

Introduction:

The Salmon River Restoration Council will implement the Off-Channel Fisheries and Riparian Habitat Enhancement project for restoring off-channel fisheries and riparian habitats to the Red Bank riverbar on the North Fork Salmon River.

This project will benefit Coho Salmon by increasing off-channel habitat complexity in riverbar side channels, creating high-flow refugia and alcoves, and revegetating the riverbar. This project will create high quality winter rearing habitat and cold-water summer refugia for Coho Salmon and other anadromous salmonids.

The Off-Channel and Riparian Habitat Enhancement project will treat limiting conditions by addressing a task identified in Recovery Plan for So. OR/No. CA Coast Coho Salmon (NOAA Final Sept 2014), SONCC-SalR.2.1.8.2: Implement restoration projects that improve off channel habitats to create refugia habitat, as guided by assessment results.

The Permittee 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, Volume II.

Objective(s):

The project will create 20 acres of off-channel habitat by grading side channels for high flow refugia, installing wood structures to reduce stream velocities and create shelter habitat, conduct riparian planting for shading and revegetation of river bar. The Project designs were developed under the 2014 FRGP Grant, P1410524 Red Bank Off-Channel Fisheries and Riparian Habitat Design.

Project Description:

Location:

Red Bank is located on the North Fork of the Salmon River 7.5 miles upstream from its confluence with the South Fork of the Salmon River, and approximately 8.5 miles from Sawyers Bar, Siskiyou County, California.. Project coordinates: Latitude 41.297719, Longitude -123.22792.

Project Set Up:

The project will be implemented by the following personnel and subcontractors:

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

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

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

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

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

Permittee's Technical Subcontractor (Geotechnical) will complete project water quality permitting compliance requirements and oversight of implementation, monitoring, and reporting. they will also complete water quality monitoring and dewatering requirements.

Permittee's 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 Permittee; Salmon River Waterhed Council. The following is a list of materials that will be used for this project:

Water Quality Instruments: Onset pressure data loggers will be used to measure water levels for pre/post implementation monitoring and long term effectiveness monitoring.

Onset water temperature data loggers will be used to measure water temperatures for pre/post implementation and long term effectiveness monitoring.

Multi-parameter meter for measuring water quality trubity and dissolve oxygen levels for pre/post implementation and long term effectiveness monitoring.

Computer/Field Tablet: Permittee will lease a laptop computer for project reporting, data storage, implementation monitoring.

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

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

Utility Vehicle Rental: Transportation for riparian plants and planting materials.

Unmanned Aerial Vehicle (UAV) Imagery and Processing: Development of an georeferenced orthomosaic image of project site for long term effectiveness monitoring.

Office and Field Supplies: Copy paper, pens/pencils, write n rain notebook/paper, measuring tapes, flagging, digital camera, binders/folder, printer ink.

Project Permits: General construction permit, Streambed Alteration Agreement, Incidental Take Permit.

Logs with attached root masses: 175 logs for constructing habitat structures to lower stream velocities, scour pools, provide shelter, and increase channel complexity.

Small Woody Material (Slash): 1,180 cy of material will be included in wood structure construction for racking debris, creating habitat complexity.

Mulching for bare soils and newly planted riparian vegetation.

Riparian Plants: 1,398 native plants in containers for planting in vegetation treatment sites.

Willow Tree Stakes: 4,482 willow and cottonwood pole stakes for planting in log structures and brush baffle installations.

Tasks:

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

Task 2: Project Permitting and Subcontracting; Permittee will secure subcontract agreements with Technical and Construction Contractors for project implementation. Permittee will complete all required regulatory NEPA and CEQA documentation including securing of necessary permits, e.g., SWRCB 401, AOC 404, CDFW 1600.

Task 3: Project Management and Coordination: Permittee will perform pre/implementation and post-project monitoring. They will submit dewatering, fish relocation and water quality plans for CDFW grant manager approval. They will coordinate inspections of the site and 100% final designs with landowner and agencies for pre-implementation review. They will also submit a construction schedule and site map.

Task 4: Material Procurement: Permittee will procure whole trees with attached root mass, riparian plants, and small woody material for project implementation.

Task 5: Site Preparation; Permittee will prepare sites for implementation, identify and flag equipment access trails to each of the site locations, areas for equipment storage, re-fueling, and maintenance. They will also identify staging sites for material storage and install pre-construction erosion control measures.

Task 6: Log Wood Structures: Wood log structures will be constructed in accordance with the 100% final design plan and CDFW California Salmonid Stream Habitat Restoration Manual.

