

Little Case Two Barrier Removal Project ***(Project ID: 1727751) 2022***

Introduction:

The Eel River Watershed Improvement Group (ERWIG) (Grantee) evaluated two culverted stream crossings for fish passage and were found to be barriers to anadromous salmon and trout. They are both partial barriers to adult salmonids and total barriers to juvenile salmonids. They block access to a mile of spawning and rearing habitat. The engineering firm, Stillwater Sciences, developed 100% design plans to remove the culverts and replace them with bridges. The Technical Advisory Committee (TAC) provided input as the designs were developed. The objective of this project is to implement the designs by removing the barriers, replacing with bridges which will restore unimpeded fish passage for all life stages of Coho, Chinook and steelhead. Additionally, log and boulder structures will be built to provide habitat within the project area and to promote long-term channel stability.

The Grantee shall not proceed with on the ground implementation until all necessary permits, consultations, and/or Notice to Proceed are secured. All habitat improvement(s) will follow techniques in the *California Salmonid Stream Habitat Restoration Manual -Volume 2, Part XII.*

<https://www.wildlife.ca.gov/Grants/FRGP/Guidance>)

Does the project involve the construction of beaver analogs?

Yes or No

Is the project located in a tidally influenced [California coastal zone](#)?

Yes or No

Objective:

The objective of this project is to replace two existing culverts on Little Case Creek with bridges that allow fish passage at all flows and life stages. This project will provide unimpeded access to approximately a mile of spawning and rearing habitat.

Project Description:

Location:

The project is located on Little Case Creek, a tributary to Tenmile Creek, tributary to the South Fork Eel River. It is located in Laytonville, CA at Township 21 North, Range 15 West, Section 10 of the Cahto Peak 7.5 Minute U.S. Geological Survey Quadrangle. Culvert 1 is located at 39.68385 N, -123.51815 W; it is

under an unnamed private road approximately 4,100 feet upstream from the confluence with Tenmile Creek. Culvert 2 is located at 39.68418 N, -123.51123 W; it is under Fitch Road, approximately 4,980 feet upstream from the confluence with Tenmile Creek. The approximate coordinates at the center of the project are: 39.68396 N, -123.51969 W.

Project Set Up:

The Eel River Watershed Improvement Group (ERWIG): Contract oversight, planning and reporting will be conducted by ERWIG Executive Director. ERWIG Project Manager: Will manage project setup and project implementation. Project manager will monitor water quality, collect pre- and post- project metrics, take pre- and post- project photos and plant native trees. Project manager will assist Executive Director in writing annual and final reports.

General Engineering Construction Contractor TBD: Will participate in project planning, will carry out equipment transportation, and will be responsible for all heavy equipment activities including sourcing logs for the project, culvert removal and disposal, bridge installation, guardrail installation, purchasing and placing rock, log placement, and any digging necessary to complete the project. Contractor will also be responsible for dewatering the creek and erosion control material placement.

Conservation Corps (CCC) Corpsmembers: Will anchor the structures according to design and anchoring specifications. CCC will also install willow trees.

Stillwater Sciences: Will oversee culvert removal, bridge installation, and the construction of LWD and boulder structures. Will complete the fish passage survey and write a fish passage assessment report.

Biologist (TBD): Will remove aquatic life, primarily fish, from project site and place block nets. Inspector (TBD) (Special Inspections): Will inspect bridge footings, soil compaction, welds, and any other special inspections required by the Mendocino County Building Permit.

William Rich & Associates: Will carry out archeological and botanical background and survey work. Will produce reports satisfying CEQA requirements.

Paleontology subcontractor: Will conduct paleontology research and surveys and will prepare a report satisfying CEQA requirements. A subcontractor with experience conducting CEQA compliant investigations and reporting will be chosen for this task.

Tree Waterer: Will water planted trees during the summer after project completion. This work will be paid for by the landowner (donated) and carried out

by the landowner's property caretaker.

Materials:

Anchoring materials logs and boulders for large wood and boulder structures. These materials are required to securely anchor large wood and rock.

Erosion Control Materials including bio-block and stabilization mats to be placed on exposed soil prior to significant rainfall.

