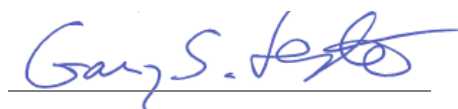


TECHNICAL MEMORANDUM

Potential Biological Impacts Review
Redwood Valley Water Infrastructure Retrofit
Redwood Valley, Mendocino County, California

Date: June 27, 2018
Project No.: 7746.15

Prepared By: Gary Lester
Senior Biologist



Reviewed By: Christopher J. Watt, CEG, CHG
Principal Engineering Geologist



Attachments: Figure 1:

Project Location Map

Appendix A
Appendix B

U.S. Fish and Wildlife Service Species List
California Department of Fish and Wildlife
Redwood Valley California Natural Diversity
Data Base Query

1.0 INTRODUCTION

The project proposes to upgrade existing water main and service lateral infrastructure within the Redwood Valley County Water District (RVCWD, the District) to current seismic design standards for water infrastructure. Existing infrastructure was installed at unknown times, to unknown design standards, using unknown materials and unknown techniques and is considered significantly vulnerable to seismic hazards. Upgrades will be accomplished by abandoning in place the existing 4-inch diameter low code water mains, installing new 6-inch water mains, and replacing existing low code water laterals with new 1-inch diameter laterals designed to meet current seismic standards. Approximately 15,026 linear feet of existing low code 4-inch diameter water mains will be abandoned in place and replaced with new 6-inch diameter polyvinyl chloride (PVC) water mains, while 5,631 feet of new 6-inch diameter PVC water main is proposed to be installed in strategic locations throughout the District to create system loops and improve system resilience and water quality. The project will also identify and replace existing low code 0.75-inch diameter water laterals with 2016 California Residential Code compliant 1-inch diameter water service laterals. The exact number of laterals to be replaced will be identified in Phase I, and only existing laterals associated with existing or burned residences will be upgraded; there will be no new (non-replacement) laterals installed and therefore no new connections to water district infrastructure. These upgrades will

replace the existing infrastructure of questionable construction with new infrastructure designed to meet modern seismic design standards and perform more reliably under seismic hazards.

The proposed project is located near the unincorporated community of Redwood Valley, Mendocino County, California, as identified in the attached location map (Figure 1) and is broken up into eight (8) distinct project areas (Blocks A-H). The proposed line replacement/upgrade will occur within existing Mendocino County roadways, existing private driveways, and currently active agricultural fields.

A biological data review was conducted, and this technical memorandum was prepared by LACO's senior biologist, Gary Lester, in order to document biological concerns and potential impacts due to proposed water line construction activities.

2.0 DATA REVIEW

A review of topographic maps, aerial photography, maps, Redwood Valley Water District project boundary, U. S. Fish and Wildlife Service (FWS) species list (Appendix A), and the California Department of Fish and Wildlife's (Appendix B, CDFW, 2018) California Natural Diversity Data Base (CNDDB) (<http://www.dfg.ca.gov/biogeodata/cnddb/>) prior to the review for the potential presence of sensitive species. We reviewed the Redwood Valley Water District project boundary, U.S. Geological Survey Quad species list from the Arcata Field Office of the U.S. Fish and Wildlife Service. The National Wetlands Inventory was also reviewed and no seasonal wetlands were identified in the District project boundaries. One surface water feature was noted as occurring at a proposed overland waterline route in project Area G, but it appears that an existing road currently crosses the drainage and is utilizing an existing culvert or bridge structure.

3.0 SENSITIVE SPECIES ANALYSIS

3.1 Potential Federally Listed Species Occurrence

All species included on Table 1 are Federally Listed species potentially occurring in the project area that were provided when a site specific Federal species list request was sent to the Arcata FWS field station (Appendix A) as is required for all Federally funded projects. The list was reviewed to determine the potential presence in the vicinity of the proposed pipeline alignments and each species is summarized below.

