

Seiad Creek at Panther Gulch Coho Habitat Enhancement Project (Project ID: 1730067)

2023

Introduction:

The Grantee will improve the geomorphic function and salmonid habitat complexity in Seiad Creek through an engineered process-based approach. A total of 22 Large Wood (LW) structures, three (3) low velocity side channels, and two (2) off-channel refugia ponds will be constructed. Mine tailings will be removed and the channel will be regraded in four (4) areas to restore and reconnect nine (9) acres of floodplain habitat. The project will enhance 0.5 miles of Seiad Creek with beneficial spawning and rearing salmonid habitat. The habitat features for this project will provide winter velocity refugia, increase the pool and cover shelter, sort substrate, and increase the frequency of floodplain and side channel inundation.

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 I, and Volume II Part XI and Part XII.

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 Seiad Creek, approximately 5.5 miles upstream from its confluence with the Klamath River and approximately 2.5 miles upstream from its confluence with Canyon Creek. The upstream extent of the project area is near Panther Gulch. The project area has one major water diversion. The project site is in Siskiyou County, California, near the town of Seiad Valley. To get to the site, drive 4.2 miles up Seiad Creek Road to an unmarked road leading down to Seiad Creek. Refer to the Project Location Map. Project coordinates are: 41.872025, -123.133588

Project Set Up:

The project will be implemented by the Grantee and Subcontractors as follows:

Grantee's Project Director will oversee project administration, supervision and technical management of the project.

Grantee's Project Manager will administer project subcontracts, oversee budget tracking, material procurement and invoices, and project reporting as well as be responsible for oversight and coordination with project contractors and specialists.

Grantee's Project Coordinator will support the Program Manager with budgetary tracking, invoicing, and grant compliance monitoring.

Grantee's Program Assistant will provide daily support and oversight with implementation activities, task scheduling, permitting compliance, and coordination with project partners. They will also complete pre/post construction monitoring.

Engineering Subcontractor will provide technical oversight of design engineering, project planning and scheduling. They will perform design compliance inspections during the implementation of the approved 100% final design plan. They will complete as-built drawings when construction is complete.

Construction Subcontractor will complete construction activities, provide equipment, labor and materials to implement the design plan. They will also perform excavation/grading work, installation of wood structures, temporary river crossing, and erosion control and dewatering management.

Materials:

All materials will be purchased by the Grantee.

The following is a list of materials that will be used for this project:

Software Licenses: License subscriptions to various programs for computer programming and project documentation.

Garmin InReach Subscription: Satellite subscription for GPS communication, navigation, and tracking.

Office and Field Supplies: Copy paper, pens/pencils, write in the rain notebook/paper, measuring tapes, flagging, digital camera, binders/folder, printer ink. Waders/boots, safety gear. Signage material. Water monitoring data loggers

Project Permit: Streambed Alteration Agreement

Construction Hardware and Supplies: Rebar steel, fasteners, steel chain

Logs with attached root masses: 89 logs for constructing habitat structures to lower stream velocities, scour pools, provide shelter, and increase channel complexity.

Large Boulders for structure ballast: 291 rock boulders @ 2.5 ton.

Native grass seed: Mulching for erosion control and planted riparian vegetation.

Tasks:

Task 1: Project Management and Administration: Grantee will provide technical and administrative oversight for the grant agreement, secure all permits, administer subcontracts, material procurement, project tracking, invoicing, and payments, submit progress, quarterly and final reports.

Task 2: Project Management and Coordination: Grantee will perform pre/implementation and post-project monitoring. Develop and submit a dewatering, fish relocation and water quality plans for CDFW grant manager approval. Grantee will coordinate inspections of the site and 100% final designs with landowner and agencies for pre-implementation review.

Task 3: Construction Implementation: large wood structures, off-channel ponds and side channel grading will be completed in accordance with the 100% final engineered design plan and CDFW California Salmonid Stream Habitat Restoration Manual.

Task 4: Post-Construction Monitoring: Complete post-implementation surveys for longitudinal channel profile with cross-sections, as-built drawings, pre & post construction photo documentation, and total number of logs installed.

Deliverables:

A total of 22 Large wood structures, three (3) low flow side channels, two (2) off-channel refugia ponds. Restore nine (9) acres of floodplain habitat and enhance Coho Salmon habitat in 0.5 mile of Seiad Creek.