Two metal bridges to be anchored to the abutments to be placed on exposed soil prior to significant rainfall.

Pre-fabricated concrete abutments

Native Trees for re-vegetation (seventeen fir logs)

Rental of Portable Toilet for subcontractors and ERWIG staff to use while on site.

Boulders for structures and to armor bank in select places.

Engineered streambed material for roughened channel.

on-site and additional Cobble & boulder rock armor to be used for bed and bank protection and incorporated into log and boulder structures

3` base road rock for road surfacing.

Tasks:

Task 1. CEQA Surveys and Research

William Rich & Associates will conduct archeological and botanical surveys within the project reach to fulfill CEQA requirements. Interim survey reports will be delivered to CDFW Grant Manager prior to receiving a Notice to Proceed. Paleontological survey crew will conduct paleontological research and surveys and prepare reports.

Task 2. Site Preparation

Stillwater staff and ERWIG staff will flag and stake sites for material delivery and installation, clear brush for equipment as needed, and designate staging areas for equipment, rock and wood. General Engineering Construction Contractor will deliver heavy equipment, rock, erosion control materials and bridges to work site. ERWIG will collect pre-project photos and metrics. ERWIG will purchase project materials, including anchoring materials, rice straw and pre-fabricated abutments. ERWIG will obtain a building permit from Mendocino County and an

LSAA permit from CDFW. To address concerns over invasive species, this project will follow the ERWIG Aquatic Invasive Species Decontamination Protocol which is in line with the CDFW Aquatic Invasive Species Decontamination Protocol.

Task 3. Aquatic Species Relocation

Block nets will be set up and fish will be removed from the section of stream that is to be dewatered using an efisher, operated by a qualified professional biologist (TBD). Relocated fish will be placed in suitable habitat upstream and/or downstream of the project site. Amphibians will be caught with a dip net and relocated upstream and/or downstream of the section of stream to be dewatered. It is anticipated that CDFW staff will oversee aquatic species relocation activities.

Task 4: Dewatering

General Engineering Construction contractor shall construct coffer dams upstream and downstream of each excavation site (within the fish exclusion zone) and divert all flow from upstream of the upstream dam to downstream of the downstream dam. The coffer dams may be constructed with clean river gravel or sand bags, and may be sealed with sheet plastic. The suction end of the intake pipe shall be fitted with fish screens meeting DFG and NOAA criteria to prevent entrainment or impingement of small fish. Any turbid water pumped from the work site itself to maintain it in a dewatered state shall be disposed of in an upland location where it will not drain directly into any stream channel. Sand bags and any sheet plastic shall be removed from the stream upon project completion. Clean river gravel may be left in the stream, but the coffer dams must be breached to return the stream flow to its natural channel.

Task 5: Site Construction

With guidance from Stillwater Engineer and ERWIG staff, General Engineering Construction Contractor (TBD) will remove the existing culverts. Removal of the existing culverts and fill prism will involve excavation of approximately 575 cubic yards of material which will be used for backfill or disposed of at a legal dumpsite. Construction contractor will further excavate the stream channel to design specifications in order to prepare for bridge installation. Pre-cast concrete abutments will be set on stabilization mats and the bridge will be anchored to the abutments. Construction Contractor will add guard/rub rails to bridges. Purchased rock will be used to stabilize the stream banks and will be incorporated into log and boulder structures. On-site rock and some additional imported cobble and may be used for streambed material. Logs will be sourced locally and used by the construction contractor to build LW structures. A special inspections subcontractor will inspect soil compaction, welds and abutments. ERWIG staff will monitor water quality as needed.

Task 5.1: Anchoring

California Conservation Corps (CCC) corpsmembers under supervision of ERWIG staff will anchor the sites according to design and anchoring

specifications. Site construction, wood placement, and anchoring will follow engineered design plans and will be in accordance with CDFG California Salmonid Stream Habitat Restoration Manual, Section VII (Flosi et al. 2010). Connections to boulders will involve threaded rebar connected directly to boulders or connected via cable/chains. CCC corpsmembers will stake willow cuttings into rockwork to help guard against erosion, help stabilize the bank and provide riparian function.