Table 1. Federally Listed Species Potentially Present in the Proposed Project Area

Species	Common Name	List Status	Preferred Habitat
<i>Brachyramphus marmoratus</i>	Marbled Murrelet	Threatened	Old growth redwoods (nesting)
<i>Strix occidentalis caurina</i>	Northern Spotted Owl	Threatened	Closed canopy coniferous forests
<i>Charadrius nivosus</i>	Western Snowy Plover	Threatened	Beaches/gravel bars (nesting)
<i>Coccyzus americanus</i>	Yellow-billed Cuckoo	Threatened	River gallery forest riparian
<i>Rana draytonii</i>	California Red-legged Frog	Threatened	Ponds within the San Francisco Bay watershed
<i>Lasthenia burkei</i>	Burke's goldfields	Endangered	Vernal pools
<i>Lasthenia conjugens</i>	Contra Costa goldfields	Endangered	Vernal pools
<i>Trifolium amoenum</i>	Showy Indian clover	Endangered	Moist heavy soils

The following summaries are for the federally listed species shown in Table 1 above, none of which are expected to occur in the project area.

The **Marbled Murrelet** is confined to old growth forests in close proximity of northern California waters. No nesting habitats occur in Redwood Valley.

Habitat for the **Northern Spotted Owl** is closed canopy coniferous forests in northwestern California. No closed canopy coniferous forests occur in the project area. Closest known Spotted Owl observation and known nesting pair is over 1 mile from Area A (CNDDB, 2018).

Western Snowy Plover is known from coastal beaches and Eel River (Humboldt County only) gravel bars. No habitat is found in the project area.

Yellow-billed Cuckoo is known from well-developed riparian forests. No riparian forest of any substantial size is found in the project area.

California Red-legged Frog is reported from south coastal Mendocino County but is unknown from the upper Russian River watershed (CDFW, 1988-1990, 2014).

The **Burke's goldfields** are reported discovered in 1886 from Ukiah but no other subsequent records are known from Mendocino County (Jepson Interchange, 2018, Sonoma County being the current closest known populations). The Ukiah type location may have been apocryphal. That said there is no vernal pool habitat in the project area.

The **Contra Costa goldfields** are known only in Mendocino County from coastal Manchester record in 1937 (Jepson Interchange, 2018). There are no interior Mendocino County records and no vernal pool habitat occurs in the project area.

3.2 Potential CNDDB Records Species Present

According to CNDDB records for the Redwood Valley Quad species search (Appendix B), the potential species shown are listed in Table 2. Only scattered oak woodland, agricultural fields, and ruderal habitats were present, eliminating many of the sensitive species specific to other types of habitats.

Table 2. CNDDB Species Potentially Present at the Proposed Project Area

Species	Common Name	Fed/State List	Preferred Habitat
<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	None	Cavernous roost sites
<i>Pekania pennanti</i>	Fisher, West Coast distinct population segment (DPS)	State threatened candidate	Complex coniferous forest
<i>Emys marmorata</i>	Western Pond Turtle	None	Open fresh water
<i>Plagiobothrys lithocaryus</i>	Mayacamas popcorn flower	None	Valley and foothill grasslands, chaparral, woodlands
<i>Navarretia leucocephala</i> ssp. <i>bakeri</i>	Baker's navarretia	None	Vernal pools

The following summaries are for the CNDDDB listed species shown in Table 2.

Townsend's big-eared bats are known to roost and breed in relatively, large, undisturbed and dark cavernous enclosed spaces (caves, tunnels, attics...). No such features or structures will be disturbed or are located in the project area.

The **Fisher** is known from northern California mixed conifer forests. No such habitat occurs in the project area.

The **Western pond turtle** is known from northern California freshwater ways and ponds. No turtle habitat is expected to be disturbed in the project area.

The **Mayacamas popcornflower** is known only from six specimen records in northern California (Lake, Mendocino counties) from 1884-1899 (Jepson Interchange, 2018). It is reported from moist sites (vernal pools?) but little is known of its exact habitat preference. No vernal pool habitat is known from the project area.

The **Baker's navarretia** was reported in 1941, from Redwood Valley (Jepson Interchange, 2018). No suitable habitat (vernal pools) for this species occurs in the project area.

Not included in either records search is the possible occurrence of listed fish species in the project area. The upper Russian River and its tributaries (i. e. Rocky, Mariposa, Corral, and Fisher creeks) occur within the Redwood Valley Water District boundaries. Anadromous fish species found within this stream system (NOAA, 2000) include Coho salmon (*Oncorhynchus kisutch*) and steelhead (*Oncorhynchus mykiss*). An examination of the project footprint (Figure 1), no pipeline crossings are proposed over any of these fish-bearing streams. Not shown above are the possible occurrence and potential impacts to nesting resident and migratory birds. Mitigation to possible nesting raptors and other bird species is provided in the recommendation section below.