Timelines:

Task 1 & 2: Starting June 3, 2024, through May 31, 2027

Task 3: August 2025 through October 31, 2025

Task 4: November 2025 through May 31, 2027

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,

tarps) 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 Grantee shall notify the CDFW Project Manager 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:

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

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*.

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 Grant Manager and pursuant to conditions in the USACE Regional General Permit and NMFS Biological Opinion.

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.

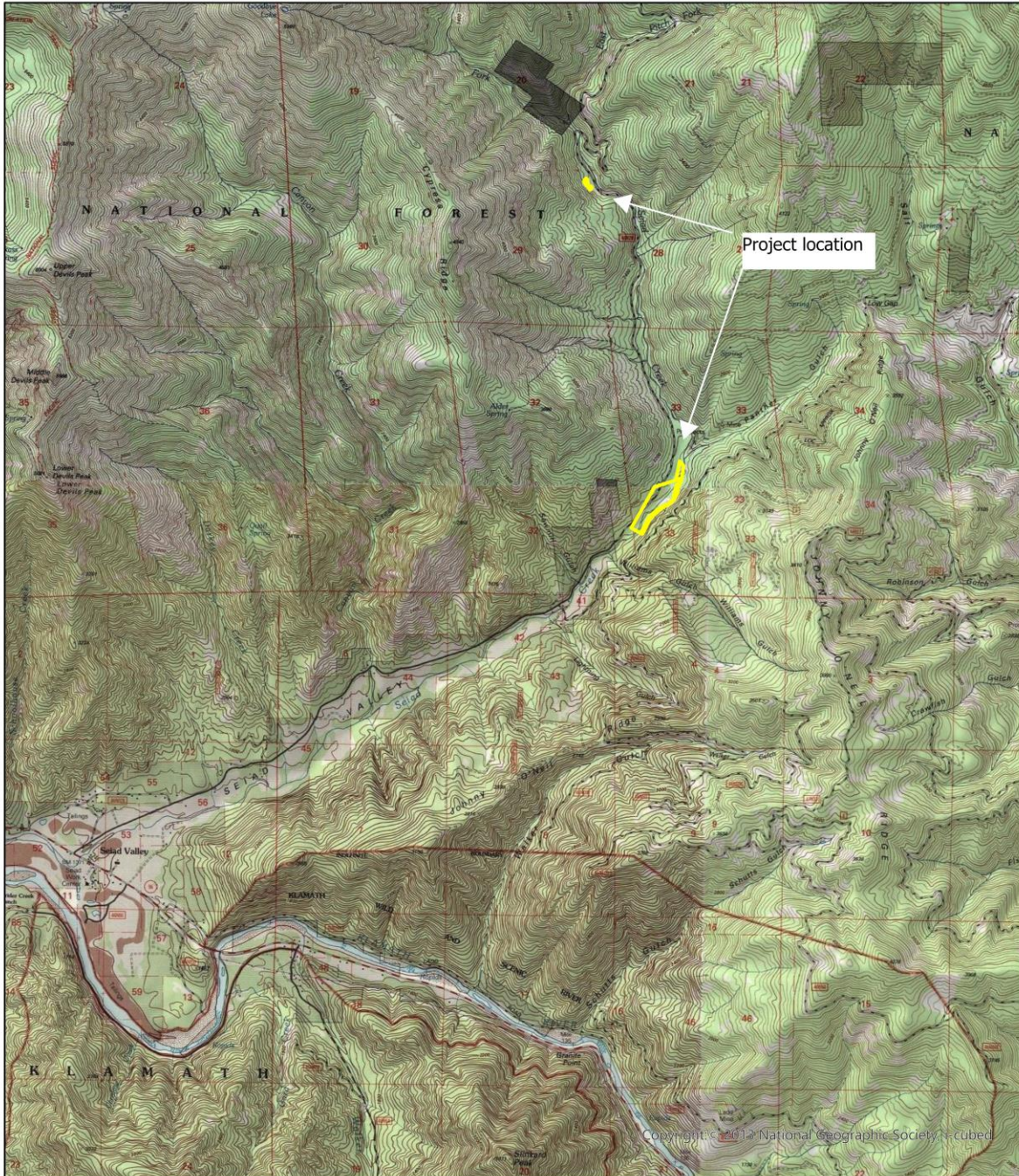
USFWS Approved fisheries biologists will provide fish relocation data via the Permittee to the CDFW Grant Manager on a form provided by CDFW.

