
Biological Resources Report

including

Special-Status Plant Survey

for

Assessor' Parcel Number 105-190-41

being

Parcel A of Parcel Map 51/083

El Dorado County, CA

Prepared by
Ruth A. Willson
Site Consulting, Inc.
Biological Services
3460 Angel Lane
Placerville, California 95667
(530) 622-7014

Prepared for
Thomas R. Van Noord
tom@tvnlaw.com

April 2016

Exhibit H

Table of Contents

I. Report Summary	1
A. Special-Status Species.	1
B. Special Habitats.	1
II. Introduction	2
A. Purpose of Report.	2
B. Project Location and Description	2
C. Property Owner and Project Engineer.	2
D. Report Preparer.	2
III. Evaluation Methods	8
A. Field Surveys.	8
B. Literature Search.	8
C. Vegetation Community Classification.	8
IV. Regulatory Setting.	9
A. Federal Regulations.	9
1. Federal Endangered Species Act (ESA).	9
2. Migratory Bird Treaty Act.	9
3. Raptors.	9
4. Wetlands and Waters.	9
B. California Regulations.	10
1. California Environmental Quality Act (CEQA).	10
2. California Endangered Species Act (CESA).	10
3. California State Fish and Game Code.	10
C. El Dorado County Regulations.	11
1. Important Habitat Mitigation Program.	11
2. Ordinance 17.71.	11
3. General Plan Policy 7.4.2.9, Important Biological Corridor.	12
V. Topographic Features.	12
A. Topography.	12
B. Soils.	12
VI. Biological Resources.	14
A. Vegetation Communities.	14
B. Wetlands and Waters.	16
C. Wildlife.	18
D. Special-Status Species.	19
1. Special-Status Species without Habitat on the Project Site.	19
2. Special-Status Species with Habitat on the Project Site.	19
3. Evaluation of Special-Status Species with Habitat on the Project Site	23
a. Federal- and/or State-Listed Species.	23
b. Species of Concern.	23
i. Invertebrates.	23
ii. Amphibians and Reptiles	24
iii. Birds.	25
iv. Mammals.	30
v. Plants.	31
E. Special Habitats.	39
VII. Important Biological Corridor Evaluation.	40
IX. References	41

Table of Figures, Tables and Appendices

Figures

Figure 1. Assessor's map.	3
Figure 2. Tentative Parcel Map.	4
Figure 3. General Plan Map.	5
Figure 4. Zoning Map.	6
Figure 5. Aerial photograph of the project site.	7
Figure 6. Soils map.	13
Figure 7. Vegetation map.	15
Figure 8. Important habitats, wetlands and waters.	17
Figure 9. California Natural Diversity Database map of known occurrences of special-status species.	19
Figure 10. Brandegee's clarkia found on the project site.	34

Tables

Table 1. Federal- and/or state-listed species having potential habitat, and special-status species found on the project site.	1
Table 2. Tree species counted along random transects through on-site oak woodlands.	14
Table 3. Special-status plant species having potential habitat on the project site.	20

Appendices

- A. U.S. Fish and Wildlife Service Official Species List and IpaC Report
- B. California Natural Diversity Database Report of Special-status Species Known to Occur in the Coloma and Eight Surrounding USGS Quads
- C. California Native Plant Society On-line Inventory of Rare and Endangered Plants, Coloma and Eight Surrounding USGS Quads
- D. Evaluation of Special-Status Species with Known Occurrences in Coloma and Surrounding USGS Quads
- E. Plant Species Found on the Project Site June 15, 23, 24, July 6 and August 3, 2015; April 16 and 18, 2016
- F. California Native Species Field Form

I. Report Summary

A. Special-Status Species

No state- or federal-listed species were found on the project site. Potential habitat was found for two state- and federal-listed species, Stebbins's morning-glory (*Calystegia stebbinsii*) and Layne's butterwort (*Packera layneae*) (Table 1). Three species of concern were found: Brandegee's clarkia (*Clarkia biloba* ssp. *brandegeae*), Cooper's hawk (*Accipiter cooperii*), and Oak titmouse (*Baeolophus inornatus*). In addition, potential habitat was found for forty-nine other species of concern, including three insects: Western bumble bee (*Bombus occidentalis*), Cosumnes spring stonefly (*Cosumnoperla hypocrena*), and Ricksecker's water scavenger beetle (*Hydrochara rickseckeri*); one amphibian: Foothill yellow-legged frog (*Rana boylei*); two reptiles: Western pond turtle (*Emys marmorata*) and Blainville's horned lizard (*Phrynosoma blainvillii*); fourteen birds: Sharp-shinned hawk (*Accipiter striatus*), Rufous-crowned sparrow (*Aimophila ruficeps*), Grasshopper sparrow (*Ammodramus savannarum*), Golden eagle (*Aquila chrysaetos*), Lawrence's goldfinch (*Carduelis lawrencei*), American dipper (*Cinclus mexicanus*), Merlin (*Falco columbarius*), American peregrine falcon (*Falco peregrinus anatum*), Fox sparrow (*Passerella iliaca*), Nuttall's woodpecker (*Picoides nuttallii*), Purple martin (*Progne subis*), Yellow warbler (*Setophaga petechia*), Black-chinned sparrow (*Spizella atrogularis*) and Brewer's sparrow (*Spizella breweri*); three mammals: Ringtail (*Bassariscus astutus*), Silver-haired bat (*Lasionycteris noctivagans*), and Yuma myotis bat (*Myotis yumanensis*); and twenty-six plants: Jepson's onion (*Allium jepsonii*), Congdon's onion (*Allium sanbornii* var. *congdonii*), Sanborn's onion (*Allium sanbornii* var. *sanbornii*), True's manzanita (*Arctostaphylos mewukka* ssp. *truei*), Nissenan manzanita (*Arctostaphylos nissenana*), Big-scale balsamroot (*Balsamorhiza macrolepis* var. *macrolepis*), Van Zuuk's morning-glory (*Calystegia vanzuukiae*), Red Hills soaproot (*Chlorogalum grandiflorum*), Sierra clarkia (*Clarkia virgata*), Streambank spring beauty (*Claytonia parviflora* ssp. *grandiflora*), Northern Sierra daisy (*Erigeron petrophilus* var. *sierrensis*), Tripod buckwheat (*Eriogonum tripodum*), Butte County fritillary (*Fritillaria eastwoodiae*), Serpentine bluecup (*Githopsis pulchella* ssp. *serpentinicola*), Foothill jepsonia (*Jepsonia heterandra*), Dubious pea (*Lathyrus sulphureus* var. *argillaceus*), Humboldt's lily (*Lilium humboldtii* ssp. *humboldtii*), Shield-bracted monkeyflower (*Mimulus glaucescens*), Sierra sweet bay (*Myrica hartwegii*), Hoary navarretia (*Navarretia eriocephala*), Awl-leaved navarretia (*Navarretia subuligera*), Bacigalupi's yampah (*Perideridia bacigalupii*), Narrow-petaled rein orchid (*Piperia leptopetala*), Sierra blue grass (*Poa sierrae*), Brownish beaked-rush (*Rhynchospora capitellata*), and Oval-leaved viburnum (*Viburnum ellipticum*). See pages 23-38 for more details.

B. Special Habitats

Two perennial stream found on-site are potential Central Valley Drainage Hardhead/Squawfish Streams. See page 39 for more details.

Table 1. State/federal-listed species with potential habitat, and special-status species found on the project site.

Special-status Species	Common Name	Legal Status ¹ Federal/ State	Species Found On Site?	Habitat Quality	Suggested Mitigation
State- or Federal-listed Species					
<i>Calystegia stebbinsii</i>	Stebbins's morning-glory	E / E	No	Marginal	None required
<i>Packera layneae</i>	Layne's butterwort	T / R	No	Suitable	None required
Species of Concern					
<i>Accipiter cooperii</i>	Cooper's hawk	— / —	Yes	Suitable	Pre-construction nesting bird survey, if construction is scheduled between March 1 and August 31
<i>Baeolophus inornatus</i>	Oak titmouse	— / —	Yes	Suitable	Pre-construction nesting bird survey, if construction is scheduled between March 1 and August 31
<i>Clarkia biloba</i> ssp. <i>brandegeae</i>	Brandegee's clarkia	— / —	Yes	Suitable	Pre-construction nesting bird survey, if construction is scheduled between March 1 and August 31

¹Legal Status: E = Endangered R = Rare T = Threatened

II. Introduction

A. Purpose of Report

A biological resources study was conducted on the project site, Assessor's Parcel Number 105-190-41 (Figure 1), in order to determine the suitability of its habitat to support state- or federal-listed special-status wildlife and plant species. The site was also searched for special-status wildlife and plant species, and special habitats, which might occur there. The site is within an Important Biological Corridor (IBC), and the report will analyze the project's compliance with County policies regarding IBCs.

B. Project Location and Description

The project site is in the northwest quarter and east half of Section 25, Township 11 North, Range 9 East, M.D.M. It lies north of Thompson Hill Road and east of Lotus Road in the Gold Hill/Lotus area of El Dorado County, CA. The proposed project would subdivide a 110± acre parcel into four lots, varying in size from 11.6 to 56.8 acres (Figure 2).

The project site has General Plan designations of Rural Residential (RR) and Agricultural Lands (AL). RR designation (Figure 3), with RL-10 zoning (Figure 4) and an Important Biological Corridor (IBC) overlay, covers most of the parcel, but is replaced by AL designation with RL-20 zoning in the northern "panhandle." The AL-designated land encompasses the northern portions of Parcels 3 and 4, and is outside of the IBC.

The parcel is bounded by properties varying in size from 10 to 100 acres.

C. Property Owners and Project Engineer

Property Owner
Thomas R. Van Noord
3350 Country Club Drive
Cameron Park, CA 95682
(530) 677-1025

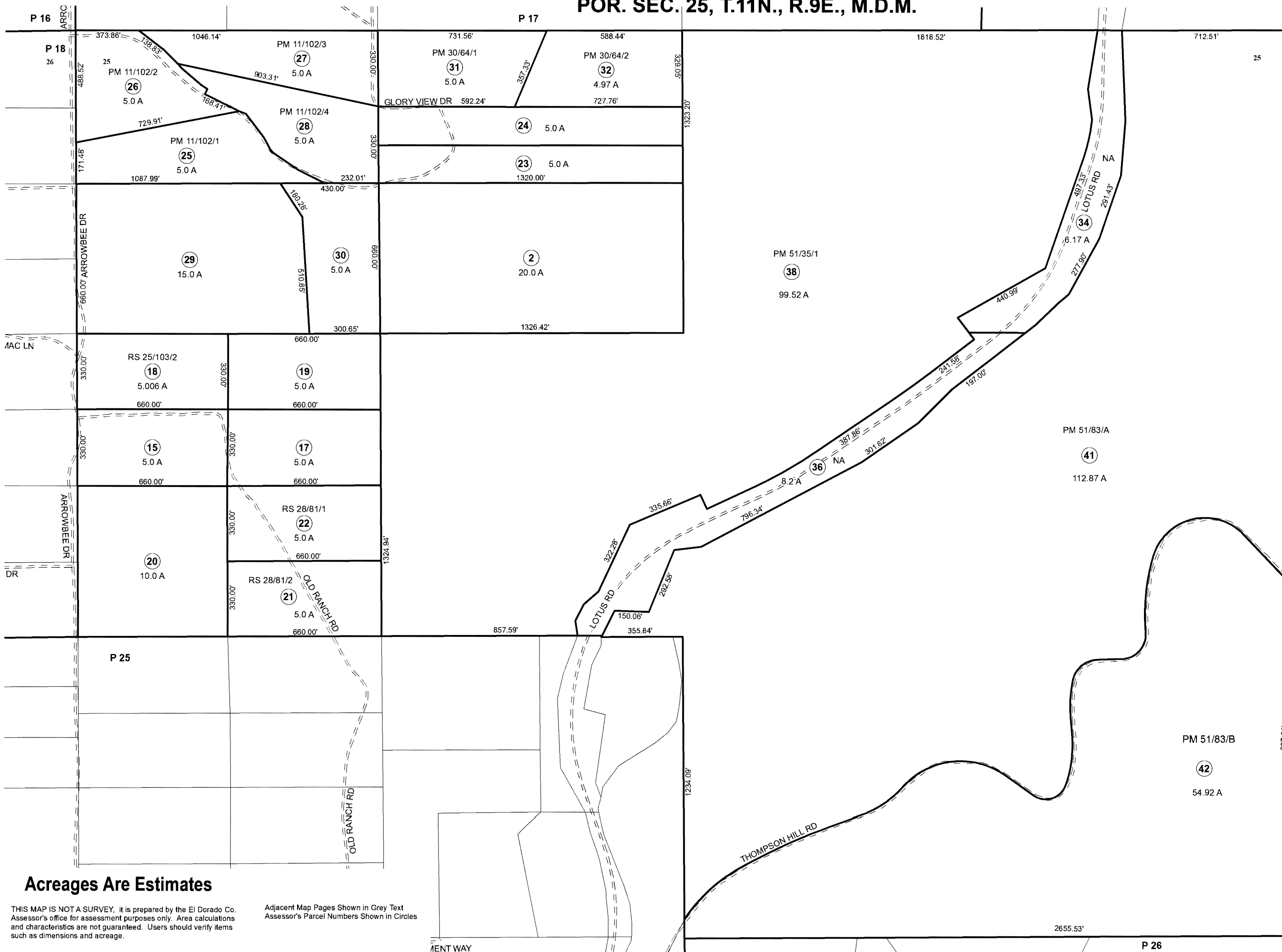
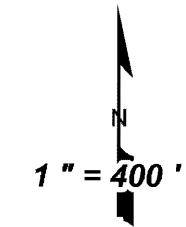
Project Engineer
Ken Purcell
5816 Havenstar Lane
El Dorado, CA 95623
(530) 622-5470

D. Report Preparer

Ruth A. Willson, M.A., Biology, California State University, Fresno, has been preparing biological reports in El Dorado County since 1992. Her educational and experiential background includes proficiency in botany, entomology, ornithology, wildlife biology and ecology. She completed training in wetland delineation with Wetland Training Institute March 31, 2006, and is an ISA Certified Arborist, No. WE-8335A.

POR. SEC. 25, T.11N., R.9E., M.D.M.

105:19



Bk 06
Pg 40

2416.37'

Bk 89
Pg 01

997.50'

Acresages Are Estimates

THIS MAP IS NOT A SURVEY, it is prepared by the El Dorado Co. Assessor's office for assessment purposes only. Area calculations and characteristics are not guaranteed. Users should verify items such as dimensions and acreage.

Adjacent Map Pages Shown in Grey Text
Assessor's Parcel Numbers Shown in Circles

Rev. SEP 9, 2015

Assessor's Map Bk. 105, Pg. 19
County of El Dorado, CA

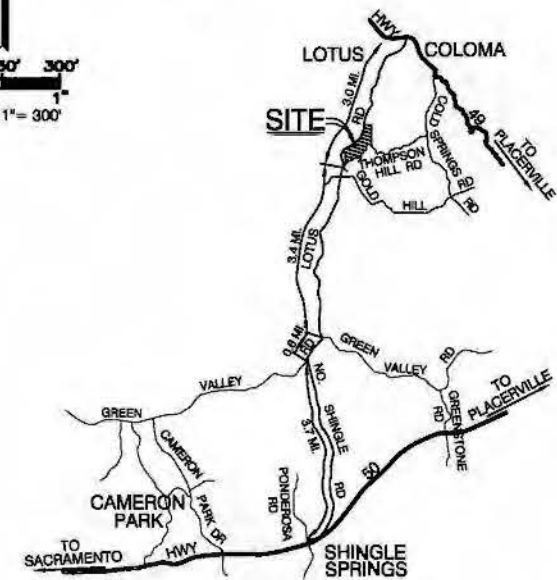
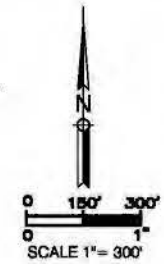
P 26

TENTATIVE PARCEL MAP

A PORTION OF SECTION 25, T. 11 N., R. 9 E., M.D.M.,
BEING PARCEL A OF P.M. 51-83
COUNTY OF EL DORADO, STATE OF CALIFORNIA

LATROBE ROAD R/W COURSE DATA

① N28°03'04"E 128.90'	⑪ N47°37'27"E 138.03'
② S86°29'20"E 150.06'	⑫ N51°03'43"E 58.65'
③ N23°30'45"E 292.58'	⑬ N29°55'30"E 277.90'
④ N84°27'31"E 117.31'	⑭ N20°18'13"E 291.43'
⑤ N63°28'10"E 796.34'	⑮ N08°00'01"E 239.38'
⑥ N56°35'01"E 301.62'	⑯ N01°01'41"W 398.14'
⑦ N48°23'18"E 205.68'	
⑧ N53°52'18"E 197.00'	
⑨ N53°23'22"E 209.74'	
⑩ N53°35'15"E 58.87'	



VICINITY MAP
NO SCALE

INFORMATION TABLE

APPLICANT / OWNER:	THOMAS R. VAN NOORD 3350 COUNTRY CLUB DR, SUITE 202 CAMERON PARK, CA 95682
PREPARED BY:	KEN W. PURCELL, CIVIL ENGINEER P.O. BOX 30, EL DORADO, CA 95623 (530) 622-5470
SCALE:	1" = 300'
CONTOUR INTERVAL:	20 FEET
SOURCE OF TOPOGRAPHY:	40 FT. U.S.G.S. CONTOURS GENERATED TO 20 FEET AND SUPPLEMENTED BY FIELD WORK
ASSESSORS PARCEL NO.:	105-190-41
PRESENT ZONING:	RL-10
PROPOSED ZONING:	NO CHANGE
CURRENT GENERAL PLAN:	RR
AREA:	112.87 ACRES
PROPOSED NUMBER/SIZE OF PARCELS:	FOUR (4) / 10 ACRE MINIMUM
DOMESTIC WATER:	INDIVIDUAL WELLS - FUTURE
SEWAGE DISPOSAL:	INDIVIDUAL SEPTIC - FUTURE
FIRE PROTECTION:	EL DORADO COUNTY FIRE DISTRICT
DATE:	JANUARY 9, 2016

LEGEND

EXISTING	PROPOSED	DESCRIPTION
—	—	BOUNDARY LINE
—	—	PARCEL LINE (LENGTH TO NEAREST FT.)
—	—	ADJOINER
—	—	20-FT. ELEV. CONTOUR LINE
—	—	100-FT. ELEV. CONTOUR LINE
—	—	GRADED AREA OR BENCH & CUT/FILL SLOPES
—	—	SLOPE
—	—	OVERHEAD UTILITY LINE & POLE
—	—	SITE ACCESS ROADS
—	—	ROCK OUTCROPPING
—	—	INTERMITTENT DRAINAGEWAY
—	—	CENTERLINE

NOTES

- 30-FT WIDE IRREVOCABLE OFFER OF DEDICATION TO THE COUNTY OF EL DORADO FOR ROAD & PUBLIC UTILITIES PURPOSES.
- EXISTING PG&E AND PT&T UTILITIES EASEMENT PER O.R. 1274-158, WIDTH NOT SPECIFIED.
- PROPOSED 30' WIDE EASEMENT FOR SLOPE MAINTENANCE PURPOSES, INCLUDING NECESSARY RIGHT OF ENTRY IN FAVOR OF PARCEL 3.

ZONING ADMINISTRATOR: _____

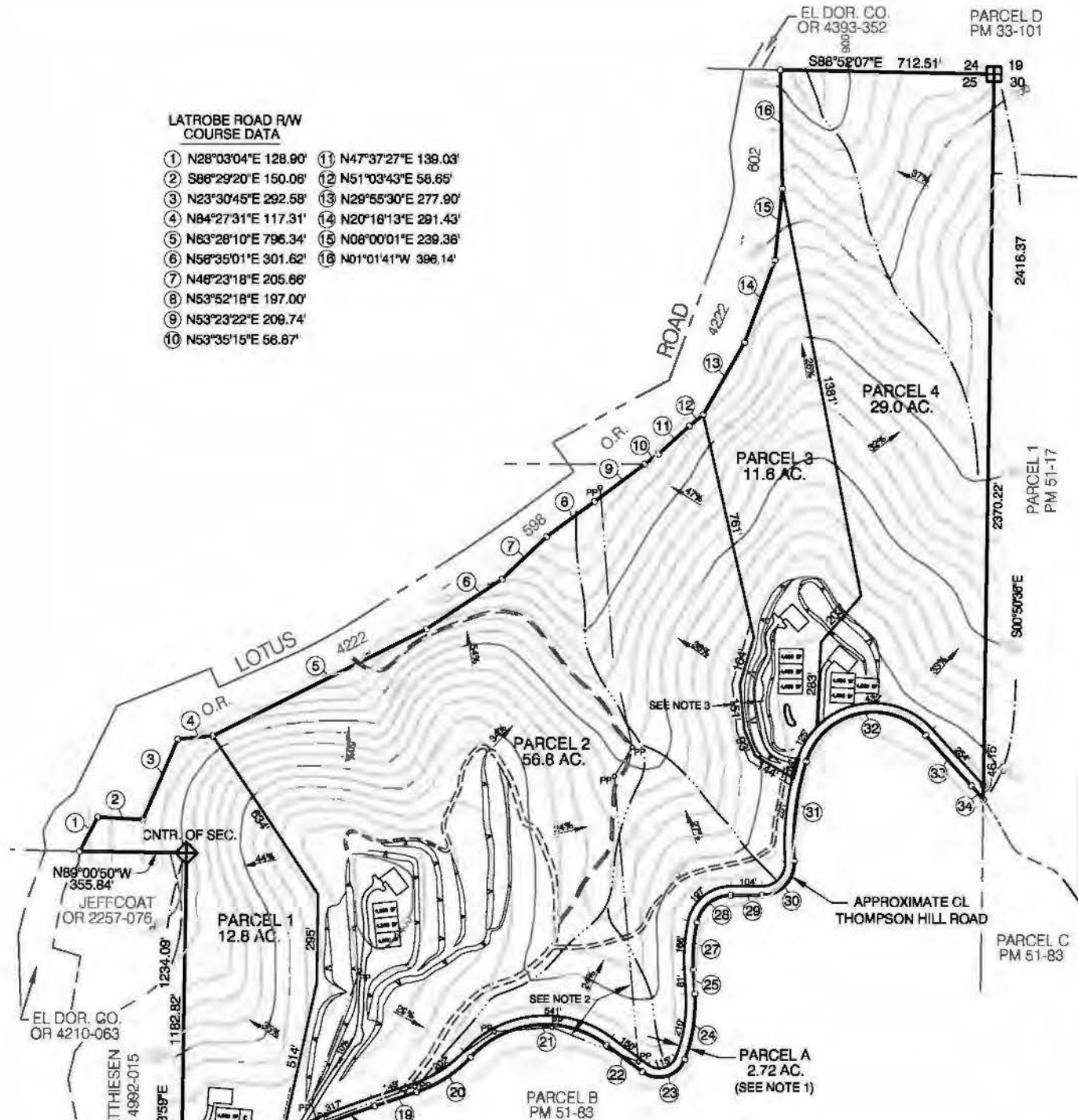
APPROVAL / DENIAL DATE: _____

PLANNING COMMISSION: _____

APPROVAL / DENIAL DATE: _____

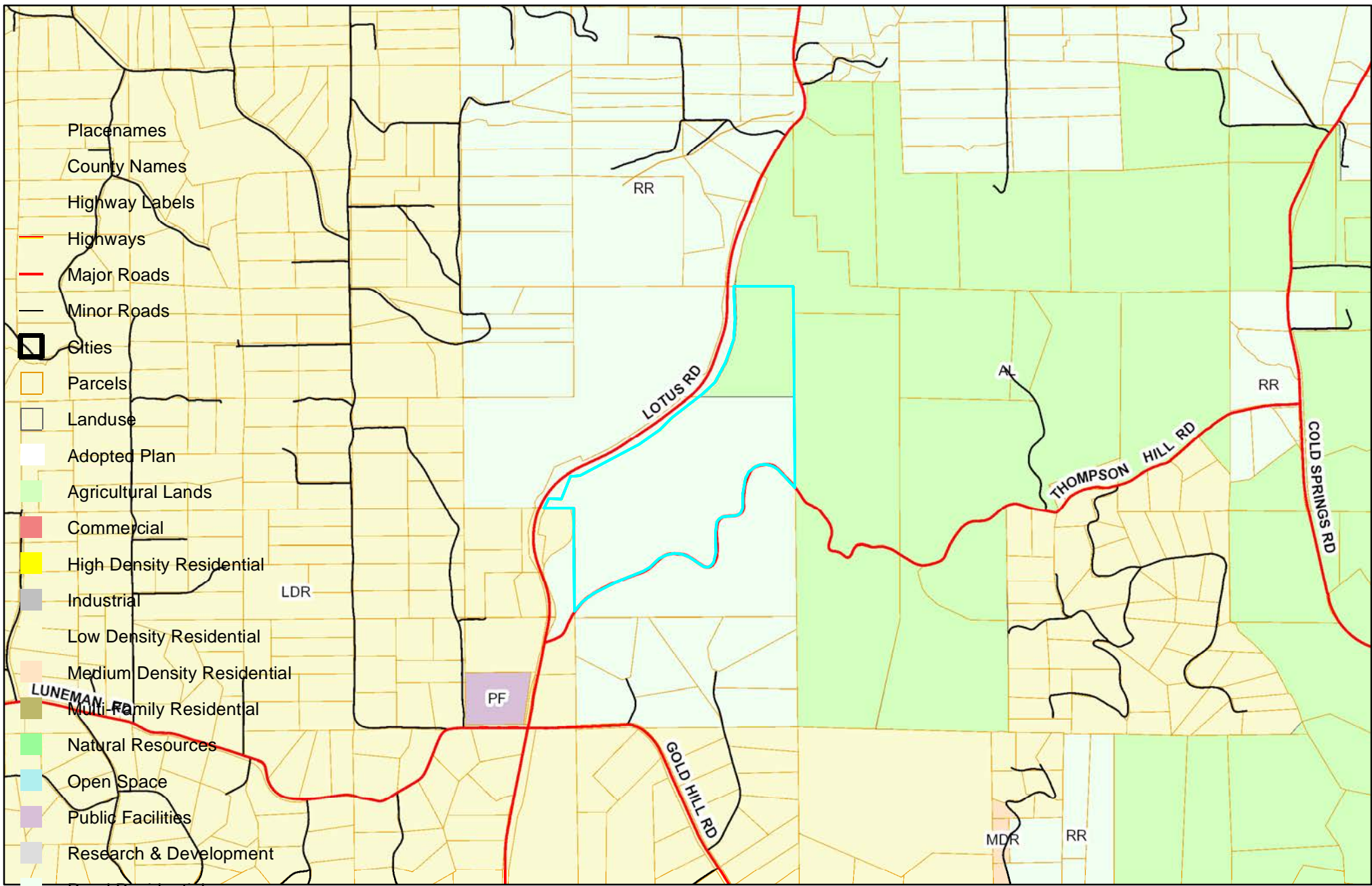
BOARD OF SUPERVISORS: _____

APPROVAL / DENIAL DATE: _____



THOMPSON HILL RD COURSE DATA

⑰ R=710.00' D=28°50'01" L=332.52' CHD=N48°27'58"E 329.49'	⑳ N03°16'53"W 80.83'
⑱ R=2600.00' D=09°36'39" L=436.13' CHD=N66°41'18"E 435.61'	㉑ R=582.00' D=15°31'22" L=157.68' CHD=N04°28'48"E 157.19'
㉒ N71°29'38"E 147.65'	㉒ R=115.00' D=77°41'14" L=155.93' CHD=N51°05'06"E 144.26'
㉓ R=435.00' D=28°34'17" L=216.92' CHD=N57°12'29"E 214.88'	㉓ N89°55'43"E 104.05'
㉔ R=340.00' D=83°49'16" L=497.40' CHD=N84°49'59"E 454.22'	㉔ R=108.00' D=93°26'19" L=176.13' CHD=N43°12'34"E 157.25'
㉕ S53°15'23"E 149.72'	㉕ R=920.00' D=20°50'38" L=334.68' CHD=N08°54'43"E 332.85'
㉖ R=92.00' D=105°58'00" L=170.15' CHD=N73°45'37"E 146.92'	㉖ R=235.00' D=120°26'34" L=494.00' CHD=N77°33'19"E 407.94'
㉗ R=530.00' D=24°03'30" L=222.55' CHD=N08°44'52"E 220.91'	㉗ S42°13'24"E 243.80' NTS
	㉘ R=610.00' D=04°09'00" L=44.18' CHD=S40°08'54"E 44.17'

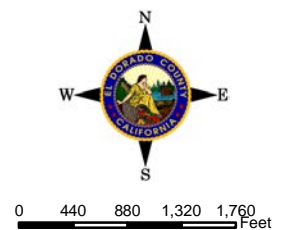


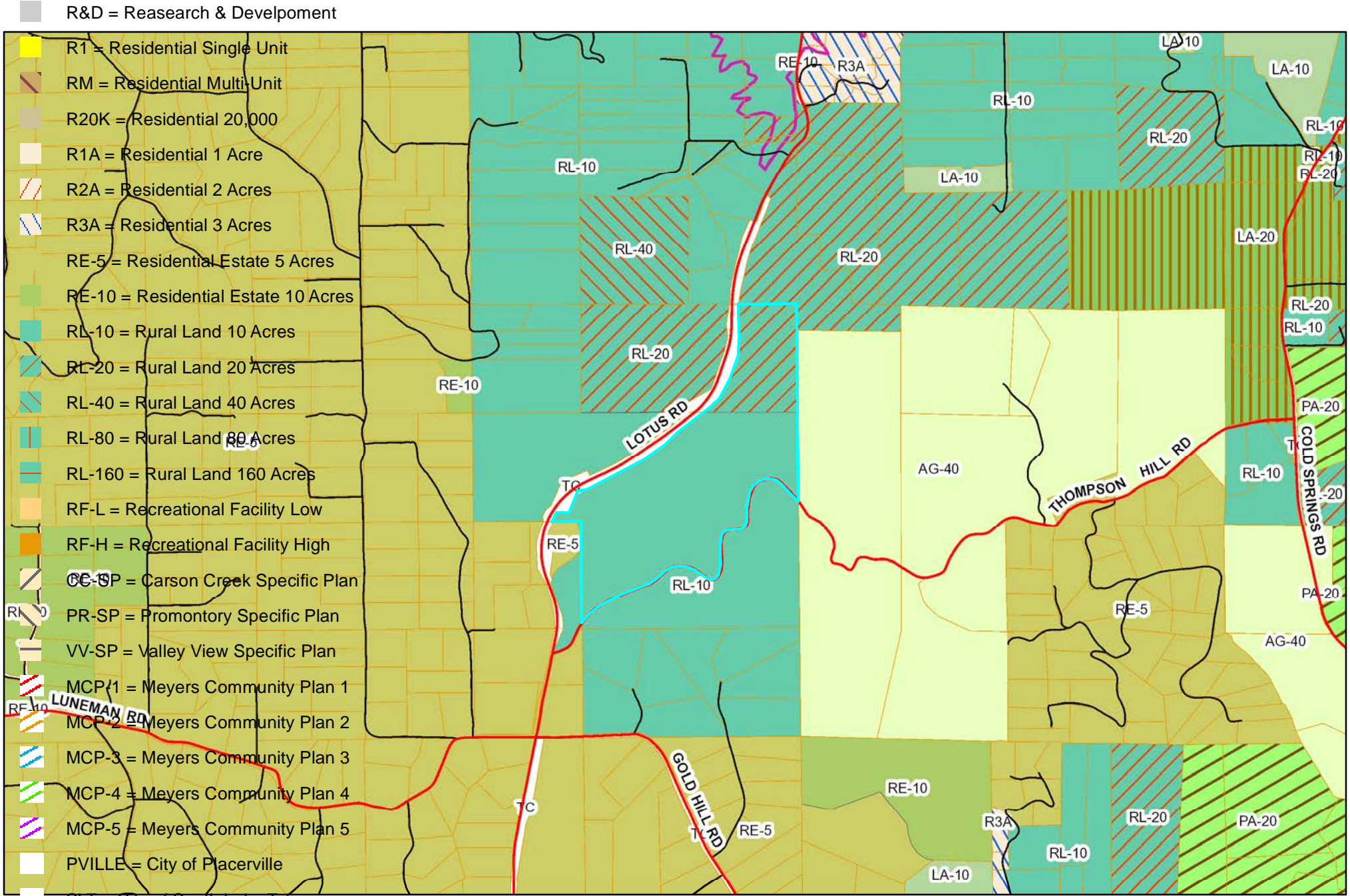
April 22, 2016

General Plan Map

- Rural Residential
- Tourist Recreational
- County Outline
- Rivers
- Lakes

mpl
MPL





April 22, 2016

Zoning Map

- TC = Transportation Corridor
- County Outline
- Rivers
- Lakes

mpl
MPL

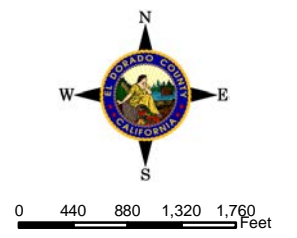
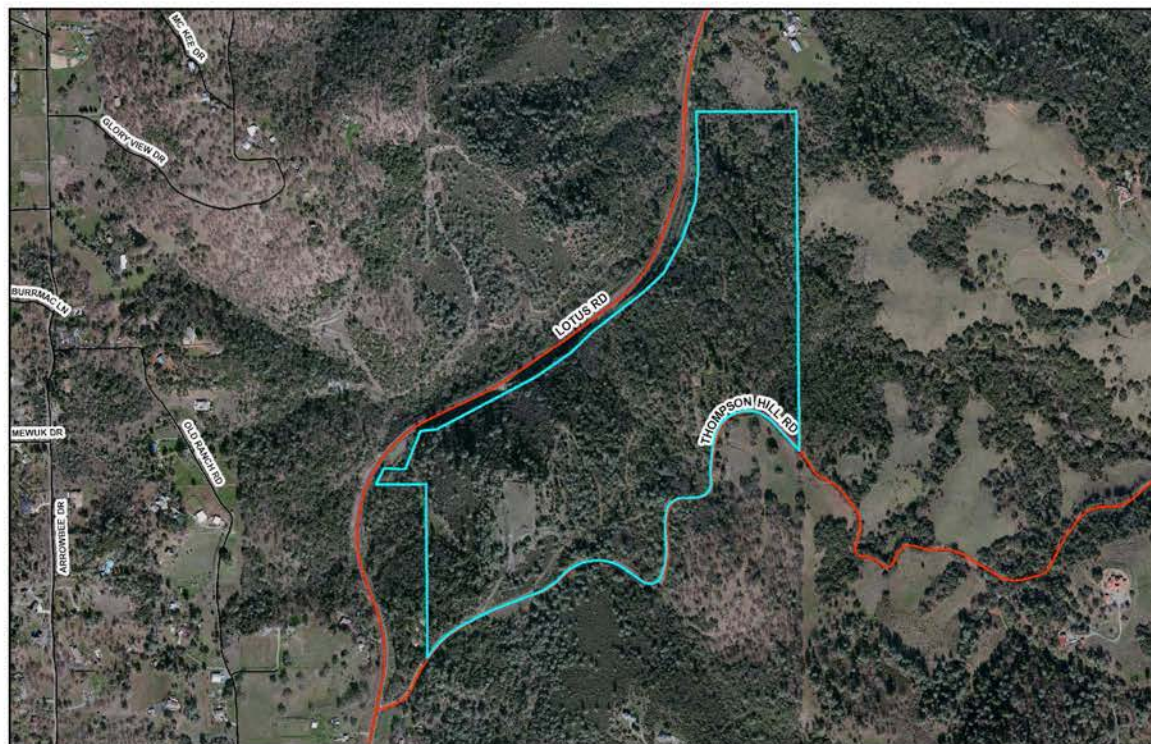


Figure 5. Aerial photograph of the project site, generated by El Dorado County Got Net.



