

SF Cottaneva Watershed Habitat Enhancement (Project ID: 1727761) 2022

Introduction:

The Eel River Watershed Improvement Group (Permittee) will implement the South Fork (SF) Cottaneva Creek Habitat Enhancement (Project) to improve instream habitat for salmonids in LNF Big River. improve instream habitat for salmonids in SF Cottaneva Creek. The Project is necessary because the lack of large wood in the stream channel has negatively affected the quality and quantity of salmonid habitat within SF Cottaneva Creek by reducing the amount of large channel forming features and limiting complex cover for salmonids. Adding complex large wood features improves geomorphic function by capturing spawning gravels, improving winter and summer instream refugia, backflooding off-channel habitat and improving access to floodplains.

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 I, Part VII*, (<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(s):

The specific objective of this project is to improve the quality and quantity of spawning and rearing habitat for Coho Salmon by installing large wood in SF Cottaneva Creek. This project will result in a total of 43 large wood features consisting of 141 pieces of wood over 7,390 feet (1.4 miles) of SF Cottanva Creek and 34 large wood features consisting of 82 pieces of wood over 4,100 (0.78 miles) of Slaughterhouse Gulch. The addition of appropriately sized wood to meet target criteria will enhance the quality, quantity, and complexity of spawning and rearing habitat for salmonids and increase the large wood per 100 meters from Poor to Good per NOAA's Central California Coast Coho Recovery Plan. Additionally, 220 redwood saplings and 50 native shrubs will be planted in the riparian zone along the project reach to improve riparian canopy and provide future large wood recruitment.

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Project Description:

Location:

The Project is located on SF Cottaneva Creek in the County of Mendocino, State of California. The SF Cottaneva Creek project reach starts 1.5 miles upstream from the confluence with Cottaneva Creek and extends upstream approximately 1.4 miles. The Slaughterhouse Gulch project reach starts at the confluence with SF Cottaneva and extends 0.78 miles upstream. The center point for the Project reach is 39.744495° north latitude, -123.801286° west longitude and is located on the Wesport 7.5 Minute U.S. Geological Survey (USGS) Quadrangle map.

Project Set Up:

Permittee Staff will conduct contract oversight, reporting, invoicing. Permittee will manage all aspects of project implementation, monitor water quality, collect pre- and post-project metrics and photos and carry out planting of native trees and plants.

Subcontractor, Edwards Excavation & Restoration will conduct felling and uprooting trees for large wood features, place large wood according to approved design plans where equipment access is available and assist with feature anchoring.

Subcontractor, California Conservation Corps (CCC) will move feature logs into position using a griphoist come-along and anchor the logs following designs and anchoring specifications.

Materials:

- A total of 77 large wood features consisting of 223 pieces of logs, root wads and boulders will be constructed and anchored with 1" threaded rebar, nuts, washers, 5/8" galvanized cable, cable clamps, and waterproof epoxy glue, or by wedging into riparian trees without using anchoring materials. Trees left unanchored will be at least 1.5 times the average bankfull width per CDFW Stream Restoration Manual specifications for unanchored large wood (Part VII-23).
- Native trees and plants will be used to plant areas disturbed by project activities and areas within the project reach that are lacking canopy cover. Species will include coast redwood (*Sequoia sempervirens*), salal (*Gaultheria shallon*), evergreen huckleberry (*Vaccinium ovatum*), azalea

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(Rhododendron species), thimbleberry (*Rubus parviflorus*), and western sword fern (*Polystichum munitum*).

Tasks:

Task 1: Site Preparation

Permittee will finalize site specific designs based on channel morphology, equipment access, and large wood availability. Permittee will flag sites for wood selection, staging, and installation, clear brush as needed, and designate staging areas for wood along the project reach. Permittee and a to be determined (TBD) Biologist will set up block nets at two stream crossing sites and Permittee will assist the Biologist in aquatic species removal.

