

Neefus Gulch Fish Passage Improvement (Phase II), Earthen Dam Barrier Removal (Project ID: 1730030) 2023

Introduction:

Trout Unlimited (Grantee) will implement the Neefus Gulch Fish Passage Improvement (Phase II), Earthen Dam Barrier Removal (Project) to restore access to 1.1 miles of spawning and rearing habitat for all life stages of salmonids in Neefus Gulch tributary to the North Fork Navarro River in the Navarro River Watershed. A 2011 CDFW Stream Habitat Inventory Report documented Coho Salmon within the first 0.52 miles of the stream between the river confluence and the crossing at Appian Way. The specific objectives of this Project consist of removal of an 18-foot high earthen berm and spillway, excavation of sediments associated with the berm, pond and deposition within the historical stream channel above the berm, and restoration of approximately 1600-feet of the stream channel that includes large wood placement. This Project will restore access to 1.1 miles of spawning and rearing habitat for all life stages of salmonids.

The Grantee shall not proceed with on the ground implementation until all necessary permits, consultations, and/or Notice to Proceed are secured. All habitat improvements will follow techniques in the California Department of Fish and Wildlife (CDFW) *California Salmonid Stream Habitat Restoration Manual, Volume 1, Part VII and Part VIII, 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

Project Description:

Location:

The Project is located on Neefus Gulch, in the County of Mendocino, State of California, approximately 0.8 miles upstream from the confluence with the North Fork Navarro River. The project site is located about three miles northwest of the village of Navarro within the Rancho Navarro subdivision. The pond is located at 18051 Appian Way, Navarro, CA on Mendocino County Assessor Parcel Number 128-27-0-20, and is identified as Reservoir 1808 with the State Water Resources Control Board (SWRCB 2012). The center point for the Project reach is 39.178768° north latitude, -123.571129° west longitude and is located on the Navarro 7.5 Minute U.S. Geological Survey (USGS) Quadrangle map.

Project Set Up:

Grantee will manage the project and lead coordination of the project partners, grant administration, subcontract execution, meeting facilitation, invoicing and reporting. Grantee may assist with aspects of grant management, administration, permitting, project coordination, and nesting bird surveys.

Subcontractor, Hanford ARC will be the construction contractor for this Project. Hanford ARC will procure all necessary materials, perform all heavy equipment work and material installation including removal of the dam and spillway, excavation and fill, installation of log structures and ESM, water management and dewatering, revegetation and erosion control. Contractor will abide by all landowner and permit requirements. The equipment will include but is not limited to excavators, on and off-road dump trucks, bulldozers, road graders, and water trucks.

Subcontractor, Construction Manager will assist with aquatic species relocation, conduct construction water quality monitoring, provide daily construction oversight, resolve contract issues, keep a daily construction log, and provide guidance to the contractor.

Subcontractor, Michael Love and Associates (MLA) will assist Grantee with project permitting, part-time construction oversight, overseeing project activities to ensure the project is built as intended, participate in project meetings, and assist with addressing any unforeseen field conditions and requests for information.

Subcontractor, Ross Taylor and Associates (RTA) will provide fish relocation services and non-native aquatic species removal.

Qualified subcontractors (to be determined TBD), will conduct environmental compliance surveys.

Materials:

Silt fence

Straw

Coir mat will be used for erosion control and pollution prevention

Logs may be purchased for instream structures

Rock (ESM and other) will be used in streambed construction and parking area and driveway construction

Riparian plants and willow cuttings will be purchased

A 16" CMP pipe will be used in the ditch relief drainage reconstruction.

Tasks:

Task 1: Project Oversight and Environmental Compliance

Project oversight and administrative activities will be conducted by the Grantee, including but not limited to, acquiring permits, subcontracts, access agreements, invoicing, data

collection, water quality monitoring and reporting. Qualified subcontractors will conduct archeological, botanical, and paleontological surveys within the Project reach.