4.0 RECOMMENDATIONS

LACO recommends the following considerations during and prior to construction activities:

- Any tree or heavy vegetation removal will be performed outside the bird breeding season (September 15-March 1).
- At a minimum of 14 days prior to proposed construction or road work, a qualified biologist will walk the proposed road and overland alignments prior to construction to identify any active raptor nest within 250'. If an active raptor nest is located within 250' of proposed construction, the nest shall not be approached any closer than 250' until a qualified biologist determines that the nest is no longer active or the chicks have fledged. Any other native bird nests located shall be protected by safety flagging and the operator instructed to avoid direct disturbance.

Every effort should be made to avoid mature native plant community locations from heavy equipment impacts, soil or gravel stockpile areas, or equipment staging areas. Careful consideration must be made to avoid disturbance to higher quality habitat in favor of lesser quality habitat or if lesser disturbance would be to simply stay on existing established roadways.

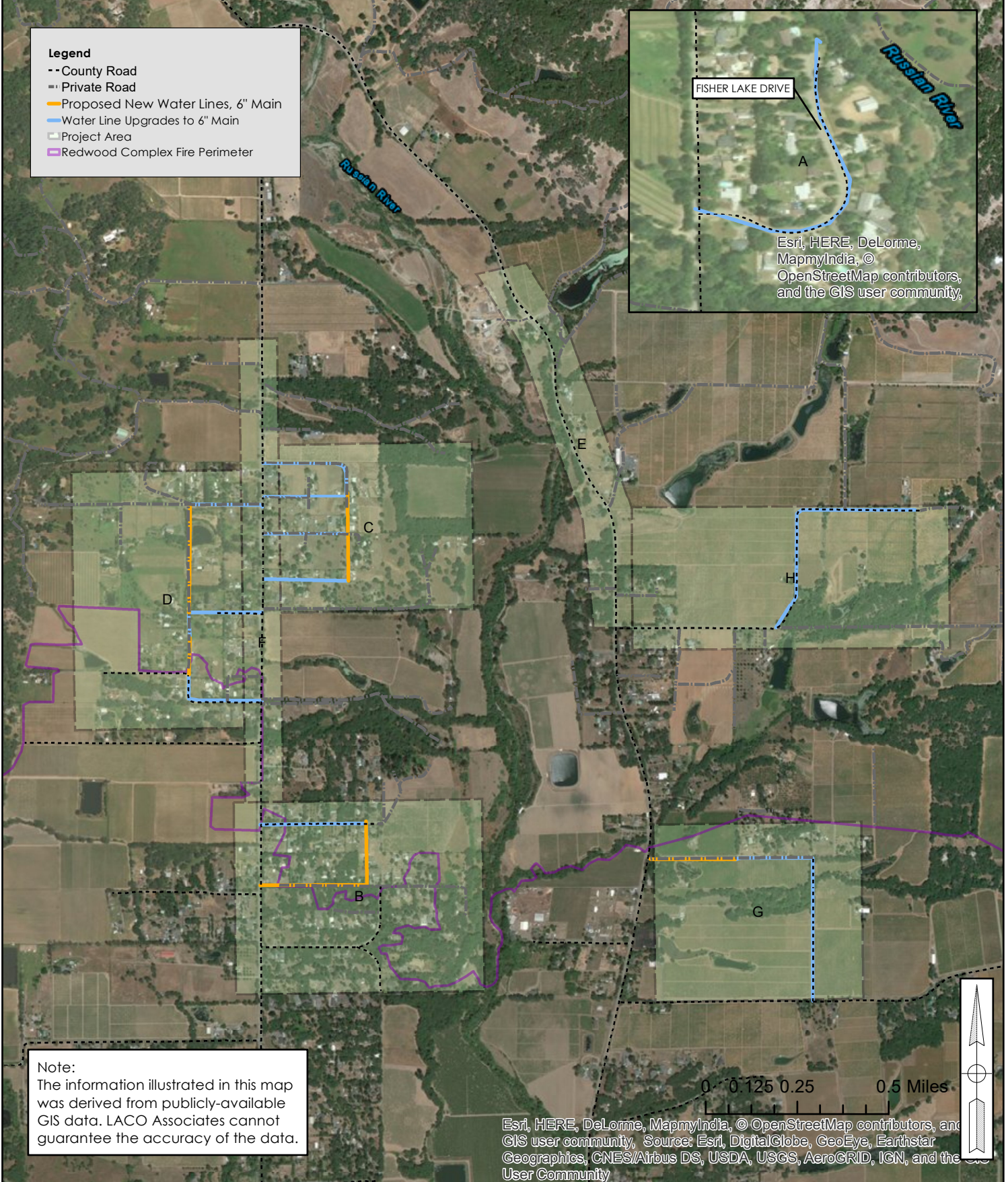
5.0 REFERENCES

- California Department of Fish and Wildlife. 1988-1990, 2008, 2014. Zeiner, D.C., W.F. Laudenslayer, Jr., K.E. Mayer, and M. White, eds. 1988-1990. California's Wildlife. Vol. I-III. California Department of Fish and Game, Sacramento, California. Updates CWHR Staff (2008) Original Map, CWHR Program/A Wright/ R Thomson (2014).
- California Department of Fish and Wildlife. March 23, 2018. California Natural Diversity Data Base (CNDDB). Redwood Valley Quad. Sacramento, CA.
- Jepson Interchange, 2018. The Jepson Herbarium. University of California, Berkeley.
<http://ucjeps.berkeley.edu/interchange/>.
- National Marine Fisheries Service. 2000. California Coastal Salmon and Steelhead, Current Stream Habitat Distribution Table, Mendocino County Streams, prepared by Weldon Jones. 127 pp.