Task 2: Large Wood Structure Construction

Permittee will oversee implementation of 77 large wood features including 223 pieces of large wood and monitor water quality as needed.

The Registered Professional Forester will sign off on all trees chosen for use in the project and will facilitate log purchases. Edwards Excavation will place downed logs into the stream following approved design plans. Two stream crossings will be used by an excavator and by an ATV to refuel the excavator. When necessary, CCC Corpsmembers will move logs into position using a grip hoist. The project will utilize living riparian trees as anchors by wedging the logs between them where feasible. CCC Corpsmembers will anchor the sites according to design and anchoring specifications. Corpsmembers will use 1" threaded rebar to anchor logs to mature riparian trees and other logs. Holes will be drilled through the logs and their anchor trees using a wood drill, timber bit, and drill bit extensions when necessary. Erosion control methods will be employed by the CCC and Permittee as required at each structure and along equipment corridors to eliminate the possibility of sediment transport to the stream.

To address concerns over invasive species this project will follow the Permittee Aquatic Invasive Species Decontamination Protocol, which is in line with the CDFW Aquatic Invasive Species Decontamination Protocol. Due to emergency response responsibilities, implementation will occur in the first summer that the CCC are available (between July and October, 2023-2025).

Available slash and small woody debris will be installed into features to provide immediate cover for salmonids and to capture additional floating debris. Small woody debris will consist of branches on tops of felled trees ranging from 3 to 11 inches in diameter. To prevent erosion and introduction of fine sediment into the

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stream channel, exposed dirt resulting from construction of features will be covered/mulched using on-site forest materials.

To address the potential spread of aquatic invasive species and Sudden Oak Death, personal gear as well as tools/equipment used in the field will be properly decontaminated before moving to a new location to comply with CDFW and California Oak Mortality Task Force disinfection/decontamination protocol requirements.

Task 3: Riparian Planting

Permittee will return in the winter following project implementation to plant 220 redwood seedlings and 50 native plants, with a primary focus in areas disturbed by project activities and lacking sufficient conifer cover or riparian vegetation.

Deliverables:

Construction of 77 large wood features with 223 pieces of large wood and additional small wood. Planting of 220 redwood seedlings and 50 native plants.

Timelines:

June 15 through October 31 of the years 2023, 2024 and 2025, Permittee will oversee the installation of large wood features within approved project reaches. Erosion control will be installed as project features are completed. Planting of 220 redwood saplings and 50 native plants will take place December 1 through January 31 of the years 2023, 2024 and 2025 and finishing on January 31, 2026.

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 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.

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

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.