Task 2. Aquatic Species Relocation and Exclusion

RTA will serve as the Project Biologist and will conduct the aquatic species relocation efforts with assistance from CM, the construction contractor, and oversight by CDFW. The pond is believed to harbor numerous nonnative fishes and support a large number of amphibians, including bullfrogs. The construction contractor will coordinate with the Project Biologist for removal and relocation of aquatic organisms during the dewatering process. This will begin with one night of bullfrog eradication prior to the start of pond draining, and two full days during pond draining to capture and relocate native species and capture and eradicate non-native species. Once the pond draining starts, the RTA crew would focus on capturing remaining bullfrogs to minimize their escape to other areas of Neefus Gulch and the Navarro River. As the pond drops, seine net sets with a kayak will be used to capture fish and amphibians. All native fish and amphibians will be identified, enumerated, and relocated to appropriate habitats. All non-native fish and amphibians will be identified, enumerated, and humanely dispatched.

The saturated sediments in the pond will take time to dry-out. Therefore, dewatering should begin as early as is permitted, likely June 15th. At this time of year, the pond may hold as much as 280,000 cubic feet (2.0 million gallons) of water. The pond does not have a drain valve, so pumping will be the only means to drain the pond. If the water quality in the pond is such that water from the pond would not be allowed to discharge into the downstream channel, this water will need to be treated as nuisance water, and either pumped into a location that it can be infiltrated or trucked off-site and disposed of in an approved manner.

Once the pond is dewatered, a streamflow bypass system consisting of coffer dams at the upstream and downstream ends of the project and a pipeline that gravity feeds streamflow around the entire isolated work area will be installed. Fish screens will be installed upstream and downstream of the pipeline to prevent fish from entering the pipe. Nuisance water seeping into the isolated work area will need to be pumped to upland areas and allowed to infiltrate. The RTA crew will install exclusion fencing and de-fish the area where the contractor's coffer dam and streamflow bypass intake is installed, if necessary.

Task 3: Construction

Construction will occur during low flow conditions and is expected to last around five weeks. A final Notice to Proceed will be secured prior to construction. All habitat improvements will follow techniques described in the California Salmonids Stream Habitat Restoration Manual, Volume I and Volume II.

Construction activities include site prep and mobilization, tree removal, water management, removal of the earthen berm, excavation of pond sediment, spoils placement, tributary regrading and road drainage culvert replacement, and site stabilization and riparian planting.

Following construction, channel banks in the lower reach of the project will be stabilized with biodegradable matting. The rest of the site will be covered in native seed and weed-free straw. Live willow cuttings will be installed along banks to provide rapid root strength for bank protection. Containerized riparian trees and shrubs will also be planted along the limits of the restored channel beyond the bankfull elevation. Riparian planting, including native trees and shrubs, will be completed in the fall following construction.

Task 4. Post-Project Monitoring

MLA will conduct post-construction monitoring following construction. The monitoring will occur 1-year and 2-years after construction to note channel adjustments and identify any issues that should be addressed. The monitoring will consist of a longitudinal profile of the restored channel bed along with select channel cross sections. Locations of large wood grade control features will be documented in the survey and can be used to determine stability. First and second winter observations will be made by Grantee and MLA and will be summarized. Observations will include photographs, visual observations of changes in the channel, stability of large wood grade control and mapped areas of scour or deposition. Grantee will lead the photo-point monitoring.

After each of the two monitoring surveys, MLA will prepare a brief memorandum summarizing the methods and results of the post-construction monitoring and provide recommendations. The first monitoring survey will serve as the First Winter Observation Summary. These reports will be compiled by TU and delivered with the subsequent annual report.

Deliverables:

Deliverables include installation of a 45-foot diameter steel plate arch that rests on precast concrete footings placed on bedrock. An MSE wall will support the fill and rail bed above the crossing. Downstream of the existing scour pool and outlet apron, the channel will be reconstructed at a 6.6% slope for a length of 50 feet.

