# Little North Fork Big River Instream Habitat Enhancement (Project ID: 1728012) 2022

## Introduction:

The Conservation Fund (Permitee) will implement the Little North Fork (LNF) Big River Habitat Enhancement (Project) to improve instream habitat for salmonids in LNF Big River. 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 South Fork 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)

Objective(s):
Is the project located in a tidally influenced California coastal zone? Yes $\square$ or No $\boxtimes$
Does the project involve the construction of beaver analogs? Yes □ or No ⊠

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 LNF Big River. This project will result in a total of 42 large wood features consisting of 83 pieces of wood over 7,020 feet (1.3 miles) of LNF Big River. The goal of this project is to enhance instream habitat in LNF Big River by installing large wood which will be used to create habitat diversity and flow complexity for salmonids, lamprey and other native species.

# **Project Description:**

#### Location:

The Project is located on the LNF Big River, tributary to Big River, in the County of Mendocino, State of California. The Project reach starts 3.2 miles upstream from the confluence with Big River and extends upstream approximately 1.3 miles. The

center point for the Project is 39.34022° north latitude, -123.67528° west longitude and is located on the Mathison Peak 7.5 Minute U.S. Geological Survey (USGS) Quadrangle map.

## **Project Set Up:**

Permitee will provide all grant and contract oversight and administration tasks including obtaining permits, securing contracts, scheduling, implementation oversight, agency communications, reporting and invoicing. All reporting and billing will be pursuant to the guidelines.

Large wood installation will be completed by subcontractor Blencowe Watershed Management (BWM) including all direct falling activities.

#### Materials:

The following materials will be installed in the project reach:

- Metal tags and nails for identification of individual large wood pieces
- 1" all thread rebar, nuts and washers for anchoring large wood features
- 83 pieces of large wood and root wads
- Straw mulch for erosion control

#### Tasks:

# Task 1: Pre-Implementation Survey and Design

BWM will complete final site layout prior to construction.

#### Task 2: Implementation

Eighty-three pieces of large wood will be installed throughout the project reach by BWM. BWM will complete all direct falling activities. A mechanized chainsaw winch will be used for the placement/adjustment of some project peices.

#### **Task 3: Post-Construction Surveys**

Post-construction surveys will include revisiting/reconducting longitudinal profile reach and all cross-sections. Project wood will be quantified, recorded and tagged with uniquely numbered aluminum tags for future monitoring/log tracking.

#### **Deliverables:**

Installation of 42 large wood features consisting of 83 logs and root wads uniquely tagged, will be installed within 1.3 miles of LNF Big River.

#### Timelines:

Construction of 42 large wood features with each log or root wad uniquely tagged, will take place between July 10 and October 31 of the years 2023, 2024 and 2025.

Mulching of disturbed areas will take place following installation of features and before the first significant rainfall. Mulch will be installed October 31 of the years 2023, 2024 and 2025.

# **Additional Requirements:**

The Permitee 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.