All habitat improvements will follow techniques described in the *California Salmonid Stream Habitat Restoration Manual*, Volume I, and Volume II Part XI and Part XII.

**1730067 - Seiad Creek at Panther Gulch Coho Habitat Enhancement Project
Project Location Topographic Map**



Mid Klamath Watershed Council
USGS Quad Name: Seiad Valley CA and Kangaroo Mountain CA
Stream Name: Seiad Creek



CDFW RAREFIND

Query Summary:

Quad IS (Figurehead Mtn. (4112383) OR Kangaroo Mtn. (4112382) OR Dutch Creek (4112381) OR Slater Butte (4112373) OR Seiad Valley (4112372) OR Hamburg (4112371) OR Huckleberry Mtn. (4112363) OR Grider Valley (4112362) OR Scott Bar (4112361))

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
Abies amabilis	Pacific silver fir	Gymnosperms	PGPIN01010	7	5	None	None	G5	S2	2B.3	IUCN_LC-Least Concern	Oldgrowth, Upper montane coniferous forest
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
Ancotrema voyanum	hooded lancetooth	Mollusks	IMGAS36130	173	20	None	None	G1G2	S1S2	null	null	Oldgrowth, Riparian forest, Talus slope
Anemone multifida var. multifida	cut-leaf anemone	Dicots	PDRAN040E6	10	2	None	None	G5T5	S1S2	2B.2	null	Lower montane coniferous forest, Subalpine coniferous forest, Upper montane coniferous forest
Arabis aculeolata	Waldo rockcress	Dicots	PDBRA06010	8	2	None	None	G4	S2	2B.2	SB_BerrySB-Berry Seed Bank	Broadleaved upland forest, Lower montane coniferous forest, Ultramafic, Upper montane coniferous forest
Ardea herodias	great blue heron	Birds	ABNGA04010	156	15	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
Atractelmis wawona	Wawona riffle beetle	Insects	IICOL58010	80	1	None	None	G3	S1S2	null	null	Aquatic
Boechera koehleri	Koehler's stipitate rockcress	Dicots	PDBRA060Z0	29	3	None	None	G3G4	S3	1B.3	USFS_S-Sensitive	Chaparral, Lower montane coniferous

													forest, Ultramafic
Boechera rollei	Rolle's rockcress	Dicots	PDBRA064H0	1	1	None	None	G1	S1	1B.1	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Ultramafic, Upper montane coniferous forest	
Bombus caliginosus	obscure bumble bee	Insects	IIHYM24380	181	1	None	None	G2G3	S1S2	null	IUCN_VU-Vulnerable	null	
Bombus franklini	Franklin's bumble bee	Insects	IIHYM24010	11	2	Endangered	Candidate Endangered	G1	SH	null	IUCN_CR-Critically Endangered	null	
Bombus morrisoni	Morrison bumble bee	Insects	IIHYM24460	86	1	None	None	G3	S1S2	null	IUCN_VU-Vulnerable	null	
Bombus occidentalis	western bumble bee	Insects	IIHYM24252	306	1	None	Candidate Endangered	G3	S1	null	IUCN_VU-Vulnerable, USFS_S-Sensitive	null	
Castilleja schizotricha	split-hair paintbrush	Dicots	PDSCR0D2Y0	30	16	None	None	G4	S3	1B.3	SB_BerrySB-Berry Seed Bank	Upper montane coniferous forest	
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	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	
Cottus klamathensis polyporus	Lower Klamath marbled sculpin	Fish	AFC4E02153	20	1	None	None	G4T2T4	S2S4	null	CDFW_SSC-Species of Special Concern	Aquatic	
Draba camosula	Mt. Eddy draba	Dicots	PDBRA112T0	14	2	None	None	G2	S2	1B.3	BLM_S-Sensitive, SB_BerrySB-Berry Seed Bank, USFS_S-Sensitive	Subalpine coniferous forest, Ultramafic, Upper montane coniferous forest	
Entosphenus similis	Klamath River lamprey	Fish	AFBAA02140	14	4	None	None	G3G4Q	S3	null	AFS_TH-Threatened, CDFW_SSC-Species of Special Concern, IUCN_NT-Near Threatened, USFS_S-Sensitive	Aquatic, Klamath/North coast flowing waters	
Epilobium siskiyouense	Siskiyou fireweed	Dicots	PDONA06100	56	4	None	None	G3	S3	1B.3	SB_BerrySB-Berry Seed Bank	Alpine boulder & rock field, Subalpine coniferous forest, Ultramafic, Upper montane coniferous forest	