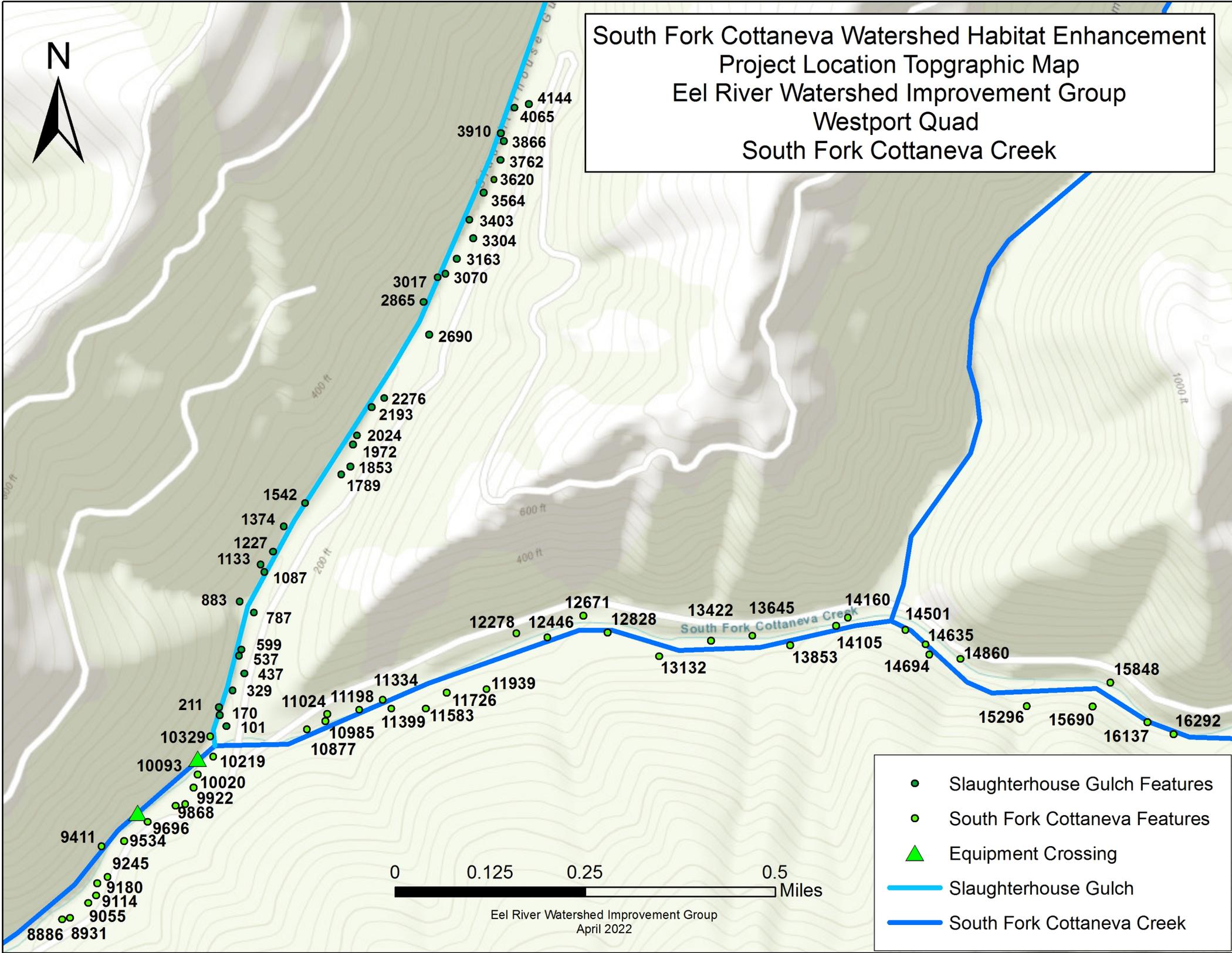
The Permittee shall notify the CDFW a minimum of five working days before the project site is de-watered and the stream flow diverted. The notification will provide a reasonable time for CDFW personnel to oversee the implementation of the water diversion plan and the safe removal and relocation of salmonids and other fish life from the project area. If the project requires dewatering of the site, and the relocation of salmonids, the 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 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.

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- e. USFWS Approved fisheries biologists will provide fish relocation data via the Permittee to the CDFW personnel on a form provided by CDFW.

South Fork Cottaneva Watershed Habitat Enhancement
 Project Location Topographic Map
 Eel River Watershed Improvement Group
 Westport Quad
 South Fork Cottaneva Creek