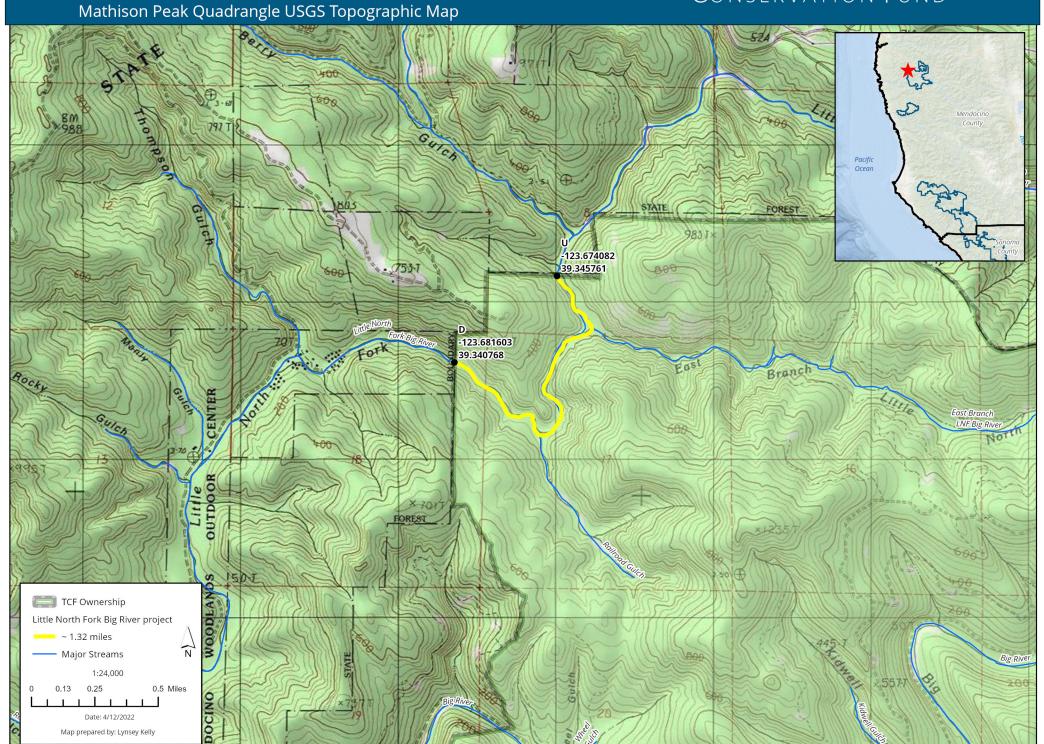
No equipment maintenance will be performed within or near the stream channel where pollutants (such as petroleum products) from the equipment may enter the channel via rainfall or runoff. Appropriate spill containment devices (e.g., oil absorbent pads, tarpaulins) will be used when refueling equipment.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

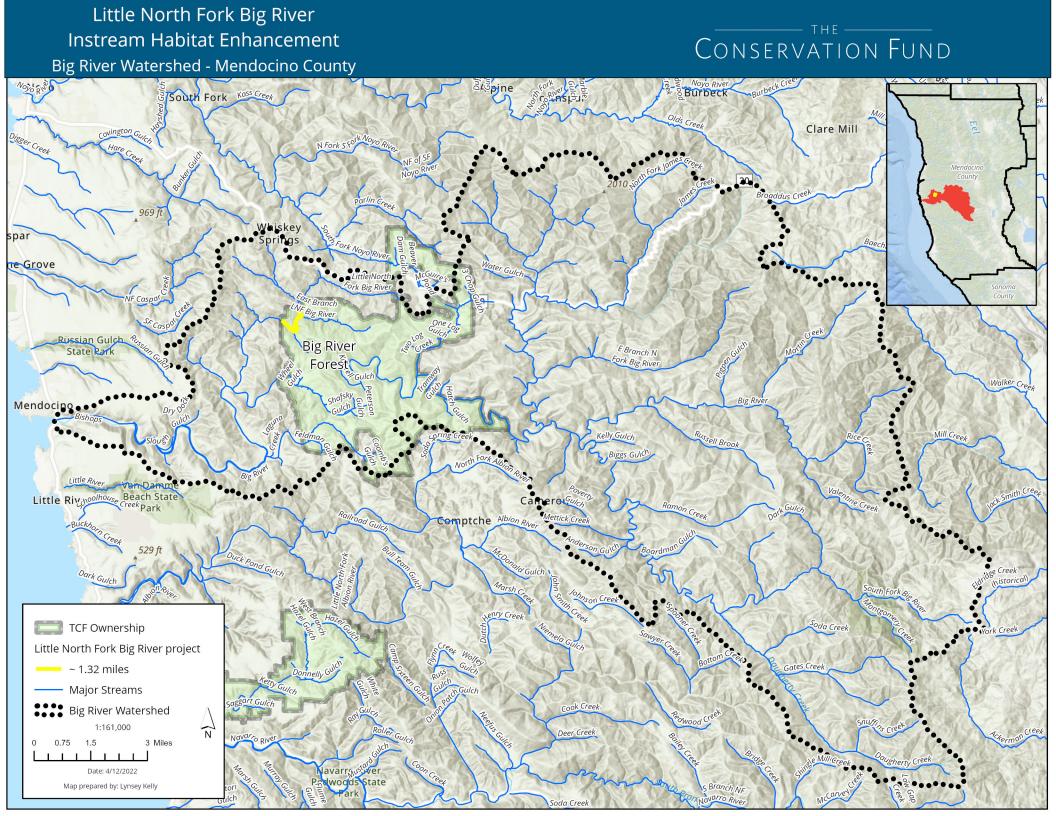
All equipment and gear will be brushed with a stiff brush prior to leaving each stretch of stream to avoid the transport of aquatic invasive species (AIS). When transporting traps out of the area, each numbered trap will be bagged in its own bag to avoid cross contamination during transport in and out 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.