Task 6: Erosion Control and Planting

Erosion control materials will be installed and mulching with rice straw and locally available native materials will take place as features are completed to avoid unforeseen surface erosion. Mulching will take place on all exposed soils which may deliver sediment to a stream. Bare soil will be seeded with native grasses. Native trees will be planted to stabilize banks and replace trees removed during project activities. See Erosion Control (Section 6.5) in the Basis of Designs for more detail. Trees will be watered by the landowner two times a week in the summer/fall months after planting. Native trees will be planted from December 1 to March 31.

Task 7. Post Project Photo & Data Collection

Following implementation ERWIG and Stillwater Sciences will take post-project photos and quantitative implementation metrics will be collected which satisfy the Project Annual Progress Reports and Final Report. Fish passage surveys will be conducted at low and high flows to assess passage through the bridges. A post-project longitudinal profile survey will be conducted. A game camera will be used to develop a time lapse video and a first winter observational report will be written.

Deliverables:

Subcontractor agreements, invoices, invoice progress reports; Interim and Final Archaeological and Botanical Survey Reports; Pre-project metrics and photos, All required permits; Fish relocation and rewatering datasheets and summary reports; Two installed bridges and wood and rock structures installed as designed. Water quality monitoring data sheets; Large wood structures anchored as designed; At least 50 native trees (*Pseudotsuga menziesii*, *Quercus sp.* and *Alnus rubra*) will be planted along the project area. Native trees will be planted from December 1 to March 31; Post-project metrics and photos, longitudinal profile, fish passage assessment and first winter observation report; Annual reports, draft final report, final report.

Timelines:

Aquatic species relocation and dewatering activities are from 8/3/2023-10/1/2023. Construction activities are from 8/15/2023-10/1/2023. Erosion control

and planting are from 8/15/2023-11/10/2024 and the final report will be submitted to CDFW by 6/30/2025.

Seasonal work window: June 15 – October 31, Tree planting after December 1 to April 1

Additional Requirements:

The Permittee will not proceed with on the ground implementation until all necessary permits and consultations are secured. Work in flowing streams is restricted per the United States Army Corp of Engineers (USACE) Regional General Permit. Actual project start and end dates, within this timeframe, are at the discretion of the California Department of Fish and Wildlife (CDFW).

No equipment maintenance will be performed within or near the stream channel where pollutants (such as petroleum products) from the equipment may enter the channel via rainfall or runoff. Appropriate spill containment devices (e.g., oil absorbent pads, tarpaulins) will be used when refueling equipment. All equipment will be removed from the streambed and flood plain areas at the end of each workday.

All equipment and gear will be brushed with a stiff brush prior to leaving each stretch of stream to avoid the transport of aquatic invasive species (AIS). When transporting traps out of the area, each numbered trap will be bagged in its own bag to avoid cross contamination during transport in and out of the work area. All crew members will decontaminate equipment and shoes for AIS according to the standards detailed in the CDFW Aquatic Invasive Species Decontamination Protocol.

During project activities, all trash that may attract predators will be properly contained, removed from the work site, and disposed of regularly. Following construction, all trash and construction debris will be removed from work areas.

The permittee shall notify the CDFW a minimum of five working days before the project site is dewatered and the stream flow diverted. The notification will provide a reasonable time for CDFW personnel to oversee the implementation of the water diversion plan and the safe removal and relocation of salmonids and other fish life from the project area. If the project requires dewatering of the site, and the relocation of salmonids, the Permittee will implement the following measures to minimize harm and mortality to listed salmonids:

a. Fish dewatering and relocation activities shall only occur between June 15 and October 31 of each year.

b. Additional measures to minimize injury and mortality of salmonids during fish relocation and dewatering activities shall be implemented as described in Part IX, pages 52 and 53 of the California Salmonid Stream Habitat Restoration Manual.

c. The Permittee shall minimize the amount of wetted stream channel dewatered at each individual project site to the fullest extent possible as approved by the CDFW personnel and pursuant to conditions in the United State Army Corp of Engineers (USACE) Regional General Permit and National Marine Fisheries Service (NMFS) Biological Opinion.

d. All electrofishing shall be performed by a qualified fisheries biologist and conducted according to the National Marine Fisheries Service, Guidelines for Electrofishing Waters Containing Salmonids Listed under the Endangered Species Act, June 2000.

e. U.S. Fish and Wildlife Service (USFWS) Approved fisheries biologists will provide fish relocation data via the Permittee to the CDFW personnel on a form provided by CDFW.