Task 7: Vegetation Baffles and Boulder Installation: Live Willow and Cottonwood pole stakes with brush material, and large boulders will be installed in accordance with the 100% final design plan and CDFW California Salmonid Stream Habitat Restoration Manual.

Task 8: Riparian Planting: Container plants will be planted in accordance with the 100% final design plan and CDFW California Salmonid Stream Habitat Restoration Manual.

Task 9: 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. Project monitoring data will be included in the project's Final Report.

Task 10: Reporting; Prepare and submit annual Monitoring Memorandum, Year Two Monitoring Memorandum, Progress Reports, Annual Progress Reports, and Draft and Final Report to CDFW Grant Manager.

Deliverables:

Task 1: Project Management and Administration; Subcontractor Contracts, Access Agreements, Invoices, Invoice Progress Reports.

Task 2: Project Permitting and Subcontracting: CEQA Surveys, LSAA Permit, Subcontractor Agreements, Implementation Schedule.

Task 3: Project Management and Coordination: Construction plans, water quality plans, implementation schedule and site map.

Task 4: Material Procurement: Logs, live vegetation stakes, and riparian plants.

Task 5: Site Preparation: Map identifying access lanes and staging areas, pre-project metrics and photos.

Task 6: Log Wood Structures: Install 175 logs for the construction of wood structures.

Task 7: Vegetation Baffles and Boulder Installation: Install 4,482 live riparian tree stakes and large boulders.

Task 8: Riparian Planting: Plant 1,398 riparian plants.

Task 9: Post Construction Monitoring: Project monitoring reports and photos, as-built plan.

Task 10: Reporting: Monitoring memorandum, progress reports, annual, and final reports.

Timelines:

Task 1: Project Management and Administration: 6/1/2022 to 4/1/2026

Task 2: Project Permitting and Subcontracting: 7/1/2022 to 7/1/2023

Task 3: Project Management and Coordination: 7/1/2022 to 7/30/2024

Task 4: Material Procurement: 7/1/2022 to 12/31/2023

Task 5: Site Preparation: 6/1/2023 to 12/31/2023

Task 6: Log Wood Structure: 7/1/2023 to 12/31/2023

Task 7: Vegetation Baffles and Boulder Installation: 7/1/2023 to 12/31/2023

Task 8: Riparian Planting: 12/1/2023 to 4/1/2024

Task 9: Post Construction Monitoring: 11/1/2023 to 12/31/2025

Task 10: Reporting: 1/1/2025 to 4/1/2026

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 Army Corp of Engineers Regional General Permit. Actual projects start and end dates, within this timeframe, are at the discretion of the California Department of Fish and Wildlife.

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. Any and 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 California Department of Fish & Wildlife Aquatic Invasive Species Decontamination Protocol.