Timelines:

June 15 through October 31 of the years 2024, 2025 and 2026, Grantee will oversee the implementation of the Project.

Additional Requirements:

The Grantee 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 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.

All habitat improvements will follow techniques described in the California Salmonids Stream Habitat Restoration Manual, Volume I and Volume II.

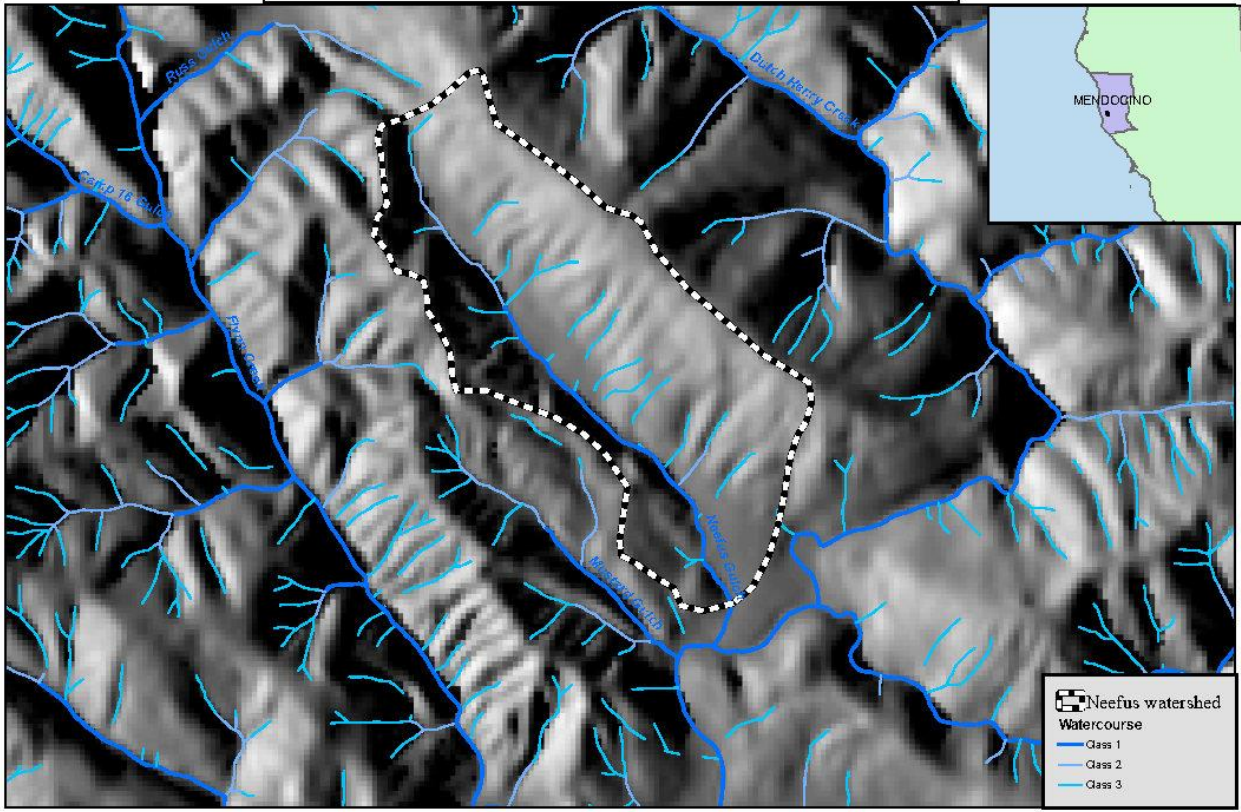
The Grantee shall notify the CDFW a minimum of five working days before the project site is de-watered and the stream flow diverted. The notification will provide a reasonable time for CDFW personnel to oversee the implementation of the water diversion plan and the safe removal and relocation of salmonids and other fish life from the project area. If the project requires dewatering of the site, and the relocation of salmonids, the Grantee 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 Grantee shall minimize the amount of wetted stream channel dewatered at each individual project site to the fullest extent possible as approved by the CDFW Grant Manager and pursuant to conditions in the 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 NMFS, Guidelines for Electrofishing Waters Containing Salmonids Listed under the Endangered Species Act, June 2000.
- e. USFWS Approved fisheries biologists will provide fish relocation data via the Grantee to the CDFW personnel on a form provided by CDFW.