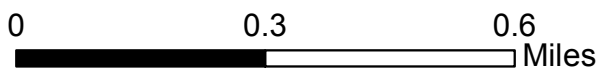
Final structure design and placement will be determined by field consultation between the Permittee and the CDFW Personnel.

All habitat improvements will follow techniques described in the California Salmonid Stream Habitat Restoration Manual. Planting of tree seedlings will take place after December 1 or when sufficient rainfall has occurred to insure the best chance of survival of the seedlings.

Project Location Topo Map
Little Case Creek Fish Passage Project
Cahto Peak Quad, Mendocino County



- Little Case Creek
- Culvert Locations



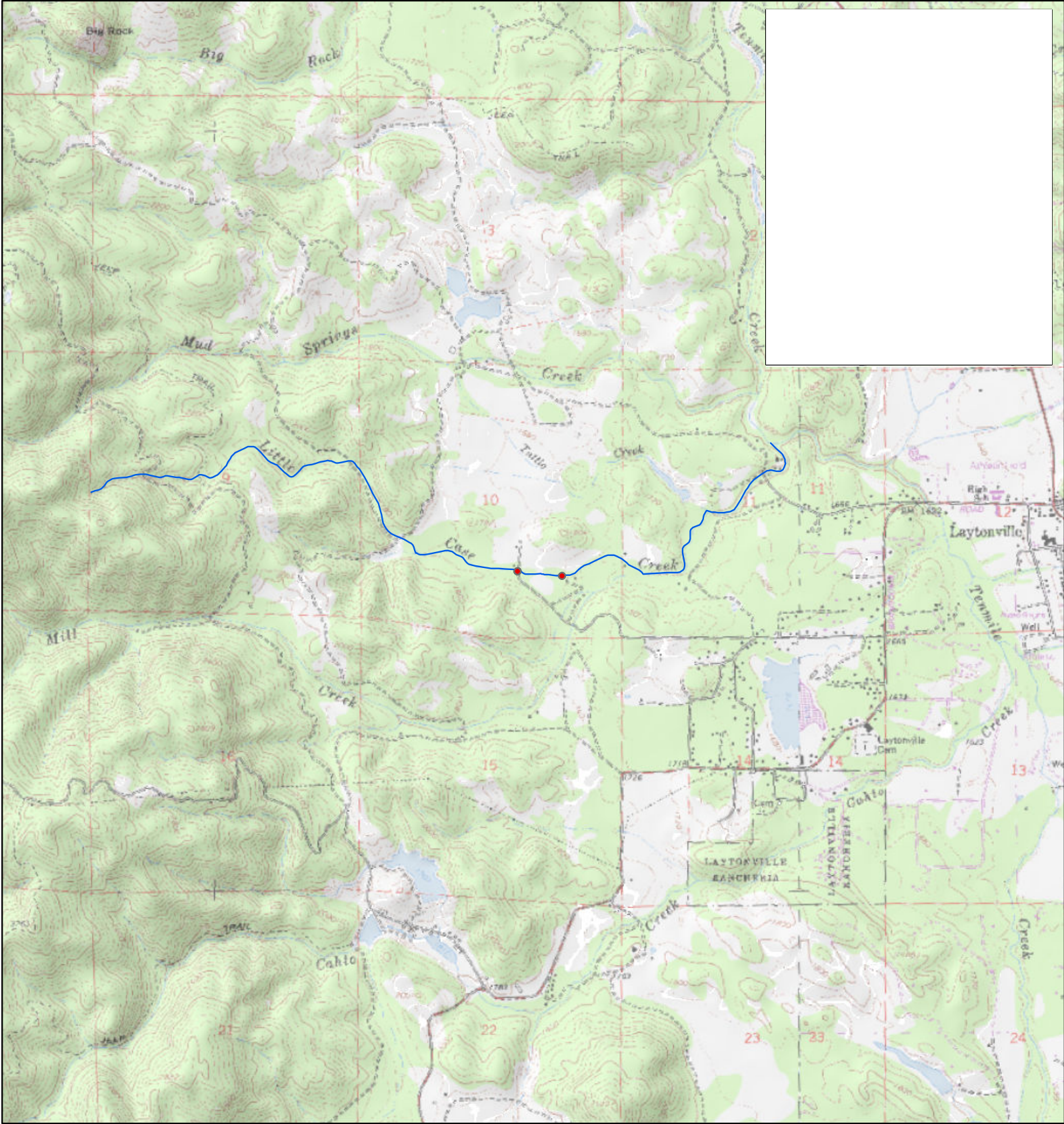
Eel River Watershed Improvement Group



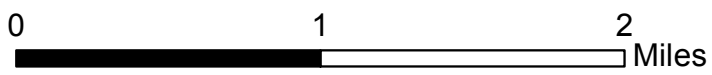
Watershed Map

Little Case Creek Fish Passage Project

Cahto Peak Quad, Mendocino County



- Little Case Creek
- Culvert Locations



CALIFORNIA DEPARTMENT OF
FISH and WILDLIFE *RareFind*

Query Summary:

Quad IS (Cahto Peak (3912365) OR Lincoln Ridge (3912366) OR Laytonville (3912364) OR Leggett (3912376) OR Tan Oak Park (3912375) OR Iron Peak (3912374) OR Longvale (3912354) OR Sherwood Peak (3912355) OR Dutchmans Knoll (3912356))

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CNDDDB Element Query Results

Scientific Name	Common Name	Taxonomic Group	Element Code	Total Occs	Returned Occs	Federal Status	State Status	Global Rank	State Rank	CA Rare Plant Rank	Other Status	Habitats
Accipiter gentilis	northern goshawk	Birds	ABNKC12060	433	2	None	None	G5	S3	null	BLM_S-Sensitive, CDF_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern, USFS_S-Sensitive	North coast coniferous forest, Subalpine coniferous forest, Upper montane coniferous forest
Alisma gramineum	grass alisma	Monocots	PMALI01010	14	2	None	None	G5	S3	2B.2	null	Marsh & swamp, Wetland
Anodonta californiensis	California floater	Mollusks	IMBIV04220	6	1	None	None	G3Q	S2?	null	USFS_S-Sensitive	Aquatic
Arborimus pomom	Sonoma tree vole	Mammals	AMAFF23030	222	26	None	None	G3	S3	null	CDFW_SSC-Species of Special Concern, IUCN_NT-Near Threatened	North coast coniferous forest, Oldgrowth, Redwood
