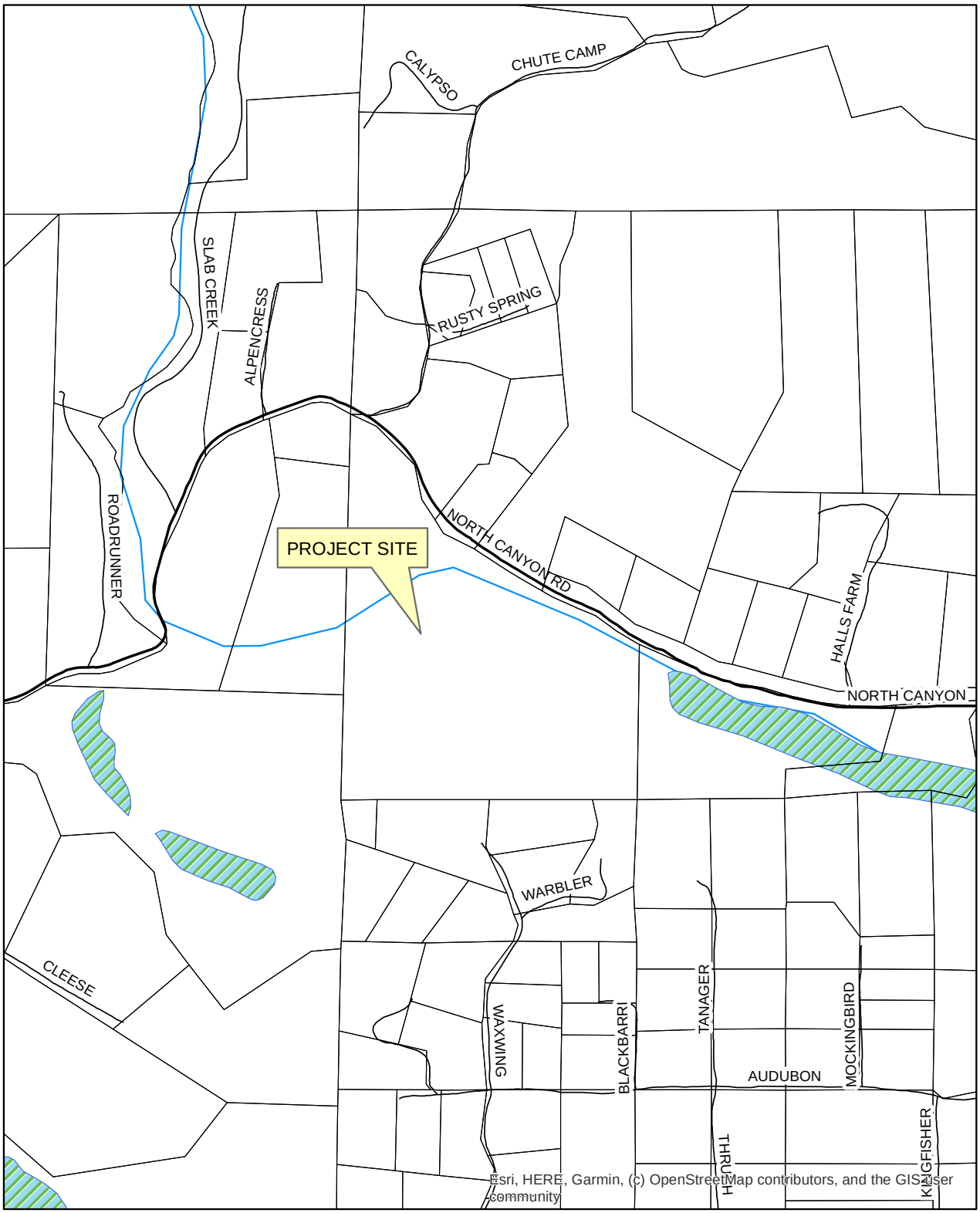
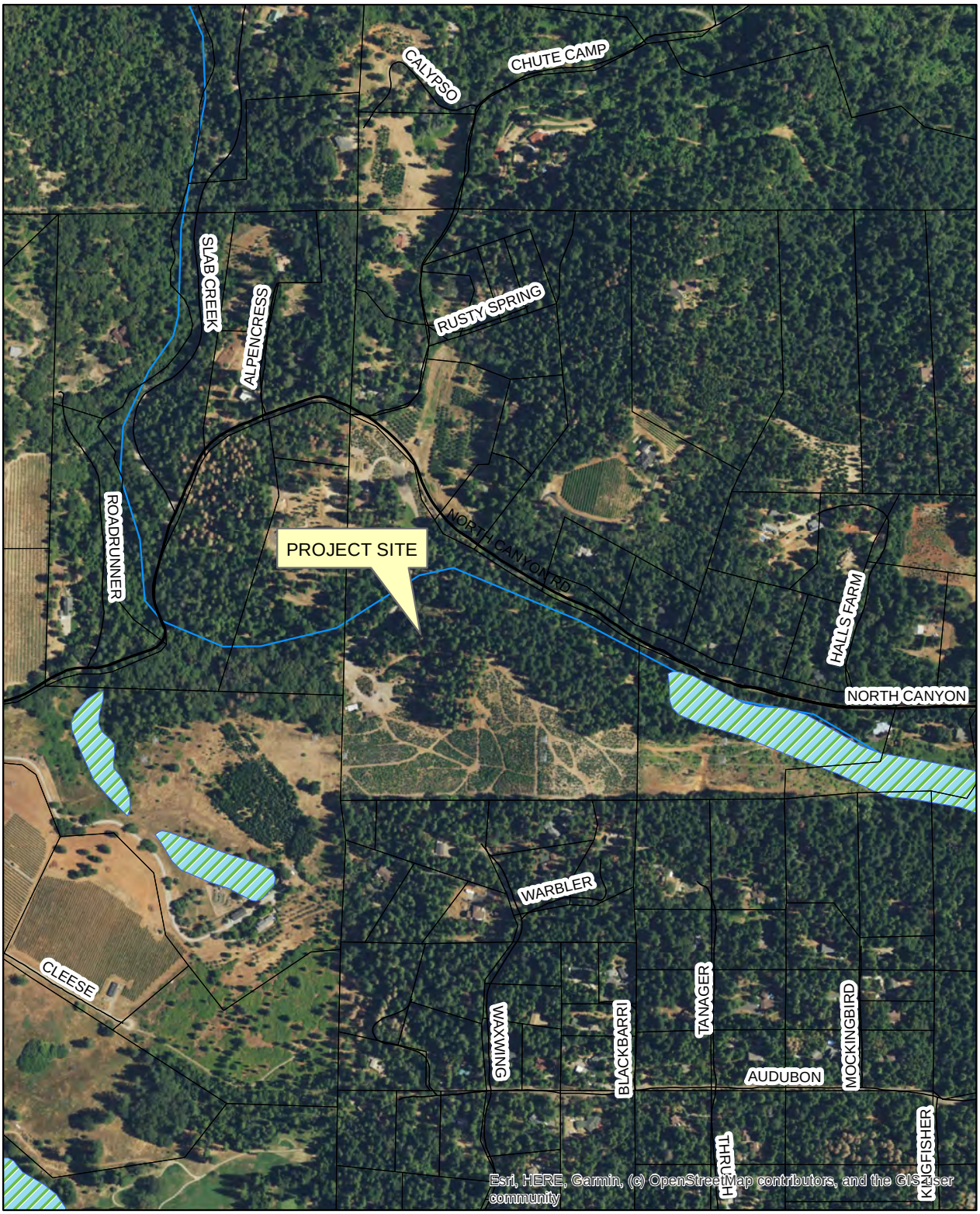
Z21-0010/WAC21-0003 INDIAN ROCK TREE FARM (HYDER)
ATTACHMENT 1 - LOCATION MAP



Z21-0010/WAC21-0003 INDIAN ROCK TREE FARM (HYDER)
ATTACHMENT 2 - AERIAL MAP



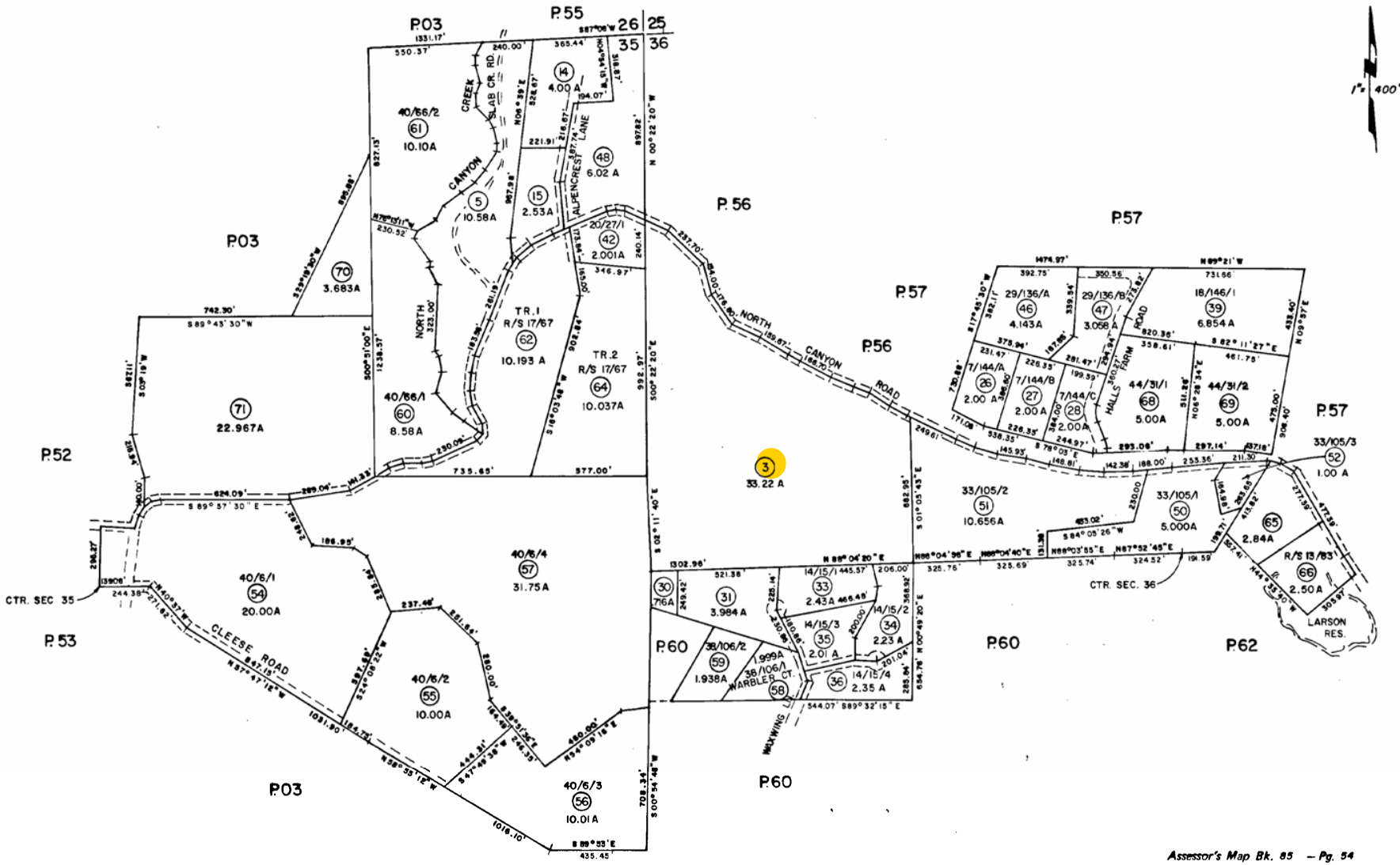
0 185 370 740 1,110 1,480
Feet

Scale

N

POR. SECS. 35 & 36., T.11N., R.11E., M.D.M.

Tax Area Code 85:54



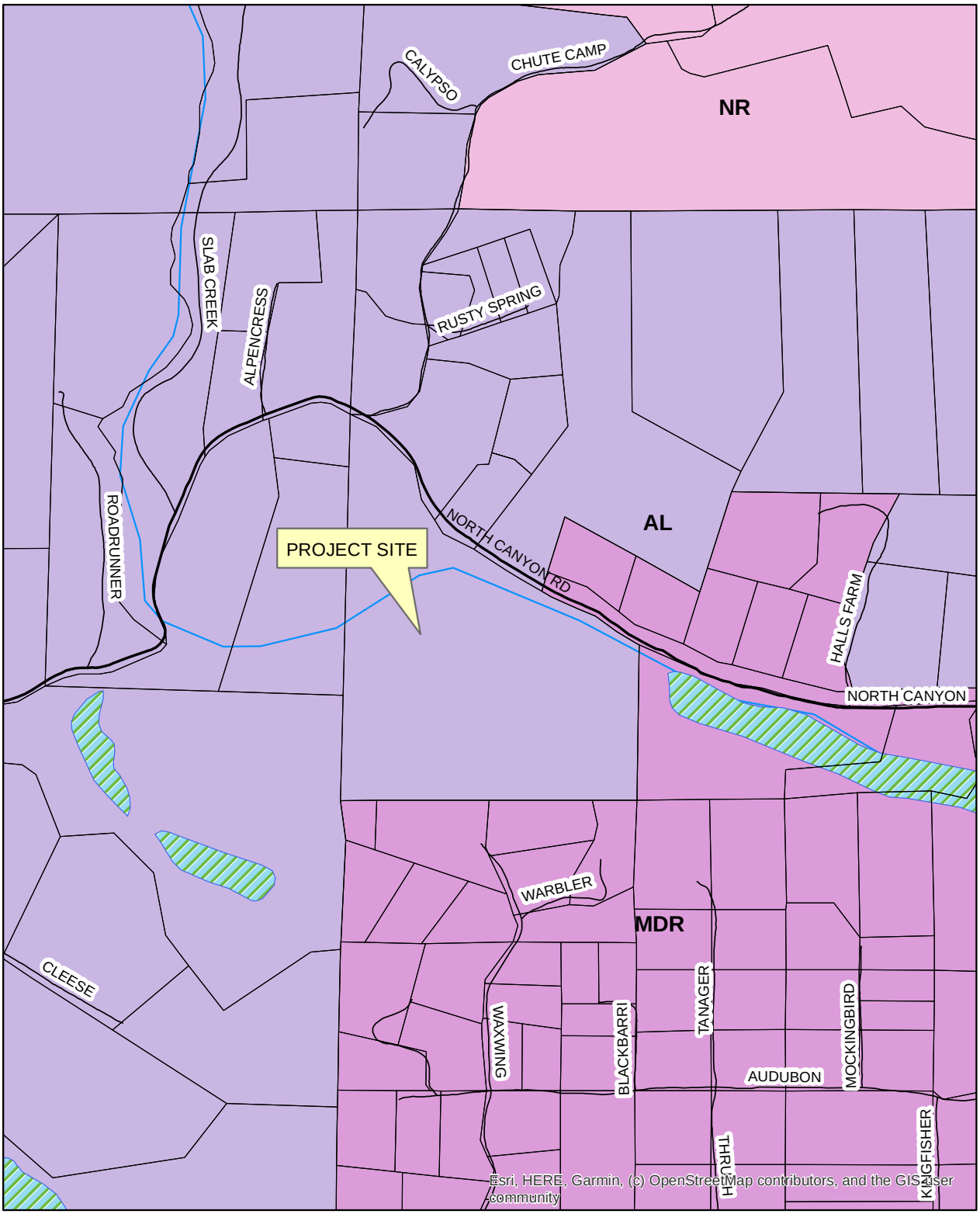
THIS MAP IS NOT A SURVEY, It is prepared by the El Dorado Co. Assessor's office for assessment purposes only.

NOTE – Assessor's Block Numbers Shown in Ellipses
Assessor's Parcel Numbers Shown in Circles

Assessor's Map Bk. 85 – Pg. 54
County of El Dorado, California

SEP 1 2 2005

Z21-0010/WAC21-0003 INDIAN ROCK TREE FARM (HYDER)
ATTACHMENT 4 - GENERAL PLAN LAND USE MAP



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Feet

Scale

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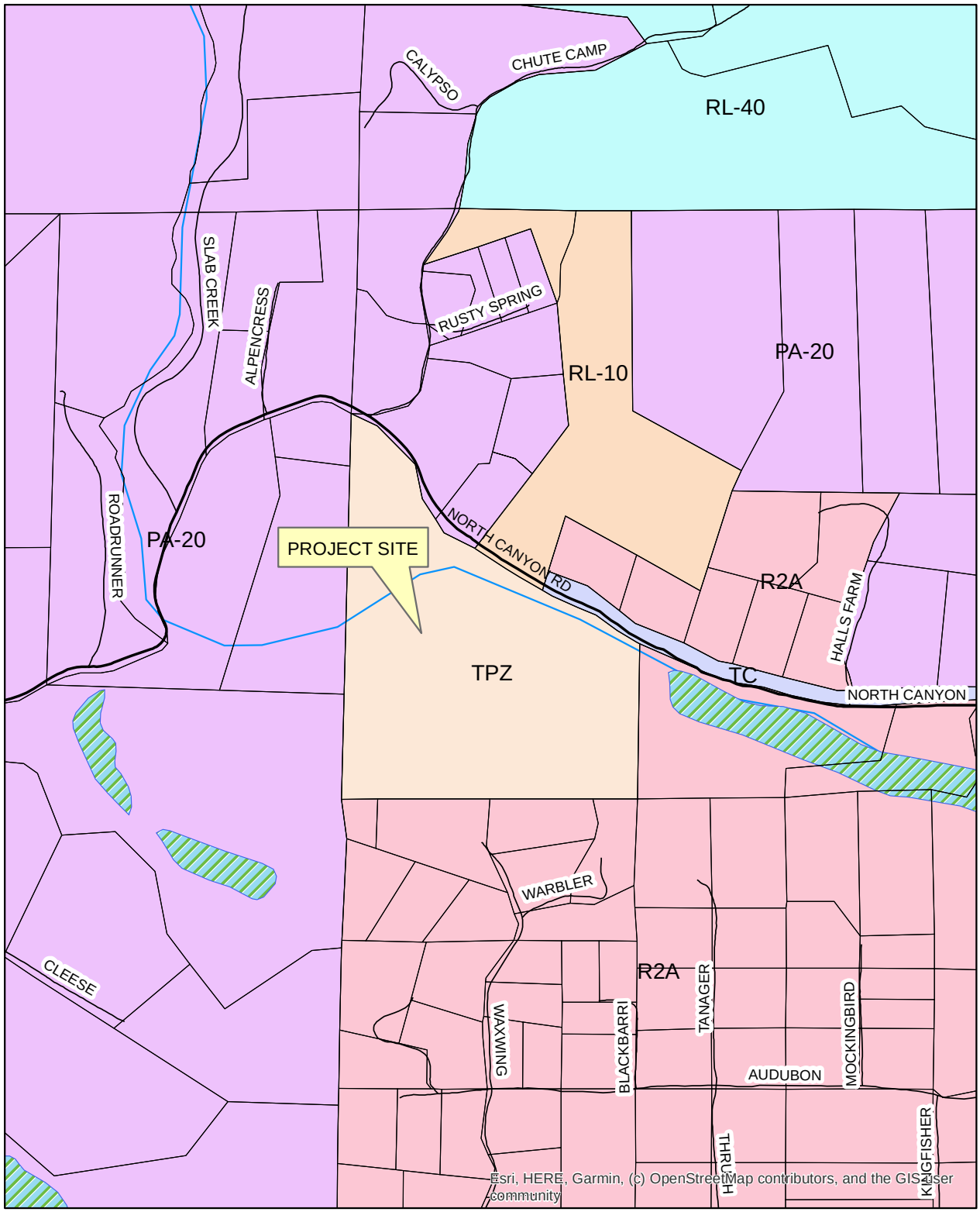
Z21-0010/WAC21-0003 INDIAN ROCK TREE FARM (HYDER)
ATTACHMENT 5 - ZONING MAP (CURRENT)



0 185 370 740 1,110 1,480
Feet

Scale

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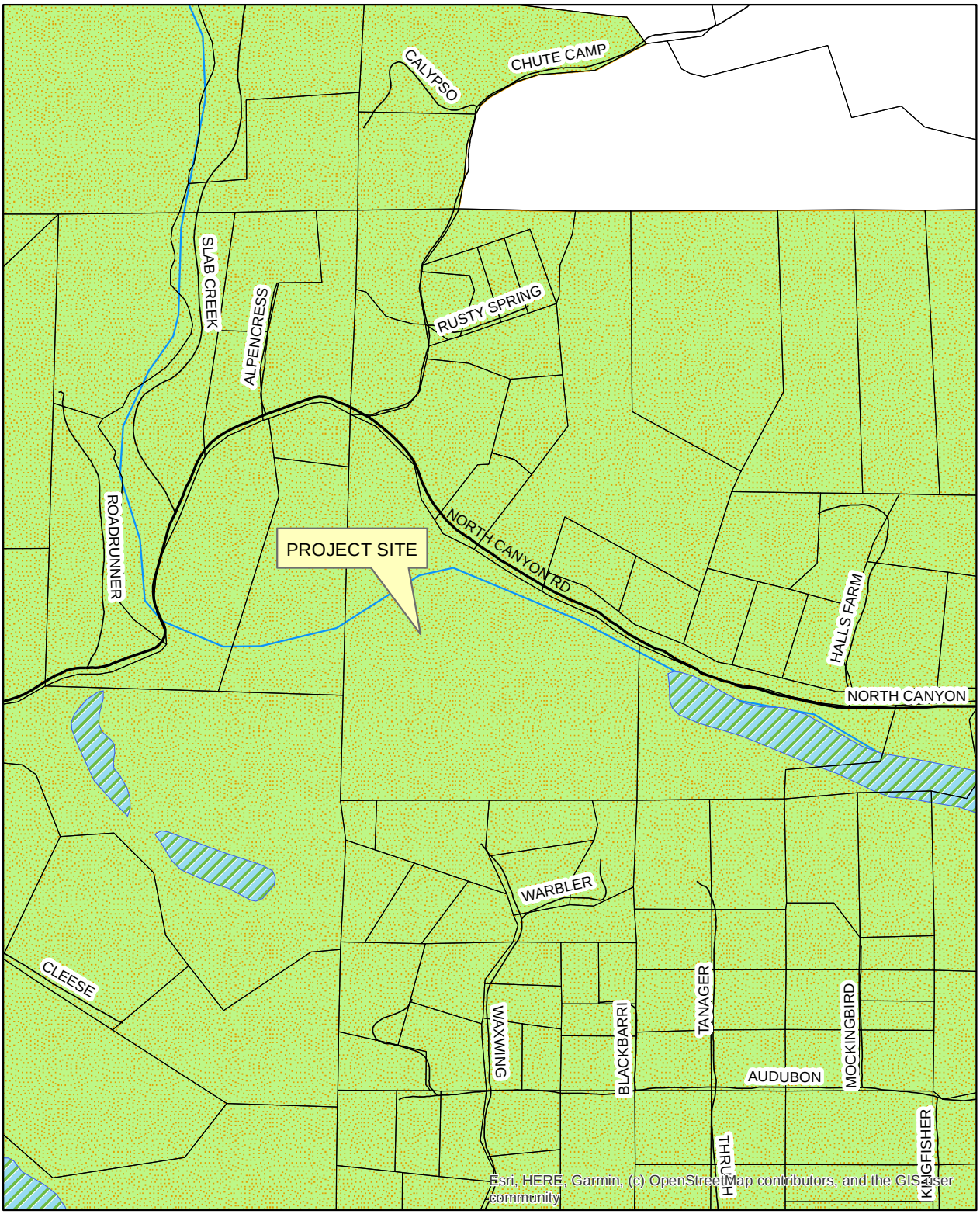
Z21-0010/WAC21-0003 INDIAN ROCK TREE FARM (HYDER)
ATTACHMENT 6 - AGRICULTURAL DISTRICT BOUNDARY MAP



0 185 370 740 1,110 1,480
Feet

Scale

N

WATER SOURCE

EXISTING WELL

WASTE WATER DISPOSAL

EXISTING SEPTIC SYSTEM

SITE NOTES

1. EXISTING HOUSE
2. EXISTING SEPTIC AREA
3. EXISTING DRIVEWAY
4. EXISTING WELL
5. EXISTING STORAGE SHED
6. EXISTING GREETING KEYOS
7. EXISTING POLE BARN
8. EXISTING SALES OFFICE
9. EXISTING GIFT SHOP
10. EXISTING PARKING AREA
11. EXISTING RANCH ROADS
12. EXISTING CHRISTMAS TREE PLANTATIONS
13. EXISTING TIMBER LANDS
14. EXISTING BRIDGE
15. EXISTING FOOT BRIDGE
16. EXISTING POND

OWNER/APPLICANT

APN 085-540-003-000
GERALDINE F. HYDER TRUSTEE OF
THE RAYMOND L. HYDER AND
GERALDINE F. HYDER 1994 TRUST
3800 NORTH CANYON RD.
CAMINO, CA 95709

REZONE SITE MAP

A PORTION OF THE NORTHWEST 1/4 OF
SECTION 36 T. 11 N., R. 11 E., M. D. M.
BEING TRACT 1 OF RS 38/05
COUNTY OF EL DORADO STATE OF CALIFORNIA

AUGUST 2022

SCALE 1" = 60'
CONTOUR INTERVAL = 10'

RECEIVED
JAN 13 2023
EL DORADO COUNTY
PLANNING AND BUILDING DEPARTMENT

FILE COPY

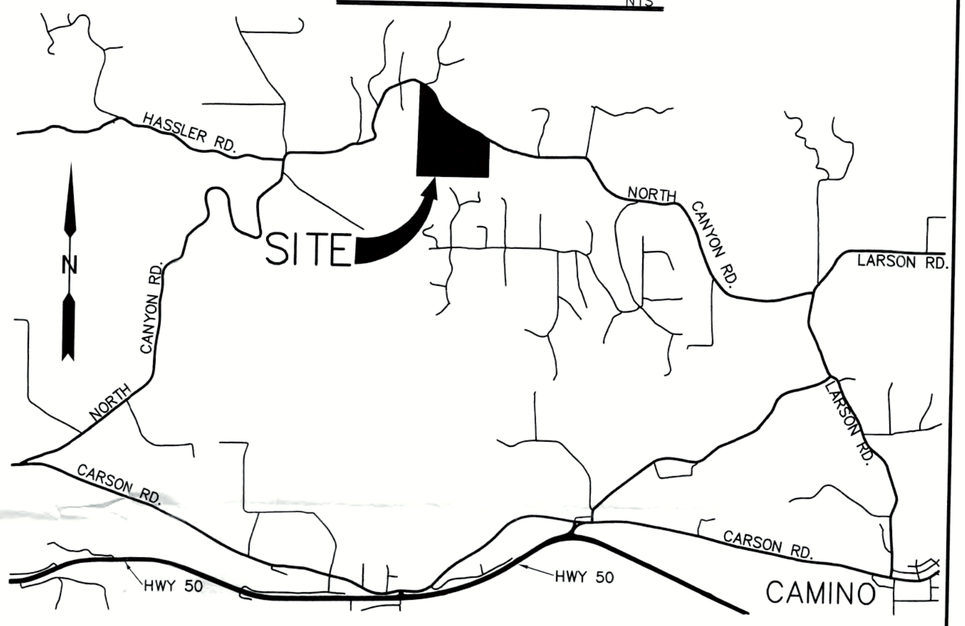
MAP PREPARED BY

JAMES WILLSON, LS 4663
SITE CONSULTING INC
LAND SURVEYING SERVICES - BIOLOGICAL SERVICES
3460 ANGEL LANE
PLACERVILLE, CA 95667

LICENSED LAND SURVEYOR
JAMES C. WILLSON
NO. 4663
Exp. 9/30/2024
STATE OF CALIFORNIA

VICINITY MAP

NTS



APN: 085-540-048
2008-0009146
APN: 085-560-007
2018-0039636
APN: 085-540-042
PM 20/27
PARCEL 1
APN: 085-560-010
PARCEL 4
PM 3/168
APN: 085-540-064
RS 17/67
TRACT 2
APN: 085-560-022
PM 47/106
PARCEL B
APN: 085-570-009
PM 10/107
PARCEL 1
APN: 085-560-019
2018-0029654
APN: 085-560-016
APN: 085-540-057
PARCEL 4 PM 40/6
APN: 085-540-051
PARCEL 2 PM 33/105
APN: 085-600-071
2013-0061153
APN: 085-540-030
2013-0057400
APN: 085-540-031
2015-0055954
APN: 085-540-033
PM 14/15
PARCEL 1
APN: 085-540-034
PM 14/15
PARCEL 2

S 64°32'55" E 126.47'
S 44°41'55" E 237.70'
S 11°57'55" E 154.00'
S 32°26'55" E 176.80'
S 62°45'55" E 156.00'
S 57°10'05" E 159.67'
S 58°14'35" E 70.00'
S 60°05'05" E 166.70'
S 65°34'35" E 124.00'
S 66°55'05" E 85.50'
S 54°45'05" E 116.14'
S 58°49'35" E 102.00'
S 62°26'35" E 12.12'
N 01°25'53" E 1696.46'
S 00°42'33" W 682.08'
S 89°53'12" W 1303.42'

100' SETBACK LINE
NORTH CANYON ROAD
100' SETBACK LINE
NORTH CANYON CREEK

APN: 085-540-003
THE RAYMOND L. HYDER AND
GERALDINE F. HYDER 1994 TRUST
4408/184
TRACT 1 RS 38/5

50.00' WIDE SMUD POWER LINE EASEMENT PER 779/402
150.00' WIDE SMUD POWER LINE EASEMENT PER467/454
100.00' PG&E POWER LINE EASEMENT PER 96/46

S36
S35

Z21-0010/WAC21-0003

Biological Resources Report

including

Special-Status Species Survey

for

Assessor' Parcel Number 085-540-003-000

3800 North Canyon Road

Camino, 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
Geraldine Hyder
Contact
Karen Hyder
Phone: 530-391-9056

September 2022

Z21-0010/WAC21-0003

Table of Contents

Table of Figures, Tables and Appendices

Figures

Tables

Appendices

I. Report Summary

A. Special-Status Species and Special Habitats

1. Special-status species

No state- or federal-listed species were found on the project site. Marginal potential habitat was found for two state- or federal-listed species: California red-legged frog (*Rana draytonii)* and Bald eagle (*Haliaeetus leucocephalus*) (Table 1).

No species of concern were found on the project site. Potential habitat was found for twenty-six species of concern, including two insects: Western bumble bee (*Bombus occidentalis*) and Wawona riffle beetle (*Atractelmis wawona*); one amphibian: Foothill yellow-legged frog (*Rana boylii*); five birds: Oak titmouse (*Baeollophus inornatus*), Cassin's finch (*Carpocacus cassinii*), Evening grossbeak (*Coccothraustes vesperina*), Olive-sided flycatcher (*Contopus cooperi*), Black-throated gray warbler (*Dendroica nigrescens*); seven mammals: Pallid bat (*Antrozous pallidus)*, Ringtail (*Bassariscus astutus*), Townsend's big-eared bat (*Corynorhinus townsendii*), Porcupine (*Erethizon dorsatum*), Silver-haired bat (*Lasionycteris noctivagans*), Long-legged myotis bat (*Myotis volans*), and Yuma myotis bat (*Myotis yumanensis*); and eleven plants: Sierra arching sedge (*Carex cyrtostachya*), Stebbin's phacelia (*Phacelia stebbinsii*), Sierra blue grass (*Poa sierrae*), Oval-leaved viburnum (*Viburnum ellipticum*), True's manzanita (*Arctostaphylos mewukka* ssp. *truei*), Brandegee's clarkia (*Clarkia biloba* ssp. *brandegeeae*), Sierra clarkia (*Clarkia virgata*), Northern Sierra daisy (*Erigeron petrophilus* var. *sierrensis*), Humboldt's lily (*Lilium humboldtii* ssp. *humboldtii*), Sierra sweet bay (*Myrica hartwegii*), and Long-fruited jewelflower (*Streptanthus longisiliquus*). See pages 21-27 for more details.

2. Special Habitats

One special habitat was found on the project site: Central Valley Drainage Resident Rainbow Trout Stream (Table 1).

Table 1. State- or federal-listed species having potential habitat on the project site, and a special habitat found on the project site.

Special-status Species	Common Name	Legal Status[1] Federal/ State	Species or Special Habitat Found On Site?	Habitat Quality
State- or Federal-listed Species				
Rana draytonii	California red-legged frog	T /	No	Marginal
Haliaeetus leucocephalus	Bald eagle	D / E	No	Very Marginal
Special Habitat				
Central Valley Drainage Resident Rainbow Trout Stream			Yes	Suitable

[1]**Legal Status**: **E** = Endangered **D** = Delisted **T** = Threatened

B. Suggested Mitigation

No state- or federal-listed species were found on the project site, so no mitigation is required for them. No mitigation should be required for species of concern not found on the project site.

Normal setbacks from waters and wetlands (100 feet from North Canyon Creek and the off-channel pond) would be sufficient to protect features and resources associated with them.

Pre-construction surveys for nesting birds, including raptors, conducted no more that 30 days prior to construction activities, is recommended if construction is scheduled during the normal nesting season (February 1-August 31). A 30-foot setback from trees with active nests is recommended for most species. If raptor nests are found on or immediately adjacent to the site, however, consultation with the California Department of Fish and Wildlife (CDFW) must be initiated to determine appropriate avoidance measures. No mitigation should be required if tree removal and grading are not scheduled during the normal nesting season.

II. Introduction

A. Purpose of Report

A biological resources study was conducted on Assessor's Parcel Number 085-540-003-000 (Figure 1), a 33.22 acre parcel, 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 report is part of submittal information for a zone change from TPZ to PA.

B. Property Location and Description

The project site is in the west half of Section 36, Township 11 North, Range 11 East, M.D.M. The parcel is located at 3800 North Canyon Road, Camino, El Dorado County, CA. (Figures 2 and 3).

The project site has General Plan designation of Agricultural Land (AL, District A) with TPZ, zoning. It is bounded by properties varying in size from 0.716 to 31.75 acres.

C. Property Owner and Project Manager

Property Owner
Raymond L. Hyder and Geraldine
F. Hyder 1994 Trust
3800 North Canyon Road
Camino, CA 95709

Project Manager
Karen Hyder
Phone: 530-391-9056

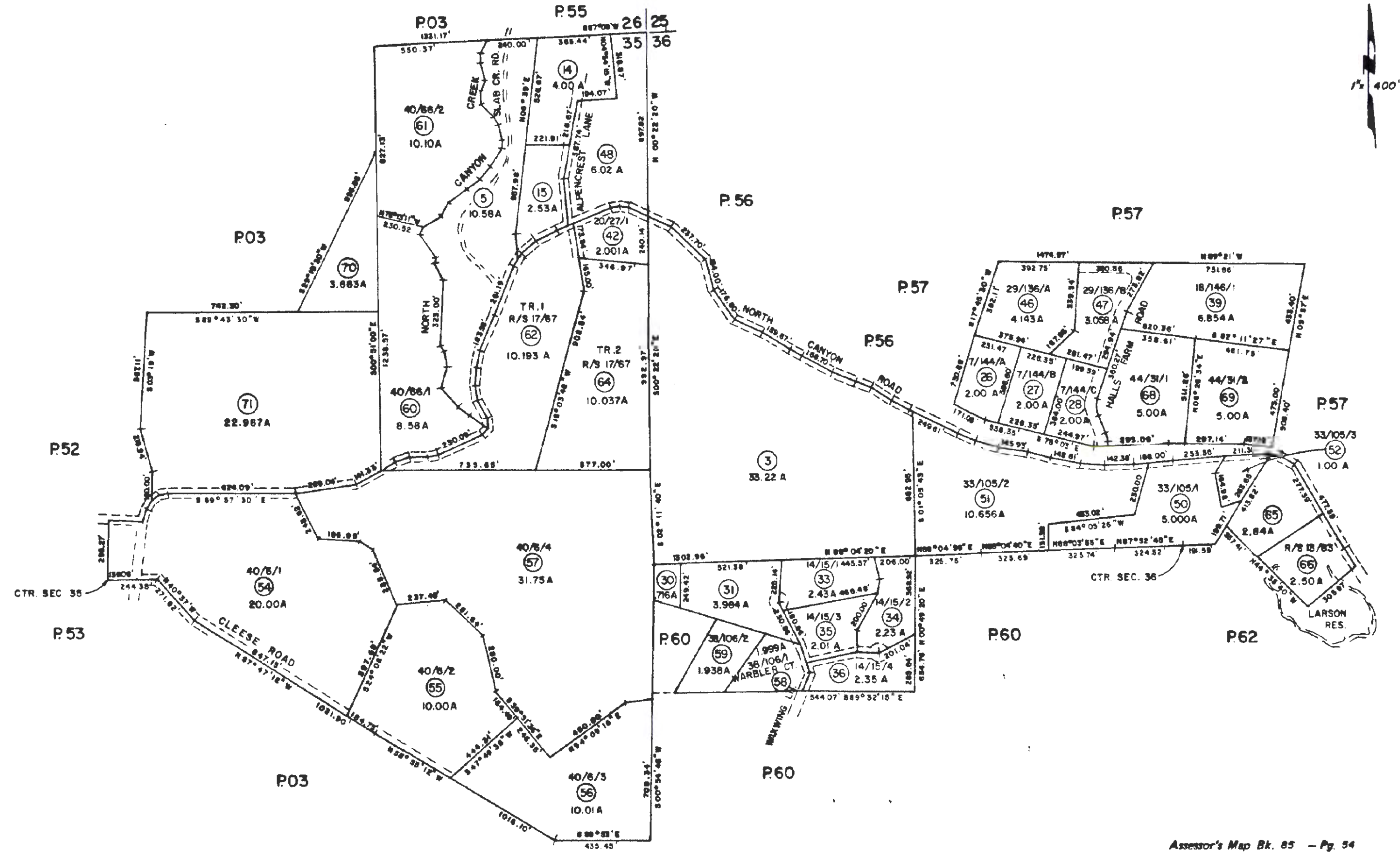
D. Report Preparer

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. SECS. 35&36., T.11N., R.11E., M.D.M.

Tax Area Code

85:54



THIS MAP IS NOT A SURVEY. It is prepared by the El Dorado Co. Assessor's office for assessment purposes only.