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





#### CALIFORNIA DEPARTMENT OF

# FISH and WILDLIFE RareFind

Query Summary:
Quad IS (Mathison Peak (3912336) OR Mendocino (3912337) OR Comptche (3912335) OR Albion (3912327) OR Elk (3912326) OR Navarro (3912325) OR Fort Bragg (3912347) OR Noyo Hill (3912346) OR Northspur (3912345))

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CNDDB Element Query Results													
Scientific Name	Common Name	Taxonomic Group	Element Code	Total	Returned Occs		State Status	Global Rank	State Rank	CA Rare Plant Rank	Other Status	Habitats	
Abronia umbellata var. breviflora	pink sand- verbena	Dicots	PDNYC010N4	61	4	None	None	G4G5T2	S2	1B.1	BLM_S-Sensitive, SB_CalBG/RSABG- California/Rancho Santa Ana Botanic Garden	Coastal dunes	
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	S1S2	null	BLM_S-Sensitive, CDFW_SSC- Species of Special Concern, IUCN_EN- Endangered, NABCI_RWL-Red Watch List, USFWS_BCC-Birds of Conservation Concern	Freshwater marsh, Marsh & swamp, Swamp, Wetland	
Agrostis blasdalei	Blasdale's bent grass	Monocots	PMPOA04060	62	12	None	None	G2G3	S2	1B.2	BLM_S-Sensitive, SB_UCSC-UC Santa Cruz	Coastal bluff scrub, Coastal dunes, Coastal prairie	
Arborimus pomo	Sonoma tree vole	Mammals	AMAFF23030	222	31	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	7	None	None	G3?T1	S1	1B.2	null	Closed-cone coniferous forest	
Ascaphus truei	Pacific tailed frog	Amphibians	AAABA01010	491	23	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_CalBC/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	
Blennosperma nanum var. robustum	Point Reyes blennosperma	Dicots	PDAST1A022	13	1	None	Rare	G4T2	S2	1B.2	null	Coastal prairie, Coastal scrub	
Bombus caliginosus	obscure bumble bee	Insects	IIHYM24380	181	3	None	None	G2G3	S1S2	null	IUCN_VU- Vulnerable	null	
Bombus occidentalis	western bumble bee	Insects	IIHYM24250	306	3	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	
Calamagrostis crassiglumis	Thurber's reed grass	Monocots	PMPOA17070	15	1	None	None	G3Q	S2	2B.1	null	Coastal scrub, Freshwater	

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												marsh, Marsh & swamp, Wetland
Calileptoneta wapiti	Mendocino leptonetid spider	Arachnids	ILARAU6040	2	2	None	None	G1	S1	null	null	North coast coniferous forest
Calystegia purpurata ssp. saxicola	coastal bluff morning-glory	Dicots	PDCON040D2	42	4	None	None	G4T2T3	S2S3	1B.2	BLM_S-Sensitive	Coastal bluff scrub, Coastal dunes, Coastal scrub, North coast coniferous forest
Campanula californica	swamp harebell	Dicots	PDCAM02060	155	40	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
Carex californica	California sedge	Monocots	PMCYP032D0	41	29	None	None	G5	S2	2B.2	null	Bog & fen, Closed-cone coniferous forest, Coastal prairie, Freshwater marsh, Marsh & swamp, Meadow & seep Wetland
Carex lenticularis var. limnophila	lagoon sedge	Monocots	PMCYP037A7	4	1	None	None	G5T5	S1	2B.2	null	Bog & fen, Marsh & swamp North coast coniferous fores
Carex livida	livid sedge	Monocots	PMCYP037L0	1	1	None	None	G5	SH	2A	null	Bog & fen, Wetland
Carex lyngbyei	Lyngbye's sedge	Monocots	PMCYP037Y0	37	3	None	None	G5	S3	2B.2	IUCN_LC-Least Concern	Marsh & swamp Wetland
Carex saliniformis	deceiving sedge	Monocots	PMCYP03BY0	18	7	None	None	G2	S2	1B.2	null	Coastal prairie, Coastal scrub, Marsh & swamp Meadow & seep Wetland
Castilleja ambigua var. humboldtiensis	Humboldt Bay owl's-clover	Dicots	PDSCR0D402	31	2	None	None	G4T2	S2	1B.2	BLM_S-Sensitive	Marsh & swamp Salt marsh, Wetland
Castilleja litoralis	Oregon coast paintbrush	Dicots	PDSCR0D012	44	3	None	None	G3	S3	2B.2	null	Coastal bluff scrub, Coastal dunes, Coastal scrub
Castilleja mendocinensis	Mendocino Coast paintbrush	Dicots	PDSCR0D3N0	52	30	None	None	G2	S2	1B.2	BLM_S-Sensitive	Closed-cone coniferous forest, Coastal bluff scrub, Coastal dunes, Coastal prairie, Coastal scrub
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	1	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	2	None	None	G3	S2.1	null	null	Marsh & swamp Wetland
Coelus globosus	globose dune beetle	Insects	IICOL4A010	50	2	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	35	None	None	G4?	S3?	4.2	null	Meadow & seep North coast