The Grantee/landowner will maintain the new crossing, inspect the crossing in a timely manner and remove debris as necessary during the storm season. The culvert design and installation will meet flow carrying capacity required for a 100-year flood event as identified by specifications determined by National Oceanic and Atmospheric Administration (NOAA) Fisheries and the CDFW, for adult and juvenile salmonid fish passage. The project will follow the National Marine Fisheries Service (NMFS 2001) Guidelines for Salmonid Passage at Stream Crossings and criteria for fish passage as

described in Volume II, Part IX, of the California Salmonid Stream Habitat Restoration Manual. The engineered plans for the culvert installation shall be visually reviewed and authorized by NOAA Fisheries or CDFW engineers prior to commencement of work.

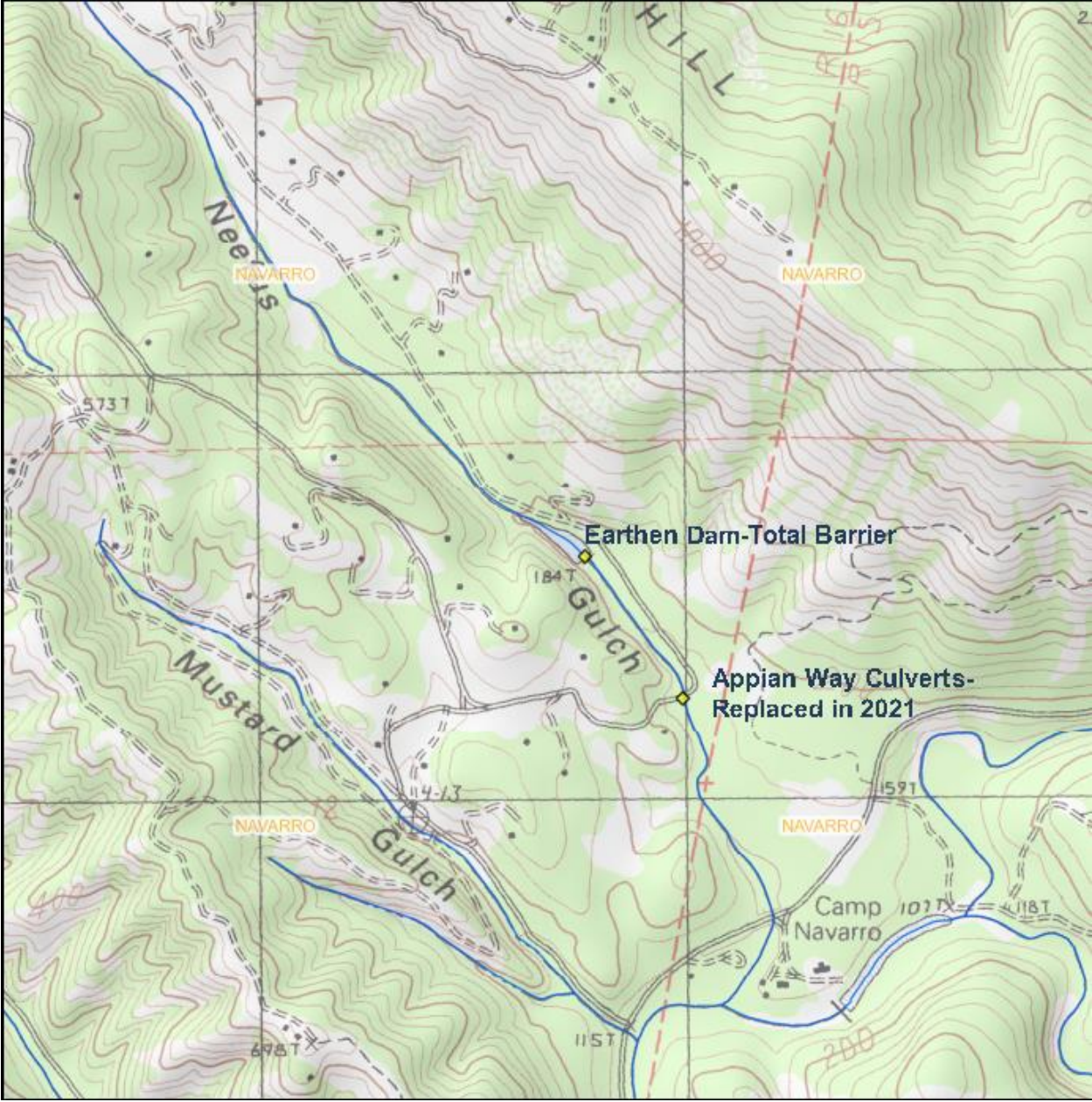
Neefus Gulch Fish Passage Improvement Phase II, Earthen Dam Barrier Removal