NOTE – Assessor's Block Numbers Shown in Ellipses. Assessor's Parcel Numbers Shown in Circles

Assessor's Map Bk. 85 – Pg. 54
County of El Dorado, California

SEP 1 2 2005

0 200 400 600

SCALE 1" = 200'

FIGURE 2. AERIAL PHOTO

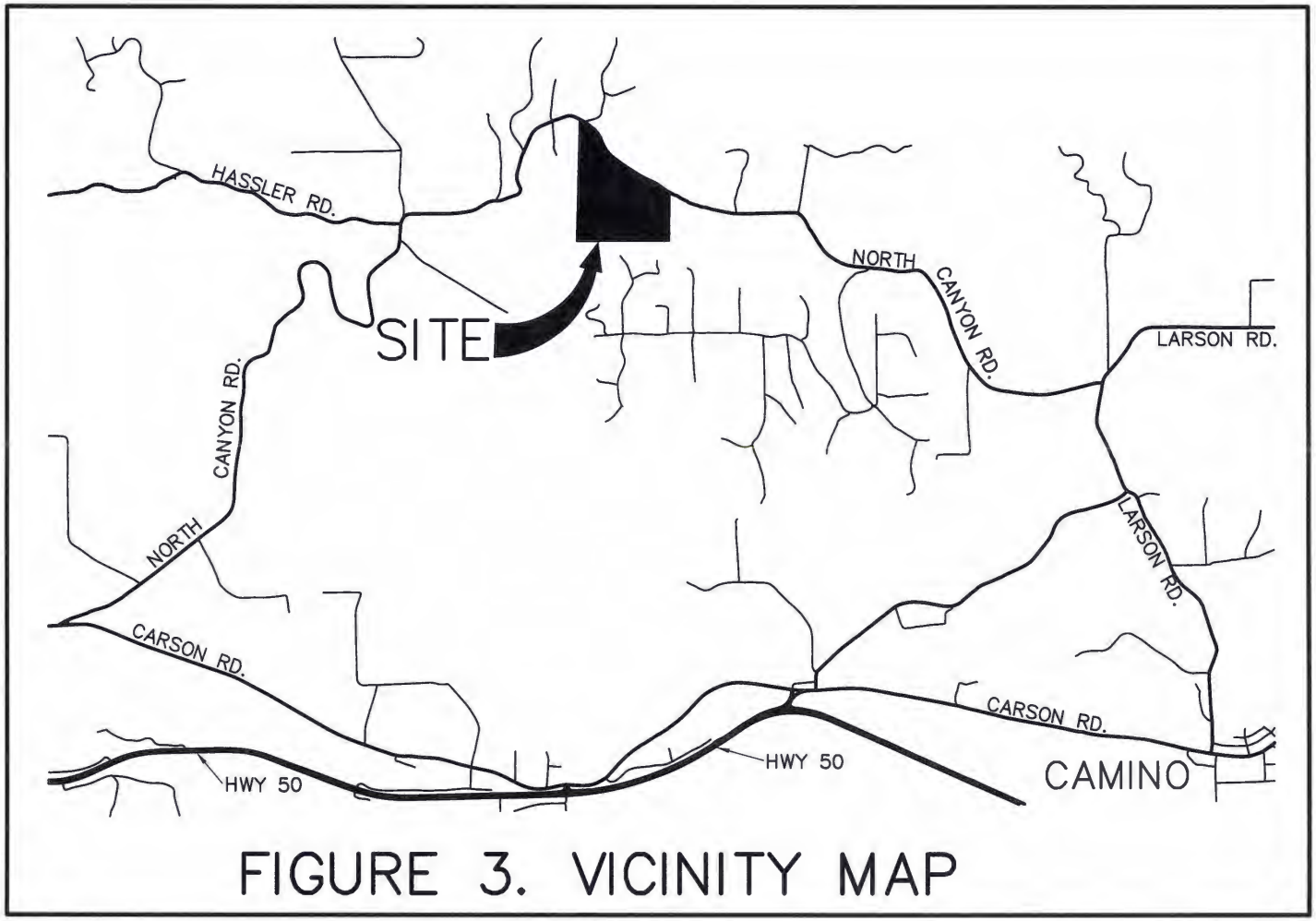


FIGURE 3. VICINITY MAP

III. Evaluation Methods

A. Field Surveys

The project site was searched for special-status species during field surveys conducted July 27, August 9, and September 1, 2022, by Ruth Willson. Field searches were conducted around the perimeter of the parcel, along all roads and on transects about 50 feet apart in forested areas and Christmas tree plantations.

Plants were identified in the field whenever possible. Samples of unknown plants were taken with identification achieved in the office through the use of Jepson Flora Project (2022). 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 (Appendix A) and a USFWS IPaC Trust Resource Report (Appendix B), both dated July 14, 2022, 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 Slate Mountain and eight surrounding USGS Quads, dated July1, 2022, was obtained from the California Natural Diversity Database (Appendix C). 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,* online edition, v9-01 0.39, accessed July 14, 2022 (Appendix D).

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 major habitat types 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. Waters and Wetlands

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.

V. Topographic Features

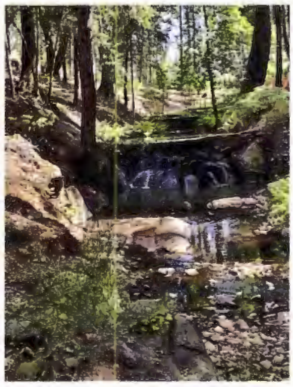
A. Topography

The project site lies between 2600 and 2850 feet (790 and 870 meters) elevation. North Canyon Creek, a perennial stream, flows westerly through the parcel; the creek's gradient is about 5 percent. The topography south of the creek primarily consists of northerly and westerly slopes from a knoll on the south boundary to the creek. The gradient of that slope is approximately 22 percent. The topography north of the creek consists of a southeasterly slope from a knoll to the creek with a gradient of about 20 percent (Figure 5, next page).

Figure 4. Photos of the project site.

Christmas tree plantation.

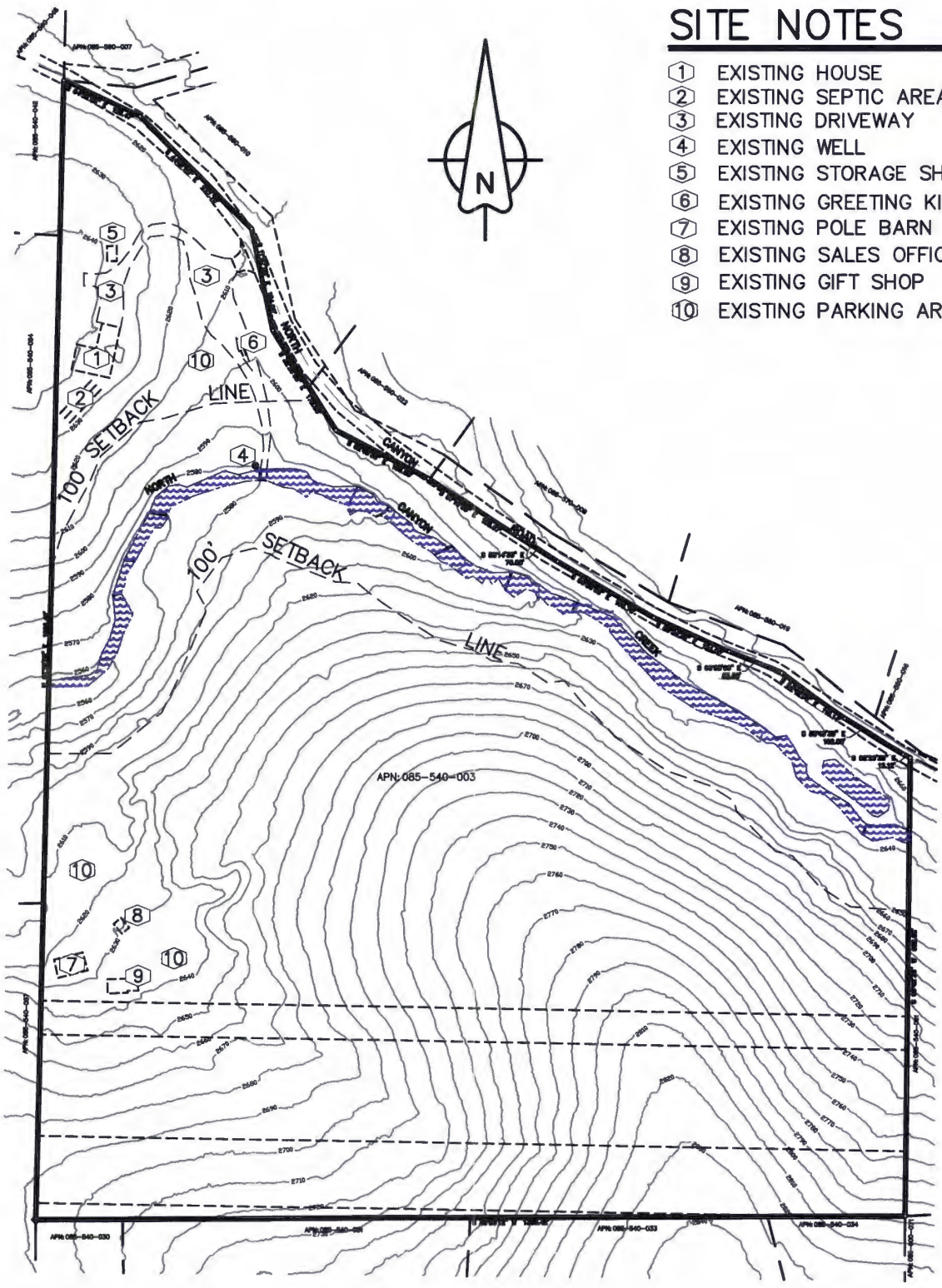
Forest land.



North Canyon Creek.

0 200 400 600

SCALE 1" = 200'
CONTOUR INTERVAL = 10'



SITE NOTES

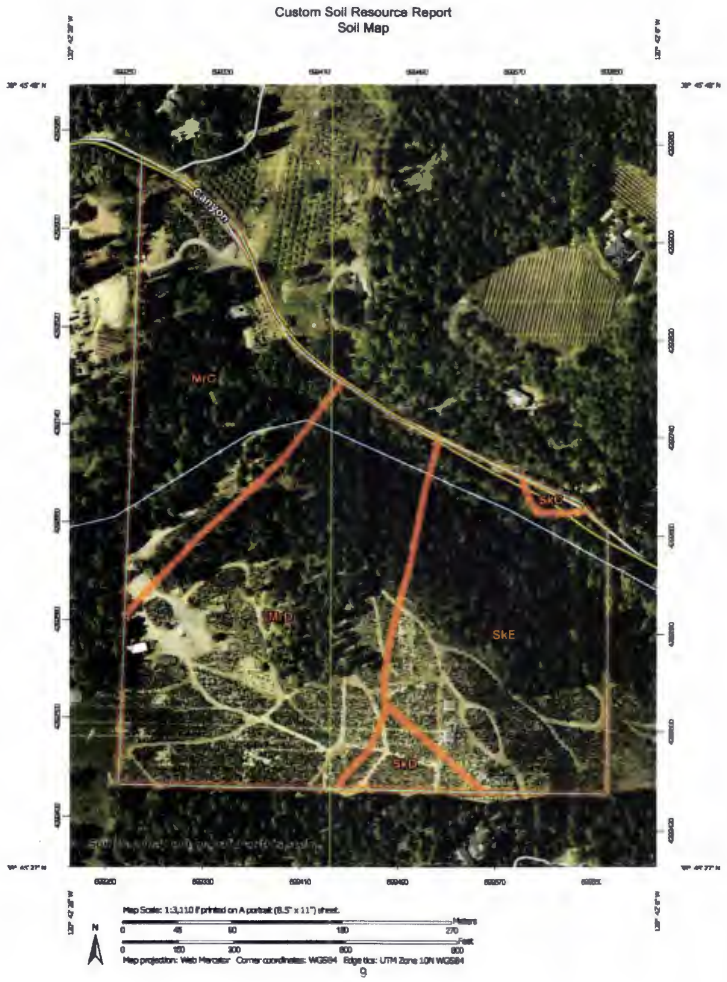
1. EXISTING HOUSE
2. EXISTING SEPTIC AREA
3. EXISTING DRIVEWAY
4. EXISTING WELL
5. EXISTING STORAGE SHED
6. EXISTING GREETING KIOSK
7. EXISTING POLE BARN
8. EXISTING SALES OFFICE
9. EXISTING GIFT SHOP
10. EXISTING PARKING AREA

FIGURE 5. TOPOGRAPHIC MAP

B. Soils

Soils on the project site (Figure 6) include (counterclockwise from northwest to northeast) Musick sandy loam, 9 to 15 percent slopes (MrC), Musick sandy loam, 15 to 30 percent slopes (MrD), Sites loam, 15 to 30 percent slopes (SkD), Sites loam 15 to 30 percent slopes (SkE), and Sites loam, 9 to 15 percent slopes (SkC). Musick sandy loam covers about 22 acres and Sites loam covers about 11 acres of the project site (USDA, NRCS 2022).

Figure 6. Soils map from National Resource Conservation Service.



VI. Biological Resources

A. Vegetation Communities

Vegetation communities on the project site include Sierran Mixed Conifer Forest, Riparian and Agricultural Land (Figure 8, next page).

1. Sierran Mixed Conifer Forest

Sierran mixed conifer forest (Mayer & Laudenslayer 1988; El Dorado County 2004) covers about 15.6 acres of the project site. **Another name for this vegetation type is Lower montane coniferous forest, which is utilized by the California Natural Diversity Database and California Native Plant Society references herein.** The most abundant species is ponderosa pine *(Pinus ponderosa)*, followed by incense cedar (*Calocedrus decurrens*) and Douglas-fir (*Pseudotsuga menziesii*). Madrone (*Arbutus menziesii)*, mountain dogwood (*Cornus nuttallii*), and California nutmeg (*Torreya californica*) are also found in the tree canopy. The shrub layer is mostly absent, due to careful forest management through the years (prescribed burning and shrub removal), but scattered shrubs include Oregon grape (*Berberis aquifolium*), toyon (*Heteromeles arbutifolia*), Western poison-oak (*Toxicodendron diversiloba*) and California rose (*Rosa californica*). The ground layer includes mountain misery (*Chamaebatia foliolosa*), blue wild-rye (*Elymus glaucus),* dogtail grass (*Cynosurus echinatus)*, Pacific starflower (*Lysimachia latifolia*), hairy wood-rush (*Luzula comosa*), American lotus (*Acmisphon americanus*) and Klamathweed *(Hypericum perforatum).* A complete list of plants found on-site is presented in Appendix F.

2. Riparian

Riparian vegetation, occurring along the banks of North Canyon Creek, covers about 1.6 acres. Riparian trees include big-leaf maple (*Acer macrophyllum*) and white alder (*Alnus rrhombifolia*). Shrubs found alongside the stream include Himalayan blackberry (*Rubus armeniacus*) and cutleaf blackberry (*R. laciniatus*). The creek supports a large variety of herbaceous species, including common horsetail (*Equisetum arvense*), big-leaf sedge (*Carex amplifolia*), Thompkin's sedge *(C. tompkinsii)*, lovegrass sedge (*Cyperus eragrostis*), panicled bulrush (*Scirpus microcarpus*), water iris (*Iris pseudacorus*), Baltic rush (*Juncus balticus*), common velvet grass (*Holcus lanatus*) and clustered dock (*Rumex conglomeratus*), among others.

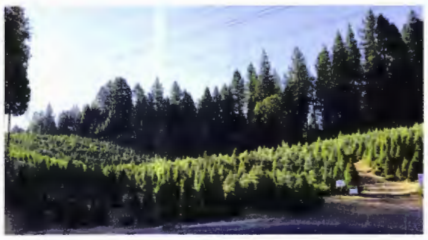
3. Agricultural land

Approximately 15.2 acres of the project site is utilized as a choose-and-cut Christmas tree farm. The plantations include Douglas-fir, silvertip fir (*Abies magnifica*), white fir (*Abies concolor*), blue spruce (*Picea pungens*) and various specialty firs. The plantations have been managed to suppress competing vegetation, so the ground layer is largely absent.

Figure 7. Vegetation communities photos.

Sierran Mixed Conifer Forest

Riparian



Agricultural land: Christmas tree plantation.

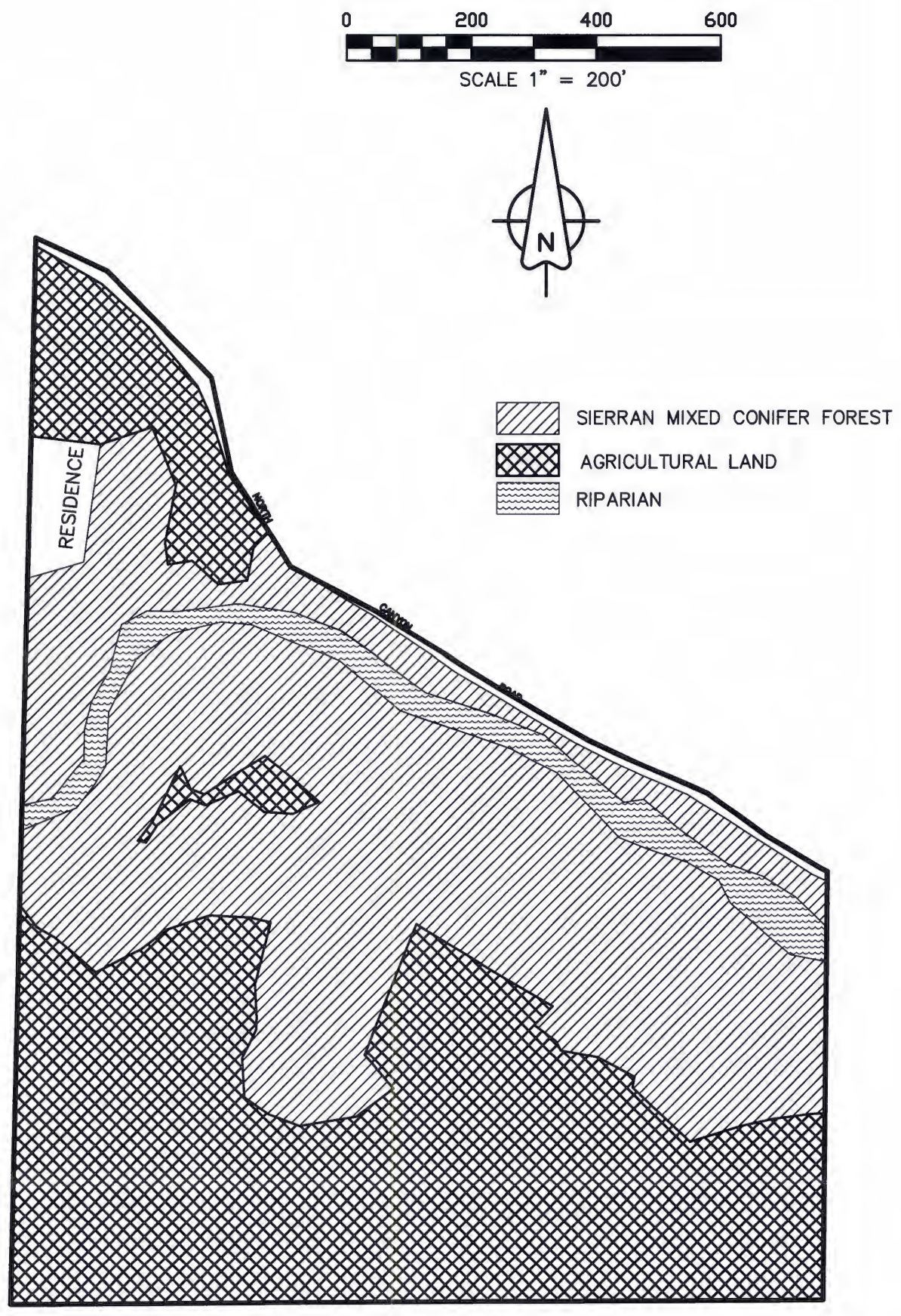


FIGURE 8. VEGETATION COMMUNITIES

B. Waters and Wetlands

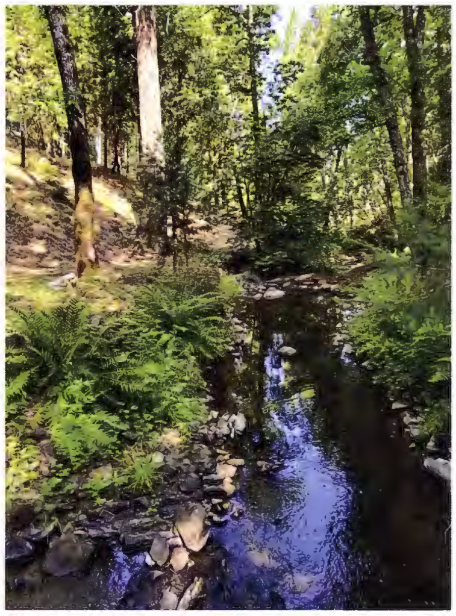
North Canyon Creek, a perennial stream (Figures 9 and 10), flows westerly through the northern portion of the project site. The gradients of the slopes above the creek (22% to 24%) are too steep to support wetlands along its bank.

An off-channel pond, dug decades ago, is found north of the creek near the northeast corner of the property. A wetland is found within the pond footprint; its area is included within the waters calculation. Total area of waters on the project site is 35,019 ft.^{2} (0.78 Ac.).

C. Mine Habitat

The project site has a mine located near the main plantation parking area (photo at left and one on page 23). The mine is currently used as a feature for Christmas tree customers to enjoy, and the customers are encouraged to sign their names on its beams. It has too much human use to be utilized as hibernation habitat for bats, although small amounts of bat guano were found in the mine. No bats were found in the mine during field surveys, but it is possible that bats had accessed the area above the mine's ceiling through cracks, and could not be seen.

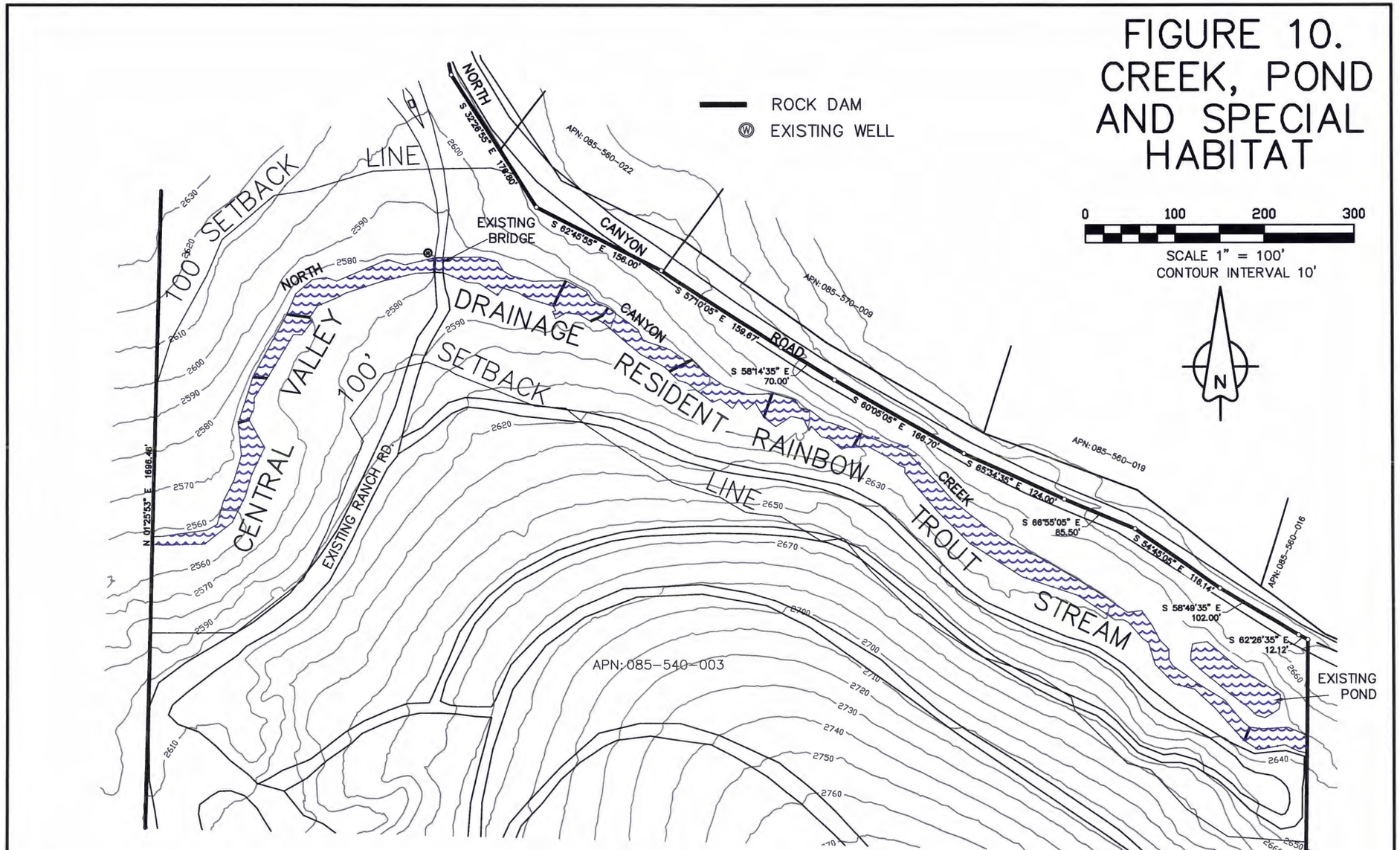
Figure 9. Photos of waters and wetlands on the project site.



North Canyon Creek.

The off-channel pond near the northeast corner of the project site.

FIGURE 10. CREEK, POND AND SPECIAL HABITAT



D. Wildlife

Two reptile species were observed on the project site: Western fence lizard (*Sceloporus occidentalis*) and Western skink (*Plestiodon skiltonianus*). 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*), Western skink (*Plestiodon skiltonianus*), Northern alligator lizard (*Elgaria coerulea*), sharp-tail snake (*Contia tenuis*), 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*), Western toad (*Anaxyrus boreas*), and ensatina (*Ensatina eschscholtzii*), among others not mentioned.

Mammals observed on the project site include Western gray squirrel (*Sciurus griseus*) and black-tailed deer (*Odocoileus hemionus)*. Evidence of other mammals on the project site include coyote (*Canis latrans*), gray fox (*Urocyon cinereoargenteus*), black bear (*Ursus americanus*), California ground squirrel (*Spermophilus beecheyi*), Botta's Pocket Gopher (*Thomomys bottae*) and black-tailed jackrabbit (*Lepus californicus)*. Not observed, but having suitable habitat on-site, are the following mammals, among others not mentioned: North American deer mouse (*Peromyscus mephitis*), California vole (*Microtus californicus*), broad-footed mole (*Scapanus latimanus*), raccoon (*Procyon lotor*), Northern river otter (*Lontra canadensis*) and ringtail (*Bassariscus astutus*).

Several bird species were found on or near the project site, including turkey vulture (*Cathartes aura*), red-tailed Hawk (*Buteo jamaicensis*), red-shouldered hawk (*Buteo lineatus*), mourning dove (*Zenaida macroura*), American robin (*Turdus migratorius*), Anna's hummingbird (*Calypte anna*), red-breasted nuthatch (*Sitta canadensis*), house finch (*Carpodacus mexicanus*), lesser goldfinch (*Spinus psaltria*), California towhee (*Melozone crissalis*), black phoebe (*Sayornis nigricans*), wild turkey (*Meleagris gallopavo*), and dark-eyed junco (*Junco hyemalis*).

The site has suitable habitat for several bird species not observed during field surveys, including, but not limited to, the following: Stellar's jay (*Cyanocitta stelleri),* Band-tailed pigeon (*Patagioenas fasciata*), Northern flicker (*Colaptes auratus*), and Pine siskin (*Carduelis pinus*).

E. 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 Slate Mountain and surrounding USGS Quads is shown in Appendix E. 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 July 27, August 9, and September 1, 2022. No species protected by the state or federal Endangered Species Acts were found; however, potential habitat was found for two such species: California red-legged frog (*Rana draytonii)* and Bald eagle (*Haliaeetus leucocephalus*). No species of concern were found on-site; however, potential habitat for twenty-five species of concern was found (Table 2). In addition, one special habitat was found: Central Valley Drainage Resident Rainbow Trout Stream. The suitability of the site to support each species is evaluated in Subsection 3, below.

Table 2. Special-status species with potential habitat on the project site.

	Common Name	Listing Status[1] Federal/ State (Other)	Habitat Quality	Species Found On Site?
State- or Federal-Listed Species				
Rana draytonii	**California red-legged frog**	**T** / —	Marginal	No
Haliaeetus leucocephalus	**Bald eagle**	D / E	Very Marginal	No
Species of Concern				
Invertebrates				
Atractelmis wawona	Wawona riffle beetle	— / —	Suitable	No
Bombus occidentalis	Western bumble bee	— / —	Marginal	No
Birds				
Baeolophus inornatus (nesting)	Oak titmouse	— / — (BCC)	Marginal	No
Carpocacus cassinii (=Haemorhous cassini)	Cassin's finch	— / — (IUCN: LC)	Suitable	No
Coccothraustes vesperinus	Evening grossbeak	— / — (IUCN: LC)	Suitable	No
Contopus cooperi (nesting)	Olive-sided flycatcher	— / — (SSC)	Suitable	No
Dendroica nigrescens (=*Setophaga nigrescens*)	Black-throated gray warbler	— / — (SSC)	Marginal	No

[1]**E** = Endangered; **R** = Rare; **T** = Threatened; **SSC**=Ca. Dept. Fish & Wildlife Species of Special Concern; **IUCN**= World Conservation Union; **LC** = World Conservation Union list of species of least concern; **BCC**= U.S. Fish & Wildlife Service Birds of Conservation Concern; **FP**=Fully protected species

Mammals				
Special-status Species	**Common Name**	**Legal Status[2] Federal/ State** (Other)	**Habitat Quality**	**Species Found On Site?**
Antrozous pallidus	Pallid bat	— / — (SSC)	Suitable	No
Bassariscus astutus	Ringtail	— / — (FP)	Suitable	No
Corynorhinus townsendii	Townsend's big-eared bat	— / — (SSC)	Suitable	No
Erethizon dorsatum	North American porcupine	— / — (IUCN: LC)	Suitable	No
Lasionycteris noctivagans	Silver-haired bat	— / — (IUCN: LC)	Suitable	No
Myotis volans	Long-legged myotis bat	— / — (IUCN: LC)	Marginal	No
Myotis yumanensis	Yuma myotis bat	— / — (IUCN: LC)	Suitable	No
Plants				
CNPS Group 1 Plants[3]				
Carex cyrtostachya	Sierra arching sedge	— / — (CNPS:1B.2)	Suitable	No
Phacelia stebbinsii	Stebbin's phacelia	— / — (CNPS: 1B.2)	Suitable	No
Poa sierrae	Sierra blue grass	— / — (CNPS: 1B.3)	Suitable	No
CNPS Group 2 Plants[3]				
Viburnum ellipticum	Oval-leaved viburnum	— / — (CNPS: 2B.3)	Suitable	No

[3]**CNPS**= California Native Plant Society; **CNPS:1B**= CNPS list of rare, threatened or endangered plants in California and elsewhere. **CNPS:2B**= CNPS list of rare, threatened or endangered plants in California but more common elsewhere. **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?
CNPS Group 4 Plants[4]				
Arctostaphylos mewukka ssp. truei	True's manzanita	— / — (CNPS:4.2)	Suitable	No
Clarkia biloba ssp. *brandegeeae*	Brandegee's clarkia	— / — (CNPS:4.2)	Suitable	No
Clarkia virgata	Sierra clarkia	— / — (CNPS:4.3)	Marginal	No
Erigeron petrophilus var. *sierrensis*	Northern Sierra daisy	— / — (CNPS:4.3)	Suitable	No
Lilium humboldtii ssp. *humboldtii*	Humboldt's lily	— / — (CNPS:4.2)	Suitable	No
Myrica hartwegii	Sierra sweet bay	— / — (CNPS:4.3)	Suitable	No
Streptanthus longisiliquus	Long-fruited jewelflower	— / — (CNPS:4.3)	Suitable	No
Special Habitats				
Central Valley Drainage Resident Rainbow Trout Stream			Suitable	Yes

[4]**CNPS**= California Native Plant Society; **CNPS:4**= CNPS 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. Federal- or State-listed Species

California red-legged frog (CRLF) (*Rana draytonii*)
Range: Occurs along the Coast Ranges from Mendocino County south and in portions of the Sierra Nevada and Cascades ranges, usually below 1200 m (3936 ft). (CWHR 2022)
Nearest CNDDB occurrence: Approximately 4.5 miles ESE of the project site in Weber Creek (BIOS 2022).
Habitat requirements: Quiet pools of streams, marshes, and occasionally ponds. Prefers shorelines with extensive vegetation. (CWHR 2022).
Habitat on project site: Marginal. North Canyon Creek has many small pools throughout the project site, but lacks overhanging vegetation preferred by the species. Furthermore, although close in air miles to a known occurrence of CRLF, there are no waterways connecting North Canyon Creek to Weber Creek, except South Fork American River. North Canyon Creek drains into South Fork American River more than 28 miles upstream from the confluence of Weber Creek with the river; thus, it is unlikely that CRLF from the Weber Creek occurrence would be found in North Canyon Creek.

Bald eagle (*Haliaeetus leucocephalus*)
Range: Occurs in suitable habitat in the Coast ranges, Cascades ranges, the Sierra Nevada, Southern California mountains and Central Valley. (BIOS 2022)
Nearest CNDDB occurrence: Approximately 19 miles NE of the project site at Union Valley Reservoir (BIOS 2022).
Habitat requirements: Requires large bodies of water or free flowing rivers with abundant fish, and adjacent snags or other perches. In California, 87% of nest sites were within 1.6 km (1 mi) of water. (CWHR 2022).
Habitat on project site: Marginal. The project site less than one mile from Slab Creek Reservoir within the South Fork American River, which could provide suitable foraging habitat, so it provides potential nest habitat for the species. North Canyon Creek, flowing through the project site, is too small to provide foraging habitat. As a Christmas tree farm with year-round cultivation practices, the project site probably has too much human interference for nesting by the species.

b. Species of Concern

i. Invertebrates

Wawona riffle beetle (*Atractelmis wawona*)
Range: Found in scattered coastal mountain streams from Del Norte to San Diego counties and in the Sierra Nevada, with most occurrences from Mariposa County north. (BIOS 2022)
Nearest CNDDB occurrence: Approximately six miles NW of the project site. (BIOS 2022)
Habitat requirements: Aquatic; found in riffles of rapid, small to medium clear mountain streams; 2000-5000 ft elev., having a strong preference for inhabiting submerged aquatic mosses. (CNDDB 2022)
Habitat on project site: Suitable is riffles between pools within North Canyon Creek on the project site.

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 2022)
Nearest CNDDB occurrence: Over eight miles north of the project site. (BIOS 2022)
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 2022)
Habitat on project site: Marginal. Suitable forage plants are limited on the project site.

ii. Amphibians

Foothill yellow-legged frog (*Rana boylii)*
Range: Occurs in the Coast Ranges from the Oregon border south to the Transverse Mountains in Los Angeles Co., in most of northern California west of the Cascade crest, and along the western flank of the Sierra south to Kern Co. Its elevation range extends from near sea level to 1940 m (6370 ft) in the Sierra (CWHR 2022)
Nearest CNDDB occurrence: Approximately four miles northwest of the project site. (BIOS 2022)
Habitat requirements: Foothill yellow-legged frogs are found in or near rocky streams in a variety of habitats. Rarely encountered far from permanent water. Tadpoles require water for at least three or four months while completing their aquatic development. (CWHR 2022)
Habitat on project site: Suitable within North Canyon Creek.

iii. Birds

Oak titmouse (*Baeolophus inornatus)* nesting
Range: Resident in cismontane California, from the Mexican border to Humboldt Co. Range encircles San Joaquin Valley, extending east from the coast through Kern Co. onto 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 Co. (CWHR 2022)
Nearest CNDDB occurrence: None. (CNDDB 2022)
Habitat requirements: Primarily associated with oaks. Prefers open woodlands of oak, and pine and oak. (CWHR 2022).
Habitat quality on project site: Marginal. Project site has few oak trees.

Cassin's finch (*Carpocacus cassinii)*
Range: Common montane resident. Occurs regularly in Cascade Range and Sierra Nevada, Great Basin ranges south to Inyo Mts., inner coastal ranges south to Mendocino Co., and southern California ranges south to Santa Rosa Mts., Riverside Co. (CWHR 2022)
Nearest CNDDB occurrence: None. (BIOS 2020)
Habitat requirements: Breeds in most higher mountain ranges in California. Prefers tall, open coniferous forests, in lodgepole pine, red fir, and subalpine conifer habitats, particularly in breeding season. Most numerous near wet meadows and grassy openings; also frequents semi-arid forests. (CWHR 2022)
Habitat on project site: Unsuitable as breeding habitat, but suitable winter habitat.

Evening grossbeak (*Coccothraustes vesperinus)*
Range: Resident of Cascade Range, Sierra Nevada, Warner, Siskiyou, and Trinity Mts., breeding mostly in mixed conifer and red fir habitats. (CWHR 2022)
Nearest CNDDB occurrence: None. (CNDDB 2022)
Habitat requirements: Breeds and forages in fairly dense, mature mixed-conifer and red fir forests; also forages in oaks, willows, and aspens. In nonbreeding season, occurs in a variety of habitats with ample food supplies, which include fruits and seeds of a variety of trees and shrubs and, in summer, considerable numbers of insects. (CWHR 2022)
Habitat on project site: Suitable.

Olive-sided flycatcher (*Contopus cooperi*) nesting
Range: Summer resident in a wide variety of forest and woodland habitats below 2800 m (9000 ft) throughout California exclusive of the deserts, the Central Valley, and other lowland valleys and basins.(CWHR 2022).
Nearest CNNDB occurrence: None. (CNDDB 2022)
Habitat requirements: Requires large, tall trees, usually conifers, for nesting and roosting sites; also lofty perches, typically the dead tips or uppermost branches of the tallest trees in vicinity, for singing posts and hunting perches. Most numerous in montane conifer forests where tall trees overlook canyons, meadows, lakes or other open terrain. (CWHR 2022)
Habitat quality on project site: Suitable.

Black-throated gray warbler (*Dendroica nigrescens)*
Range: Resident in dry, open woodlands and brushy understory of forests in foothills and mountains throughout much of California. Absent from Central Valley and deserts. (CWHR 2022)
Nearest CNDDB occurrence: None. (CNDDB 2022)
Habitat requirements: Ponderosa pine, valley foothill hardwood-conifer, montane hardwood, and pinyon-juniper habitats. Frequents brushy understory. (CWHR 2022)
Habitat on project site: Marginal. Project site has relatively little brushy understory within its forest.

iv. Mammals

Pallid bat (*Antrozous pallidus)*
Range: Occurs in various riparian habitat, grasslands, shrublands, woodlands, and forests at low to middle elevations (CWHR 2022).
Nearest CNDDB occurrence: Approximately 11 miles WNW, at Coloma. (BIOS 2022)
Habitat requirements: Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites (CNDDB 2022). Day roosts are in caves, crevices, mines, and occasionally in hollow trees and buildings. Night roosts may be in more open sites, such as porches and open buildings (CWHR 2022).
Habitat quality on project site: Suitable within on-site forest. The mine has too much human activity during Christmas tree season for successful hibernation by the species.

Broken Handle Mine

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.
Nearest CNDDB occurrence: None. (CNDDB 2022)
Habitat requirements: Suitable habitat for ringtails consists of a mixture of forest and shrubland in close association with rocky areas or riparian habitats. Usually not found more than 1 km (0.6 mi) from permanent water. (CWHR 2022)
Habitat quality on project site: Suitable throughout the project site.

Townsend's big-eared bat (*Corynorhinus townsendii*)
Range: Throughout California in a wide variety of habitats. Most common in mesic sites. (CNDDB 2022).
Nearest CNNDB occurrence: Approximately 11 miles north off Wentworth Springs Road, El Dorado County. (BIOS 2022)
Habitat requirements: Requires caves, mines, tunnels, buildings, or other human-made structures for roosting. Prefers mesic habitats; requires drinking water. Gleans insects from brush or trees or feeds along habitat edges. (CWHR 2022). Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to human disturbance (CNDDB 2022).
Habitat quality on project site: Suitable within the on-site mine tunnel and outbuildings.