April 26, 2016

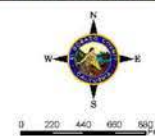
APN 105-190-41

Placenames — Highways
 County Names — Major Roads
 Highway Labels — Minor Roads

■ Cities
 □ County Outline
 — Rivers

■ Lakes
 ■ Red: Band_1
 ■ Green: Band_2

■ Blue: Band_3
 mpt
 MFL



III. Evaluation Methods

A. Field Surveys

The project site was searched for special-status species during field surveys conducted June 15, 23, 24, July 6, and August 3, 2015, and April 16 and 18, 2016 by Ruth Willson. Field searches were hindered by impenetrable chaparral cover and steep slopes over much of the parcel, so were limited to areas along existing roads, within swales and along drainages, and at least one transect midway between the top and bottom of ravines. Proposed building, septic and road sites were thoroughly searched. The locations of species of concern were mapped using a sub-meter GPS unit. Plants were identified in the field whenever possible. Samples of unknown plants were taken with identification achieved in the office through the use of Hickman (1993) and Jepson Flora Project (2013). Vegetation communities were identified in the field and mapped utilizing aerial photos.

B. Literature Search

The U.S. Fish and Wildlife Service (USFWS) Official Species List, updated April 22, 2016, and the USFWS IPaC Trust Resource Report, generated April 24, 2016, served as the main sources of data on federal-listed species and migratory birds that could be affected by the project. A report of known occurrences of special-status species in the Coloma and eight surrounding USGS Quads, updated February 28, 2016, was obtained from the California Natural Diversity Database (Appendix B). Other current lists reviewed include the California Department of Fish and Wildlife (DFW) publications *State and Federally Listed Endangered, Threatened and Rare Plants of California* and *Special Vascular Plants, Bryophytes and Lichens*, along with the California Native Plant Society (CNPS) list, *Inventory of Rare and Endangered Plants*, accessed April 22, 2016 (Appendix C).

C. Vegetation Community Classification

References on the classification of vegetation include Mayer & Laudenslayer (1988), Munz & Keck (1959) and Sawyer et al. (2009). Vegetation communities are referenced to those listed in the El Dorado County General Plan, adopted July 19, 2004 (El Dorado County, 2006).

IV. Regulatory Setting

A. Federal Regulations

1. Federal Endangered Species Act (ESA)

Section 9 of the ESA prohibits “take” of endangered or threatened species; take is defined “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect.” Section 10 of the ESA allows incidental take for listed species for otherwise lawful projects. Section 10 Permits can be obtained through the United States Fish and Wildlife Service.

2. Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act prohibits the take, possession, or trade of migratory birds or their parts. The Act specifically protects migratory bird nests from possession, sale, purchase, barter, transport, import and export, and take (16 U.S.C., Sec. 703, Supp. I, 1989). The definition of take is to pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to hunt, shoot, wound, kill, trap, capture, or collect (50 CFR 10.12). Exceptions from the MBTA prohibitions are prescribed by the Secretary of the Interior, and include non-native, invasive species such as European starling, English sparrow, rock dove, and Eurasian collared dove.

3. Raptors

Raptors and their nests are protected under both federal (MBTA) and state (Fish and Game Code Section 3503.5) regulations. Section 3503.5 states that it is “unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto.”

4. Wetlands and Waters

The U.S. Army Corps of Engineers (USACE) has jurisdiction over “Waters of the U.S.” (also called “jurisdictional waters”) under provisions of Section 404 of the Clean Water Act (1972). Such “jurisdictional waters” include waters used, or potentially used, for interstate commerce, interstate waters, lakes, rivers, streams, tributaries of streams, and wetlands adjacent to or tributary to the above. Irrigation and drainage ditches excavated on dry land, artificially-irrigated areas, man-made lakes or ponds used for irrigation or stock watering, small artificial water bodies such as swimming pools, and water-filled depressions are usually exempted from USACE jurisdiction (33 CFR, Part 328).

California Department of Fish and Wildlife (CDFW) has jurisdiction over alterations to the beds of rivers, streams, creeks, or lakes. The Fish and Game Code (Section 1602) requires an entity to notify CDFW of any proposed activity that may substantially modify a river, stream, or lake. Alterations include activities that would: substantially divert or obstruct the natural flow of any river, stream or lake; substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake; or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.

Disturbance of any potential jurisdictional features on this project could require one or more of the following permits:

- A Clean Water Act, Section 404 permit from the U.S. Army Corps of Engineers.
- A Water Quality Certification, Section 401, permit from the Regional Water Quality Control Board.
- A 1601-1603 Streambed Alteration Agreement from the California Department of Fish and Game.

B. California Regulations

1. California Environmental Quality Act

According to Section 21002 of CEQA, “It is the policy of the State that public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects. To clarify that statement, CEQA Guidelines, Section 15370, lists five mitigation concepts for listed species.

- a. Avoiding the impact altogether by not taking a certain action.
- b. Minimizing impacts by limiting the degree or magnitude of the action.
- c. Rectifying the impact by repairing, rehabilitating or restoring the impacted area.
- d. Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the project.
- e. Compensating for the impact by replacing or providing substitute resources or environments.

2. California Endangered Species Act (CESA)

Section 2052 of CESA states, “The Legislature . . . finds and declares that it is the policy of the state to conserve, protect, restore, and enhance any endangered species or any threatened species and its habitat.” Protection for such special-status species is codified in Section 2080 of the Fish and Game Code, which prohibits “take” of any endangered or threatened species. Take is defined in Section 86 of the Fish and Game Code as “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture or kill.”

CESA emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate mitigation planning to offset losses caused by the project, but allows for take incidental to otherwise lawful development projects. When take of a species cannot be avoided, an Incidental Take Permit, authorized under Title 14, Section 783.2, may be obtained through the CESA Section 2081(b) and (c) incidental take permit process.

3. California State Fish and Game Code

The State Fish and Game Code Section 3513 states that it is unlawful to take or possess any migratory non-game bird as designated in the Migratory Bird Treaty Act or any part of such migratory non-game bird, except as provided by the Secretary of the Interior under provisions of the Migratory Treaty Act.

C. El Dorado County Regulations

1. El Dorado County Important Habitat Mitigation Program

Mitigation guidelines provided by El Dorado County include, but are not limited to, the following:

- a. Avoidance;
- b. Open space/conservation easements;
- c. Redesign;
- d. Clustering;
- e. Vegetated buffers;
- f. Retaining animal dispersal corridors;
- g. Planning construction activity to avoid critical time periods (nesting, breeding) for wildlife species;
- h. Careful siting to place new disturbances at previously disturbed locations;
- i. Restoration or enhancement of woodland habitat;
- j. Best Management Practices for reducing impacts from grading/development in environmentally sensitive areas;
- k. Additional oak tree canopy retention and oak woodland habitat preservation or replacement on-site and/or off-site;
- l. Retaining contiguous stands of oak woodland habitats by retaining corridors between stands.

2. El Dorado County Ordinance 17.71

Mitigation for projects in Rare Plant Mitigation Areas 1 and 2 are outlined Ordinance 17.71, with a strong emphasis on use of an Ecological Preserve Fee or participation in the Off-site Mitigation Program as the preferred mitigation options. Use of the Ecological Preserve Fee as mitigation can no longer be done, due to the ruling of the California Appellate Court in *California Native Plant Society v. El Dorado County* [170 Cal. App.4th 1026 (2009)], and El Dorado County does not currently have an Off-site Mitigation Program. The only remaining mitigation option, On-site Mitigation, is outlined in Section 17.71.020:

1. Development within Mitigation Area 0 will continue to address mitigation for impacts to rare plants on an individual basis. Within Mitigation Area 0, on-site mitigation is strongly encouraged. Developments within Mitigation Area 0 shall mitigate impacts by exercising one of the following three (3) options:
 - a. Set aside a part of the property and dedicate a perpetual conservation easement for habitat protection; or
 - b. Cluster development in the least environmentally sensitive portion of the property according to the implementation strategy adopted by the County in March 1993 and receive in appropriate cases a density bonus in return for dedication of a perpetual conservation easement over the remainder of the property; or
 - c. Provide an independent mitigation plan that meets CEQA requirements, such as the purpose of long-term protection of an amount of habitat in the same ecological preserve and as close to the development site as feasible, equal to at least 1.5 times the acreage developed.
2. Option 1.b. of this Section shall apply only to properties greater than five (5) acres in area.

3. El Dorado County General Plan Policy 7.4.2.9, Important Biological Corridor

The project site is within an Important Biological Corridor, as defined in El Dorado County General Plan Policy 7.4.2.9. Guidelines in Policy 7.4.2.9 state, “Lands located within the overlay district shall be subject to the following provisions:

- a. Increased minimum parcel size;
- b. Higher canopy-retention standards and/or different mitigation standards/thresholds for oak woodlands;
- c. Lower thresholds for grading permits;
- d. Higher wetlands/riparian retention standards and/or more stringent mitigation requirements for wetland/riparian habitat loss;
- e. Increased riparian corridor and wetland setbacks;
- f. Greater protection for rare plants (e.g., no disturbance at all or disturbance only as recommended by U.S. Fish and Wildlife Service/California Department of Fish and Game);
- g. Standards for retention of contiguous areas/large expanses of other (non-oak or non-sensitive) plant communities;
- h. Building permits discretionary or some other type of “site review” to ensure that canopy is retained;
- i. More stringent standards for lot coverage, floor area ratio and building height;
- j. No hindrances to wildlife movement (e.g., no fences that would restrict wildlife movement).”

V. Topographic Features

A. Topography

The project site lies between 880 and 1400 feet (268 and 427 meters) elevation. The topography consists of two main ridges separated by an unnamed intermittent creek, lying between Granite Canyon Creek and Granite Creek, which are both perennial streams (Figure 2). Each ridge is also drained by several ephemeral creeks.

Parcel 1 encompasses the westernmost slope of the ridge lying between Granite Canyon Creek and the intermittent creek. The area near Thompson Hill Road has an approximate slope of 7%, but slopes on the rest of the parcel vary from 35% to 44%. Parcel 2 encompasses most of the westernmost ridge and the northwestern slope of the easternmost ridge, including the intermittent creek between them. The top of the western ridge is nearly flat, apparently due to extensive grading and/or filling. Slopes on the north side of the ridge vary from 50 to 54 percent; those on the east side, from 24 to 34 percent; and those on the west slope of the eastern ridge, from 27 to 47 percent (Figure 2). Parcel 3 encompasses the north slope of the eastern ridge. The gradient on Parcel 3 varies from about 10 percent on the ridge top to 26 percent on its northern slope. Parcel 4 encompasses the east slope of the easternmost ridge, Granite Creek and the hillside east of the creek. The ridgetop on Parcel 4 consists of an 10 percent gradient, and slopes on the remainder of the parcel vary from 32 to 37 percent.

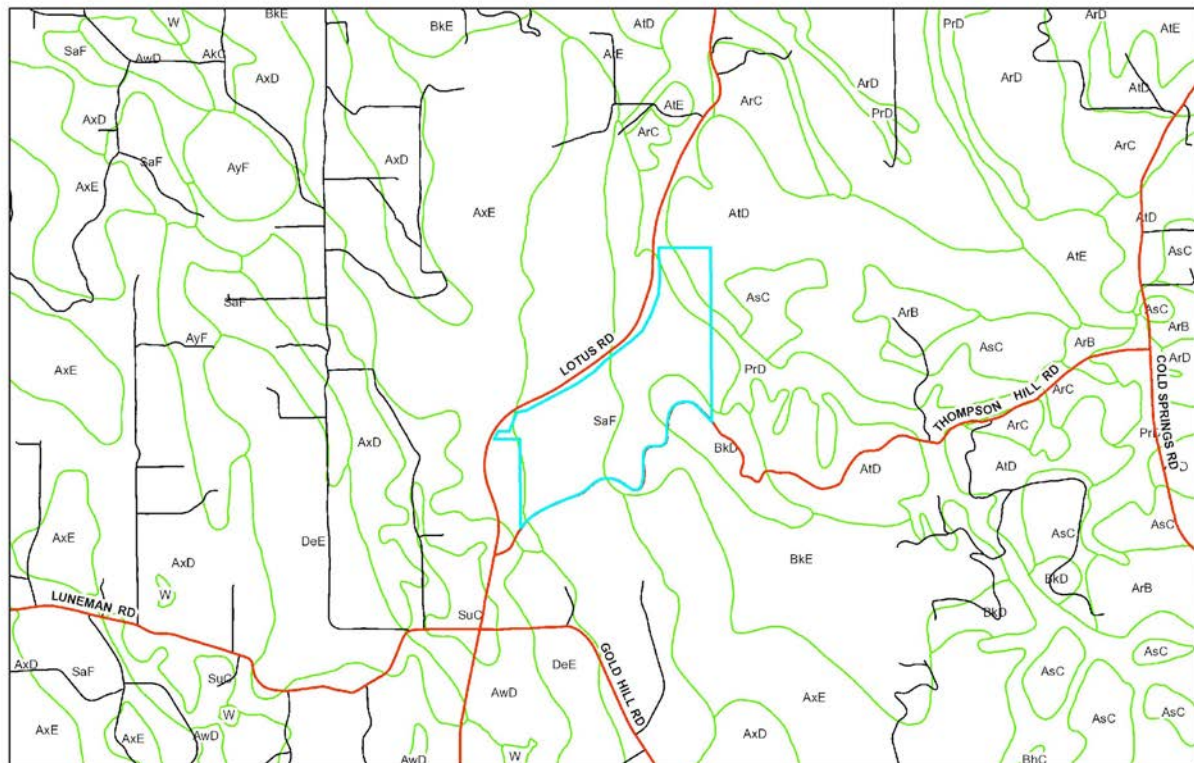
The creekbed of the intermittent creek follows a 43 percent gradient through Parcel 2, that of Granite Creek, 23 percent through Parcel 4, and Granite Canyon Creek, approximately 7 percent through Parcel 1.

B. Soils

Soils on the project site (Figure 6) include (from southwest to northeast) Auburn very rocky silt loam (AxE), Serpentine rock land (SaF), Boomer very rocky loam (BkD and BkE), Placer diggings (PrD), and Auberry very rocky coarse sandy loam (AtD). Auburn soils are derived from basic igneous or metamorphic rock; Serpentine soils from ultrabasic, metamorphic rock; Boomer soils from schist; and Auberry from granite. Soils classified as Placer diggings consist of stony, cobbly and gravelly materials, commonly in beds of creeks that have been placer mined, and are derived from a mixture of soil types found on-site. (USDA 1974).

As seen on Figure 6, Serpentine soils are the predominant type found on Parcels 1 and 2, with some Auburn soils along the western border of Parcel 1 and Boomer soils on the eastern third of Parcel 2. The soils on Parcel 3 are in the Boomer series, including both Boomer very rocky loam, 3 to 30 percent slopes (BkD) and Boomer very rocky loam, 30 to 50 percent slopes (BkE), except a small amount of Serpentine soils along its western boundary. Parcel 4 has Boomer soils toward the west, Placer diggings along Granite Creek, and Auberry soils near its northeast corner.

Figure 6. Soils map, generated by El Dorado County Got Net.



April 22, 2016

Soils Map

Placenames — Highways
 County Names — Major Roads
 Highway Labels — Minor Roads

■ Cities ■ Lakes
 □ County Outline ■ Soils
 — Rivers

MP
 MPL



AxE = Auburn very rocky silt loam
 SaF = Serpentine rock land
 BkD = Boomer very rocky loam, 3 to 30 percent slopes
 BkE = Boomer very rocky loam, 30 to 50 percent slopes
 PrD = Placer diggings
 AtD = Auberry very rocky coarse sandy loam

VI. Biological Resources

A. Vegetation Communities

1. Mixed Serpentine Chaparral

Mixed serpentine chaparral vegetation is the dominant vegetation community on Serpentine soils, found on Parcels 1 and 2 (Figure 7) and covering over 28 acres (measured on an aerial photo within a CAD program). A mixture of shrub species was found, including leather oak (*Quercus durata*), chamise (*Adenostoma fasciculatum*), whiteleaf manzanita (*Arctostaphylos viscida*), hop tree (*Ptelea crenulata*), poison-oak (*Toxicodendron diversiloba*), deer brush (*Ceanothus integerrimus*), toyon (*Heteromeles arbutifolia*) and buck brush (*Ceanothus cuneatus*). This vegetation community has been described as the *Quercus durata* Association (Leather Oak Association) (Klein et.al, 2007). Scattered trees, including interior live oak (*Quercus wislizeni*), California bay (*Umbellularia californica*), and foothill pine (*Pinus sabiniana*) were found throughout the chaparral. The ground layer within the chaparral is dominated by annual grasses, including bromes (*Bromus* sp.), dogtail (*Cynosurus echinatus*), California melic (*Melica imperfecta*), canary grass (*Phalaris minor*), medusa grass (*Elymus caput-medusae*), and barbed goatgrass (*Aegilops triuncialis*). Forbs found in the chaparral include sanicle (*Sanicula* sp.), klamathweed (*Hypericum perforatum*), coyote mint (*Monardella villosa*), and thin-stemmed navarretia (*Navarretia filicaulis*).

2. Oak Woodland

Oak woodland covers the non-serpentine soils on-site, about 78 acres, found on the eastern portion of Parcel 2, and on Parcels 3 and 4. The most common oak species is interior live oak (*Q. wislizeni*), comprising over 58 percent of the oak canopy. Black oaks (*Q. kelloggii*) comprise about 21.4 percent of the oak canopy, and the remainder of the oak canopy (19.9 percent) consists of blue oaks (*Q. douglasiana*) (Table 2). The oak woodland includes both gray and ponderosa pines (*Pinus sabiniana* and *P. ponderosa*), with the former on dry slopes and the latter on relatively flat highlands. California bay and California buckeye (*Aesculus californica*) are found on slopes of ravines.

Nearly all the oak woodland on the project site has a dense, impenetrable shrub layer, including such species as western poison-oak, toyon, chamise, coyote brush (*Baccharis pilularis*), whiteleaf manzanita, and chaparral clematis (*Clematis lasiantha*). The only open oak woodland on-site is located on Auberry soils east of Granite Creek, along the northern boundary of Parcel 4; that area is dominated by blue oaks (*Quercus douglasiana*), and lacks a significant shrub layer.

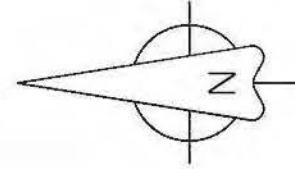
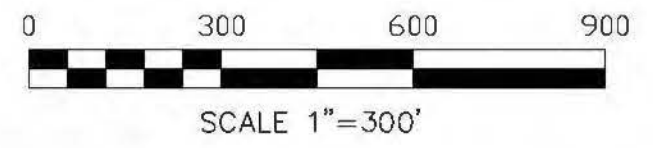
Common ground-layer plants in the oak woodland include sanicle, wild carrot (*Daucus carata*), yarrow (*Achillea millefolium*), yellow star-thistle (*Centaurea solstitialis*), wooly sunflower (*Eriophyllum lanatum*), cat's-ear (*Hypochaeris* sp.), rose clover (*Trifolium hirtum*) Ithuriel's spear (*Triteleia laxa*), bedstraw (*Galium* sp.) and various grasses, as listed in Section A, above.

Table 2. Tree species counted along random transects through on-site oak woodlands.

	Blue Oak	Black Oak	Interior Live Oak	Bay Laurel	Buckeye	Foothill Pine	Ponderosa Pine	Total Oaks	Total Trees
Total Trees Counted	66	71	195	8	37	79	48	332	504
Percentage of Sampled Canopy	13.1	14.1	38.7	1.6	7.3	15.7	9.5	65.9	100
Percentage of Oak Canopy	19.9	21.4	58.7						

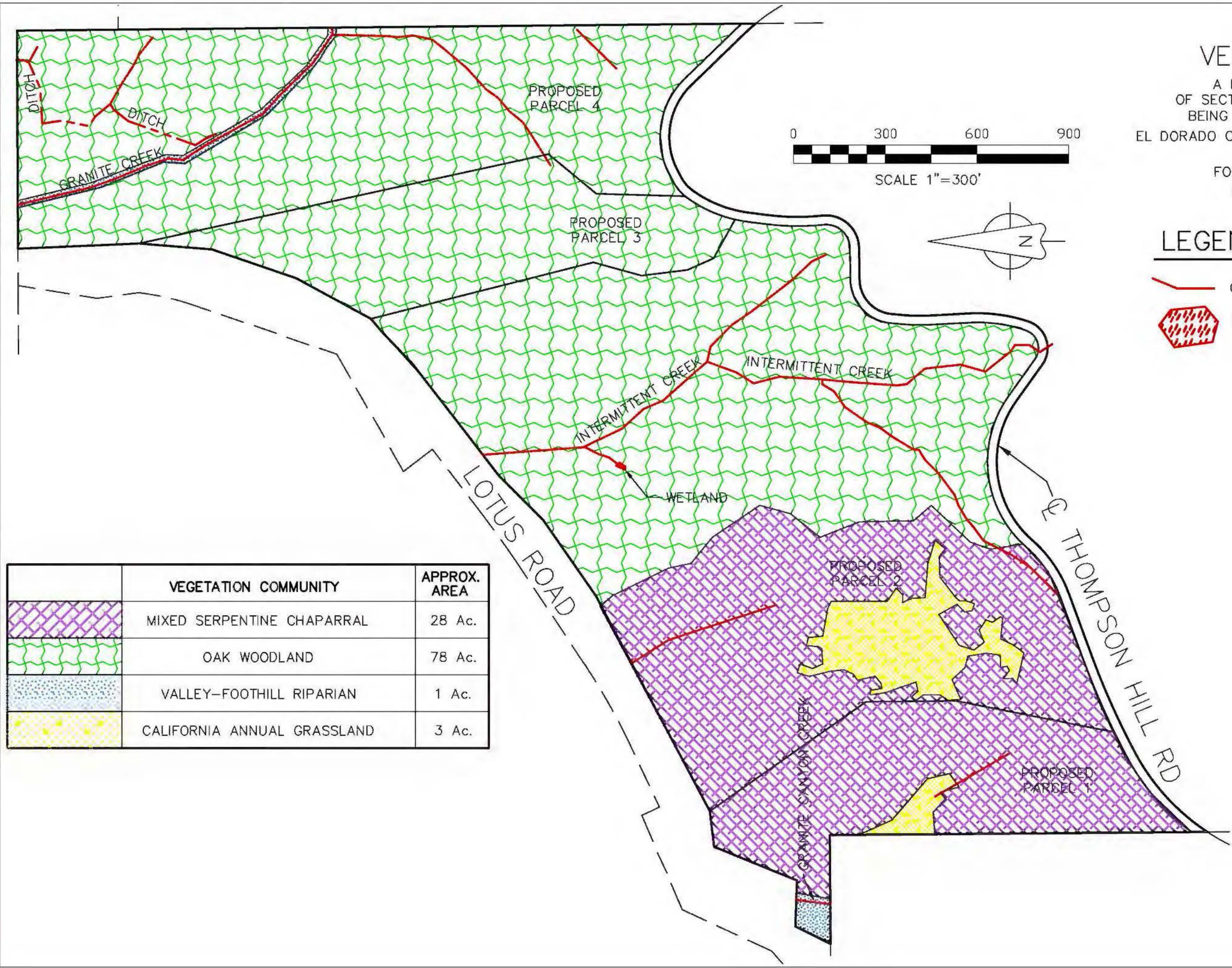
FIGURE 7 VEGETATION MAP

A PORTION OF SECTION 25
OF SECTION 25, T.11N., R.9E., M.D.M.
BEING PARCEL A OF PM 51/083
EL DORADO COUNTY STATE OF CALIFORNIA
APRIL 2016
FOR: TOM VAN NORD
APN:105-190-41



LEGEND

-  CHANNEL
-  WETLANDS



	VEGETATION COMMUNITY	APPROX. AREA
	MIXED SERPENTINE CHAPARRAL	28 Ac.
	OAK WOODLAND	78 Ac.
	VALLEY-FOOTHILL RIPARIAN	1 Ac.
	CALIFORNIA ANNUAL GRASSLAND	3 Ac.

3. Valley-Foothill Riparian

Although its gradient is too steep in places for establishment of riparian vegetation, plants associated with riparian corridors are found alongside pools within both Granite Canyon and Granite Creek. California wild grape (*Vitis californica*) and Himalayan blackberry (*Rubus armeniacus*) choke the streambed where the creek enters the property along its east boundary (photo below). Other plants found along the creek bank include red willow (*Salix laevigata*), California bay, white alder (*Alnus rhombifolia*) and Oregon ash (*Fraxinus latifolia*). Valley-foothill riparian vegetation covers about one acre of the project site.



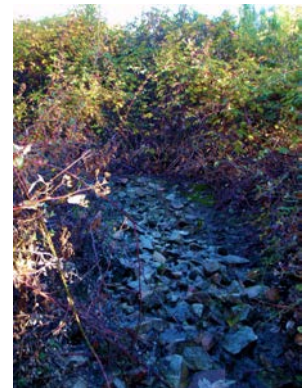
Granite Creek

4. California Annual Grassland

California annual grassland, covering about three acres of the project site, is found on Parcel 1 along the west boundary where a ravine enters an old roadbed, and on Parcel 2 on the ridgetop (photo below). Vegetation is a mixture of grasses and forbs, including barbed goatgrass, dogtail, medusa grass, bromes, fescues (*Festuca* sp.), flax (*Linum bienne*), rose clover, cat's-ear and yellow star-thistle (*Centaurea solstitialis*).

B. Wetlands and Waters

One wetland, resulting from a spring at the base of a road cutbank and covering 298 ft² of the roadbed, was found on Parcel 2 (photo at right). Water from the wetland drains over a steep embankment after crossing the road, eventually spilling into an intermittent creek on Parcel 2 (Figure 8).



Spring with Wetland

Granite Creek and Granite Canyon Creek are both perennial streams found on the project site. Granite Creek enters the site on the east side of Parcel 4 and carries water northeasterly about 1236 ft. to the north boundary of Parcel 4. After crossing a neighboring parcel and beneath Lotus Road, Granite Creek joins Granite Canyon Creek about 500 feet north of the project site. Although it was not flowing during field surveys in 2015, it contained water in many pools, and supported a population of fish and crayfish (species not determined). The creek was flowing during surveys conducted in 2016.

Granite Canyon Creek, into which all waters from the project site eventually flow, carries water 112 feet across a finger of the project site that extends from the west boundary of Parcel 1 to Lotus Road. After crossing beneath Lotus Road, it continues northerly on the north side of Lotus Road about a mile, then joins the South Fork American River, a traditional navigable water, northwest of Lotus.

Other waters found on the project site consist of ephemeral ravines that drain rainwater from the project site to either Granite Canyon Creek or Granite Creek. All waters on the project site eventually join the South Fork American River northwest of Lotus.