0 0.5 1 2 Miles

FRGP Application 1730030





CDFW RAREFIND

Query Summary:

Quad IS (Mathison Peak (3912336) OR Comptche (3912335) OR Greenough Ridge (3912334) OR Elk (3912326) OR Navarro (3912325) OR Bailey Ridge (3912324) OR Mallo Pass Creek (3912316) OR Cold Spring (3912315) OR Philo (3912314))

CNDDB 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	1	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
Agelaius tricolor	tricolored blackbird	Birds	ABPBXB0020	955	1	None	Threatened	G1G2	S2	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_EN-Endangered, USFWS_BCC-Birds of Conservation Concern	Freshwater marsh, Marsh & swamp, Wetland
Agrostis blasdalei	Blasdale's bent grass	Monocots	PMPOA04060	62	1	None	None	G2G3	S2	1B.2	BLM_S-Sensitive, SB_UCSC-UC Santa Cruz	Coastal bluff scrub, Coastal dunes, Coastal prairie
Aplodontia rufa nigra	Point Arena mountain beaver	Mammals	AMAF01011	39	16	Endangered	None	G5T1	S1	null	CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern	Coastal scrub, Meadow & seep
Arborimus pomus	Sonoma tree vole	Mammals	AMAFF23030	222	30	None	None	G3	S3	null	CDFW_SSC-Species of Special Concern, IUCN_NT-Near Threatened	North coast coniferous forest, Oldgrowth, Redwood
Arctostaphylos nummularia ssp. mendocinoensis	pygmy manzanita	Dicots	PDERI04280	7	2	None	None	G3?T1	S1	1B.2	SB_UCSC-UC Santa Cruz	Closed-cone coniferous forest
Ascaphus truei	Pacific tailed frog	Amphibians	AAABA01010	491	35	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	12	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
Atractelmis wawona	Wawona riffle beetle	Insects	IICOL58010	80	1	None	None	G3	S1S2	null	null	Aquatic
Bombus occidentalis	western bumble bee	Insects	IIHYM24252	306	1	None	Candidate Endangered	G3	S1	null	IUCN_VU-Vulnerable, USFS_S-Sensitive	null
Brachyramphus marmoratus	marbled murrelet	Birds	ABNNN06010	110	1	Threatened	Endangered	G3	S2	null	CDF_S-Sensitive, IUCN_EN-Endangered	Lower montane coniferous forest, Oldgrowth, Redwood
Callileptoneta wapiti	Mendocino leptonetid spider	Arachnids	ILARAU6040	2	1	None	None	G1	S1	null	null	North coast coniferous forest