North American porcupine (*Erethizon dorsatum)*
Range: Forested habitats in the Sierra Nevada, Cascade, and Coast ranges, with scattered observations from forested areas in the Transverse Ranges.(CNDDB 2022)
Nearest CNDDB occurrence: Near Garden Valley. Last sighted 1983. Sightings near Placerville were in 1873 and 1916. (BIOS 2020)
Habitat requirements: Most common in montane conifer, Douglas-fir, alpine dwarf-shrub, and wet meadow habitats. Less common in hardwood, hardwood-conifer, montane and valley-foothill riparian, aspen, pinyon-juniper, low sage, sagebrush, and bitterbrush habitats. Requires forest with a good understory of herbs, grasses, and shrubs. Prefers open stands of conifers. In spring and summer, uses meadows, brushy and riparian habitats for feeding. In winter, restricted to forests. In relatively arid regions, somewhat restricted to riparian habitats. Dens in caves, crevices in rocks, cliffs, hollow logs, snags, burrows of other animals; will use dense foliage in trees if other sites are unavailable (CWHR 2022).
Habitat quality on project site: Suitable. Although the forested portion of the project site has relatively little understory of herbs, grasses and shrubs, the Christmas tree plantations could provide forage on the trees.

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 2022)
Nearest CNDDB occurrence: About four miles east of the project site, near Pollock Pines. (BIOS 2022)
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 2022)
Habitat on project site: Suitable throughout the project site.

Long-legged myotis bat (*Myotis volans*)
Range: Occurs in the coastal ranges from Oregon to Mexico, the Cascade/Sierra Nevada ranges to southern California, most of the Great Basin region, and in several Mojave Desert mountain ranges; absent only from the Central Valley, the Colorado and Mojave deserts (except in mountain ranges), and from eastern Lassen and Modoc counties. (CWHR 2022)
Nearest CNDDB occurrence: About 12 miles SE near Camp Creek, south of Jenkinson Reservoir. (BIOS 2022)
Habitat requirements: Most common in woodland and forest habitats above 4000 ft. Trees are important day roosts; caves and mines are night roosts. Nursery colonies usually under bark or in hollow trees, but occasionally in crevices or buildings. (CNDDB 2022) Feeds over water, and over open habitats, using denser woodlands and forests for cover and reproduction. (CWHR 2022)
Habitat on project site: Marginal. Project site offers suitable feeding and roosting habitat, but at less than 2900 feet elevation, the project site is lower in elevation than the species' preferred elevation range.

Yuma myotis bat (*Myotis yumanensis)*
Range: Widespread in California from sea level to 11,000 feet elevation, but uncommon to rare above 2560 m (8000 ft). Uncommon in desert regions, except the mountain ranges bordering the Colorado River Valley. (CWHR 2022)
Nearest CNDDB occurrence: Less than a mile north of the project site, at Slab Creek Reservoir. (BIOS 2022)
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 2022)
Habitat on project site: Suitable forage habitat over North Canyon Creek, and suitable roosting and maternity colony habitat in forest, buildings and mine tunnel on the project site.

v. Plants

(1) CNPS List 1 Plants[4]

Sierra arching sedge (*Caryx cyrtostachya)*
Range: Butte, El Dorado, Placer and Yuba counties. (CNPS 2022)
Nearest CNDDB occurrence: About ten miles NW of the project site, between Garden Valley and Georgetown. (BIOS 2022)
Habitat requirements: Mesic places in lower montane coniferous forest; also riparian forest, marshes and swamps, meadows and seeps. (CNDDB 2022)
Habitat on project site: Suitable on banks of North Canyon Creek.

Stebbin's phacelia (*Phacelia stebbinsii*)
Range: El Dorado, Nevada and Placer and counties. (CNPS 2022)
Nearest CNDDB occurrence: Poho Ridge area about 6 miles northeast of the project site, north of Pollock Pines. (BIOS 2022)
Habitat requirements: Among rocks and rubble on metamorphic rock benches within lower montane coniferous forest, cismontane woodland, meadows and seeps. 605-2320 m. elevation. (CNDDB 2022)
Habitat on project site: Suitable but limited habitat is found on slopes above North Canyon Creek.

[4]CNPS List 1B= California Native Plant Society list of Rare, Threatened or Endangered Plants in California and Elsewhere

Sierra blue grass (*Poa sierrae*)
Range: Butte, El Dorado, Nevada, Placer, Plumas and Shasta counties. (CNPS 2022)
Nearest CNDDB occurrence: Approximately 13 miles NE of the project site, NE of Stumpy Meadows Reservoir. (BIOS 2022)
Habitat requirements: Found in shady, moist, rocky slopes within lower montane coniferous forest. Often in canyons. 365-1915 meters elevation. (CNPS 2020)
Habitat on project site: Suitable on slopes above North Canyon Creek.

(2) CNPS List 2 Plants[5]

Oval-leaved viburnum (*Viburnum ellipticum*)
Range: Alameda, Contra Costa, El Dorado, Fresno, Glenn, Humboldt, Lake, Marin, Mendocino, Napa, Placer, Shasta, Solano, Sonoma, and Tehama counties. (CNPS 2022)
Nearest CNDDB occurrence: Reported in Placerville in 1901; more recent occurrences are south of Lake Clementine, Placer County. (BIOS 2022)
Habitat requirements: Found in chaparral, cismontane woodland or lower montane coniferous forest between 215 and 1400 m elevation (CNDDB 2022). Generally found on north-facing slopes (Jepson 2022).
Habitat on site: Suitable in forested areas of the project site.

(3) CNPS List 4 Plants[6]

True's manzanita (*Arctostaphylos mewukka* ssp. *truei*)
Range: Butte, El Dorado, Nevada, Placer, Plumas and Yuba counties.(CNPS 2022).
Nearest CNNDB occurrence: None (BIOS 2022)
Habitat requirements: Chaparral and openings in cismontane woodland; 425-1390 m. elevation. (CNDDB 2022, Jepson 2022)
Habitat quality on project site: Suitable in openings within forested areas of the project site.

Brandegee's clarkia (*Clarkia biloba* ssp. *brandageeae*)
Range: Butte, El Dorado, Nevada, Placer, Sacramento, Sierra, and Yuba Counties. (CNPS 2022)
Nearest CNDDB occurrence: About three miles southwest of the project site, near Smith Flat. (BIOS 2022)
Habitat requirements: Chaparral, cismontane woodland, and lower montane coniferous forest, often on roadcuts, 75-915 m elevation. (CNPS 2022)
Habitat on project site: Suitable on slopes and road-cuts in forested areas of the project site.

Sierra clarkia (*Clarkia virgata*)
Range: Amador, Calaveras, El Dorado, Mariposa, Plumas, Tuolumne and Yuba counties. (CNPS 2022)
Nearest CNDDB occurrence: None. (CNDDB 2022)
Habitat requirements: Cismontane woodland or lower montane coniferous forest, between 400 and 1615 meters elevation (CNPS 2022). Lower margin of montane forest and adjacent oak-grey pine woodland (CNDDB 2022).
Habitat on project site: Marginal. Project site is above the oak-grey pine ecotone.

[5]California Native Plant Society list of rare, threatened or endangered plants in California, but more common elsewhere.

[6]California Native Plant Society list of plants of limited distribution.

Northern Sierra daisy (*Erigeron petrophilus* var. *sierrensis*)
Range: Butte, El Dorado, Nevada, Placer, Plumas, Sierra and Yuba counties. (CNPS 2022)
Nearest CNDDB occurrence: None. (CNDDB 2022)
Habitat requirements: Rocky foothills to montane forest, sometimes on serpentine; 300–1900 meters elevation (Jepson 2020). Cismontane woodland, lower montane coniferous forest, upper montane coniferous forest, 300-2073 meters elevation (CNPS 2022).
Habitat on project site: Suitable within forested areas on the project site.

Humboldt's lily (*Lilium humboldtii* ssp. *humboldtii*)
Range: Amador, Butte, Calaveras, El Dorado, Los Angeles, Nevada, Placer, Plumas, San Diego, Santa Barbara, Sierra, Tehama, and Yuba counties. (CNPS 2022)
Nearest CNDDB occurrence: None. (CNDDB 2022)
Habitat requirements: Openings in chaparral, cismontane woodland or lower coniferous forest, between 90 and 1280 meters elevation (CNPS 2022); openings in yellow-pine forest or open forest (CNDDB 2022).
Habitat on project site: Suitable within forested areas of the project site.

Sierra sweet bay (*Myrica hartwegii*)
Range: Calaveras, El Dorado, Mariposa Nevada, Placer and Tuolumne counties. (CNPS 2022)
Nearest CNDDB occurrence: None. (CNDDB 2022)
Habitat requirements: Streambanks, moist places in foothills or lower montane yellow-pine forest; 300–1800 m. elevation (Jepson 2022). Cismontane woodland, lower montane coniferous forest, riparian forest, 150-1750 m. elevation (CNPS 2022). Riparian forest, cismontane woodland, lower montane coniferous forest. Usually on streamsides. 150-1750 m. (CNDDB 2022)
Habitat on project site: Suitable along North Canyon Creek.

Long-fruited jewelflower (*Streptanthus longisiliquus*)
Range: Butte, El Dorado, Nevada, Placer, Shasta and Tehama counties. (CNPS 2022)
Nearest CNDDB occurrence: None. (CNDDB 2022)
Habitat requirements: Openings in lower montane coniferous forest and cismontane woodland, 715-1500 meters elevation.
Habitat on project site: Suitable within forested areas of the project site.

vi. Special Habitat

Central Valley Drainage Resident Rainbow Trout Stream
Nearest CNDDB occurrence: Over seven miles SSE in Camp Creek.
Habitat requirements: Clear cold water; a silt-free substrate in riffle-run areas; approximately 1:1 pool-to-riffle ratio with areas of slow, deep water; well-vegetated stream banks; abundant in-stream cover; and relatively stable water flow, temperature regimes and stream banks. Pools are important to trout as a refuge from adverse conditions. (Raleigh et. al, 1984)
Habitat on project site: Suitable. The North Canyon Creek, within the boundaries of the project site, has been managed as a catch-and-release trout stream for decades, and has a stable, self-propagating trout population (Figure 10).

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APPENDIX A

United States Fish and Wildlife Service
Official Species List
dated
July 14, 2022

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 95825-1846
Phone: (916) 414-6600 Fax: (916) 414-6713

In Reply Refer To:
Project Code: 2022-0063948
Project Name: Indian Rock Tree Farm

July 14, 2022

Subject: List of threatened and endangered species that may occur in your proposed project location 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, 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 U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

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

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see https://www.fws.gov/birds/policies-and-regulations.php.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php.

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 Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

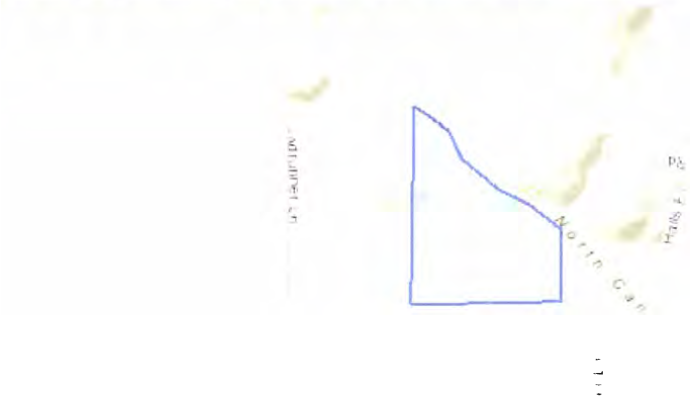
This species list is provided by:

Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
(916) 414-6600

Project Summary

Project Code: 2022-0063948
Event Code: None
Project Name: Indian Rock Tree Farm
Project Type: Planting / Silviculture
Project Description: Zone change.
Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@38.7605421,-120.70492988457917,14z



Counties: El Dorado County, California

Endangered Species Act Species

There is a total of 3 threatened, endangered, or candidate species on this 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.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Amphibians

NAME	STATUS
California Red-legged Frog *Rana draytonii*	Threatened

There is **final** critical habitat for this species. The location of the critical habitat is not available.
Species profile: https://ecos.fws.gov/ecp/species/2891

Fishes

NAME	STATUS
Delta Smelt *Hypomesus transpacificus*	Threatened

There is **final** critical habitat for this species. The location of the critical habitat is not available.
Species profile: https://ecos.fws.gov/ecp/species/321

Insects

NAME	STATUS
Monarch Butterfly *Danaus plexippus*	Candidate

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/9743

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

IPaC User Contact Information

Agency: County of El Dorado
Name: Ruth Willson
Address: 3460 Angel Lane
City: Placerville
State: CA
Zip: 95667
Email ruthwillson@comcast.net
Phone: 5306227014

APPENDIX B

United States Fish and Wildlife Service
IpaC Trust Resources Report
dated
July 14, 2022

IPaC U.S. Fish & Wildlife Service

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Project information

NAME

Indian Rock Tree Farm

LOCATION

El Dorado County, California

DESCRIPTION

Some(Zone change.)

Local office

Sacramento Fish And Wildlife Office

(916) 414-6600

(916) 414-6713

Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

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 from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Log in to IPaC.
2. Go to your My Projects list.
3. Click PROJECT HOME for this project.
4. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Amphibians

NAME	STATUS

California Red-legged Frog Rana draytonii — Threatened

Wherever found

There is **final** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/2891

Fishes

NAME	STATUS
Delta Smelt Hypomesus transpacificus	Threatened

Wherever found

There is **final** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/321

Insects

NAME	STATUS
Monarch Butterfly Danaus plexippus	Candidate

Wherever found

No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/9743

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern https://www.fws.gov/program/migratory-birds/species
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Jan 1 to Aug 31
Black-throated Gray Warbler *Dendroica nigrescens* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds May 1 to Jul 20

- California Thrasher Toxostoma redivivum — Breeds Jan 1 to Jul 31
  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
- Cassin's Finch Carpodacus cassinii — Breeds May 15 to Jul 15
  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
  https://ecos.fws.gov/ecp/species/9462
- Evening Grosbeak Coccothraustes vespertinus — Breeds May 15 to Aug 10
  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
- Lewis's Woodpecker Melanerpes lewis — Breeds Apr 20 to Sep 30
  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
  https://ecos.fws.gov/ecp/species/9408
- Oak Titmouse Baeolophus inornatus — Breeds Mar 15 to Jul 15
  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
  https://ecos.fws.gov/ecp/species/9656
- Olive-sided Flycatcher Contopus cooperi — Breeds May 20 to Aug 31
  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
  https://ecos.fws.gov/ecp/species/3914
- Wrentit Chamaea fasciata — Breeds Mar 15 to Aug 10
  This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence ( )

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

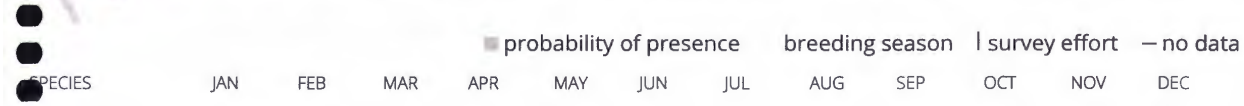
Breeding Season ( )
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

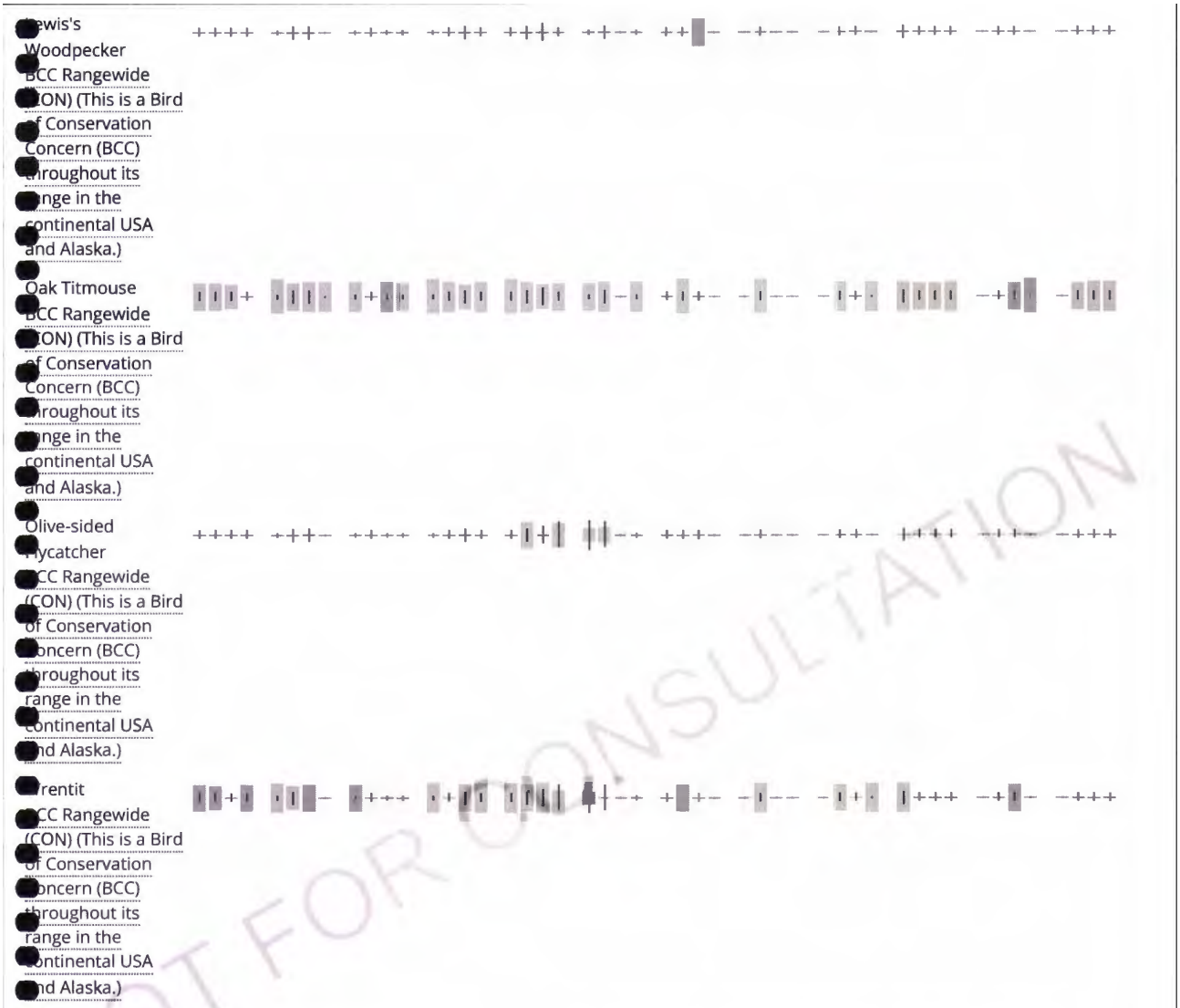
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



ald Eagle Non-BCC ulnerable (This is ot a Bird of Conservation Concern (BCC) in is area, but arrants attention because of the Eagle Act or for otential usceptibilities in offshore areas om certain types f development or ctivities.)	
lack-throated Gray Warbler BCC - BCR (This is a rd of Conservation Concern (BCC) only particular Bird Conservation Regions (BCRs) in the continental SA)	
alifornia Thrasher CC Rangewide (CON) (This is a Bird of Conservation oncern (BCC) roughout its range in the continental USA nd Alaska.)	
assin's Finch CC Rangewide (CON) (This is a Bird of Conservation oncern (BCC) roughout its range in the continental USA nd Alaska.)	
vening Grosbeak CC Rangewide (CON) (This is a Bird of Conservation oncern (BCC) roughout its range in the ontinental USA nd Alaska.)	



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects,

and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Coastal Barrier Resources System

Projects within the John H. Chafee Coastal Barrier Resources System (CBRS) may be subject to the restrictions on federal expenditures and financial assistance and the consultation requirements of the Coastal Barrier Resources Act (CBRA) (16 U.S.C. 3501 et seq.). For more information, please contact the local Ecological Services Field Office or visit the CBRA Consultations website. The CBRA website provides tools such as a flow chart to help determine whether consultation is required and a template to facilitate the consultation process.

THERE ARE NO KNOWN COASTAL BARRIERS AT THIS LOCATION.

Data limitations

The CBRS boundaries used in IPaC are representations of the controlling boundaries, which are depicted on the official CBRS maps. The boundaries depicted in this layer are not to be considered authoritative for in/out determinations close to a CBRS boundary (i.e., within the "CBRS Buffer Zone" that appears as a hatched area on either side of the boundary). For projects that are very close to a CBRS boundary but do not clearly intersect a unit, you may contact the Service for an official determination by following the instructions here: https://www.fws.gov/service/coastal-barrier-resources-system-property-documentation

Data exclusions

CBRS units extend seaward out to either the 20- or 30-foot bathymetric contour (depending on the location of the unit). The true seaward extent of the units is not shown in the CBRS data, therefore projects in the offshore areas of units (e.g., dredging, breakwaters, offshore wind energy or oil and gas projects) may be subject to CBRA even if they do not intersect the CBRS data. For additional information, please contact CBRA@fws.gov.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT 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.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER FORESTED/SHRUB WETLAND
Palustrine

A full description for each wetland code can be found at the National Wetlands Inventory website

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 tuberficid 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.

APPENDIX C

California Department of Fish and Game
Natural Diversity Database RareFind 5 Report
Slate Mountain and Surrounding USGS Quads
dated July 1, 2022

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Devil Peak (3812085) OR Slate Mtn. (3812076) OR Tunnel Hill (3812086) OR Pollock Pines (3812075) OR Sly Park (3812065) OR Camino (3812066) OR Placerville (3812067) OR Garden Valley (3812077) OR Georgetown (3812087))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Accipiter gentilis northern goshawk	ABNKC12060	None	None	G5	S3	SSC
Agelaius tricolor tricolored blackbird	ABPBXB0020	None	Threatened	G1G2	S1S2	SSC
Aplodontia rufa californica Sierra Nevada mountain beaver	AMAFA01013	None	None	G5T3T4	S2S3	SSC
Arctostaphylos nissenana Nissenan manzanita	PDERI040V0	None	None	G1	S1	1B.2
Ardea alba great egret	ABNGA04040	None	None	G5	S4	
Atractelmis wawona Wawona riffle beetle	IICOL58010	None	None	G3	S1S2	
Bombus occidentalis western bumble bee	IIHYM24250	None	None	G2G3	S1	
Calochortus clavatus var. avius Pleasant Valley mariposa-lily	PMLIL0D095	None	None	G4T2	S2	1B.2
Calystegia vanzuukiae Van Zuuk's morning-glory	PDCON040Q0	None	None	G2Q	S2	1B.3
Campylopodiella stenocarpa flagella-like atractylocarpus	NBMUS84010	None	None	G5	S1?	2B.2
Carex cyrtostachya Sierra arching sedge	PMCYP03M00	None	None	G2	S2	1B.2
Central Valley Drainage Hardhead/Squawfish Stream Central Valley Drainage Hardhead/Squawfish Stream	CARA2443CA	None	None	GNR	SNR	
Central Valley Drainage Resident Rainbow Trout Stream Central Valley Drainage Resident Rainbow Trout Stream	CARA2421CA	None	None	GNR	SNR	
Chlorogalum grandiflorum Red Hills soaproot	PMLIL0G020	None	None	G3	S3	1B.2
Clarkia biloba ssp. brandegeeae Brandegee's clarkia	PDONA05053	None	None	G4G5T4	S4	4.2
Corynorhinus townsendii Townsend's big-eared bat	AMACC08010	None	None	G4	S2	SSC
Cosumnoperla hypocrena Cosumnes stripetail	IIPLE23020	None	None	G2	S2	
Emys marmorata western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC

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
Erethizon dorsatum North American porcupine	AMAFJ01010	None	None	G5	S3	
Horkelia parryi Parry's horkelia	PDROS0W0C0	None	None	G2	S2	1B.2
Lasionycteris noctivagans silver-haired bat	AMACC02010	None	None	G3G4	S3S4	
Lewisia serrata saw-toothed lewisia	PDPOR040E0	None	None	G2	S2	1B.1
Myotis thysanodes fringed myotis	AMACC01090	None	None	G4	S3	
Myotis volans long-legged myotis	AMACC01110	None	None	G4G5	S3	
Myotis yumanensis Yuma myotis	AMACC01020	None	None	G5	S4	
Nebria darlingtoni South Forks ground beetle	IICOL6L100	None	None	G1	S1	
Packera layneae Layne's ragwort	PDAST8H1V0	Threatened	Rare	G2	S2	1B.2
Pekania pennanti Fisher	AMAJF01020	None	None	G5	S2S3	SSC
Phacelia stebbinsii Stebbins' phacelia	PDHYD0C4D0	None	None	G3	S3	1B.2
Poa sierrae Sierra blue grass	PMPOA4Z310	None	None	G3	S3	1B.3
Rana boylii foothill yellow-legged frog	AAABH01050	None	Endangered	G3	S3	SSC
Rana draytonii California red-legged frog	AAABH01022	Threatened	None	G2G3	S2S3	SSC
Rhynchospora capitellata brownish beaked-rush	PMCYP0N080	None	None	G5	S1	2B.2
Riparia riparia bank swallow	ABPAU08010	None	Threatened	G5	S2	
Sacramento-San Joaquin Foothill/Valley Ephemeral Stream Sacramento-San Joaquin Foothill/Valley Ephemeral Stream	CARA2130CA	None	None	GNR	SNR	
Sphagnum Bog Sphagnum Bog	CTT51110CA	None	None	G3	S1.2	
Stygobromus grahami Graham's Cave amphipod	ICMAL05920	None	None	G2	S2	
Viburnum ellipticum oval-leaved viburnum	PDCPR07080	None	None	G4G5	S3?	2B.3

Record Count: 38

APPENDIX D

California Native Plant Society
Inventory of Rare and Endangered Plants,
online edition, v9-01 0.39
accessed July 14, 2022

SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM
Arctostaphylos nissenana	Nissenan manzanita	Ericaceae	perennial evergreen shrub
Campylopodiella stenocarpa	flagella-like atractylocarpus	Dicranaceae	moss
Chlorogalum grandiflorum	Red Hills soaproot	Agavaceae	perennial bulbiferou herb
Clarkia biloba ssp. *brandegeeae*	Brandegee's clarkia	Onagraceae	annual herb
Clarkia virgata	Sierra clarkia	Onagraceae	annual herb
Githopsis pulchella ssp. *serpentinicola*	serpentine bluecup	Campanulaceae	annual herb
Horkelia parryi	Parry's horkelia	Rosaceae	perennial herb
Navarretia prolifera ssp. *lutea*	yellow bur navarretia	Polemoniaceae	annual herb
Phacelia stebbinsii	Stebbins' phacelia	Hydrophyllaceae	annual herb

Showing 1 to 9 of 9 entries

Suggested Citation:
California Native Plant Society, Rare Plant Program. 2022. Rare Plant Inventory (online edition, v9-01 1.5). Website https://www.rareplants.cnps.org

APPENDIX E

**Evaluation of Special-Status Species
with Known Occurrences in
Slate Mountain 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 = CDFW California Interagency Wildlife Task Group
CNPS = California Native Plant Socicty
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 threatcned)
.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 = CDFW 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)**	**CNDDB Rank** **Global/State**	**Habitat Requirements**	**Potential to occur on project site?**
Invertebrates				
Atractelmis wawona Wawona riffle beetle	/ —	G3 S1S2	Aquatic; found in riffles of rapid, small to medium clear mountain streams, usually in submerged aquatic mosses; 2000-5000 ft elev. (CNDDB 2022)	Yes. See text for further discussion.
Bombus occidentalis Western bumble bee	— /	G2G3 S1	Typically nests underground in abandoned rodent burrows or other cavities, but also reported from above-ground locations (in logs or railroad ties). Generalist forager of flowering plants; does not depend on any one flower type. (Hatfield, et al. 2015)	Yes. See text for further discussion.
Cosumnoperla hypocrena Cosumnes stripetail stonefly	— / —	G2 S2	Intermittent streams on western slope of Central Sierra Nevada foothills in American and Cosumnes river watersheds (CNDDB 2022)	No. Project site has no intermittent streams.
Danaus plexippus Monarch butterfly (Overwintering)	C /	G4T2T3 S2S3	Winter roost sites in closed-cone coniferous forests along the coast from northern Mendocino to Baja California, Mexico. (CNDDB 2022)	No. Project site is in the Sierra Nevada mountains, not coastal, as required by the species.
Nebria darlingtoni South Forks ground beetle	— / —	G1 S1	Restricted to the canyon of the South Fork American River. Known only from 5 collections, all between Pacific House and Kyburz.. (CNDDB 2022)	No. Project site is lower in elevation than the known range of the species.
Stygobromus grahami Graham's Cave amphipod	— /	G2 S2	Known only from caves in Central California. (CNDDB 2022)	No. Project site has no caves.
Fish				
Hypomesus transpacificus **Delta smelt**	**T / E**	G1 S1	California endemic species that only occurs in the San Francisco estuary. (CDFW 2022)	No. Project site is outside of the range of the species.

Special-status Species **Common Name**	**Listing Status** **Federal / State** **(OTHER)**	**CNDDB Rank** **Global/State**	**Habitat Requirements**	**Potential to occur on project site?**
Amphibians				
Rana boylii Foothill yellow-legged frog	— / (SSC)	G3 S3	Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats..Needs at least some cobble-sized substrate fore egg-laying, and requires at least 15 weeks to attain metamorphosis. (CNDDB 2022)	Yes. See text for further discussion.
Rana draytonii **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 2022) 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. (CNDDB 2022)	Yes. See text for further discussion.
Reptiles				
Emys marmorata 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. (CNDDB 2022)	No. Project site lacks basking sites suitable for the species.
Birds				
Accipiter gentilis (nesting) Northern goshawk	— / — (SSC)	G5 S3	Nests in mature, dense conifer forest, usually on north slopes near water. Red fir, lodgepole pine, Jeffrey pine and aspens are typical nest trees found in North coast coniferous forest Subalpine coniferous forest and Upper montane coniferous forest habitats. (CNDDB 2022)	No. Project site has no suitable forest habitat: lacks preferred nest tree species.

Special-status Species Common Name	Listing Status Federal / State (OTHER)	CNDDB Rank Global/State	Habitat Requirements	Potential to occur on project site?
Agelaius tricolor (nesting colony) Tricolored blackbird	— / **T** (SSC)	G1G2 S1S2	Dense thickets of cattail, tule, willow, blackberry, wild rose or tall herbs near or emergent from water. (CWHR 2022) Suitable habitats include freshwater marshes, swamps and wetlands. (CNDDB 2022)	No. Project site has swamps, marshes or wetlands.
Ardea alba (rookery) Great egret	— / (CDF:S)	G5 S4	Fresh and saline emergent wetlands, margins of lakes, estuaries, other wetlands and irrigated pastures. 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 2022)	No. Project site lacks suitable wetland habitats.
Asio otus (nesting) Long-eared owl	— / – (SSC)	G5 S3	Riparian bottomlands grown to tall willows and cottonwoods; also, belts of live oak paralleling stream courses. Require adjacent open land, productive of mice and the presence of old nests of crows, hawks, or magpies for breeding. (CNDDB 2022)	No. Project site has no riparian bottomland habitat.
Baeolophus inornatus (nesting) Oak titmouse	— / (BCC)	G4 S4	Primarily associated with oaks; prefers open woodlands of oak, pine and oak, juniper and pinyon. Ventures into residential areas. (CWHR 2022)	Yes. See text for further discussion.
Carpocacus cassinii(=Haemorhous cassinii) Cassin's Finch	— / — (IUCN: LC)	G5 SNR	A common montane resident; breeds in most higher mountain ranges in California. Prefers tall, open coniferous forests, in lodgepole pine, red fir, and subalpine conifer habitats, Most numerous near wet meadows and grassy openings; also frequents semi-arid forests. (CWHR 2022)	Yes, as a winter visitor, but project site is lower in elevation than the preferred breeding area. See text for further discussion.
Chamaea fasciata Wrentit	— / (IUCN: LC)	G5 SNR	Chaparral and brushy areas, from the coast to lower reaches of mountains . Also occurs in suburban gardens and parks. (NatureServe 2022, CWHR 2022)	No. Project site has no chaparral or brushy understory required by the species.

Special-status Species Common Name	Listing Status Federal / State (OTHER)	CNDDB Rank Global/State	Habitat Requirements	Potential to occur on project site?
Coccothraustes vespertinus Evening Grosbeak	— /	G5 SNR	Resident of Cascade Range, Sierra Nevada, Warner, Siskiyou, and Trinity Mts., breeding mostly in mixed conifer and red fir habitats. Feeds on seeds of fir, pine, and other conifers, and buds of hardwoods such as aspen, willow, oak, and maple. Also eats fruits and seeds of a variety of trees and shrubs and, in summer, considerable numbers of insects. (CWHR 2022)	Yes. See text for further discussion.
Contopus cooperi (nesting) Olive-sided flycatcher	— / (SSC)	G4 S43	Conifer or mixed hardwood/conifer forests (montane hardwood-conifer). Most numerous in montane conifer forests where tall trees overlook canyons, meadows, lakes or other open terrain. (CWHR 2022)	Yes. See text for further discussion.
Dendroica nigrescens (=*Setophaga nigrescens*) Black-throated Gray Warbler	— /	G5 SNR	Summer resident in dry, open woodlands and brushy understory of forests in foothills and mountains throughout much of California. Absent from Central Valley and deserts. Frequents ponderosa pine, valley foothill hardwood-conifer, montane hardwood, and pinyon-juniper habitats. (CWHR 2022)	Yes. See text for further discussion.
Haliaeetus leucocephalus (nesting, wintering) **Bald eagle**	**D / E** (FP)	G5 S3	Large bodies of water or free-flowing rivers with abundant fish, and adjacent snags or other perches. (CWHR 2022)	Yes. See text for further discussion.
Melanerpes lewis (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 2020)	No. Project site is out of the nesting range of the species, but has suitable winter forage habitat.
Riparia riparia (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 2020)	No. Project site lacks suitable bank or cliff nesting habitat, and is out of the known range of the species.
Toxostoma redivivum California thrasher	— / (IUCN: LC)	G5 SNR	Moderate to dense chaparral habitats in foothills and lowlands in cismontane CA.; less commonly, extensive thickets in young or open valley foothill riparian habitat. (CWHR 2020)	No. Project site has neither chaparral nor dense riparian habitat required by the species.

Special-status Species Common Name	Listing Status Federal / State (OTHER)	CNDDB Rank Global/State	Habitat Requirements	Potential to occur on project site?
Mammals				
Antrozous pallidus Pallid bat	/ — (SSC)	G4 / S3	Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	Yes. See text for further discussion.
A plodontia rufa californica Sierra Nevada Mountain Beaver	— / — (SSC)	G5T3T4 S2S3	Occurs in dense riparian-deciduous and open, brushy stages of most forest types. Typical habitat in the Sierra Nevada is montane riparian. Frequents open and intermediate canopy coverage with a dense understory near water. Deep, friable soils are required for burrowing, along with a cool, moist microclimate. (CWHR 2022)	No. Project site lacks dense understory shrubs near water required by the species.
Bassariscus astutus 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 2022)	Yes. See text for further discussion.
Corynorhinus townsendii Townsend's big-eared bat	— / — (SSC)	G4 S2	Requires caves, mines, tunnels, buildings, or other human-made structures for roosting. Prefers mesic habitats. Gleans from brush or trees or feeds along habitat edges. (CWHR 2022)	Yes. See text for further discussion.
Erethizon dorsatum North American porcupine	— / (IUCN: LC)	G5 S3	Wide variety of coniferous and mixed woodland habitats: Broadleaved upland forest, Cismontane woodland, Closed-cone coniferous forest, Lower montane coniferous forest, North coast coniferous forest, Upper montane coniferous forest. (CNDDB 2022)	Yes. See text for further discussion.
Lasionycteris noctivagans Silver-haired bat	— / — (IUCN: LC)	G3G4 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 2022)	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?**
Myotis thysanodes Fringed myotis	— / — (BLM: S)	G4 S3	Optimal habitats are pinyon-juniper, valley foothill hardwood and hardwood-conifer, generally at 1300-2200 m (4000-7000 ft). Roosts in caves, mines, buildings, and crevices. Easily disturbed at roosting sites. (CWHR 2022)	No. Project site is lower in elevation than the known range of the species.
Myotis yumanensis Yuma myotis	— / — (BLM: S)	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 2022)	Yes. See text for further discussion.
Myotis volans Long-legged myotis	— / – (IUCN: LC)	G4G5 S3	Occurs throughout CA, absent only from the Central Valley, the Colorado and Mojave deserts (except in mountain ranges), and from eastern Lassen and Modoc cos. Most common in woodland and forest habitats above 1200 m (4000 ft). (CWHR 2022)	Yes. See text for further discussion.
Pekania pennanti Fisher	— / — (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 2022).	No. Forest on the project site has been managed, with selective logging and prescribed burns during the recent half-century. It is also within Apple Hill, with more cultivated fruit tree acreage than mature, dense forests.
Plants				
Allium sanbornii var.congdonii Congdon's onion	— / — (CNPS: 4.3)	G3T3 S3	Ultramafic barrens or volcanic soils with scattered grey pines. 300-990 m. (CNDDB 2022)	No. Project site lacks both ultramafic barrens and volcanic soils.
Allium sanbornii var. *sanbornii* Sanborn's onion	— / (CNPS: 4.2)	G4T3T4 S3S4	Chaparral, cismontane woodland and lower montane coniferous forest, usually on gravelly serpentine soils. (CNPS 2016) 260-1510 m. elevation. (CNDDB 2022)	No. Project site lacks suitable gravelly serpentine soils.
Arctostaphylos mewukka ssp. *truei* True's manzanita	— / — (CNPS: 4.2)	G4?T3 S3	Chaparral and lower montane coniferous forest, 425-1390 m. elevation. (CNDDB 2022)	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?
Arctostaphylos nissenana Nissenan manzanita	/ — (CNPS:1B.2)	G1 S1	Open rocky ridges in chaparral or closed-cone coniferous forest between 465-1100 m elevation. (CNDDB 2020)	No. Project site has neither chaparral nor closed-cone coniferous forest, which are the known habitats for the species.
Bolandra californica Sierra bolandra	– / — (CNPS: 4.3)	G4 S4	Mesic, rocky sites in lower and upper montane coniferous forest, 975-2450 m. elevation. (CNDDB 2022)	No. Project site is lower in elevation than the known range of the species.
Calochortus clavatus var. *avius* Pleasant Valley mariposa-lily	/ (CNPS: 1B.2)	G4T2 S2	Josephine silt loam and volcanically derived soil; often in rocky areas, in lower montane coniferous forest. 300-1710 m. (CNDDB 2022)	No. Project site lacks suitable soils.
Calystegia vanzuukiae Van Zuuk's morning-glory	– / — (CNPS: 1B.3)	G2? S2	Chaparral on gabbro or serpentine soils, 700-1160 m. elevation. (CNDDB 2022)	No. Project site is lower in elevation than the known range of the species and lacks suitable soils.
Campylopodiella stenocarpa Flagella-like atractylocarpus	/ — (CNPS: 2B.2)	G5 S1?	Roadsides within cismontane woodland, 285-430 m elevation (CNDDB 2022)	No. Project site has no cismontane woodland habitat and is higher in elevation than the known range of the species.
Carex cyrtostachya Sierra arching sedge	— / — (CNPS: 1B.2)	G2 S2	Mesic sites within lower montane coniferous forest, riparian forest, marshes, swamps, meadows and seeps between 605-1390 m. elevation. (CNDDB 2022)	Yes. See text for further discussion.
Ceanothus fresnensis Fresno ceanothus	/ — (CNPS: 4.3)	G4 S4	Openings in cismontane woodland, lower montane coniferous forest, 900-2105 m elevation. (CNDDB 2022)	No, Project site is lower in elevation than the known range of the species.
Chlorogalum grandiflorum Red Hills soaproot	/ — (CNPS: 1B.2)	G3 S3	Open chaparral on gabbro or serpentine soils. (Hunter and Horenstein 1991); sometimes on non-ultramafic substrates, 240-760 m. elevation. (CNDDB 2022)	No. Project site lacks chaparral vegetation and suitable soils, and is higher in elevation than the known range of the species.
Clarkia biloba ssp. *brandegeeae* Brandegee's clarkia	— / — (CNPS: 4.2)	G4G5T4 S4	Chaparral, cismontane woodland, lower montane coniferous forest, often on road cuts, 75-915 m. elevation. (CNDDB 2022)	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?**
Clarkia virgata Sierra clarkia	— / — (CNPS: 4.3)	G3 S3	Cismontane woodland and lower margin of montane coniferous forest, 400-1615 m. elevation. (CNDDB 2022)	Yes. See text for further discussion.
Claytonia parviflora ssp. *grandiflora* Streambank spring beauty	— / — (CNPS: 4.2)	G5T3 S3	Pine/blue oak (cismontane) woodlands in the Sierra foothills. 250-1200 m. elevation. (CNDDB 2022)	No. Project site has lower montane woodland vegetation, not cismontane woodland vegetation where the species has been found.
Delphinium hansenii ssp. *ewanianum* Ewan's larkspur	— / — (CNPS: 4.2)	G4T3 S3	Rocky soils within cismontane woodland, and valley and foothill grassland. 60-600 m. elevation. (CNDDB 2022)	No. Project site has neither cismontane woodland nor grassland habitats required by the species.
Erigeron petrophilus var. *sierrensis* 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. (CNDDB 2022)	Yes. See text for further discussion.
Eriogonum tripodum Tripod buckwheat	— / — (CNPS: 4.2)	G4 S4	Gravelly slopes and flats, often on serpentine, in cismontane woodland and chaparral, 200-1600 m. elevation. (CNDDB 2022)	No. Project site has lacks suitable substrate required by the species.
Githopsis pulchella ssp. *serpentinicola* Serpentine bluecup	— / — (CNPS: 4.3)	G4T3 S3	Serpentine or Ione soils within cismontane woodland, 320-610 m. elevation. (CNDDB 2022)	No. Project site has neither cismontane woodland habitat nor suitable soils for the species.
Hesperocyparis bakeri Baker cypress	— / — (CNPS: 4.2)	G3 S3	Mixed-evergreen forests, open slopes, flats, on serpentine or volcanic substrates. 820-1995 m. (CNDDB 2022)	No. Project site lacks suitable soils required by the species.
Horkelia parryi Parry's horkelia	— / — (CNPS: 1B.2)	G2 S2	Chaparral and cismontane woodland, on Ione or limestone soils, between 80-1035 m. elevation. (CNDDB 2022)	No. Neither Ione nor limestone soils, required by the species, are found on the project site.
Jensia yosemitana Yosemite tarplant	— / — (CNPS: 3.2)	G3 S3	Meadows and seeps, lower montane coniferous forest on granite, 1200-2300 m elevation. (CNDDB 2022)	No. Project site is lower in elevation than the known range of the species.

