CFGC) list 37 fully protected species (CFGC Sections 3511, 4700, 5050, and 5515). These sections prohibit take or possession "at any time" of the species listed, with few exceptions, and state that "no provision of this code or any other law will be construed to authorize the issuance of permits or licenses to 'take' the species," and that no previously issued permits or licenses for take of the species "shall have any force or effect" for authorizing take or possession.

Bird Nesting Protections

Bird nesting protections (Sections 3503, 3503.5, 3511, 3513 and 3800) in the CFGC include the following:

- Section 3503 prohibits the take, possession, or needless destruction of the nest or eggs of any bird.
- Section 3503.5 prohibits the take, possession, or needless destruction of any nests, eggs, or birds in the orders Falconiformes (new world vultures, hawks, eagles, ospreys, and falcons, among others), and Strigiformes (owls).
- Section 3511 prohibits the take or possession of Fully protected birds.
- Section 3513 prohibits the take or possession of any migratory nongame bird or part thereof, as designated in the MBTA. To avoid violation of the take provisions, it is generally required that Project-related disturbance at active nesting territories be reduced or eliminated during the nesting cycle.
- Section 3800 prohibits the take of any any non-game bird (i.e., bird that is naturally occurring in California that is not a gamebird, migratory game bird, or fully protected bird)

Native Plant Protection Act

The Native Plant Protect Act (NPPA) (1977) (CFGC Sections 1900-1913) was created with the intent to "preserve, protect, and enhance rare and endangered plants in this State." The NPPA is administered by CDFW. The Fish and Game Commission has the authority to designate native plants as endangered or rare and to protect endangered and rare plants from take. CESA (CFGC 2050-2116) provided further protection for rare and endangered plant species, but the NPPA remains part of the Fish and Game Code.