- U.S. Fish and Wildlife Service, March 23, 2018. Redwood Valley Quad Species List, Arcata Field Office, CA.

FIGURE 1

Project Location Map

REUSE OF DOCUMENTS: This document and the ideas and design incorporated herein, as an instrument of professional service, is the property of LACO Associates and shall not be reused in whole or part for any other project without LACO Associates express written authorization.



APPENDIX A

U.S. Fish and Wildlife Service, Project Species List



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Arcata Fish And Wildlife Office

1655 Heindon Road

Arcata, CA 95521-4573

Phone: (707) 822-7201 Fax: (707) 822-8411



In Reply Refer To:

March 23, 2018

Consultation Code: 08EACT00-2018-SLI-0170

Event Code: 08EACT00-2018-E-00340

Project Name: Redwood Valley Water District water main & lateral replacement

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

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, 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>

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

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

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

Attachment(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:

Arcata Fish And Wildlife Office

1655 Heindon Road

Arcata, CA 95521-4573

(707) 822-7201

Project Summary

Consultation Code: 08EACT00-2018-SLI-0170

Event Code: 08EACT00-2018-E-00340

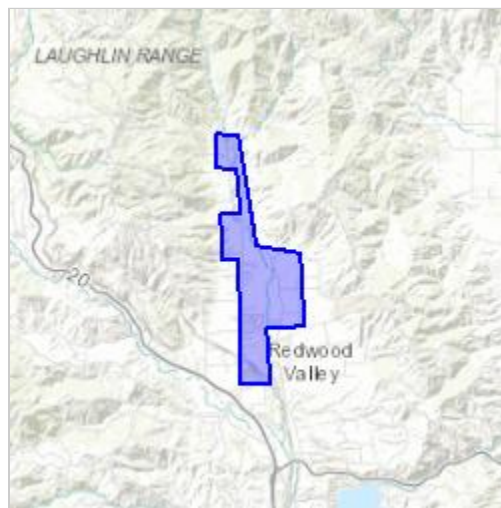
Project Name: Redwood Valley Water District water main & lateral replacement

Project Type: WATER SUPPLY / DELIVERY

Project Description: Due to 2017 fire damage, the RVWD proposes to replace the water main & laterals in 7 separate district locations.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/39.30347730623751N123.21231680471058W>



Counties: Mendocino, CA

Endangered Species Act Species

There is a total of 8 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 Fisheries¹, 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.