Special-status Species Common Name	Listing Status Federal / State (OTHER)	CNDDB Rank Global/State	Habitat Requirements	Potential to occur on project site?
Juncus digitatus Finger Rush	— / (CNPS: 1B.1	G1 S1	Openings in cismontane woodland and lower montane coniferous forest; vernal pools. In full sun, in the vernally damp ground of seeps, vernal pools and swales on gentle slopes over volcanic bedrock. 700-800 m. (CNDDB 2022)	No. Project site lacks vernal pools and seeps. Wet areas on the project site are shaded.
Lewisia serrata Saw-toothed lewisia	/ — (CNPS: 1B.2)	G2 S2	Shaded, north-facing moss-covered, metamorphic rock cliffs. 800-1435 m.	No. Project site has not rock cliffs.
Lilium humboldtii ssp. *humboldtii* Humboldt lily	/ — (CNPS: 4.2)	G4T3 S3	Openings in chaparral, lower montane coniferous forest, cismontane woodland, 90-1280 m. elevation. (CNDDB 2022)	Yes. See text for further discussion.
Myrica hartwegii Sierra sweet bay	— / — (CNPS: 4.3)	G4 S4	Usually on streamsides in riparian forest, cismontane woodland, lower montane coniferous forest, 150-1750 m. elevation. (CNDDB 2022)	Yes. See text for further discussion.
Navarretia prolifera ssp. *lutea* Yellow bur navarretia	— / — (CNPS: 4.3	G4T3 S3	Chaparral, cismontane woodland. Open areas of well-drained soils on primarily south exposures. 850-1405 m. (CNDDB 2022)	No. Project site has neither chaparral nor cismontane woodland habitat and lacks south exposures.
Packera layneae (=Senecio layneae) **Layne's butterwort**	**T / R** (CNPS: 1B.2)	G2 S2	Chaparral, cismontane woodland on serpentine or gabbro soils, 205-1060 m. elevation (CNDDB 2022).	No. Project site has neither serpentine nor gabbro soils required by the species.
Peltigera gowardii Western waterfan lichen	— / — (CNPS: 4.2)	G4? S3	Upper montane coniferous forest, 1795-2195 m. elevation.	No. Project site is lower in elevation that the known range of the species.
Phacelia stebbinsii Stebbin's phacelia	— / – (CNPS: 1B.2	G3 S3	Lower montane coniferous forest, cismontane woodland, meadows and seeps. Among rocks and rubble on metamorphic rock benches. 605-2320 m. (CNDDB 2022)	Yes. See text for further discussion.
Poa sierrae Sierra blue grass	/ — (CNPS: 1B.3	G3 S3	Lower montane coniferous forest. Shady, moist, rocky slopes. Often in canyons. 365-1915 m. (CNDDB 2022)	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?**
Pseudostellaria sierrae Sierra starwort	— / — (CNPS: 4.2)	G3G4 S3	Chaparral, cismontane woodland, lower montane coniferous forest, upper montane coniferous forest, 1225-2195 m elevation. (CNDDB 2022)	No. Project site is lower in elevation than the known range of the species.
Rhynchospora capitellata Brownish beaked-rush	— / — (CNPS: 1B.2)	G5 S1	Mesic sites in upper and lower montane coniferous forest, meadows and seeps, marshes and swaps; 45-1710 m elevation. (CNDDB 2022)	No. Project site has no meadows, marshes or swamps.
Streptanthus longisiliquus Long-fruit jewelflower	/ — (CNPS: 4.3)	G3 S3	Openings in lower montane coniferous forest and cismontane woodland, 715-1500 m elevation. (CNDDB 2022)	Yes. See text for further discussion.
Viburnum ellipticum Oval-leaved viburnum	– / — (CNPS: 2B.3)	G4G5 S3?	Chaparral, cismontane woodland or lower montane coniferous forest between 215-1400 m. elevation (CNDDB 2022)	Yes. See text for further discussion.
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. Hardhead are typically found in undisturbed areas of larger middle- and low elevation streams 10-1,450 m elevation, and Hardhead are always found in association with Sacramento squawfish. They tend to be absent from streams where introduced species, especially centrarchids, predominate or streams that have been severely altered by human activity (Moyle 1995)	No. North Canyon Creek, within the boundaries of the project site, has been managed for the natural propagation of rainbow trout, with shallow dams installed to create deeper water for trout to survive summer heat (ie. altered by human activity, making it unsuitable for hardhead/squawfish habitat).
Central Valley Drainage Resident Rainbow Trout Stream	— / —	GNR / SNR	Perennial streams that support resident (non-anadromous) rainbow trout populations.	Yes. See text for further discussion.
Sacramenyo-San Juaquin Foothill/Valley Ephemrral Stream	— / —	GNR / SNR	An ephemeral stream flows briefly due to run-off, and has no groundwater contribution.	No. Project site has no ephemeral steams.
Sphagnum Bog	— / —	G3 / S1.2	Bog & fen, wetland. (CNDDB 2022)	No. Project site has no bogs, fens or wetlands.

APPENDIX F

Plant Species Found on the Project site

July 27, August 9, and September 1, 2022.

Plant Species Found on the Project Site
July 27, August 9, and September 1, 2022.

Agavaceae
Chlorogalum pomeridianum (DC.) Kunth var. *pomeridianum*, **Soaproot**

Amaranthaceae
Amaranthus sp., **Pigweed**

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

Apiaceae
Daucus carota L., **Wild carrot, Queen Anne's Lace**
Ligusticum californicum J.M. Coult. & Rose
Sanicula sp., **Sanicle**

Asteraceae
Achillea millefolium L., **Yarrow**
Adenocaulon bicolor Hook., **Trail plant**
Agoseris heterophylla (Nutt.) Greene var. *heterophylla*, **Annual mountain dandelion**
Baccharis pilularis DC., **Coyote brush**
Bidens frondosa L., **Sticktight**
Centaurea solstitialis L., **Yellow star-thistle**
Cirsium vulgare (Savi) Ten., **Bull thistle**
Hypochaeris sp., **Cat's-ear**
Lactuca serriola L., **Prickly lettuce**
Lapsana communis L., **Common nipplewort**
Madia elegans D. Don, **Common madia**
Madia subspicata D.D. Keck
Micropus sp. **Cottonweed**
Stephanomeria elata Nutt., **Wirelettuce**
Symphyotrichum sp., **American-aster**
Taraxicom sp., **Dandelion**
Tragopogon dubius Scop. **Goat's beard**

Athyriaceae
Athyrium filix-femina (L.) Roth var. *cyclosorum* Rupr. **Lady fern**

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

Betulaceae
Alnus rhombifolia Nutt., **White alder**

Blechanaceae
Struthiopteris spicant (L.) Weiss, **Deer fern**

Brassicaceae
Brassica nigra (L.) W.D.J. Koch, **Black mustard**

Caprifoliaceae
Lonicera hispidula (indl.) Torr. & A. Gray, **California honeysuckle**
Symphoricarpos albus (L.) S.F. Blake var. *laevigatus* (Fernald) S.F. Blake, **Snowberry**

Caryophyllaceae
Cerastium fontanum Baumg. ssp. *vulgare* (Hartm.) Greuter & Burdet **Common mouse-ear chickweed**
Stellaria media (L.) Vill., **Common chickweed**

Chenopodiaceae
Dysphania botrys (L.) Mosyakine & Clements, **Jerusalem Oak**
Salsola sp., **Russian thistle**

Convolvulaceae
Convolvulus arvensis, L. **Field bindweed**
Calystegia occidentalis (A. Gray) Brummitt

Cornaceae
Cornus nuttallii Audubon, **Mountain**

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

Cyperaceae
Carex amplifolia Boott, **Big-leaf sedge**
Carex tiompkinsii J.T. Howell, **Tompkin's sedge**
Cyperus eragrostis Lam., **Lovegrass sedge**
Scirpus microcarpus .Presl & C.Presl, **Panicled bulrush**

Cystopteridaceae
Cystopteris fragilis (L.) Bernh. **Fragile fern**

Dennstaedtiaceae
Pteridium aquilinum (L.) Kuhn var. *pubescens* Underw. **Bracken fern**

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

Ericaceae
Arbutus menziesii Pursh, **Pacific madrone**
Arctostaphylos viscida C. Parry, **White-leaf manzanita**

Euphorbiaceae
Croton setiger Hook, **Dove weed**
Chamaesyce maculata L., **Spotted spurge**
Euphorbia serpillifolia Pers. subsp. *serpillifolia*, **Thyme-leaf sandmat**

Equisetaceae
Equisetum arvense L. **Common horsetail**

Fabaceae
Acmispon americanus (Nutt.) Rydb., var. *americanus*, **American lotus**
Lathyrus latifolius L., **Perennial sweet pea**
Hosackia oblongifolia Benth. var. *oblongifolia*, **Bird's-foot trefoil**
Medicago polymorpha L., **California burclover**
Trifolium glomeratum L., **Clustered clover**
Trifolium gracilentum Torr. & A.Gray, **Pinpoint clover**
Vicia sp., **Vetch**

Fagaceae
Quercus chrysolepis Liebm., **Canyon live oak**
Quercus kelloggii Newb., **California black oak**
Quercus wislizeni A.DC., **Interior live oak**

Gentianaceae
Centaurium tenuiflorum (Hoffmans. & Link) Janch., **Centaury**

Hypericaceae
Hypericum calycinum L., **Aarons beard**
Hypericum perforatum L. subsp. *perforatum*, **Klamathweed**

Iridaceae
Iris hartwegii Baker subsp. *hartwegii* **Sierra iris**
Iris pseudacorus L. **Water iris**

Juglandaceae
Juglans hindsii Jeps. ex R.E. Sm., **Northern California Black walnut**

Juncaceae
Juncus balticus Willd. ssp. Ater (Rydb.) Snogerup, **Baltic rush**
Juncus bufonius L. var. *bufonius*, **Toad rush**
Luzula comosa E. Mey. var. *comosa*, **Hairy wood-rush**

Lamiaceae
Prunella vulgaris L. var. *vulgaris* , **Self-heal**

Lauraceae
Unbellularia californica (Hook. & Arn.) Nutt. **California Bay Laurel**

Liliaceae
Chlorogalum pomeridianum (DC.) Kunth var. *pomeridianum*, **Common soaproot**

Myrsinaceae
Lysimachia arvensis (L.) U. Manns & Anderb., **Scarlet pimpernel**
Lysimachia latifolia (Hook.) Cholewa, **Pacific Starflower**

Onagraceae
Epilobium brachycarpum C. Presl, **Willow herb**
Epilobium minutum Lindl.

Orchidaceae
Goodyera oblongifolia Raf., **Rattlesnake-plantain**
Piperia traansversa Suksd., **Flat spurred piperia**

Orobanchaceae
Cordylanthus tenuis A.Gray ssp. *tenuis*, **bird's-beak**

Oxalidaceae
Oxalis corniculata L. **Wood sorrel**

Phytolaccaceae
Phytolacca americana L., var. *americana*, **Pokeweed**

Pinaceae
Abies concolor (Gordon & Glend.) Lindl. ex Hildebr., **White fir**
Abies magnifica A. Murray bis, **California red fir**
Picea pungens, Engelm., **Blue spruce**
Pinus ponderosa Lawson & C. Lawson, **Ponderosa pine**
Pseudotsuga menziesii (Mirb.) Franco var. *menziesii* **Douglas-fir**

Plantaginaceae
Kickxia elatine (L.) Dumort., **Fluellen**
Plantago lanceolata L., **English plantain**
Plantago major L., **Common plantain**

Poaceae
Aira caryophyllea L, **Silver hair grass**
Avena barbata Pott ex Link, **Slender wild oats**
Brachypodium distachyon (L.) P. Beauv., **False brome**
Briza minor L., **Annual quaking grass**
Bromus sp., **Brome**
Calamagrostis rubescens Buckley. **Pine reed grass**
Cynodon dactylon (L.) Pers., **Bermuda grass**
Cynosurus echinatus L., **Hedgehog dogtail**
Deschampsia danthonioides (Trin.) Munro, **Annual Hairgrass**
Elymus glaucus Buckley, **Blue wildrye**
Eragrostis minor Host, **Little love grass**
Festuca myuros L, **Rattail sixweeks grass**
Festuca perennis (L.) Columbus & J.P.Sm., **Ryegrass**
Holcus lanatus L., **Common velvet grass**
Melica sp., **Melica**
Phalaris sp., **Canary grass**
Poa pratensis L. subsp. *pratensis*, **Kentucky bluegrass**
Setaria faberi R.A.W. Herrm., **Chinese foxtail**

Polemoniaceae
Phlox speciosa Pursh

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

Polygonaceae
Persicaria lapathifolia (L.) Delarbre. **Willow weed**
Polygonum sp. **Common knotweed**
Rumex acetosella L., **Sheep sorrel**
Rumex conglomeratus Murray, **Clustered dock**
Rumex occidentalis S. Watson, **Western dock**

Portulacaceae
Portulaca oleracea L., **Purslane**

Primulaceae
Anagallis arvensis L., **Scarlet pimpernel**

Ranunculaceae
Ranunculus canus Benth. Var. *canus,* **Buttercup**

Rhamnaceae
Ceanothus integerrimus Hook. & Arn, **Deer brush**
Rhamnus crocea Nutt. **Redberry**

Rosaceae
Chamaebatia foliolosa Benth., **Mountain misery**
Drymocallis glandulosa (Lindl.) Rydb., **Sticky Cinquefoil**
Frageria vesca L., **Wood strawberry**
Heteromeles arbutifolia (Lindley) Roemer, **Toyon**
Prunus cerasifera Ehrh., **Cherry plum**
Rosa californica /cham. & Schldl., **California rose**
Rubus armeniacus Focke **Himalayan blackberry**
Rubus laciniatus Willd., **Cutleaf blackberry**

Rubiaceae
Galium divaricatum Lam., **Lamarck's bedstraw**

Galium bolanderi A. Gray, **Bolander's bedstraw**
Sherardia arvensis L., **Field madder**

Ruscaceae
Maianthemum racemosum (L.) Link, **Western false Soloman's seal**

Sapindaceae
Acer macrophyllum Pursh, **Big-leaf maple**

Saxifragaceae
Lithophragma bolanderi A. Gray; **Woodland star**
Tellima grandiflora (Pursh) Douglas ex Lindl., **Fringe cup**

Scrophulariaceae
Verbascum thapsus L., **Wooly mullein**

Taxaceae
Torreya californica Torr., **California nutmeg**

Violaceae
Viola sp., **Violet**

Wetland Delineation Report

for

Assessor's Parcel Number 085-540-003-000

3800 North Canyon Road

Camino, 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
Geraldine Hyder
Contact
Karen Hyder
Phone: 530-391-9056

September 2022

Z21-0010/WAC21-0003

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I. Report Summary

A. Potential Jurisdictional Features

The project site has two waters: North Canyon Creek, a perennial stream, and one off-channel pond, dug several decades ago. Wetlands are limited to the footprint of the pond, when drained; thus, their area is included within the waters calculation. The total potential jurisdictional features on the project site is 35,019 ft.^{2} (0.78 acres). See Page 12 for more specific information.

B. Proposed Mitigation

Normal setbacks from perennial waters (100 feet on each side of North Canyon Creek and the pond) would be sufficient to protect those resources and the vegetation associated with them.

II. Introduction

A. Purpose of Report

A wetland delineation was conducted September 21, 2022, on Assessor's Parcel Number 085-540-003-000 (Figure 1), at the request of Karen Hyder. The wetland delineation is part of submittal information required by El Dorado County for a zone change from TPZ to PA for a 33.22-acre parcel of land.

B. Project Location and Description

The study area is in the east half of Section 36, Township 11 North, Range 11 East, M.D.M., located at 3800 North Canyon Road, Camino, El Dorado County, CA. (Figures 2 and 3). It has been the site of a choose-and-cut Christmas tree farm for decades, and also supports about 15 acres of timber land. The property has one home, a gift shop, a mine tunnel and other outbuildings.

The project site has a General Plan designation of Agricultural Land (AL, District A) with TPZ zoning. It is bounded by properties varying in size from 0.716 to 31.75 acres.

C. Property Owner and Project Manager

Property Owner
Raymond L. Hyder and Geraldine
F. Hyder 1994 Trust
3800 North Canyon Road
Camino, CA 95709

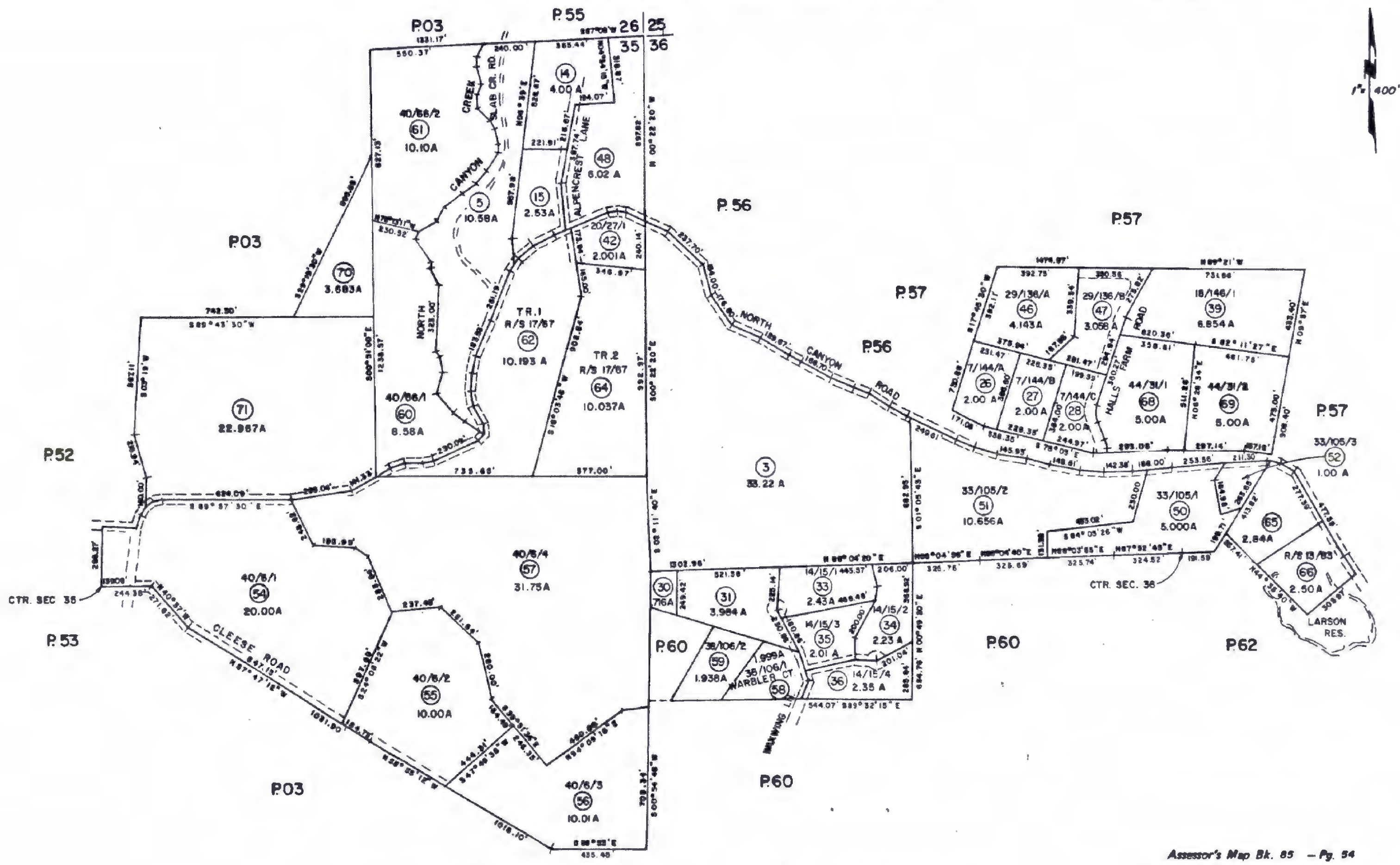
Project Manager
Karen Hyder
Phone: 530-391-9056

E. Report Preparer

Ruth A. Willson, M.A., Biology, California State University, Fresno, Biologist for Site Consulting, Inc., 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 a Certified Arborist with the International Society of Arboriculture (Certification No. WE-8335A).

POR. SECS. 35&36., T.11N., R.11E., M.D.M.

Tax Area Code 85:54



THIS MAP IS NOT A SURVEY. It is prepared by the El Dorado Co. Assessor's office for assessment purposes only.

NOTE – Assessor's Block Numbers Shown in Ellipses
Assessor's Parcel Numbers Shown in Circles

Assessor's Map Bk. 85 – Pg. 54
County of El Dorado, California

SEP 1 2 2005

0 200 400 600

SCALE 1" = 200'

FIGURE 2. AERIAL PHOTO

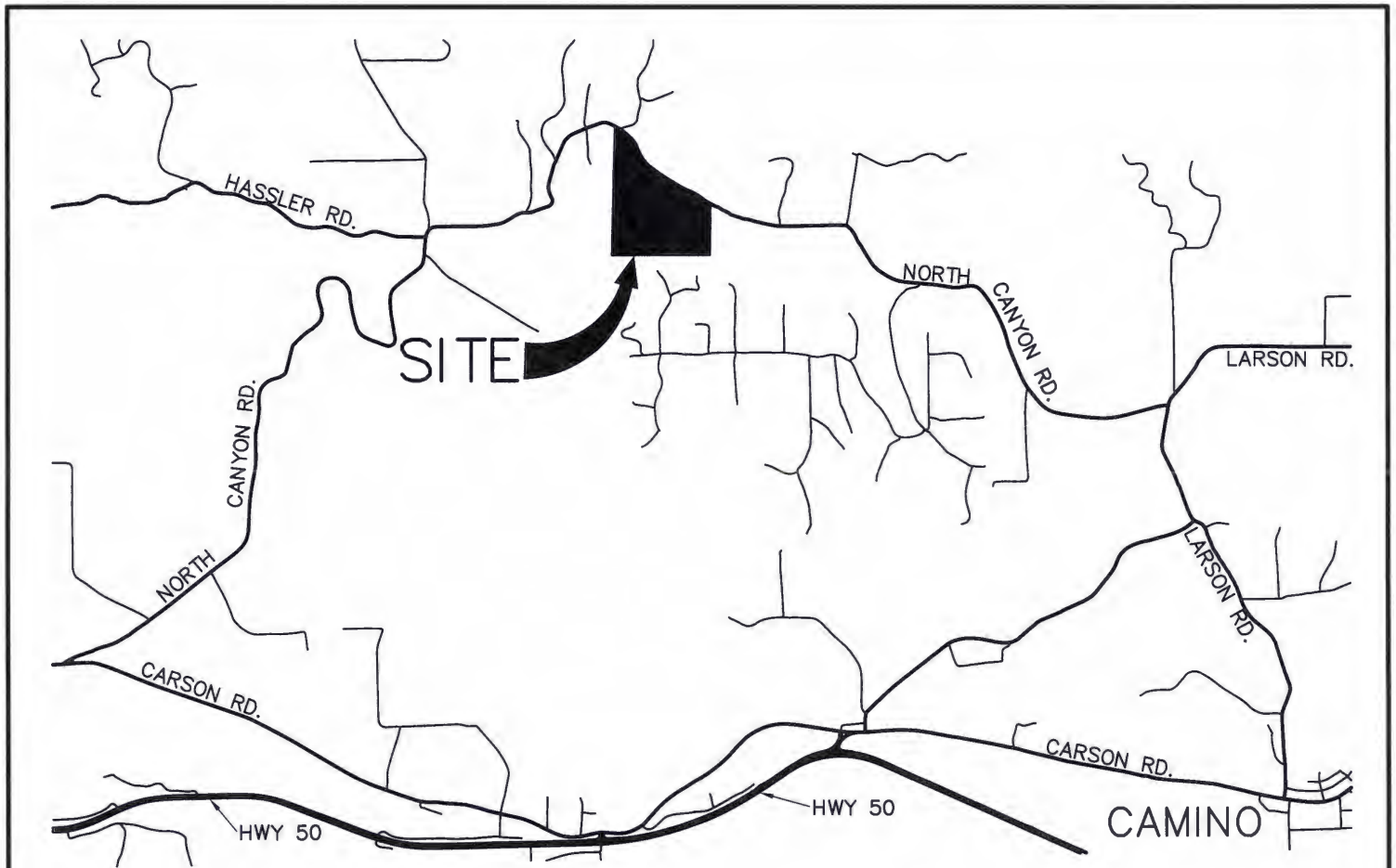


FIGURE 3. VICINITY MAP

III. Methods

A. Literature

Literature utilized for the wetland delineation includes U.S. Army Corps (2010), and Wetland Training Institute (1995). Jurisdictional suitability of hydrologic features was evaluated utilizing the Environmental Protection Agency's Rapanos guidelines (EPA 2007). Soil color was determined using Munsell (2000). Soil classification and descriptions were found on the NRCS Web Soil Survey (2022). Vegetation and plant taxonomy references include California Department of Fish and Game (DFG, 2010), Sawyer et al. (2009), Mayer and Laudenslayer (1988), Klein et al. (2007), and Baldwin, ed. (2012). Hydrophytic vegetation classification was found in Corps (2020). Hydric soils information was obtained from NRCS (2022).

B. Field Survey and Mapping

A field survey to delineate the boundaries of wetlands and waters on the project site was conducted September 21, 2022, by Ruth Willson, utilizing the routine determination method in accordance with the U.S. Army Corps of Engineers Wetland Delineation Manual (Corps 1987) and its Western Mountains, Valleys and Coast Regional Supplement to the Wetland Delineation Manual (Corps 2010). Wetland determination data points are mapped on Figure 9, page 13, and wetland data sheets are presented in Appendix A.

The channel of North Canyon Creek and the footprint of the off-channel pond were surveyed September 21, 2022, by James Willson, L.S., utilizing centimeter-accuracy GPS.

IV. Site Description

A. Topography

The project site lies between 2600 and 2850 feet (790 and 870 meters) elevation. North Canyon Creek, a perennial stream, flows northwesterly through the parcel, with a gradient of 5 percent. The topography south of the creek primarily consists of northerly and westerly slopes from a knoll on the property's south boundary to the creek. The gradient of that slope is approximately 22 percent. The topography north of the creek consists of a southeasterly slope from a knoll to the creek, with a gradient of about 20 percent (Figure 4).

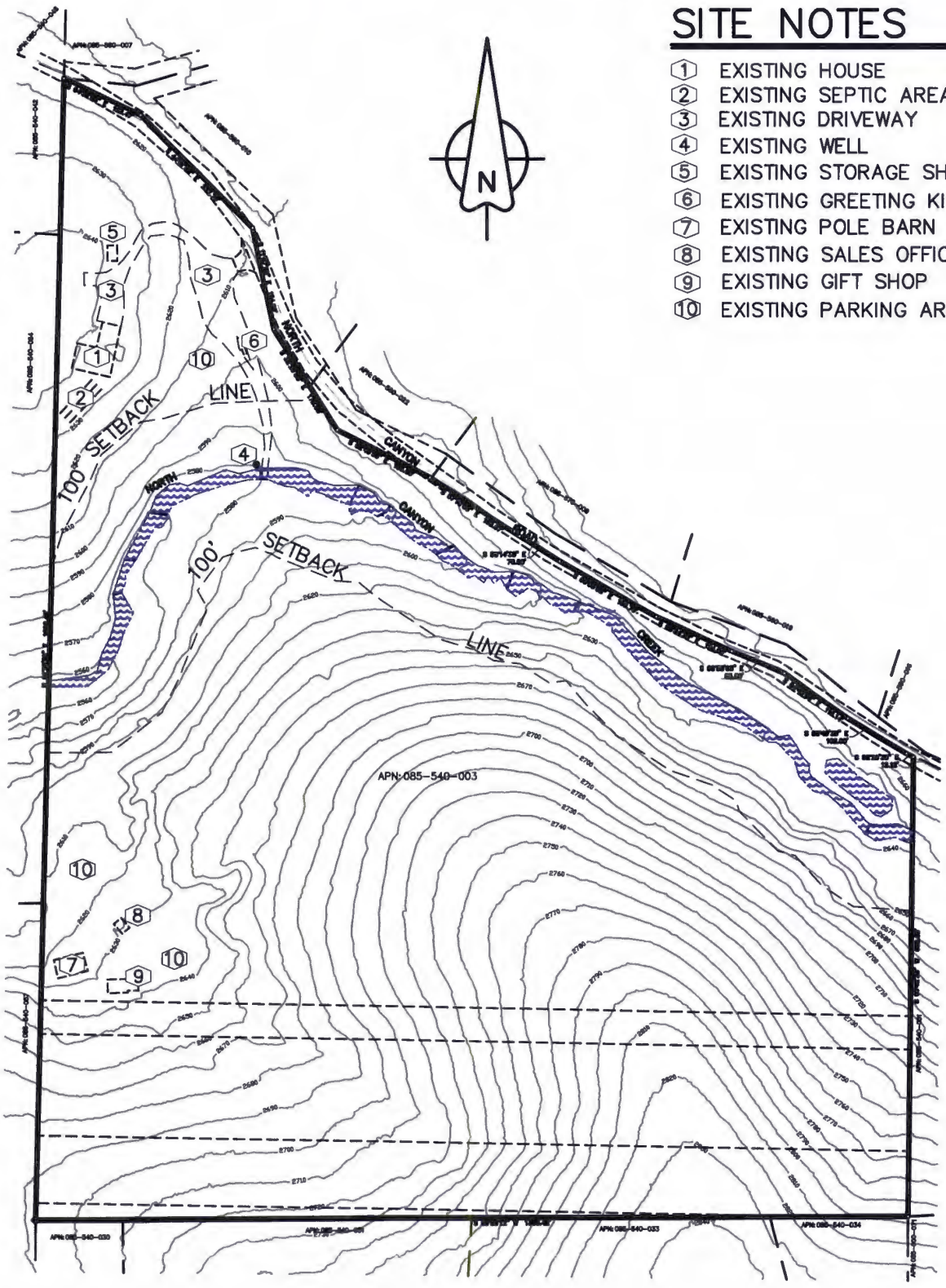
B. Hydrology

Direct precipitation, drainage of precipitation and groundwater discharge are the hydrologic sources for the project site. While the property has no ephemeral or intermittent waters, North Canyon Creek passes through it. The creek collects water from intermittent and ephemeral sources upstream of Larsen Reservoir, located less than one-half mile upstream, southeasterly of the study area. The creek enters the study area near its northeast corner and carries water about one-fourth mile northwesterly, leaving the property along its western boundary. After leaving the study area, the creek carries water about one mile northerly to the South Fork American River, a traditional navigable water (Figure 5).

An off-channel pond, dug decades ago, receives water from the creek, then releases it back into the creek. Some water also seeps into the pond from the creek through the soil between the two features.

0 200 400 600

SCALE 1" = 200'
CONTOUR INTERVAL = 10'

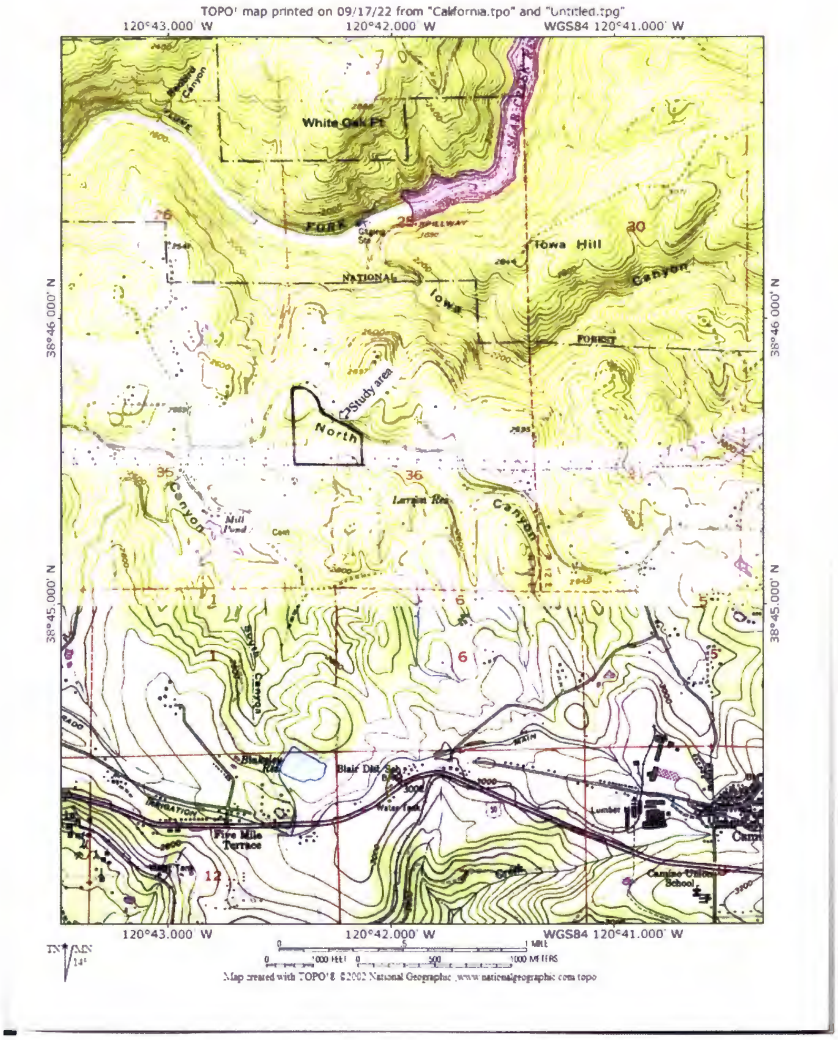


SITE NOTES

1. EXISTING HOUSE
2. EXISTING SEPTIC AREA
3. EXISTING DRIVEWAY
4. EXISTING WELL
5. EXISTING STORAGE SHED
6. EXISTING GREETING KIOSK
7. EXISTING POLE BARN
8. EXISTING SALES OFFICE
9. EXISTING GIFT SHOP
10. EXISTING PARKING AREA

FIGURE 4. TOPOGRAPHIC MAP

Figure 5. Topographic map, from National Geographic Maps (2002).



C. Vegetation Communities

Vegetation communities on the project site include Sierran Mixed Conifer Forest, Riparian and Agricultural Land (Figures 6 and 7).

1. Sierran Mixed Conifer Forest

Sierran mixed conifer forest (Mayer & Laudenslayer 1988; El Dorado County 2004) covers about 15.6 acres of the project site. The most abundant species is ponderosa pine *(Pinus ponderosa)*, followed by incense cedar (*Calocedrus decurrens*) and Douglas-fir (*Pseudotsuga menziesii*). California black oak (*Quercus kelloggii*), Madrone (*Arbutus menziesii)*, Mountain dogwood (*Cornus nuttallii*), and California nutmeg (*Torreya californica*) are also found in the tree canopy. The shrub layer is mostly absent, due to careful forest management through the years (prescribed burning and shrub removal), but scattered shrubs include Oregon grape (*Berberis aquifolium*), toyon (*Heteromeles arbutifolia*), Western poison-oak (*Toxicodendron diversiloba*) and California rose (*Rosa californica*). The ground layer includes mountain misery (*Chamaebatia foliolosa*), blue wild-rye (*Elymus glaucus),* dogtail grass (*Cynosurus echinatus)*, Pacific starflower (*Lysimachia latifolia*), hairy wood-rush (*Luzula comosa*), American lotus (*Acmisphon americanus*) and klamathweed *(Hypericum perforatum).* A complete list of plants found on-site is presented in Appendix B.

2. Riparian

Riparian vegetation, occurring along the banks of North Canyon Creek, covers about 1.6 acres. Riparian trees include big-leaf maple (*Acer macrophyllum*) and white alder (*Alnus rrhombifolia*). Shrubs found alongside the stream include Himalayan blackberry (*Rubus armeniacus*) and cutleaf blackberry (*R. laciniatus*). The creek supports a large variety of herbaceous species, including common horsetail (*Equisetum arvense*), big-leaf sedge (*Carex amplifolia*), Thompkin's sedge *(C. tompkinsii)*, lovegrass sedge (*Cyperus eragrostis*), panicled bulrush (*Scirpus microcarpus*), water iris (*Iris pseudacorus*), Baltic rush (*Juncus balticus*), common velvet grass (*Holcus lanatus*) and clustered dock (*Rumex conglomeratus*), among others.