Mixed Serpentine Chaparral



Oak Woodland



Valley-Foothill Riparian







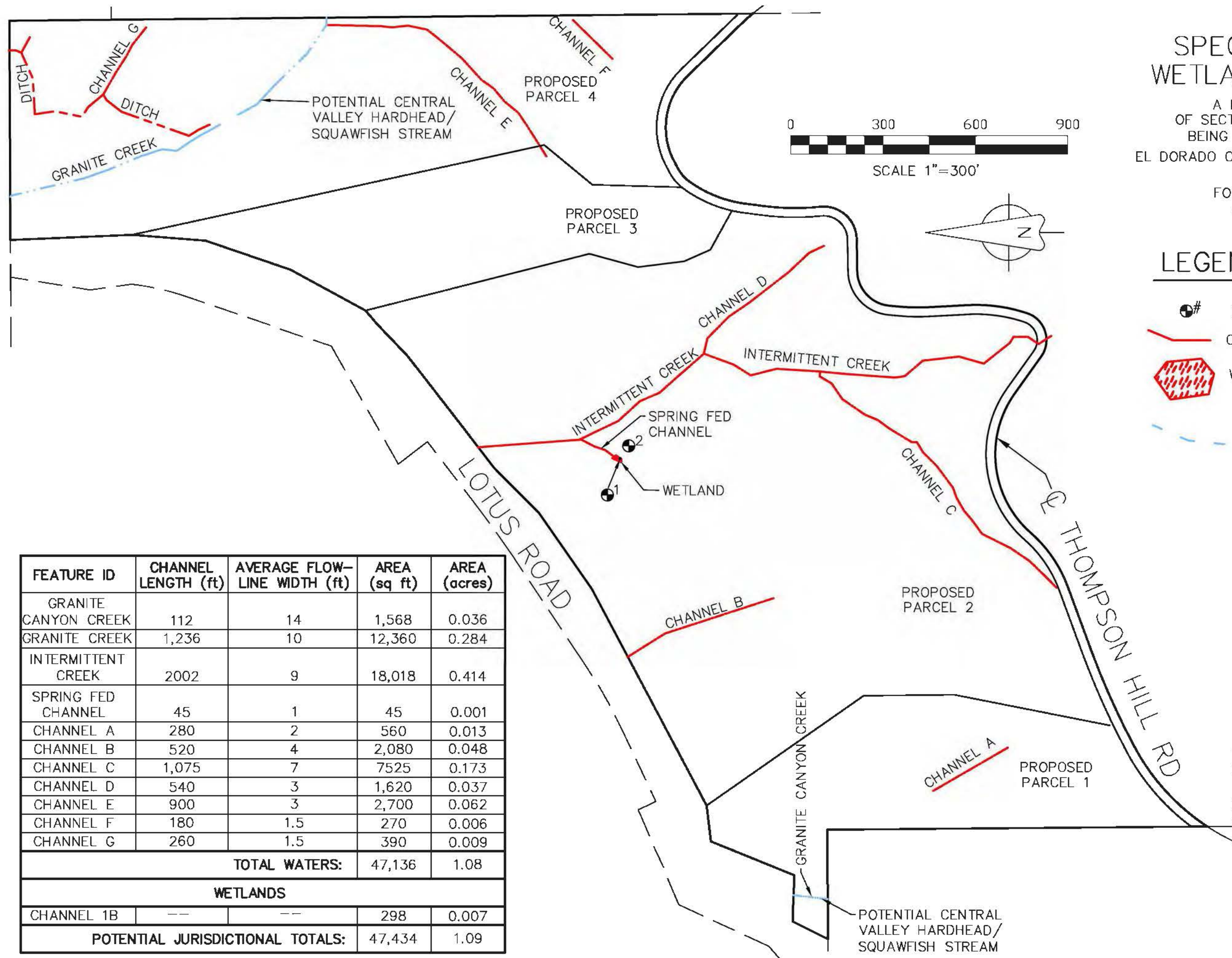
California Annual Grassland

FIGURE 8 SPECIAL HABITATS WETLANDS & WATERS

A PORTION OF SECTION 25
OF SECTION 25, T.11N., R.9E., M.D.M.
BEING PARCEL A OF PM 51/083
EL DORADO COUNTY STATE OF CALIFORNIA
APRIL 2016
FOR: TOM VAN NORD
APN: 105-190-41

LEGEND

-  DATA POINT
-  CHANNEL
-  WETLANDS
-  POTENTIAL CENTRAL VALLEY HARDHEAD/SQUAWFISH STREAM



FEATURE ID	CHANNEL LENGTH (ft)	AVERAGE FLOW-LINE WIDTH (ft)	AREA (sq ft)	AREA (acres)
GRANITE CANYON CREEK	112	14	1,568	0.036
GRANITE CREEK	1,236	10	12,360	0.284
INTERMITTENT CREEK	2002	9	18,018	0.414
SPRING FED CHANNEL	45	1	45	0.001
CHANNEL A	280	2	560	0.013
CHANNEL B	520	4	2,080	0.048
CHANNEL C	1,075	7	7,525	0.173
CHANNEL D	540	3	1,620	0.037
CHANNEL E	900	3	2,700	0.062
CHANNEL F	180	1.5	270	0.006
CHANNEL G	260	1.5	390	0.009
TOTAL WATERS:			47,136	1.08
WETLANDS				
CHANNEL 1B	--	--	298	0.007
POTENTIAL JURISDICTIONAL TOTALS:			47,434	1.09

C. Wildlife

Two reptile species were observed on the project site: California alligator lizard (*Elgaria coerulea*) and Western fence lizard (*Sceloporus occidentalis*). The site has suitable habitat for additional reptiles not observed during field surveys, including, but not limited to, Common king snake (*Lampropeltis getula*), Gopher snake (*Pituophis catenifer*), Ringneck snake (*Diadophis punctatus*), Sharp-tail snake (*Contia tenuis*), Racer (*Coluber constrictor*), Terrestrial gartersnake (*Thamnophis elegans*) and Western rattlesnake (*Crotalus viridis*).

No amphibians were observed, but the site has suitable habitat for Pacific tree frog (*Pseudacris egilla*), California slender salamander (*Batrachoseps attenuatus*), and California newt (*Taricha torosa*).

Evidence of mammals found on the project site include Coyote (*Canis latrans*), Black-tailed deer (*Odocoileus hemionus*), Gray fox (*Urocyon cinereoargenteus*), Striped skunk (*Mephitis mephitis*), Western gray squirrel (*Sciurus griseus*), Big-eared woodrat (*Neotoma macrotis*), Cottontail rabbit (*Sylvilagus bachmani*), Black bear (*Ursus americanus*) and Mountain lion (*Panthera concolor*). Not observed, but having suitable habitat on-site, are the following mammals: California ground squirrel (*Spermophilus beecheyi*), North American deer mouse (*Peromyscus mephitis*), California vole (*Microtus californicus*), Broad-footed mole (*Scapanus latimanus*), Raccoon (*Procyon lotor*), Ringtail (*Bassariscus astutus*), Virginia opossum (*Didelphis virginiana*), Long-tailed weasel (*Mustela frenata*), Dusky-footed woodrat (*Neotoma fuscipes*), California ground squirrel (*Spermophilus beecheyi*) and Western gray squirrel (*Sciurus griseus*).

Several bird species were found on or near the project site, including Scrub jay (*Apelocoma coerulescens*), Stellar's jay (*Cyanocitta stelleri*), Spotted towhee (*Pipilio maculatus*), California towhee (*Pipilo crissalis*), Turkey vulture (*Cathartes aura*), California quail (*Callipepla californica*), Mourning dove (*Zenaidura macroura*), Band-tailed pigeon (*Patagioenas fasciata*), American robin (*Turdus migratorius*), Anna's hummingbird (*Calypte anna*), Pacific-slope flycatcher (*Empidonax difficilis*), Oak titmouse (*Baeolophus inornatus*), Northern mockingbird (*Mimus polyglottos*), House finch (*Carpodacus mexicanus*), Lesser goldfinch (*Spinus psaltria*), Bewick's wren (*Thrymanes bewickii*), Acorn woodpecker (*Melanerpes formicivorus*), Black phoebe (*Sayornis nigricans*), Ash-throated flycatcher (*Contopus cooperi*), Kinglet (*Regulus* sp.), Warbling vireo (*Vireo gilvus*), Orange-crowned warbler (*Vermivora celata*), Yellow-rumped warbler (*Dendroica coronata*), Bullock's oriole (*Icterus bullockii*), Tree swallow (*Tachycineta bicolor*), Bushtit (*Psaltiriparus minimus*) and Long-eared owl (*Asio otus*).

The site has suitable habitat for several bird species not observed during field surveys, including, but not limited to, the following: Dark-eyed junco (*Junco hyemalis*), Golden-crowned and White-crowned sparrow (*Zonotrichia atricapilla* and *Z. leucophrys*), Yellow warbler (*Dendroica petechia*), California thrasher (*Toxostoma redivivum*), Rufous-crowned sparrow (*Aimophila ruficeps*), Blue-gray gnatcatcher (*Poliophtila caerulea*), Black-throated gray warbler (*Dendroica nigrescens*), Great horned owl (*Bubo virginianus*), Hutton's vireo (*Vireo huttoni*), White-breasted nuthatch (*Sitta carolinensis*), Rock wren (*Salpinctes obsoletus*), Canyon wren (*Catherpes mexicanus*) and House wren (*Troglodytes aedon*).

D. Special-Status Species

1. Special-Status Species Without Habitat on the Project Site

An evaluation of special-status species which may be found in the Coloma and surrounding USGS Quads is shown in Appendix D. Species lacking suitable habitat on the project site are not discussed further in this report.

2. Special-Status Species with Habitat on the Project Site

The property was searched for special-status species during field surveys conducted June 15, 23, 24, July 6 and August 3, 2015, and April 16 and 18, 2016. Potential habitat was found for two state- and federal-listed species: Stebbins's morning-glory (*Calystegia stebbinsii*) and Layne's butterwort (*Packera layneae*). Three species of concern were found on-site: Brandegee's clarkia (*Clarkia biloba* ssp. *brandegeeae*), Cooper's hawk (*Accipiter cooperii*), and Oak titmouse (*Baeolophus inornatus*). In addition, potential habitat for forty-nine additional species of concern was found (Table 3). The suitability of the site to support each species is evaluated in Subsection 3, below.

Figure 9. California Natural Diversity Database BIOS map of known occurrences of special-status species near the project site.

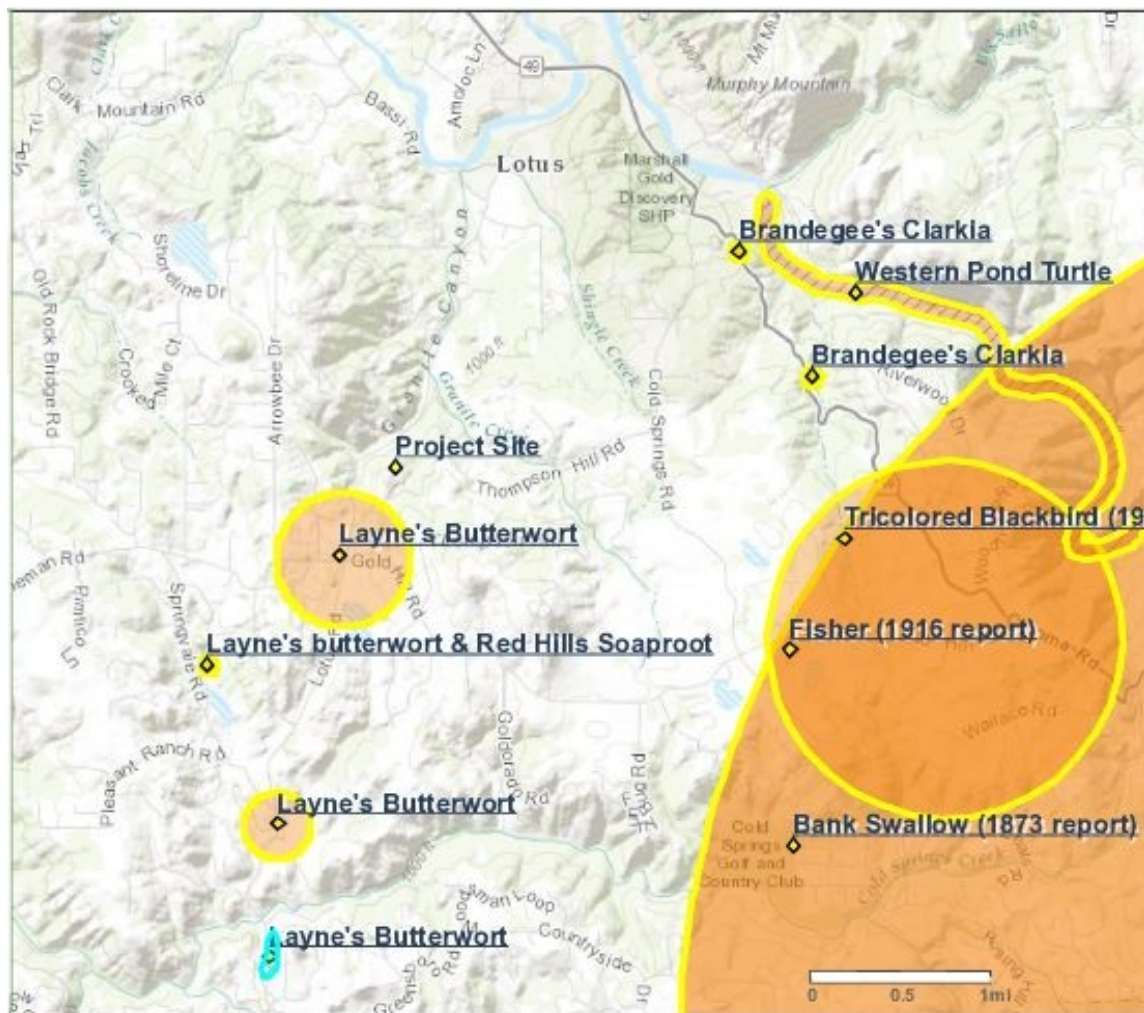


Table 3. Special-status species with potential habitat on the project site.

	Common Name	Legal Status ¹ Federal/ State (Other)	Habitat Quality	Species Found On Site?
State- or Federal-Listed Species				
<i>Calystegia stebbinsii</i>	Stebbins's morning-glory	E / E	Marginal	No
<i>Packera layneae</i>	Layne's butterwort	T / R	Suitable	No
Invertebrate Species of Concern				
<i>Bombus occidentalis</i>	Western bumble bee	— / —		
<i>Cosumnoperla hypocrena</i>	Cosumnes spring stonefly	— / —	Suitable	No
<i>Hydrochara rickseckeri</i>	Ricksecker's water scavenger beetle	— / —	Marginal	No
Amphibian Species of Concern				
<i>Rana boylei</i>	Foothill yellow-legged frog	— / — (SSC)	Suitable	No
Reptile Species of Concern				
<i>Emys marmorata</i>	Western pond turtle	— / — (SSC)	Marginal	No
<i>Phrynosoma blainvillii</i>	Blainville's horned lizard	— / — (SSC)	Suitable	No
Bird Species of Concern				
<i>Accipiter cooperii</i> (nesting)	Cooper's hawk	— / — (IUCN: LC)	Suitable	Yes
<i>Accipiter striatus</i> (nesting)	Sharp-shinned hawk	— / — (SSC)	Marginal	No
<i>Aimophila ruficeps</i>	Rufous-crowned sparrow	— / — (IUCN: LC)	Suitable	No
<i>Ammodramus savannarum</i> (nesting)	Grasshopper sparrow	— / — (SSC)	Suitable	No
<i>Aquila chrysaetos</i> (nesting)	Golden eagle	— / — (FP)	Marginal	No
<i>Baeolophus inornatus</i> (nesting)	Oak titmouse	— / — (BCC)	Suitable	Yes
<i>Carduelis lawrencei</i> (nesting)	Lawrence's goldfinch	— / — (BCC)	Suitable	No
<i>Cinclus mexicanus</i>	American dipper	— / — (IUCN: LC)	Marginal	No
<i>Falco columbarius</i> (wintering)	Merlin	— / — (IUCN: LC)	Marginal	No
<i>Falco peregrinus anatum</i> (nesting)	American peregrine falcon	— / — (FP)	Suitable	No
<i>Passerella iliaca</i> (nesting)	Fox sparrow	— / — (BCC)	Suitable	No
continued on next page				

¹: E = Endangered; R = Rare; T = Threatened; 2: SSC=Ca. Dept. Fish & Wildlife Species of Special Concern

Special-status Species	Common Name	Legal Status ² Federal/ State (Other)	Habitat Quality	Species Found On Site?
Bird Species of Concern (continued)				
<i>Picoides nuttallii</i> (nesting)	Nuttall's woodpecker	— / — (BCC)	Suitable	No
<i>Progne subis</i> (nesting)	Purple martin	— / — (SSC)	Marginal	No
<i>Setophaga petechia</i> (nesting)	Yellow warbler	— / — (SSC)	Suitable	No
<i>Spizella atrogularis</i> (nesting)	Black-chinned sparrow	— / — (BCC)	Suitable	No
<i>Spizella breweri</i> (nesting)	Brewer's sparrow	— / — (BCC)	Marginal	No
Mammal Species of Concern				
<i>Bassariscus astutus</i>	Ringtail	— / — (FP)	Suitable	No
<i>Lasionycteris noctivagans</i>	Silver-haired bat	— / — (IUCN: LC)	Suitable	No
<i>Myotis yumanensis</i>	Yuma myotis bat	— / — (IUCN: LC)	Suitable	No
continued on next page				
Plant Species of Concern				
<i>Allium jepsonii</i>	Jepson's onion	— / — (CNPS:1B.2)	Suitable	No
<i>Allium sanbornii</i> var. <i>congdonii</i>	Congdon's onion	— / — (CNPS:4.3)	Suitable	No
<i>Allium sanbornii</i> var. <i>sanbornii</i>	Sanborn's onion	— / — (CNPS:4.2)	Suitable	No
<i>Arctostaphylos mewukka</i> ssp. <i>truei</i>	True's manzanita	— / — (CNPS:4.2)	Marginal	No
<i>Arctostaphylos nissenana</i>	Nissenan manzanita	— / — (CNPS:1B.2)	Marginal	No
<i>Balsamorhiza macrolepis</i> var. <i>macrolepis</i>	Big-scale balsamroot	— / — (CNPS:1B.2)	Suitable	No
<i>Calystegia vanzuukiae</i>	Van Zuuk's morning-glory	— / — (CNPS:1B.3)	Marginal	No
<i>Chlorogalum grandiflorum</i>	Red Hills soaproot	— / — (CNPS:1B.2)	Suitable	No
<i>Clarkia biloba</i> ssp. <i>brandegeae</i>	Brandegee's clarkia	— / — (CNPS:4.2)	Suitable	Yes
continued on next page				

² CNPS= California Native Plant Society; CNPS:1B= CNPS list of rare, threatened or endangered plants in California and elsewhere; CNPS:2= CNPS list of rare, threatened or endangered plants in California, but more common elsewhere; CNPS:3 = CNPS list of plants with problematic taxonomy; CNPS:4= CNPS watch list of plants with limited distribution; CNPS Threat Ranks: 0.1= Seriously threatened in California (over 80% of occurrences threatened); 0.2= Moderately threatened in California(20-80% of occurrences threatened); 0.3= Not very threatened in California (<20% of occurrences threatened)

Special-status Species	Common Name	Legal Status ³ Federal/ State (Other)	Habitat Quality	Species Found On Site?
Plant Species of Concern (continued)				
<i>Clarkia virgata</i>	Sierra clarkia	— / — (CNPS:4.3)	Marginal	No
<i>Claytonia parviflora</i> ssp. <i>grandiflora</i>	Streambank spring beauty	— / — (CNPS:4.2)	Suitable	No
<i>Erigeron petrophilus</i> var. <i>sierrensis</i>	Northern Sierra daisy	— / — (CNPS:4.3)	Suitable	No
<i>Eriogonum tripodum</i>	Tripod buckwheat	— / — (CNPS:4.2)	Suitable	No
<i>Fritillaria eastwoodiae</i>	Butte County fritillary	— / — (CNPS:3.2)	Suitable	No
<i>Githopsis pulchella</i> ssp. <i>serpentinicola</i>	Serpentine bluecup	— / — (CNPS:4.3)	Suitable	No
<i>Jepsonia heterandra</i>	Foothill jepsonia	— / — (CNPS:3.3)	Suitable	No
<i>Lathyrus sulphureus</i> var. <i>argillaceus</i>	Dubious pea	— / — (CNPS: 3)	Suitable	No
<i>Lilium humboldtii</i> ssp. <i>humboldtii</i>	Humboldt's lily	— / — (CNPS:4.2)	Suitable	No
<i>Mimulus glaucescens</i>	Shield-bracted monkeyflower	— / — (CNPS:4.3)	Suitable	No
<i>Myrica hartwegii</i>	Sierra sweet bay	— / — (CNPS:4.3)	Suitable	No
<i>Navarretia eriocephala</i>	Hoary navarretia	— / — (CNPS:4.3)	Marginal	No
<i>Navarretia subuligera</i>	Awl-leaved navarretia	— / — (CNPS:4.3)	Marginal	No
<i>Perideridia bacigalupii</i>	Bacigalupi's yampah	— / — (CNPS:4.2)	Suitable	No
<i>Piperia leptopetala</i>	Narrow-petaled rein orchid	— / — (CNPS:4.3)	Suitable	No
<i>Poa sierrae</i>	Sierra blue grass	— / — (CNPS:1B.3)	Suitable	No
<i>Rhynchospora capitellata</i>	Brownish beaked-rush	— / — (CNPS:2B.2)	Suitable	No
<i>Viburnum ellipticum</i>	Oval-leaved viburnum	— / — (CNPS:2.3)	Suitable	No
Special Habitats				
Central Valley Drainage Hardhead/Squawfish Stream		— / —	Marginal	Potentially

³ CNPS= California Native Plant Society; CNPS:1B= CNPS list of rare, threatened or endangered plants in California and elsewhere; CNPS:2= CNPS list of rare, threatened or endangered plants in California, but more common elsewhere; CNPS:3 = CNPS list of plants with problematic taxonomy; CNPS:4= CNPS watch list of plants with limited distribution; CNPS Threat Ranks: 0.1= Seriously threatened in California (over 80% of occurrences threatened); 0.2= Moderately threatened in California(20-80% of occurrences threatened); 0.3= Not very threatened in California (<20% of occurrences threatened)

3. Evaluation of Special-Status Species

a. State- or Federal-listed Species

Stebbins' morning-glory (*Calystegia stebbinsii*)

Range: Northern and southern parts of the Pine Hill gabbro soils formation in El Dorado County, and one population on serpentine soils in Nevada County (USFWS 2002).

Nearest CNNDDB⁴ occurrence: About four miles WSW of the project site in the northern portion of the Pine Hill gabbro soils complex, and about 28 miles NNW on Serpentine soils near Grass Valley. (BIOS 2016)

Habitat requirements: Found only in chaparral on gabbro or serpentine soils (USFWS 2002). The species seems to be shade intolerant and does not occur within a closed canopy of chaparral shrubs (Baad and Hanna 1987). Species is generally absent from areas with the understory dominated by annual grasses. (Wilson 1986, Hunter and Horenstein 1991).

Habitat on project site: Marginal. Serpentine soils on the project site have either an understory of annual grasses or a dense, closed shrub canopy, which seem to limit proliferation of the species on otherwise suitable soils.

Potential impacts: Stebbins' morning-glory was not found on the project site, so there would be no direct impact to it. Construction of roads, houses and supporting structures within chaparral on Serpentine soils would eliminate potential habitat for the species. Clearing or thinning the chaparral shrubs would improve the potential habitat for the species.

Mitigation: None required.

Layne's butterwort (*Packera layneae*)

Range: Foothills of Butte, El Dorado, Placer, Yuba and Tuolumne counties. (CNPS 2016)

Nearest CNDDDB occurrence: Approximately 0.5 miles south of the project site along Gold Hill Road (estimated location from herbarium specimen collected in 1962). (CNDDDB 2016)

Habitat requirements: Open rocky areas in chaparral on gabbro or serpentine soils (USFWS 2007), 200-1085 m elevation (CNDDDB 2016).

Habitat on project site: Suitable on Serpentine soils on the western portion of the project site.

Potential impacts: Layne's butterwort was not found on the project site, so the project would have no direct impact to the species. Construction of roads, houses and supporting structures would eliminate potential habitat for the species.

Mitigation: None required.

b. Species of Concern

i. Invertebrates

Western bumble bee (*Bombus occidentalis*)

Range: Historic range (prior to 1998) included northern California, Oregon, Washington, Alaska, Idaho, Montana, western Nebraska, western North Dakota, western South Dakota, Wyoming, Utah, Colorado, northern Arizona, and New Mexico. Recently, the population has undergone marked reductions. (Xerces Society 2016)

Habitat requirements: Bumble bees require flowers on which to forage, nest sites and overwintering sites. Bumble bees forage on a diverse group of plants (eg. *Phacelia*, *Ceanothus*, *Eschscholtzia*, *Lupinus*, *Rosa*, *Asclepias*, *Agastache*, *Monardella*, *Helianthus* and *Solidago* sp.), and need an abundance of flowers to sustain the colony. Nests are often in underground abandoned rodent burrows, or at ground level in grass tufts, or in bird nests, tree cavities or under rocks. Only mated queens overwinter in self-dug cavities in soft earth; the rest of the colony dies. (Xerces Society 2016b)

Habitat quality on project site: Suitable. The project site has flowering plants suitable for foraging by the species and plenty of nesting habitat.

Nearest CNDDDB occurrence: Approximately six miles NW of the project site. (BIOS 2016)

Potential impacts: Relatively little impact from road and building construction upon potential nest sites for the species. Much of the on-site potential habitat for the species is too steep for development.

⁴ CNDDDB= California Natural Diversity Database, which inventories the status and location of special-status plants and animals in California.

Cosumnes spring stonefly (*Cosumnoperla hypocrena*)

Range: Known only from the Cosumnes River and American River drainages in El Dorado County. (CNDDDB 2016)

Nearest CNDDDB occurrence: Approximately six miles WSW of the project site. (BIOS 2016)

Habitat requirements: Intermittent streams on western slope of foothills in American and Cosumnes River basins. (CNDDDB 2016)

Habitat on project site: Suitable within intermittent tributaries to Granite Creek.

Potential impacts: No impact. Suitable habitat for the species is bounded by steep slopes that preclude any development activity, and would be protected by setbacks from ephemeral and intermittent waters (55 feet suggested).

Ricksecker's water scavenger beetle (*Hydrochara rickseckeri*)

Range: Known from Marin, Sonoma, Solano, San Mateo, Lake, Placer (Lincoln area), San Joaquin and Sacramento counties. (CNDDDB 2016)

Nearest CNDDDB occurrence: Approximately twelve miles southwest at Folsom Lake in Sacramento County (BIOS 2016).

Habitat requirements: The aquatic beetle lives in weedy, shallow, open water habitats associated with fresh water seeps, springs, farm ponds, vernal pools, and slow-moving streams. (LSA Assoc. 2004) Current CNDDDB occurrences were found within vernal pools and seasonal wetlands. (CNDDDB 2016)

Habitat on project site: Marginal in the small wetland formed by a spring alongside a roadbed on Parcel 2 (Figure 8); unsuitable on the remainder of the project site.

Potential impacts: No impact. Suitable habitat for the species is bounded by steep slopes that preclude any development activity, and would be protected by setbacks from wetlands (55 feet suggested).

ii. Amphibians and Reptiles

Foothill yellow-legged frog (*Rana boylei*)

Range: Coast Ranges from Oregon border south to the Transverse Mountains, in most of northern California west of the Cascade crest, and along the western flank of the Sierra Nevada south to Kern County from sea level to 1830 m (CWHR 2016).

Nearest CNDDDB occurrence of record: Approximately three miles north in Indian Creek, north of Coloma. (BIOS 2016)

Habitat requirements: Found in or near partly-shaded, shallow streams in habitats ranging from valley-foothill hardwood, valley-foothill hardwood-conifer, valley-foothill riparian, ponderosa pine, mixed conifer, coastal scrub, mixed chaparral and wet meadows. Need at least some cobble-sized substrate for egg laying. Adults may become inactive or hibernate in colder areas, going underground or beneath surface objects more than 50 m (155 ft.) from water, but otherwise spend most of their time in or near streams in all seasons. (CWHR 2016, CNDDDB 2016)

Habitat on project site: Suitable in Granite Creek and Granite Canyon Creek.

Potential impacts: No impact. Suitable habitat for the species is bounded by steep slopes that preclude any development activity, and would be protected by setbacks from perennial waters (110 feet suggested).

Western pond turtle (*Emys marmorata*)

Range: Found in suitable aquatic habitats throughout California, west of the Sierra-Cascade crest between sea level and 6000 feet elevation. (CWHR 2016, CNDDDB 2016)

Nearest CNDDDB occurrence of record: Approximately three miles east in the South Fork American River. (BIOS 2016)

Habitat requirements: Found in ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 ft. elevation. Require basking sites such as partially submerged logs, rocks, floating vegetation sandy banks, grassy open fields or open mud banks. Eggs are laid in nests in slow-moving water or in nests dug in high-humidity areas up to 0.5 km from water. (CWHR 2016, CNDDDB 2016)

Habitat on project site: Suitable in Granite Canyon Creek; marginal in Granite Creek, which is heavily shaded with swiftly moving waters.

Potential impacts: No impact. Potential habitat for the species is bounded by steep slopes that preclude any development activity, and would be protected by setbacks from perennial waters (110 feet suggested).

Blainville's horned lizard (*Phrynosoma blainvillii*)

Range: Found in Sierra Nevada foothills from Butte Co. to Kern Co. up to 1200 m elevation, throughout the central and southern California coast, and in the mountains of southern California, up to 1800 m elevation. (CWHR 2016)

Nearest CNDDDB occurrence: Approximately six miles southwest of the project site, near Rescue. (BIOS 2016)

Habitat requirements: Found in open country with sandy areas such as flood plains, washes, flood plains and wind-blown deposits, in habitats including valley foothill hardwood, conifer, riparian, pine-cypress, juniper and annual grassland. Feeds in open areas between shrubs, often near ant nests; consumes insects, especially ants. (CWHR 2016)

Habitat on project site: Suitable in small clearings scattered throughout the project site.

Potential impacts: Construction of roads, houses and supporting structures would eliminate minimal amounts of potential habitat for the species.

iii. Birds

Cooper's hawk (*Accipiter cooperii*) nesting

Range: Breeding resident in most wooded portions of California between sea level and 2700 m elevation. (CWHR 2016)

Nearest CNDDDB occurrence: Approximately 18 miles southwest of the project site, near Lake Natoma. (BIOS 2016)

Habitat requirements: Dense live oak, riparian deciduous or patchy woodland habitats near water. Feeds on small birds, mammals, reptiles and amphibians. Nests in deciduous trees or conifers, usually near streams. (CWHR 2016)

Habitat on project site: Suitable foraging habitat in oak woodland throughout the project site. Suitable nesting habitat on slopes above Granite Creek and Granite Canyon Creek.

Potential impacts: Construction during the nesting season could disrupt nesting hawks, if found on-site.

Suggested mitigation: Pre-construction surveys for nesting raptors, conducted no more than 30 days prior to construction activities, is recommended if construction is scheduled during the normal nesting season (March 1-August 31). If raptor nests are found on or immediately adjacent to the site, consultation with the California Department of Fish and Wildlife must be initiated to determine appropriate avoidance measures.

Sharp-shinned hawk (*Accipiter striatus*) nesting

Range: Fairly common migrant and winter resident throughout California, except in areas with deep snow. Breeding distribution poorly documented. Very few breeding records for Cascades/Sierra Nevada. Probably breeds south in Coast Ranges to about 35° lat., and at scattered locations in the Transverse and Peninsular Ranges. (CWHR 2016)

Nearest CNDDDB occurrence: Approximately 30 miles ENE between Union Valley and Ice House reservoirs. (BIOS 2016)

Habitat requirements: Breeds in ponderosa pine, black oak, riparian deciduous, mixed conifer, and Jeffrey pine habitats. Prefers, but not restricted to, riparian habitats. North facing slopes with plucking perches are critical requirements. (CWHR 2016)

Habitat on project site: Marginal on north slopes above Granite Creek.

Potential impacts: Construction during the nesting season could disrupt nesting hawks, if found on-site.

Suggested mitigation: Pre-construction surveys for nesting raptors, conducted no more than 30 days prior to construction activities, is recommended if construction is scheduled during the normal nesting season (March 1-August 31). If raptor nests are found on or immediately adjacent to the site, consultation with the California Department of Fish and Wildlife must be initiated to determine appropriate avoidance measures.