Carex californica	California sedge	Monocots	PMCYP032D0	41	13	None	None	G5	S2	2B.2	null	Bog & fen, Closed-cone coniferous forest, Coastal
												prairie, Freshwater marsh, Marsh & swamp, Meadow & seep, Wetland
Carex saliniformis	deceiving sedge	Monocots	PMCYP03BY0	18	1	None	None	G2	S2	1B.2	null	Coastal prairie, Coastal scrub, Marsh & swamp, Meadow & seep, Wetland
Castilleja mendocinensis	Mendocino Coast paintbrush	Dicots	PDSCR0D3N0	52	7	None	None	G2	S2	1B.2	BLM_S-Sensitive, SB_UCSC-UC Santa Cruz	Closed-cone coniferous forest, Coastal bluff scrub, Coastal dunes, Coastal prairie, Coastal scrub
Coastal Brackish Marsh	Coastal Brackish Marsh	Marsh	CTT52200CA	30	1	None	None	G2	S2.1	null	null	Marsh & swamp, Wetland
Coastal and Valley Freshwater Marsh	Coastal and Valley Freshwater Marsh	Marsh	CTT52410CA	60	2	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	2	None	None	G4	S2	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern, USFS_S-Sensitive	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
Eastwoodiella californica	swamp harebell	Dicots	PDCAM02060	155	10	None	None	G3	S3	1B.2	BLM_S-Sensitive, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Bog & fen, Closed-cone coniferous forest, Coastal prairie, Marsh & swamp, Meadow & seep, North coast coniferous forest, Wetland
Elanus leucurus	white-tailed kite	Birds	ABNKC06010	184	1	None	None	G5	S3S4	null	BLM_S-Sensitive, CDFW_FP-Fully Protected, IUCN_LC-Least Concern	Cismontane woodland, Marsh & swamp, Riparian woodland, Valley & foothill grassland, Wetland

Erethizon dorsatum	North American porcupine	Mammals	AMAFJ01010	523	1	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
Erysimum concinnum	bluff wallflower	Dicots	PDBRA160E3	30	1	None	None	G3	S2	1B.2	BLM_S-Sensitive	Coastal bluff scrub, Coastal
												dunes, Coastal prairie
Erythronium revolutum	coast fawn lily	Monocots	PMLIL0U0F0	172	8	None	None	G4G5	S3	2B.2	SB_UCSC-UC Santa Cruz	Bog & fen, Broadleaved upland forest, North coast coniferous forest, Wetland
Falco peregrinus anatum	American peregrine falcon	Birds	ABNKD06071	73	1	Delisted	Delisted	G4T4	S3S4	null	CDF_S-Sensitive	null
Fissidens pauperculus	minute pocket moss	Bryophytes	NBMUS2W0U0	22	1	None	None	G3?	S2	1B.2	USFS_S-Sensitive	North coast coniferous forest, Redwood
Fritillaria roderickii	Roderick's fritillary	Monocots	PMLIL0V0M0	8	2	None	Endangered	G1Q	S1	1B.1	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Coastal bluff scrub, Coastal prairie, Valley & foothill grassland
Gilia capitata ssp. pacifica	Pacific gilia	Dicots	PDPLM040B6	91	1	None	None	G5T3	S2	1B.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Chaparral, Coastal bluff scrub, Coastal prairie, Valley & foothill grassland
Grand Fir Forest	Grand Fir Forest	Forest	CTT82120CA	9	5	None	None	G1	S1.1	null	null	null
Helminthoglypta arrosa pomoensis	Pomo bronze shoulderband	Mollusks	IMGASC2033	3	3	None	None	G2G3T1	S1	null	IUCN_DD-Data Deficient	North coast coniferous forest, Redwood
Hesperevax sparsiflora var. brevifolia	short-leaved evax	Dicots	PDASTE5011	72	2	None	None	G4T3	S3	1B.2	BLM_S-Sensitive, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Coastal bluff scrub, Coastal dunes, Coastal prairie
Hesperocyparis pygmaea	pygmy cypress	Gymnosperms	PGCUP04032	37	13	None	None	G1	S1	1B.2	BLM_S-Sensitive, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Closed-cone coniferous forest
Hesperoleucus venustus navarroensis	northern coastal roach	Fish	AFCJB19031	4	2	None	None	GNRT3	S3	null	CDFW_SSC-Species of Special Concern	Aquatic, Klamath/North coast flowing waters
Hesperolinon adenophyllum	glandular western flax	Dicots	PDLIN01010	48	1	None	None	G2G3	S2S3	1B.2	BLM_S-Sensitive	Chaparral, Cismontane woodland, Ultramafic, Valley & foothill grassland
Kopsiopsis hookeri	small groundcone	Dicots	PDORO01010	21	1	None	None	G4?	S1S2	2B.3	null	North coast coniferous forest
Lasthenia californica ssp. bakeri	Baker's goldfields	Dicots	PDAST5L0C4	19	1	None	None	G3T1	S1	1B.2	null	Closed-cone coniferous forest, Coastal scrub, Marsh & swamp, Meadow & seep