Birds

NAME	STATUS
Marbled Murrelet <i>Brachyramphus marmoratus</i> Population: U.S.A. (CA, OR, WA) There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/4467	Threatened
Northern Spotted Owl <i>Strix occidentalis caurina</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1123	Threatened
Western Snowy Plover <i>Charadrius alexandrinus nivosus</i> Population: Pacific Coast population DPS-U.S.A. (CA, OR, WA), Mexico (within 50 miles of Pacific coast) There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8035	Threatened
Yellow-billed Cuckoo <i>Coccyzus americanus</i> Population: Western U.S. DPS There is proposed critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3911	Threatened

Amphibians

NAME	STATUS
California Red-legged Frog <i>Rana draytonii</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2891	Threatened

Flowering Plants

NAME	STATUS
Burke's Goldfields <i>Lasthenia burkei</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4338	Endangered
Contra Costa Goldfields <i>Lasthenia conjugens</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7058	Endangered
Showy Indian Clover <i>Trifolium amoenum</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6459	Endangered

Critical habitats

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

APPENDIX B

California Department of Fish and Wildlife, California Natural Diversity Data Base, Redwood Valley Quad Record Search



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Query Criteria: Quad IS (Redwood Valley (3912332))

Map Index Number: 92743 EO Index: 93900
Key Quad: Redwood Valley (3912332) Element Code: AMACC08010
Occurrence Number: 487 Occurrence Last Updated: 2014-06-11

Scientific Name: *Corynorhinus townsendii* Common Name: Townsend's big-eared bat
Listing Status: Federal: None Rare Plant Rank:
State: None Other Lists: BLM_S-Sensitive
CNDDB Element Ranks: Global: G3G4 CDFW_SSC-Species of Special Concern
State: S2 IUCN_LC-Least Concern
USFS_S-Sensitive
WBWG_H-High Priority

General Habitat: Micro Habitat:
THROUGHOUT CALIFORNIA IN A WIDE VARIETY OF HABITATS. MOST ROOSTS IN THE OPEN, HANGING FROM WALLS AND CEILINGS.
COMMON IN MESIC SITES. ROOSTING SITES LIMITING. EXTREMELY SENSITIVE TO HUMAN
DISTURBANCE.

Last Date Observed: 1969-04-03 Occurrence Type: Natural/Native occurrence
Last Survey Date: 1969-04-03 Occurrence Rank: Unknown
Owner/Manager: UNKNOWN Trend: Unknown
Presence: Presumed Extant

Location:
ABOUT 3.7 MI E OF BEVANS CREEK 387 DAM AND ABOUT 5 MI N OF CALPELLA.
Detailed Location:
EXACT LOCATION UNKNOWN. MAPPED TO PROVIDED LOCALITY OF 5 MI N OF CALPELLA.

Ecological:

Threats:

General:

1 MALE COLLECTED ON 3 APR 1969 BY L. CHRISTIANSON (CAS #15287) AT A CAVE.

PLSS: T17N, R12W, Sec. 28 (M) Accuracy: 1 mile Area (acres): 0
UTM: Zone-10 N4350738 E482526 Latitude/Longitude: 39.30586 / -123.20267 Elevation (feet): 860

County Summary: Quad Summary:
Mendocino Redwood Valley (3912332)

Sources:

CHR69S0001 CHRISTIANSON, L. - CAS #15287 1969-04-03



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number: 98476
Key Quad: Redwood Valley (3912332)
Occurrence Number: 767
EO Index: 99906
Element Code: AMAJF01021
Occurrence Last Updated: 2016-01-12

Scientific Name: *Pekania pennanti*
Common Name: fisher - West Coast DPS
Listing Status: **Federal:** None
State: Candidate Threatened
Rare Plant Rank:
CNDDB Element Ranks: **Global:** G5T2T3Q
State: S2S3
Other Lists: BLM_S-Sensitive
CDFW_SSC-Species of Special Concern
USFS_S-Sensitive

General Habitat: INTERMEDIATE TO LARGE-TREE STAGES OF CONIFEROUS FORESTS AND DECIDUOUS-RIPARIAN AREAS WITH HIGH PERCENT CANOPY CLOSURE.
Micro Habitat: USES CAVITIES, SNAGS, LOGS AND ROCKY AREAS FOR COVER AND DENNING. NEEDS LARGE AREAS OF MATURE, DENSE FOREST.