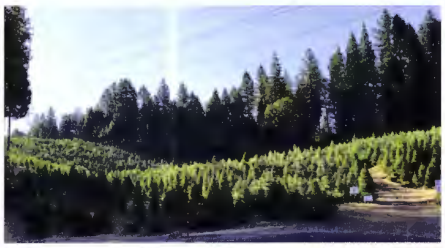
3. Agricultural land

Approximately 15.2 acres of the project site is utilized as a choose-and-cut Christmas tree farm. The plantations include Douglas-fir, Silvertip fir (*Abies magnifica*), White fir (*Abies concolor*), Blue spruce (*Picea pungens*) and various specialty firs. The plantations have been managed to suppress competing vegetation, so the ground layer is largely absent.

Figure 6. Vegetation communities photos.

Sierran Mixed Conifer Forest

Riparian



Agricultural land: Christmas tree plantation.

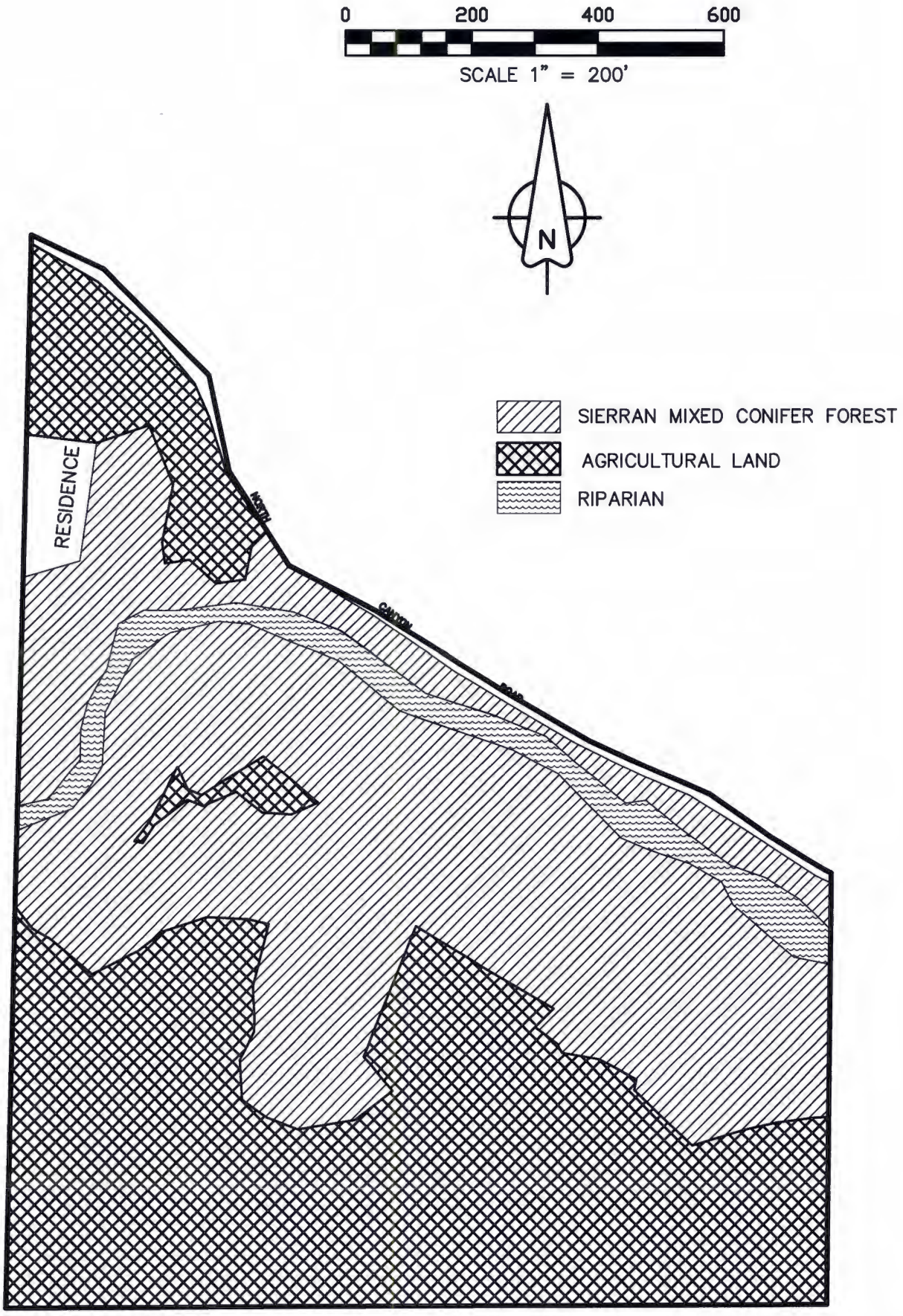


FIGURE 7. VEGETATION COMMUNITIES

D. Soils

1. Soil Classification

Soils on the project site (Figure 8, below) include (counterclockwise from northwest to northeast) Musick sandy loam, 9 to 15 percent slopes (MrC), Musick sandy loam, 15 to 30 percent slopes (MrD), Sites loam, 15 to 30 percent slopes (SkD), Sites loam 15 to 30 percent slopes (SkE), and Sites loam, 9 to 15 percent slopes (SkC). Musick sandy loam covers about 22 acres and Sites loam covers about 11 acres of the project site (USDA, NRCS 2022, Appendix C).

Figure 8. Soils map from National Resource Conservation Service.

2. Soil Descriptions

a. Musick Series

Musick Series soils are well-drained soils underlain by acid igneous rocks at a depth below 48 inches, and are found on gently rolling to steep mountainous uplands (5 to 50% slopes) at elevations from 2000 to 5000 feet. Average annual precipitation, including snowfall, is 35 to 60 inches and frost-free season varies from 140 to 240 days. (USDA 1974). Soil colors from a representative profiles of Musick series soils is shown below.

i. Musick Sandy Loam, 15 to 30 percent slopes (MrD)

0-6 inches: Brown (10YR 5/3) sandy loam, dark brown (7.5YR 3/3) when moist;
6 to 12 inches: Brown (7.5YR 5/4) heavy sandy loam, reddish brown (5YR 4/4) when moist;
12 to 18 inches: Variegated reddish-brown and red (5YR 5/4 and 2.5YR 5/6) light sandy clay loam, variegated yellowish-red and red (5YR 4/6 and 2.5YR 4/6) when moist;
18 to 28 inches: variegated red and reddish-yellow (2.,5YR 5/8 and 5YR 6/6) heavy clay loam near sandy clay, variegated red and yellowish-red (2.5YR 4/6, 4/8 and 5YR 5/6) when moist;
28 to 42 inches: Variegated light-red and reddish-yellow (2.5YR 6/8 and 5YR 6/8) light sandy clay, variegated red and reddish-yellow (2.5YR 4/8 and 5YR 6/8) when moist;
42 to 56 inches: Variegated light-red, red and reddish-yellow (2.5YR 6/8, 2.5YR 5/8 and 5YR 6/8) heavy sandy loam, variegated red, light red and reddish-yellow (2.5YR 5/8, 2.5YR 6/8 and 5YR 6/8) when moist;
56 to 60 inches: Variegated reddish-yellow (5YR 6/8 & 7/8) sandy loam, variegated reddish-yellow and light red (5YR 6/8 and 2.5YR 6/8) when moist.

ii. Musick sand loam, 9 to 15 percent slopes (MrC)

The soil profile is similar to Musick sand loam, 15 to 30 percent slopes, except the land is less sloping.

b. Sites Series

The Sites Series consists of well-drained soils underlain by metasedimentary and metabasic rocks at a depth of 40 to more than 60 inches. The soils occur on rolling to very steep mountainous uplands, with slopes are from 9 to 70 percent, at elevations between 2000 to 5000 feet. Average annual precipitation, including snow, is 35 to 60 inches, and frost-free season is 140 to 240 days. Soil colors from a representative profile of Sites loam, 15 to 30 percent slopes (SkD) follows:

i. Sites Loam, 15-30% slopes (SkD)

0-to 7 inches: Brown (7.5YR 5/4) loam, dark brown (7.5YR 3/3) when moist;
7 to 14 inches: Reddish-brown (5YR 5/4) loam, dark reddish brown (5YR 5/4) when moist;
14 to 21 inches: Yellowish-red (5YR 4/6) clay loam, reddish-brown (5 YR 4/4) when moist;
21 to 29 inches: Red (2.5YR 5/6) clay, red (2.5YR 4/6) when moist;
29 to 53 inches: Red (2.5YR 5/8) clay, red (2.5YR 4/8) when moist;
53 to 69 inches: Light-red (2.5YR 6/8) clay loam, red (2.5YR 4/8) when moist;
69 inches: Weathered schist and slate.

ii. Sites Loam, 9 to 15 percent slopes (SkC)

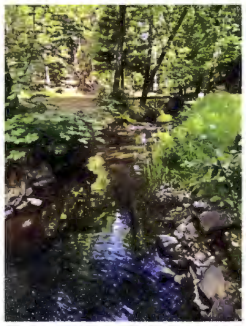
Sites loam, 9 to 15 percent slopes, is similar to Sites loam, 15 to 30 percent slopes, except it is on less-sloping ground.

iii. Sites Loam, 30 to 50 percent slopes (SkE)

Sites loam, 9 to 15 percent slopes, is similar to Sites loam, 15 to 30 percent slopes, except it is on more-sloping ground.

VI. Delineation Results

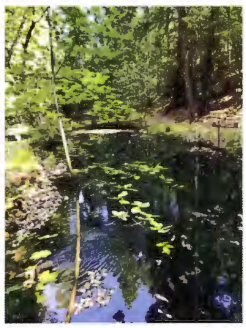
The project site has two waters: North Canyon Creek and an off-channel pond dug decades ago. (Figure 9). When the pond is drained, its footprint has wetland characteristics (hydric soils and hydrophytic vegetation), but its area is included herein as a water, rather than a wetland. The topographic map of the project site (Figure 4) shows a drainage swale near the parking area by the southwest corner of the property. Field studies did not find a defined channel within the swale; thus, it is not classified as an ephemeral stream and is not part of the Waters of the U.S.



North Canyon Creek.

A. Waters

North Canyon Creek enters the study area near its northeast corner and carries water about one-fourth mile northwesterly, leaving the property along its western boundary. Total area of North Canyon Creek is 31,630 ft.^{2} (0.7 Ac.). The off-channel pond is located near the northeastern corner of the project site. Its total area 3,389 ft.^{2} (0.08 Ac.). The total potential jurisdictional area on the project site, shown in Table 1, is 35,019 ft.^{2} (0.78 Ac.).



The off-channel pond.

B. Wetlands

The study area has no wetlands, except within the pond's footprint. As noted above, its area is included as a water rather than a wetland.

Table 1. Potential jurisdictional waters on the project site.

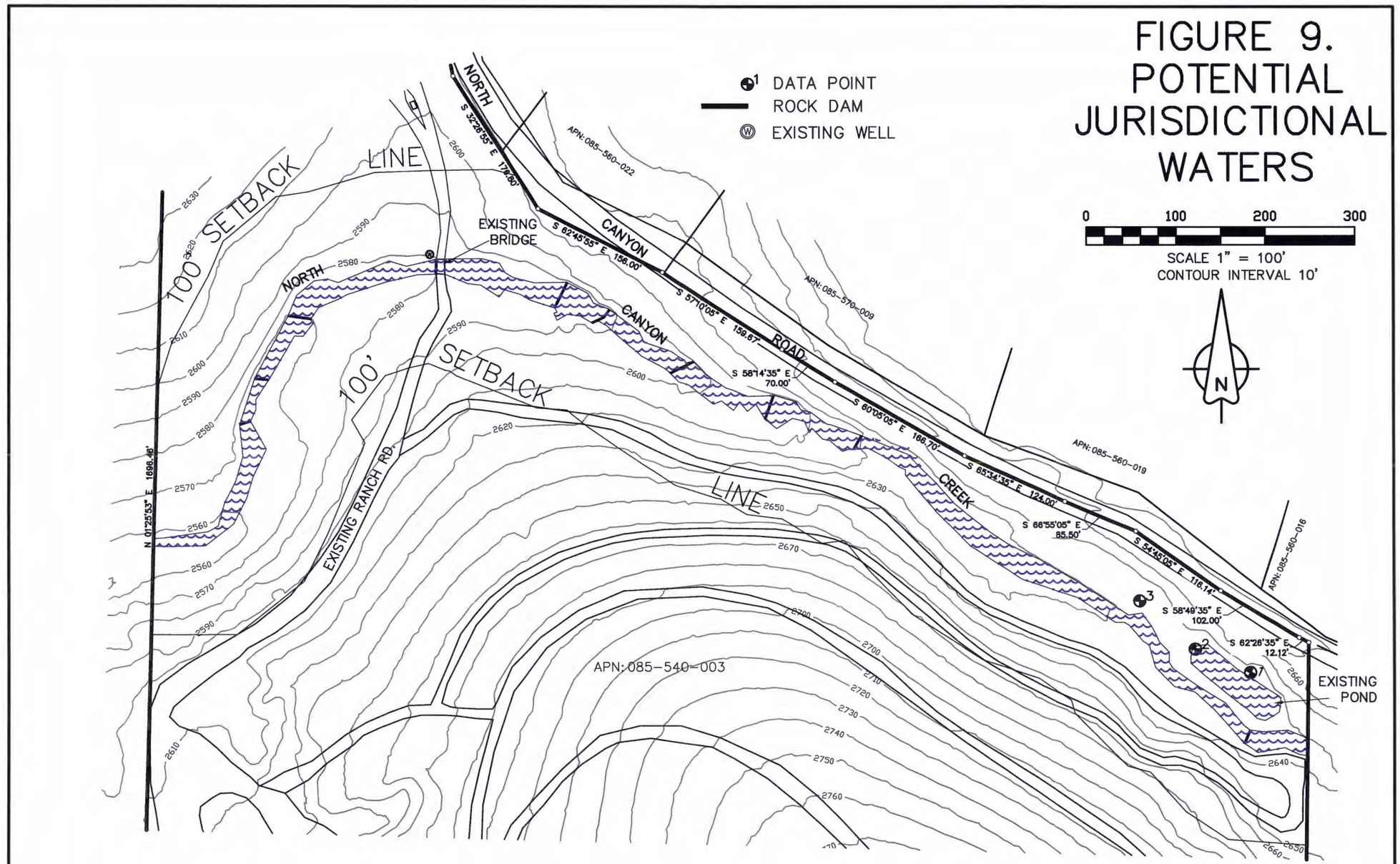
WATERS				
Water ID	**Channel Length (ft)**	**Average Flow-line Width (ft)**	**Area (ft^2)**	**Area (acres)**
North Canyon Creek	±1660	±19	31,630	0.7
Pond	n/a	n/a	3,389	0.08
TOTAL WATERS			**35,019**	**0.78**
POTENTIAL JURISDICTIONAL TOTAL			**35,019**	**0.78**

VI. Permits

Disturbance of any 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.

FIGURE 9. POTENTIAL JURISDICTIONAL WATERS



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Appendix A.

Wetland Determination Data Forms
Western Mountains, Valleys, and Coast Region

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Hyder Trust City/County: El Dorado Sampling Date: 9/21/2022

Applicant/Owner: Geraldine Hyder State: CA Sampling Point: 1

Investigator(s): Ruth Willson Section, Township, Range: Sec. 36, T. 11 N., R. 11 E., MDM

Landform (hillslope, terrace, etc.): Slope within pond footprint Local relief (concave, convex, none): Concave Slope (%): 45

Subregion (LRR): MLRA 22A Lat: 38° 45' 35.98" Long: -120° 42' 09.24" Datum: WGS 84

Soil Map Unit Name: Sites loam, 15 to 30 percent slopes (SkE) NWI classification: PSSC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? No Are "Normal Circumstances" present? Yes X No ____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No _____	**Is the Sampled Area within a Wetland?** Yes X No _____
Hydric Soil Present?	Yes X No _____	
Wetland Hydrology Present?	Yes X No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 3 m²)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Alnus rhombifolia*	100	Yes	FACW
2.			
3.			
4.			
	100 = Total Cover		
Sapling/Shrub Stratum (Plot size: 3 m²)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 3 m²)			
1. *Lapsana communis*	4	Yes	FACU
2. *Rumex conglomeratus*	2	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	6 = Total Cover		
Woody Vine Stratum (Plot size: 3 m²)			
1. *Rubus laciniatus*	3	Yes	FACU
2.			
	3 = Total Cover		

% Bare Ground in Herb Stratum 94

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B) 50

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species 102	x 2 =	204
FAC species	x 3 =	
FACU species 7	x 4 =	28
UPL species	x 5 =	
Column Totals: 109 (A)		232 (B)

Prevalence Index = B/A = 2.1

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ___ 2 - Dominance Test is >50%
- X 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ 5 - Wetland Non-Vascular Plants[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

SOIL

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	5YR 2.5/1	50	7.5TR 2.5/1	2	C	M	Loam	40% coarse rock
			2.5YR 4/6	8	C	M		
4-10	5YR 3/3	35	2.5YR 4/6	10	C	M	Sandy loam	5% medium gravel
	5YR 4/3	50			C	M		
10-13	5YR 3/2	60	10YR 3/4	3	C	M	Sandy clay	5% medium gravel
	5YR 3/3	30	10YR 4/6	2	CS	on rocks		
13	Bottom of hole							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes X No _____ Depth (inches): 14

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Data point was located within the footprint of a pond, above the water level.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Hyder Trust City/County: Applicant/ El Dorado Sampling Date: 9/21/2022

Owner: Geraldine Hyder State: CA Sampling Point: 2

Investigator(s): Ruth Willson Section, Township, Range: Sec. 36, T. 11 N., R. 11 E., MDM

Landform (hillslope, terrace, etc.): Terrace below hillslope Local relief (concave, convex, none): None Slope (%): 0

Subregion (LRR): MLRA 22A Lat: 38° 45' 35.7" Long: _: 120° 42' 08.5" Datum: WGS 84

Soil Map Unit Name: Sites loam, 15 to 30 percent slopes (SkE) NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? No Are "Normal Circumstances" present? Yes X No ____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes _____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 3 m²)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 3 m²)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 3 m²)			
1. *Hypochaeris radicata*	70	Yes	FACU
2. *Equisetum arvense*	3	No	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	73 = Total Cover		
Woody Vine Stratum (Plot size: 3 m²)			
1. *Rubus armeniacus*	5	Yes	FACU
2.			
	5 = Total Cover		

% Bare Ground in Herb Stratum 27

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species 3	x 3 = 9	
FACU species 75	x 4 = 280	
UPL species	x 5 =	
Column Totals: 78 (A)	289 (B)	

Prevalence Index = B/A = 3.7

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks:

SOIL

Sampling Point: 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1.5	2.5YR 3/4	95					Loam	5% medium gravel
1.5-12	5YR 4/6	79	10YR 4/8	1	C	M	Clayey loam	Many fine roots
	2.5YR 5/6	20						
12	Bottom of hole							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No __X__

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No __X__ Depth (inches): _____

Water Table Present? Yes _____ No __X__ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No __X__ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No __X__

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Data point was located on a terrace below a hillslope and above a pond.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Hyder Trust City/County: El Dorado Sampling Date: 9/21/2022

Applicant/Owner: Geraldine Hyder State: CA Sampling Point: 3

Investigator(s): Ruth Willson Section, Township, Range: Sec. 36, T. 11 N., R. 11 E., MDM

Landform (hillslope, terrace, etc.): Terrace below hillslope Local relief (concave, convex, none): None Slope (%): 0

Subregion (LRR): MLRA 22A Lat: 38° 45' 36.75" Long: -120° 42' 10.0" Datum: WGS 84

Soil Map Unit Name: Sites loam, 15 to 30 percent slopes (SkE) NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? No Are "Normal Circumstances" present? Yes X No

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____ No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____ No X	
Wetland Hydrology Present?	Yes ____ No X	

Remarks:

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 2 m²)			
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 2 m²)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 2 m²)			
1. *Frageria vesca*	85	Yes	FACU
2. *Equisetum arvense*	15	No	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 2 m²)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 00 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:

SOIL

Sampling Point: 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	2.5YR 3/3	98	2.5YR 4/6	1	C	M	Sandy Loam	Many fine roots
			2.5YR 3/6	1	CS	on rocks	Sandy Loam	
9-11	2.5YR 4/4	95					Sandy loam	5% medium gravel
11	Bottom of hole							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Data point was located within a shallow depression on a terrace below a hillslope and above a creek.

Appendix B

Plant Species Found on the Project Site
July 27, August 9, and September 1, 2022

Plant Species Found on the Project Site
July 27, August 9, and September 1, 2022

Agavaceae
Chlorogalum pomeridianum (DC.) Kunth var. *pomeridianum*, **Soaproot**

Amaranthaceae
Amaranthus sp., **Pigweed**

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

Apiaceae
Daucus carota L., **Wild carrot, Queen Anne's Lace**
Ligusticum californicum J.M. Coult. & Rose
Sanicula sp., **Sanicle**

Asteraceae
Achillea millefolium L., **Yarrow**
Adenocaulon bicolor Hook., **Trail plant**
Agoseris heterophylla (Nutt.) Greene var. *heterophylla*, **Annual mountain dandelion**
Baccharis pilularis DC., **Coyote brush**
Bidens frondosa L., **Sticktight**
Centaurea solstitialis L., **Yellow star-thistle**
Cirsium vulgare (Savi) Ten., **Bull thistle**
Hypochaeris ., **Cat's-ear**
Lactuca serriola L., **Prickly lettuce**
Lapsana communis L., **Common nipplewort**
Madia elegans D. Don, **Common madia**
Madia subspicata D.D. Keck
Micropus sp. **Cottonweed**
Stephanomeria elata Nutt., **Wirelettuce**
Symphyotrichum sp., **American-aster**
Taraxicom sp., **Dandelion**
Tragopogon dubius Scop. **Goat's beard**

Athyriaceae
Athyrium filix-femina (L.) Roth var. *cyclosorum* Rupr. **Lady fern**

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

Betulaceae
Alnus rhombifolia Nutt., **White alder**

Blechanaceae
Struthiopteris spicant (L.) Weiss, **Deer fern**

Brassicaceae
Brassica nigra (L.) W.D.J. Koch, **Black mustard**

Caprifoliaceae
Lonicera hispidula (indl.) Torr. & A. Gray, **California honeysuckle**
Symphoricarpos albus (L.) S.F. Blake var. *laevigatus* (Fernald) S.F. Blake, **Snowberry**

Caryophyllaceae
Cerastium fontanum Baumg. ssp. *vulgare* (Hartm.) Greuter & Burdet **Common mouse-ear chickweed**
Stellaria media (L.) Vill., **Common chickweed**

Chenopodiaceae
Dysphania botrys (L.) Mosyakine & Clements, **Jerusalem Oak**
Salsola sp., **Russian thistle**

Convolvulaceae
Convolvulus arvensis, L. **Field bindweed**
Calystegia occidentalis (A. Gray) Brummitt

Cornaceae
Cornus nuttallii Audubon, **Mountain**

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

Cyperaceae
Carex amplifolia Boott, **Big-leaf sedge**
Carex tiompkinsii J.T. Howell, **Tompkin's sedge**
Cyperus eragrostis Lam., **Lovegrass sedge**
Scirpus microcarpus .Presl & C.Presl, **Panicled bulrush**

Cystopteridaceae
Cystopteris fragilis (L.) Bernh. **Fragile fern**

Dennstaedtiaceae
Pteridium aquilinum (L.) Kuhn var. *pubescens* Underw. **Bracken fern**

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

Ericaceae
Arbutus menziesii Pursh, **Pacific madrone**
Arctostaphylos viscida C. Parry, **White-leaf manzanita**

Euphorbiaceae
Croton setiger Hook, **Dove weed**
Chamaesyce maculata L., **Spotted spurge**
Euphorbia serpillifolia Pers. subsp. *serpillifolia*, **Thyme-leaf sandmat**

Equisetaceae
Equisetum arvense L. **Common horsetail**

Fabaceae
Acmispon americanus (Nutt.) Rydb., var. *americanus*, **American lotus**
Lathyrus latifolius L., **Perennial sweet pea**
Hosackia oblongifolia Benth. var. *oblongifolia*, **Bird's-foot trefoil**
Medicago polymorpha L., **California burclover**
Trifolium glomeratum L., **Clustered clover**
Trifolium gracilentum Torr. & A.Gray, **Pinpoint clover**
Vicia sp., **Vetch**

Fagaceae
Quercus chrysolepis Liebm., **Canyon live oak**
Quercus kelloggii Newb., **California black oak**
Quercus wislizeni A.DC., **Interior live oak**

Gentianaceae
Centaurium tenuiflorum (Hoffmans. & Link) Janch., **Centaury**

Hypericaceae
Hypericum calycinum L., **Aarons beard**
Hypericum perforatum L. subsp. *perforatum*, **Klamathweed**

Iridaceae
Iris hartwegii Baker subsp. *hartwegii* **Sierra iris**
Iris pseudacorus L. **Water iris**

Juglandaceae
Juglans hindsii Jeps. ex R.E. Sm., **Northern California Black walnut**

Juncaceae
Juncus balticus Willd. ssp. Ater (Rydb.) Snogerup, **Baltic rush**
Juncus bufonius L. var. *bufonius*, **Toad rush**
Luzula comosa E. Mey. var. *comosa*, **Hairy wood-rush**

Lamiaceae
Prunella vulgaris L. var. *vulgaris* , **Self-heal**

Lauraceae
Unbellularia californica (Hook. & Arn.) Nutt. **California Bay Laurel**

Liliaceae
Chlorogalum pomeridianum (DC.) Kunth var. *pomeridianum*, **Common soaproot**

Myrsinaceae
Lysimachia arvensis (L.) U. Manns & Anderb., **Scarlet pimpernel**
Lysimachia latifolia (Hook.) Cholewa, **Pacific Starflower**

Onagraceae
Epilobium brachycarpum C. Presl, **Willow herb**
Epilobium minutum Lindl.

Orchidaceae
Goodyera oblongifolia Raf., **Rattlesnake-plantain**
Piperia traansversa Suksd., **Flat spurred piperia**

Orobanchaceae
Cordylanthus tenuis A.Gray ssp. *tenuis*, **bird's-beak**

Oxalidaceae
Oxalis corniculata L. **Wood sorrel**

Phytolaccaceae
Phytolacca americana L., var. *americana*, **Pokeweed**

Pinaceae
Abies concolor (Gordon & Glend.) Lindl. ex Hildebr., **White fir**
Abies magnifica A. Murray bis, **California red fir**
Picea pungens, Engelm., **Blue spruce**
Pinus ponderosa Lawson & C. Lawson, **Ponderosa pine**
Pseudotsuga menziesii (Mirb.) Franco var. *menziesii* **Douglas-fir**

Plantaginaceae
Kickxia elatine (L.) Dumort., **Fluellen**
Plantago lanceolata L., **English plantain**
Plantago major L., **Common plantain**

Poaceae
Aira caryophyllea L, **Silver hair grass**
Avena barbata Pott ex Link, **Slender wild oats**
Brachypodium distachyon (L.) P. Beauv., **False brome**
Briza minor L., **Annual quaking grass**
Bromus sp., **Brome**
Calamagrostis rubescens Buckley. **Pine reed grass**
Cynodon dactylon (L.) Pers., **Bermuda grass**
Cynosurus echinatus L., **Hedgehog dogtail**
Deschampsia danthonioides (Trin.) Munro, **Annual Hairgrass**
Elymus glaucus Buckley, **Blue wildrye**
Eragrostis minor Host, **Little love grass**
Festuca myuros L, **Rattail sixweeks grass**
Festuca perennis (L.) Columbus & J.P.Sm., **Ryegrass**
Holcus lanatus L., **Common velvet grass**
Melica sp., **Melica**
Phalaris sp., **Canary grass**
Poa pratensis L. subsp. *pratensis*, **Kentucky bluegrass**
Setaria faberi R.A.W. Herrm., **Chinese foxtail**

Polemoniaceae
Phlox speciosa Pursh

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

Polygonaceae
Persicaria lapathifolia (L.) Delarbre. **Willow weed**
Polygonum sp. **Common knotweed**
Rumex acetosella L., **Sheep sorrel**
Rumex conglomeratus Murray, **Clustered dock**
Rumex occidentalis S. Watson, **Western dock**

Portulacaceae
Portulaca oleracea L., **Purslane**

Primulaceae
Anagallis arvensis L., **Scarlet pimpernel**

Ranunculaceae
Ranunculus canus Benth. Var. *canus*, **Buttercup**

Rhamnaceae
Ceanothus integerrimus Hook. & Arn, **Deer brush**
Rhamnus crocea Nutt. **Redberry**

Rosaceae
Chamaebatia foliolosa Benth., **Mountain misery**
Drymocallis glandulosa (Lindl.) Rydb., **Sticky Cinquefoil**
Frageria vesca L., **Wood strawberry**
Heteromeles arbutifolia (Lindley) Roemer, **Toyon**
Prunus cerasifera Ehrh., **Cherry plum**
Rosa californica /cham. & Schldl., **California rose**
Rubus armeniacus Focke **Himalayan blackberry**
Rubus laciniatus Willd., **Cutleaf blackberry**

Rubiaceae
Galium divaricatum Lam., **Lamarck's bedstraw**

Galium bolanderi A. Gray, **Bolander's bedstraw**
Sherardia arvensis L., **Field madder**

Ruscaceae
Maianthemum racemosum (L.) Link, **Western false Soloman's seal**

Sapindaceae
Acer macrophyllum Pursh, **Big-leaf maple**

Saxifragaceae
Lithophragma bolanderi A. Gray; **Woodland star**
Tellima grandiflora (Pursh) Douglas ex Lindl., **Fringe cup**

Scrophulariaceae
Verbascum thapsus L., **Wooly mullein**

Taxaceae
Torreya californica Torr., **California nutmeg**

Violaceae
Viola sp., **Violet**

Appendix C

National Resource Conservation Service
Custom Soils Report

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for El Dorado Area, California

August 18, 2022

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: El Dorado Area, California
Survey Area Data: Version 13, Sep 3, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 3, 2019—Oct 29, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
MrC	Musick sandy loam, 9 to 15 percent slopes	8.5	25.2%
MrD	Musick sandy loam, 15 to 30 percent slopes	13.9	41.4%
SkC	Sites loam, 9 to 15 percent slopes, C low montane	0.2	0.6%
SkD	Sites loam, 15 to 30 percent slopes, C low montane	1.0	2.8%
SkE	Sites loam, 30 to 50 percent slopes, C low montane	10.1	29.9%
Totals for Area of Interest		**33.6**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

El Dorado Area, California

MrC—Musick sandy loam, 9 to 15 percent slopes

Map Unit Setting

National map unit symbol: hj0p
Elevation: 2,000 to 5,000 feet
Mean annual precipitation: 35 to 70 inches
Mean annual air temperature: 50 to 57 degrees F
Frost-free period: 140 to 200 days
Farmland classification: Farmland of local importance

Map Unit Composition

Musick and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Musick

Setting

Landform: Mountain slopes
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Mountainflank, mountaintop
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Colluvium derived from granite and/or colluvium derived from granodiorite

Typical profile

H1 - 0 to 12 inches: sandy loam
H2 - 12 to 18 inches: sandy clay loam
H3 - 18 to 42 inches: sandy clay loam
H4 - 42 to 56 inches: sandy clay loam
H5 - 56 to 60 inches: sandy loam

Properties and qualities

Slope: 9 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 9.1 inches)

Interpretive groups

Land capability classification (irrigated): 4e
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Ecological site: F022AW007CA - Deep Mesic Mountains >40"ppt
Hydric soil rating: No

Minor Components

Holland
Percent of map unit: 4 percent
Landform: Mountain slopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Mountainflank
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Josephine
Percent of map unit: 4 percent
Hydric soil rating: No

Shaver
Percent of map unit: 4 percent
Landform: Mountain slopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Mountainflank
Down-slope shape: Concave
Hydric soil rating: No

Argonaut
Percent of map unit: 3 percent
Landform: Ridges
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

MrD—Musick sandy loam, 15 to 30 percent slopes

Map Unit Setting
National map unit symbol: hj0q
Elevation: 2,000 to 5,000 feet
Mean annual precipitation: 35 to 70 inches
Mean annual air temperature: 50 to 57 degrees F
Frost-free period: 140 to 200 days
Farmland classification: Farmland of local importance

Map Unit Composition
Musick and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Musick

Setting

Landform: Mountain slopes
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Mountainflank, mountaintop
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Colluvium derived from granite and/or colluvium derived from granodiorite

Typical profile

H1 - 0 to 12 inches: sandy loam
H2 - 12 to 18 inches: sandy clay loam
H3 - 18 to 42 inches: sandy clay loam
H4 - 42 to 56 inches: sandy clay loam
H5 - 56 to 60 inches: sandy loam

Properties and qualities

Slope: 15 to 30 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 9.1 inches)

Interpretive groups

Land capability classification (irrigated): 6e
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: C
Ecological site: F022AW007CA - Deep Mesic Mountains >40"ppt
Hydric soil rating: No

Minor Components

Holland

Percent of map unit: 5 percent
Landform: Mountain slopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Mountainflank
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Shaver

Percent of map unit: 5 percent
Landform: Mountain slopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Mountainflank
Down-slope shape: Concave
Hydric soil rating: No

Josephine
Percent of map unit: 5 percent
Hydric soil rating: No

SkC—Sites loam, 9 to 15 percent slopes, C low montane

Map Unit Setting
National map unit symbol: 2w86w
Elevation: 1,690 to 3,940 feet
Mean annual precipitation: 35 to 59 inches
Mean annual air temperature: 55 to 59 degrees F
Frost-free period: 200 to 270 days
Farmland classification: Farmland of local importance

Map Unit Composition
Sites and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Sites

Setting
Landform: Mountains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Mountainflank
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum weathered from metasedimentary rock

Typical profile
Oi - 0 to 3 inches: slightly decomposed plant material
A - 3 to 17 inches: loam
BAt - 17 to 24 inches: loam
Bt - 24 to 56 inches: clay
BCt - 56 to 72 inches: clay
Cr - 72 to 79 inches: bedrock

Properties and qualities
Slope: 9 to 15 percent
Depth to restrictive feature: 39 to 79 inches to paralithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 11.8 inches)

Interpretive groups
Land capability classification (irrigated): 3e

Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: F022AW007CA - Deep Mesic Mountains >40"ppt
Hydric soil rating: No

Minor Components

Jocal
Percent of map unit: 5 percent
Landform: Mountains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Mountainflank, mountaintop
Down-slope shape: Linear
Across-slope shape: Convex
Hydric soil rating: No

Mariposa
Percent of map unit: 5 percent
Landform: Mountains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Mountainflank, mountaintop
Down-slope shape: Linear
Across-slope shape: Convex
Hydric soil rating: No

Boomer
Percent of map unit: 3 percent
Landform: Mountains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Mountainflank
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Rock outcrop
Percent of map unit: 2 percent
Landform: Mountains
Hydric soil rating: No

SkD—Sites loam, 15 to 30 percent slopes, C low montane

Map Unit Setting
National map unit symbol: 2x29f
Elevation: 1,710 to 3,840 feet
Mean annual precipitation: 37 to 60 inches
Mean annual air temperature: 55 to 59 degrees F
Frost-free period: 200 to 275 days
Farmland classification: Farmland of local importance

Map Unit Composition
Sites and similar soils: 85 percent

Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Sites

Setting

Landform: Mountains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Mountainflank
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum weathered from metasedimentary rock

Typical profile

Oi - 0 to 3 inches: slightly decomposed plant material
A - 3 to 17 inches: loam
BAt - 17 to 24 inches: loam
Bt - 24 to 56 inches: clay
BCt - 56 to 72 inches: clay
Cr - 72 to 79 inches: bedrock

Properties and qualities

Slope: 15 to 30 percent
Depth to restrictive feature: 39 to 79 inches to paralithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 11.8 inches)

Interpretive groups

Land capability classification (irrigated): 4e
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Ecological site: F022AW007CA - Deep Mesic Mountains >40"ppt
Hydric soil rating: No

Minor Components

Boomer

Percent of map unit: 9 percent
Landform: Mountains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Mountainflank
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Mariposa

Percent of map unit: 5 percent
Landform: Mountains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Mountainflank
Down-slope shape: Convex
Across-slope shape: Convex

Hydric soil rating: No

Rock outcrop

Percent of map unit: 1 percent
Landform: Mountains

SkE—Sites loam, 30 to 50 percent slopes, C low montane

Map Unit Setting

National map unit symbol: 2x29h
Elevation: 1,690 to 3,760 feet
Mean annual precipitation: 34 to 56 inches
Mean annual air temperature: 55 to 61 degrees F
Frost-free period: 215 to 280 days
Farmland classification: Farmland of local importance

Map Unit Composition

Sites and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Sites

Setting

Landform: Mountains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Mountainflank
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum weathered from metasedimentary rock

Typical profile

Oi - 0 to 3 inches: slightly decomposed plant material
A - 3 to 17 inches: loam
BAt - 17 to 24 inches: loam
Bt - 24 to 56 inches: clay
BCt - 56 to 72 inches: clay
Cr - 72 to 79 inches: bedrock

Properties and qualities

Slope: 30 to 50 percent
Depth to restrictive feature: 39 to 79 inches to paralithic bedrock
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 11.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: C
Ecological site: F022AW007CA - Deep Mesic Mountains >40"ppt
Hydric soil rating: No

Minor Components

Mariposa

Percent of map unit: 10 percent
Landform: Mountains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Mountainflank
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Boomer

Percent of map unit: 5 percent
Landform: Mountains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Mountainflank
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Rock outcrop

Percent of map unit: 5 percent
Landform: Mountains

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United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

RNS ACOUSTICS

Phone: 858 224 3959
7964 Arjons Drive, Suite H200, San Diego, CA 92126
WWW.RNSACOUSTICS.COM . INFO@RNSACOUSTICS.COM

May 17, 2023

Karen Hyder
Indian Rock Tree Farm
3800 N Canyon Road
Camino, CA 95709

RE: Acoustical Report / Conditional Use Permit
Indian Rock Tree Farm – Camino, CA

Dear Karen:

The following report summarizes our environmental noise measurements, analysis, and recommendations for the Indian Rock Tree Farm, CA.

Executive Summary

Indian Rock Tree Farm is a business located at 3800 N Canyon Road, Camino, CA. It is our understanding that Indian Rock is applying for a Conditional Use Permit (CUP) to allow live music for weddings and events. As part of the CUP application, El Dorado County is requiring an acoustical study to show that events will comply with the requirements of the county's General Plan / Noise Element and Noise Ordinance (County Code of Ordinance, Chapter 130.37).

The client indicated the desired location for events is a relatively flat area on the west side of the property, between the creek and private service road. The proposed event area is approximately 150'+ from the west property line, 180'+ from the northeast property line, and 900'+ from the south and east property lines. The nearest residential dwellings are approximately 350' west and 400' northeast from the proposed event area.