Lasthenia californica ssp. macrantha	perennial goldfields	Dicots	PDAST5L0C5	59	1	None	None	G3T2	S2	1B.2	BLM_S-Sensitive, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Coastal bluff scrub, Coastal dunes, Coastal scrub
Lilium maritimum	coast lily	Monocots	PMLIL1A0C0	84	9	None	None	G2	S2	1B.1	BLM_S-Sensitive, SB_BerrySB-Berry Seed Bank, SB_UCBG-UC Botanical Garden at Berkeley	Broadleaved upland forest, Closed-cone coniferous forest, Coastal prairie, Coastal scrub, Marsh & swamp, North coast coniferous forest
Mendocino Pygmy Cypress Forest	Mendocino Pygmy Cypress Forest	Forest	CTT83161CA	25	11	None	None	G2	S2.1	null	null	Closed-cone coniferous forest
Mitellastra caulescens	leafy-stemmed mitrewort	Dicots	PDSAX0N020	21	2	None	None	G5	S4	4.2	null	Broadleaved upland forest, Lower montane coniferous forest, Meadow & seep, North coast coniferous forest

Northern Coastal Salt Marsh	Northern Coastal Salt Marsh	Marsh	CTT52110CA	53	1	None	None	G3	S3.2	null	null	Marsh & swamp, Wetland
Oncorhynchus mykiss irideus pop. 49	steelhead - northern California DPS winter-run	Fish	AFCHA0213Q	96	12	Threatened	None	G5T3Q	S3	null	AFS_TH-Threatened	Aquatic, Estuary, Klamath/North coast flowing waters
Packera bolanderi var. bolanderi	seacoast ragwort	Dicots	PDAST8H0H1	72	2	None	None	G4T4	S2S3	2B.2	null	Coastal scrub, North coast coniferous forest
Pandion haliaetus	osprey	Birds	ABNKC01010	504	2	None	None	G5	S4	null	CDF_S-Sensitive, CDFW_WL-Watch List, IUCN_LC-Least Concern	Riparian forest
Pinus contorta ssp. bolanderi	Bolander's beach pine	Gymnosperms	PGPIN04081	28	12	None	None	G5T2	S2	1B.2	SB_UCSC-UC Santa Cruz	Closed-cone coniferous forest
Piperia candida	white-flowered rein orchid	Monocots	PMORC1X050	222	40	None	None	G3?	S3	1B.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	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
Progne subis	purple martin	Birds	ABPAU01010	71	1	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	24	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 pop. 1	foothill yellow-legged frog - north coast DPS	Amphibians	AAABH01051	1608	170	None	None	G3T4	S4	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, USFS_S-Sensitive	Aquatic, Klamath/North coast flowing waters, Riparian forest, Riparian scrub, Riparian woodland