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		]										coniferous forest, Wetland
Cornus unalaschkensis	bunchberry	Dicots	PDCOR010F0	11	3	None	None	G5	S2	2B.2	null	Bog & fen, Meadow & seep, North coast coniferous forest
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
Cuscuta pacifica var. papillata	Mendocino dodder	Dicots	PDCUS011A2	5	2	None	None	G5T1	S1	1B.2	null	Coastal dunes
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
Emys marmorata	western pond turtle	Reptiles	ARAAD02030	1404	1	None	None	G3G4	\$3	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 flowing waters, South coast standing waters, 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, Upper montane coniferous forest
Erigeron supplex	supple daisy	Dicots	PDAST3M3Z0	21	4	None	None	G2	S2	1B.2	SB_UCBG-UC Botanical Garden at Berkeley	Coastal bluff scrub, Coastal prairie
Erysimum concinnum	bluff wallflower	Dicots	PDBRA160E3	30	8	None	None	G3	S2	1B.2	BLM_S-Sensitive	Coastal bluff scrub, Coastal dunes, Coastal prairie
Erysimum menziesii	Menzies' wallflower	Dicots	PDBRA160R0	19	4	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	coast fawn lily	Monocots	PMLIL0U0F0	172	5	None	None	G4G5	S3	2B.2	null	Bog & fen,