Arctostaphylos manzanita ssp. elegans	Konocti manzanita	Dicots	PDERI04271	69	1	None	None	G5T3	S3	1B.3	null	Chaparral, Cismontane woodland, Lower montane coniferous forest
Arctostaphylos stanfordiana ssp. raichei	Raiche's manzanita	Dicots	PDERI041G2	13	1	None	None	G3T2	S2	1B.1	BLM_S-Sensitive, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, SB_USDA-US Dept of Agriculture	Chaparral, Lower montane coniferous forest, Ultramafic
Ardea herodias	great blue heron	Birds	ABNGA04010	156	1	None	None	G5	S4	null	CDF_S-Sensitive, IUCN_LC-Least Concern	Brackish marsh, Estuary, Freshwater marsh, Marsh & swamp, Riparian forest, Wetland
Ascaphus truei	Pacific tailed frog	Amphibians	AAABA01010	491	10	None	None	G4	S3S4	null	CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern	Aquatic, Klamath/North coast flowing waters, Lower montane coniferous forest, North coast coniferous forest, Redwood, Riparian forest
Astragalus agnicidus	Humboldt County milk-vetch	Dicots	PDFAB0F080	69	27	None	Endangered	G2	S2	1B.1	SB_BerrySB-Berry Seed Bank, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Broadleaved upland forest, North coast coniferous forest
Bombus caliginosus	obscure bumble bee	Insects	IIHYM24380	181	3	None	None	G2G3	S1S2	null	IUCN_VU-Vulnerable	null
Bombus crotchii	Crotch bumble bee	Insects	IIHYM24480	437	1	None	None	G2	S1S2	null	null	null
Bombus occidentalis	western bumble bee	Insects	IIHYM24250	306	5	None	None	G2G3	S1	null	USFS_S-Sensitive	null
Brachyramphus marmoratus	marbled murrelet	Birds	ABNNN06010	110	1	Threatened	Endangered	G3	S2	null	CDF_S-Sensitive, IUCN_EN-Endangered, NABCI_RWL-Red Watch List	Lower montane coniferous forest, Oldgrowth, Redwood
Brasenia schreberi	watershield	Dicots	PDCAB01010	43	2	None	None	G5	S3	2B.3	IUCN_LC-Least Concern	Marsh & swamp, Wetland
Campanula californica	swamp harebell	Dicots	PDCAM02060	155	4	None	None	G3	S3	1B.2	BLM_S-Sensitive	Bog & fen, Closed-cone