Rufous-crowned sparrow (*Aimophila ruficeps*)

Range: Resident of sparse, mixed chaparral and coastal scrub habitats (especially coastal sage) from Mendocino and Tehama cos. south to the Mexican border. Uncommon on lower slopes of western Sierra Nevada, and on Santa Cruz Island. (CWHR 2016)

Nearest CNDDDB occurrence: Los Angeles County. (BIOS 2016)

Habitat requirements: Frequents relatively steep, often rocky hillsides with grass and forb patches; also grassy slopes without shrubs, if rock outcrops are present. (CWHR 2016)

Habitat on project site: Suitable in small, scattered openings on steep slopes throughout the project site.

Potential impacts: None expected. Suitable habitat is too steep for development.

Suggested mitigation: Pre-construction surveys for nesting birds, conducted no more than 30 days prior to construction activities, is recommended if construction is scheduled during the normal nesting season (March 1-August 31). If nests are found within or near proposed construction, a 40-foot radius, fenced protection zone around the nest is recommended.

Grasshopper sparrow (*Ammodramus savannarum*) nesting

Range: Summer resident and breeder in foothills and lowlands west of the Cascade-Sierra Nevada crest from Mendocino and Trinity counties south to San Diego county. (CWHR 2016)

Nearest CNDDDB occurrence: About 19 miles southwest of the project site near Rancho Murieta. (BIOS 2016)

Habitat requirements: Dry or well-drained grassland, especially native grassland with a mix of grasses and forbs for foraging and nesting. Uses scattered shrubs for singing perches. Nests on the ground in a slight depression at the base of overhanging grasses or forbs. (CWHR 2016)

Habitat on project site: Suitable in grassland habitat on the ridgetop on Parcel 2; unsuitable on the remainder of the project site.

Potential impacts: Loss of potential habitat due to construction of a house and other structures within grasslands.

Suggested mitigation: Pre-construction surveys for nesting birds, conducted no more than 30 days prior to construction activities, is recommended if construction is scheduled during the normal nesting season (March 1-August 31). If nests are found within or near proposed construction, a 40-foot radius, fenced protection zone around the nest is recommended.

Golden eagle (*Aquila chrysaetos*) nesting

Range: Uncommon permanent resident and migrant throughout California except the center of the Central Valley, from sea level to 3833 m elevation. (CWHR 2016)

Nearest CNDDDB occurrence: Approximately 12 miles southwest of the project site, near El Dorado Hills. (BIOS 2016)

Habitat requirements: Rolling foothills and mountain terrain, wide arid plateaus deeply cut by streams and canyons, open mountain slopes, cliffs and rock outcrops. Needs open terrain for hunting: grasslands, deserts, savannahs, and early successional stages of forest and shrub habitats. Nests on cliffs or large trees in open areas. (CWHR 2016)

Habitat on project site: Marginal. The site has relatively little open forage habitat required by the species. Marginal nesting habitat is found in tall trees on slopes above Granite Creek.

Potential impacts: Removal of large trees in open areas would eliminate potential nesting habitat.

Suggested mitigation: Pre-construction surveys for nesting raptors, conducted no more than 30 days prior to construction activities, is recommended if construction is scheduled during the normal nesting season (March 1-August 31). If raptor nests are found on or immediately adjacent to the site, consultation with the California Department of Fish and Wildlife must be initiated to determine appropriate avoidance measures.

Oak titmouse (*Baeolophus inornatus*) nesting

Range: Resident in oak habitats ranging from the Mexican border to Humboldt Co. Range encircles San Joaquin Valley, extending east from the coast through Kern Co. to the western slope of the Sierra Nevada north to Shasta Co. Scattered and local populations north of Humboldt Co. near the coast, and locally in Siskiyou County. (CWHR 2016)

Nearest CNDDDB occurrence: Tuolumne County. (BIOS 2016)

Habitat requirements: Occurs in montane hardwood-conifer, montane hardwood, blue, valley, and coastal oak woodlands, and montane and valley foothill riparian habitats in cismontane California. Prefers open woodlands of oak, and pine and oak. Nests in cavities or tree snags. Ventures into residential areas. (CWHR 2016)

Habitat on project site: Suitable within oak woodland throughout the project site. The species was seen in oak woodlands on the project site.

Potential impacts: Removal of oak trees would eliminate potential habitat for the species.

Suggested mitigation: Pre-construction surveys for nesting birds, conducted no more than 30 days prior to construction activities, is recommended if construction is scheduled during the normal nesting season (March 1-August 31). If nests are found within or near proposed construction, a 40-foot radius, fenced protection zone around the nest is recommended.

Lawrence's goldfinch (*Carduelis lawrencei*) nesting

Range: Rather common along western edge of southern deserts, common but erratic in Santa Clara County and on the coastal slope from Monterey County south. Uncommon in foothills surrounding the Central Valley. (CWHR 2016)

Nearest CNDDDB occurrence: None. (CNDDDB 2016)

Habitat requirements: Utilizes valley foothill hardwood, valley foothill hardwood-conifer, and, in southern California, desert riparian, palm oasis, pinyon-juniper and lower montane habitats. Requires open woodland or shrubland with a nearby source of water, and forb and shrub seeds. Nests in dense foliage of a tree or shrub, especially within oaks, cypresses or riparian thickets. Most often nests near water in open, arid woodland, but also uses chaparral. (CWHR 2016)

Habitat on project site: Suitable nesting habitat is limited to a small area of open oak woodland on Parcel 4; remainder of the project site has dense chaparral canopy, unsuitable for nesting by the species.

Potential impacts: No impact. Suitable nesting habitat is inaccessible to development due to steep terrain.

American dipper (*Cinclus mexicanus*)

Range: Uncommon to common resident on clear, fast-flowing streams and rivers in montane regions throughout the state. Common in the Cascade Range and Sierra Nevada, occupying riverine habitats up to 3500 m (11,600 ft) elevation. May move to lower elevations in winter. (CWHR 2016)

Nearest CNDDDB occurrence: None. (CNDDDB 2016)

Habitat requirements: Confined to clear, clean streams and rivers with rocky shores and bottoms in mountains. Nests in crevice in rocks, behind waterfall, in stump or log, in bank, or under bridge or other human-made structure, usually within 1-2 m of stream surface in a location inaccessible to mammals. (CWHR 2016)

Habitat on project site: Suitable winter forage area in Granite Creek; unsuitable in the remainder of the project site. The project is outside the normal nesting range of the species.

Potential impacts: No impact. Suitable habitat for the species is bounded by steep slopes that preclude any development activity, and would be protected by normal setbacks from perennial waters.

Merlin (*Falco columbarius*) wintering

Range: Winter migrant in most of the western half of California below 1500 m elevation. (CWHR 2016)

Nearest CNDDDB occurrence: About 17 miles southwest of the project site, at Lake Natoma. (BIOS 2016)

Habitat requirements: Utilizes coastlines, open grasslands, woodlands, lakes, wetlands, edges and early successional stages, ranging from annual grasslands to Ponderosa pine and montane hardwood-conifer habitats. Frequents open habitats at low elevations near water and tree stands, especially near coastlines, lakeshores and wetlands. Does not nest in California. (CWHR 2016)

Habitat on project site: Suitable habitat is limited to grasslands on Parcel 2 and open oak woodland near the north boundary of Parcel 4. Marginal habitat is found in woodlands on the remainder of the project site, where the dense understory of chaparral shrubs lessens the likelihood of use by the species.

Potential impacts: Minimal amounts of potential foraging habitat would be lost due to construction of buildings within grasslands on-site.

Suggested mitigation: None required.

American peregrine falcon (*Falco peregrinus anatum*) nesting

Range: An uncommon summer resident and migrant in coastal California and in foothills of the Sierra Nevada. (CWHR 2016)

Nearest CNDDDB occurrence: Calaveras County. (BIOS 2016)

Habitat requirements: Frequents bodies of water in open areas with cliffs and canyons nearby for cover and nesting. Breeds near wetlands, lakes, rivers, or other water on high cliffs, banks, dunes, mounds. Will nest on human-made structures, and occasionally uses tree or snag cavities or old nests of other raptors. (CWHR 2016)

Habitat on project site: Marginal in trees on the slopes above Granite Creek. The project site lacks suitable cliff habitat for nesting by the species, and the dense chaparral vegetation lessens the likelihood of use by the species

Potential impacts: No impact is expected. Suitable nesting habitat for the species is bounded by steep slopes that preclude any development activity, and would be protected by normal setbacks from perennial waters.

Suggested mitigation: Pre-construction surveys for nesting raptors, conducted no more than 30 days prior to construction activities, is recommended if construction is scheduled during the normal nesting season (March 1-August 31). If raptor nests are found on or immediately adjacent to the site, consultation with the California Department of Fish and Wildlife must be initiated to determine appropriate avoidance measures.

Fox sparrow (*Passerella iliaca*) nesting

Range: Summer ranges in the mountains of California; winters in brushy habitats in foothills and lowlands (CWHR 2016)

Nearest CNDDDB occurrence: None. (CNDDDB 2016)

Habitat requirements: Breeds in dense montane chaparral and brushy understory of other wooded, montane habitats. (CWHR 2016)

Habitat on project site: Suitable throughout the project site.

Potential impacts: Minimal loss of potential habitat if chaparral shrubs are removed for buildings, roads, septic, etc.

Suggested mitigation: Pre-construction surveys for nesting birds, conducted no more than 30 days prior to construction activities, is recommended if construction is scheduled during the normal nesting season (March 1-August 31). If nests are found within or near proposed construction, a 40-foot radius, fenced protection zone around the nest is recommended.

Nuttall's woodpecker (*Picoides albolarvatus*) nesting

Range: Central Valley, Transverse and Peninsular Ranges, Coast Range north to Sonoma County, lower portions of Cascade Range and Sierra Nevada. Average home range is 0.8 mile from a riparian strip (CWHR 2016).

Nearest CNDDDB occurrence: None. (CNDDDB 2016)

Habitat requirements: Resident of low-elevation riparian deciduous and oak habitats. Feeds on oak and riparian deciduous trees for sap, adult and larval insects; also eats seeds, nuts and fruits. Nests in riparian habitat, usually in a dead willow, sycamore, cottonwood or alder, rarely in oaks. (CWHR 2016)

Habitat on project site: Suitable on the slopes above Granite Creek and Granite Canyon Creek.

Potential impacts: Removal of oak trees would eliminate potential foraging habitat for the species. Suitable nesting habitat would be undisturbed, as it is found in terrain too steep for development.

Suggested mitigation: Pre-construction surveys for nesting birds, conducted no more than 30 days prior to construction activities, is recommended if construction is scheduled during the normal nesting season (March 1-August 31). If nests are found within or near proposed construction, a 40-foot radius, fenced protection zone around the nest is recommended.

Purple martin (*Progne subis*) nesting

Range: Local summer resident in a variety of wooded, low-elevation habitats throughout the state. (CWHR 2016)

Nearest CNDDDB occurrence: About 28 miles WSW of the project site, near McClellan Airfield. (BIOS 2016)

Habitat requirements: Uses valley foothill and montane hardwood, valley foothill and montane hardwood-conifer, and riparian habitats. Also occurs in coniferous habitats, including closed-cone pine-cypress, ponderosa pine, Douglas-fir, and redwood. Frequents old-growth, multi-layered, open forest and woodland with snags in breeding season. Forages over riparian areas, forest, and woodland. (CWHR 2016)

Habitat on project site: Marginal. Vegetation on the project site is too dense for the species, but it may utilize scattered pines near Granite Creek.

Potential impacts: None expected. Potential habitat for the species is located on slopes too steep for development, and would be protected by setbacks from perennial waters (110 feet suggested).

Yellow warbler (*Setophaga petechia*) nesting

Range: Coast Ranges from Del Norte County to Ventura County, the northern Cascade mountains east to Modoc County, and along the western slope of the Sierra Nevada south to Kern County. Also breeds along the eastern Sierra from Lake Tahoe to Inyo County, and in southern California mountains. (CWHR 2016)

Nearest CNDDDB occurrence: About 30 miles northwest of the project site, east of Beale AFB. (BIOS 2016)

Habitat requirements: Breeds in riparian woodlands from coastal and desert lowlands up to 2500 m in Sierra Nevada. Also breeds in montane chaparral, and in open ponderosa pine and mixed conifer habitats with substantial amounts of brush. Frequents open to medium-density woodlands and forests with a heavy brush understory in breeding season. In migration, found in a variety of sparse to dense woodland and forest habitats. (CWHR 2016)

Habitat on project site: Suitable nesting and forage areas in woodlands throughout the project site, especially near Granite Creek and Granite Canyon Creek.

Potential impacts: Minimal amounts of potential nesting habitat would be lost if construction occurs within woodlands found on-site.

Suggested mitigation: Pre-construction surveys for nesting birds, conducted no more than 30 days prior to construction activities, is recommended if construction is scheduled during the normal nesting season (March 1-August 31). If nests are found within or near proposed construction, a 40-foot radius, fenced protection zone around the nest is recommended.

Black-chinned sparrow (*Spizella atrogularis*) nesting

Range: A summer resident that breeds locally and uncommonly in foothills bordering Central Valley, and commonly on arid mountain slopes of southern California. (CWHR 2016)

Nearest CNDDDB occurrence: None. (CNDDDB 2016)

Habitat requirements: Occurs mostly on sloping ground in mixed chaparral, chamise-redshank chaparral, sagebrush, and similar brushy habitats, including those in understory of sparse pinyon-juniper, juniper, and other conifer habitats. Frequents shrub stands of mixed species. Breeds and forages in open to moderately dense chaparral and similar brushy habitats; often on arid, south-facing slopes with ceanothus, manzanita, sagebrush, chamise. (CWHR 2016)

Habitat on project site: Suitable throughout the project site, wherever chaparral shrubs are present, either alone or as understory of oaks or pines.

Potential impacts: Minimal loss of potential habitat if chaparral shrubs are removed for buildings, roads, septic, etc.

Suggested mitigation: Pre-construction surveys for nesting birds, conducted no more than 30 days prior to construction activities, is recommended if construction is scheduled during the normal nesting season (March 1-August 31). If nests are found within or near proposed construction, a 40-foot radius, fenced protection zone around the nest is recommended.

Brewer's sparrow (*Spizella breweri*) nesting

Range: A common summer resident and breeder east of the Cascade-Sierra Nevada crest, in mountains and higher valleys of Mojave Desert, and in those bounding southern end of the San Joaquin Valley. Breeds locally above pinyon-juniper belt and apparently on western slope of Sierra Nevada (Verner and Boss 1980). (CWHR 2016)

Nearest CNDDDB occurrence: Approximately 110 miles southeast, south of Mono Lake. (BIOS 2016)

Habitat requirements: Found in extensive stands of sagebrush with moderate canopy unbroken by trees. Similar shrub habitats, such as bitterbrush, are used to a lesser extent. Breeds in extensive shrub stands with moderate canopy, especially sagebrush. (CWHR 2016)

Habitat on project site: Marginal. The species preferred nesting habitat is desert shrubs, none of which are present on the project site. The potential to occur on-site is considered here because the species was reported as breeding on the western slope in 1980; however, recent reports of the nesting range of the species do not include habitats found on the project site.

Potential impacts: Minimal loss of potential habitat if chaparral shrubs are removed for buildings, roads, septic, etc.

Suggested mitigation: Pre-construction surveys for nesting birds, conducted no more than 30 days prior to construction activities, is recommended if construction is scheduled during the normal nesting season (March 1-August 31). If nests are found within or near proposed construction, a 40-foot radius, fenced protection zone around the nest is recommended.

iv. Mammals

Ringtail (*Bassariscus astutus*)

Range: Permanent resident in various riparian habitats, and in brush stands of most forest and shrub habitats, at low to middle elevations. (CWHR 2016)

Nearest CNDDDB occurrence: None. (CNDDDB 2016)

Habitat requirements: Suitable habitat consists of a mixture of forest and shrubland in close association with rocky areas or riparian habitats. (CWHR 2016)

Habitat on project site: Suitable throughout the project site, especially near Granite Creek and Granite Canyon Creek.

Potential impacts: No impact will occur to the best habitat for the species, near perennial creeks, as it is too steep for development and would be protected by setbacks from perennial waters. Minimal amounts of marginal habitat for the species would be lost to construction of buildings and roads.

Silver-haired bat (*Lasionycteris noctivagans*)

Range: Coastal and montane forests from the Oregon border south along the coast to San Francisco Bay, and along the Sierra Nevada and Great Basin region to Inyo County. Also recorded in Sacramento, Stanislaus, Monterey and Yolo counties. Known as a migrant throughout California. The species likely winters in Mexico. (CWHR 2016)

Nearest CNDDB occurrence: About seven miles east of the project site, at Chili Bar. (BIOS 2016)

Habitat requirements: Summer habitats include coastal and montane coniferous forest, valley foothill woodlands, pinyon-juniper woodlands and valley foothill and montane riparian habitats below 2750 m elevation. Feeds over forest streams, ponds and open brushy areas. Requires drinking water. Roosts in hollow trees, snags, buildings, rock crevices, caves and under bark. Nurseries are located in dense foliage or hollow trees. (CWHR 2016)

Habitat on project site: Suitable in oak and ponderosa pine vegetation, especially near Granite Creek and Granite Canyon Creek.

Potential impacts: None expected. Suitable habitat for the species is found on the slopes above Granite Creek and Granite Canyon Creek, which are too steep for development, and would be protected by setbacks from perennial waters (110 feet suggested).

Yuma myotis bat (*Myotis yumanensis*)

Range: Widespread in California from sea level to 11,000 feet elevation. Uncommon in desert regions, except the mountain ranges bordering the Colorado River Valley. (CWHR 2016)

Habitat requirements: Open forests and woodlands with bodies of water. Feeds on insects taken over ponds, streams and stock tanks. Requires drinking water. Roosts in buildings, mines, caves, crevices, abandoned swallow nests and under bridges. Maternity colonies are found in warm, dark buildings, caves, mines and under bridges. (CWHR 2016)

Habitat on project site: Suitable foraging habitat near Granite Creek and Granite Canyon Creek. Suitable maternity habitat beneath bridges located off-site.

Nearest CNDDB occurrence: About seven miles east of the project site, at Chili Bar. (BIOS 2016)

Potential impacts: No impact. Potential habitat for the species, near Granite Creek, as it is too steep for development and would be protected by setbacks from perennial waters (110 feet suggested).

v. Plants

Jepson's onion (*Allium jepsonii*)

Range: Butte, El Dorado, Placer and Tuolumne counties. (CNPS 2016)

Nearest CNDDB occurrence: About four miles south of the project site, near the Lotus/Green Valley Road intersection. (BIOS 2016)

Habitat requirements: Chaparral, cismontane woodland or lower montane coniferous forest on serpentine or volcanic soils between 300 and 1320 meters elevation. (CNPS 2016)

Habitat on project site: Suitable in openings on serpentine soils found on Parcels 1 and 2. Unsuitable on the remainder of the project site. Thinning dense chaparral canopy could improve potential habitat for the species.

Potential impacts: Jepson's onion was not found on the project site, so the project would have no direct impact on it. Development of buildings and roads would eliminate minimal amounts of potential habitat for the species.

Congdon's onion (*Allium sanbornii* var. *congdonii*)

Range: El Dorado, Mariposa, Nevada, Placer and Tuolumne counties. (CNPS 2016)

Nearest CNDDDB occurrence: None. (CNDDDB 2016)

Habitat requirements: Chaparral or cismontane woodland on serpentine or volcanic soils, between 300 and 990 meters elevation. (CNPS 2016)

Habitat on project site: Suitable in openings on serpentine soils found on Parcels 1 and 2. Unsuitable on the remainder of the project site.

Potential impacts: Congdon's onion was not found on the project site. Development on serpentine soils would eliminate minimal amounts of potential habitat for the species. Thinning dense chaparral canopy could improve potential habitat for the species.

Sanborn's onion (*Allium sanbornii* var. *sanbornii*)

Range: Butte, Calaveras, El Dorado, Nevada, Placer, Plumas, Shasta, Tehama, Tuolumne and Yuba counties. (CNPS 2016)

Nearest CNDDDB occurrence: None.

Habitat requirements: Chaparral, cismontane woodland or lower montane coniferous forest, usually on gravelly serpentine soils, between 260 and 1510 meters elevation. (CNPS 2016)

Habitat on project site: Suitable in openings on serpentine soils found on Parcels 1 and 2. Unsuitable on the remainder of the project site.

Potential impacts: Sanborn's onion was not found on the project site. Development on serpentine soils would eliminate minimal amounts of potential habitat for the species. Thinning dense chaparral canopy could improve potential habitat for the species.

True's manzanita (*Arctostaphylos mewukka* ssp. *truei*)

Range: Butte, El Dorado, Nevada, Placer, Plumas and Yuba counties. (CNPS 2016)

Nearest CNDDDB occurrence: None. (CNDDDB 2016)

Habitat requirements: Chaparral, lower montane coniferous forest, sometimes on roadsides, between 425 and 1390 meters elevation. (CNPS 2016)

Habitat on project site: Marginal. The highest elevation on the project site (427 m.), on the grassy ridge on Parcel 1, is near the lower elevation limits of the species (425 m.), and is not suitable habitat for the species.

Potential impacts: True's manzanita was not found on the project site, so the project would have no direct impact on it. Construction of buildings or roads near ponderosa pines would eliminate minimal amounts of potential habitat for the species.

Nissenan manzanita (*Arctostaphylos nissenana*)

Range: El Dorado, Placer and Tuolumne counties. (Jepson 2016)

Nearest CNDDDB occurrence: About 6 miles northeast of the project site, between Garden Valley and Kelsey. (BIOS 2016)

Habitat requirements: Open, rocky shale ridges, chaparral, woodland, between 450 and 1650 meters elevation. (Jepson 2016)

Habitat on project site: Marginal. Project site has few vegetation openings, lacks shale substrate and is lower in elevation than the known range of the species.

Potential impacts: Nissenan manzanita was not found on the project site, so the project would have no direct impact on it. Development would adversely affect minimal amounts of marginal potential habitat for the species.

Big-scale balsamroot (*Balsamorhiza macrolepis* var. *macrolepis*)

Range: Alameda, Amador, Butte, Colusa, El Dorado, Lake, Mariposa, Napa, Placer, Santa Clara, Shasta, Solano, Sonoma, Tehama and Tuolumne counties. (CNPS 2016)

Nearest CNDDDB occurrence: Approximately 9 miles WNW of the project site, near the North Fork American River. (BIOS 2016)

Habitat requirements: Found in chaparral, cismontane woodland, and valley and foothill grassland, sometimes on serpentine soils, between 90 and 1555 meters elevation. (CNPS 2016)

Habitat on project site: Suitable in annual grassland on Parcel 2 and in small openings scattered throughout the property.

Potential impacts: Big-scale balsamroot was not found on the project site, so the project would have no direct impact on it. Development in grasslands would adversely affect minimal amounts of potential habitat for the species.

Van Zuuk's morning-glory (*Calystegia vanzuukiae*)

Range: El Dorado and Placer counties. (CNPS 2016)

Nearest CNDDDB occurrence: About 8 miles northeast of the project site, between Garden Valley and Georgetown. (BIOS 2016)

Habitat requirements: Open areas in chaparral, cismontane woodland on gabbro or serpentine soils, between 500 and 1180 meters elevation. (CNPS 2016)

Habitat on project site: Marginal on serpentine soils on Parcels 1 and 2. The project is below the known range of the species.

Potential impacts: Van Zuuk's morning-glory was not found on the project site, so the project would have no direct impact on it. Development would adversely affect minimal amounts of potential habitat for the species.

Red Hills soaproot (*Chlorogalum grandiflorum*)

Range: Amador, Butte, Calaveras, El Dorado, Placer and Tuolumne counties. (CNPS 2016)

Nearest CNDDDB occurrence: Approximate area mapped includes the SW portion of Parcel 1; other occurrence is about two miles southeast of the project site, Springvale Road, Lotus. (BIOS 2016)

Habitat requirements: Open chaparral on gabbro or serpentine soils. (Hunter and Horenstein 1991)

Habitat on site: Suitable in openings within chaparral on serpentine soils on the western portion of the project site.

Potential impacts: Red Hills soaproot was not found on the project site, so there would be no direct impact on it. Development on serpentine soils would adversely affect minimal amounts of potential habitat for the species. Thinning dense chaparral vegetation on serpentine soils could improve potential habitat for the species.

Brandegee's clarkia (*Clarkia biloba* ssp. *brandageae*)

Range: Butte, El Dorado, Nevada, Placer, Sacramento, Sierra, and Yuba Counties. (CNPS 2016)

Nearest CNDDDB occurrence: About four miles west-southwest of the project site.

Habitat requirements: Dry sites in chaparral, cismontane woodland, and lower montane coniferous forest, often on roadcuts, 75-915 m elevation. (CNPS 2016, CNDDDB 2016)

Habitat on project site: Suitable in chaparral and oak woodlands found on-site. Brandegee's clarkia was found on the sides of ravines on the project site, and some on existing roadbeds (Figure 10).

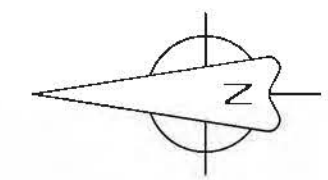
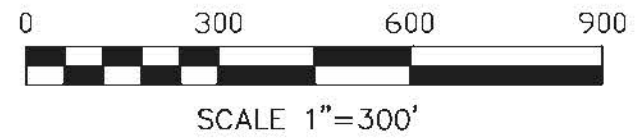
Potential impacts: Brandegee's clarkia growing on existing dirt roads would be eliminated if future owners improve the roads, but road improvements are not proposed for this project. Most plants are growing on slopes in ravines that are too steep for any development activity. Potential habitat could be improved by clearing or thinning dense chaparral shrubs.

Suggested mitigation: Enhanced setbacks from ephemeral and perennial waters to protect habitat occupied by the species (55 feet for ephemeral waters, 110 feet from perennial waters).




FIGURE 10 BRANDEGEE'S CLARKIA FOUND ON THE PROJECT SITE

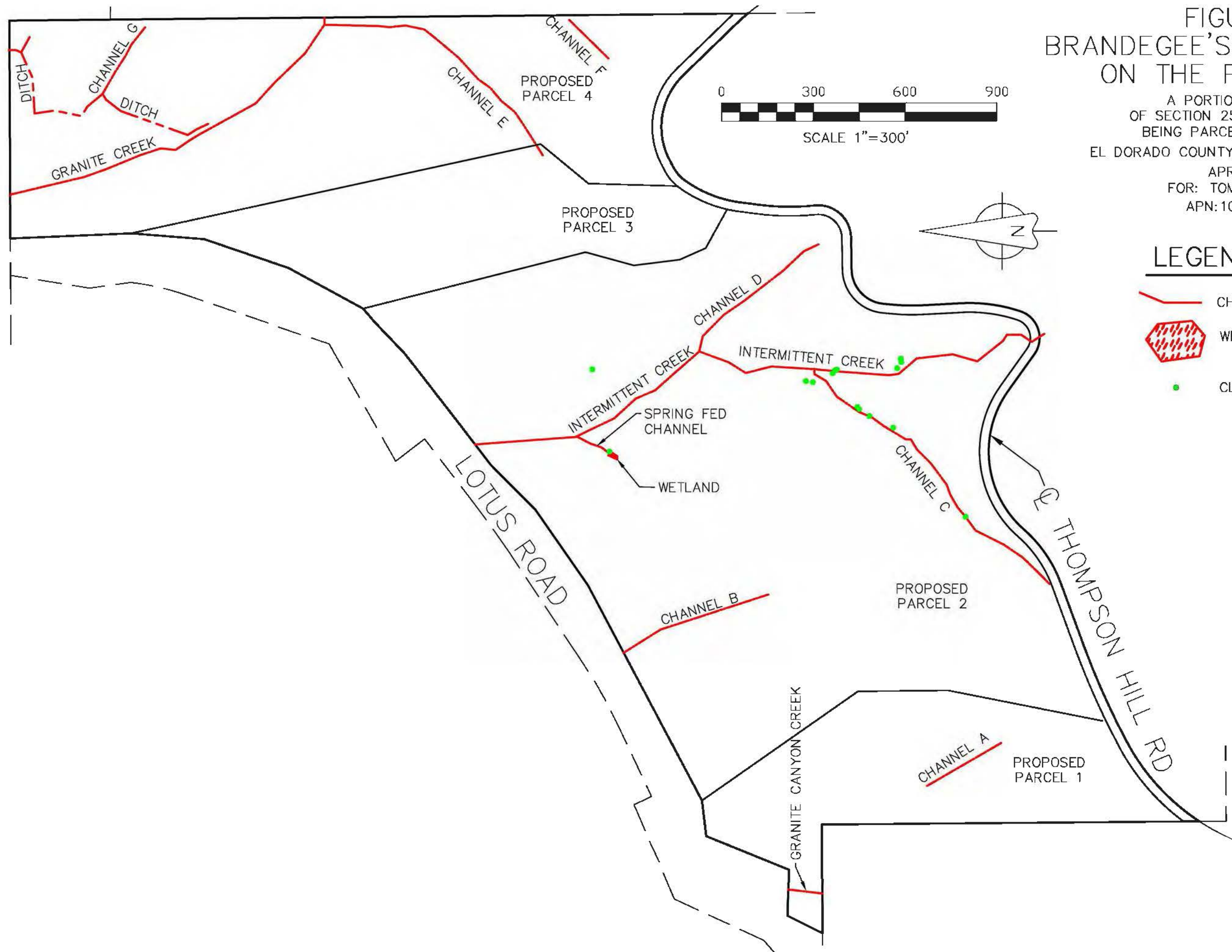
A PORTION OF SECTION 25
OF SECTION 25, T.11N., R.9E., M.D.M.
BEING PARCEL A OF PM 51/083
EL DORADO COUNTY STATE OF CALIFORNIA

APRIL 2016
FOR: TOM VAN NORD
APN: 105-190-41



LEGEND

-  CHANNEL
-  WETLAND
-  CLARKIA BILOBA SSP. BRANDEGEEAE



Sierra clarkia (*Clarkia virgata*)

Range: Amador, Calaveras, El Dorado, Mariposa, Plumas, and Tuolumne counties. (CNPS 2016)

Nearest CNDDDB occurrence: None. (CNDDDB 2016)

Habitat requirements: Cismontane woodland or lower montane coniferous forest, between 400 and 1615 meters elevation (CNPS 2016). Lower margin of montane forest and adjacent oak-grey pine woodland (CNDDDB 2016).

Habitat on project site: Marginal. Project site has a nearly-complete chaparral shrub vegetation cover, either by itself or as an understory in oak woodland found on-site; *Sierra clarkia* is not known to occupy chaparral habitats.

Potential impacts: *Sierra clarkia* was not found on the project site, so the project would have no direct impact on it. Development of roads and buildings would eliminate minimal amounts of potential habitat for the species.

Streambank spring beauty (*Claytonia parviflora* ssp. *grandiflora*)

Range: Amador, Butte, Calaveras, El Dorado, Fresno, Kern, Placer, Tulare and Tuolumne counties. (CNPS 2016)

Nearest CNDDDB occurrence: None. (CNDDDB 2016)

Habitat requirements: Rocky soils in cismontane woodland, between 250 and 1200 meters elevation (CNPS 2016); vernal moist, often disturbed sites; 150–1200 meters elevation (Jepson 2005).

Habitat on project site: Suitable on slopes above Granite Creek.

Potential impacts: Streambank spring beauty was not found on the project site, so the project would have no direct impact on it. Potential habitat for the species is located on slopes too steep for development, and would be protected by enhanced setbacks from perennial (110 feet suggested) and ephemeral waters (55 feet suggested).

Northern Sierra daisy (*Erigeron petrophilus* var. *sierrensis*)

Range: Butte, El Dorado, Nevada, Plumas, Sierra and Yuba counties. (CNPS 2016)

Nearest CNDDDB occurrence: None. (CNDDDB 2016)

Habitat requirements: Rocky foothills to montane forest, sometimes on serpentine; 300–1900 meters elevation (Jepson 2016). Cismontane woodland, lower montane coniferous forest, upper montane coniferous forest, 300–2073 meters elevation (CNPS 2016).