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revolutum												Broadleaved upland forest, North coast coniferous forest, Wetland
Eucyclogobius newberryi	tidewater goby	Fish	AFCQN04010	127	2	Endangered	None	G3	S3	null	AFS_EN- Endangered, IUCN_VU- Vulnerable	Aquatic, Klamath/North coast flowing waters, Sacramento/Sa Joaquin flowing waters, South coast flowing waters
Fratercula cirrhata	tufted puffin	Birds	ABNNN12010	17	2	None	None	G5	S1S2	null	CDFW_SSC- Species of Special Concern, IUCN_LC- Least Concern, USFWS_BCC-Birds of Conservation Concern	Protected deepwater coastal communities
Gilia capitata ssp. pacifica	Pacific gilia	Dicots	PDPLM040B6	91	5	None	None	G5T3	S2	1B.2	null	Chaparral, Coastal bluff scrub, Coastal prairie, Valley & foothill grassland
Gilia millefoliata	dark-eyed gilia	Dicots	PDPLM04130	54	4	None	None	G2	S2	1B.2	BLM_S-Sensitive	Coastal dunes
Grand Fir Forest	Grand Fir Forest	Forest	CTT82120CA	9	6	None	None	G1	S1.1	null	null	null
Helminthoglypta arrosa pomoensis	Pomo bronze shoulderband	Mollusks	IMGASC2033	3	1	None	None	G2G3T1	S1	null	IUCN_DD-Data Deficient	North coast coniferous forest, Redwoo
Hemizonia congesta ssp. congesta	congested- headed hayfield tarplant	Dicots	PDAST4R065	52	1	None	None	G5T2	S2	1B.2	SB_UCBG-UC Botanical Garden at Berkeley	Valley & foothill grassland
Hesperevax sparsiflora var. brevifolia	short-leaved evax	Dicots	PDASTE5011	72	20	None	None	G4T3	S3	1B.2	BLM_S-Sensitive	Coastal bluff scrub, Coastal dunes, Coastal prairie
Hesperocyparis pygmaea	pygmy cypress	Gymnosperms	PGCUP04032	37	25	None	None	G1	S1	1B.2	BLM_S-Sensitive, SB_CalBG/RSABG- California/Rancho Santa Ana Botanic Garden	Closed-cone coniferous fore
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
Horkelia marinensis	Point Reyes horkelia	Dicots	PDROS0W0B0	36	4	None	None	G2	S2	1B.2	null	Coastal dunes, Coastal prairie, Coastal scrub
Hydrobates homochroa	ashy storm- petrel	Birds	ABNDC04030	21	1	None	None	G2	S2	null	BLM_S-Sensitive, CDFW_SSC- Species of Special Concern, IUCN_EN- Endangered, NABCI_RWL-Red Watch List, USFWS_BCC-Birds of Conservation Concern	Protected deepwater coastal communities
Juncus supiniformis	hair-leaved rush	Monocots	PMJUN012R0	6	6	None	None	G5	S1	2B.2	IUCN_LC-Least Concern	Bog & fen, Marsh & swam Wetland
Kopsiopsis hookeri	small groundcone	Dicots	PDORO01010	21	1	None	None	G4?	S1S2	2B.3	null	North coast coniferous fore
Lasthenia californica ssp. bakeri	Baker's goldfields	Dicots	PDAST5L0C4	19	3	None	None	G3T1	S1	1B.2	null	Closed-cone coniferous forest, Coastal scrub, Marsh & swamp, Meadow & see
Lasthenia californica ssp. macrantha	perennial goldfields	Dicots	PDAST5L0C5	59	11	None	None	G3T2	S2	1B.2	BLM_S-Sensitive	Coastal bluff scrub, Coastal dunes, Coastal scrub
Lathyrus palustris	marsh pea	Dicots	PDFAB250P0	13	1	None	None	G5	S2	2B.2	null	Bog & fen, Coastal prairie, Coastal scrub, Lower montane coniferous forest, Marsh & swamp, North

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												coast coniferous forest, Wetland
Lilium maritimum	coast lily	Monocots	PMLIL1A0C0	84	34	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
Lycopodium clavatum	running-pine	Ferns	PPLYC01080	120	4	None	None	G5	S3	4.1	null	Lower montane coniferous forest, Marsh & swamp, North coast coniferous forest, Wetland
Mendocino Pygmy Cypress Forest	Mendocino Pygmy Cypress Forest	Forest	CTT83161CA	25	24	None	None	G2	S2.1	null	null	Closed-cone coniferous fores
Microseris borealis	northern microseris	Dicots	PDAST6E030	3	1	None	None	G5	S1	2B.1	IUCN_LC-Least Concern	Bog & fen, Lower montane coniferous forest, Meadow & seep, Wetland
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
Northern Coastal Salt Marsh	Northern Coastal Salt Marsh	Marsh	CTT52110CA	53	2	None	None	G3	S3.2	null	null	Marsh & swamp Wetland
Noyo intersessa	Ten Mile shoulderband	Mollusks	IMGASC5070	3	2	None	None	G2	S2	null	null	Coastal dunes, Coastal scrub, Redwood, Riparian forest
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	2	Threatened	None	G5T2T3Q	S2S3	null	AFS_TH- Threatened	Aquatic, Klamath/North coast flowing waters
Packera bolanderi var. bolanderi	seacoast ragwort	Dicots	PDAST8H0H1	72	6	None	None	G4T4	S2S3	2B.2	null	Coastal scrub, North coast coniferous fores
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
Phacelia insularis var. continentis	North Coast phacelia	Dicots	PDHYD0C2B1	15	5	None	None	G2T2	S2	1B.2	SB_UCBG-UC Botanical Garden at Berkeley	Coastal bluff scrub, Coastal dunes
Pinus contorta ssp. bolanderi	Bolander's beach pine	Gymnosperms	PGPIN04081	28	28	None	None	G5T2	S2	1B.2	null	Closed-cone coniferous fores
Piperia candida	white- flowered rein orchid	Monocots	PMORC1X050	222	18	None	None	G3?	S3	1B.2	null	Broadleaved upland forest, Lower montane coniferous forest, North coast coniferous forest, Ultramafic
Plebejus anna lotis	lotis blue butterfly	Insects	IILEPG5013	2	1	Endangered	None	G4TH	SH	null	null	Bog & fen, Meadow & seep Wetland
Pleuropogon hooverianus	North Coast semaphore grass	Monocots	PMPOA4Y070	27	1	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	3	None	None	G5	S3	null	CDFW_SSC- Species of Special Concern, IUCN_LC- Least Concern	Broadleaved upland forest, Lower montane coniferous fores
Puccinellia	dwarf alkali grass	Monocots	PMPOA531L0	2	1	None	None	G5	SH	2B.2	null	Marsh & swamp Wetland
pumila	yrass				1			l				