Last Date Observed: 2012-12-12
Last Survey Date: 2012-12-12
Owner/Manager: PVT
Presence: Presumed Extant
Occurrence Type: Natural/Native occurrence
Occurrence Rank: Good
Trend: Unknown

Location: ABOUT 1.5 MI ENE OF RUSSIAN RIVER AT CORRAL CREEK, W OF CAVE CREEK RD, ABOUT 2.5 MI S OF LAKE LEE, 9.5 MI SE OF WILLITS.

Detailed Location: MAPPED TO PROVIDED COORDINATES.

Ecological: OPEN STAND OF BLACK OAK, MADRONE, AND MANZANITA, INTERSPERSED WITH GRASSY OPENINGS. GENTLE NORTHERN SLOPE.

Threats: LIKELY EXPOSED TO ANTICOAGULANT RODENTICIDE WITHIN HOME RANGE, BUT NOT AT SPECIFIC SITE DUE TO STUDY DESIGN SAFETY.

General: FISHER DETECTED TAKING BAIT AND INVESTIGATING BAIT TREE AT CAMERA STATION ON 12 DEC 2012.

PLSS: T17N, R12W, Sec. 9, N (M) **Accuracy:** 80 meters **Area (acres):** 5
UTM: Zone-10 N4355068 E482956 **Latitude/Longitude:** 39.34488 / -123.19779 **Elevation (feet):** 1,179

County Summary: Mendocino
Quad Summary: Redwood Valley (3912332)

Sources:
KOL13F0005 KOLLER, S. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - FIELD SURVEY FORM FOR MARTES PENNANTI 2013-01-10
KOL14R0001 KOLLER, S. ET AL. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - DISTRIBUTION OF FISHER (P. PENNANTI) IN SOUTHERN HUMBOLDT & MENDOCINO COUNTIES AND HUMBOLDT MARTEN (M. C. HUMBOLDTENSIS) IN PRAIRIE CREEK REDWOODS & HUMBOLDT REDWOODS STATE PARKS 2014-12-11



Occurrence Report
California Department of Fish and Wildlife
California Natural Diversity Database



Map Index Number: 52692	EO Index: 52692
Key Quad: Redwood Valley (3912332)	Element Code: ARAAD02030
Occurrence Number: 585	Occurrence Last Updated: 2003-09-30

Scientific Name: <i>Emys marmorata</i>	Common Name: western pond turtle
Listing Status: Federal: None State: None	Rare Plant Rank:
CNDDB Element Ranks: Global: G3G4 State: S3	Other Lists: BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable USFS_S-Sensitive

General Habitat: A THOROUGHLY AQUATIC TURTLE OF PONDS, MARSHES, RIVERS, STREAMS AND IRRIGATION DITCHES, USUALLY WITH AQUATIC VEGETATION, BELOW 6000 FT ELEVATION.	Micro Habitat: NEEDS BASKING SITES AND SUITABLE (SANDY BANKS OR GRASSY OPEN FIELDS) UPLAND HABITAT UP TO 0.5 KM FROM WATER FOR EGG-LAYING.
---	--

Last Date Observed: 2003-08-06	Occurrence Type: Natural/Native occurrence
Last Survey Date: 2003-08-06	Occurrence Rank: Fair
Owner/Manager: UNKNOWN	Trend: Unknown
Presence: Presumed Extant	

Location:
WEST FORK OF THE RUSSIAN RIVER, DOWNSTREAM OF MUMFORD DAM, 0.8 MILE NORTH OF REDWOOD VALLEY.

Detailed Location:
SITE IS LOCATED ABOUT 1000 FEET DOWNSTREAM OF MUMFORD DAM.

Ecological:
HABITAT CONSISTS OF A SLOW-MOVING SEGMENT OF RIVER, WITH 1-6' DEPTHS, IN A WILLOW/ALDER RIPARIAN ZONE.

Threats:
General:
2 ADULTS CAPTURED DURING STREAM RESTORATION AND RELOCATED DOWNSTREAM OF THE PROJECT; 1 TURTLE WAS A MALE WITH A 150 MM CARAPACE.