Habitat on project site: Suitable in openings in woodlands on the project site.

Potential impacts: Northern Sierra daisy was not found on the project site, so the project would have no direct impact on it. Development would adversely affect minimal amounts of potential habitat for the species.

Tripod buckwheat (*Eriogonum tripodum*)

Range: Amador, Colusa, El Dorado, Glenn, Lake, Mariposa, Napa, Placer, Tehama and Tuolumne counties. (CNPS 2016)

Nearest CNDDDB occurrence: None. (CNDDDB 2016)

Habitat requirements: Chaparral, cismontane woodland, often on serpentine soils, between 200 and 1600 meters elevation (CNPS 2016).

Habitat on project site: Suitable on serpentine soils on Parcels 1 and 2.

Potential impacts: Tripod buckwheat was not found on the project site, so the project would have no direct impact on it. Development on serpentine soils would eliminate minimal amounts of potential habitat for the species.

Butte County fritillary (*Fritillaria eastwoodiae*)

Range: Butte, El Dorado, Nevada, Placer, Plumas, Shasta, Tehama and Yuba counties, and in Oregon. (CNPS 2016)

Nearest CNDDDB occurrence: About eleven miles NE of the project site, at Auburn State Recreation Area. (BIOS 2016)

Habitat requirements: Found in openings in chaparral, cismontane woodland and lower montane coniferous forest (CNPS 2016); usually on dry slopes but also in wet places, on serpentine, red clay and sandy loam soils, 50-1500 meters elevation. (CNDDDB 2016)

Habitat on project site: Suitable in openings in chaparral scattered throughout the project site.

Potential impacts: Butte County fritillary was not found on the project site, so there would be no direct impact on it. Development would adversely affect minimal amounts of potential habitat for the species. Clearing or thinning chaparral shrubs could improve potential habitat on the property.

Serpentine bluecup (*Githopsis pulchella* ssp. *serpentinicola*)

Range: Amador, El Dorado, Mariposa, Stanislaus and Tuolumne counties. (CNPS 2013)

Nearest CNDDDB occurrence: None. (CNDDDB 2016)

Habitat requirements: Cismontane woodland on serpentine or Ione soils, between 320 and 610 meters elevation. (CNPS 2016)

Habitat on project site: Suitable on serpentine soils on Parcels 1 and 2.

Potential impacts: Serpentine bluecup was not found on the project site, so the project would have no direct impact on it. Development on serpentine soils would eliminate minimal amounts of potential habitat for the species.

Foothill jepsonia (*Jepsonia heterandra*)

Range: Amador, Calaveras, El Dorado, Mariposa, Stanislaus and Tuolumne counties. (CNPS 2016)

Nearest CNDDDB occurrence: None. (CNDDDB 2016)

Habitat requirements: Cismontane woodland or lower coniferous forest on rocky, metamorphic soils, between 50 and 500 meters elevation (CNPS 2016). Crevices, especially in slate-like rock on dry, rocky slopes below 700 meters elevation (Jepson 2016).

Habitat on project site: Suitable on slopes above Granite Creek.

Potential impacts: Foothill jepsonia was not found on the project site, so the project would have no direct impact on it. Optimal habitat is located on steep slopes unsuitable for development, and would be protected by setbacks from Granite Creek and its ephemeral tributaries.

Dubious pea (*Lathyrus sulphureus* var. *argillaceus*)

Range: Calaveras, El Dorado, Nevada, Placer, Shasta and Tehama counties. (CNPS 2016)

Nearest CNDDDB occurrence: Auburn. (CNDDDB 2016)

Habitat requirements: Cismontane woodland, lower montane coniferous forest, upper montane coniferous forest, between 150 and 930 meters elevation. (CNDDDB 2016)

Habitat on project site: Suitable on non-serpentine soils. *Lathyrus sulphureus* var. *sulphureus* was found on-site, but *L. sulphureus* var. *argillaceus* was not found.

Potential impacts: Dubious pea was not found on the project site, so the project would have no direct impact on it. Construction of buildings, roads and septic areas would eliminate minimal amounts of potential habitat for the species.

Humboldt's lily (*Lilium humboldtii* ssp. *humboldtii*)

Range: Amador, Butte, Calaveras, El Dorado, Fresno, Mariposa, Nevada, Placer, Tehama, Tuolumne and Yuba counties. (CNPS 2016)

Nearest CNDDDB occurrence: None. (CNDDDB 2016)

Habitat requirements: Openings in chaparral, cismontane woodland or lower coniferous forest, between 90 and 1280 meters elevation. (CNPS 2016)

Habitat on project site: Suitable on the eastern portion of the project site, on non-serpentine soils.

Potential impacts: Humboldt's lily was not found on the project site, so the project would have no direct impact on it. Construction of buildings, roads and septic areas would eliminate minimal amounts of potential habitat for the species. Thinning dense chaparral vegetation could improve potential habitat for the species.

Shield-bracted monkeyflower (*Mimulus glaucescens*)

Range: Butte, Colusa, Lake, Nevada, Shasta and Tehama counties. (CNPS 2016)

Nearest CNDDDB occurrence: None. (CNDDDB 2016)

Habitat requirements: Seepage areas on serpentine soils, 60-1240 meters elevation. (Jepson 2016, CNPS 2016)

Habitat on project site: Suitable in a small wetland resulting from a spring on an existing roadbed on Parcel 2; unsuitable on the remainder of the parcel.

Potential impacts: Shield-bracted monkeyflower was not found on the project site, so the project would have no direct impact on it. Road improvements or channelization of the spring would eliminate potential habitat for the species.

Suggested mitigation: Normal setbacks from the wetland would protect potential habitat for the species.

Sierra sweet bay (*Myrica hartwegii*)

Range: El Dorado, Madera, Mariposa Nevada, Tuolumne and Yuba counties. (CNPS 2016)

Nearest CNDDDB occurrence: None. (CNDDDB 2016)

Habitat requirements: Streambanks, moist places in foothills or lower montane yellow-pine forest; 300–1800 m. elevation (Jepson 2016). Cismontane woodland, lower montane coniferous forest, riparian forest, 150-1750 m. elevation (CNPS 2016).

Habitat on project site: Suitable near Granite Canyon Creek and on lower-gradient portions of Granite Creek.

Potential impacts: No impact. Sierra sweet bay was not found on the project site. Potential habitat suitable for the species is bounded by slopes too steep for development, and would be protected by normal setbacks from Granite Creek.

Navarretia eriocephala (*Hoary navarretia*)

Range: Amador, Calaveras, El Dorado, Placer and Sacramento counties. (CNPS 2016)

Nearest CNDDDB occurrence: None. (CNDDDB 2016)

Habitat requirements: Vernal mesic sites in cismontane woodland, valley and foothill grassland, 105-400 meters elevation (CNPS 2016). Heavy soil of seasonally wet flats, below 400 m. elevation (Jepson 2016).

Habitat on project site: Marginal at the small wetland resulting from a spring on an existing roadbed on Parcel 2; unsuitable on the remainder of the parcel due to steep gradients along water courses.

Potential impacts: Hoary navarretia was not found on the project site, so the project would have no direct impact on it. Road improvements or channelization of the spring would eliminate potential habitat for the species.

Awl-leaved navarretia (*Navarretia subuligera*)

Range: Amador, Butte, Del Norte, Lake, Mendocino, Modoc, Napa, Shasta and Tehama counties. (CNPS 2016)

Nearest CNDDDB occurrence: None. (CNDDDB 2016)

Habitat requirements: Open, rocky, mesic places in chaparral, cismontane woodland and lower montane coniferous forest, 150-1100 meters elevation. (CNPS 2016, Jepson 2016)

Habitat on project site: Marginal at the small wetland resulting from a spring on an existing roadbed on Parcel 2; unsuitable on the remainder of the parcel due to steep gradients along water courses.

Potential impacts: Awl-leaved navarretia was not found on the project site, so the project would have no direct impact to it. Road improvements or channelization of the spring would eliminate potential habitat for the species.

Suggested mitigation: Enhanced setbacks from the wetland would protect potential habitat for the species (55 feet suggested).

Bacigalupi's yampah (*Perideridia bacigalupii*)

Range: Amador, Butte, Calaveras, Madera, Mariposa, Nevada, Tuolumne and Yuba Counties. (CNPS 2016)

Nearest CNDDDB occurrence: None. (CNDDDB 2016)

Habitat requirements: Serpentine soils with chaparral or lower montane coniferous forest vegetation, 450-1035 meters elevation. (CNPS 2016)

Habitat on site: Suitable within openings in chaparral vegetation on the western, serpentine soils portion of the project site.

Potential impacts: Bacigalupi's yampah was not found on the project site so the project would have no direct impact to the species. Development within chaparral serpentine soils on-site would eliminate minimal amounts of potential habitat for the species. Thinning dense chaparral canopy could improve potential habitat for the species.

Narrow-petaled rein orchid (*Piperia leptopetala*)

Range: El Dorado, Fresno, Lake, Los Angeles, Monterey, Mariposa, Nevada, Orange, Plumas, Riverside, San Bernardino, San Benito, Santa Clara, San Diego, Shasta, Siskiyou, San Luis Obispo, Sonoma, and Tulare counties. (CNPS 2016)

Nearest CNDDDB occurrence: None. (CNDDDB 2016)

Habitat requirements: Generally dry sites in cismontane woodland, lower montane coniferous forest, upper montane coniferous forest, 380-2225 meters elevation. (Jepson 2016, CNPS 2016)

Habitat on project site: Suitable throughout the eastern portions of the project site; unsuitable on western portions having serpentine soils.

Potential impacts: Narrow-petaled rein orchid was not found on the project site so the project would have no direct impact to the species. Development on non-serpentine soils on-site would eliminate minimal amounts of potential habitat for the species.

Sierra blue grass (*Poa sierrae*)

Range: Butte, El Dorado, Madera, Nevada, Placer, Plumas and Shasta counties. (CNPS 2016)

Nearest CNDDDB occurrence: Approximately 21 miles NE of the project site, in Placer County. (BIOS 2016)

Habitat requirements: Shady moist slopes, often on mossy rocks, in canyons, forest; 350–1500 meters elevation (Jepson 2016). Lower montane coniferous forest (CNPS 2016).

Habitat on project site: Suitable on the slopes above Granite Creek and Granite Canyon Creek.

Potential impacts: No impact. Sierra blue grass was not found on the project site so the project would have no direct impact to the species. Suitable potential habitat for the species is protected by steep slopes that preclude development, and would be further protected by setbacks from Granite Creek and its ephemeral tributaries.

Brownish beaked-rush (*Rhynchospora capitellata*)

Range: Butte, El Dorado, Madera, Nevada, Placer, Plumas and Shasta counties. (CNPS 2016)

Nearest CNDDDB occurrence: Approximately 31 miles NE of the project site, near Grass Valley. (BIOS 2016)

Habitat requirements: Wet meadows, fens, seeps, marshes; < 2000 meters elevation (Jepson 2016).
Openings in lower coniferous forest, 365-1500 meters elevation (CNPS 2013).

Habitat on project site: Suitable within the small wetland associate with the spring on an existing roadbed on Parcel 2; unsuitable on the remainder of the project site.

Potential impacts: Brownish beaked-rush was not found on the project site, so there are no direct impacts to the species. Disturbances to the wetland on Parcel 2 would be detrimental to potential habitat for the species.

Oval-leaved viburnum (*Viburnum ellipticum*)

Range: Alameda, Contra Costa, El Dorado, Fresno, Glenn, Humboldt, Lake, Mendocino, Mariposa, Napa, Placer, Shasta, Solano, Sonoma, and Tehama counties. (CNPS 2016)

Nearest CNDDDB occurrence: About 12 miles NNW of the project site, near Lake Clementine, Placer County. (BIOS 2016)

Habitat requirements: Found in chaparral, cismontane woodland or lower montane coniferous forest between 215 and 1400 m elevation (CNPS 2016). Generally found on north-facing slopes (Jepson 2016).

Habitat on site: Suitable on slopes above Granite Creek. Marginal on non-serpentine soils on the eastern portion of the project site.

Potential impacts: Oval-leaved viburnum was not found on the project site, so there are no direct impacts to the species. Suitable potential habitat for the species is protected by steep slopes that preclude any development activities. Development within the oak woodland and chaparral found on the eastern portion of the site would result in loss of minimal amounts of potential habitat for the species.

E. Special Habitats

Central Valley Drainage Hardhead/Squawfish Stream

Specific habitat requirements: Undisturbed large, middle- and low-elevation streams, 10-1450 m (33-4760 ft.) elevation, with summer temperatures often in excess of 20° C, and not dominated by introduced species, especially centrarchids. Hardhead are relatively intolerant of low oxygen levels, especially at higher temperatures, a factor which may limit their distribution to well oxygenated streams and the surface water of reservoirs. Hardhead prefer clear, deep (> 1 m) pools with sand-gravel-boulder substrates and slow water velocities (<25 cm sec-1). (Moyle, et al. 1995)

Range: Mid-elevation tributaries to the Sacramento, San Joaquin and Russian rivers. (DFG 2008a)

Nearest CNDDDB occurrence of record: Approximately 12 miles SSE in the North Fork Cosumnes River. (CNDDDB 2016)

Habitat on site: Marginal within both Granite Canyon Creek and Granite Creek. Pools within the creeks may not have sufficient depth for summer survival.

Potential impacts: Potential habitat for the species is protected by steep slopes that preclude any development activities near either creek, and would be further protected by suggested setbacks of 110 feet from the perennial waters.

VII. Important Biological Corridor Evaluation

The project site was evaluated for conformity of the project to El Dorado County General Plan Policy 7.4.2.9 guidelines for development within an Important Biological Corridor (IBC). A point-by-point consideration of the guidelines follows.

- **Increased minimum parcel size**

The proposed minimum parcel size is 11.6 acres, whereas the zoning allows 10 acre minimum.

- **Higher canopy-retention standards and/or different mitigation standards/thresholds for oak woodlands**

Total oak canopy coverage was calculated as 65.9 percent of the project site (Table 3). No oak canopy is currently proposed for removal, whereas thirty percent removal would be allowed under Policy 7.4.4.4.

- **Lower thresholds for grading permits**

All proposed parcels have direct access from Thompson Hill Road. Eventually, driveways, building pads and septic areas would be added.

- **Higher wetlands/riparian retention standards and/or more stringent mitigation requirements for wetland/riparian habitat loss**

This project will have no effect on wetland or riparian areas.

- **Increased riparian corridor and wetland setbacks.**

Larger setbacks from waters and wetlands is suggested (55 feet from wetlands, ephemeral and intermittent waters, 110 feet from perennial waters).

- **Greater protection for rare plants (e.g., no disturbance at all or disturbance only as recommended by U.S. Fish and Wildlife Service/California Department of Fish and Wildlife)**

The species of concern found on-site (Brandegees' clarkia) is protected by slopes too steep for development. No other rare plants were found on-site.

- **Standards for retention of contiguous areas/large expanses of other (non-oak or non-sensitive) plant communities**

No non-oak or sensitive plant communities will be disturbed by the project.

- **Building permits discretionary or some other type of "site review" to ensure that canopy is retained**

This Biological Resources report is being submitted in partial fulfillment of this requirement.

- **More stringent standards for lot coverage, floor area ratio (FAR) and building height**

No buildings are proposed at this time.

- **No hindrances to wildlife movement (e.g., no fences that would restrict wildlife movement)**

It is recommended that fences be limited to those that would not restrict wildlife movement, except fences immediately adjacent to barns or homes for the purposes of protecting livestock, crops or landscaping.

VIII. References

- Baad, M.F. and G.D. Hanna. 1987. Pine Hill Ecological Reserve operations and maintenance schedule. Unpublished report prepared for the California Department of Fish and Game. *In: United States Fish and Wildlife Service. 2002. Recovery Plan for Gabbro Soil Plants of the Central Sierra Nevada Foothills.* Portland, Oregon, Page II-21.
- Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti and D.H. Wilken (eds). 2012. The Jepson Manual, Vascular Plants of California, Second Edition. Berkeley: University of California Press.
- Brummitt, R.K. 1974. A remarkable new species of *Calystegia (Convolvulaceae)* from California. *Kew Bull.* 29(3): 499-502.
- California Department of Fish & Wildlife, Biogeographic Data Branch. 2016. California Natural Diversity Database *within* Biogeographic Information and Observation System (BIOS). <http://bios.dfg.ca.gov>
- California Department of Fish & Wildlife. 2009. Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities. http://www.dfg.ca.gov/wildlife/nongame/survey_monitor.html.
- California Native Plant Society (CNPS). 2016. Inventory of Rare and Endangered Plants, Coloma and surrounding USGS Quads. <http://cnps.site.aplus.net/cgi-bin/inv/inventory.cgi>
- California Natural Diversity Data Base, Department of Fish and Wildlife. 2016. *Rarefind 5*, Commercial edition. <https://nrm.dfg.ca.gov/cnddb>
- California Natural Diversity Database, Department of Fish and Game. 2016. *State and Federally Listed Endangered, Threatened, and Rare Plants of California*. <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109390>
- Dunham, J., R. Schroeter and B. Rieman. 2003. Influence of maximum water temperature on occurrence of Lahontan cutthroat trout within streams. *North American Journal of Fisheries Management* 23(3):1042-1049.
- EIP Associates. 1991. *Preserve Sites and Preservation Strategies for Rare Plant Species in Western El Dorado County*. County of El Dorado. Unpublished report.
- El Dorado County. 2004. El Dorado County General Plan. Placerville, California: El Dorado County Planning Department.
- Elias, Thomas S. 1987. *Conservation and Management of Rare and Endangered Plants*. Sacramento: California Native Plant Society.
- Hunter, J.C. and J.E. Horenstein. 1991. "The Vegetation of the Pine Hill area (California) and its relation to substratum." Pages 197-206 in: *The vegetation of ultramafic (serpentine) soils*. Proceedings of the First International Conference on Serpentine Soils.
- Jepson Flora Project (eds.) 2016. Jepson eFlora, <http://ucjeps.berkeley.edu/IJM.html>
- Klein, A., J. Crawford, J. Evens, T. Keeler-Wolfe and D. Hickson. 2007. Classification of the Vegetative Alliances of the Northern Sierra Nevada Foothills; Report prepared for California Department of Fish and Game. Sacramento: California Native Plant Society.

- Lichvar, R.W., M. Butterwick, N.C. Melvin and W.N. Kirchner. 2014. Arid West 2014 Regional Wetland Plant List. Army Corps of Engineers, Cold Regions Research and Engineering Laboratory. Accessed 4/24/2016 at:
http://rsgisias.crrel.usace.army.mil/nwpl_static/data/DOC/lists_2014/Regions/pdf/reg_AW_2014v1.pdf
- LSA Associates, Inc. 2004. Ricksecker's water scavenger beetle *Hydrochara rickseckeri*. Solano County Water Agency Species Descriptions. <http://www.scwa2.com/species.html> .
- Mayer, K.E. and W.F. Laudenslayer, Jr. 1988. A guide to wildlife habitats of California. Sacramento: California Dept. of Fish and Game.
- McGinnis, S.M. 1984. *Freshwater fishes of California. California Natural History Guides (49)*. Berkeley: University California Press.
- Moyle, P.B., R.M. Yoshiyama, J.E. Williams and E.D. Wikramanayake. 1995. Fish species of special concern in California, Second Edition. University of California, Davis, Department of Wildlife and Fisheries Biology.
- NatureServe. 2016. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. Available <http://explorer.natureserve.org>. (Accessed: April 24, 2016).
- National Geographic Maps. 2002. California: Seamless USGS topographic maps on CD-ROM. San Francisco, California.
- Sawyer, J.O., T. Keeler-Wolf and J.M. Evans. 2009. *A manual of California vegetation, 2nd ed.* Sacramento: California Native Plant Society.
- Shuford, W. D., and Gardali, T., editors. 2008. 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.
- Springer, R.K. 1968. *Geology of the Pine Hill Intrusive Complex, El Dorado County, CA*. University of California, Davis: unpublished Ph.D. thesis.
- United States Fish and Wildlife Service. 2002. *Recovery Plan for Gabbro Soil Plants of the Central Sierra Nevada Foothills*. Portland, Oregon.
- United States Department of Agriculture, Soil Conservation Service (USDA). 1974. Soil Survey of El Dorado Area, California. Washington, D.C.: U.S. Government Printing Office.
- United States Fish and Wildlife Service. 2016. IpaC trust report and official species list. <http://ecos.fws.gov/ipac>.
- Verner, J and A.S. Boss, technical coordinators. 1980. California wildlife and their habitats: western Sierra Nevada. Gen. Tech. Rep. PSW-37, 439p., illus. Pacific Southwest Forest and Range Exp. Stn., Forest Serv., U.S. Dep. Agric., Berkeley, Calif.
- Williams, P., R. Thorp, L. Richardson and S. Colla. 2014. Bumble Bees of North America, An Identification Guide. Princeton University Press.
- Wilson, J.L. 1986. *A Study of Plant Species Diversity and Vegetation Associated with the Pine Hill Gabbro Formation and Adjacent Substrata, El Dorado County, California*. California State University, Sacramento: unpublished M.A. thesis.
- Xerces Society for Invertebrate Conservation. 2016. Bumble bees: western bumble bee (*Bombus occidentalis*). <http://www.xerces.org/western-bumble-bee/> Accessed March 29, 2016.
- Zeiner, D.C., W.F. Laudenslayer, Jr., K.E. Mayer and M. White. 1988. California's Wildlife, Vol. I, Amphibians and Reptiles. Sacramento: Dept. of Fish and Game.

APPENDIX A

**United States Fish and Wildlife Service
Official Species List
updated April 22, 2016
and
IpaC Resources Report
dated April 24, 2016**



United States Department of the Interior



FISH AND WILDLIFE SERVICE

Sacramento Fish and Wildlife Office

FEDERAL BUILDING, 2800 COTTAGE WAY, ROOM W-2605

SACRAMENTO, CA 95825

PHONE: (916)414-6600 FAX: (916)414-6713

Consultation Code: 08ESMF00-2015-SLI-0854

April 22, 2016

Event Code: 08ESMF00-2016-E-02866

Project Name: Van Noord Parcel Map

Subject: Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, under the jurisdiction of the U.S. Fish and Wildlife Service (Service) that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Please follow the link below to see if your proposed project has the potential to affect other species or their habitats under the jurisdiction of the National Marine Fisheries Service:

http://www.nwr.noaa.gov/protected_species/species_list/species_lists.html

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2)

of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment



United States Department of Interior
Fish and Wildlife Service

Project name: Van Noord Parcel Map

Official Species List

Provided by:

Sacramento Fish and Wildlife Office
FEDERAL BUILDING
2800 COTTAGE WAY, ROOM W-2605
SACRAMENTO, CA 95825
(916) 414-6600

Consultation Code: 08ESMF00-2015-SLI-0854

Event Code: 08ESMF00-2016-E-02866

Project Type: DEVELOPMENT

Project Name: Van Noord Parcel Map

Project Description: North of Thompson Hill Road, Placerville, CA

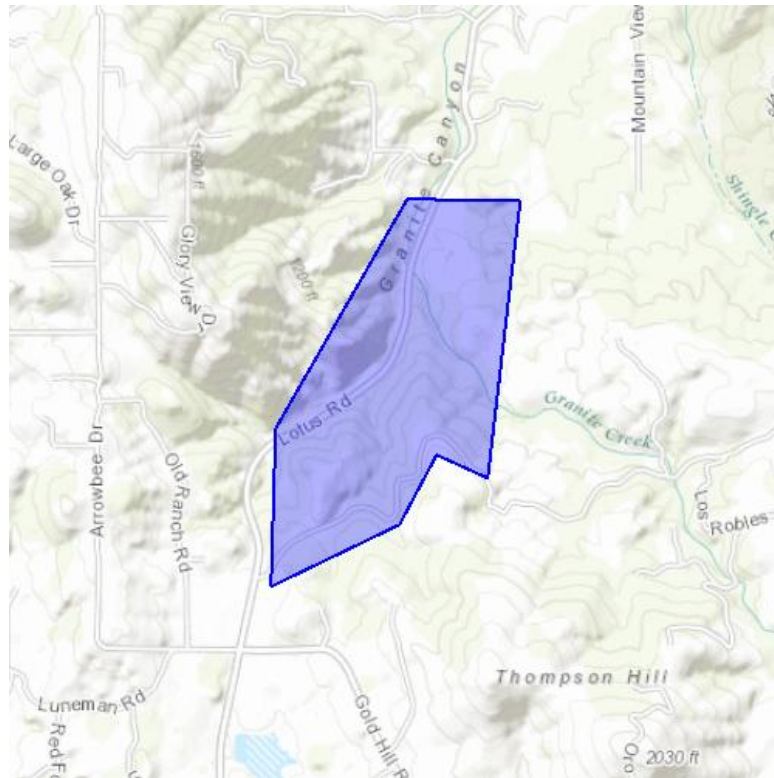
Please Note: The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.



United States Department of Interior
Fish and Wildlife Service

Project name: Van Noord Parcel Map

Project Location Map:



Project Coordinates: MULTIPOLYGON (((-120.91672897338866 38.786873494735666, -120.91089248657228 38.78680659127048, -120.91260910034178 38.77569974584943, -120.9151840209961 38.77663653454915, -120.91707229614258 38.77389304718155, -120.92368125915527 38.77141712653214, -120.92342376708984 38.77770713513942, -120.91672897338866 38.786873494735666)))

Project Counties: El Dorado, CA



United States Department of Interior
Fish and Wildlife Service

Project name: Van Noord Parcel Map

Endangered Species Act Species List

There are a total of 6 threatened or endangered species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Amphibians	Status	Has Critical Habitat	Condition(s)
California red-legged frog (<i>Rana draytonii</i>) Population: Entire	Threatened	Final designated	
Fishes			
Delta smelt (<i>Hypomesus transpacificus</i>) Population: Entire	Threatened	Final designated	
steelhead (<i>Oncorhynchus (=salmo) mykiss</i>) Population: Northern California DPS	Threatened	Final designated	
Flowering Plants			
Layne's butterweed (<i>Senecio layneae</i>)	Threatened		
Pine Hill ceanothus (<i>Ceanothus roderickii</i>)	Endangered		
Stebbins' morning-glory (<i>Calystegia stebbinsii</i>)	Endangered		



United States Department of Interior
Fish and Wildlife Service

Project name: Van Noord Parcel Map

Critical habitats that lie within your project area

There are no critical habitats within your project area.

Van Noord Parcel Map

IPaC Trust Resources Report

Generated April 24, 2016 01:32 PM MDT, IPaC v3.0.2

This report is for informational purposes only and should not be used for planning or analyzing project level impacts. For project reviews that require U.S. Fish & Wildlife Service review or concurrence, please return to the IPaC website and request an official species list from the Regulatory Documents page.

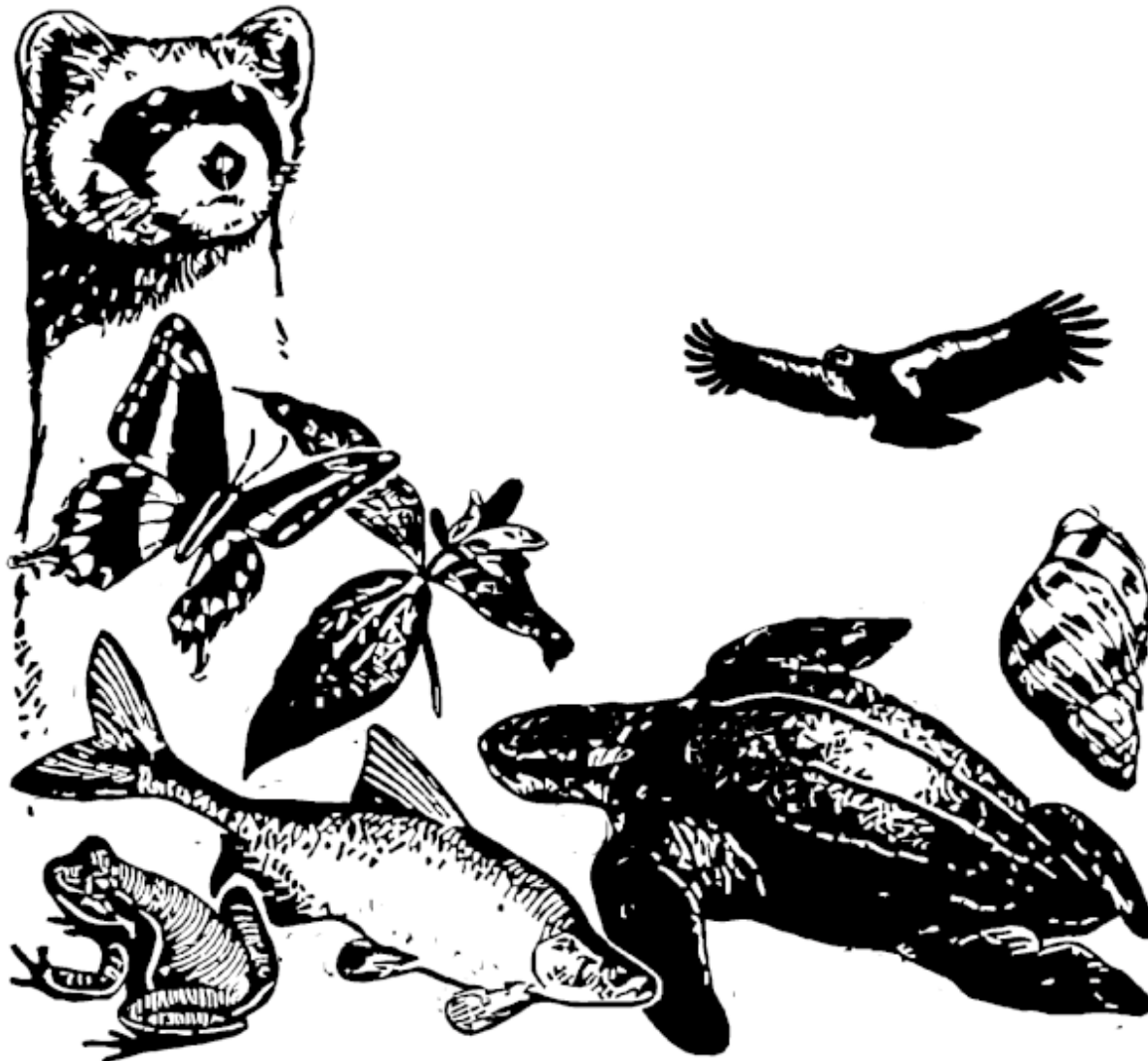


Table of Contents

IPaC Trust Resources Report	1
Project Description	1
Endangered Species	2
Migratory Birds	4
Refuges & Hatcheries	7
Wetlands	8

U.S. Fish & Wildlife Service

IPaC Trust Resources Report



NAME

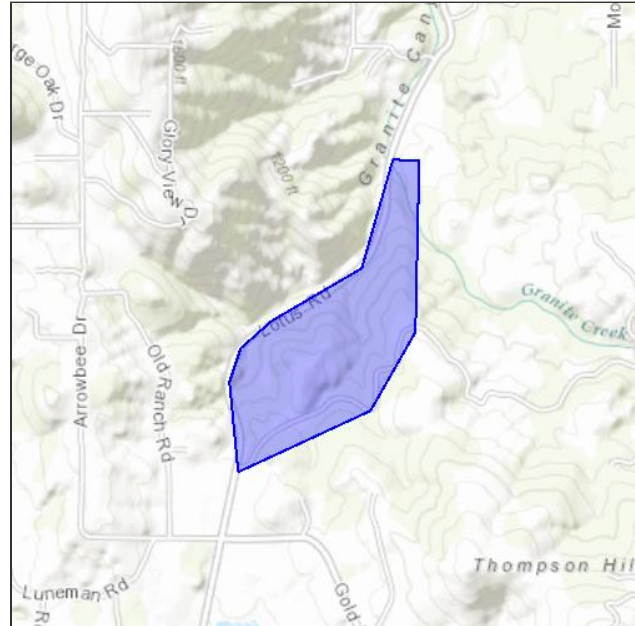
Van Noord Parcel Map

LOCATION

El Dorado County, California

IPAC LINK

<https://ecos.fws.gov/ipac/project/WMI24-JRQQN-GOXAO-X2QNL-C3WZL4>



U.S. Fish & Wildlife Service Contact Information

Trust resources in this location are managed by:

Sacramento Fish And Wildlife Office

Federal Building

2800 Cottage Way, Room W-2605

Sacramento, CA 95825-1846

(916) 414-6600

Endangered Species

Proposed, candidate, threatened, and endangered species are managed by the [Endangered Species Program](#) of the U.S. Fish & Wildlife Service.