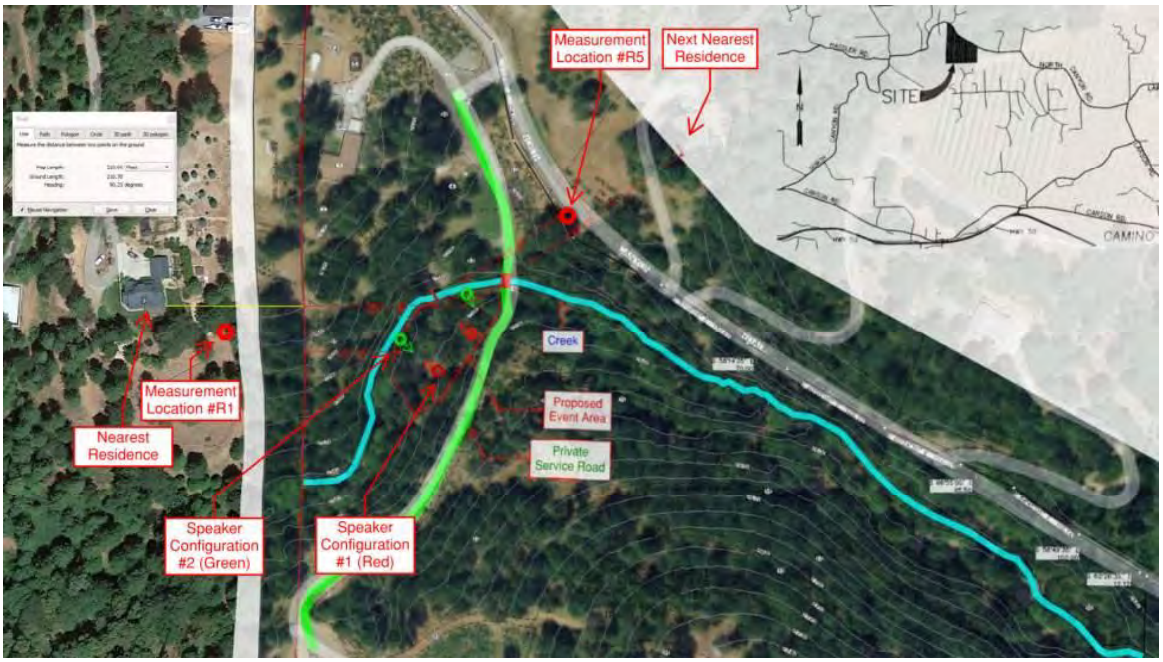
The Indian Rock Tree Farm property and neighboring properties are considered "Rural Region" with respect to El Dorado County zoning, land-use, noise element, and noise ordinance regulations. **The county noise regulations indicate maximum allowable hourly equivalent sound levels of 50 dBA from 7am to 7pm, 45 dBA from 7pm to 10pm, and 40 dBA from 10pm to 7am. For noises consisting primarily of speech or music, the maximum allowable levels shall be lowered by five dBA.**

	Maximum Allowable Hourly Equivalent Level (LAeq,1hr / dBA)		
El Dorado County, CA Noise Element and Ordinance Limits	**Day 7:00a - 7:00p**	**Evening 7:00p - 10:00p**	**Night 10:00p - 7:00a**
Rural Region (Standard)	50 dBA	45 dBA	40 dBA
Rural Region (Speech, Music, Tone)	45 dBA	40 dBA	35 dBA

The attached annotated site plan shows the proposed event location (red boundary) in reference to the creek (light blue) and private service road (green).

The red circles with arrows represent "Speaker Configuration #1," which was indicated by the owner to be the preferred speaker location and orientation for most events.

The green circles with arrows represent "Speaker Configuration #2," which was indicated to be an alternate speaker orientation.



RNS Acoustics conducted on-site sound measurements and audio recordings on Tuesday, April 25th, 2023. The test results and observations were analyzed to develop recommendations to comply with the county noise regulations.

To comply with the County noise regulations and minimize noise impacts to neighboring properties, we recommend the following noise mitigation measures:

- Loudspeakers shall only be placed at the proposed event area adjacent to the creek. Loudspeakers shall not be pointed directly towards the nearest neighboring residences. Loudspeakers shall be placed a minimum of 150' from the property lines.

- **Sound levels from the loudspeakers shall be limited to a maximum hourly equivalent level of 75 dBA from 7am to 7pm, 70 dBA from 7pm to 10pm, and 65 dBA from 10pm to 7am, measured at a point 15 feet (or closer) from the front of the loudspeakers.**

- **Sound levels from the loudspeakers shall be limited to a maximum hourly equivalent level of 70 dBA from 7am to 7pm, 65 dBA from 7pm to 10pm, and 60 dBA from 10pm to 7am, measured 15' from the speakers in the direction of the nearest west and northeast property lines.** Note that typical PA loudspeakers have some degree of directionality, and keeping the speakers from pointing directly towards the neighboring residences will typically result in ~5+ dBA reduction in sound levels measured off-axis from the front of the loudspeakers.

- The maximum allowable sound levels shall be measured using a sound level meter and microphone having a minimum Class 2 / Type 2 rating according to the American National Standard Institute (ANSI) Standard S1.4A-1985. We recommend using a Smaart SPL sound meter system, or approved equal. Smaart SPL is a computer-based data logging system that measures multiple sound level metrics (time and frequency content) using calibrated microphones. The real-time sound levels are displayed on a local LED monitor or viewed remotely via web browser, and are also recorded for further reporting or analysis. The sound levels can be displayed numerically, as well as using a "traffic light" style display (i.e. green is acceptable, yellow is approaching the allowable limits, and red is exceeding the allowable limits).

- The recommended loudspeaker locations and sound levels shall comply with the maximum allowable A-weighted hourly equivalent levels stated in the county noise ordinance. The resulting A-weighted hourly equivalent sound levels are estimated to be 45 dBA or lower from 7am to 7pm, 40 dBA or lower from 7pm to 10pm, and 35 dBA or lower from 10pm to 7am, when measured on the neighboring properties, 100' from the nearest residences (towards the Indian Rock property line), as described by the noise ordinance.

- The following report provides additional details on the relevant noise regulations, on-site sound measurements, and analysis used to determine the above recommendations.

Regulatory Environment

The following section briefly summarizes the most relevant points of the applicable noise regulations, to the best of our current knowledge. Note that the interpretation and application of the regulations may include some discretion by the Authorities Having Jurisdiction.

El Dorado County General Plan – Noise Element

The El Dorado County General Plan includes a Noise Element (Chapter 6 – Public Health, Safety, and Noise Element), attached. The relevant sections of the Noise Element are excerpted below.

NOISE

GOAL 6.5: ACCEPTABLE NOISE LEVELS

Ensure that County residents are not subjected to noise beyond acceptable levels.

OBJECTIVE 6.5.1: PROTECTION OF NOISE-SENSITIVE DEVELOPMENT

Protect existing noise-sensitive developments (e.g., hospitals, schools, churches and residential) from new uses that would generate noise levels incompatible with those uses

and, conversely, discourage noise-sensitive uses from locating near sources of high noise levels.

Policy 6.5.1.1 Where noise-sensitive land uses are proposed in areas exposed to existing or projected exterior noise levels exceeding the levels specified in Table 6-1 or the performance standards of Table 6-2, an acoustical analysis shall be required as part of the environmental review process so that noise mitigation may be included in the project design.

Policy 6.5.1.2 Where proposed non-residential land uses are likely to produce noise levels exceeding the performance standards of Table 6-2 at existing or planned noise-sensitive uses, an acoustical analysis shall be required as part of the environmental review process so that noise mitigation may be included in the project design.

Policy 6.5.1.3 Where noise mitigation measures are required to achieve the standards of Tables 6-1 and 6-2, the emphasis of such measures shall be placed upon site planning and project design. The use of noise barriers shall be considered a means of achieving the noise standards only after all other practical design-related noise mitigation measures have been integrated into the project and the noise barriers are not incompatible with the surroundings.

… (Non-relevant clauses omitted for brevity)

Policy 6.5.1.7 Noise created by new proposed non-transportation noise sources shall be mitigated so as not to exceed the noise level standards of Table 6-2 for noise-sensitive uses.

TABLE 6-2
NOISE LEVEL PERFORMANCE PROTECTION STANDARDS FOR NOISE SENSITIVE LAND USES AFFECTED BY NON-TRANSPORTATION* SOURCES

	Daytime 7 a.m. - 7 p.m.		Evening 7 p.m. - 10 p.m.		Night 10 p.m. - 7 a.m.	
Noise Level Descriptor	Community	Rural	Community	Rural	Community	Rural
Hourly L_{eq}, dB	55	50	50	45	45	40
Maximum level, dB	70	60	60	55	55	50

Notes:

Each of the noise levels specified above shall be lowered by five dB for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises. These noise level standards do not apply to residential units established in conjunction with industrial or commercial uses (e.g., caretaker dwellings).

The County can impose noise level standards which are up to 5 dB less than those specified above based upon determination of existing low ambient noise levels in the vicinity of the project site.

In Community areas the exterior noise level standard shall be applied to the property line of the receiving property. In Rural Areas the exterior noise level standard shall be applied at a point 100' away from the residence. The above standards shall be measured only on property containing a noise sensitive land use as defined in Objective 6.5.1. This measurement standard may be amended to provide for measurement at the boundary of a recorded noise easement between all effected property owners and approved by the County.

*Note: For the purposes of the Noise Element, transportation noise sources are defined as traffic on public roadways, railroad line operations and aircraft in flight. Control of noise from these sources is preempted by Federal and State regulations. Control of noise from facilities of regulated public facilities is preempted by California Public Utilities Commission (CPUC) regulations. All other noise sources are subject to local regulations. Non-transportation noise sources may include industrial operations, outdoor recreation facilities, HVAC units, schools, hospitals, commercial land uses, other outdoor land use, etc.

<u>El Dorado County Noise Ordinance</u>

The El Dorado County Municipal Code of Ordinances includes noise regulations under Section 130.37 – Noise Standards. For brevity, we will refer to these regulations as the "county noise ordinance," and a copy is attached for reference. The maximum allowable A-weighted Hourly Equivalent Levels in the county noise ordinance are generally equivalent to the county noise element (130.37.060.1). The noise ordinance does not include requirements or technical definition of "maximum level," and there are other minor differences, but the overall regulations are similar.

<u>Caveats</u>

The above information is a high-level summary of the most relevant sections of the county noise regulations. We recommend reviewing this report and the complete regulations in detail with qualified legal counsel or planning authorities to verify interpretation and compliance with all regulations. In some situations, the Authorities Having

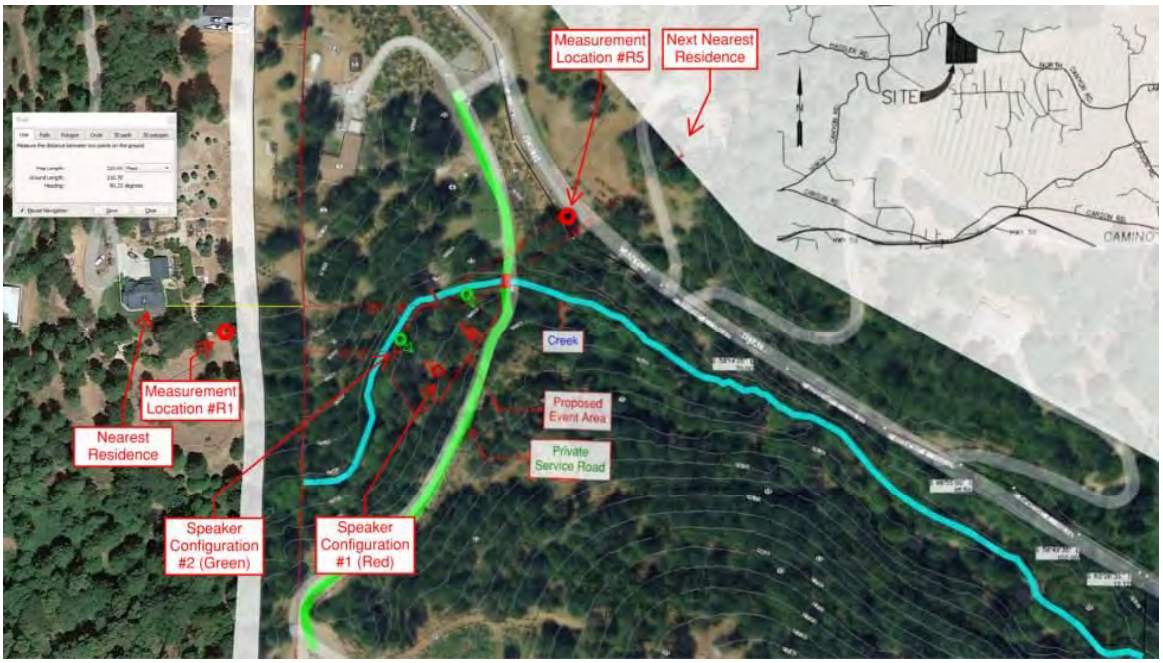
Jurisdiction may have discretion to interpret, modify, or apply the regulations in a manner different from our understanding.

Environmental Noise Sources

The typical background noise environment and sound levels are due to the combination of noise sources near and far. Typical environmental noise sources at the project site include traffic, aircraft, wind through trees and grass, water flowing through the creek, birds, landscaping equipment and activities, etc.

Noise Measurements and Analysis

RNS Acoustics conducted noise measurements from 4:00 pm to 7:00 pm on Tuesday, April 25th, 2023.

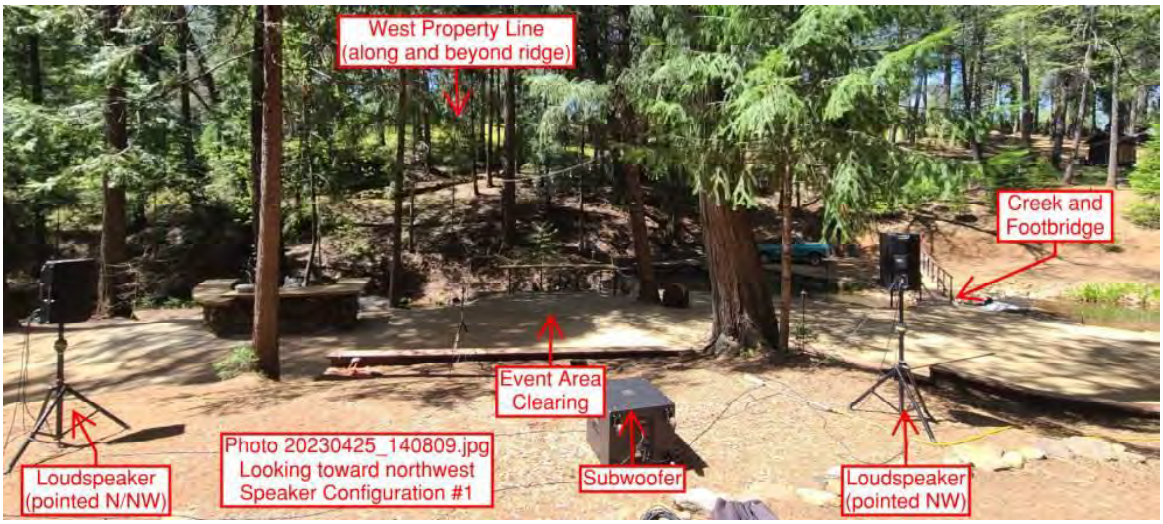


Two full-range PA loudspeakers and one subwoofer were placed at the proposed event area, and configured to play a sequence of test signals including pink noise, classical music, rock music, and dance music.

Measurements and audio recordings were made at six locations around the west, north, and northeast property lines, and the locations were selected based on the residences closest to the proposed event area, site topography, and the county noise regulations. On inspection of the measured results and audio recordings, many of the measurements were not clearly representative of the test signals, due to interference from intrusive background noises (landscaping or construction equipment, traffic, planes, chickens, creek). Due to this interference, and to simplify presentation of the results and analysis, we will focus on measurement location #1, which is 100' from the nearest residence to the west, and measurement location #5, which is ~180' northeast of the event area and ~220' from the next nearest residence to the northeast.

Speaker Configuration #1

"Speaker Configuration #1" was indicated to be the owner's preferred setup, with the speakers located along the southeast edge of the event area and pointed to the north/northwest (red circles and arrows on the annotated plan).



The test signal was adjusted so that the average sound level was approximately 85 dBA (LAeq) during loudest portions of the pink noise, rock, and dance music samples, measured at 15' in front each loudspeaker. For reference, during the various test signals, the maximum sound level fluctuated between 82-88 dBA using slow time response (LASmax) and real-time monitoring.

The average ambient sound level at measurement location #R1 (100' from the nearest residence to the west) was 45.5 dBA before the loudspeaker testing began, and 43.5 dBA after the loudspeaker testing was concluded.

With the loudspeakers playing the test signal at 85 dBA at 15 ft (equivalent level), the resulting sound level was 50.0 – 52.3 dBA at measurement location #R1, which was audible above ambient sound levels, and above the daytime noise regulation limit (45 dBA for music).

The loudspeakers were then turned down 10 dBA, so the equivalent sound level was 75 dBA measured 15 feet in front of each speaker, and the test was repeated. The test signal was slightly audible above background, but did not significantly increase the sound level above the typical ambient levels.

	Sound Level at Location #R1 (dBA)			
Speaker Configuration #1	**Ambient**	**Pink Noise**	**Rock**	**Dance**
85 dBA @ 15'	**43.5 - 45.5**	**50**	**52.3**	**50.7**
75 dBA @ 15'	**43.5 - 45.5**	**44.4**	**44.7**	**44.2**

The average ambient sound level at measurement location #R5 (~180' northeast of the event area, towards the next nearest residence) was 46.8 – 47.4 dBA when there were no cars passing directly by.

Unfortunately, measurements at R5 with the loudspeaker at 85 dBA were not usable. However, with the loudspeakers at 75 dBA, the resulting sound levels were 48.1 – 49.8 dBA at R5 which included contributions from background noise sources.

	Sound Level at Location #R5 (dBA)			
Speaker Configuration #1	**Ambient**	**Pink Noise**	**Rock**	**Dance**
85 dBA @ 15'	**46.8 - 47.4**	**-**	**-**	**-**
75 dBA @ 15'	**46.8 - 47.4**	**48.1**	**49.8**	**48.8**

Note that measurement location R5 is located directly adjacent to the property line and road. If noise levels were measured for compliance at 100' from the northeast residence, then measurement location would be ~120' further from the event area, resulting in an estimated 4-5 dBA reduction in amplified sound levels due to increased distance from the sound source (20* LOG(300'/180') = 4.4 dBA reduction). Sound levels from speaker configuration 1 at 75 dBA (15' from the speaker) are estimated to be 45 dBA or less measured 100' from the northeast neighboring residence.

Speaker Configuration #2

"Speaker Configuration #2" was selected to be an alternate event setup, with the speakers located along the creek adjacent to the event area and pointed to the south/southeast (green circles and arrows on the annotated plan).

With the loudspeakers playing the test signal at 85 dBA at 15 ft (equivalent level), the resulting sound level was 47.2 – 50.5 dBA at measurement location #R1, which was audible above ambient sound levels, and above the daytime noise regulation limit (45 dBA for music).

The loudspeakers were then turned down 10 dBA, so the equivalent sound level was 75 dBA measured 15 feet in front of each speaker, and the test was repeated. The test signal was slightly audible above background, but did not increase the sound level above the typical ambient levels.

	Sound Level at Location #R1 (dBA)			
Speaker Configuration #2	**Ambient**	**Pink Noise**	**Rock**	**Dance**
85 dBA @ 15'	**43.5 - 45.5**	**47.2**	**50.5**	**47.8**
75 dBA @ 15'	**43.5 - 45.5**	**44.0**	**44.7**	**44.2**

The average ambient sound level at measurement location #R5 (~180' northeast of the event area, towards the next nearest residence) was 46.8 – 47.4 dBA when there were no cars passing directly by.

With the loudspeakers playing the test signal at 85 dBA at 15 ft (equivalent level), the resulting sound level was 51.8 – 54.2 dBA at measurement location #R5, which was audible above ambient sound levels, and above the daytime noise regulation limit (45 dBA for music).

The loudspeakers were then turned down 10 dBA, so the equivalent sound level was 75 dBA measured 15 feet in front of each speaker, and the test was repeated. The test signal was slightly audible above background, but did not significantly increase the sound level above the typical ambient levels.

	Sound Level at Location #R5 (dBA)			
Speaker Configuration #2	**Ambient**	**Pink Noise**	**Rock**	**Dance**
85 dBA @ 15'	**46.8 - 47.4**	**51.8**	**54.1**	**54.2**
75 dBA @ 15'	**46.8 - 47.4**	**48.0**	**48.1**	**48.7**

Conclusions

From these measurements, we can make the following conclusions and recommendations:

- The proposed speaker configurations would exceed the daytime county noise regulations at the neighboring properties (LAeq 45 dBA for music) if the sound level is set at LAeq 85 dBA measured 15' from the front of the speakers.

- However, with the speakers limited to LAeq 75 dBA at 15', the amplified hourly equivalent sound levels are estimated to be LAeq 45 dBA measured 100' from the nearest neighboring residences (in the direction of the event area), and similar to or below the typical daytime ambient sound levels.

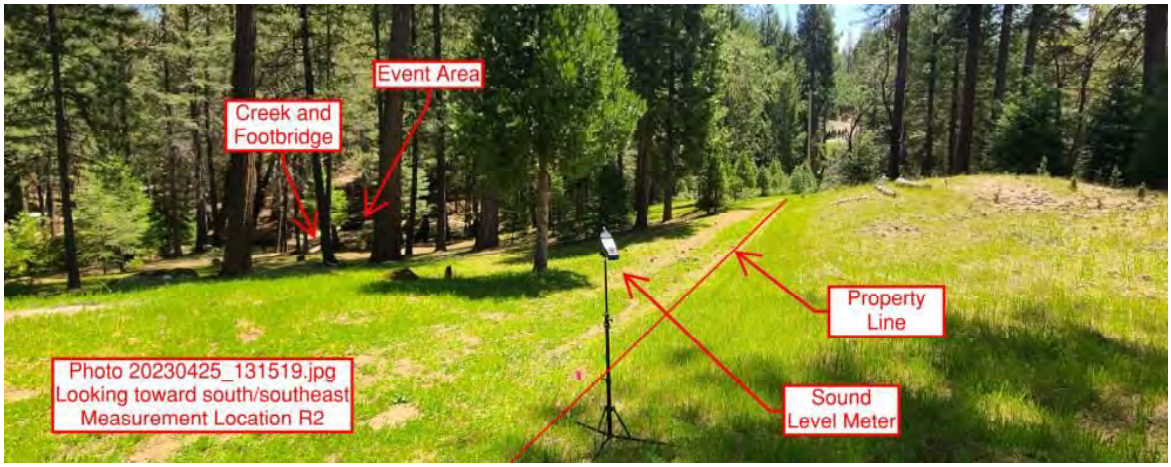
- Meeting the evening (LAeq 40 dBA for music) and nighttime (LAeq 35 dBA for music) sound limits would require further limiting the sound levels to LAeq 70 dBA during the evening and LAeq 65 dBA during the night.

- To minimize the noise impact to neighbors, we recommend that the speakers be located a minimum of 150' from any property line, and not pointed directly towards the nearest residences.

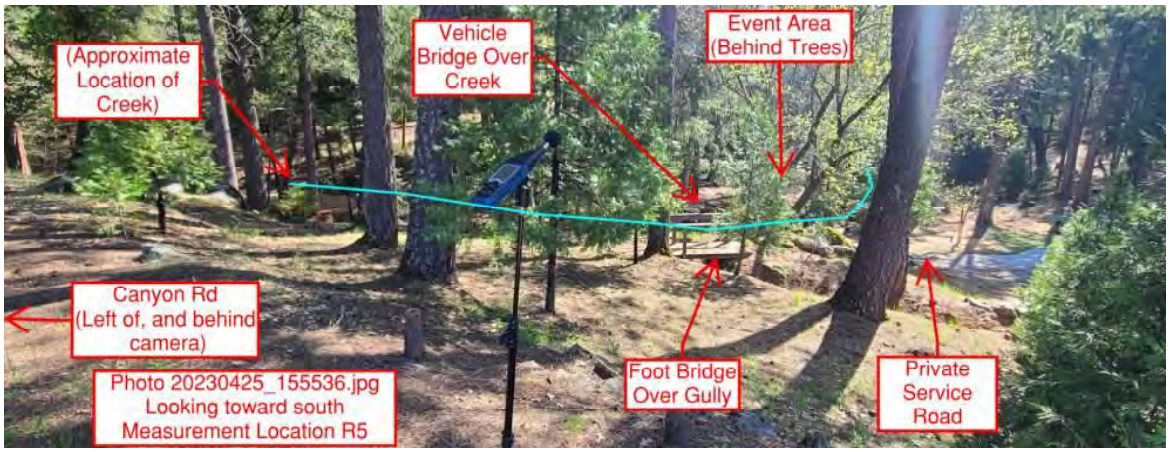
Additional Information

Measurement Location #R1 – 100' from nearest residence

Measurement Location #R2 – West Property Line



Measurement Location #R5 – Northeast property line / ~180' northeast from event area



Sound Level Monitoring System

- A sound level monitoring system can help to ensure that the allowable sound levels are not exceeded.
- An example of a robust sound level monitoring system is the Smaart SPL system provided by Rational Acoustics. https://www.rationalacoustics.com/products/smaart-spl-v9-perpetual
- Smaart SPL is a computer-based data logging system that measures multiple sound level metrics (time and frequency content) using calibrated microphones. The real-time sound levels are displayed on a local LED monitor or viewed remotely via web browser, and are also recorded for further reporting or analysis. The sound levels can be displayed numerically, as well as using a "traffic light" style display (i.e. green is acceptable, yellow is approaching the allowable limits, and red is exceeding the allowable limits).
- A simple and easy to read display showing the real-time sound levels should be placed at an appropriate position for the event staff, DJ, sound engineer, and/or musicians. The sound level display should also be

digitally transmitted or accessible via web interface, so that venue staff can also monitor the sound levels in real time.

The following photo shows an example of the Smaart SPL system with a simplified sound level display including a color coded “traffic light” style indicator.

- It is important that the sound level meter and microphone (or sound monitoring system) meet a minimum Class 2 / Type 2 specification (ANSI S1.4A-1985). Class 1 / Type 1 equipment is technically more accurate and precise, however, Class 1 / Type 1 equipment is usually significantly more expensive. Class 2 / Type 2 equipment is acceptable according to the county noise regulations, and, in our experience, is sufficiently accurate for this type of application.

- It is also important that the sound level meters are field calibrated at the beginning of each event, and the calibration checked again at the end of the event. The calibration values for each microphone / meter should be documented, and typically should be within 0.5 dB from start to end. The calibrator should be Class 1 / Type 1 approved and verified by the manufacturer on an annual basis. If the microphones are not regularly field calibrated, the reported sound levels could vary by an unpredictable and unacceptable amount due to environmental conditions (temperature, humidity, atmospheric pressure).

- The maximum allowable sound levels should be clearly communicated to the event organizers, DJ, sound engineer, and/or musicians.

- The maximum allowable sound levels and curfews should be written into the event contracts, with clearly defined and enforceable penalties for violating the requirements (i.e. venue staff can turn the music down or off if sound levels approach or exceed the allowable limits).

- When installing the sound monitoring system, the allowable level thresholds and alerts generated by the system may need to be adjusted depending on the location of the microphone(s) in relation to the loudspeakers and property lines. For example, it may not be feasible to have microphones installed permanently 15’ in front of or to the side of the speakers, particularly if events use their own PA system or musicians. The sound thresholds, limits, and alerts should be set during installation and configuration of the monitoring system, and periodically field verified using spot measurements, to ensure sound levels do not exceed the maximum allowable equivalent sound levels at 15’ from the speakers and at the neighboring properties.

Test Equipment

The following table lists the acoustical test equipment used for our measurements. The equipment was calibrated before starting the measurement and checked again at the end of the measurement.

Type	Manufacturer	Model	Serial
Sound Level Meter	NTi	XL2	A2A-14078-E0
Sound Level Meter	NTi	XL2	A2A-14080-E0
Calibrator	ACO Pacific	Model #521	85110
Microphone	Earthworks	M23	6740I
Microphone	Earthworks	M23	6740I
PA Loudspeakers (2)	QSC	K12.2	N/A
PA Subwoofer (1)	QSC	KS118	N/A

Terminology

Decibels (dB) – "A unit of level which denotes the ratio between two quantities that are proportional to the power; the number of decibels is 10 times the logarithm (to the base 10) of this ratio." In acoustics, decibels most commonly refer to Sound Pressure Level (dBSPL), but decibels can also be used to characterize electrical signals, vibration, and other quantities. Decibels are used to simplify the characterization of levels that have a very large range of magnitude. For example, a Sound Pressure Level of 0 dB is typically referenced to 20 micropascals, and 100 dB equals 2,000,000 micropascals.

Sound Pressure Level – Sound pressure levels characterize the magnitude of fluctuations in air pressure, which are perceived as sound.

Frequency refers to the speed of air pressure fluctuations, measured in cycles per second, or Hertz (Hz). For example, the human ear can hear sounds from ~20 Hz to ~20,000 Hz, and a piano ranges from ~30 Hz to ~4000 Hz. Low-frequency sounds range from ~20 Hz to ~200 Hz (subwoofers, bass, kick drum). Mid-frequency sounds range from ~200 – 2,000 Hz (human voice). High-frequency sounds range from ~2,000 Hz to ~20,000 Hz (snare drum, cymbals, birds chirping, etc).

A-weighting is a method of interpreting the frequency content of sound. A-weighting reduces the influence of low-frequency sound, similar to how the human ear perceives loudness. A-weighting is commonly used in noise ordinances and is indicated by dB(A), dBA, LAx,y (where "x" indicates the metric and "y" (optional) indicates the time period).

Equivalent Level – "The level of a steady sound which, in a stated time period and at a stated location, has the same sound energy as the (A-weighted) time-varying sound." This is sometimes also called the Equivalent Continuous Noise Level, and commonly said to indicate the average sound level over a given measurement period. For purposes of environmental noise analysis, the A-weighted Hourly Equivalent Level ($LA_{EQ,1hr}$) is most commonly used.

Decibels and Loudness

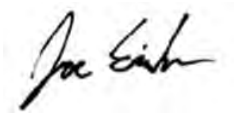
The loudness of sound is most commonly indicated by A-weighted decibels (dBA). Human perception of loudness is a complicated and somewhat subjective phenomenon. However, for a simplified comparison, consider the following table of descriptions:

Reduction or Improvement	Subjective Description
1 dB	Not noticeable or barely noticeable to most individuals "One click on a car radio volume dial"
2 - 3 dB	Just noticeable difference "Minor improvement"
5 dB	Clearly noticeable "Moderate improvement"
10 dB	Significant change Commonly said to be "half as loud"
20 dB	Very Significant change "One quarter as loud"

Comments

This report is based on our best understanding of the current design intent and project goals. If any of the project conditions or design goals change significantly, we reserve the right to modify our analysis and recommendations. Feel free to call if you have any questions or comments.

Sincerely,
RNS Acoustics

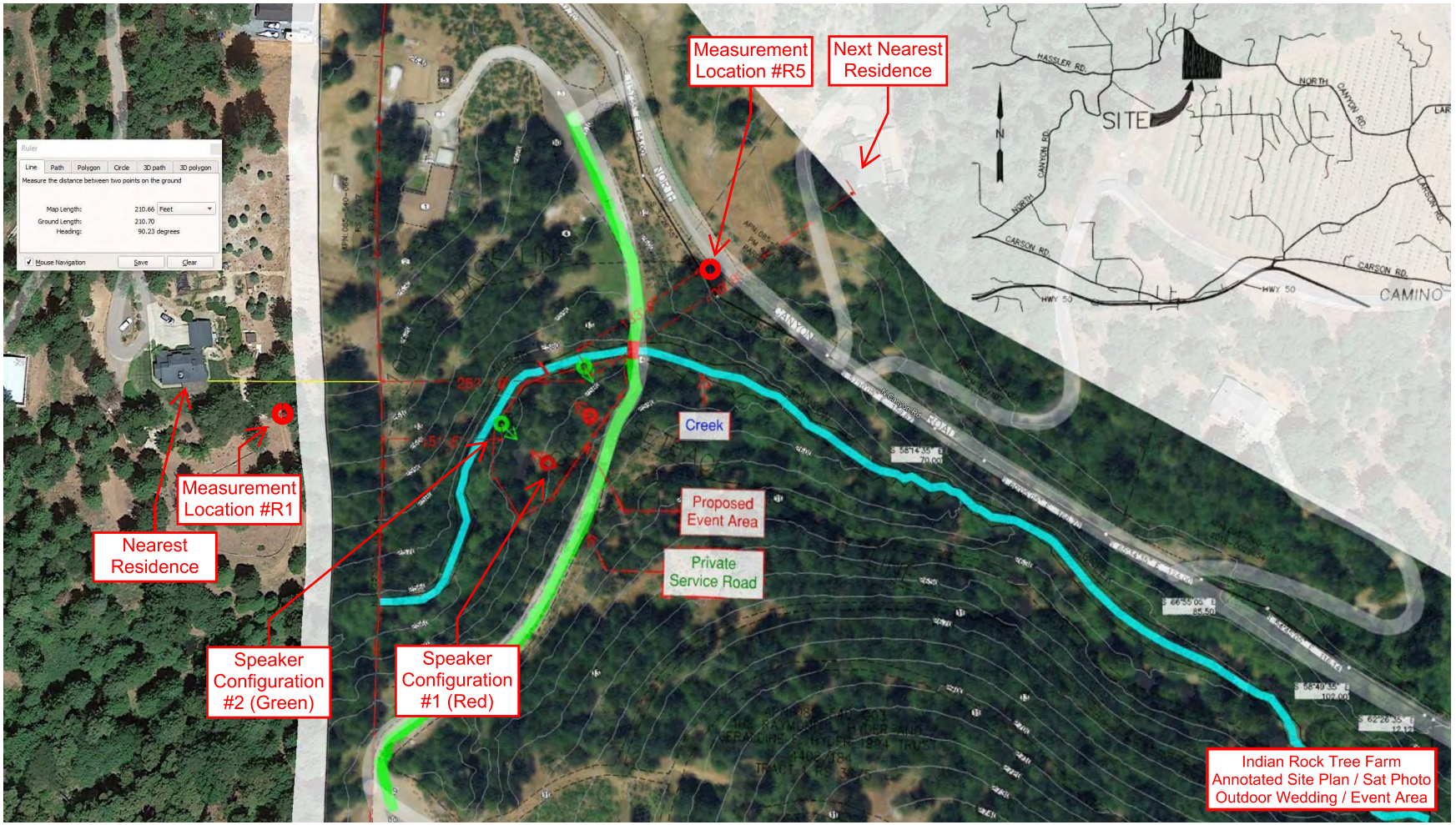


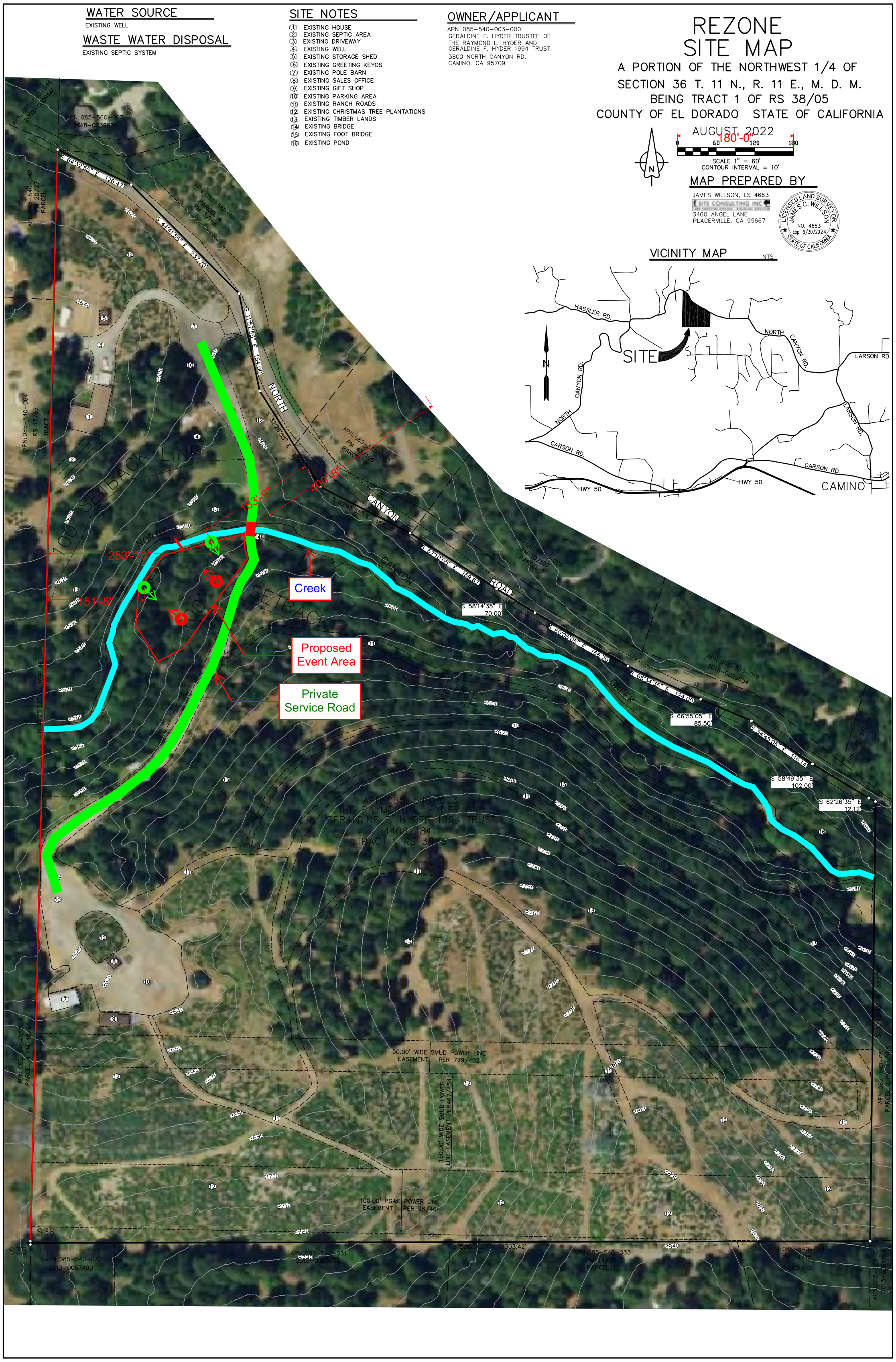
Prepared by:
Joe Erickson
Lead Acoustical Consultant

Reviewed By:
Ryan Sema
Principal

Enclosed:

Annotated Site Plan
El Dorado County General Plan – Noise Element
El Dorado County Code of Ordinances – Chapter 130.37 (Noise Ordinance)


Measurement Location #R5
Next Nearest Residence
Measurement Location #R1
Nearest Residence
Speaker Configuration #2 (Green)
Speaker Configuration #1 (Red)
Creek
Proposed Event Area
Private Service Road
SITE
CAMINO
HWY 50
Indian Rock Tree Farm
Annotated Site Plan / Sat Photo
Outdoor Wedding / Event Area


WATER SOURCE
EXISTING WELL
WASTE WATER DISPOSAL
EXISTING SEPTIC SYSTEM
SITE NOTES
1 EXISTING HOUSE
2 EXISTING SEPTIC AREA
3 EXISTING DRIVEWAY
4 EXISTING WELL
5 EXISTING STORAGE SHED
6 EXISTING GREETING KEYOS
7 EXISTING POLE BARN
8 EXISTING SALES OFFICE
9 EXISTING GIFT SHOP
10 EXISTING PARKING AREA
11 EXISTING RANCH ROADS
12 EXISTING CHRISTMAS TREE PLANTATIONS
13 EXISTING TIMBER LANDS
14 EXISTING BRIDGE
15 EXISTING FOOT BRIDGE
16 EXISTING POND
OWNER/APPLICANT
APN 085-540-003-000
GERALDINE F. HYDER TRUSTEE OF
THE RAYMOND L. HYDER AND
GERALDINE F. HYDER 1994 TRUST
3800 NORTH CANYON RD.
CAMINO, CA 95709
REZONE
SITE MAP
A PORTION OF THE NORTHWEST 1/4 OF
SECTION 36 T. 11 N., R. 11 E., M. D. M.
BEING TRACT 1 OF RS 38/05
COUNTY OF EL DORADO STATE OF CALIFORNIA
AUGUST 2022
180'-0"
0 60 120 180
SCALE 1" = 60'
CONTOUR INTERVAL = 10'
N
MAP PREPARED BY
JAMES WILLSON, LS 4663
SITE CONSULTING INC.
3460 ANGEL LANE
PLACERVILLE, CA 95667
LICENSED LAND SURVEYOR
JAMES C. WILLSON
NO. 4663
Exp. 9/30/2024
STATE OF CALIFORNIA
VICINITY MAP
NTS
HASSLER RD.
NORTH CANYON RD.
SITE
LARSON RD.
CARSON RD.
HWY 50
CAMINO
NORTH CANYON ROAD
CREEK
Creek
Proposed
Event Area
Private
Service Road
400'-8"
253'-10"
51'-5"
SETBACK LINE
S 58°14'35" E 70.00
S 66°55'05" E 85.50
S 58°49'35" E 102.00
S 62°26'35" E 12.12
50.00' WIDE SMUD POWER LINE EASEMENT PER 779/402
100.00' PG&E POWER LINE EASEMENT PER 96/46
4408/184
TRACT 1 RS 38/05
S36
S35

PRINCIPLE

The Plan must identify public health and safety issues and provide guidance for protecting the health, safety, and welfare of El Dorado County residents.