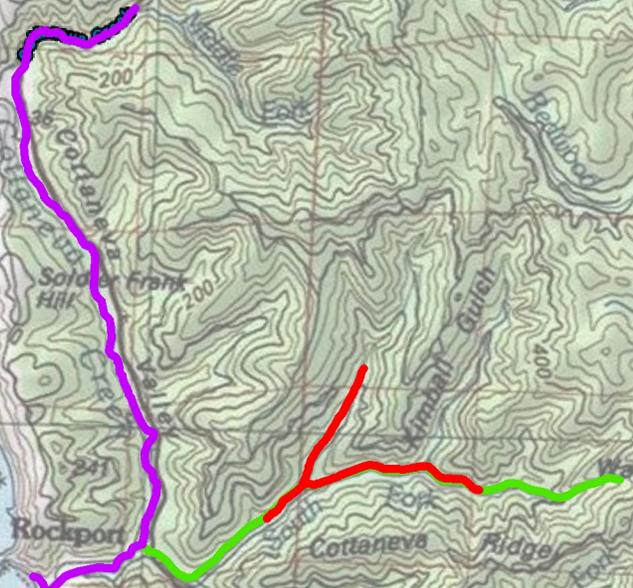
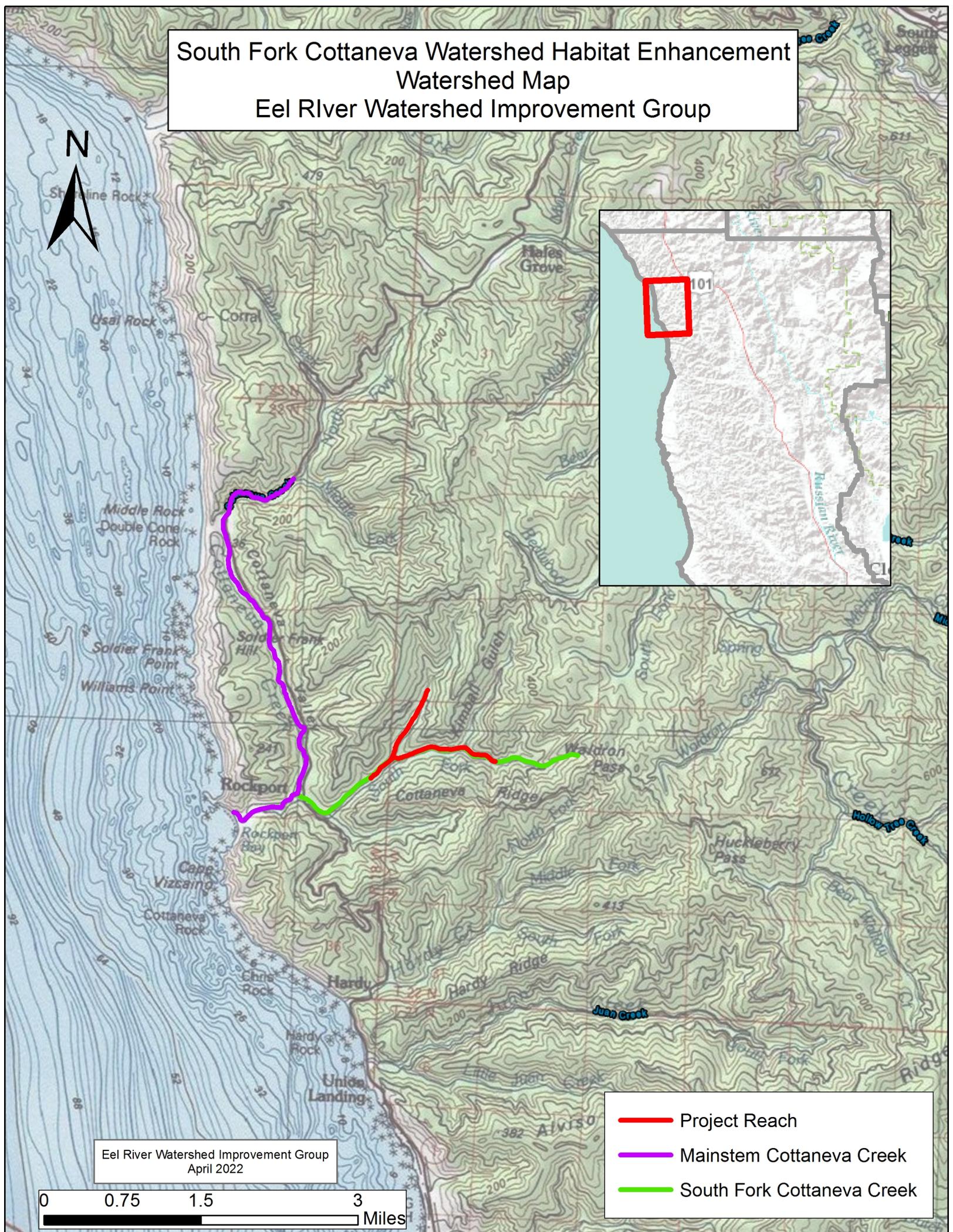
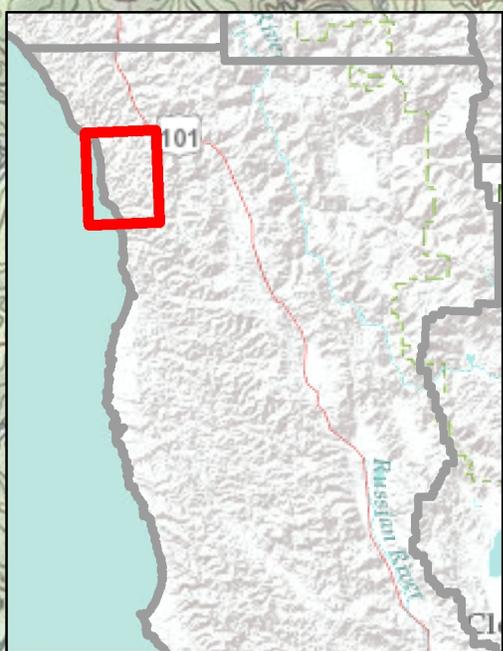