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

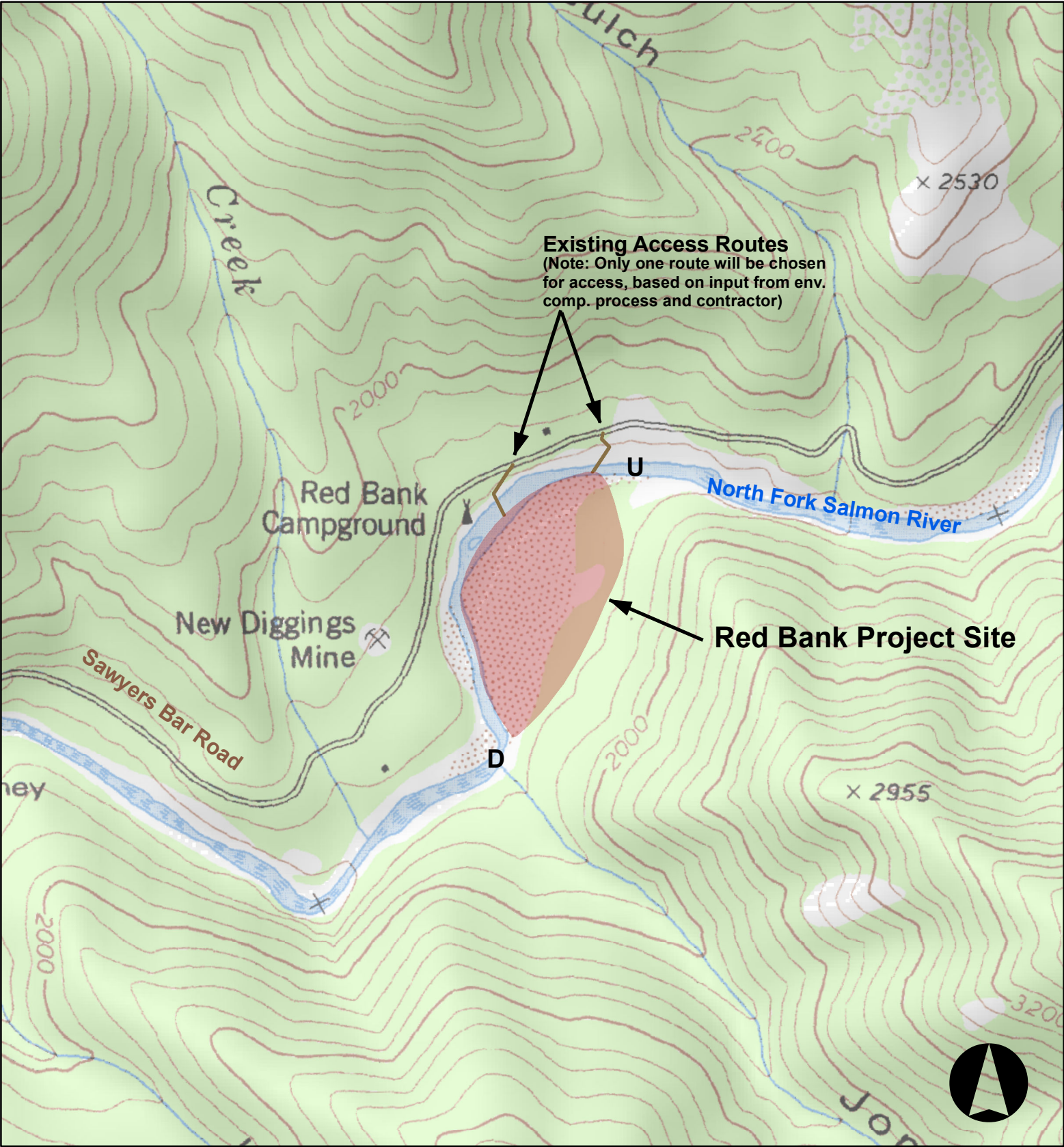
The Permittee shall notify the CDFW Project Manager a minimum of five working days before the project site is de-watered and the stream flow diverted. The notification will provide a reasonable time for CDFW personnel to oversee the implementation of the water diversion plan and the safe removal and 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:

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

- b. Additional measures to minimize injury and mortality of salmonids during fish relocation and dewatering activities shall be implemented as described in Part IX, pages 52 and 53 of the *California Salmonid Stream Habitat Restoration Manual*.
- c. The Permittee shall minimize the amount of wetted stream channel dewatered at each individual project site to the fullest extent possible as approved by the CDFW Grant Manager and pursuant to conditions in the USACE Regional General Permit and NMFS Biological Opinion.
- d. All electrofishing shall be performed by a qualified fisheries biologist and conducted according to the National Marine Fisheries Service, Guidelines for Electrofishing Waters Containing Salmonids Listed under the Endangered Species Act, June 2000.
- e. 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.

Red Bank Off-Channel Fisheries and Riparian Habitat Enhancement Project



Applicant: Salmon River Restoration Council

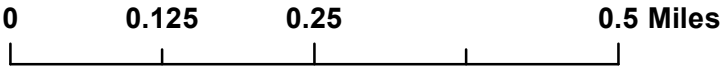
USGS 7.5" Quad Name: Sawyers Bar

Stream Name: Salmon River

1:10,000

 **Project Area**

 **Access Route**



Salmon River Watershed

0 5 10 Miles

1:250,000

▲ Project Location



Siskiyou County



Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database



Query Criteria: Quad< IS (Sawyers Bar (4112332) OR Tanners Peak (4112331) OR Grasshopper Ridge (4112321) OR Cecilville (4112322) OR Youngs Peak (4112323) OR Forks of Salmon (4112333) OR Medicine Mtn. (4112343) OR English Peak (4112342) OR Yellow Dog Peak (4112341))

Possible species within the Sawyers Bar and surrounding quads for 1725892 - Red Bank Off-Channel Fisheries and Riparian Habitat Enhancement Project, Siskiyou County