INTRODUCTION

The Public Health, Safety, and Noise Element is consistent with the requirements set forth in the California Government Code Section 65302 and other applicable sections. Specifically, California Government Code Section 65302(g) requires communities to identify "any reasonable risk associated with the effects of seismically induced surface rupture, ground shaking, ground failure, tsunami, seiches, and dam failure; slope instability leading to mudslides and landslides, subsidence and other geologic hazards known to the legislative body; flooding; and wildland and urban fires."

The Public Health, Safety, and Noise Element addresses community noise problems, in accordance with Government Code Section 65302(f). The noise contour maps required by that statute are found in Appendix C. Additionally, this element satisfies the State mandated requirements for the safety general plan element.

REGULATORY FRAMEWORK

In 1971, the State of California mandated that county and city general plans include a noise element. A noise element must contain the following information:

1. Identification of major noise sources which affect the county;
2. Mapping of noise contours for major noise producers, including roadways;
3. Policies and programs which address existing and foreseeable noise problems and minimize the exposure of community residents to excessive noise.

RELATIONSHIP TO OTHER ELEMENTS

Issues set forth in this element are closely linked to the Land Use, Conservation and Open Space, Circulation, and Public Services and Utilities elements. The overall focus of the Public Health, Safety, and Noise Element is to provide guidelines for protecting the residents from existing and potential hazards in El Dorado County.

ORGANIZATION OF THE ELEMENT

This element sets forth planning strategies for fire hazards, seismic hazards, flood hazards, noise, hazardous materials, air quality, airport safety, and highway safety.

POLICY SECTION

GENERAL

GOAL 6.1: COORDINATION

A coordinated approach to hazard and disaster response planning.

OBJECTIVE 6.1.1: EL DORADO COUNTY MULTI-JURISDICTIONAL LOCAL HAZARD MITIGATION PLAN

The El Dorado County Multi-Jurisdictional Local Hazard Mitigation Plan shall serve as the implementation program for this Goal.

Policy 6.1.1.1 The El Dorado County Multi-jurisdictional Local Hazard Mitigation Plan (LHMP) shall serve as the implementation program for the coordination of hazard planning and disaster response efforts within the County and is incorporated by reference to this Element. The County will ensure that the LHMP is updated on a regular basis to keep pace with the growing population.

FIRE SAFETY

GOAL 6.2: FIRE HAZARDS

Minimize fire hazards and risks in both wildland and developed areas.

OBJECTIVE 6.2.1: DEFENSIBLE SPACE

All new development and structures shall meet "defensible space" requirements and adhere to fire code building requirements to minimize wildland fire hazards.

Policy 6.2.1.1 Implement Fire Safe ordinance to attain and maintain defensible space through conditioning of tentative maps and in new development at the final map and/or building permit stage.

Policy 6.2.1.2 Coordinate with the local Fire Safe Councils, California Department of Forestry and Fire Protection, and federal and state agencies having land use jurisdiction in El Dorado County in the development of a countywide fuels management strategy.

OBJECTIVE 6.2.2: LIMITATIONS TO DEVELOPMENT

Regulate development in areas of high and very high fire hazard as designated by the California Department of Forestry and Fire Prevention Fire Hazard Severity Zone Maps.

Policy 6.2.2.1 Fire Hazard Severity Zone Maps shall be consulted in the review of all projects so that standards and mitigation measures appropriate to each hazard classification can be applied. Land use densities and intensities shall be determined by mitigation measures in areas designated as high or very high fire hazard.

Policy 6.2.2.2 The County shall preclude development in areas of high and very high wildland fire hazard or in areas identified as wildland-urban interface (WUI) communities within the vicinity of Federal lands that are a high risk for wildfire, as listed in the Federal Register Executive Order 13728 of May 18, 2016, unless such development can be adequately protected from wildland fire hazard, as demonstrated in a WUI Fire Safe Plan prepared by a qualified professional as approved by the El Dorado County Fire Prevention Officers Association. The WUI Fire Safe Plan shall be approved by the local Fire Protection District having jurisdiction and/or California Department of Forestry and Fire Protection. (Resolution 124-2019, August 6, 2019)

OBJECTIVE 6.2.3: ADEQUATE FIRE PROTECTION

Application of uniform fire protection standards to development projects by fire districts.

Policy 6.2.3.1 As a requirement for approving new development, the County must find, based on information provided by the applicant and the responsible fire protection district that, concurrent with development, adequate emergency water flow, fire access, and fire fighting personnel and equipment will be available in accordance with applicable State and local fire district standards.

Policy 6.2.3.2 As a requirement of new development, the applicant must demonstrate that adequate access exists, or can be provided to ensure that emergency vehicles can access the site and private vehicles can evacuate the area.

Policy 6.2.3.3 Day care centers shall be subject to conformance with all applicable sections of Title 19 of the Fire Code.

Policy 6.2.3.4 All new development and public works projects shall be consistent with applicable State Wildland Fire Standards and other relevant State and federal fire requirements.

OBJECTIVE 6.2.4: AREA-WIDE FUEL MANAGEMENT PROGRAM

Reduce fire hazard through cooperative fuel management activities.

Policy 6.2.4.1 Discretionary development within high and very high fire hazard areas shall be conditioned to designate fuel break zones that comply with fire safe requirements to benefit the new and, where possible, existing development.

Policy 6.2.4.2 The County shall cooperate with the California Department of Forestry and Fire Protection and local fire protection districts to identify opportunities for fuel breaks in zones of high and very high fire hazard either prior to or as a component of project review.

OBJECTIVE 6.2.5: FIRE PREVENTION EDUCATION

Inform and educate homeowners regarding fire safety and prevention.

Policy 6.2.5.1 The County shall cooperate with the U.S. Forest Service, California Department of Forestry and Fire Protection, and local fire districts in fire prevention education programs.

GEOLOGIC AND SEISMIC HAZARDS

ASBESTOS

Asbestos is of special concern in El Dorado County because it occurs naturally in surface deposits of several types of ultramafic materials (materials that contain magnesium and iron and a very small amount of silica). Asbestos emissions can result from the sale or use of asbestos-containing materials, road surfacing with such materials, grading activities, and surface mining.

The El Dorado County Air Quality Management District (AQMD) is responsible for implementing and enforcing asbestos-related regulations and programs. This includes implementation of Title 17, Sections 93105 and 93106 of the California Code of Regulations (Asbestos Airborne Toxic Control Measure-Asbestos-Containing Serpentine) and the

County's Naturally Occurring Asbestos and Dust Protection Ordinance. Regulated activities include construction or digging on a site containing naturally occurring asbestos in rock or soils and the sale and use of serpentine material or rock containing asbestos materials for surfacing.

Asbestos-related measures presented in this General Plan are focused on supporting the actions of the AQMD.

GOAL 6.3: GEOLOGIC AND SEISMIC HAZARDS

Minimize the threat to life and property from seismic and geologic hazards.

OBJECTIVE 6.3.1: BUILDING AND SITE STANDARDS

Adopt and enforce development regulations, including building and site standards, to protect against seismic and geologic hazards.

Policy 6.3.1.1 The County shall require that all discretionary projects and all projects requiring a grading permit, or a building permit that would result in earth disturbance, that are located in areas likely to contain naturally occurring asbestos (based on mapping developed by the California Department of Conservation [DOC]) have a California-registered geologist knowledgeable about asbestos-containing formations inspect the project area for the presence of asbestos using appropriate test methods. The County shall amend the Erosion and Sediment Control Ordinance to include a section that addresses the reduction of thresholds to an appropriate level for grading permits in areas likely to contain naturally occurring asbestos (based on mapping developed by the DOC). The Department of Transportation and the County Air Quality Management District shall consider the requirement of posting a warning sign at the work site in areas likely to contain naturally occurring asbestos based on the mapping developed by the DOC.

Policy 6.3.1.2 The County shall establish a mandatory disclosure program, where potential buyers and sellers of real property in all areas likely to contain naturally occurring asbestos (based on mapping developed by the California Department of Conservation [DOC]) are provided information regarding the potential presence of asbestos subject to sale. Information shall include potential for exposure from access roads and from disturbance activities (e.g., landscaping).

Policy 6.3.1.3 The County Environmental Management Department shall report annually to the Board of Supervisors regarding new information on asbestos and design an information outreach program.

OBJECTIVE 6.3.2: COUNTY-WIDE SEISMIC HAZARDS

Continue to evaluate seismic related hazards such as liquefaction, landslides, and avalanche, particularly in the Tahoe Basin.

Policy 6.3.2.1 The County shall maintain updated geologic, seismic and avalanche hazard maps, and other hazard inventory information in cooperation with the State Office of Emergency Services, California Department of Conservation--Division of Mines and Geology, U.S. Forest Service, Caltrans, Tahoe Regional Planning Agency, and other agencies as this information is made available. This information shall be incorporated into the El Dorado County Operational Area Multi-Hazard Functional Emergency Operations Plans.

Policy 6.3.2.2 Future subdivision in the area around Fallen Leaf Lake shall be precluded.

Policy 6.3.2.3 An avalanche overlay zone shall be established and applied to all residential areas subject to avalanche. All new structures located within avalanche susceptible areas shall be designed to withstand the expected forces of such an event.

Policy 6.3.2.4 *intentionally blank*

Policy 6.3.2.5 Applications for development of habitable structures shall be reviewed for potential hazards associated with steep or unstable slopes, areas susceptible to high erosion, and avalanche risk. Geotechnical studies shall be required when development may be subject to geological hazards. If hazards are identified, applicants shall be required to mitigate or avoid identified hazards as a condition of approval. If no mitigation is feasible, the project will not be approved.

FLOOD HAZARDS

GOAL 6.4: FLOOD HAZARDS

Protect the residents of El Dorado County from flood hazards.

OBJECTIVE 6.4.1: DEVELOPMENT REGULATIONS

Minimize loss of life and property by regulating development in areas subject to flooding in accordance with Federal Emergency Management Agency (FEMA) guidelines, California law, and the El Dorado County Flood Damage Prevention Ordinance.

Policy 6.4.1.1 The County shall continue participation in the National Flood Insurance Program and application of flood plain zoning regulations.

Policy 6.4.1.2 The County shall identify and delineate flood prone study areas discovered during the completion of the master drainage studies or plans.

Policy 6.4.1.3 No new critical or high occupancy structures (e.g., schools, hospitals) shall be located in the 100-year floodplain of any river, stream, or other body of water.

Policy 6.4.1.4 Creation of new parcels which lie entirely within the 100-year floodplain as identified on the most current version of the flood insurance rate maps provided by FEMA or dam failure inundation areas as delineated in dam failure emergency response plans maintained by the County shall be prohibited.

Policy 6.4.1.5 New parcels which are partially within the 100-year floodplain or dam failure inundation areas as delineated in dam failure emergency response plans maintained by the County must have sufficient land available outside the FEMA or County designated 100-year floodplain or the dam inundation areas for construction of dwelling units, accessory structures, and septic systems. Discretionary applications shall be required to determine the location of the designated 100-year floodplain and identified dam failure inundation areas on the subject property.

OBJECTIVE 6.4.2: DAM FAILURE INUNDATION

Protect life and property of County residents below dams.

Policy 6.4.2.1 Apply a zoning overlay for areas located within dam failure inundation zones as identified by the State Department of Water Resources Division of Safety of Dams.

Policy 6.4.2.2 No new critical or high occupancy structures (e.g., schools, hospitals) should be located within the inundation area resulting from failure of dams identified by the State Department of Water Resources Division of Safety of Dams.

NOISE

GOAL 6.5: ACCEPTABLE NOISE LEVELS

Ensure that County residents are not subjected to noise beyond acceptable levels.

OBJECTIVE 6.5.1: PROTECTION OF NOISE-SENSITIVE DEVELOPMENT

Protect existing noise-sensitive developments (e.g., hospitals, schools, churches and residential) from new uses that would generate noise levels incompatible with those uses

and, conversely, discourage noise-sensitive uses from locating near sources of high noise levels.

Policy 6.5.1.1 Where noise-sensitive land uses are proposed in areas exposed to existing or projected exterior noise levels exceeding the levels specified in Table 6-1 or the performance standards of Table 6-2, an acoustical analysis shall be required as part of the environmental review process so that noise mitigation may be included in the project design.

Policy 6.5.1.2 Where proposed non-residential land uses are likely to produce noise levels exceeding the performance standards of Table 6-2 at existing or planned noise-sensitive uses, an acoustical analysis shall be required as part of the environmental review process so that noise mitigation may be included in the project design.

Policy 6.5.1.3 Where noise mitigation measures are required to achieve the standards of Tables 6-1 and 6-2, the emphasis of such measures shall be placed upon site planning and project design. The use of noise barriers shall be considered a means of achieving the noise standards only after all other practical design-related noise mitigation measures have been integrated into the project and the noise barriers are not incompatible with the surroundings.

Policy 6.5.1.4 Existing dwellings and new single-family dwellings on legal lots of record, as of the date of adoption of this General Plan, are not subject to County review with respect to satisfaction of the standards of the Public Health, Safety, and Noise Element except in areas governed by the Airport Land Use Compatibility Plan for applicable airports. (See Objective 6.5.2.)

As a consequence, such dwellings may be constructed in other areas where noise levels exceed the standards of the Public Health, Safety, and Noise Element. It is not the responsibility of the County to ensure that such dwellings meet the noise standards of the Public Health, Safety, and Noise Element, or the noise standards imposed by lending agencies such as HUD, FHA and Cal Vet. If homes are located and constructed in accordance with the Public Health, Safety, and Noise Element, it is expected that the resulting exterior and interior noise levels will conform to the HUD/FHA/Cal Vet noise standards.

Policy 6.5.1.5 Setbacks shall be the preferred method of noise abatement for residential projects located along U.S. Highway 50. Noise walls shall be discouraged within the foreground viewshed of U.S. Highway 50 and shall be discouraged in favor of less intrusive noise mitigation (e.g., landscaped berms, setbacks) along other high volume roadways.

Policy 6.5.1.6 New noise-sensitive uses shall not be allowed where the noise level, due to non-transportation noise sources, will exceed the noise level standards of Table 6-2 unless effective noise mitigation measures have been incorporated into the development design to achieve those standards.

Policy 6.5.1.7 Noise created by new proposed non-transportation noise sources shall be mitigated so as not to exceed the noise level standards of Table 6-2 for noise-sensitive uses.

Policy 6.5.1.8 New development of noise sensitive land uses will not be permitted in areas exposed to existing or projected levels of noise from transportation noise sources which exceed the levels specified in Table 6-1 unless the project design includes effective mitigation measures to reduce exterior noise and noise levels in interior spaces to the levels specified in Table 6-1.

Policy 6.5.1.9 Noise created by new transportation noise sources, excluding airport expansion but including roadway improvement projects, shall be mitigated so as not to exceed the levels specified in Table 6-1 at existing noise-sensitive land uses.

Policy 6.5.1.10 To provide a comprehensive approach to noise control, the County shall:

A. Develop and employ procedures to ensure that noise mitigation measures required pursuant to an acoustical analysis are implemented in the project review process and, as may be determined necessary, through the building permit process.

B. Develop and employ procedures to monitor compliance with the standards of the Noise Element after completion of projects where noise mitigation measures were required.

C. The zoning ordinance shall be amended to provide that noise standards will be applied to ministerial projects with the exception of single-family residential building permits if not in areas governed by the Airport Land Use Compatibility Plan. (See Objective 6.5.2.)

TABLE 6-1
MAXIMUM ALLOWABLE NOISE EXPOSURE FOR TRANSPORTATION NOISE SOURCES

Land Use	Outdoor Activity Areas[1] L_{dn}/CNEL, dB	Interior Spaces	
		L_{dn}/CNEL, dB	L_{eq}, dB[2]
Residential	60[3]	45	--
Transient Lodging	60[3]	45	--
Hospitals, Nursing Homes	60[3]	45	--
Theaters, Auditoriums, Music Halls	--	--	35
Churches, Meeting Halls, Schools	60[3]	--	40
Office Buildings	--	--	45
Libraries, Museums	--	--	45
Playgrounds, Neighborhood Parks	70	--	--

Notes:

[1] In Communities and Rural Centers, where the location of outdoor activity areas is not clearly defined, the exterior noise level standard shall be applied to the property line of the receiving land use. For residential uses with front yards facing the identified noise source, an exterior noise level criterion of 65 dB L_{dn} shall be applied at the building facade, in addition to a 60 dB L_{dn} criterion at the outdoor activity area. In Rural Regions, an exterior noise level criterion of 60 dB L_{dn} shall be applied at a 100 foot radius from the residence unless it is within Platted Lands where the underlying land use designation is consistent with Community Region densities in which case the 65 dB L_{dn} may apply. The 100-foot radius applies to properties which are five acres and larger; the balance will fall under the property line requirement.

[2] As determined for a typical worst-case hour during periods of use.

[3] Where it is not possible to reduce noise in outdoor activity areas to 60 dB L_{dn}/CNEL or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 65 dB L_{dn}/CNEL may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table.

TABLE 6-2
NOISE LEVEL PERFORMANCE PROTECTION STANDARDS FOR NOISE SENSITIVE LAND USES AFFECTED BY NON-TRANSPORTATION* SOURCES

	Daytime 7 a.m. - 7 p.m.		Evening 7 p.m. - 10 p.m.		Night 10 p.m. - 7 a.m.	
Noise Level Descriptor	Community	Rural	Community	Rural	Community	Rural
Hourly L_{eq}, dB	55	50	50	45	45	40
Maximum level, dB	70	60	60	55	55	50

Notes:

Each of the noise levels specified above shall be lowered by five dB for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises. These noise level standards do not apply to residential units established in conjunction with industrial or commercial uses (e.g., caretaker dwellings).

The County can impose noise level standards which are up to 5 dB less than those specified above based upon determination of existing low ambient noise levels in the vicinity of the project site.

In Community areas the exterior noise level standard shall be applied to the property line of the receiving property. In Rural Areas the exterior noise level standard shall be applied at a point 100' away from the residence. The above standards shall be measured only on property containing a noise sensitive land use as defined in Objective 6.5.1. This measurement standard may be amended to provide for measurement at the boundary of a recorded noise easement between all effected property owners and approved by the County.

*Note: For the purposes of the Noise Element, transportation noise sources are defined as traffic on public roadways, railroad line operations and aircraft in flight. Control of noise from these sources is preempted by Federal and State regulations. Control of noise from facilities of regulated public facilities is preempted by California Public Utilities Commission (CPUC) regulations. All other noise sources are subject to local regulations. Non-transportation noise sources may include industrial operations, outdoor recreation facilities, HVAC units, schools, hospitals, commercial land uses, other outdoor land use, etc.

Policy 6.5.1.11 The standards outlined in Tables 6-3, 6-4, and 6-5 shall not apply to those activities associated with actual construction of a project as long as such construction occurs between the hours of 7 a.m. and 7 p.m., Monday through Friday, and 8 a.m. and 5 p.m. on weekends, and on federally-recognized holidays. Further, the standards outlined in Tables 6-3, 6-4, and 6-5 shall not apply to public projects to alleviate traffic congestion and safety hazards.

TABLE 6-3
MAXIMUM ALLOWABLE NOISE EXPOSURE FOR NONTRANSPORTATION NOISE SOURCES IN COMMUNITY REGIONS AND ADOPTED PLAN AREAS–CONSTRUCTION NOISE

Land Use Designation[1]	Time Period	Noise Level (dB)	
		L_{eq}	L_{max}
Higher-Density Residential (MFR, HDR, MDR)	7 am–7 pm	55	75
	7 pm–10 pm	50	65
	10 pm–7 am	45	60
Commercial and Public Facilities (C, R&D, PF)	7 am–7 pm	70	90
	7 pm–7 am	65	75
Industrial (I)	Any Time	80	90

Note:
[1] Adopted Plan areas should refer to those land use designations that most closely correspond to the similar General Plan land use designations for similar development.

TABLE 6-4
MAXIMUM ALLOWABLE NOISE EXPOSURE FOR NONTRANSPORTATION NOISE SOURCES IN RURAL CENTERS–CONSTRUCTION NOISE

Land Use Designation	Time Period	Noise Level (dB)	
		L_{eq}	L_{max}
All Residential (MFR, HDR, MDR)	7 am–7 pm	55	75
	7 pm–10 pm	50	65
	10 pm–7 am	40	55
Commercial, Recreation, and Public Facilities (C, TR, PF)	7 am–7 pm	65	75
	7 pm–7 am	60	70
Industrial (I)	Any Time	70	80
Open Space (OS)	7 am–7 pm	55	75
	7 pm–7 am	50	65

TABLE 6-5
MAXIMUM ALLOWABLE NOISE EXPOSURE FOR NONTRANSPORTATION NOISE SOURCES IN RURAL REGIONS–CONSTRUCTION NOISE

Land Use Designation	Time Period	Noise Level (dB)	
		L_{eq}	L_{max}
All Residential (LDR)	7 am–7 pm	50	60
	7 pm–10 pm	45	55
	10 pm–7 am	40	50
Commercial, Recreation, and Public Facilities (C, TR, PF)	7 am–7 pm	65	75
	7 pm–7 am	60	70
Rural Land, Natural Resources, Open Space, and Agricultural Lands (RR, NR, OS, AL)	7 am–7 pm	65	75
	7 pm–7 am	60	70

Policy 6.5.1.12 When determining the significance of impacts and appropriate mitigation for new development projects, the following criteria shall be taken into consideration.

A. Where existing or projected future traffic noise levels are less than 60 dBA L_{dn} at the outdoor activity areas of residential uses, an increase of more than 5 dBA L_{dn} caused by a new transportation noise source will be considered significant;

B. Where existing or projected future traffic noise levels range between 60 and 65 dBA L_{dn} at the outdoor activity areas of residential uses, an increase of more than 3 dBA L_{dn} caused by a new transportation noise source will be considered significant; and

C. Where existing or projected future traffic noise levels are greater than 65 dBA L_{dn} at the outdoor activity areas of residential uses, an increase of more than 1.5 dBA L_{dn} caused by a new transportation noise will be considered significant.

Policy 6.5.1.13 When determining the significance of impacts and appropriate mitigation to reduce those impacts for new development projects, including ministerial development, the following criteria shall be taken into consideration:

A. In areas in which ambient noise levels are in accordance with the standards in Table 6-2, increases in ambient noise levels caused by new nontransportation noise sources that exceed 5 dBA shall be considered significant; and

B. In areas in which ambient noise levels are not in accordance with the standards in Table 6-2, increases in ambient noise levels caused by new nontransportation noise sources that exceed 3 dBA shall be considered significant.

Policy 6.5.1.14 The County will adopt a noise ordinance to resolve neighborhood conflicts and to control unnecessary noise in the County. Examples of the types of noise sources that can be controlled through the use of a quantitative noise ordinance include noisy mechanical equipment (e.g., swimming pool pumps, HVAC units), and amplified music in commercial establishments.

Policy 6.5.1.15 The County will establish and maintain coordination among city, county, and state agencies involved in noise abatement and other agencies to reduce noise generated from sources outside the County's jurisdiction.

OBJECTIVE 6.5.2: AIRPORT NOISE GUIDELINES

The County shall recognize the Airport Land Use Compatibility Plan (ALUCP) for the Placerville Airport, the Cameron Airpark Airport, and the Georgetown Airport as the applicable guidelines for development within the Airport Noise Zones for these airports. Where there is a conflict between the County noise standards and the noise standards of the ALUCP, the standards of the ALUCP shall take precedence.

Policy 6.5.2.1 All projects, including single-family residential, within the Airport Noise Zones of the Cameron Airpark, Georgetown, and Placerville airports shall be evaluated against the applicable policies in the ALUCP.

Policy 6.5.2.2 The County shall develop and apply a combining zone district for areas located within the Airport Noise Zones in the ALUCP.

HAZARDOUS MATERIALS

GOAL 6.6: MANAGEMENT OF HAZARDOUS MATERIALS

Recognize and reduce the threats to public health and the environment posed by the use, storage, manufacture, transport, release, and disposal of hazardous materials.

OBJECTIVE 6.6.1: REGULATION OF HAZARDOUS MATERIALS

Regulate the use, storage, manufacture, transport and disposal of hazardous materials in accordance with State and Federal regulations.

Policy 6.6.1.1 The Hazardous Waste Management Plan shall serve as the implementation program for management of hazardous waste in order to protect the health, safety, property of residents and visitors, and to minimize environmental degradation while maintaining economic viability.

Policy 6.6.1.2 Prior to the approval of any subdivision of land or issuing of a permit involving ground disturbance, a site investigation, performed by a Registered Environmental Assessor or other person experienced in identifying potential hazardous wastes, shall be submitted to the County for any subdivision or parcel that is located on a known or suspected contaminated site included in a list on file with the Environmental Management Department as provided by the State of California and federal agencies. If contamination is found to exist by the site investigations, it shall be corrected and remediated in compliance with applicable laws, regulations, and standards prior to the issuance of a new land use entitlement or building permit.

Policy 6.6.1.3 Provision must be made for disposal of aviation generated petroleum, oils, lubricants, and solvents at the County airports.

AIR QUALITY

GOAL 6.7: AIR QUALITY MAINTENANCE

A. Strive to achieve and maintain ambient air quality standards established by the U.S. Environmental Protection Agency and the California Air Resources Board.

B. Minimize public exposure to toxic or hazardous air pollutants and air pollutants that create unpleasant odors.

OBJECTIVE 6.7.1: EL DORADO COUNTY CLEAN AIR PLAN

Adopt and enforce Air Quality standards to reduce the health impacts caused by harmful emissions.

Policy 6.7.1.1 Improve air quality through land use planning decisions.

Policy 6.7.1.2 Support local and regional air quality improvement efforts.

OBJECTIVE 6.7.2: VEHICULAR EMISSIONS

Reduce motor vehicle air pollution by developing programs aimed at minimizing congestion and reducing the number of vehicle trips made in the County and encouraging the use of clean fuels.

Policy 6.7.2.1 Develop and implement a public awareness campaign to educate community leaders and the public about the causes and effects of El Dorado County air pollution and about ways to reduce air pollution.

Policy 6.7.2.2 Encourage, both through County policy and discretionary project review, the use of staggered work schedules, flexible work hours, compressed work weeks, teleconferencing, telecommuting, and car pool/van pool matching as ways to reduce peak-hour vehicle trips.

Policy 6.7.2.3 To improve traffic flow, synchronization of signalized intersections shall be encouraged as a means to reduce congestion, conserve energy, and improve air quality.

Policy 6.7.2.4 Encourage a local and inter-State rail system.

Policy 6.7.2.5 Upon reviewing projects, the County shall support and encourage the use of, and facilities for, alternative-fuel vehicles to the extent feasible. The County shall develop language to be included in County contract procedures to give preference to contractors that utilize low-emission heavy-duty vehicles.

Policy 6.7.2.6 The County shall investigate the replacement of its fleet vehicles with more fuel-efficient alternative fuel vehicles (e.g., liquid natural gas, fuel cell vehicles).

OBJECTIVE 6.7.3: TRANSIT SERVICE

Expand the use of transit service within the County.

Policy 6.7.3.1 Legally permissible trip reduction programs and the development of transit and ridesharing facilities shall be given priority over highway capacity expansion when such programs and facilities will help to achieve and maintain mobility and air quality.

Policy 6.7.3.2 Transit Service – The County shall promote infill development that is compact, mixed used, pedestrian friendly, and transit oriented in areas identified as Transit Priority Project Areas.

OBJECTIVE 6.7.4: PROJECT DESIGN AND MIXED USES

Encourage project design that protects air quality and minimizes direct and indirect emissions of air contaminants.

Policy 6.7.4.1 Reduce automobile dependency by permitting mixed land use patterns which locate services such as banks, child care facilities, schools, shopping centers, and restaurants in close proximity to employment centers and residential neighborhoods.

Policy 6.7.4.2 Promote the development of new residential uses within walking or bicycling distance to the County's larger employment centers.

Policy 6.7.4.3 New development on large tracts of undeveloped land near the rail corridor shall, to the extent practical, be transit supportive with high density or intensity of use.

Policy 6.7.4.4 All discretionary development applications shall be reviewed to determine the need for pedestrian/bike paths connecting to adjacent development and to common service facilities (e.g., clustered mail boxes, bus stops, etc.).

Policy 6.7.4.5 Specific plans submitted to the County shall provide for the implementation of all policies contained under Objective 6.7.4 herein.

Policy 6.7.4.6 The County shall regulate wood-burning fireplaces and stoves in all new development. Environmental Protection Agency (EPA)-approved stoves and fireplaces burning natural gas or propane are allowed. The County

shall discourage the use of non-certified wood heaters and fireplaces during periods of unhealthy air quality.

Policy 6.7.4.7 The County shall inform the public regarding the air quality effects associated with the use of wood for home heating. The program should address proper operation and maintenance of wood heaters, proper wood selection and use, the health effects of wood smoke, weatherization methods for homes, and determining the proper size of heaters needed before purchase and professional installation. The County shall develop an incentive program to encourage homeowners to replace high-pollution emitting non-EPA-certified wood stoves that were installed before the effective date of the applicable EPA regulation with newer cleaner-burning EPA-certified wood stoves.

OBJECTIVE 6.7.5: AGRICULTURAL AND FUEL REDUCTION BURNING

Adopt and maintain air quality regulations which will continue to permit agricultural and fuel reduction burning while minimizing their adverse effects.

OBJECTIVE 6.7.6: AIR POLLUTION-SENSITIVE LAND USES

Separate air pollution sensitive land uses from significant sources of air pollution.

Policy 6.7.6.1 Ensure that new facilities in which sensitive receptors are located (e.g., schools, child care centers, playgrounds, retirement homes, and hospitals) are sited away from significant sources of air pollution.

Policy 6.7.6.2 New facilities in which sensitive receptors are located (e.g. residential subdivisions, schools, childcare centers, playgrounds, retirement homes, and hospitals) shall be sited away from significant sources of air pollution.

OBJECTIVE 6.7.7: CONSTRUCTION RELATED, SHORT-TERM EMISSIONS

Reduce construction related, short-term emissions by adopting regulations which minimize their adverse effects.

Policy 6.7.7.1 The County shall consider air quality when planning the land uses and transportation systems to accommodate expected growth, and shall use the recommendations in the most recent version of the El Dorado County Air Quality Management (AQMD) *Guide to Air Quality Assessment: Determining Significance of Air Quality Impacts Under the California Environmental Quality Act*, to analyze potential air quality impacts (e.g., short-term construction, long-term operations, toxic and odor-related emissions) and to require feasible mitigation requirements for such impacts. The County shall also consider any new information or technology that becomes available prior to periodic updates of the Guide.

The County shall encourage actions (e.g., use of light-colored roofs and retention of trees) to help mitigate heat island effects on air quality.

OBJECTIVE 6.7.8: THE EFFECTS OF AIR POLLUTION ON VEGETATION

Monitor ongoing scientific research regarding the adverse effects, if any, of air pollution on vegetation.

Policy 6.7.8.1 The County shall monitor ongoing scientific research regarding the adverse effects, if any, of air pollution on vegetation, including commercially valuable timber, threatened or endangered plant species, and other plant species. If and when such research conclusively determines, or if and when the weight of scientific opinion concludes, that air pollution is causing significant harm to vegetation within El Dorado County or similarly situated areas, the County, through its periodic review of the General Plan pursuant to Policy 2.9.1.2, shall consider whether to add policies to the General Plan to try to mitigate such harm.

AVIATION-RELATED HAZARDS

GOAL 6.8: AVIATION-RELATED HAZARDS

Minimize aviation-related hazards in and around existing and future airports.

OBJECTIVE 6.8.1: SAFETY HAZARDS EXPOSURE

Minimize the public's exposure to airport-related safety hazards by requiring new development around airports to be compatible with that use.

Policy 6.8.1.1 All development within the Airport Influence Area of the Placerville Airport, the Cameron Airpark Airport, and the Georgetown Airport shall comply with El Dorado County Airport Land Use Commission's policies and maps as set forth in the Airport Land Use Compatibility Plan for each airport. All development within the Airport Influence Area of the South Lake Tahoe Airport shall comply with the Airport Land Use Compatibility Plan (ALUCP) for the areas around the South Lake Tahoe Airport. Where there is a difference between the County development standards and the development standards of the Airport Land Use Compatibility Plan, as applied to proposed development, the standards that will most reduce airport-related hazards shall apply. (Resolution 124-2019, August 6, 2019)

Policy 6.8.1.2 The County shall develop an airport combining zone district within the El Dorado County Zoning Ordinance, for each of the Safety Zones as defined by the Airport Land Use Compatibility Plan for each of the County's public airports. Said ordinance shall specify maximum density and minimum parcel size.

HIGHWAY SAFETY

GOAL 6.9: HIGHWAY SAFETY

Provide highways within the County that provide for the safe movement of goods and people throughout the County.

OBJECTIVE 6.9.1: SAFETY HAZARDS REDUCTION PROGRAM

Create a program to reduce safety hazards on County roadways especially at locations with a history of frequent accidents.

Policy 6.9.1.1 The County shall identify those roadways with existing or projected safety problems, prioritize them in terms of the immediacy of the need for improvements, and develop programs for financing needed improvements.

Policy 6.9.1.2 Recognize that substandard road conditions exist in some rural areas of the County and include feasible roadway, pedestrian, and bicyclist safety improvements in the roadway improvement priority list.

Policy 6.9.1.3 New roads connecting to County roads shall be designed to provide safe access as required by the County Design and Improvement Standards Manual.

OBJECTIVE 6.9.2: EMERGENCIES ON STATE HIGHWAYS

The County should coordinate with Caltrans for the efficient movement of traffic on County roads in the event of closures on State highways.

IMPLEMENTATION PROGRAM

MEASURE HS-A

Maintain emergency response procedures and programs, including agreements with other local, state, and federal agencies, to provide coordinated disaster response and programs to inform the public of emergency preparedness and response procedures. [Policy 6.1.1.1]

Responsibility:	Sheriff's Department (Office of Emergency Services), County Administrative Officer, Department of Transportation, Environmental Management, and General Services Department
Time Frame:	Ongoing review and updating of the Operational Area Multi-Hazard Functional Emergency Operations Plan.

MEASURE HS-B

Work with the local Fire Safe Councils, fire protection districts, U.S. Forest Service, and California Department of Forestry and Fire Protection to develop and implement a countywide Wildfire Safety Plan. The Wildfire Safety Plan shall focus on, but not be limited to, the following:

- Public wildfire safety education;
- Basic fire protection standards for different areas of the county;
- Appropriate mitigation for development in areas having high and very high fuel hazards;
- Opportunities for fire fuel reduction;
- Implementation of fire safe standards;
- Coordination with fire protection districts
- Fuels management standards to apply to new development adjacent to forested areas and within greenbelts; and
- Appropriate standards for open space and greenbelts.

[Policies 6.2.1.1, 6.2.4.2, and 6.2.5.1]

Responsibility:	Planning Department, Department of Transportation, and Building Department
Time Frame:	Develop draft plan within six months of General Plan adoption.

MEASURE HS-C

Develop a program to collect, maintain, and update geological, seismic, avalanche, and other geological hazard information. [Policy 6.3.2.1]

Responsibility:	Planning Department and Sheriff's Department (Office of Emergency Services)
Time Frame:	Develop program within five years of General Plan adoption.

MEASURE HS-D

Develop and adopt standards to protect against seismic and geologic hazards. [Objective 6.3.1]

Responsibility:	Planning Department, Building Department, and Department of Transportation
Time Frame:	Develop standards within five years of General Plan adoption.

MEASURE HS-E

The County shall adopt a Naturally Occurring Asbestos Disclosure Ordinance that includes the provisions in the policy described in Policy 6.3.1.2.

Responsibility:	Environmental Management
Time Frame:	Present ordinance to Board of Supervisors within three years of General Plan adoption.

MEASURE HS-F

Develop a program to track asbestos-related information as it pertains to El Dorado County. [Policy 6.3.1.3]

Responsibility:	Environmental Management
Time Frame:	Develop program within one year of General Plan adoption. Report results to the Board of Supervisors annually.

MEASURE HS-G

Adopt California Building Code revisions. [Policy 6.3.2.4]

Responsibility:	Building Department
Time Frame:	Adopt revisions as UBC changes are promulgated (ongoing).

MEASURE HS-H

Continue to participate in the Federal Flood Insurance Program, maintain flood hazard maps and other relevant floodplain data made available by other sources, and revise or update this information as new information becomes available. In its review of applications for building permits, discretionary project applications, and capital improvement proposals, the County shall determine whether the proposed project is within the 100-year floodplain based on these data. [Policies 6.4.1.1, 6.4.1.2, and 6.4.1.3]

Responsibility:	Planning Department, Building Department, Department of Transportation, and General Services Department
Time Frame:	Ongoing

MEASURE HS-I

To provide a comprehensive approach to noise control, adopt a Noise Ordinance that includes, but is not limited to, the following:

A. Procedures to ensure that noise mitigation measures, as determined through an acoustical analysis, are implemented in the project review process and, if determined necessary, through the building permit process;

B. Procedures to monitor compliance with the standards of the Noise Ordinance after completion of projects where noise mitigation measures were required; and

C. Application of the noise standards to ministerial projects, with the exception of single-family residential building permits, if not in areas governed by the Airport Land Use Compatibility Plan.

[Policies 6.5.1.10, 6.5.1.13, and 6.5.1.14]

Responsibility:	Planning Department and Department of Transportation
Time Frame:	Develop ordinance within five years of General Plan adoption.

MEASURE HS-J

Establish a working group to address cross-jurisdictional noise issues. Members of the group should include representatives from the County, cities of Placerville and South Lake Tahoe, California Department of Transportation, California Department of Forestry and Fire Protection, California Department of Parks and Recreation, U.S. Forest Service, U.S. Bureau of Land Management, and Tahoe Regional Planning Agency. [Policy 6.5.1.15]

Responsibility:	Planning Department, Department of Transportation, General Services Department, and Sheriff's Department.
Time Frame:	Seat working group within three years of General Plan adoption.