- Slaughterhouse Gulch Features
- South Fork Cottaneva Features
- ▲ Equipment Crossing
- Slaughterhouse Gulch
- South Fork Cottaneva Creek

0 0.125 0.25 0.5 Miles

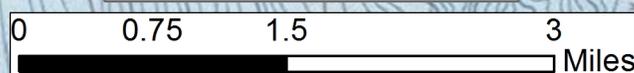
South Fork Cottaneva Watershed Habitat Enhancement Watershed Map

Eel River Watershed Improvement Group



-  Project Reach
-  Mainstem Cottaneva Creek
-  South Fork Cottaneva Creek

Eel River Watershed Improvement Group
April 2022



CALIFORNIA DEPARTMENT OF
FISH and WILDLIFE RareFind

Query Summary:

Quad IS (Westport (3912367) OR Lincoln Ridge (3912366) OR Dutchmans Knoll (3912356) OR Inglenook (3912357) OR Mistake Point (3912378) OR Hales Grove (3912377) OR Leggett (3912376))

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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
<i>Abronia umbellata</i> var. <i>breviflora</i>	pink sand-verbena	Dicots	PDNYC010N4	61	6	None	None	G4G5T2	S2	1B.1	BLM_S-Sensitive, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Coastal dunes
<i>Accipiter gentilis</i>	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
<i>Agrostis blasdalei</i>	Blasdale's bent grass	Monocots	PMPOA04060	62	2	None	None	G2G3	S2	1B.2	BLM_S-Sensitive, SB_UCSC-UC Santa Cruz	Coastal bluff scrub, Coastal dunes, Coastal prairie
<i>Anodonta californiensis</i>	California floater	Mollusks	IMBIV04220	6	1	None	None	G3Q	S2?	null	USFS_S-Sensitive	Aquatic
<i>Arborimus pomo</i>	Sonoma tree vole	Mammals	AMAFF23030	222	22	None	None	G3	S3	null	CDFW_SSC-Species of Special Concern, IUCN_NT-Near Threatened	North coast coniferous forest, Oldgrowth, Redwood
<i>Arctostaphylos stanfordiana</i> ssp. <i>raichei</i>	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
<i>Ardea herodias</i>	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
<i>Ascaphus truei</i>	Pacific tailed frog	Amphibians	AAABA01010	491	28	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
<i>Astragalus agnicidus</i>	Humboldt County milk-vetch	Dicots	PDFAB0F080	69	28	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
<i>Bombus caliginosus</i>	obscure bumble bee	Insects	IIHYM24380	181	4	None	None	G2G3	S1S2	null	IUCN_VU-Vulnerable	null
<i>Bombus crotchii</i>	Crotch bumble bee	Insects	IIHYM24480	437	1	None	None	G2	S1S2	null	null	null
<i>Bombus occidentalis</i>	western bumble bee	Insects	IIHYM24250	306	5	None	None	G2G3	S1	null	USFS_S-Sensitive	null
<i>Calamagrostis crassiglumis</i>	Thurber's reed grass	Monocots	PMPOA17070	15	1	None	None	G3Q	S2	2B.1	null	Coastal scrub, Freshwater marsh, Marsh & swamp, Wetland
<i>Calamagrostis foliosa</i>	leafy reed grass	Monocots	PMPOA170C0	22	1	None	Rare	G3	S3	4.2	null	Coastal bluff scrub, North coast coniferous forest
<i>Campanula</i>	swamp	Dicots	PDCAM02060	155	7	None	None	G3	S3	1B.2	BLM_S-Sensitive	Bog & fen,