												coniferous forest, Coastal prairie, Marsh & swamp, Meadow & seep, North coast coniferous forest, Wetland
Ceanothus foliosus var. vineatus	Vine Hill ceanothus	Dicots	PDRHA040D6	6	2	None	None	G3T1	S1	1B.1	null	Chaparral
Coastal and Valley Freshwater Marsh	Coastal and Valley Freshwater Marsh	Marsh	CTT52410CA	60	1	None	None	G3	S2.1	null	null	Marsh & swamp, Wetland
Coptis laciniata	Oregon goldthread	Dicots	PDRAN0A020	122	26	None	None	G4?	S3?	4.2	null	Meadow & seep, North coast coniferous forest, Wetland
Corynorhinus townsendii	Townsend's big-eared bat	Mammals	AMACC08010	635	1	None	None	G4	S2	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern, USFS_S-Sensitive, WBWG_H-High Priority	Broadleaved upland forest, Chaparral, Chenopod scrub, Great Basin grassland, Great Basin scrub, Joshua tree woodland, Lower montane coniferous forest, Meadow & seep, Mojavean desert scrub, Riparian forest, Riparian woodland, Sonoran desert scrub, Sonoran thorn woodland, Upper montane coniferous forest, Valley & foothill grassland
Emys marmorata	western pond turtle	Reptiles	ARAAD02030	1404	5	None	None	G3G4	S3	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_VU-Vulnerable, USFS_S-Sensitive	Aquatic, Artificial flowing waters, Klamath/North coast flowing waters, Klamath/North coast standing waters, Marsh & swamp, Sacramento/San Joaquin flowing waters, Sacramento/San Joaquin standing waters, South coast flowing waters, South coast standing waters, Wetland
Entosphenus tridentatus	Pacific lamprey	Fish	AFBAA02100	9	2	None	None	G4	S3	null	AFS_VU-Vulnerable, BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, USFS_S-Sensitive	Aquatic, Klamath/North coast flowing waters, Sacramento/San Joaquin flowing waters, South coast flowing waters
Erethizon dorsatum	North American porcupine	Mammals	AMAFJ01010	523	2	None	None	G5	S3	null	IUCN_LC-Least Concern	Broadleaved upland forest, Cismontane woodland, Closed-cone coniferous forest, Lower montane coniferous forest, North coast coniferous forest, Upper montane coniferous forest
Eriogonum kelloggii	Kellogg's buckwheat	Dicots	PDPGN083A0	7	1	None	Endangered	G2	S2	1B.2	BLM_S-Sensitive	Lower montane coniferous