PLSS: T17N, R12W, Sec. 32 (M)	Accuracy: 80 meters	Area (acres): 0
UTM: Zone-10 N4347727 E482102	Latitude/Longitude: 39.27871 / -123.20750	Elevation (feet): 720

County Summary: Mendocino	Quad Summary: Redwood Valley (3912332)
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Sources:
COO03F0007 COOK, D. (SONOMA COUNTY WATER AGENCY) - FIELD SURVEY FORM FOR CLEMMYS (=EMYS) MARMORATA MARMORATA 2003-08-06



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number:	28368	EO Index:	20117
Key Quad:	Potter Valley (3912331)	Element Code:	PDBOR0V0P0
Occurrence Number:	2	Occurrence Last Updated:	1996-10-10

Scientific Name:	<i>Plagiobothrys lithocaryus</i>	Common Name:	Mayacamas popcornflower
Listing Status:	Federal: None	Rare Plant Rank:	1A
	State: None	Other Lists:	
CNDDDB Element Ranks:	Global: GH		
	State: SH		

General Habitat:	Micro Habitat:
CHAPARRAL, CISMONTANE WOODLAND, VALLEY AND FOOTHILL GRASSLAND.	MOIST SITES. 300-450 M.

Last Date Observed:	1899-04-XX	Occurrence Type:	Natural/Native occurrence
Last Survey Date:	1899-04-XX	Occurrence Rank:	Unknown
Owner/Manager:	UNKNOWN	Trend:	Unknown
Presence:	Presumed Extant		

Location:
POTTER VALLEY.

Detailed Location:
EXACT LOCATION WITHIN POTTER VALLEY UNKNOWN. MAPPED BY CNDDDB IN VICINITY OF TOWN OF POTTER VALLEY.

Ecological:

Threats:

General:
ONLY SOURCE OF INFORMATION FOR THIS SITE IS 1899 COLLECTION BY PURPUS.

PLSS:	T17N, R11W, Sec. 18 (M)	Accuracy:	1 mile	Area (acres):	0
UTM:	Zone-10 N4352962 E489759	Latitude/Longitude:	39.32601 / -123.11881	Elevation (feet):	950

County Summary:	Quad Summary:
Mendocino	Potter Valley (3912331), Redwood Valley (3912332)

Sources:

MES91U0001	MESSICK, T. - INFORMATION ON PLAGIOBOTHRYUS FOR THE 5TH EDITION OF THE INVENTORY. 1991-11-12
PUR99S0001	PURPUS, N. - PURPUS SN UC #24563 1899-04-XX



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number: 30110 **EO Index:** 10051
Key Quad: Redwood Valley (3912332) **Element Code:** PDPLM0C0E1
Occurrence Number: 18 **Occurrence Last Updated:** 1996-10-10

Scientific Name: *Navarretia leucocephala ssp. bakeri* **Common Name:** Baker's navarretia
Listing Status: **Federal:** None **Rare Plant Rank:** 1B.1
State: None **Other Lists:** BLM_S-Sensitive
CNDDB Element Ranks: **Global:** G4T2
State: S2

General Habitat: CISMONTANE WOODLAND, MEADOWS AND SEEPS, VERNAL POOLS, VALLEY AND FOOTHILL GRASSLAND, LOWER MONTANE CONIFEROUS FOREST.
Micro Habitat: VERNAL POOLS AND SWALES; ADOBE OR ALKALINE SOILS. 3-1680 M.

Last Date Observed: 1941-05-30 **Occurrence Type:** Natural/Native occurrence
Last Survey Date: 1941-05-30 **Occurrence Rank:** Unknown
Owner/Manager: UNKNOWN **Trend:** Unknown
Presence: Presumed Extant

Location:
REDWOOD VALLEY. 4 MILES NORTH OF CALPELLA.

Detailed Location:

Ecological:
WET DEPRESSIONS IN FIELD.

Threats:

General:
ONLY SOURCE OF INFORMATION FOR THIS SITE IS 1941 COLLECTION BY TRACY.

PLSS: T17N, R12W, Sec. 29 (M) **Accuracy:** 1 mile **Area (acres):** 0
UTM: Zone-10 N4349734 E481903 **Latitude/Longitude:** 39.29680 / -123.20986 **Elevation (feet):** 850

County Summary: Mendocino **Quad Summary:** Redwood Valley (3912332)

Sources:
TRA41S0001 TRACY, J. - TRACY #16884 UC #906679, DAV #48321 1941-05-30