MEASURE HS-K

Review the Zoning Ordinance and identify changes that would accomplish the following:

A. Include an airport combining zone district for each of the Safety Zones as defined in the Airport Land Use Compatibility Plan for each of the County's public airports; and

B. Develop and apply a combining zone district for areas within the Airport Influence Area for each of the public airports to discourage the placement of incompatible uses. [Policies 6.5.2.2 and 6.8.1.2]

Responsibility:	Planning Department
Time Frame:	Update Zoning Ordinance within one year of General Plan adoption.

MEASURE HS-L

Update airport master plans and work with the appropriate Airport Land Use Commissions to update the Comprehensive Land Use Plans to reflect noise levels in the year 2025. [Policy 6.5.2.3]

Responsibility:	Planning Department and Department of Transportation
Time Frame:	Revise master plans within five years of adoption of General Plan.

MEASURE HS-M

Maintain and update the Hazardous Waste Management Plan for management of hazardous waste to protect the health, safety, and property of residents and visitors, and to minimize environmental degradation. [Policy 6.6.1.1]

Responsibility:	Environmental Management
Time Frame:	Review and update, if necessary, within five years of General Plan adoption.

MEASURE HS-N

Collect and maintain information on sites known, or suspected to be contaminated by hazardous materials. The information shall include current data from the California Department of Toxic Substances Control's Hazardous Waste and Substance Sites List compiled pursuant to Section 65962.5 of the Government Code. [Policy 6.6.1.2]

Responsibility:	Environmental Management and Planning Department
Time Frame:	Ongoing

MEASURE HS-O

Develop, implement, and update, as necessary, a plan for the storage, transport, and disposal of hazardous materials used at County-operated facilities. [Policy 6.6.1.3]

Responsibility:	Department of Transportation and General Services Department
Time Frame:	Develop plan within five years of General Plan adoption.

MEASURE HS-P

Enhance and maintain the Air Quality Management District's air quality public education program. The program will include information regarding naturally occurring asbestos. [Policies 6.3.1.3 and 6.7.2.1]

Responsibility:	Air Quality Management District
Time Frame:	Develop program within three years of General Plan adoption.

MEASURE HS-Q

Develop and implement a program to encourage use of mechanisms to reduce peak-hour vehicle trips consistent with Policy 6.7.2.2.

Responsibility:	Planning Department and Department of Transportation
Time Frame:	Develop program within three years of General Plan adoption.

MEASURE HS-R

Identify fleet vehicles that could successfully be replaced with more fuel efficient or alternative fuel vehicles. When those fleet vehicles are due for replacement, thoroughly investigate their replacement with such vehicles. [Policy 6.7.2.6]

Responsibility:	Department of General Services
Time Frame:	Ongoing

MEASURE HS-S

Develop and implement an incentive program to encourage homeowners to replace high-pollution emitting non-EPA-certified wood stoves. [Policy 6.7.4.7]

Responsibility:	Planning Department, Building Department, and Environmental Management
Time Frame:	Develop program within four years of General Plan adoption.

MEASURE HS-T

Adopt and/or update air quality regulations regarding agricultural and fuel reduction burning, construction emissions, mobile source emissions, fugitive dust, and volatile organic emissions. [Objective 6.7.5 and Policy 6.7.7.1]

Responsibility:	Air Quality Management District
Time Frame:	Develop standards within five years of General Plan adoption.

MEASURE HS-U

Monitor existing, ongoing studies related to effects of air pollution on vegetation. [Policy 6.7.8.1]

Responsibility:	Air Quality Management District
Time Frame:	Ongoing

MEASURE HS-V

Amend prescriptive standard for the Fugitive Dust Prevention and Control Plan and Contingent Asbestos Hazard Dust Mitigation Plan. [Policy 6.3.1.1]

Responsibility:	Environmental Management
Time Frame:	Adopt amendment within three years of General Plan adoption.

MEASURE HS-W

Survey and prioritize safety improvements on County roads. Develop financing programs for making necessary improvements. [Policy 6.9.1.1]

Responsibility:	Department of Transportation
Time Frame:	Complete survey within three years; Develop financing program within eight years of General Plan adoption.

MEASURE HS-X

Coordinate air quality planning efforts with other local and regional agencies. [Policies 6.7.1.1 and 6.7.1.2]

Responsibility:	Planning Department
Time Frame:	Ongoing

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CHAPTER 130.37. - NOISE STANDARDS

Sec. 130.37.010 - Content.

This Chapter complies with General Plan Goal 6.5 (Acceptable Noise Levels), and supplements County Code Chapter 9.16 (Noise) by establishing standards concerning acceptable noise levels for both noise-sensitive land uses and for noise-generating land uses.

Sec. 130.37.020 - Exemptions.

The following noise sources shall be exempt from the standards of this Chapter:

A. Activities conducted in public parks, public playgrounds, and public or private school grounds, including but not limited to school athletic and school entertainment events, providing an amplified sound system is not required or used.

B. The use of any mechanical device, apparatus, or equipment related to or connected with emergency activities or emergency work to protect life or property.

C. Safety signals, warning devices, and emergency pressure relief valves properly operated and in good working order.

D. Noise sources associated with property maintenance, such as lawn mowers, trimmers, snow blowers, power tools in good working order, and cutting of firewood for non-commercial personal use, provided that the activities take place between the hours of eight a.m. and nine p.m. on weekdays and nine a.m. to nine p.m. on weekends and federal holidays.

E. Noise sources associated with agricultural uses listed in Section 130.21.020 (Agricultural Zones: Matrix of Allowed Uses) in Article 2 (Zones, Allowed Uses, and Zoning Standards) of this Title that are performed consistent with the standards and practices of the agricultural industry.

F. Noise sources associated with work performed by public or private utilities in the maintenance or modification of its facilities.

G. Noise sources associated with public holidays, or other commonly celebrated occasions.

H. Traffic on public roadways, railroad line operations, aircraft in flight, and any other activity where regulation thereof has been preempted by state or federal law.

I. Construction (e.g., construction, alteration or repair activities) during daylight hours provided that all construction equipment shall be fitted with factory installed muffling devices and maintained in good working order.

Sec. 130.37.030 - Applicability.

Subject to the exemptions in Section 130.37.020 (Noise Standards, Exemptions) above in this Chapter, noise standards established in this Chapter shall apply to all noise generating uses requiring discretionary review or ministerial permits, with the exception of existing and new single-unit residential dwellings on legal lots that are not within areas governed by an Airport Comprehensive Land Use Plan. (General Plan Policy 6.5.1.4, Acceptable Noise Levels, Protection of Noise-Sensitive Development).

Sec. 130.37.040 - Definitions.

The following definitions shall apply to this Chapter:

"Acoustic Specialist" means a person trained in acoustic sampling that is qualified to measure sound levels consistent with criteria contained within this article.

"Ambient Sound Level" means the composite of normal or existing sound from all sources, measured at a given location for a specified time of the day or night.

"A-weighting" means the scale for measuring sound that de-emphasizes low and high frequencies in order to simulate human hearing; indicated as dBA.

"Community Noise Equivalent Level (CNEL)" means a weighted average hourly noise level over a 24 hour day used specifically for airport and aircraft noise assessment.

"Day-Night Average Sound Level (Ldn)" means the dBA for a given area during a 24-hour day with a 10dB weighting applied to nighttime sound levels.

"Decibel" means a unit of relative loudness on a logarithmic scale that runs from zero for the least perceptible sound to 140 for sound that causes pain.

"Equivalent Noise Level (Leq)" means the average energy noise level determined by averaging the cumulative noise event levels during a specific period of time and expressing it in A-weighted decibels, or dBA.

"Fixed Sound Source" means a device or machine which creates sounds while fixed or stationary, including but not limited to residential, agricultural, industrial, and commercial machinery and equipment, pumps, fans, compressors, air conditioners and refrigeration equipment, and motor vehicles operated on private property.

"Maximum Sound Level (Lmax)" means the maximum instantaneous noise level measured on a sound level meter.

"Non-Transportation Noise Source" means industrial operations, commercial land uses, outdoor recreation activities and facilities, Heating, Ventilation and Air Conditioning (HVAC) units, schools, hospitals, and other outdoor land use.

"Sensitive Receptor" means a land use in which there is a reasonable degree of sensitivity to noise. Such uses include single- and multi-unit residential dwellings including frequently inhabited outbuildings, schools, hospitals, churches, rest homes, cemeteries, public libraries, and other sensitive uses as determined by the Director.

"Sound Level Meter" means an instrument meeting American National Standard Institute (ANSI) Standard S1.4A-1985 for Type 1 or Type 2 sound level meters, or an instrument and associated recording and analyzing equipment that will provide equivalent data.

"Transportation Noise Source" means traffic on public or private (non-county maintained) roadways, railroad line operations, and aircraft in flight.

Sec. 130.37.050 - Acoustic Analysis Requirements.

An acoustic analysis prepared by an acoustic specialist shall be required prior to discretionary authorization or permit approval for the following uses:

A. New noise-generating land uses likely to exceed the performance thresholds in the Tables in Section 130.37.060 (Noise Standards) below in this Chapter when proposed in areas adjacent to sensitive receptors. Noise sources may include industrial operations, outdoor recreation facilities, outdoor concerts and events utilizing amplified sound systems, commercial land uses, fixed sound sources, and other similar uses; or

B. New noise-sensitive land uses proposed in areas exposed to existing or projected exterior noise levels likely to exceed the thresholds in the Tables in Section 130.37.060 (Noise Standards) below in this Chapter.

Sec. 130.37.060 - Noise Standards.

The following standards shall apply to all development projects for which an acoustic analysis is required:

A. Noise sensitive land uses affected by non-transportation noise sources shall not exceed standards set forth in Table 130.37.060.1 (Noise Level Performance Standards for Noise Sensitive Land Uses Affected by Non-Transportation Sources) below in this Section:

Table 130.37.060.1—Noise Level Performance Standards for Noise Sensitive Land Uses Affected by Non-Transportation Sources

NOISE LEVEL PERFORMANCE STANDARDS FOR NOISE SENSITIVE LAND USES AFFECTED BY NON-TRANSPORTATION SOURCES

Noise Level Descriptor	Daytime 7 a.m.—7 p.m.		Evening 7 p.m.—10 p.m.		Night 10 p.m.—7 a.m.	
	Community/ Rural Centers	Rural Regions	Community/ Rural Centers	Rural Regions	Community/ Rural Centers	Rural Regions
Hourly Leq, dBA	55	50	50	45	45	40
Maximum level, dBA	70	60	60	55	55	50

1. Each of the noise levels specified above shall be lowered by five dBA for simple tone noises, noises consisting primarily of unamplified speech or music, or for recurring impulsive noises. These noise level standards do not apply to residential units established in conjunction with industrial or commercial uses, such as caretaker dwellings.
2. The Director can impose noise level standards which are up to five dBA less than those specified above, based upon a determination of existing low ambient noise levels in the vicinity of the project site.
3. The exterior noise level standard shall be applied as follows:
   a. In Community Regions, at the property line of the receiving property;
   b. In Rural Centers and Regions, at a point 100 feet away from a sensitive receptor or, if the sensitive receptor is within the Platted Lands Overlay (-PL) where the underlying land use designation is consistent with Community Region densities, at the property line of the receiving property or 100 feet away from the sensitive receptor, whichever is less; or
   c. In all areas, at the boundary of a recorded noise easement between affected properties.

B. Transportation noise shall not exceed thresholds set forth in Table 130.37.060.2 (Noise Level Standards for Noise-Sensitive Land Uses Affected by Transportation Noise Sources) below in this Section:

Table 130.37.060.2—Noise Level Standards for Noise-Sensitive Land Uses Affected by Transportation Noise Sources

NOISE LEVEL STANDARDS FOR NOISE-SENSITIVE LAND USES AFFECTED BY TRANSPORTATION NOISE SOURCES			
Sensitive Receptor	**Outdoor Activity Areas**	**Interior Spaces**	
	Ldn/CNEL, dB	Ldn/CNEL, dB	Leq, dB [1]
Residential	60	45	-
Transient Lodging	60	45	-
Hospitals, Nursing Homes	60	45	-
Theaters, Auditoriums, Music Halls	-	-	35
Churches, Meeting Halls, Schools	60	-	40
Office Buildings	-	-	45
Libraries, Museums	-	-	45
Playgrounds, Neighborhood Parks	70	-	-
Notes [1] As determined for a typical worst-case hour during periods of use.			

1. In Community Regions and Rural Centers:

   (a) Where the location of outdoor activity areas is not clearly defined, the exterior noise

level standard shall be applied at the property line of the sensitive receptor.

(b) For residential uses with front yards facing the identified noise source, an exterior noise level threshold of 65 dBA Ldn shall be applied at the dwelling facade in addition to the required threshold at the outdoor activity area.

2. In Rural Regions: An exterior noise level threshold of 60 dBA Ldn shall be applied at a 100 foot radius from the dwelling on lots five acres and larger. Those lots less than five acres shall have the noise level standards applied at the property line.

3. Where it is not possible to reduce noise levels in those outdoor activity areas limited to 60 dBA Ldn/CNEL thresholds using a practical application of the best-available noise reduction measures, an exterior noise threshold of up to 65 dBA Ldn/CNEL may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table.

C. Construction-related noise shall allow for exceptions to the evening and night time standards or other temporary exceedances of noise standards as may be approved by the Director, where necessary to alleviate traffic congestion and safety hazards, or where authorized by an approved permit.

Sec. 130.37.070 - Noise Reduction Measures.

Noise reduction measures shall be incorporated into the project design to reduce noise levels at or below the thresholds set forth in Tables in Section 130.37.060 (Noise Standards) above in this Chapter. Where applicable, the following specific requirements shall also apply:

A. To meet noise threshold standards under Table 130.37.060.2 (Noise Level Standards for Noise-Sensitive Land Uses Affected by Transportation Noise Sources) above in this Chapter, where feasible, setbacks shall be the preferred method of noise abatement for residential projects located along U.S. Highway 50. Noise walls shall be discouraged within the foreground viewshed of U.S. Highway 50 and shall be discouraged in favor of less intrusive noise mitigation (e.g., landscaped berms, setbacks) along other high volume roadways.

B. For outdoor concerts and events utilizing amplified sound system(s), a discretionary permit shall be required in the form of a Temporary or Conditional Use Permit. Self-monitoring shall be performed to insure that sound system levels are in compliance with those specified in the conditions of approval based on the acoustic analysis. As a standard condition of approval for such use permits, failure to comply with sound system levels shall result in termination of the event for the duration of the period approved under the use permit and a moratorium on future events for the applicant or the property owner of two calendar years from the date of

non-compliance. A second violation after such time shall result in revocation of the Conditional Use Permit, if applicable, and a permanent moratorium on future events for the applicant and property owner whether on that site or any other within the County.

Sec. 130.37.080 - Noise Level Measurements.

For the purpose of evaluating conformance with the standards of this Chapter, noise levels shall be measured as follows:

A. Use of Meter. Any noise measurement shall be made with a sound level meter using the A-weighted scale. Calibration of the measurement equipment utilizing an acoustical calibrator shall be performed immediately prior to recording any noise data.

B. Ambient Sound Levels. Compliance with the above standards shall be determined by measuring the existing noise level with a sound level meter using slow response, with the sound source at issue remaining silent. The ambient sound level shall be determined based on the mean average of not less than three 20 minute measurements for any given time period. Additional noise measurements may be necessary to ensure that the ambient sound level is adequately determined.

C. Measuring Exterior Noise Levels. Except as otherwise provided in this Chapter, exterior noise levels shall be measured at the property line of the affected noise-sensitive land use. Where practical, the microphone shall be positioned five feet above the ground and away from reflective surfaces.

D. Measuring Interior Noise Levels. Interior noise levels shall be measured within the sensitive receptor, as defined in Section 130.37.040 (Noise Standards, Definitions) above in this Chapter, at points at least four feet from the wall, ceiling, or floor nearest the noise source, with windows in the normal seasonal configuration. The reported interior noise level shall be determined by taking the arithmetic average of the readings taken at the various microphone locations.

T. KEAR
TRANSPORTATION PLANNING
& MANAGEMENT, INC.

Memorandum

TO: Karen Hyder, Indian Rock Tree Farm

CC: Zach Oates, El Dorado County DOT

FROM: Tom Kear, PhD, PE

Date: January 9, 2024

RE: Indian Rock Tree Farm Vehicle Miles Traveled Analysis

Introduction

Indian Rock Tree Farm is a long-established Christmas tree farm and private event venue located in the Apple Hill region of El Dorado County. The property consists of approximately 33.2 acres with the tree farm, limited event facilities, and a single residence. The owner's adult children plan to return to the property to manage business interests and provide elder care. The business is located at 3800 North Canyon Rd, Camino, CA 95709 (APN 085-540-03-100).

As part of the entitlement process for building an additional dwelling unit on the property, El Dorado County determined that the parcel requires rezoning from its historic designation(s) *Residential Estate 5-Acre* (RE-5), *Timber Production* (TPZ), *Two-acre Residential* (R2A), and *Select Agricultural District* (SA-10). The proposed zoning is *Planned Agriculture* (PA). The rezone is hereafter referred to as "the Project." Note that it is a common occurrence that historic non-compliant zoning such as this occurs where operating businesses are grandfathered in on parcels where the General Plan and/or zoning requirements are modified subsequent to the opening of the business. However new business applications and or development applications can trigger the need to correct historic zoning inconsistencies. In this case the anticipated request to build an additional dwelling unit has triggered the need to rezone the parcel to PA.

Even though there are no aspects of the business that are being changed, the proposed rezone requires an initial study under the California Environmental Quality Act (CEQA) to document that there are no anticipated CEQA impacts associated with the change in zoning. A Vehicle Miles Traveled (VMT) analysis has been requested by the County to support that initial study. T. Kear Transportation Planning and Management (TKTPM) spoke with El Dorado County Department of Transportation staff (Zach Oates) regarding an overall approach framework for the VMT analysis. It was determined that only *new* business activity and housing needs to be considered in the VMT analysis. While there are no planned changes in the operation of Indian Rock Tree Farm, the proposed zoning would allow for up to 24 special events of 250 people annually[1]. This VMT analysis will document that the potential

[1] El dorado county Zoning) Ordinance, Title 130, Adopted August 14, 2018, amended August 23, 2022. Section 130.40.260, available online at https://www.edcgov.us/Government/planning/Pages/zoning_ordinance.aspx, accessed January 8, 2024.

tkear@tkearinc.com 916-340-4811
2838 Zamora Lane, Davis, California 95618 **www.tkearinc.com**

for more and larger special events and the anticipated additional dwelling unit will not exceed El Dorado County's de minimis threshold for VMT from small projects that generate on average fewer than 100 daily vehicle trips[2].

Analysis

This VMT analysis is based on comparing. The potential increase in daily vehicle tips (from the new single-family residence that the applicant intends to eventually construct, and a potential increase in special events allowed under the PA zoning, to the County's threshold for small projects of 100 trips per day. VMT from business operations and the potential additional residence are both considered.

VMT related potential changes in business operations

As stated above, there is not an anticipated change in business operations on the Project parcel, however the rezone to PA would allow for additional events on the parcel, up to 24 events with 250 people per event. Vehicle occupancy for event centers is poorly documented but generally believed to average about 2.5 persons per vehicle. To be conservative we assume 1.5 persons per vehicle with each vehicle making two trips (1 inbound, 1 outbound).

$$\left(\frac{24\ events}{1\ year}\right)\left(\frac{1\ year}{365\ days}\right)\left(\frac{250\ people}{1\ event}\right)\left(\frac{1\ Vehicle}{1.5\ people}\right)\left(\frac{2\ trips}{1\ vehcile}\right) = 21.9\ trips\ per\ day$$

It is unclear whether the 250-person limit includes staff. To be conservative the average daily trip estimate is therefore increased by just over 25% to **27.4 trips per day.**

VMT related potential addition of one single-family home

Trip generation for the additional single-family home is based on the ITE Trip Generation Manual[3] single-family detached housing. Average trip generation for a single-family home is:

- 9.43 daily trips per weekday
- 9.48 daily trips on Saturday
- 8.48 daily trips on Sunday

This results in an average of **9.3 daily trips**.

Findings and Recommendations

Combined trip generation for potential new business activity and the additional single-family residence is anticipated to be less than 36.7 trips per day on average. This is well below the County's adopted de minimis threshold for small projects with an average of 100 trips per day. This analysis finds that the proposed rezone will have a **less-than-significant** impact on VMT under CEQA. TKTPM recommends that the rezone be approved.

[2] El dorado County Board of Supervisors Resolution 141-2020 adopted October 6, 2020.
[3] ITE (2021) Trip Generation Manual 11 Edition, Land use 210, Institute of Transportation engineers, Washington DC.

Indian Rock Tree Farm Rezone

Wildland Urban Interface Fire Protection Plan
Fire Safe Plan
WAC 21-003/Z 21-0010 PA

Prepared for:

The Raymond L. Hyder and
Geraldine F. Hyder 1994 Trust

Prepared by:

CDS Fire Prevention Planning
William F. Draper
Registered Professional Forester
#898
4645 Meadowlark Way
Placerville, CA 95667

October 21, 2022

Indian Rock Tree Farm

The Fire Safe Plan for the Indian Rock tree Farm does not guarantee that wildfire will not threaten, damage or destroy natural resources, homes or endanger residents. However, the full implementation of the mitigation measures will greatly reduce the exposure of structures to potential loss from wildfire and provide defensible space for firefighters and residents as well as protect the native vegetation. Specific items are listed for homeowner's attention to aid in wildfire safety. The plan recommends and acknowledges best management practices. It is of great importance to recognize that no plan can completely protect property from wildland fire with multiple variables inherent in the wildland-urban interface.

Approved by:

Braden Stirling, Fire Marshal
El Dorado County Fire Protection District

11/9/2022
Date

Darin McFarlin, FCS
Fire Prevention
California Department of Forestry and Fire Protection

11/13/22
Date

Prepared by:

William F. Draper
RPF # 898

11/9/22
Date

PROFESSIONAL FORESTER
[redacted] P.
[redacted]
No. 898
STATE OF CALIFORNIA

PURPOSE:

Indian Rock Tree Farm is an actively managed forest and Christmas tree farm located on 33.2 acres in Camino, California in the heart of “Apple Hill”. The owners are wanting to diversify their business to fully utilize the unique features of the property. They are seeking a rezoning from Timber Production Zone (TPZ) to Planned Agriculture (PA).

SCOPE:

The Fire Safe Plan for this property takes into consideration the existing best management practices being used and expands on those practices with the most current fire safe requirements that will be incorporated in the future management and development of the tree farm.

The Fire Safe Plan for the Indian Rock Tree Farm does not guarantee that wildfire will not threaten, damage or destroy natural resources, homes or endanger residents. However, the full implementation of the fire safe requirements will greatly reduce the exposure of structures to potential loss from wildfire and provide defensible space for firefighters and residents as well as protect the native vegetation. It is important to recognize that no plan can completely protect property from wildland fire with multiple variables inherent in the wildland-urban interface.

PROJECT:

Indian Rock Tree Farm located at 3200 North Canyon Road in Camino has requested to be rezoned to better meet the needs of the farm for the future. This 33.2 acre parcel, APN: 085-540-003, has a long history of being a managed forest and “choose and cut” Christmas tree farm. The majority of the property is on a northwest facing ridge with slopes up to 30%. There is an existing residence, sales area, farm support buildings, parking, gathering site, and roads/trails. There is a high voltage transmission lines across the back of the property where some of the Christmas trees are grown. The landowners have developed North Canyon Creek to be a productive fish stream with pools and a drafting site. The drafting site is on the south side of the creek in the northeast corner of the property. The entire property has been manicured. The timber stand is a mixture of conifers with Incense cedar, Ponderosa pine, Douglas-fir, White fir, Black oak, and Madrone overstory. Big Leaf maple is the dominate tree species along the creek. The understory has been mostly eliminated and the trees limbed. In some areas of the understory there are Christmas trees planted. The tree canopy is generally well over 30’ from the ground to tree limbs. There are patches of understory with managed Christmas trees. The majority of Christmas tree plantings are densely planted in open areas under the high-tension powerline towers.

The stewards of this property use wood chips around and under their trees to control weeds and erosion. There are a series of roads and footpaths winding through the trees to provide access and break-up the vegetative fuels the forest contains. The clean understory is the product of years of control burns and intensive management.

The house site is at the north west corner of the property on a knoll. The house is in good repair and there are not plans to construct any additional housing or additions to the existing residence. The Firescaping standards in Appendix A should serve as a guide for maintaining a fire safe environment around the home. Zone O is a new requirement that will need to be incorporated around the residence in the coming year. This is referred to as the ember resistant zone and extends out from the foundation of the house for 5’.

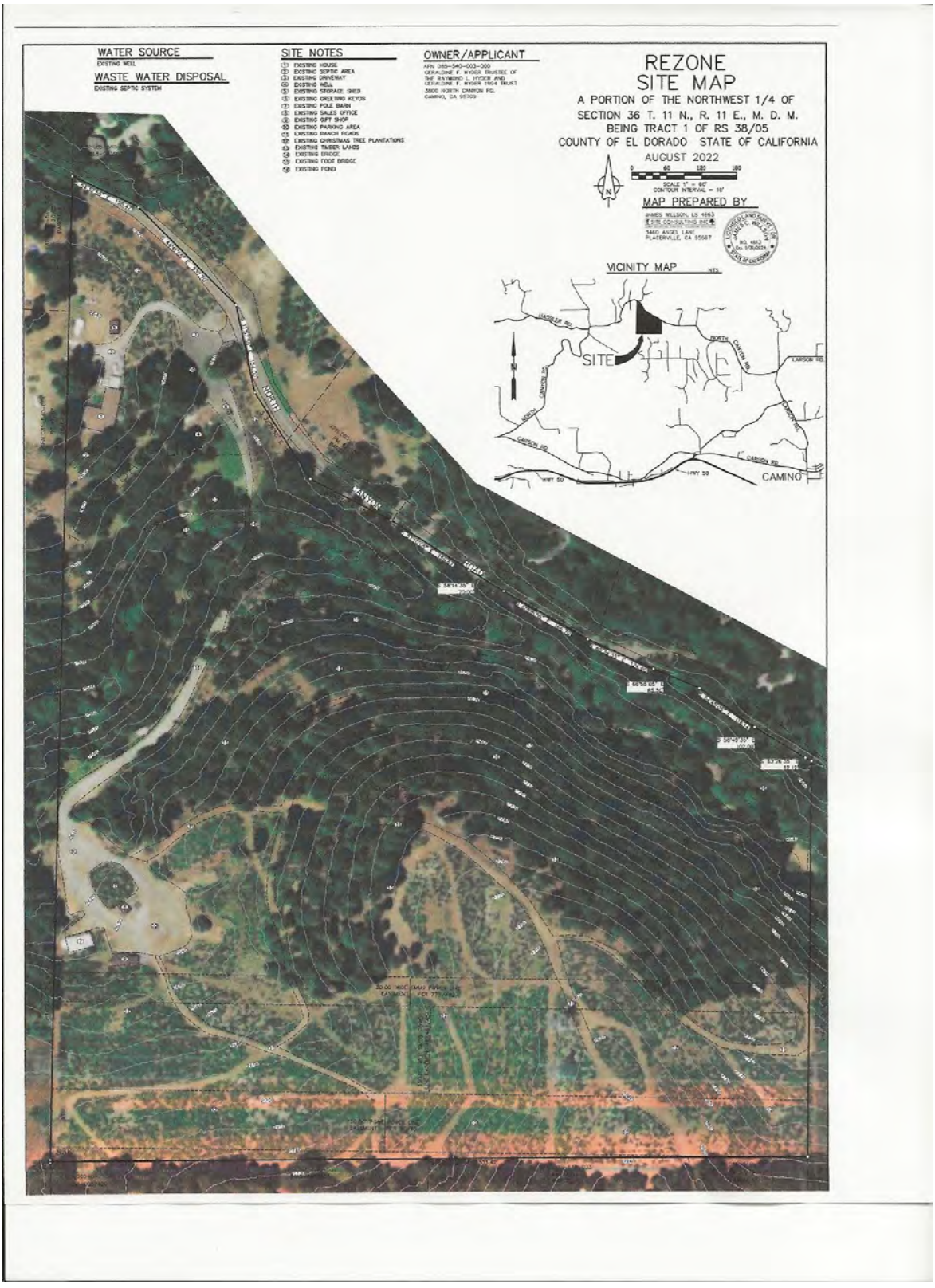
FIRE SAFE REQUIREMENTS:

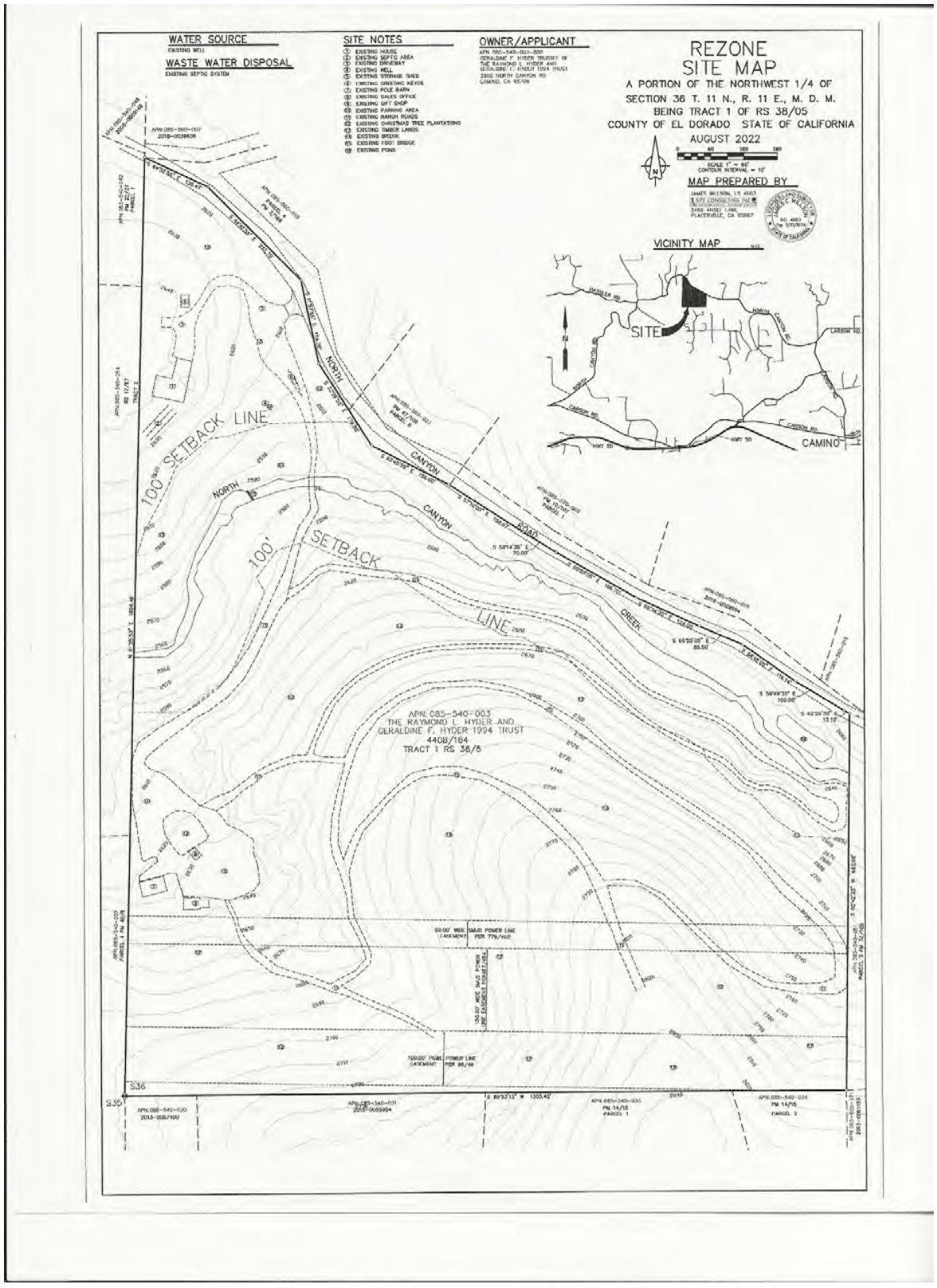
The existing residence is subject to El Dorado County Code of Ordinances Chapter 8.09 (Vegetation Management and Defensible Space) and California Public Resources Code section 4291 (PRC 4291) the state defensible space requirement for maintaining 100’ clearances around all structures (See Appendix

A CAL FIRE Guideline). The County's "Good Neighbor" provision in the County Code will be utilized as necessary to meet the 100' clearance requirement. The property is located in a "Very High" Fire Severity Zone as prepared by CAL FIRE as part of its Fire Resource and Assessment Program (FRAP) in 2007. The El Dorado County Fire Protection District (EDCFPD) provides all fire and emergency medical services to this project. The California Department of Forestry and Fire Protection (CALFIRE) has wildland fire responsibility in this state responsibility area (SRA).

Any new building shall comply with California Code of Regulations Title 24, Parts 1-12 (California Building Standards Code) or those in effect at the time of construction. The property owner is responsible for any future fire safe or building code changes adopted by the state or local authority. A periodic review (about every 5 years) should be done between the landowner and EDCFPD to determine that the fire safe conditions are being followed or need to be revised.

The annual maintenance of the hazardous vegetation and removal prior to the start of the fire season and maintained throughout the fire season are critical for establishing and keeping a fire safe environment. All burning shall be carried out in full compliance with state and local regulations. Appropriate burning permits and adherence to burn day restrictions shall be followed. Hazard reduction work shall be completed by May 15 annually.


WATER SOURCE
EXISTING WELL
WASTE WATER DISPOSAL
EXISTING SEPTIC SYSTEM
SITE NOTES
(1) EXISTING HOUSE
(2) EXISTING SEPTIC AREA
(3) EXISTING DRIVEWAY
(4) EXISTING WELL
(5) EXISTING STORAGE SHED
(6) EXISTING GREETING KIOSK
(7) EXISTING POLE BARN
(8) EXISTING SALES OFFICE
(9) EXISTING GIFT SHOP
(10) EXISTING PARKING AREA
(11) EXISTING RANCH ROADS
(12) EXISTING CHRISTMAS TREE PLANTATIONS
(13) EXISTING TIMBER LANDS
(14) EXISTING BRIDGE
(15) EXISTING FOOT BRIDGE
(16) EXISTING POND
OWNER/APPLICANT
APN 080-540-003-000
GERALDINE F. HYDER TRUSTEE OF
THE RAYMOND L. HYDER AND
GERALDINE F. HYDER 1994 TRUST
3800 NORTH CANYON RD.
CAMINO, CA 95709
REZONE
SITE MAP
A PORTION OF THE NORTHWEST 1/4 OF
SECTION 36 T. 11 N., R. 11 E., M. D. M.
BEING TRACT 1 OF RS 38/05
COUNTY OF EL DORADO STATE OF CALIFORNIA
AUGUST 2022
SCALE 1" = 60'
CONTOUR INTERVAL = 10'
MAP PREPARED BY
JAMES WILSON, LS 4663
SITE CONSULTING INC
3460 ANGEL LANE
PLACERVILLE, CA 95667
VICINITY MAP
SITE
CAMINO
HASSLER RD
NORTH CANYON RD
CARSON RD
HWY 50


WATER SOURCE
EXISTING WELL
WASTE WATER DISPOSAL
EXISTING SEPTIC SYSTEM
SITE NOTES
(1) EXISTING HOUSE
(2) EXISTING SEPTIC AREA
(3) EXISTING DRIVEWAY
(4) EXISTING WELL
(5) EXISTING STORAGE SHED
(6) EXISTING GRATING KEYOS
(7) EXISTING POLE BARN
(8) EXISTING SALES OFFICE
(9) EXISTING GIFT SHOP
(10) EXISTING PARKING AREA
(11) EXISTING RANCH ROADS
(12) EXISTING CHRISTMAS TREE PLANTATIONS
(13) EXISTING TIMBER LANDS
(14) EXISTING BRIDGE
(15) EXISTING FOOT BRIDGE
(16) EXISTING POND
OWNER/APPLICANT
APN 085-540-003-000
GERALDINE F. HYDER TRUSTEE OF THE RAYMOND L. HYDER AND GERALDINE F. HYDER 1994 TRUST
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JAMES WILSON, LS 4663
SITE CONSULTING INC.
3450 ANGEL LANE
PLACERVILLE, CA 95667
VICINITY MAP
SITE
CAMINO
HWY 50
100' SETBACK LINE
NORTH CANYON ROAD
CREEK
APN: 085-540-003
THE RAYMOND L. HYDER AND
GERALDINE F. HYDER 1994 TRUST
4408/164
TRACT 1 RS 38/5
50.00' WIDE SMUD POWER LINE EASEMENT PER 779/402
100.00' PG&E POWER LINE EASEMENT PER 95/46
S36
APN: 085-540-030
2013-0057400
APN: 085-540-031
2013-0035954
APN: 085-540-033
PM 14/15
PARCEL 1
APN: 085-540-034
PM 14/15
PARCEL 2

APPENDIX A
INDIAN ROCK TREE FARM
FIRESCAPING STANDARDS

Firescaping is an approach to landscaping to help protect homes from wildland fires. The goal is to create a landscape that will slow the advance of a wildfire and create a Defensible Space that provides the key point for firefighting agencies to defend the home. This approach has a landscape zone surrounding the home containing a balance of native and exotic plants that are fire and drought resistant, help control erosion, and are visually pleasing. Firescaping is designed not only to protect the home but to reduce damage to oaks and other plants.

Zone 0

This is the 5' ember resistant zone. No flammable vegetation or ground cover is allowed within 5' of the residence foundation.

Zone I

The zone extends to not less than 30 feet from the house **or to the property line whichever is less** in all directions and has a traditional look of irrigated shrubs, flowers gardens, trees and lawns. All dead trees, brush, concentrations of dead ground fuels (tree limbs, logs etc. exceeding 1inch in diameter) shall be removed. All native oak trees, conifers and brush species are pruned up to 10 feet above the ground as measured on the uphill side but no more than 1/3 of the live crown. The plants in this zone are generally less than 18 inches in height, must be slow to ignite from windblown sparks and flames. Such plants should produce only small amounts of litter and retain high levels of moisture in their foliage year around. Native and exotic trees are permitted inside the Zone, but foliage may not be within 10 feet of the roof or chimney. Grass and other herbaceous growth within this zone must be irrigated or if left to cure must be mowed to a 2 inch stubble, chemically treated or removed. Such treatment must be accomplished by June 1, annually. This zone has built in firebreaks created by driveways, sidewalks etc.

Zone II

This Zone adds 70 feet to Zone I and extends a minimum of 100 feet from the house in all directions, **or to the property line whichever is less,** and is a transition area to the outlying vegetation. The zone is a band of low growing succulent ground covers designed to reduce the intensity, flame length and rate of spread of an approaching wildfire. Irrigation may be necessary to maintain a quality appearance and retain the retardant ability of the plants. All dead trees, brush, concentration of dead ground fuels (tree limbs, logs etc.) exceeding 2 inches in diameter shall be removed. Annual grasses shall be mowed after they have cured to a 2 inch stubble by June 1, annually. Native trees and brush species may be preserved and pruned of limbs up to 8 feet above the ground as measured on the uphill side.

For All Zones With Oaks

Mature, multi stemmed Oaks can present a serious wildfire problem if untreated. Treat the Oaks as to the following specifications: (a) remove all dead limbs and stems and (b) cut off green stems at 10 feet above the ground as measured on the uphill side that arch over and are growing down towards the ground.

APPENDIX A

CAL FIRE GUIDELINE