												forest, Ultramafic
Erythronium revolutum	coast fawn lily	Monocots	PMLIL0U0F0	172	4	None	None	G4G5	S3	2B.2	null	Bog & fen, Broadleaved upland forest, North coast coniferous forest, Wetland
Eucyclogobius newberryi	tidewater goby	Fish	AFCQN04010	127	1	Endangered	None	G3	S3	null	AFS_EN- Endangered, IUCN_VU- Vulnerable	Aquatic, Klamath/North coast flowing waters, Sacramento/San Joaquin flowing waters, South coast flowing waters
Gilia millefoliata	dark-eyed gilia	Dicots	PDPLM04130	54	1	None	None	G2	S2	1B.2	BLM_S-Sensitive	Coastal dunes
Hesperolinon adenophyllum	glandular western flax	Dicots	PDLIN01010	48	2	None	None	G2G3	S2S3	1B.2	BLM_S-Sensitive	Chaparral, Cismontane woodland, Ultramafic, Valley & foothill grassland
Lasiurus cinereus	hoary bat	Mammals	AMACC05030	238	1	None	None	G3G4	S4	null	IUCN_LC-Least Concern, WBWG_M-Medium Priority	Broadleaved upland forest, Cismontane woodland, Lower montane coniferous forest, North coast coniferous forest
Limnanthes bakeri	Baker's meadowfoam	Dicots	PDLIM02020	21	5	None	Rare	G1	S1	1B.1	SB_USDA-US Dept of Agriculture	Freshwater marsh, Marsh & swamp, Meadow & seep, Valley & foothill grassland, Vernal pool, Wetland
Lupinus milo- bakeri	Milo Baker's lupine	Dicots	PDFAB2B4E0	11	1	None	Threatened	G1Q	S1	1B.1	SB_CalBG/RSABG- California/Rancho Santa Ana Botanic Garden, SB_UCBG-UC Botanical Garden at Berkeley	Cismontane woodland, Valley & foothill grassland
Margaritifera falcata	western pearlshell	Mollusks	IMBIV27020	78	5	None	None	G4G5	S1S2	null	null	Aquatic
Mitellastra caulescens	leafy- stemmed mitrewort	Dicots	PDSAX0N020	21	3	None	None	G5	S4	4.2	null	Broadleaved upland forest, Lower montane coniferous forest, Meadow & seep, North coast coniferous forest
Navarretia leucocephala ssp. bakeri	Baker's navarretia	Dicots	PDPLM0C0E1	64	1	None	None	G4T2	S2	1B.1	null	Cismontane woodland, Lower montane coniferous forest, Meadow & seep, Valley & foothill grassland, Vernal pool, Wetland
North Central Coast Fall-Run Steelhead Stream	North Central Coast Fall- Run Steelhead Stream	Inland Waters	CARA2631CA	2	1	None	None	GNR	SNR	null	null	null
Oncorhynchus kisutch pop. 4	coho salmon - central California coast ESU	Fish	AFCHA02034	23	1	Endangered	Endangered	G5T2Q	S2	null	AFS_EN- Endangered	Aquatic
Oncorhynchus mykiss irideus pop. 16	steelhead - northern California DPS	Fish	AFCHA0209Q	12	1	Threatened	None	G5T2T3Q	S2S3	null	AFS_TH- Threatened	Aquatic, Klamath/North coast flowing waters
Pekania pennanti	Fisher	Mammals	AMAJF01020	555	5	None	None	G5	S2S3	null	BLM_S-Sensitive, CDFW_SSC- Species of Special Concern, USFS_S- Sensitive	North coast coniferous forest, Oldgrowth, Riparian forest