This USFWS trust resource report is for informational purposes only and should not be used for planning or analyzing project level impacts.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list from the Regulatory Documents section.

[Section 7](#) of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency.

A letter from the local office and a species list which fulfills this requirement can only be obtained by requesting an official species list either from the Regulatory Documents section in IPaC or from the local field office directly.

The list of species below are those that may occur or could potentially be affected by activities in this location:

Amphibians

California Red-legged Frog *Rana draytonii* Threatened

CRITICAL HABITAT

There is **final** critical habitat designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=D02D

Fishes

Delta Smelt *Hypomesus transpacificus* Threatened

CRITICAL HABITAT

There is **final** critical habitat designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=E070

Steelhead *Oncorhynchus (=Salmo) mykiss* Threatened

CRITICAL HABITAT

There is **final** critical habitat designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=E08D

Flowering Plants

Layne's Butterweed *Senecio layneae* Threatened

CRITICAL HABITAT

No critical habitat has been designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=Q1O2

Pine Hill Ceanothus *Ceanothus roderickii* Endangered

CRITICAL HABITAT

No critical habitat has been designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=Q0DK

Stebbins' Morning-glory *Calystegia stebbinsii* Endangered

CRITICAL HABITAT

No critical habitat has been designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=Q0AU

Critical Habitats

There are no critical habitats in this location

Migratory Birds

Birds are protected by the [Migratory Bird Treaty Act](#) and the [Bald and Golden Eagle Protection Act](#).

Any activity that results in the take of migratory birds or eagles is prohibited unless authorized by the U.S. Fish & Wildlife Service.^[1] There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured.

Any person or organization who plans or conducts activities that may result in the take of migratory birds is responsible for complying with the appropriate regulations and implementing appropriate conservation measures.

1. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

Additional information can be found using the following links:

- Birds of Conservation Concern
<http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Conservation measures for birds
<http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Year-round bird occurrence data
<http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/akn-histogram-tools.php>

The following species of migratory birds could potentially be affected by activities in this location:

Bald Eagle <i>Haliaeetus leucocephalus</i>	Bird of conservation concern
Year-round http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B008	
Black Rail <i>Laterallus jamaicensis</i>	Bird of conservation concern
Season: Breeding http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B09A	
Black-chinned Sparrow <i>Spizella atrogularis</i>	Bird of conservation concern
Season: Breeding http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B01R	
California Spotted Owl <i>Strix occidentalis occidentalis</i>	Bird of conservation concern
Year-round http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B08L	

Calliope Hummingbird <i>Stellula calliope</i> Season: Breeding http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B0K3	Bird of conservation concern
Costa's Hummingbird <i>Calypte costae</i> Season: Breeding http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B0JE	Bird of conservation concern
Flammulated Owl <i>Otus flammeolus</i> Season: Breeding http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B0DK	Bird of conservation concern
Fox Sparrow <i>Passerella iliaca</i> Year-round	Bird of conservation concern
Green-tailed Towhee <i>Pipilo chlorurus</i> Season: Breeding http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B0IO	Bird of conservation concern
Lewis's Woodpecker <i>Melanerpes lewis</i> Season: Wintering http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B0HQ	Bird of conservation concern
Loggerhead Shrike <i>Lanius ludovicianus</i> Year-round http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B0FY	Bird of conservation concern
Long-billed Curlew <i>Numenius americanus</i> Season: Wintering http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B06S	Bird of conservation concern
Nuttall's Woodpecker <i>Picoides nuttallii</i> Year-round http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B0HT	Bird of conservation concern
Oak Titmouse <i>Baeolophus inornatus</i> Year-round http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B0MJ	Bird of conservation concern
Olive-sided Flycatcher <i>Contopus cooperi</i> Season: Breeding http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B0AN	Bird of conservation concern
Peregrine Falcon <i>Falco peregrinus</i> Season: Wintering http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B0FU	Bird of conservation concern
Rufous-crowned Sparrow <i>Aimophila ruficeps</i> Year-round http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B0MX	Bird of conservation concern

Short-eared Owl <i>Asio flammeus</i> Season: Wintering http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B0HD	Bird of conservation concern
Snowy Plover <i>Charadrius alexandrinus</i> Season: Breeding	Bird of conservation concern
Swainson's Hawk <i>Buteo swainsoni</i> Season: Breeding http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B070	Bird of conservation concern
Western Grebe <i>aechmophorus occidentalis</i> Season: Wintering http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B0EA	Bird of conservation concern
Williamson's Sapsucker <i>Sphyrapicus thyroideus</i> Year-round http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B0FX	Bird of conservation concern
Willow Flycatcher <i>Empidonax traillii</i> Season: Breeding http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B0F6	Bird of conservation concern
Yellow-billed Magpie <i>Pica nuttalli</i> Year-round http://ecos.fws.gov/tess_public/profile/speciesProfile.action?sPCODE=B0N8	Bird of conservation concern

Wildlife refuges and fish hatcheries

There are no refuges or fish hatcheries in this location

Wetlands in the National Wetlands Inventory

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

DATA LIMITATIONS

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

DATA EXCLUSIONS

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

DATA PRECAUTIONS

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

This location overlaps all or part of the following wetlands:

Freshwater Emergent Wetland

[PEMFh](#)

0.119 acre

A full description for each wetland code can be found at the National Wetlands Inventory website: <http://107.20.228.18/decoders/wetlands.aspx>

APPENDIX B

**California Department of Fish and Game
Natural Diversity Database RareFind 5 Report
Coloma and Surrounding USGS Quads
updated April 1, 2016**



Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database



Query Criteria: Quad (Auburn (3812181) OR Clarksville (3812161) OR Coloma (3812078) OR Garden Valley (3812077) OR Georgetown (3812087) OR Greenwood (3812088) OR Pilot Hill (3812171) OR Placerville (3812067) OR Shingle Springs (3812068))

Van Noord Tentative Parcel Map, Thompson Hill Road.

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Accipiter gentilis</i> northern goshawk	ABNKC12060	None	None	G5	S3	SSC
<i>Agelaius tricolor</i> tricolored blackbird	ABPBXB0020	None	None	G2G3	S1S2	SSC
<i>Allium jepsonii</i> Jepson's onion	PMLIL022V0	None	None	G2	S2	1B.2
<i>Ammonitella yatesii</i> tight coin (=Yates' snail)	IMGASB0010	None	None	G1	S1	
<i>Andrena blennospermatis</i> Blennosperma vernal pool andrenid bee	IIHYM35030	None	None	G2	S2	
<i>Andrena subapasta</i> an andrenid bee	IIHYM35210	None	None	G1G2	S1S2	
<i>Aquila chrysaetos</i> golden eagle	ABNKC22010	None	None	G5	S3	FP
<i>Arctostaphylos nissenana</i> Nissenan manzanita	PDERI040V0	None	None	G1	S1	1B.2
<i>Ardea alba</i> great egret	ABNGA04040	None	None	G5	S4	
<i>Ardea herodias</i> great blue heron	ABNGA04010	None	None	G5	S4	
<i>Athene cunicularia</i> burrowing owl	ABNSB10010	None	None	G4	S3	SSC
<i>Balsamorhiza macrolepis</i> big-scale balsamroot	PDAST11061	None	None	G2	S2	1B.2
<i>Banksula californica</i> Alabaster Cave harvestman	ILARA14020	None	None	GH	SH	
<i>Banksula galilei</i> Galile's cave harvestman	ILARA14040	None	None	G1	S1	
<i>Bombus morrisoni</i> Morrison bumble bee	IIHYM24460	None	None	G4G5	S1S2	
<i>Bombus occidentalis</i> western bumble bee	IIHYM24250	None	None	G2G3	S1	
<i>Branchinecta lynchi</i> vernal pool fairy shrimp	ICBRA03030	Threatened	None	G3	S3	
<i>Calystegia stebbinsii</i> Stebbins' morning-glory	PDCON040H0	Endangered	Endangered	G1	S1	1B.1
<i>Calystegia vanzuukiae</i> Van Zuurk's morning-glory	PDCON040Q0	None	None	G2Q	S2	1B.3



Selected Elements by Scientific Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Carex cyrtostachya Sierra arching sedge	PMCYP03M00	None	None	G2	S2	1B.2
Ceanothus roderickii Pine Hill ceanothus	PDRHA04190	Endangered	Rare	G1	S1	1B.2
Central Valley Drainage Hardhead/Squawfish Stream Central Valley Drainage Hardhead/Squawfish Stream	CARA2443CA	None	None	GNR	SNR	
Chlorogalum grandiflorum Red Hills soaproot	PMLIL0G020	None	None	G2	S2	1B.2
Clarkia biloba ssp. brandegeae Brandegee's clarkia	PDONA05053	None	None	G4G5T4	S4	4.2
Corynorhinus townsendii Townsend's big-eared bat	AMACC08010	None	Candidate Threatened	G3G4	S2	SSC
Cosumnoperla hypocreana Cosumnes stripetail	IIPLE23020	None	None	G2	S2	
Crocانthemum suffrutescens Bisbee Peak rush-rose	PDCIS020F0	None	None	G2Q	S2	3.2
Desmocerus californicus dimorphus valley elderberry longhorn beetle	IICOL48011	Threatened	None	G3T2	S2	
Elanus leucurus white-tailed kite	ABNKC06010	None	None	G5	S3S4	FP
Emys marmorata western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
Fremontodendron decumbens Pine Hill flannelbush	PDSTE03030	Endangered	Rare	G1	S1	1B.2
Fritillaria eastwoodiae Butte County fritillary	PMLIL0V060	None	None	G3Q	S3	3.2
Galium californicum ssp. sierrae El Dorado bedstraw	PDRUB0N0E7	Endangered	Rare	G5T1	S1	1B.2
Haliaeetus leucocephalus bald eagle	ABNKC10010	Delisted	Endangered	G5	S2	FP
Horkelia parryi Parry's horkelia	PDROS0W0C0	None	None	G2	S2	1B.2
Hydrochara rickseckeri Ricksecker's water scavenger beetle	IICOL5V010	None	None	G2?	S2?	
Lasionycteris noctivagans silver-haired bat	AMACC02010	None	None	G5	S3S4	
Lathyrus sulphureus var. argillaceus dubious pea	PDFAB25101	None	None	G5T1T2	S1S2	3
Myotis yumanensis Yuma myotis	AMACC01020	None	None	G5	S4	
Oncorhynchus mykiss irideus steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	G5T2Q	S2	



Selected Elements by Scientific Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Packera layneae</i> Layne's ragwort	PDAST8H1V0	Threatened	Rare	G2	S2	1B.2
<i>Pekania pennanti</i> fisher - West Coast DPS	AMAJF01021	Proposed Threatened	Candidate Threatened	G5T2T3Q	S2S3	SSC
<i>Phrynosoma blainvillii</i> coast horned lizard	ARACF12100	None	None	G3G4	S3S4	SSC
<i>Rana boylei</i> foothill yellow-legged frog	AAABH01050	None	None	G3	S3	SSC
<i>Rana draytonii</i> California red-legged frog	AAABH01022	Threatened	None	G2G3	S2S3	SSC
<i>Riparia riparia</i> bank swallow	ABPAU08010	None	Threatened	G5	S2	
<i>Sagittaria sanfordii</i> Sanford's arrowhead	PMALI040Q0	None	None	G3	S3	1B.2
<i>Viburnum ellipticum</i> oval-leaved viburnum	PDCPR07080	None	None	G4G5	S3?	2B.3
<i>Wyethia reticulata</i> El Dorado County mule ears	PDAST9X0D0	None	None	G2	S2	1B.2

Record Count: 49

APPENDIX C

California Native Plant Society
On-line Inventory of Rare and Endangered Plants
Coloma and Surrounding USGS Quads
April 22, 2016

CNPS Inventory of Rare and Endangered Plants




































Status: Plant Press Manager window with 41 items - Fri, Apr. 22, 2016 12:20 ET c

- During each visit, we provide you with an empty "Plant Press" for collecting items of interest.
- Several report formats are available. Use the CSV and XML options to download raw data.

Reformat list as: Standard List - with Plant Press controls ▾

DELETE unchecked items check all check none

open	save	scientific	common	family	CNPS
	<input checked="" type="checkbox"/>	<u>Allium jepsonii</u>	Jepson's onion	Alliaceae	List 1B.2
	<input checked="" type="checkbox"/>	<u>Allium sanbornii</u> var. <u>congdonii</u>	Congdon's onion	Alliaceae	List 4.3
	<input checked="" type="checkbox"/>	<u>Allium sanbornii</u> var. <u>sanbornii</u>	Sanborn's onion	Alliaceae	List 4.2
	<input checked="" type="checkbox"/>	<u>Arctostaphylos mewukka</u> ssp. <u>truei</u>	True's manzanita	Ericaceae	List 4.2
	<input checked="" type="checkbox"/>	<u>Arctostaphylos nissenana</u>	Nissenan manzanita	Ericaceae	List 1B.2
	<input checked="" type="checkbox"/>	<u>Balsamorhiza macrolepis</u>	big-scale balsamroot	Asteraceae	List 1B.2
	<input checked="" type="checkbox"/>	<u>Brasenia schreberi</u>	watershield	Cabombaceae	List 2B.3
	<input checked="" type="checkbox"/>	<u>Calochortus clavatus</u> var. <u>avius</u>	Pleasant Valley mariposa lily	Liliaceae	List 1B.2
	<input checked="" type="checkbox"/>	<u>Calystegia stebbinsii</u>	Stebbins' morning-glory	Convolvulaceae	List 1B.1
	<input checked="" type="checkbox"/>	<u>Calystegia vanzuukiae</u>	Van Zuuk's morning-glory	Convolvulaceae	List 1B.3
	<input checked="" type="checkbox"/>	<u>Carex cyrtostachya</u>	Sierra arching sedge	Cyperaceae	List 1B.2
	<input checked="" type="checkbox"/>	<u>Ceanothus roderickii</u>	Pine Hill ceanothus	Rhamnaceae	List 1B.1
	<input checked="" type="checkbox"/>	<u>Chlorogalum grandiflorum</u>	Red Hills soaproot	Agavaceae	List 1B.2
	<input checked="" type="checkbox"/>	<u>Clarkia biloba</u> ssp. <u>brandegeae</u>	Brandegge's clarkia	Onagraceae	List 4.2
	<input checked="" type="checkbox"/>	<u>Clarkia virgata</u>	Sierra clarkia	Onagraceae	List 4.3
	<input checked="" type="checkbox"/>	<u>Claytonia parviflora</u> ssp. <u>grandiflora</u>	streambank spring beauty	Montiaceae	List 4.2
	<input checked="" type="checkbox"/>	<u>Crocanthemum suffrutescens</u>	Bisbee Peak rush-rose	Cistaceae	List 3.2
	<input checked="" type="checkbox"/>	<u>Erigeron petrophilus</u> var. <u>sierrensis</u>	northern Sierra daisy	Asteraceae	List 4.3
	<input checked="" type="checkbox"/>	<u>Eriogonum tripodum</u>	tripod buckwheat	Polygonaceae	List 4.2
	<input checked="" type="checkbox"/>	<u>Fremontodendron decumbens</u>	Pine Hill flannelbush	Malvaceae	List 1B.2
	<input checked="" type="checkbox"/>	<u>Fritillaria eastwoodiae</u>	Butte County fritillary	Liliaceae	List 3.2

	✓	<u>Gallium californicum</u> ssp. <u>sierrae</u> 	El Dorado bedstraw	Rubiaceae	List 1B.2
	✓	<u>Githopsis pulchella</u> ssp. <u>sergentinicola</u> 	serpentine bluecup	Campanulaceae	List 4.3
	✓	<u>Glyceria grandis</u> 	American manna grass	Poaceae	List 2B.3
	✓	<u>Horkella parryi</u> 	Parry's horkella	Rosaceae	List 1B.2
	✓	<u>Jepsonia heterandra</u> 	foothill jepsonia	Saxifragaceae	List 4.3
	✓	<u>Lathyrus sulphureus</u> var. <u>argillaceus</u>	dubious pea	Fabaceae	List 3
	✓	<u>Lilium humboldtii</u> ssp. <u>humboldtii</u> 	Humboldt lily	Liliaceae	List 4.2
	✓	<u>Monardella candicans</u> 	Sierra monardella	Lamiaceae	List 4.3
	✓	<u>Myrica hartwegii</u> 	Sierra sweet bay	Myricaceae	List 4.3
	✓	<u>Navarretia eriocephala</u>	hoary navarretia	Polemoniaceae	List 4.3
	✓	<u>Packera layneae</u> 	Layne's ragwort	Asteraceae	List 1B.2
	✓	<u>Piperia leptopetala</u> 	narrow-petaled rein orchid	Orchidaceae	List 4.3
	✓	<u>Poa sierrae</u>	Sierra blue grass	Poaceae	List 1B.3
	✓	<u>Potamogeton ephyrus</u>	Nuttall's ribbon-leaved pondweed	Potamogetonaceae	List 2B.2
	✓	<u>Rhynchospora capitellata</u> 	brownish beaked-rush	Cyperaceae	List 2B.2
	✓	<u>Sagittaria sanfordii</u> 	Sanford's arrowhead	Alismataceae	List 1B.2
	✓	<u>Scutellaria galericulata</u> 	marsh skullcap	Lamiaceae	List 2B.2
	✓	<u>Stuckenia filiformis</u> ssp. <u>alpina</u>	slender-leaved pondweed	Potamogetonaceae	List 2B.2
	✓	<u>Viburnum ellipticum</u> 	oval-leaved viburnum	Adoxaceae	List 2B.3
	✓	<u>Wyethia reticulata</u> 	El Dorado County mule ears	Asteraceae	List 1B.2

DELETE unchecked items

check all

check none

APPENDIX D

Evaluation of Special-Status Species with Known Occurrences in Shingle Springs and Surrounding USGS Quads

Notations, Symbols and Abbreviations

Species printed in bold type are listed under Federal and/or California Endangered Species Acts.

Listing Status = Federal and California Endangered Species Acts listing status:

E = Endangered R = Rare T = Threatened
D = De-listed C = Candidate for listing

Conservation Ranks are shorthand formulas that provide information on the rarity of species in their global range (G1 to G5) and within the state (S1 to S5). Status of subspecies is also ranked (T1 to T5).

G1 or S1 or T1 = Extremely endangered: <6 viable occurrences (EOs) or <1000 individuals or <2000 acres of occupied habitat

G2 or S2 or T2 = Endangered: 6-20 EOs or 1000-3000 individuals or 2000-10,000 acres

G3 or S3 or T3 = Restricted range, rare: 21-80 EOs or 3000-10,000 individuals or 10,000-50,000 acres

G4 or S4 or T4 = Apparently secure: factors exist to cause some concern, such as narrowing of habitat

G5 or S5 or T5 = Demonstrably secure: commonly found throughout its historic range.

Other Notations

G1G2 = proper rank is most likely withing this range of ranks

G2? = proper rank is probably G2

Q = there is some taxonomic question about the species

H = Historic community, presumed eliminated; possibly extinct

NR = Not ranked

N = Non-breeder

Abbreviations

BCC = U.S. Fish & Wildlife Service Birds of Conservation Concern

CC = Species of conservation concern to the scientific community; no state or federal protected status

CDFW = California Department of Fish and Wildlife

CITGW = CDF California Interagency Wildlife Task Group

CNPS = California Native Plant Society

CNPS:1B = CNPS list of rare, threatened or endangered plants in California and elsewhere

CNPS:2 = CNPS list of rare, threatened or endangered plants in California, but more common elsewhere

CNPS:3 = CNPS review list of plants with limited distribution information or problematic taxonomy

.1 = Seriously endangered in California (over 80% of occurrences threatened/ high degree of immediate threat)

.2 = Fairly endangered in California (20-80% of occurrences threatened)

.3 = Not very endangered in California (<20% of occurrences threatened or no threats known)

SSC = CDFW Species of Special Concern

FP = Fully Protected Species

HCPB = CDF Habitat Conservation Planning Branch

IUCN = World Conservation Union

VU = World Conservation Union list of vulnerable species

LC = World Conservation Union list of species of least concern

USBC = United States Bird Conservancy

Watch list = USBC list of threatened and declining species

USFWS = United States Fish and Wildlife Service

Special-status Species Common Name	Listing Status Federal / State (OTHER)	CNDDDB Rank Global/State	Habitat Requirements	Potential to occur on project site?
<u>Invertebrates</u>				
<i>Ammonitella yatesii</i> Yate's snail, tight coin	— / —	G2 S2	Inhabits limestone caves and outcroppings; favors north-facing slopes. (CNDDDB 2016)	No. Project site has no limestone caves or outcroppings required by the species.
<i>Andrena blennospermatis</i> Blennosperma vernal pool andrenid bee	— / —	G2 S2	Forages on vernal pool <i>Blennosperma</i> plants. Nests in uplands surrounding vernal pools. (CNDDDB 2016)	No. Project site has no vernal pools and no <i>Blennosperma</i> plants.
<i>Andrena subapasta</i> Vernal pool andrenid bee	— / —	G1G2 S1S2	Forages on <i>Arenaria californica</i> , <i>Orthocarpus erianthus</i> and <i>Lasthenia</i> sp. Nests in uplands near vernal pools. (CNDDDB 2016)	No. Project site lacks vernal pool habitat. The species' host plants were not found on-site.
<i>Banksula californica</i> Alabaster cave harvestman	— / —	GH SH	Known only from Alabaster Cave, 5.5 miles west of Pilot Hill alongside Rattlesnake Bar Road. (CNDDDB 2016)	No. Project site has no cave habitat.
<i>Banksula galilei</i> Galile's cave harvestman	— / —	G1 S1	Limestone caves. Known only from Lime Rock Caves, south of Clipper Gap and north of the North Fork American River. (CNDDDB 2016)	No. Project site has no cave habitat.
<i>Bombus morrisoni</i> Morrison bumble bee	— / —	G4G5 S1S2	Occurs throughout the Mountain West from California east of the Sierra-Cascade Ranges to southern British Columbia; in the Desert West east to New Mexico, Texas, and north to western South Dakota (Williams et al. 2014).	No. Project site is not within the known range of the species.
<i>Bombus occidentalis</i> Western bumble bee	— / —	G2G3 S1	Formerly known from northern California north throughout Alaska, east to the western Dakotas, and south to northern Arizona, and New Mexico. Current range is much reduced, especially in California, Oregon, Washington and southern British Columbia. (Xerces Soc. 2016)	Yes. See text for further discussion.
<i>Branchinecta lynchi</i> Vernal pool fairy shrimp	T / —	G3 S2S3	Inhabits small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression vernal pools in grasslands of the Central Valley, Central Coast Ranges and South Coast Mountains. (CNDDDB 2016)	No. Project site has no vernal pool habitat.
<i>Cosumnoperla hypocrena</i> Cosumnes stripetail stonefly	— / —	G2 S2	Intermittent streams on western slope of Central Sierra Nevada foothills in American and Cosumnes river watersheds (CNDDDB 2016)	Yes. See text for further discussion.

Special-status Species Common Name	Listing Status Federal / State (OTHER)	CNDDDB Rank Global/State	Habitat Requirements	Potential to occur on project site?
<i>Desmocerus californicus dimorphus</i> Valley elderberry longhorn beetle	T / —	G3T2 S2	Elderberry shrubs (<i>Sambucus</i> species), are the host plants of the beetles (USFWS 1999) Prefers to lay eggs in elderberries 2-8 inches in diameter, especially stressed plants. (CNDDDB 2016)	No. The host plant was not found on-site.
<i>Hydrochara rickseckeri</i> Ricksecker's water scavenger beetles	— / —	G2? S2?	Vernal pools and seasonal wetlands. Larvae are aquatic, probably predaceous, and adults are probably scavengers. (CNDDDB 2016)	Yes. See text for further discussion.
Fish				
<i>Hypomesus transpacificus</i> Delta smelt	T / T	G1 S1	Estuaries in Sacramento-San Joaquin Delta, and seasonally in Suisun Bay, Carquinez Strait and San Pablo Bay. Seldom found at salinities > 10ppt; most often at salinities < 2ppt. (CNDDDB 2016)	No. Project site is outside of the range of the species and lacks suitable slow-water habitat.
<i>Mylopharodon conocephalus</i> Hardhead	— / — (SSC)	G3 S3	Low to mid-elevation streams in the Sacramento-San Joaquin drainage, and Russian River. Require clear, deep pools with sand-gravel-boulder bottoms and slow water velocity. Not found where exotic centrarchids predominate. (CNDDDB 2016)	Yes. See text for further discussion.
<i>Oncorhynchus clarkii henshawi</i> Lahontan cutthroat trout	T / —	G4G5 S2	Cold water streams in Lahontan Basin (CNDDDB 2016). Maximum daily air temperatures cannot exceed 28.5°C (Dunham et. al 2003)	No. Project site has no cool-water perennial streams.
<i>Oncorhynchus mykiss irideus</i> Central Valley steelhead	T / —	G5T2Q S2	Sacramento and San Joaquin Rivers and their tributaries that have direct access to the ocean (ie. no dams) (MCGinnis 1984)	No. Project site has no perennial streams with direct access to the ocean.
<i>Oncorhynchus tsawaytscha</i> Winter-run chinook salmon, Sacramento River	E / E	G5 S1	Sacramento and San Joaquin Rivers and their tributaries that have direct access to the ocean (ie. no dams) (MCGinnis 1984)	No. Project site has no perennial streams with direct access to the ocean.
<i>Oncorhynchus tsawaytscha</i> Central Valley spring-run chinook salmon	T / T	G5 S1	Sacramento and San Joaquin Rivers and their tributaries that have direct access to the ocean (ie. no dams) (MCGinnis 1984)	No. Project site has no perennial streams with direct access to the ocean.
Amphibians				
<i>Ambystoma californiense</i> central population California tiger salamander	T / T (SSC)	G2G3 S2S3	Grasslands, oak savannah, edges of mixed woodland up to 1054 meters elevation. Breeds in seasonal ponds or vernal pools; lives in rodent or ground squirrel burrows remainder of year. (CWHR 2016)	No. Project site is out of the known range of the species, and lacks suitable breeding habitat. Nearest CNDDDB occurrences are near Ione and Galt, CA.

Special-status Species Common Name	Listing Status Federal / State (OTHER)	CNDDDB Rank Global/State	Habitat Requirements	Potential to occur on project site?
<i>Rana boylei</i> Foothill yellow-legged frog	— / — (SSC)	G3 S3	Found in or near perennial, rocky streams in a variety of habitats from sea level to 1940 m (6370 ft) elevation. (CWHR 2016) Require at least 15 weeks to attain metamorphosis. (CNDDDB 2016)	Yes. See text for further discussion.
<i>Rana draytonii</i> California red-legged frog	T / — (SSC)	G2G3 S2S3	Quiet pools of streams, marshes, occasionally ponds; A highly aquatic species with little movement away from streamside habitats. Intermittent streams must retain surface water in pools year-round for frog survival. (CWHR 2016) Permanent deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development, and access to estivation habitat. (CNDDDB 2016)	No. Waters on-site have a steep gradient, unsuitable for the species.
<i>Rana sierrae</i> Sierra Nevada yellow-legged frog	C / —	G2 S2	Aquatic habitats above 4500 feet elevation in Sierra Nevada mountains. (CWHR 2016) Always found within a few feet of water. Tadpoles may require 2-4 years to complete development. (CNDDDB 2016)	No. Project site is out of the known range of the species.
<i>Spea hammondi</i> Western spadefoot toad	— / — (SSC)	G3 S3	Grassland, but occasionally in valley-foothill hardwood habitats. Some populations may persist a few years in orchards or vineyards. (CWHR 2016) Breeds in vernal pools. (CNDDDB 2016)	No. Project site is outside of the range of the species and lacks suitable breeding habitat.
Reptiles				
<i>Emys marmorata</i> Western pond turtle	— / — (SSC)	G3G4 S3	Associated with permanent or nearly permanent water in a wide variety of habitat types below 6000 ft. elevation. Requires basking sites, and sandy banks or grassy open fields within 0.5 km of water for egg laying. (CNDDDB 2016)	Yes. See text for further discussion.
<i>Phrynosoma blainvillii</i> Blainville's horned lizard	— / — (SSC)	G4G5 S3S4	Sacramento Valley, surrounding foothills and Coast Ranges below 1200 m. elevation. Requires sandy or loose soil with abundant ant colonies for foraging. (CWHR 2016)	Yes. See text for further discussion.
<i>Thamnophis gigas</i> Giant garter snake	T / T	G2G3 S2S3	Freshwater marshes, low-gradient streams, drainage canals; winters in small mammal burrows in adjacent upland. Ranges from Butte Co. to Fresno Co. (CWHR 2016)	No. Project site is out of the known range of the species. Nearest CNDDDB occurrence is in Sacramento Co. east of Rancho Murieta.

Special-status Species Common Name	Listing Status Federal / State (OTHER)	CNDDDB Rank Global/State	Habitat Requirements	Potential to occur on project site?
Birds				
<i>Accipiter cooperii</i> (nesting) Cooper's hawk	— / — (IUCN:LC)	G5 S3	Nests in deciduous trees in riparian areas or live oaks near streams, seal level to 2700 m (9000 ft.) elevation. (CWHR 2016)	Yes. See text for further discussion.
<i>Accipiter gentilis</i> (nesting) Northern goshawk	— / — (SSC)	G5 S3	Nests in mature, dense conifer forest, usually on north slopes near water, in densest part of stand, but near openings. Red fir, lodgepole pine, Jeffrey pine and aspens are typical nest trees. (CNDDDB 2016)	No. Project site has no dense conifer forest habitat.
<i>Accipiter striatus</i> (nesting) Sharp-shinned hawk	— / — (IUCN:LC)	G5 S3	Nests in Ponderosa pine, black oak, riparian deciduous, mixed conifer and Jeffrey pine habitats. Prefers north slopes usually within 275 ft. of water. (CNDDDB 2016)	Yes. See text for further discussion.
<i>Aechmophorus occidentalis</i> Western grebe	— / — (BCC)	G5 SNR	Require large, open waters for courtship, feeding, and flocking. Frequent extensive beds of tall, emergent vegetation such as tules or cattails for nesting (CWHR 2016).	No. Project site has no large, open water habitat.
<i>Agelaius tricolor</i> (nesting colony) Tricolored blackbird	— / — (SSC)	G2G3 S2	Dense thickets of cattail, tule, willow, blackberry, wild rose or tall herbs near or emergent from water. (CWHR 2016)	No. Project site has no dense hydrophytic plant thickets near or emergent from water.
<i>Aimophila ruficeps</i> Rufous-crowned sparrow	— / — (BCC)	G5 SNR	Resident of sparse, mixed chaparral and coastal scrub habitats. Frequents relatively steep, often rocky hillsides with grass and forb patches; also grassy slopes without shrubs, if rock outcrops are present. (CWHR 2016)	Yes. See text for further discussion.
<i>Ammodramus savannarum</i> (nesting) Grasshopper sparrow	— / — (SSC)	G5 S2	Summer resident and breeder in dry, dense grasslands with scattered shrubs in foothills and lowlands west of Sierra-Cascade ranges. Uses shrubs for singing perches. (CWHR 2016)	Yes. See text for further discussion.
<i>Aquila chrysaetos</i> (nesting) Golden eagle	— / — (FP)	G5 S3	Nests on cliffs and in large trees in large open areas in rolling foothills. Needs open terrain for hunting: grasslands, deserts, savannahs, and early successional stages of forest and shrub habitats. (CWHR 2016)	Yes. See text for further discussion.
<i>Ardea alba</i> (rookery) Great egret	— / — (CDF:S)	G5 S4	Northern California resident birds are found in coastal lowlands, inland valleys and the Central Valley. Nests in large trees near marshes, tide-flats, irrigated pastures, margins of lakes and rivers. Nesting colonies must be isolated from human activities, or parents may abandon nests. (CWHR 2016)	No. Project site has lacks suitable wetland habitats.