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
Eriogonum diclinum	Jaynes Canyon buckwheat	Dicots	PDPGN081S0	14	1	None	None	G3	S3	2B.3	null	Ultramafic, Upper montane coniferous forest
Eriogonum hirtellum	Klamath Mountain buckwheat	Dicots	PDPGN082T0	30	8	None	None	G2G3	S2S3	1B.3	SB_UCSC-UC Santa Cruz, USFS_S-Sensitive	Lower montane coniferous forest, Ultramafic, Upper montane coniferous forest
Erythronium hendersonii	Henderson's fawn lily	Monocots	PMLIL0U070	7	2	None	None	G4	S2	2B.3	USFS_S-Sensitive	Lower montane coniferous forest
Falco peregrinus anatum	American peregrine falcon	Birds	ABNKD06071	73	1	Delisted	Delisted	G4T4	S3S4	null	CDF_S-Sensitive	null
Gonidea angulata	western ridged mussel	Mollusks	IMBIV19010	157	25	None	None	G3	S2	null	IUCN_VU-Vulnerable	Aquatic
Haliaeetus leucocephalus	bald eagle	Birds	ABNKC10010	332	2	Delisted	Endangered	G5	S3	null	BLM_S-Sensitive, CDF_S-Sensitive, CDFW_FP-Fully Protected, IUCN_LC-Least Concern, USFS_S-Sensitive	Lower montane coniferous forest, Oldgrowth
Hemieva ranunculifolia	buttercup-leaf hemieva	Dicots	PDSAX0W010	8	1	None	None	G5	S2	2B.2	null	Meadow & seep, Upper montane coniferous forest, Wetland
Juncus dudleyi	Dudley's rush	Monocots	PMJUN01390	12	1	None	None	G5	S1	2B.3	null	Lower montane coniferous forest, Wetland
Lanx alta	highcap lanx	Mollusks	IMGASL7010	13	3	None	None	G2G3	S3	null	null	Aquatic
Lasionycteris noctivagans	silver-haired bat	Mammals	AMACC02010	139	1	None	None	G3G4	S3S4	null	IUCN_LC-Least Concern	Lower montane coniferous forest, Oldgrowth, Riparian forest
Lewisia cotyledon var. heckneri	Heckner's lewisia	Dicots	PDPOR04052	41	1	None	None	G4T3	S3	1B.2	BLM_S-Sensitive, SB_UCSC-UC Santa Cruz	Lower montane coniferous forest
Lomatium hendersonii	Henderson's lomatium	Dicots	PDAP11B0T0	14	1	None	None	G5?	S2	2B.3	null	Great Basin scrub, Lower montane coniferous forest, Pinon & juniper woodlands
Margaritifera falcata	western pearlshell	Mollusks	IMBIV27020	78	9	None	None	G4G5	S1S2	null	IUCN_NT-Near Threatened	Aquatic

Martes caurina humboldtensis	Humboldt marten	Mammals	AMAJF01012	44	2	Threatened	Endangered	G4G5T1	S1	null	CDFW_SSC-Species of Special Concern, USFS_S-Sensitive	North coast coniferous forest, Oldgrowth, Redwood
Mitellastraca caulescens	leafy-stemmed mitrewort	Dicots	PDSAX0N020	21	1	None	None	G5	S4	4.2	null	Broadleaved upland forest, Lower montane coniferous forest, Meadow & seep, North coast coniferous forest
Monadenia callipeplus	downy sideband	Mollusks	IMGASC7110	3	3	None	None	G1?	S1S2	null	null	Oldgrowth, Riparian forest
Monotropa uniflora	ghost-pipe	Dicots	PDMON03030	115	1	None	None	G5	S2	2B.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Broadleaved upland forest, North coast coniferous forest
Pandion haliaetus	osprey	Birds	ABNKC01010	504	1	None	None	G5	S4	null	CDF_S-Sensitive, CDFW_WL-Watch List, IUCN_LC-Least Concern	Riparian forest
Pekania pennanti	Fisher	Mammals	AMAJF01020	555	5	None	None	G5	S2S3	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern, USFS_S-Sensitive	North coast coniferous forest, Oldgrowth, Riparian forest
Piperia candida	white-flowered rein orchid	Monocots	PMORC1X050	222	2	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
Plethodon asupak	Scott Bar salamander	Amphibians	AAAAD12560	42	27	None	Threatened	G1G2	S3	null	IUCN_VU-Vulnerable	null
Plethodon elongatus	Del Norte salamander	Amphibians	AAAAD12050	151	10	None	None	G4	S3	null	CDFW_WL-Watch List, IUCN_NT-Near Threatened	Oldgrowth
Plethodon stormi	Siskiyou Mountains salamander	Amphibians	AAAAD12180	84	72	None	Threatened	G3?	S3	null	IUCN_EN-Endangered, USFS_S-Sensitive	Lower montane coniferous forest
Prophysaon sp. 1	Klamath taildropper	Mollusks	IMGAS62100	31	5	None	None	G3	S3	null	null	Broadleaved upland forest, Lower montane coniferous forest, Meadow & seep, Riparian forest
Ptilidium californicum	Pacific fuzzwort	Bryophytes	NBHEP2U010	177	16	None	None	G4G5	S3S4	4.3	BLM_S-Sensitive	Lower montane coniferous forest, Upper montane coniferous forest
Rana boylei pop. 1	foothill yellow-legged frog - north coast DPS	Amphibians	AAABH01051	1608	4	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