Appendix B

Botany Report for the Proposed School Trails Project

Bear Valley, San Bernardino County, California

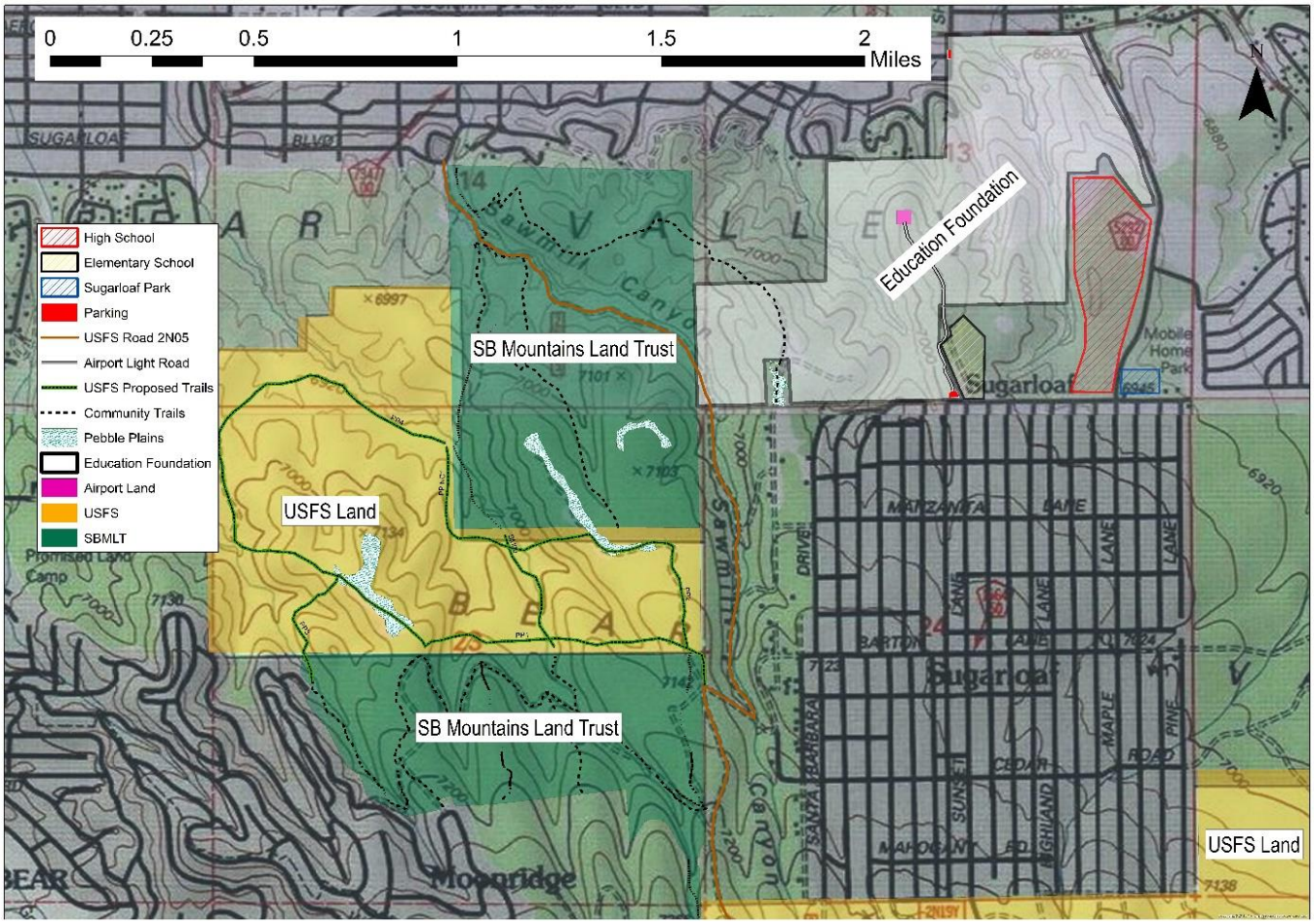
July 23, 2019

Brigit M. Laughlin

Reviewed by Scott Eliason and Dr. Tim Krantz

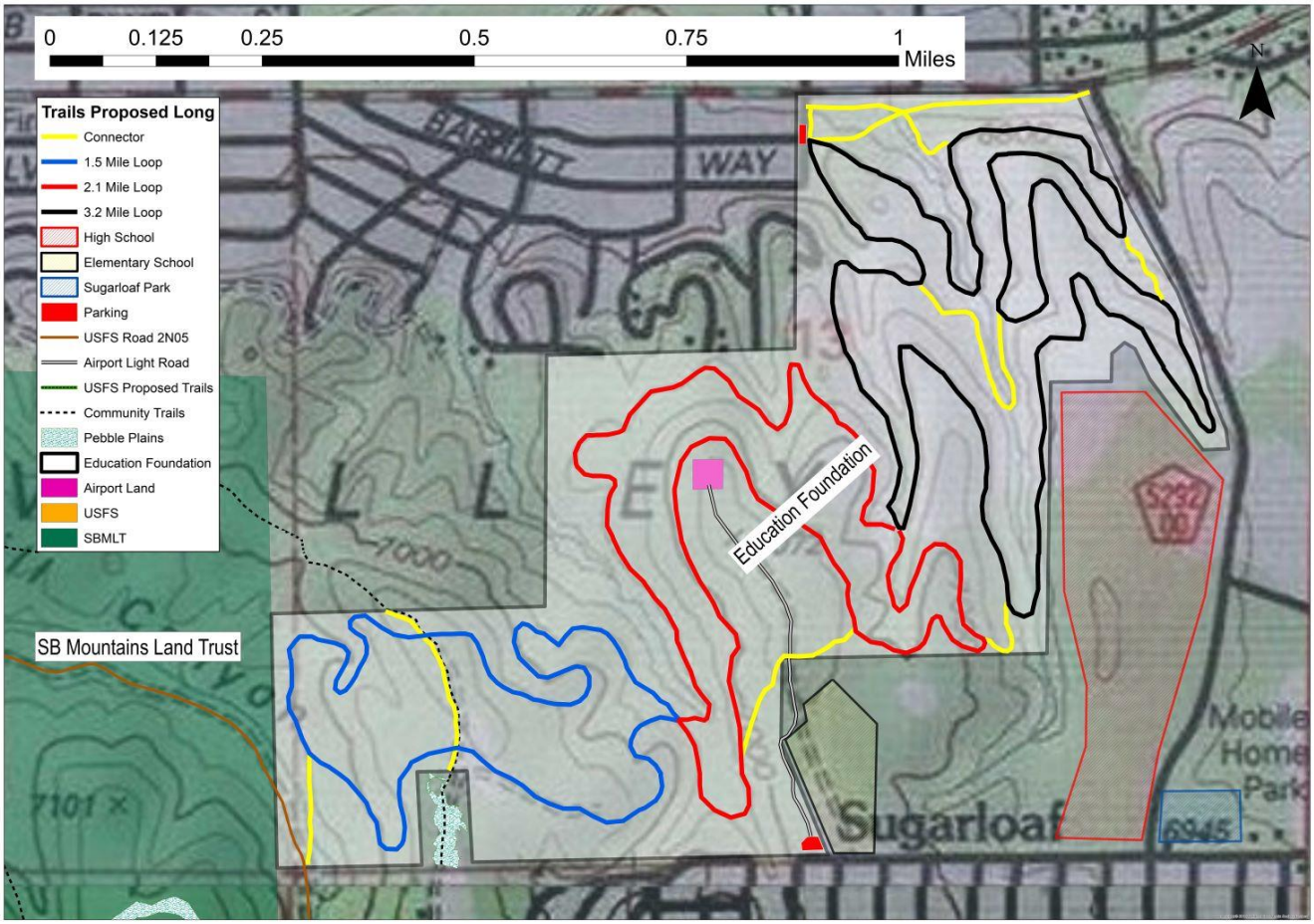
School Trails OVERVIEW

2/10/2019



School Trails Loop LONG

2/10/2019



Project Description

The proposed school trails would be constructed with the intent to provide recreational opportunities for the surrounding community, educational prospects for local elementary and high school students, and connectivity between local neighborhoods and schools. If construction is completed, the trails will extend approximately 7 miles in length, will vary between 24 and 36 inches of width, and will have a tread of natural material. The proposed designers and builders of this trail are partners of the United States Forest Service, the Southern California Mountains Foundation, the City of Big Bear Lake, the County of San Bernardino, Snow Summit, and the Big Bear Valley Trails Foundation. See photographs attached for a depiction of the proposed trails.

Existing Environment

The proposed trail region is inhabited by Great Basin sagebrush scrub and Pinyon-juniper woodland plant communities. The trees in proposed project area are Pinyon pine and Jeffrey pine (*Pinus monophylla* and *Pinus jeffreyi).* These woodland species are interspersed with shrub land habitat with dominant species such as *Fremontodendron californicum* (Flannel bush), *Artemisia tridentata* (Great Basin sagebrush), *Eriogonum fasciculatum* (Flat-top buckwheat), and *Cercocarpus ledifolius* (Curl- leaf mountain mahogany). The Dixie Lee Pebble Plain is located near the northeast edge of the project area and supports numerous rare, sensitive, and protected species including (but not limited to) Southern mountain wild buckwheat (*Eriogonum kennedyi* var. *austromontanum),* Bear Valley sandwort (*Eremgone ursina*) and Ash-gray paintbrush *(Castilleja cinerea).*