Biological Resources Report
Van Noord Parcel Map, April 2016

Special-status Species Common Name	Listing Status Federal / State (OTHER)	CNDDDB Rank Global/State	Habitat Requirements	Potential to occur on project site?
<i>Ardea herodias</i> (rookery) Great blue heron	— / — (CDF:S)	G5 S4	Forages in marshes, lakes margins, tide-flats, rivers, streams, wet meadows. Prefers to nest in secluded groves of tall trees near shallow-water feeding areas, but feeding area may be up to 16 km (10 mi) distant. (CWHR 2016)	No. Project site lacks suitable wetland habitats.
<i>Asio flammeus</i> (nesting) Short-eared owl	— / — (SSC, BCC)	G5 S3	Open areas with few trees, such as annual and perennial grasslands, prairies, dunes, meadows, irrigated lands, and saline or fresh emergent wetlands. Breeding range does not include Sierra Nevada foothills. (CWHR 2016)	No. Project site is outside of the nesting range of the species and lacks suitable open habitat for foraging.
<i>Asio otus</i> (nesting) Long-eared owl	— / — (SSC)	G5 S3	Riparian habitat from valley foothill hardwood up to ponderosa pine communities. Nest in dense riparian stands of willow, cottonwoods, live oaks or conifers with adjacent open lands for foraging. (CWHR 2016)	No. Project site has no dense riparian vegetation.
<i>Athene cunicularia</i> (burrow sites) Burrowing owl	— / — (SSC, BCC)	G4 S3	Open, dry grassland and desert habitats; in grass, forb and open shrub stages of pinyon-juniper and ponderosa pine habitats (CWHR 2016)	No. Project site has very little open grassland or ponderosa pine habitats.
<i>Baeolophus inornatus</i> (nesting) Oak titmouse	— / — (BCC)	G5 S3?	Primarily associated with oaks; prefers open woodlands of oak, pine and oak, juniper and pinyon. Ventures into residential areas. (CWHR 2016)	Yes. See text for further discussion.
<i>Botaurus lentiginosus</i> American bittern	— / — (IUCN:LC)	G4 S3	Fresh or saline emergent wetlands, adjacent shallow water of lakes, backwaters of rivers or estuaries. (CWHR 2016)	No. Project site has lacks suitable wetland or water habitats.
<i>Buteo lagopus</i> (wintering) Rough-legged hawk	— / — (IUCN:LC)	G5 SNRN	Migrant and winter resident in California lowlands, desert areas, Modoc Plateau and along the coast. Hunts in wet meadows, marshes, swamps, riparian edges. (CWHR 2016)	No. Project site lacks suitable wetland or riparian habitats.
<i>Buteo regalis</i> (wintering) Ferruginous hawk	— / — (SSC)	G4 S3S4	Frequents large, open tracts of grasslands, sparse shrub, or desert habitats with elevated structures for nesting. (CWHR 2016)	No. Project site lacks large, open grasslands and is out of the known range of the species.
<i>Buteo swainsoni</i> (nesting) Swainson's hawk	— / T (SSC)	G5 S2	Breeds in stands with few trees in juniper-sage flats, riparian areas and in oak savannah in the Central Valley. Forages in adjacent grasslands or suitable grain or alfalfa fields or pastures. (CWHR 2016)	No. Project site has very little open grassland habitat and is out of the known range of the species.
<i>Calypte costa</i> Costa's hummingbird	— / — (BCC)		Most common in southern California, but also breeds along western edge of the San Joaquin Valley, primarily in arid scrub and chaparral habitats and in riparian edges. (CWHR 2016)	No. Project site is out of the known range of the species.

Biological Resources Report
Van Noord Parcel Map, April 2016

Special-status Species Common Name	Listing Status Federal / State (OTHER)	CNDDB Rank Global/State	Habitat Requirements	Potential to occur on project site?
<i>Carduelis lawrencei</i> (nesting) Lawrence's goldfinch	— / — (BCC)	G3G4 S3	Common along western edge of southern deserts; uncommon in foothills surrounding Central Valley. Breeds in open oak or other arid woodland within 0.5 mi. of water. Prefers to nest in an oak, most often near water, but also uses chaparral. (CWHR 2016)	Yes. See text for further discussion.
<i>Chaetura vauxi</i> (nesting) Vaux's swift	— / — (SSC)	G5 S3	Redwood and Douglas-fir habitats, sometimes in other conifer habitats, with nest sites in hollow trees and snags. (CWHR 2016)	No. Project site has no redwood or Douglas-fir habitats.
<i>Charadrius alexandrinus</i> (nesting) Snowy plover	— / — (BCC)	G3T3 S2	Nests, feeds, and takes cover on sandy or gravelly beaches along the coast, on estuarine salt ponds, alkali lakes, and at the Salton Sea. (CWHR 2016)	No. Project site has no suitable wetland or water habitats.
<i>Charadrius montanus</i> (wintering) Mountain plover	— / — (SSC)	G2 S2?	Found on short grasslands and plowed fields of the Central Valley from Sutter and Yuba cos. southward. Also found in foothill valleys west of San Joaquin Valley, Imperial Valley, plowed fields of Los Angeles and western San Bernardino counties, and along the central Colorado river valley. (CWHR 2016)	No. Project site is out of the known range of the species.
<i>Circus cyaneus</i> (nesting) Northern harrier	— / — (SSC)	G5 S3	Frequents meadows, grasslands, open rangelands, desert sinks, fresh and saltwater emergent wetlands; seldom found in wooded areas (CWHR 2016)	No. Project site has very little open habitats and no wetlands suitable for the species.
<i>Cinclus mexicanus</i> American dipper	— / — (IUCN-LC)	G5 S?	Confined to clear, fast-flowing streams and rivers with rocky shores and bottoms in the mountains. (CWHR 2016)	Yes. See text for further discussion.
<i>Coccyzus americanus</i> (nesting) Yellow-billed cuckoo	C / E	G5T3Q S1	Inhabits extensive deciduous riparian thickets with willows and dense, low-level foliage, which abut slow-moving watercourses, backwaters, or seeps. (CWHR 2016)	No. Project site lacks suitable riparian thickets or slow-moving waters.
<i>Contopus cooperi</i> (nesting) Olive-sided flycatcher	— / — (BCC)	G4 S4	Conifer or mixed hardwood/conifer forests (montane hardwood-conifer). Requires high perches for singing and hunting. (CWHR 2016)	No. Project site has montane hardwood-conifer habitat.
<i>Cypseloides niger</i> (nesting) Black swift	— / — (SSC, BCC)	G4 S2	Steep, rocky, often moist locations on cliff either on sea or behind or adjacent to a waterfall in a deep canyon. (CWHR 2016)	No. Project site lacks suitable cliffs with waterfalls required for nesting by the species.
<i>Elanus leucurus</i> White-tailed kite (nesting)	— / — (FP)	G5 S3S4	Resident in coastal and valley lowlands; rarely found away from agricultural areas. Nests near top of dense stand of oaks or other trees (CWHR 2016)	No. Project site is out of the known range of the species.

Special-status Species Common Name	Listing Status Federal / State (OTHER)	CNDDDB Rank Global/State	Habitat Requirements	Potential to occur on project site?
<i>Empidonax traillii brewsteri</i> (nesting) Little willow flycatcher	— / E	G5T1T2 S1S2	Wet meadows and montane riparian vegetation, 600-2500 m (2000 to 8000 ft) elevation. Dense willow thickets are required for nesting and roosting. (CWHR 2016)	No. Project site is out of the known range of the species.
<i>Falco columbarius</i> (wintering) Merlin	— / — (IUCN: LC)	G5 S3	Winter migrant utilizing habitats from grassland to Ponderosa pine and montane hardwood-conifer below 1500 m. Required cover is dense tree stands near water; seldom found in heavily wooded areas, or open deserts. (CWHR 2016)	Yes. See text for further discussion.
<i>Falco mexicanus</i> (nesting) Prairie falcon	— / — (IUCN: LC)	G5 S3	Distributed from grasslands through alpine meadows, but usually found in grasslands. Nests in open terrain with canyons, cliffs, escarpments, and rock outcrops. (CWHR 2016)	No. Project site lacks suitable open terrain for nesting.
<i>Falco peregrinus anatum</i> (nesting) American peregrine falcon	D / D (BCC)	G4 SNR	Requires protected cliffs and ledges for cover. Breeds near water on high cliffs, banks, dunes, mound; occasionally in tree or snag cavities or old nests of other raptors. (CWHR 2016)	Yes. See text for further discussion.
<i>Haliaeetus leucocephalus</i> (nesting, wintering) Bald eagle	D / E (FP, BCC)	G5 S2	Large bodies of water or free-flowing rivers with abundant fish, and adjacent snags or other perches. (CWHR 2016)	No. Project site is too far from suitable river or lake foraging habitats.
<i>Icteria virens</i> (nesting) Yellow-breasted chat	— / — (SSC)	G5 S3	Nests in dense riparian habitats dominated by willows, alders, Oregon ash, tall weeds, blackberry vines and grapevines. (CWHR 2016)	No. Project site has no suitable riparian habitat for nesting by the species.
<i>Lanius ludovicianus</i> (nesting) Loggerhead shrike	— / — (SSC)	G4 S4	Open habitats with scattered shrubs, posts, etc. for perches. Nests in densely-foliated shrub or tree (CWHR 2016)	No. Project site has no suitable open habitat for the species.
<i>Laterallus jamaicensis coturniculus</i> California black rail	— / T (BCC)	G4T1 S1	Freshwater marshes, wet meadows, shallow margins of saltwater marshes around larger bays. Requires non-fluctuating water depths of about one inch; dense vegetation for nesting. (CWHR 2016)	No. Project site has no suitable wetland habitat and is out of the known range of the species.
<i>Melanerpes lewis</i> (nesting) Lewis's woodpecker	— / — (BCC)	G4 S4	Winters in open oak savannah, broken deciduous and coniferous habitats. Nests in Coast Ranges, Modoc Plateau and eastern slope of Sierra Nevada. (CWHR 2016)	No. Project site is out of the nesting range of the species, but has suitable winter forage habitat.
<i>Melospiza melodia</i> (Modesto population) Modesto song sparrow	— / — (SSC)	G5 S3?	Freshwater wetlands, early succession riparian thickets and valley oak riparian groves below 200 ft. (61 m.) elevation. (Shuford & Gardali 2008)	No. Project site is out of the range of the species.

Biological Resources Report
Van Noord Parcel Map, April 2016

Special-status Species Common Name	Listing Status Federal / State (OTHER)	CNDDB Rank Global/State	Habitat Requirements	Potential to occur on project site?
<i>Numenius americanus</i> (nesting) Long-billed curlew	— / — (IUCN: LC)	G5 S2	Grasslands and wet meadows, usually adjacent to lakes, marshes, or estuaries. Breeds on grazed, mixed-grass and short grass prairies. (CWHR 2016)	No. Project site lacks suitable wetlands and is out of the known range of the species.
<i>Otus flammeolus</i> (nesting) Flammulated owl	— / — (BCC)	G4 S2S3	Coniferous forests between 1830-3048 m (6000-10,000 ft) elevation. Favors small openings and edges with snags. (CWHR 2016)	No. Project site is out of the known range of the species.
<i>Pandion haliaetus</i> (nesting) Osprey	— / — (CDF :S) (DFG: WL) (IUCN: LC)	G5 S3	Associated strictly with large, fish-bearing waters, primarily in Ponderosa pine and higher-elevation conifer habitats. Preys mostly on fish; also takes a few mammals, birds, reptiles, amphibians, and invertebrates. (CWHR, 2016)	No. Project site has no large, fish-bearing waters.
<i>Passerella iliaca</i> Fox sparrow	— / — (BCC)	G5 SNR	Breeds and winters in dense, brushy habitats or riparian thickets and forages on ground beneath shrubs. (CWHR, 2016)	Yes. See text for further discussion.
<i>Phalacrocorax auritus</i> (nesting colony) Double-crested cormorant	— / — (DFG: WL) (IUCN: LC)	G5 S3	Resident along the entire coast of California and on inland lakes, in fresh, salt and estuarine waters. Feeds mainly on fish; also on crustaceans and amphibians. Requires undisturbed nest-sites beside water, on islands or mainland. Nests in colonies of a few to hundreds of pairs, or even thousands. (CWHR 2016)	No. Project site has no suitable permanent water habitat required by the species.
<i>Pica nuttalli</i> Yellow-billed magpie	— / — (BCC)	G3G4 S3S4	Resident in Central Valley and central-coast mountain ranges of California. Inhabits valley foothill hardwood, valley foothill hardwood-conifer, valley foothill riparian, orchard vineyard, cropland, pasture, and urban habitats. (CWHR 2016)	No. Project site is out of the known range of the species.
<i>Picoides albolarvatus</i> (nesting) White-headed woodpecker	— / — (BCC)	G4 S4	Montane pine and fir forests with large trees, snags and tree/shrub or tree/herbaceous ecotones. Nests in open conifer habitats, often near edges of roads, natural openings, or on edges of small clearings. (CWHR 2016)	No. Project site has no mature pine or fir forest habitats.
<i>Picoides nuttallii</i> (nesting) Nuttall's woodpecker	— / — (BCC)	G4G5 S4S5	Frequents a mix of deciduous riparian and adjacent oak habitats. Requires snags and dead limbs for nest excavation.(CWHR 2016)	Yes. See text for further discussion.
<i>Pipilo chlorurus</i> Green-tailed towhee	— / — (BCC)	G5 SNR	Montane chaparral, sagebrush, low sagebrush, and bitterbrush habitats. Uncommon on western slope of Sierra Nevada. (CWHR 2016)	No. Project site has no montane chaparral, sagebrush or bitterbrush habitats.

Biological Resources Report
Van Noord Parcel Map, April 2016

Special-status Species Common Name	Listing Status Federal / State (OTHER)	CNDDB Rank Global/State	Habitat Requirements	Potential to occur on project site?
<i>Plegadis chihi</i> (rookeries) White-faced ibis	— / — (SSC)	G5 S1	Fresh emergent wetlands, shallow lakes, irrigated pastures or cropland. Nests amid tall marsh plants in extensive marshes (CWHR 2016)	No. Project site has no suitable wetland or cropland habitats.
<i>Progne subis</i> (nesting) Purple martin	— / — (SSC)	G5 S3	Valley foothill and montane hardwood, valley foothill and montane hardwood-conifer, and riparian habitats. Also occurs in coniferous habitats. Inhabits open forests, woodlands, and riparian areas in breeding season. Nests in tree cavities. (CWHR 2016)	Yes. See text for further discussion.
<i>Riparia riparia</i> (nesting) Bank swallow	— / T	G5 S2	Open riparian areas, brushland, grassland and cropland. Nests in vertical banks and cliffs with fine-textured/sandy soils near water. (CWHR 2016Sph)	No. Project site lacks suitable bank or cliff nesting habitat, and is out of the known range of the species.
<i>Setophaga petechia</i> (nesting) Yellow warbler	— / — (SSC)	G5T3? S2	Nests in riparian habitats dominated by willows, cottonwoods, sycamores or alders, or in mature chaparral. Frequents open to medium-density woodlands and forests with a heavy brush understory in breeding season. (CWHR 2016)	Yes. See text for further discussion.
<i>Sphyrapicus ruber</i> (nesting) Red-breasted sapsucker	— / — (IUCN: LC)	G5 S4	Riparian areas in deciduous and coniferous forest habitats, especially near aspens, open meadows, clearings, lakes. Breeds from ~ 1200-2500 m (4000-8000 ft) elevation in the Sierras. (CWHR 2016)	No. Project site is out of the nesting range of the species, but may provide winter forage areas.
<i>Sphyrapicus thyroideus</i> Williamson's sapsucker	— / — (BCC)	G5 SNR	Coniferous forests at about 1700-2900 m (5500-9500 ft). Preferred nesting habitat is lodgepole pine, but also nests in aspens adjacent to stands of red fir, Jeffrey pine, and eastside pine habitats. (CWHR 2016)	No. Project site is lower in elevation than the known range of the species.
<i>Spizella atrogularis</i> Black-chinned sparrow	— / — (BCC)	G5 S4	Regularly breeds in foothills bordering Central Valley north to Lake and Mariposa counties, irregularly north to Shasta & Trinity counties; more common on arid mountain slopes of southern California. Breeds and forages in open to moderately dense chaparral and similar brushy habitats. (CWHR 2016)	Yes. See text for further discussion.
<i>Spizella breweri</i> Brewer's sparrow	— / — (BCC)	G5 S4	Breeds in treeless shrub habitats with moderate canopy, especially in sagebrush, commonly above pinyon-juniper belt and reportedly on western slope of Sierra Nevada (Verner & Boss, 1980). (CWHR 2016)	Yes. See text for further discussion.

Special-status Species Common Name	Listing Status Federal / State (OTHER)	CNDDB Rank Global/State	Habitat Requirements	Potential to occur on project site?
<i>Spizella passerina</i> (nesting) Chipping sparrow	— / — (CC)	G5 S4S5	Oak woodland, orchards, mixed coniferous forest, montane and subalpine forest. Prefers open woody habitats with sparse or low herbaceous layer and few shrubs, if any. Usually nests in conifers. (CWHR 2016)	No. Project site lacks suitable open forest habitat required by the species.
<i>Stellula calliope</i> = (<i>Selasphorus calliope</i>) Calliope hummingbird	— / — (BCC)	G5 SNR	Breeds in wooded habitats from ponderosa pine and montane hardwood-conifer up through lodgepole pine, favoring montane riparian, aspen, and other open forests near streams. (CWHR 2016)	No. Project site lacks ponderosa pine and montane hardwood-conifer forests.
<i>Strix occidentalis occidentalis</i> California spotted owl	— / — (SSC, BCC)	G3T3 S3	In northern California, found mixed conifer habitats (canopy closure >40%), often with an understory of black oak, in narrow, steep-sided canyons with north-facing slopes, within 300 meters of water (CWHR 2016)	No. Project site lacks mixed conifer habitat.
Mammals				
<i>Bassariscus astutus</i> Ringtail	— / — (FP)	G5 SNR	Resident in habitats with a mixture of forest and shrubland in close association with rocky areas within 1 km of permanent water. (CWHR 2016)	Yes. See text for further discussion.
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	— / CT (SSC)	G3G4 S2	Requires caves, or mines, tunnels, buildings, or other human-made structures for roosting. Prefers mesic habitats. Gleans from brush or trees or feeds along habitat edges. (CWHR 2016)	No. Project site has no suitable roosting habitat.
<i>Lasiorycteris noctivagans</i> Silver-haired bat	— / — (IUCN: LC)	G5 S3S4	Primarily found in coastal and montane forests, but also valley foothill woodlands and riparian areas. Feeds over ponds, streams and open brushy areas. Roosts in hollow trees, beneath loose bark, in abandoned woodpecker holes; rarely under rocks. Requires drinking water. (CWHR 2016)	Yes. See text for further discussion.
<i>Myotis yumanensis</i> Yuma myotis	— / — (IUCN: LC)	G5 S4	Many habitats from sea level to 2400 m. in Sierras, roosting in caves, mines, buildings, bridges, crevices. Distribution is closely tied to bodies of water, over which it forages for insects. (CWHR 2016)	Yes. See text for further discussion.
<i>Pekania pennanti</i> Fisher	CT / CT (SSC)	G5 S2S3	Suitable habitat is large areas of mature, dense coniferous forest stands or deciduous-riparian habitats with ≥50% canopy closure close to water (CWHR 2016).	No. Project site lacks suitable conifer and deciduous-riparian habitats.

Biological Resources Report
Van Noord Parcel Map, April 2016

Special-status Species Common Name	Listing Status Federal / State (OTHER)	CNDDDB Rank Global/State	Habitat Requirements	Potential to occur on project site?
Plants				
<i>Allium jepsonii</i> Jepson's onion	— / — (CNPS:1B.2)	G1 / S1	Chaparral, cismontane woodland or lower montane coniferous forest on serpentine or volcanic soils, usually in an open area, 450-1130 meters elevation (CNDDDB 2016)	Yes. See text for further discussion.
<i>Allium sanbornii</i> var. <i>congdonii</i> Congdon's onion	— / — (CNPS: 4.3)	G3T3 S3	Ultramafic barrens or volcanic soils with scattered grey pines. 300-990 m. (CNDDDB 2016)	Yes. See text for further discussion.
<i>Allium sanbornii</i> var. <i>sanbornii</i> Sanborn's onion	— / — (CNPS: 4.2)	G3T4? S4?	Chaparral, cismontane woodland and lower montane coniferous forest, usually on serpentine soils. (CNPS 2016) 260-1510 m. elevation. (CNDDDB 2016)	Yes. See text for further discussion.
<i>Arctostaphylos mewukka</i> ssp. <i>truei</i> True's manzanita	— / — (CNPS: 4.2)	G4 S3	Chaparral and lower montane coniferous forest, 425-1390 m. elevation. (CNDDDB 2016)	Yes. See text for further discussion.
<i>Arctostaphylos nissenana</i> Nissenan manzanita	— / — (CNPS:1B.2)	G1 S1	Open rocky ridges in chaparral or closed-cone coniferous forest between 450-1100 m elevation. (CNDDDB 2016)	Yes. See text for further discussion.
<i>Balsamorhiza macrolepis</i> var. <i>macrolepis</i> Big-scale balsamroot	— / — (CNPS: 1B.2)	G2 / S2	Open grassy slopes and valleys in Sierra Nevada foothills, Sacramento Valley and San Francisco Bay area. (Jepson 2016) Sometimes found on Serpentine soils; 90-1555 m elevation. (CNDDDB 2016)	Yes. See text for further discussion.
<i>Brasenia schreberi</i> Watershield	— / — (CNPS: 2B.3)	G5 S2	Emergent from ponds and slow streams, below 2200 m. elevation. (Jepson 2016)	No. Project site has no pond or slow-moving streams.
<i>Calochortus clavatus</i> var. <i>avius</i> Pleasant Valley mariposa lily	— / — (CNPS: 1B.2)	G4T2 S2	Open oak and pine forests, 900-1800 m. elevation. (Jepson 2016)	No. Project site is lower in elevation than the known range of the species.
<i>Calystegia stebbinsii</i> Stebbins's morning-glory	E / E (CNPS:1B.1)	G1 / S1.1	Chaparral on gabbro or serpentine soils. (USFWS 2002) Usually absent from areas with understory dominated by grasses (Wilson 1986, Hunter and Horenstein 1991); 180-725 m. elevation (CNDDDB 2016)	Yes. See text for further discussion.
<i>Calystegia vanzuukiae</i> Van Zuuk's morning-glory	— / — (CNPS: 1B.3)	G2? S2	Chaparral on gabbro or serpentine soils, 500-1180 m. elevation. (CNDDDB 2016)	Yes. See text for further discussion.
<i>Carex cyrtostachya</i> Sierra arching sedge	— / — (CNPS: 1B.2)	G2G3 S2S3	Mesic sites within lower montane coniferous forest, riparian forest, marshes, swamps, meadows and seeps between 605-1390 m. elevation. (CNDDDB 2016)	No. Project site lacks suitable mesic habitats and is lower in elevation than the known range of the species.

Biological Resources Report
Van Noord Parcel Map, April 2016

Special-status Species Common Name	Listing Status Federal / State (OTHER)	CNDDDB Rank Global/State	Habitat Requirements	Potential to occur on project site?
<i>Ceanothus roderickii</i> Pine Hill ceanothus	E / R (CNPS: 1B.1)	G1 S1	Openings or disturbed areas in chaparral on gabbro soils (USFWS 2002) Usually absent from areas with understory dominated by grasses (Wilson 1986, Hunter and Horenstein 1991). 260-630 m. elevation (CNDDDB 2016)	No. Project site lacks gabbro soils required by the species.
<i>Chlorogalum grandiflorum</i> Red Hills soaproot	— / — (CNPS: 1B.2)	G2 S2	Open chaparral on gabbro or serpentine soils. (Hunter and Horenstein 1991); sometimes on non-ultramafic substrates, 240-760 m. elevation. (CNDDDB 2016)	Yes. See text for further discussion
<i>Clarkia biloba</i> ssp. <i>brandegeae</i> Brandegee's clarkia	— / — (CNPS: 4.2)	G4G5T4 S4	Chaparral, cismontane woodland, lower montane coniferous forest, often on road cuts, 75-915 m. elevation. (CNDDDB 2016)	Yes. Species was found on the project site. See text for further discussion.
<i>Clarkia virgata</i> Sierra clarkia	— / — (CNPS: 4.3)	G3 S3	Cismontane and lower margin of montane coniferous forest, 400-1615 m. elevation. (CNDDDB 2016)	Yes. See text for further discussion.
<i>Claytonia parviflora</i> ssp. <i>grandiflora</i> Streambank spring beauty	— / — (CNPS: 4.2)	G5T3 S3	Cismontane woodland, 250-1200 m. elevation. (CNDDDB 2016) Vernal moist, often disturbed sites, 150-1200 m. elevation. (Jepson 2016)	Yes. See text for further discussion.
<i>Crocانthemum suffrutescens</i> Bisbee Peak rush-rose	— / — (CNPS: 3.2)	G2Q S2	Chaparral on gabbro soils in El Dorado County or on Ione soils elsewhere (Wilson 1986, Jepson 2016); 45-610 m. elevation (CNDDDB 2013).	No. Project site has neither gabbro nor Ione soils required by the species.
<i>Erigeron petrophilus</i> var. <i>sierrensis</i> Northern Sierra daisy	— / — (CNPS: 4.3)	G4T4 S4	Rocky soils, sometimes on serpentine, cismontane woodland, lower and upper montane coniferous forest, 300-2075 m. elevation. (CNDDDB 2016)	Yes. See text for further discussion.
<i>Eriogonum tripodum</i> Tripod buckwheat	— / — (CNPS: 4.2)	G4 S4	Gravelly slopes and flats, often on serpentine, in cismontane woodland and chaparral, 200-1600 m. elevation. (CNDDDB 2016)	Yes. See text for further discussion.
<i>Fremontodendron decumbens</i> Pine Hill flannelbush	E / R (CNPS: 1B.2)	G1 S1	On scattered rocky outcrops in chaparral on/in the vicinity of Pine Hill; in black oak woodland on Pine Hill; on gabbro or serpentine soils, 425-760 m. elevation. (CNDDDB 2013)	No. Project site is outside of the known range of the species.
<i>Fritillaria eastwoodiae</i> Butte County fritillary	— / — (CNPS: 3.2)	G3Q S3	Chaparral, cismontane woodland and lower montane coniferous forest on serpentine, red clay or sandy loam soils, 50-1500 m. elevation. (CNDDDB 2016)	Yes. See text for further discussion.

Special-status Species Common Name	Listing Status Federal / State (OTHER)	CNDDDB Rank Global/State	Habitat Requirements	Potential to occur on project site?
<i>Galium californicum</i> ssp. <i>sierrae</i> El Dorado bedstraw	E / R (CNPS: 1B.2)	G5T1 S1	Oak woodland on gabbro soils. (USFWS 2002) Absent from areas with understory dominated by grasses (Wilson 1986, Hunter and Horenstein 1991); 100-585 m. elevation (CNDDDB 2016).	No. Project site lacks gabbro soils required by the species.
<i>Githopsis pulchella</i> ssp. <i>serpenticola</i> Serpentine bluecup	— / — (CNPS: 4.3)	G4T3 S3	Serpentine or Ione soils, within cismontane woodland, 320-610 m. elevation. (CNDDDB 2016)	Yes. See text for further discussion.
<i>Glyceria grandis</i> American manna grass	— / — (CNPS: 2B.3)	G5 S2	Bogs, marshes, meadows, seeps, wetlands, ponds in valleys and lower mountains, 15-1980 m. elevation. (CNDDDB 2016)	No. Project site lacks suitable wetland habitat required by the species.
<i>Horkelia parryi</i> Parry's horkelia	— / — (CNPS: 1B.2)	G2 S2	Chaparral and cismontane woodland, on Ione or limestone soils, between 80-1035 m. elevation. (CNDDDB 2013)	No. Neither Ione nor limestone soils, required by the species, are found on the project site.
<i>Jepsonia heterandra</i> Foothill jepsonia	— / — (CNPS: 3.3)	G4 S4	Rock crevices, especially slate-like rock, in cismontane woodland, lower montane coniferous forest, 50-550 m. elevation. (CNDDDB 2016)	Yes. See text for further discussion.
<i>Lathyrus sulphureus</i> var. <i>argillaceus</i> Dubious pea	— / — (CNPS: 4.3)	G5T1T2 S1S2	Cismontane woodland, lower and upper coniferous forest, 150-305 meters elevation. (CNDDDB 2013)	Yes. See text for further discussion.
<i>Lilium humboldtii</i> ssp. <i>humboldtii</i> Humboldt lily	— / — (CNPS: 4.2)	G4T3 S3	Openings in chaparral, lower montane coniferous forest (open yellow-pine forest), cismontane woodland, 90-1280 m. elevation. (CNDDDB 2016)	Yes. See text for further discussion.
<i>Mimulus glaucescens</i> Shield-bracted monkeyflower	— / — (CNPS: 4.3)	G3 S3	Wet places, rock crevices, serpentine seeps in chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland, 60- 1240 m. elevation. (CNDDDB 2016)	Yes. See text for further discussion.
<i>Monardella candicans</i> Sierra monardella	— / — (CNPS: 4.3)	G4 S4	Sandy or gravelly soil in chaparral, cismontane woodland, lower montane coniferous forest, 150-800 m. elevation. (CNDDDB 2016)	No. Soils are primarily silt loam or serpentine, not sandy or gravelly as required by the species.
<i>Myrica hartwegii</i> Sierra sweet bay	— / — (CNPS: 4.3)	G4 S4	Usually on streambanks in riparian forest, cismontane woodland, lower montane coniferous forest, 150- 1750 m. elevation. (CNDDDB 2016)	Yes. See text for further discussion.
<i>Navarretia eriocephala</i> Hoary navarretia	— / — (CNPS: 4.3)	G4 S4	Vernally mesic sites in cismontane woodland, valley and foothill grassland, 105-400 m. elevation. (CNDDDB 2016)	Yes. See text for further discussion.
<i>Navarretia subuligera</i> Awl-leaved navarretia	— / — (CNPS: 4.3)	G4 S4	Rocky plains and slopes, mesic sites in cismontane woodland, lower coniferous forest and chaparral, 150-1100 m. elevation. (CNDDDB 2016)	Yes. See text for further discussion.