Rana draytonii	California red-legged frog	Amphibians	AAABH01022	1686	4	Threatened	None	G2G3	S2S3	null	CDFW_SSC-Species of Special Concern, IUCN_VU-Vulnerable	Aquatic, Artificial flowing waters, Artificial standing waters, Freshwater marsh, Marsh & swamp, Riparian forest, Riparian scrub, Riparian woodland, Sacramento/San Joaquin flowing waters, Sacramento/San Joaquin standing waters, South coast flowing waters, South coast standing waters, Wetland
Rhyacotriton variegatus	southern torrent salamander	Amphibians	AAAAJ01020	416	12	None	None	G3?	S2S3	null	CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern, USFS_S-Sensitive	Lower montane coniferous forest, Oldgrowth, Redwood, Riparian forest
Rhynchospora alba	white beaked-rush	Monocots	PMCYP0N010	17	1	None	None	G5	S2	2B.2	IUCN_LC-Least Concern	Bog & fen, Marsh & swamp, Meadow & seep, Wetland
Sanguisorba officinalis	great burnet	Dicots	PDROS1L060	22	1	None	None	G5?	S2	2B.2	null	Bog & fen, Broadleaved upland forest, Marsh & swamp, Meadow & seep, North coast

													coniferous forest, Riparian forest, Ultramafic, Wetland
<i>Sidalcea calycosa</i> ssp. <i>rhizomata</i>	Point Reyes checkerbloom	Dicots	PDMAL11012	34	1	None	None	G5T2	S2	1B.2	null		Freshwater marsh, Marsh & swamp, Wetland
<i>Sidalcea malachroides</i>	maple-leaved checkerbloom	Dicots	PDMAL110E0	136	3	None	None	G3	S3	4.2	null		Broadleaved upland forest, Coastal prairie, Coastal scrub, North coast coniferous forest, Riparian forest
<i>Sidalcea malviflora</i> ssp. <i>purpurea</i>	purple-stemmed checkerbloom	Dicots	PDMAL110FL	19	1	None	None	G5T1	S1	1B.2	BLM_S-Sensitive		Broadleaved upland forest, Coastal prairie
<i>Speyeria zerene behrensii</i>	Behren's silverspot butterfly	Insects	IILEPJ6088	12	1	Endangered	None	G5T1	S1	null	null		Coastal prairie
Sphagnum Bog	Sphagnum Bog	Marsh	CTT51110CA	12	2	None	None	G3	S1.2	null	null		Bog & fen, Wetland
<i>Streptanthus glandulosus</i> ssp. <i>hoffmanii</i>	Hoffman's bristly jewelflower	Dicots	PDBRA2G0J4	16	2	None	None	G4T2	S2	1B.3	SB_UCSC-UC Santa Cruz		Chaparral, Cismontane woodland, Ultramafic, Valley & foothill grassland
<i>Taricha rivularis</i>	red-bellied newt	Amphibians	AAAAF02020	136	24	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
<i>Trifolium buckwestiorum</i>	Santa Cruz clover	Dicots	PDFAB402W0	64	4	None	None	G2	S2	1B.1	BLM_S-Sensitive, SB_SBBG-Santa Barbara Botanic Garden, SB_UCSC-UC Santa Cruz, SB_USDA-US Dept of Agriculture		Broadleaved upland forest, Cismontane woodland, Coastal prairie
<i>Trifolium trichocalyx</i>	Monterey clover	Dicots	PDFAB402J0	6	1	Endangered	Endangered	G1	S1	1B.1	SB_UCBG-UC Botanical Garden at Berkeley, SB_USDA-US Dept of Agriculture		Closed-cone coniferous forest
<i>Usnea longissima</i>	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