Botanical Survey: Rare, Threatened, or Endangered Species in the Project Area[3]

Eriogonum kennedyi var. *austromontanum* (Southern mountain wild buckwheat)





Castilleja cinerea (Ash gray indian paintbrush)





[3] https://calphotos.berkeley.edu/

Phlox dolichantha (Big Bear Valley phlox)





Castilleja montigena (Mountain paintbrush)





Eremogone ursina (Bear Valley sandwort)





Ivesia argyrocoma (Silvery rat tails)





Species/Symbol	Listing[4]	Description of Listing[5]	Species Information[6]
Eremogone ursina ERUR	1B.2	Rare, threatened or endangered throughout its range with the majority of the species endemic to California Listed as Threatened under federal Endangered Species Act	Group: Dicot Family: CARYOPHYLLACEAE Duration: Perennial Growth Habitat: Forb/herb Native Status: L48 N
Castilleja cinerea CACI6	1B.2	Rare, threatened or endangered throughout its range with the majority of the species endemic to California Listed as Threatened under federal Endangered Species Act	Group: Dicot Family: OROBANCHACEAE Duration: Perennial Growth Habitat: Forb/Herb Native Status: L48 N
Castilleja montigena CAMO20	4.3	Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)	Group: Dicot Family: OROBANCHACEAE Duration: Perennial Growth Habitat Forb/herb Native Status L48 N
Eriogonum kennedyi var. *austromontanum*	1B.2	Rare, threatened or endangered throughout its range with the majority of	Group: Dicot Family: POLYGONACEAE

[4] https://www.calflora.org/
[5] rareplants.cnps.org/
[6] https://plants.usda.gov/threat.html