Biological Resources Report
Van Noord Parcel Map, April 2016

Special-status Species Common Name	Listing Status Federal / State (OTHER)	CNDDB Rank Global/State	Habitat Requirements	Potential to occur on project site?
<i>Packera layneae</i> (= <i>Senecio layneae</i>) Layne's butterwort	T / R (CNPS: 1B.2)	G2 S2	Open rocky areas in chaparral on gabbro or serpentine soils (USFWS 2002b); 200-1000 m. elevation (CNDDB 2013).	Yes. See text for further discussion.
<i>Perideridia bacigalupii</i> Bacigalupi's yampah	— / — (CNPS: 4.2)	G3 S3	Steep, rocky banks or slopes on serpentine soil in chaparral or lower montane coniferous forest, 450-1035 m. elevation. (CNDDB 2016)	Yes. See text for further discussion.
<i>Piperia leptopetala</i> Narrow-petaled rein orchid	— / — (CNPS: 4.3)	G4 S4	Generally dry sites, scrub, woodland; below 2200 m. elevation. (Jepson 2016) Cismontane woodland, lower and upper montane coniferous forest, 380-2225 m elevation. (CNDDB 2016)	Yes. See text for further discussion.
<i>Poa sierrae</i> Sierra blue grass	— / — (CNPS: 1B.3; USFS:S)	G3 S3	Shady, moist, rocky slopes, often in canyons, in lower montane coniferous forest, 365-1500 m. elevation. (CNDDB 2016)	Yes. See text for further discussion.
<i>Potamogeton epihydrus</i> Nuttall's ribbon-leaved pondweed	— / — (CNPS: 2B.2)	G5 S2S3	Shallow water, ponds, lakes, streams irrigation ditches, 370-2170 m. elevation. (CNDDB 2016)	No. Project site lacks slow, shallow waters suitable for the species.
<i>Rhynchospora capitellata</i> Brownish beaked-rush	— / — (CNPS: 2B.2)	G5 S1	Meadows and seeps in lower and upper montane coniferous forest, 45-2000 m. elevation (CNDDB, CNPS 2016)	Yes. See text for further discussion.
<i>Rorippa subumbellata</i> Tahoe yellow-cress	C / E (CNPS: 1B.1)	G1 / S1.1	Lower montane coniferous forest, meadows and seeps. Found on sandy beaches, lakeside margins and riparian areas on decomposed granite sand from 1885-1900 meters elevation. (CNDDB 2013)	No. Project site is lower than the known elevation range of the species.
<i>Sagittaria sanfordii</i> Sanford's arrowhead	— / — (CNPS: 1B.2)	G3 / S3	Emergent from shallow, standing, fresh water within marshes, ponds and ditches, 0-650 m. elevation. (CNPS 2013, BLM 2010)	No. The project site has no shallow ponds, marshes or ditches.
<i>Scutellaria galericulata</i> Marsh skullcap	— / — (CNPS: 2B.2)	G5 S2	Marshes, swamps, meadows, seeps in lower montane coniferous forest, 0-2100 m. elevation. (CNDDB 2016)	No. Project site has no lower montane coniferous forest habitat with suitable mesic sites.

Biological Resources Report
 Van Noord Parcel Map, April 2016

Special-status Species Common Name	Listing Status Federal / State (OTHER)	CNDDDB Rank Global/State	Habitat Requirements	Potential to occur on project site?
<i>Stuckenia filiformis</i> ssp. <i>alpina</i> Slender-leaved pondweed	— / — (CNPS: 2B.2)	G5T5 S3	Shallow, clear water of lakes, wetlands, 300-2150 m. elevation. (CNDDDB 2016)	No. Project site has no shallow waters suitable for the species.
<i>Viburnum ellipticum</i> Oval-leaved viburnum	— / — (CNPS: 2.3)	G5 / S3	Chaparral, cismontane woodland or lower montane coniferous forest between 215-1400 m. elevation (CNDDDB 2016)	Yes. See text for further discussion.
<i>Wyethia reticulata</i> El Dorado mule-ears	— / — (1B.2)	G2 / S2	Occurs in chaparral, cismontane woodland and lower montane coniferous forest on stony red clay and gabbro soils (USFWS 2002b); 180-630 m. elevation (CNDDDB 2016)	No Project site is out of the known range of the species.
Special Habitats				
Central Valley Drainage Hardhead/Squawfish Stream	— / —	GNR / SNR	Small to large perennial streams within the Sacramento-San Joaquin, Pajaro-Salinas, Russian, Clear Lake and upper Pit River drainages in California. (Moyle 1995)	Yes. See text for further discussion.

APPENDIX E

**Plant Species Found on the Project Site
June 15, 23, 24, July 6 and August 3, 2015
April 16 and 18, 2016**

**Plant Species Found on the Project Site
June 15, 23, 24, July 6 and August 3, 2015; April 16 and 18, 2016**

Anacardiaceae

Rhus aromatica Aiton, **Skunk bush**
Toxicodendron diversiloba (Torrey & A. Gray)
E. Greene, **Western poison-oak**

Apiaceae

Conium maculatum L., **Poison hemlock**
Daucus carota L., **Wild carrot, Queen Anne's Lace**
Daucus pusillus Michx., **American wild carrot**
Lomatium macrocarpum (Torr. & A. Gray) J.M.
Coult. & Rose, **Bigseed biscuitroot**
Lomatium utriculatum (Nutt. ex Torr. & A. Gray) J.M.
Coult. & Rose, **Common lomatium**
Perideridia kelloggii (A. Gray) Mathias, **Kellogg's
yampah**

Sanicula sp., **Sanicle**
Scandix pecten-veneris L., **Venus' needle**

Apocynaceae

Asclepias cordifolia (Benth) Jeps., **Purple milkweed**

Asteraceae

Achillea millefolium L., **Yarrow**
Agoseris heterophylla (Nutt.) Greene var.
heterophylla, **Annual mountain dandelion**
Artemisia douglasiana Besser. **Mugwort**
Baccharis pilularis DC., **Coyote brush**
Brickellia californica (Torr. & A. Gray) A. Gray,
California brickellbush
Carduus pycnocephalus L., **Italian plumeless thistle**
Calycadenia multiglandulosa DC., **Sticky western
rosinweed**
Centaurea solstitialis L., **Yellow star-thistle**
Chamaemelum fuscatum (Brot.) Vasc., **Chamomile**
Chondrilla juncea L., **Skeleton weed**
Cirsium vulgare (Savi) Ten., **Bull thistle**
Ericameria arborescens (A. Gray) Greene,
Golden fleec
Eriophyllum lanatum (Pursh.) J. Forbes var.
achilleoides (DC.) Jeps. **Common woolly
sunflower**
Grindelia camporum Greene, **Gumplant**
Holozonia filipes (Hook. & Arn.) Greene,
Whitecrown
Hypochaeris glabra L., **Smooth cat's-ear**
Lactuca serriola L., **Prickly lettuce**
Leontodon saxatilis Lam., **Hawkbit**
Logfia depressa (A. Gray) Holub, **Dwarf cottonrose**
Logfia filaginoides (Hook. & Arn.) Morefield,
California cottonrose
Madia elegans D. Don, **Common madia**
Madia exigua (Sm.) A. Gray, **Thread-stem madia**
Pseudognaphalium californicum (DC.) Anderb.,
California cudweed
Senecio vulgaris
Silybum marianum (L.) Gaertn., **Milk thistle**

Asteraceae (continued)

Symphotrichum bracteolatum (Nutt.) G.L. Nesom,
Eaton's aster
Tragopogon dubius Scop. **Goat's beard**
Uropappus lindleyi (DC.) Nutt., **Silverpuffs**
Wyethia angustifolia (DC.) Nutt., **Narrow-leaf
mule-ears**
Wyethia helenioides (DC.) Nutt., **Gray mule-ears**
Xanthium sp., **Cocklebur**

Berberidaceae

Berberis aquifolium Pursh., **Oregon-grape**

Betulaceae

Alnus rhombifolia Nutt., **White alder**

Boraginaceae

Amsinckia menziesii (Lehm.) A. Nelson & J.F.
Macbr., **Small-flowered fiddleneck**
Eriodictyon californicum (Hook. & Arn.) Torr.,
California Yerba Santa
Nemophila heterophylla Fisch. & C.A. Mey., **White
nemophila**
Plagiobothrys canescens Benth. var. *canescens*,
Valley popcornflower
Plagiobothrys fulvus (Hook. & Arn.) I.M. Johnst.
var. *campestris* (Greene) I.M. Johnst.,
Popcornflower

Brassicaceae

Brassica nigra (L.) W.D.J. Koch, **Black mustard**
Hirschfeldia incana (L.) Lagr.-Fossat, **Shortpod
mustard**

Thysanocarpus curvipes Hook. subsp. *curvipes*,

Lacepod

Caprifoliaceae

Lonicera hispidula (indl.) Torr. & A. Gray,
California honeysuckle

Caryophyllaceae

Cerastium arvense L., **Field mouse-ear chickweed**
Schleranthus annuus L., **Knawel**
Silene gallica L., **Windmill pink**
Silene laciniata Cav. subsp. *californica* (Durand) J.K.
Morton

Stellaria media (L.) Vill., **Common chickweed**

Convolvulaceae

Calystegia occidentalis ssp. *fulcrata* (A. Gray)
Brummitt, **Chaparral false-bindweed**

Cupressaceae

Calocedrus decurrens (Torr.) Florin, **Incense cedar**

Cyperaceae

Carex praegracilis W, Boott, **Black creeper**
Cyperus eragrostis Lam., **Tall flatsedge**

Dryopteridaceae

Dryopteris arguta (Kaulf.) Maxon, **Wood fern**

Ericaceae

Arctostaphylos viscida C. Parry, **White-leaf manzanita**

Euphorbiaceae

Croton setiger Hook, **Dove weed**

Euphorbia spathulata Lam., **Warty spurge**

Fabaceae

Acmispon brachycarpus (Benth.) D.D. Sokoloff,

Foothill Deervetch

Acmispon parviflorus (Benth.) D.D. Sokoloff,

Smallflower lotus

Astragalus gambelianus E. Sheld., **Gambel's milk-vetch**

Cercis occidentalis A.Gray, **Western redbud**

Lathyrus latifolius L., **Perennial sweetpea**

Lathyrus sulphureus A. Gray var. *sulphureus*, **Sulphur Pea, Snub Pea**

Lupinus bicolor Lindl., **Bicolor lupine**

Lupinus nanus Benth., **Sky lupine**

Trifolium bifidum A. Gray var. *bifidum*, **Notch leaf clover**

Trifolium dichotomum Hook. & Arn., **Branched**

Indian clover

Trifolium hirtum All., **Rose clover**

Trifolium subterraneum L., **Subterranean clover**

Trifolium willdenovii Spreng., **Tomcat clover**

Vicia sp., **Vetch**

Fagaceae

Quercus chrysolepis Liebm., **Canyon live oak**

Quercus douglasii Hook & Arn., **Blue oak**

Quercus kelloggii Newb., **California black oak**

Quercus durata Jeps. var. *durata*, **Leather oak**

Quercus wislizeni A. DC., **Interior live oak**

Gentianaceae

Centaurium tenuiflorum (Hoffmanns & Link) Janch.,

Slender centaury

Geraniaceae

Erodium sp., **Filaree**

Geranium dissectum L., **Cutleaf geranium**

Geranium molle L., **Woodland geranium**

Hypericaceae

Hypericum perforatum L. subsp. *perforatum*,

Klamathweed

Iridaceae

Sisyrinchium bellum S. Watson, **Western blue-eyed grass**

Juncaceae

Luzula comosa E. Mey. var. *comosa*, **Hairy wood-rush**

Lamiaceae

Monardella villosa Benth. ssp. *villosa*, **Coyote mint**

Melissa officinalis L., **Lemon balm**

Scutellaria siphcampyloides Vatke, **Narrow-leaf skullcap**

Scutellaria tuberosa Benth., **Blue skullcap**

Lauraceae

Umbellularia californica (Hook. & Arn.) Nutt.,

California bay

Liliaceae

Calochortus albus (Benth.) Douglas ex Benth, **Fairy lantern**

Calochortus monophyllus (Lindl.) Lem., **Yellow star-tulip**

Chlorogalum pomeridianum (DC.) Kunth

var. *pomeridianum*, **Common soaproot**

Dichelostemma capitatum (Benth.) Alph. Wood,

Blue dicks

Dichelostemma volubile (Kellogg) A. Heller,

Twining Brodiaea

Triteleia laxa Benth., **Ithuriel's spear**

Linaceae

Linum bienne Mill., **Narrow-leaf flax**

Myrsinaceae

Lysimachia arvensis (L.) U. Manns & Anderb.,

Scarlet pimpernel

Oleaceae

Fraxinus latifolia Benth., **Oregon ash**

Orobanchaceae

Castilleja foliolosa Hook. & Arn., **Wooly paintbrush**

Montiaceae

Claytonia parviflora Hook. subsp. *parviflora*, **Miner's lettuce**

Onagraceae

Clarkia biloba (Durand) A. Nelson & J.F. Macbr.

ssp. *brandegeae* (Jeps.) H.Lewis & M.Lewis,

Brandegee's clarkia

Clarkia purpurea (Curtis) A.Nelson & J.F.Macbr.

ssp. *quadrivulnera* (Lindl.) H.Lewis & M. Lewis

Fourspot

Orobanchaceae

Castilleja linearilobus (Benth) T.I. Chuang & Heckard

Cordylanthus pilosus A.Gray ssp. *hansenii* (Ferris)

T.I. Chuang & Heckard **Hansen's bird-beak**

Triphysaria eriantha (Benth.) T.I. Chuang & Heckard

subsp. *eriantha*, **Butter and eggs**

Papaveraceae

Eschscholzia californica Cham. **California poppy**

Eschscholzia lobbii Greene, **Frying pans**

Phrymaceae

Mimulus cardinalis Benth., **Cardinal flower**
Mimulus guttatus DC., **Common Monkeyflower**

Pinaceae

Pinus ponderosa Lawson & C. Lawson
Pinus sabiniana Douglas, **Gray or foothill pine**
Pseudotsuga menziesii (Mirb.) Franco var. *menziesii*

Douglas-fir

Plantaginaceae

Collinsia tinctoria Benth., **Chinese houses**
Keckiella breviflora (Lindl.) Straw var. *breviflora*

Beardtongue

Kickxia elatine (L.) Dumort. **Fluellen**
Penstemon azureus Benth. var. *angustissimus* A.Gray,

Azure penstemon

Plantago erecta E. Morris, **Foothill plantain**
Plantago lanceolata L., **Italian plantain**

Poaceae

Aegilops triuncialis L., **Barbed goatgrass**
Agrostis capillaris L., **Colonia bentgrass**

Avena sp., **Wild oat**

Briza minor L., **Annual quaking grass**

Bromus hordeaceus L., **Soft chess**

Bromus madritensis L., **Madrid brome**

Bromus sterilis L., **Poverty brome**

Bromus tectorum L., **Cheat grass**

Cynosurus echinatus L., **Hedgehog dogtail**

Elymus caput-medusae (L.) Nevski, **Medusa head**

Elymus glaucus Buckley, **Blue wildrye**

Elymus multisetus (J.G. Sm.) Burt, **Big squirreltail**

Elymus trachycaulus (Link.) Shinnars ssp.

trachycaulus **Slender wheat grass**

Festuca bromoides L., **Brome fescue**

Festuca perennis (L.) Columbus & J.P.Sm., **Ryegrass**

Gastridium phleoides (Nees & Meyen) C.E. Hubb.

Nit grass

Hordeum sp., **Barley**

Melica imperfecta Trin., **Little California Melica**

Melica torreyana Scribn., **Torrey's melicgrass**

Phalaris minor Retz., **Little-seeded canary grass**

Poa bulbosa subsp. *vivipara* (Koeler) Arcang.,

Bulbous bluegrass

Poa pratensis L. subsp. *pratensis*, **Kentucky**

bluegrass

Polypogon monspeliensis (L.) Desf., **Annual beard**
grass

Vulpia myuros L., **Rat's-tail fescue**

Polemoniaceae

Allophyllum giloides (Benth.) A.D. Grant &
V.E. Grant, **False gilia**

Leptosiphon bicolor Nutt., **True babystars**

Navarretia capillaris (Kellogg) Kuntz, **Miniature**
gilia

Navarretia filicaulis (A.Gray) Greene,

Thin-stemmed navarretia

Navarretia intertexta (Benth.) Hook. ssp. *intertexta*

Needle-leaf navarretia

Polygalaceae

Polygala cornuta Kellogg var. *cornuta*, **Milkwort**

Polygonaceae

Eriogonium luteolum Greene var. *pedunculatum*
(S.Stokes) Reveal, **Wild buckwheat**

Rumex conglomeratus Murray, **Clustered dock**

Rumex crispus L., **Curly dock**

Primulaceae

Anagallis arvensis L., **Scarlet pimpernel**

Primula hendersonii (A. Gray) Mast & Reveal,

Mosquito bills, sailor caps

Pteridaceae

Adiantum capillus-veneris L., **Southern maidenhair**

Pentagramma pallida (Weath.) Yatsk. et al.,

Silverback fern

Ranunculaceae

Clematis lasiantha Nutt., **Chaparral clematis**

Delphinium patens Benth., **Spreading larkspur**

Ranunculus canus Benth. var. *canus*, **Buttercup**

Rhamnaceae

Ceanothus cuneatus (Hook.) Nutt., var. *cuneatus*

Buck brush

Ceanothus integerrimus Hook. & Arn, **Deer brush**

Ceanothus palmeri Trel., **Deer brush**

Frangula californica (Eschsch.) A. Gray, **California**
coffeeberry

Frangula californica (Eschsch.) A. Gray ssp.

tomentella (Benth.) Kartesz & Gandhi

Hoary coffeeberry

Rhamnus ilicifolia Kellogg, **Holly-leaf redberry**

Rosaceae

Adenostoma fasciculatum Hook. & Arn., **Chamise**

Drymocallis glandulosa (Lindl.) Rydb., **Sticky**

Cinquefoil

Heteromeles arbutifolia (Lindley) Roemer, **Toyon**

Rubus armeniacus Focke **Himalayan blackberry**

Rubus ursinus Cham. & Schldt., **California**
blackberry

Rubiaceae

Galium bolanderi A. Gray, **Bolander's bedstraw**

Galium parisiense L. **Wall bedstraw**

Galium porrigens Dempster, **Climbing bedstraw**

Rutaceae

Ptelea crenulata Greene, **Hop tree**

Salicaceae

Salix exigua Nutt., **Narrow-leaf willow**

Salix laevigata Bebb, **Red willow**

Sapindaceae

Aesculus californica (Spach) Nutt. **California
buckeye**

Saxifragaceae

Lithophragma bolanderi A. Gray, **Woodland star**

Scrophulariaceae

Scrophularia californica Cham. & Schltl.,

California figwort

Verbascum thapsus L., **Woolly mullein**

Simaroubaceae

Ailanthus altissima (Mill.) Swingle, **Tree of Heaven**

Themidaceae

Triteleia ixioides subsp. *scabra* (Greene) L.W. Lenz,

Golden brodiaea

Valerianaceae

Plectritis ciliosa (Greene) Jeps., **Long-spurred sea
blush**

Violaceae

Viola purpurea Kellogg ssp. *quercetorum* (M.S.
Baker & J.C. Clausen) R.J. Little, **Goosefoot**

violet

Viscaceae

Phoradendron villosum (Nutt.) Nutt., **Oak mistletoe**

Vitaceae

Vitis californica Benth., **California wild grape**

Zygophyllaceae

Tribulus terrestris L., **Puncture vine**

APPENDIX F

California Native Species Field Form

Mail to:
California Natural Diversity Database
California Dept. of Fish & Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: (916) 324-0475 email: CNDDDB@wildlife.ca.gov

For Office Use Only

Source Code: _____ Quad Code: _____
Elm Code: _____ Occ No.: _____
EO Index: _____ Map Index: _____

Date of Field Work (mm/dd/yyyy): 06/23/2016

California Native Species Field Survey Form

Clear Form Print Form

Scientific Name: Clarkia biloba ssp. brandegeae

Common Name: Brandegee's clarkia

Species Found? Yes No If not found, why?

Total No. Individuals: 100+/- Subsequent Visit? Yes No

Is this an existing NDDDB occurrence? No Unk. Yes, Occ. # _____

Collection? If yes: _____
Number _____ Museum / Herbarium _____

Reporter: Ruth Willson
Address: 3460 Angel Lane
Placerville, CA 95667
E-mail Address: ruthwillson@comcast.net
Phone: 530-622-7014

Plant Information Phenology: % vegetative: <u>5</u> % flowering: <u>65</u> % fruiting: <u>30</u>	Animal Information # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown _____ <input type="checkbox"/> wintering <input type="checkbox"/> breeding <input type="checkbox"/> nesting <input type="checkbox"/> rookery <input type="checkbox"/> burrow site <input type="checkbox"/> lek <input type="checkbox"/> other
---	--

Location Description (please attach map AND/OR fill out your choice of coordinates, below)
See attached mp.

County: El Dorado Landowner / Mgr: Thomas Van Noord

Quad Name: Coloma Elevation: 1180-1280 ft

T 11N R 9E Sec 25, _____ 1/4 of _____ 1/4, Meridian: H M S Source of Coordinates (GPS, topo. map & type): _____

T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: H M S GPS Make & Model: _____

DATUM: NAD27 NAD83 WGS84 Horizontal Accuracy: _____ meters/feet

Coordinate System: UTM Zone 10 UTM Zone 11 **OR** Geographic (Latitude & Longitude)

Coordinates: _____

Habitat Description (plants & animals) *plant communities, dominants, associates, substrates/soils, aspects/slope:*
Animal Behavior *(Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):*
Sides of ravines in oak woodland, Boomer rocky loam soils. Associates: Quercus wislizenii, Aesculus californica, Sanicula sp., Bromus sp.

Please fill out separate form for other rare taxa seen at this site.

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

Immediate AND surrounding land use: Rural residential properties.

Visible disturbances: None.

Threats: Parcel is scheduled to be subdivided.

Comments: Plants are protected by slopes too steep for development.

Determination: <i>(check one or more, and fill in blanks)</i> <input checked="" type="checkbox"/> Keyed (cite reference): <u>Baldwin, 2012; Jepson e-Flora</u> <input type="checkbox"/> Compared with specimen housed at: _____ <input checked="" type="checkbox"/> Compared with photo / drawing in: <u>Cal Photos: plants</u> <input type="checkbox"/> By another person (name): _____ <input type="checkbox"/> Other: _____	Photographs: <i>(check one or more)</i> <table style="width: 100%;"><tr><td></td><td>Slide</td><td>Print</td><td>Digital</td></tr><tr><td>Plant / animal</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td></tr><tr><td>Habitat</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>Diagnostic feature</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr></table> May we obtain duplicates at our expense? <input checked="" type="radio"/> yes <input type="radio"/> no		Slide	Print	Digital	Plant / animal	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Habitat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Diagnostic feature	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Slide	Print	Digital														
Plant / animal	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>														
Habitat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>														
Diagnostic feature	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>														



March 15, 2016

Tom Van Noord
tom@tvnlaw.com

RE: AP 105-190-41, Tentative Parcel Map

Dear Mr. Van Noord:

Per your request of March 10, 2016, I have compiled a map showing the wetland, waters and special-status species found last year on your above-referenced Thompson Hill property (below). I do not expect to add more wetlands or waters after further surveys of the property, but may find more special-status plant species. As you know, the surveys done last year were completed from mid-June through August during a drought year. Consequently, the spring-blooming species were not "evident and identifiable" when the surveys were done, necessitating additional surveys this spring.

One plant species of concern, Brandegee's clarkia (*Clarkia biloba* ssp. *brandegeae*) was found on-site. In addition, the site has potential habitat for two state- and federal-listed plant species: Stebbins's morning-glory (*Calystegia stebbinsi*) and Layne's butterwort (*Packera layneae*); and twenty-five plant species of concern: Jepson's onion (*Allium jepsonii*), Congdon's onion (*Allium sanbornii* var. *congdonii*), Sanborn's onion (*Allium sanbornii* var. *sanbornii*), True's manzanita (*Arctostaphylos mewukka* ssp. *truei*), Nissenan manzanita (*Arctostaphylos nissenana*), Big-scale balsamroot (*Balsamorhiza macrolepis* var. *macrolepis*), Van Zuuk's morning-glory (*Calystegia vanzuukiae*), Red Hills soaproot (*Chlorogalum grandiflorum*), Sierra clarkia (*Clarkia virgata*), Streambank spring beauty (*Claytonia parviflora* ssp. *grandiflora*), Northern Sierra daisy (*Erigeron petrophilus* var. *sierrensis*), Tripod buckwheat (*Eriogonum tripodum*), Butte County fritillary (*Fritillaria eastwoodiae*), Serpentine bluecup (*Githopsis pulchella* ssp. *serpentinicola*), Foothill jepsonia (*Jepsonia heterandra*), Humboldt's lily (*Lilium humboldtii* ssp. *humboldtii*), Shield-bracted monkeyflower (*Mimulus glaucescens*), Sierra sweet bay (*Myrica hartwegii*), Hoary navarretia (*Navarretia eriocephala*), Awl-leaved navarretia (*Navarretia subuligera*), Bacigalupi's yampah (*Perideridia bacigalupii*), Narrow-petaled rein orchid (*Piperia leptopetala*), Sierra blue grass (*Poa sierrae*), Brownish beaked-rush (*Rhynchospora capitellata*), and Oval-leaved viburnum (*Viburnum ellipticum*). One special habitat, Central Valley Drainage Hardhead/Squawfish Stream, was also found on the project site.

One bird species of concern, oak titmouse (*Baeolophus inornatus*), was found on-site. In addition, potential habitat was found for twenty-three other species of concern, including two insects: Cosumnes spring stonefly (*Cosumnoperia hypocrena*), and Ricksecker's water scavenger beetle (*Hydrochara rickseckeri*); one amphibian: Foothill yellow-legged frog (*Rana boylei*); two reptiles: Western pond turtle (*Emys marmorata*), and Blainville's horned lizard (*Phrynosoma blainvillii*); and fifteen birds: Cooper's hawk (*Accipiter cooperii*), Sharp-shinned hawk (*Accipiter striatus*), Grasshopper sparrow (*Ammodramus savannarum*), Golden eagle (*Aquila chrysaetos*), Lawrence's goldfinch (*Carduelis lawrencei*), American dipper (*Cinclus mexicanus*), Merlin (*Falco columbarius*), American peregrine falcon (*Falco peregrinus anatum*), Fox sparrow (*Passerella iliaca*), Nuttall's woodpecker (*Picoides nuttallii*), Purple martin (*Progne subis*), Yellow warbler (*Setophaga petechia*), Black-chinned sparrow (*Spizella atrogularis*), Brewer's sparrow (*Spizella breweri*), and Calliope hummingbird (*Stellula calliope*); three mammals: Ringtail (*Bassariscus astutus*), Silver-haired bat (*Lasiorycteris noctivagans*), and Yuma myotis bat (*Myotis yumanensis*).

The project site has one small (298 ft.²) spring-fed wetland, two perennial creeks, one intermittent creek and eight channels, with a combined area of 1.09 acres of potential jurisdictional features. All waters are located within terrain that is too steep for building.

I hope to have your reports completed by late April, 2016. Please contact me if you need further information.

Sincerely,

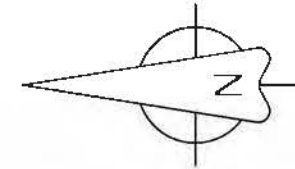
Ruth Willson

PRELIMINARY MAP OF SPECIAL-STATUS SPECIES, WETLANDS & WATERS MAP

A PORTION OF SECTION 25
 OF SECTION 25, T.11N., R.9E., M.D.M.
 BEING PARCEL A OF PM 51/083
 EL DORADO COUNTY STATE OF CALIFORNIA
 JULY 2015
 FOR: TOM VAN NORD
 APN:105-190-41

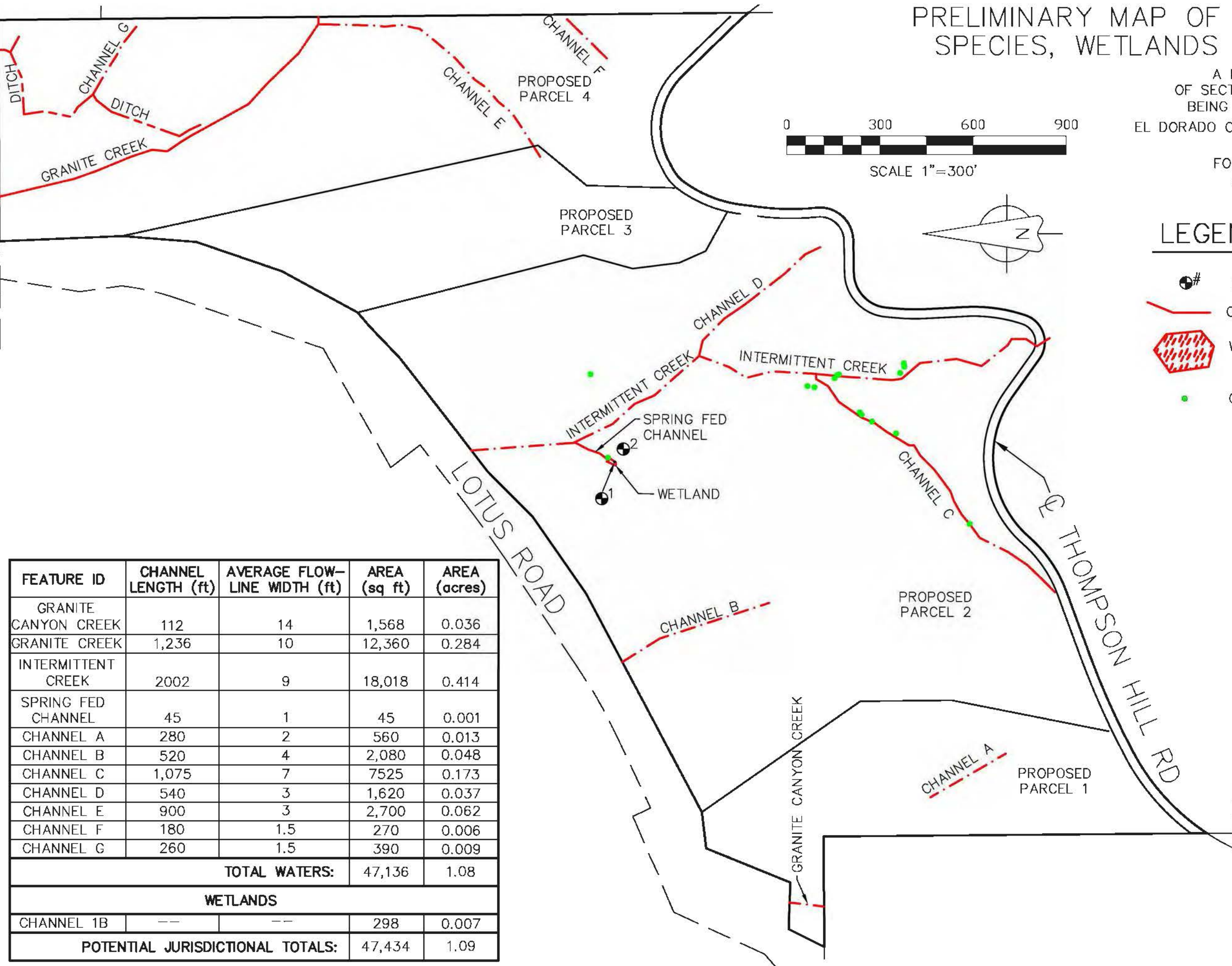


SCALE 1"=300'



LEGEND

- DATA POINT
- CHANNEL
- WETLANDS
- CLARKIA BILOBA SSP. BRANDAGEEAE



FEATURE ID	CHANNEL LENGTH (ft)	AVERAGE FLOW-LINE WIDTH (ft)	AREA (sq ft)	AREA (acres)
GRANITE CANYON CREEK	112	14	1,568	0.036
GRANITE CREEK	1,236	10	12,360	0.284
INTERMITTENT CREEK	2002	9	18,018	0.414
SPRING FED CHANNEL	45	1	45	0.001
CHANNEL A	280	2	560	0.013
CHANNEL B	520	4	2,080	0.048
CHANNEL C	1,075	7	7,525	0.173
CHANNEL D	540	3	1,620	0.037
CHANNEL E	900	3	2,700	0.062
CHANNEL F	180	1.5	270	0.006
CHANNEL G	260	1.5	390	0.009
TOTAL WATERS:			47,136	1.08
WETLANDS				
CHANNEL 1B	---	---	298	0.007
POTENTIAL JURISDICTIONAL TOTALS:			47,434	1.09