californica	harebell												Closed-cone coniferous forest, Coastal prairie, Marsh & swamp, Meadow & seep, North coast coniferous forest, Wetland
Cardamine angulata	seaside bittercress	Dicots	PDBRA0K010	38	1	None	None	G4G5	S3	2B.1	null	Lower montane coniferous forest, North coast coniferous forest, Wetland	
Carex lyngbyei	Lyngbye's sedge	Monocots	PMCYP037Y0	37	1	None	None	G5	S3	2B.2	IUCN_LC-Least Concern	Marsh & swamp, 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	
Carex viridula ssp. viridula	green yellow sedge	Monocots	PMCYP03EM5	8	1	None	None	G5T5	S2	2B.3	null	Bog & fen, Marsh & swamp, North coast coniferous forest, Wetland	
Castilleja litoralis	Oregon coast paintbrush	Dicots	PDSCR0D012	44	1	None	None	G3	S3	2B.2	null	Coastal bluff scrub, Coastal dunes, Coastal scrub	
Castilleja mendocinensis	Mendocino Coast paintbrush	Dicots	PDSCR0D3N0	52	12	None	None	G2	S2	1B.2	BLM_S-Sensitive	Closed-cone coniferous forest, Coastal bluff scrub, Coastal dunes, Coastal prairie, Coastal scrub	
Ceanothus foliosus var. vineatus	Vine Hill ceanothus	Dicots	PDRHA040D6	6	1	None	None	G3T1	S1	1B.1	null	Chaparral	
Charadrius nivosus nivosus	western snowy plover	Birds	ABNNB03031	138	1	Threatened	None	G3T3	S2	null	CDFW_SSC-Species of Special Concern, NABCI_RWL-Red Watch List	Great Basin standing waters, Sand shore, Wetland	
Chorizanthe howellii	Howell's spineflower	Dicots	PDPGN040C0	9	5	Endangered	Threatened	G1	S1	1B.2	null	Coastal dunes, Coastal prairie, Coastal scrub	
Clarkia amoena ssp. whitneyi	Whitney's farewell-to-spring	Dicots	PDONA05025	8	5	None	None	G5T1	S1	1B.1	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, SB_UCBG-UC Botanical Garden at Berkeley	Coastal bluff scrub, 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	1	None	None	G3	S2.1	null	null	Marsh & swamp, Wetland	
Coelus globosus	globose dune beetle	Insects	IICOL4A010	50	1	None	None	G1G2	S1S2	null	IUCN_VU-Vulnerable	Coastal dunes	
Collinsia corymbosa	round-headed Chinese-houses	Dicots	PDSCR0H060	13	4	None	None	G1	S1	1B.2	null	Coastal dunes	
Coptis laciniata	Oregon goldthread	Dicots	PDRAN0A020	122	17	None	None	G4?	S3?	4.2	null	Meadow & seep, North coast coniferous forest, Wetland	
Corynorhinus townsendii	Townsend's big-eared bat	Mammals	AMACC08010	635	3	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	1	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	
Erysimum concinnum	bluff wallflower	Dicots	PDBRA160E3	30	1	None	None	G3	S2	1B.2	BLM_S-Sensitive	Coastal bluff scrub, Coastal dunes, Coastal prairie	
Erysimum menziesii	Menzies' wallflower	Dicots	PDBRA160R0	19	1	Endangered	Endangered	G1	S1	1B.1	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, SB_UCBG-UC Botanical Garden at Berkeley	Coastal dunes	
Erythronium revolutum	coast fawn lily	Monocots	PMLIL0U0F0	172	2	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	
Eumetopias jubatus	Steller sea lion	Mammals	AMAJC03010	38	1	Delisted	None	G3	S2	null	IUCN_EN-Endangered, MMC_SSC-Species of Special Concern	Marine intertidal & splash zone communities, Protected deepwater coastal communities, Rock shore	
Fen	Fen	Marsh	CTT51200CA	6	1	None	None	G2	S1.2	null	null	Bog & fen, Wetland	