ERKEA2		the species endemic to California Listed as Threatened under federal Endangered Species Act	Duration: Perennial Growth Habitat Forb/herb, subshrub Native Status L48 N
Ivesia argyrocoma IVAR	1B.2	Rare, threatened or endangered throughout its range with the majority of the species endemic to California	Group: Dicot Family: ROSACEAE Duration: Perennial Growth Habitat Forb/herb Native Status L48 N
Phlox dolichantha PHDO2	1B.2	Rare, threatened or endangered throughout its range with the majority of the species endemic to California	Group: Dicot Family POLEMONIACEAE Duration Perennial Growth Habitat Forb/herb, subshrub Native Status L48 N

Methodology

A botany survey was conducted on July 16, 2019 with a temperature of approximately 78°F. Brigit Laughlin and Joseph Esparza conducted the survey with the assistance of Driz Cook, who was present to showcase the proposed trails. All target species were readily detectable and identifiable based on observations at nearby reference populations. The proposed trail area was monitored by walking along the outskirts of the property in a counter-clockwise manner, away from the starting point, near the intersection of Big Bear Blvd and Shore Drive. Areas adjacent to the proposed trail were surveyed for potential Threatened or Endangered Species (TESP) plant habitat. The hemi-parasitic species *Castilleja montigena* was searched for in sage brush (its primary host plant) and other shrubs. It was expected to be found in populations with multiple individuals and was easy to locate because of its bright red coloring. *Phlox dolicantha* was searched for in shaded areas, and was identified by its vegetative structure and the remnants of pink, white, or purple colored petals (it was late in the flowering season). Pebble plains species were not observed within the survey area, except for in and adjacent to the Dixie Lee Lane Pebble Plain. Previously recorded rare plants associated with the Dixie Lee Lane Pebble Plain were located using ArcGIS Collector App and current distribution and status were documented.

Results

Scattered populations of *Castilleja montigena* were found throughout the proposed trail alignments. The species was found in populations generally consisting of five or more individuals. The individuals were located on other plant species, most commonly Great Basin sage brush. *Castilleja montigena* was periodically found on the proposed trail area, however, it was normally only one or two individuals that were directly in the center of the trail area. The rest of the individuals in these particular populations were outside of the footprint of the proposed trails.

Phlox dolichantha was observed widely scattered in the survey area, but it was not observed on the proposed trails. The described species is found in shaded areas, and populations are normally comprised of scattered individuals. The proposed trail area provided very little shade and the soil was very dry. Therefore, the proposed trails were not suitable habitat for *Phlox dolichantha*. Scattered individuals were found in shaded areas under logs and trees.

The pebble plains species *Eriogonum kennedyi var. austromontanum, Eremogone ursina,* and *Castilleja cinerea* were located directly on and adjacent to the Dixie Lee Lane Pebble Plain. Both *Ivesia argyrocoma* and *Eriogonum kennedyi var. austromontanum* were found in abundance in and outside of the fenced-off pebble plains habitat. Other rare and associated pebble plain species, such as *Erigeron aphanactis* (Rayless fleabane) and *Antennaria dimorpha* (Dwarf pussy toes), were found with *Ivesia argyrocoma* and *Eriogonum kennedyi var. austromontanum* outside the fenced area. The presence of these species indicated suitable pebble plain habitat that was not limited to the gated off portion of the pebble plain habitat. Pebble plains species were not observed in any other locations within the project area.

Recommendations

Impacts to *Castilleja montigena* should be avoided or minimized to the extent practical when constructing the trails. Areas adjacent to the trails should be protected as needed to sustain habitat for *Castilleja montigena* and other rare plants. These areas could be protected with signs directing people and bikes to stay on the trail, as well as signs prohibiting off trail use. Such measures could also protect *Phlox dolichantha* in the few areas it is located on the property. Such efforts to protect and monitor the effects of the trails and their use would be a great project for interested High School students. Some of the land in the proposed project area has been cleared in the past, leaving it vulnerable to continued impacts from OHV use. It is in the best interest of the endangered and rare plant species that motorized vehicle use on the project area be prohibited.

Any area that contains *Ivesia argyrocoma*, *Eriogonum kennedyi* var. *austromontanum*, or other pebble plains species must to be avoided completely to keep the project within a Categorical Exclusion under the California Environmental Quality Act (CEQA), as there is a mandatory finding of significance under CEQA for impacts to these species. Further monitoring and precautions should be taken once the proposed trails have been built, in order to maintain this sensitive habitat.