<i>Rana cascadae</i>	Cascades frog	Amphibians	AAABH01060	464	3	None	Candidate Endangered	G3	S3	null	CDFW_SSC-Species of Special Concern, IUCN_NT-Near Threatened, USFS_S-Sensitive	Aquatic, Lower montane coniferous forest
<i>Rhyacotriton variegatus</i>	southern torrent salamander	Amphibians	AAAAJ01020	416	4	None	None	G3?	S2S3	null	CDFW_SSC-Species of Special Concern, IUCN_LC-	Lower montane coniferous forest,
											Least Concern, USFS_S-Sensitive	Oldgrowth, Redwood, Riparian forest
<i>Saussurea americana</i>	American saw-wort	Dicots	PDAST8B020	3	3	None	None	G5	S1	2B.2	null	Lower montane coniferous forest, Meadow & seep
<i>Sedum marmorense</i>	Marble Mountains stonecrop	Dicots	PDCRA0A230	6	2	None	None	G1G2	S1S2	1B.2	null	Subalpine coniferous forest, Talus slope, Ultramafic, Upper montane coniferous forest
<i>Sedum oblongeolatum</i>	Applegate stonecrop	Dicots	PDCRA0A0T0	10	8	None	None	G3	S1	1B.1	SB_BerrySB-Berry Seed Bank	Upper montane coniferous forest
<i>Selaginella scopulorum</i>	Rocky Mountain spike-moss	Ferns	PPSEL010C2	21	1	None	None	G5T5?	S2S3	2B.3	null	Subalpine coniferous forest, Upper montane coniferous forest
<i>Silene hookeri</i>	Hooker's catchfly	Dicots	PDCAR0U2M0	31	1	None	None	G4	S2	2B.2	null	Chaparral, Cismontane woodland, Lower montane coniferous forest, Ultramafic
<i>Smilax jamesii</i>	English Peak greenbrier	Monocots	PMSMI010D0	158	2	None	None	G3G4	S3S4	4.2	null	Broadleaved upland forest, Lower montane coniferous forest, Marsh & swamp, North coast coniferous forest, Upper montane coniferous forest, Wetland
<i>Stachys pilosa</i>	hairy marsh hedge-nettle	Dicots	PDLAM1X1A0	33	1	None	None	G5	S3	2B.3	null	Great Basin scrub, Meadow & seep
<i>Thermopsis robusta</i>	robust false lupine	Dicots	PDFAB3Z0D0	104	2	None	None	G2	S2	1B.2	SB_UCSC-UC Santa Cruz, USFS_S-Sensitive	Broadleaved upland forest, North coast coniferous forest, Ultramafic
<i>Trilobopsis tehamana</i>	Tehama chaparral	Mollusks	IMGASA2040	12	5	None	None	G2	S1	null	USFS_S-Sensitive	null
<i>Triteleia hendersonii</i>	Henderson's triteleia	Monocots	PMLIL21070	2	1	None	None	G4	S1	2B.2	null	Cismontane woodland
<i>Viola howellii</i>	Howell's violet	Dicots	PDVIO040U0	1	1	None	None	G4	S1	2B.2	null	North coast coniferous forest