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Rana aurora	northern red- legged frog	Amphibians	AAABH01021	292	30	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 boylii	foothill yellow- legged frog	Amphibians	AAABH01050	2478	101	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, Ripariar forest, Riparian woodland, Sacramento/Sar Joaquin flowing waters
Rhyacotriton variegatus	southern torrent salamander	Amphibians	AAAAJ01020	416	13	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
Rhynchospora alba	white beaked- rush	Monocots	PMCYP0N010	17	2	None	None	G5	S2	2B.2	IUCN_LC-Least Concern	Bog & fen, Marsh & swamp, Meadow & seep, Wetland
Sanguisorba officinalis	great burnet	Dicots	PDROS1L060	22	3	None	None	G5?	S2	2B.2	null	Bog & fen, Broadleaved upland forest, Marsh & swamp, Meadow & seep, North coast coniferous forest, Riparian forest, Ultramafic, Wetland
Sidalcea calycosa ssp. rhizomata	Point Reyes checkerbloom	Dicots	PDMAL11012	34	5	None	None	G5T2	S2	1B.2	null	Freshwater marsh, Marsh & swamp, Wetland
Sidalcea malachroides	maple-leaved checkerbloom	Dicots	PDMAL110E0	136	5	None	None	G3	S3	4.2	null	Broadleaved upland forest, Coastal prairie, Coastal scrub, North coast coniferous forest, Riparian forest
Sidalcea malviflora ssp. patula	Siskiyou checkerbloom	Dicots	PDMAL110F9	60	1	None	None	G5T2	S2	1B.2	null	Coastal bluff scrub, Coastal prairie, North coast coniferous forest
Sidalcea malviflora ssp. purpurea	purple- stemmed checkerbloom	Dicots	PDMAL110FL	19	1	None	None	G5T1	S1	1B.2	BLM_S-Sensitive	Broadleaved upland forest, Coastal prairie
Speyeria zerene behrensii	Behren's silverspot butterfly	Insects	IILEPJ6088	12	2	Endangered	None	G5T1	S1	null	null	Coastal prairie
Sphagnum Bog	Sphagnum Bog	Marsh	CTT51110CA	12	5	None	None	G3	S1.2	null	null	Bog & fen, Wetland
Taricha rivularis	red-bellied newt	Amphibians	AAAAF02020	136	16	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
Trifolium buckwestiorum	Santa Cruz clover	Dicots	PDFAB402W0	64	2	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 Āgriculture	Broadleaved upland forest, Cismontane woodland, Coastal prairie
Trifolium trichocalyx	Monterey clover	Dicots	PDFAB402J0	6	1	Endangered	Endangered	G1	S1	1B.1	SB_USDA-US Dept of Agriculture	Closed-cone coniferous forest
Triquetrella californica	coastal triquetrella	Bryophytes	NBMUS7S010	13	1	None	None	G2	S2	1B.2	USFS_S-Sensitive	Coastal bluff scrub, Coastal scrub
Usnea	Methuselah's	Lichens	NLLEC5P420	206	8		None	G4	S4	4.2	BLM S-Sensitive	Broadleaved

longissima	beard lichen											upland forest, North coast coniferous forest, Oldgrowth, Redwood
Viola palustris	alpine marsh violet	Dicots	PDVIO041G0	10	2	None	None	G5	S1S2	2B.2	null	Bog & fen, Coastal scrub,