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Abies amabilis</i> Pacific silver fir	PGPIN01010	None	None	G5?	S2	2B.3
<i>Abies lasiocarpa var. lasiocarpa</i> subalpine fir	PGPIN01072	None	None	G5T5	S3	2B.3
<i>Accipiter gentilis</i> northern goshawk	ABNKC12060	None	None	G5	S3	SSC
<i>Ancotrema voyanum</i> hooded lancetooth	IMGAS36130	None	None	G1G2	S1S2	
<i>Arabis rigidissima var. rigidissima</i> Trinity Mountains rockcress	PDBRA061R2	None	None	G3T3	S3	1B.3
<i>Ascaphus truei</i> Pacific tailed frog	AAABA01010	None	None	G4	S3S4	SSC
<i>Atractelmis wawona</i> Wawona riffle beetle	IICOL58010	None	None	G3	S1S2	
<i>Bombus caliginosus</i> obscure bumble bee	IIHYM24380	None	None	G4?	S1S2	
<i>Bombus occidentalis</i> western bumble bee	IIHYM24250	None	Candidate Endangered	G2G3	S1	
<i>Chaenactis suffrutescens</i> Shasta chaenactis	PDAST200H0	None	None	G2G3	S2S3	1B.3
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	AMACC08010	None	None	G4	S2	SSC
<i>Eriogonum diclinum</i> Jaynes Canyon buckwheat	PDPGN081S0	None	None	G3	S3	2B.3
<i>Erythronium hendersonii</i> Henderson's fawn lily	PMLIL0U070	None	None	G4	S2	2B.3
<i>Erythronium oregonum</i> giant fawn lily	PMLIL0U0C0	None	None	G4G5	S2	2B.2
<i>Falco peregrinus anatum</i> American peregrine falcon	ABNKD06071	Delisted	Delisted	G4T4	S3S4	FP
<i>Gentiana plurisetosa</i> Klamath gentian	PDGEN060V0	None	None	G2G3	S2	1B.3
<i>Gulo gulo</i> California wolverine	AMAJF03010	None	Threatened	G4	S1	FP
<i>Helminthoglypta talmadgei</i> Trinity shoulderband	IMGASC2630	None	None	G2	S2	



Selected Elements by Scientific Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Hemieva ranunculifolia</i> buttercup-leaf hemieva	PDSAX0W010	None	None	G5	S2	2B.2
<i>Klamath/No Coast Spring Run Chinook/Summer Steelhead Stream</i> Klamath/No Coast Spring Run Chinook/Summer Steelhead Stream	CARB2333CA	None	None	GNR	SNR	
<i>Klamath/North Coast Rainbow Trout Stream</i> Klamath/North Coast Rainbow Trout Stream	CARB2312CA	None	None	GNR	SNR	
<i>Martes caurina humboldtensis</i> Humboldt marten	AMAJF01012	Threatened	Endangered	G4G5T1	S1	SSC
<i>Myotis evotis</i> long-eared myotis	AMACC01070	None	None	G5	S3	
<i>Oncorhynchus mykiss irideus pop. 36</i> summer-run steelhead trout	AFCHA0213B	None	Candidate Endangered	G5T4Q	S2	SSC
<i>Oncorhynchus tshawytscha pop. 30</i> chinook salmon - upper Klamath and Trinity Rivers ESU	AFCHA02056	Candidate	Candidate Endangered	G5T3Q	S1S2	SSC
<i>Pekania pennanti</i> Fisher	AMAJF01020	None	None	G5	S2S3	SSC
<i>Piperia candida</i> white-flowered rein orchid	PMORC1X050	None	None	G3	S3	1B.2
<i>Plethodon elongatus</i> Del Norte salamander	AAAAD12050	None	None	G4	S3	WL
<i>Potamogeton robbinsii</i> Robbins' pondweed	PMPOT030Z0	None	None	G5	S3	2B.3
<i>Ptilidium californicum</i> Pacific fuzzwort	NBHEP2U010	None	None	G4G5	S3S4	4.3
<i>Rana boylei</i> foothill yellow-legged frog	AAABH01050	None	Endangered	G3	S3	SSC
<i>Rana cascadae</i> Cascades frog	AAABH01060	None	Candidate Endangered	G3G4	S3	SSC
<i>Rubus nivalis</i> snow dwarf bramble	PDROS1K4S0	None	None	G4?	S1	2B.3
<i>Silene marmorensis</i> Marble Mountain campion	PDCAR0U0Z0	None	None	G2	S2	1B.2
<i>Smilax jamesii</i> English Peak greenbrier	PMSMI010D0	None	None	G3G4	S3S4	4.2
<i>Tauschia howellii</i> Howell's tauschia	PDAP127050	None	None	G2G3	S2S3	1B.3
<i>Vaccinium scoparium</i> little-leaved huckleberry	PDERI180Y0	None	None	G5	S3	2B.2

Record Count: 37