<i>Gilia capitata</i> ssp. <i>pacifica</i>	Pacific <i>gilia</i>	Dicots	PDPLM040B6	91	1	None	None	G5T3	S2	1B.2	null	Chaparral, Coastal bluff scrub, Coastal prairie, Valley & foothill grassland
<i>Gilia millefoliata</i>	dark-eyed <i>gilia</i>	Dicots	PDPLM04130	54	3	None	None	G2	S2	1B.2	BLM_S-Sensitive	Coastal dunes
Grand Fir Forest	Grand Fir Forest	Forest	CTT82120CA	9	1	None	None	G1	S1.1	null	null	null
<i>Hesperovax sparsiflora</i> var. <i>brevifolia</i>	short-leaved <i>evax</i>	Dicots	PDASTE5011	72	3	None	None	G4T3	S3	1B.2	BLM_S-Sensitive	Coastal bluff scrub, Coastal dunes, Coastal prairie
<i>Hesperocyparis pygmaea</i>	pygmy cypress	Gymnosperms	PGCUP04032	37	1	None	None	G1	S1	1B.2	BLM_S-Sensitive, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Closed-cone coniferous forest
<i>Horkelia marinensis</i>	Point Reyes <i>horkelia</i>	Dicots	PDROS0W0B0	36	8	None	None	G2	S2	1B.2	null	Coastal dunes, Coastal prairie, Coastal scrub
<i>Lasiurus cinereus</i>	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
<i>Lasthenia californica</i> ssp. <i>bakeri</i>	Baker's goldfields	Dicots	PDAST5L0C4	19	1	None	None	G3T1	S1	1B.2	null	Closed-cone coniferous forest, Coastal scrub, Marsh & swamp, Meadow & seep
<i>Lasthenia californica</i> ssp. <i>macrantha</i>	perennial goldfields	Dicots	PDAST5L0C5	59	1	None	None	G3T2	S2	1B.2	BLM_S-Sensitive	Coastal bluff scrub, Coastal dunes, Coastal scrub
<i>Lilium maritimum</i>	coast lily	Monocots	PMLIL1A0C0	84	2	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
<i>Margaritifera falcata</i>	western pearlshell	Mollusks	IMBIV27020	78	5	None	None	G4G5	S1S2	null	null	Aquatic
<i>Mitellastra caulescens</i>	leafy-stemmed mitrewort	Dicots	PDSAX0N020	21	4	None	None	G5	S4	4.2	null	Broadleaved upland forest, Lower montane coniferous forest, Meadow & seep, North coast coniferous forest
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
Northern Coastal Salt Marsh	Northern Coastal Salt Marsh	Marsh	CTT52110CA	53	1	None	None	G3	S3.2	null	null	Marsh & swamp, Wetland
<i>Noyo intersessa</i>	Ten Mile shoulderband	Mollusks	IMGASC5070	3	1	None	None	G2	S2	null	null	Coastal dunes, Coastal scrub, Redwood, Riparian forest
<i>Oenothera wolfii</i>	Wolf's evening-primrose	Dicots	PDONA0C1K0	29	2	None	None	G2	S1	1B.1	SB_BerrySB-Berry Seed Bank	Coastal bluff scrub, Coastal dunes, Coastal prairie
<i>Oncorhynchus kisutch</i> pop. 4	coho salmon - central California coast ESU	Fish	AFCHA02034	23	1	Endangered	Endangered	G5T2Q	S2	null	AFS_EN-Endangered	Aquatic
<i>Oncorhynchus mykiss irideus</i> pop. 16	steelhead - northern California DPS	Fish	AFCHA0209Q	12	1	Threatened	None	G5T2T3Q	S2S3	null	AFS_TH-Threatened	Aquatic, Klamath/North coast flowing waters
<i>Pekania pennanti</i>	Fisher	Mammals	AMAJF01020	555	1	None	None	G5	S2S3	null	BLM_S-Sensitive, CDFW_SSC-	North coast coniferous