Piperia candida	white-flowered rein orchid	Monocots	PMORC1X050	222	25	None	None	G3?	S3	1B.2	null	Broadleaved upland forest, Lower montane coniferous forest, North coast coniferous forest, Ultramafic
Pleuropogon hooverianus	North Coast semaphore grass	Monocots	PMPOA4Y070	27	2	None	Threatened	G2	S2	1B.1	SB_BerrySB-Berry Seed Bank, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Broadleaved upland forest, Meadow & seep, North coast coniferous forest, Wetland
Potamogeton ephydrus	Nuttall's ribbon-leaved pondweed	Monocots	PMPO03080	25	1	None	None	G5	S2S3	2B.2	IUCN_LC-Least Concern	Marsh & swamp, Wetland
Progne subis	purple martin	Birds	ABPAU01010	71	3	None	None	G5	S3	null	CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern	Broadleaved upland forest, Lower montane coniferous forest
Ramalina thrausta	angel's hair lichen	Lichens	NLLEC3S340	21	1	None	None	G5?	S2S3	2B.1	null	North coast coniferous forest
Rana aurora	northern red-legged frog	Amphibians	AAABH01021	292	6	None	None	G4	S3	null	CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern, USFS_S-Sensitive	Klamath/North coast flowing waters, Riparian forest, Riparian woodland
Rana boylei	foothill yellow-legged frog	Amphibians	AAABH01050	2478	46	None	Endangered	G3	S3	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_NT-Near Threatened, USFS_S-Sensitive	Aquatic, Chaparral, Cismontane woodland, Coastal scrub, Klamath/North coast flowing waters, Lower montane coniferous forest, Meadow & seep, Riparian forest, Riparian woodland, Sacramento/San Joaquin flowing waters
Rhyacotriton variegatus	southern torrent salamander	Amphibians	AAAAJ01020	416	17	None	None	G3G4	S2S3	null	CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern, USFS_S-Sensitive	Lower montane coniferous forest, Oldgrowth, Redwood, Riparian forest
Sidalcea malachroides	maple-leaved checkerbloom	Dicots	PDMAL110E0	136	10	None	None	G3	S3	4.2	null	Broadleaved upland forest, Coastal prairie, Coastal scrub, North coast coniferous forest, Riparian forest
Silene bolanderi	Bolander's catchfly	Dicots	PDCAR0U2L0	30	5	None	None	G2	S2	1B.2	null	Chaparral, Cismontane woodland, Lower montane coniferous forest, Meadow & seep, North coast coniferous forest, Ultramafic
Silene greenei ssp. angustifolia	Red Mountain catchfly	Dicots	PDCAR0U0A2	8	2	None	Endangered	G5T1	S1	1B.2	BLM_S-Sensitive	Chaparral, Lower montane coniferous forest, Ultramafic
Taricha rivularis	red-bellied newt	Amphibians	AAAAF02020	136	5	None	None	G2	S2	null	CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern	Broadleaved upland forest, North coast coniferous forest, Redwood, Riparian forest, Riparian woodland
Taxidea taxus	American badger	Mammals	AMAJF04010	594	1	None	None	G5	S3	null	CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern	Alkali marsh, Alkali playa, Alpine, Alpine dwarf scrub, Bog & fen,

													Brackish marsh, Broadleaved upland forest, Chaparral, Chenopod scrub, Cismontane woodland, Closed-cone coniferous forest, Coastal bluff scrub, Coastal dunes, Coastal prairie, Coastal scrub, Desert dunes, Desert wash, Freshwater marsh, Great Basin grassland, Great Basin scrub, Interior dunes, lone formation, Joshua tree woodland, Limestone, Lower montane coniferous forest, Marsh & swamp, Meadow & seep, Mojavean desert scrub, Montane dwarf scrub, North coast coniferous forest, Oldgrowth, Pavement plain, Redwood, Riparian forest, Riparian scrub, Riparian woodland, Salt marsh, Sonoran desert scrub, Sonoran thorn woodland, Ultramafic, Upper montane coniferous forest, Upper Sonoran scrub, Valley & foothill grassland
Thermopsis robusta	robust false lupine	Dicots	PDFAB3Z0D0	104	5	None	None	G2	S2	1B.2	USFS_S-Sensitive	Broadleaved upland forest, North coast coniferous forest, Ultramafic	
Upland Douglas Fir Forest	Upland Douglas Fir Forest	Forest	CTT82420CA	15	2	None	None	G4	S3.1	null	null	North coast coniferous forest	
Usnea longissima	Methuselah's beard lichen	Lichens	NLLEC5P420	206	8	None	None	G4	S4	4.2	BLM_S-Sensitive	Broadleaved upland forest, North coast coniferous forest, Oldgrowth, Redwood	
Viburnum ellipticum	oval-leaved viburnum	Dicots	PDCPR07080	39	4	None	None	G4G5	S3?	2B.3	null	Chaparral, Cismontane woodland, Lower montane coniferous forest	