												Species of Special Concern, USFS_S-Sensitive	forest, Oldgrowth, Riparian forest
<i>Phacelia insularis</i> var. <i>continentis</i>	North Coast phacelia	Dicots	PDHYD0C2B1	15	4	None	None	G2T2	S2	1B.2	SB_UCBG-JC Botanical Garden at Berkeley	Coastal bluff scrub, Coastal dunes	
<i>Piperia candida</i>	white-flowered rein orchid	Monocots	PMORC1X050	222	21	None	None	G3?	S3	1B.2	null	Broadleaved upland forest, Lower montane coniferous forest, North coast coniferous forest, Ultramafic	
<i>Progne subis</i>	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	
<i>Rana aurora</i>	northern red-legged frog	Amphibians	AAABH01021	292	10	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	
<i>Rana boylei</i>	foothill yellow-legged frog	Amphibians	AAABH01050	2478	42	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	
<i>Rhyacotriton variegatus</i>	southern torrent salamander	Amphibians	AAAAJ01020	416	34	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	
<i>Rhynchospora alba</i>	white beaked-rush	Monocots	PMCYP0N010	17	1	None	None	G5	S2	2B.2	IUCN_LC-Least Concern	Bog & fen, Marsh & swamp, Meadow & seep, Wetland	
<i>Sidalcea malachroides</i>	maple-leaved checkerbloom	Dicots	PDMAL110E0	136	18	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>Silene bolanderi</i>	Bolander's catchfly	Dicots	PDCAR0U2L0	30	1	None	None	G2	S2	1B.2	null	Chaparral, Cismontane woodland, Lower montane coniferous forest, Meadow & seep, North coast coniferous forest, Ultramafic	
<i>Silene greenei</i> ssp. <i>angustifolia</i>	Red Mountain catchfly	Dicots	PDCAR0U0A2	8	2	None	Endangered	G5T1	S1	1B.2	BLM_S-Sensitive	Chaparral, Lower montane coniferous forest, Ultramafic	
<i>Taricha rivularis</i>	red-bellied newt	Amphibians	AAAAF02020	136	6	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>Thermopsis robusta</i>	robust false lupine	Dicots	PDFAB3Z0D0	104	7	None	None	G2	S2	1B.2	USFS_S-Sensitive	Broadleaved upland forest, North coast coniferous	

												forest, Ultramafic
Triquetrella californica	coastal triquetrella	Bryophytes	NBMUS7S010	13	1	None	None	G2	S2	1B.2	USFS_S-Sensitive	Coastal bluff scrub, Coastal scrub
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	14	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	1	None	None	G4G5	S3?	2B.3	null	Chaparral, Cismontane woodland, Lower montane coniferous forest