

Introduction:

The Trout Unlimited, Inc. will implement the Albion River and Tom Bell Creek Instream Habitat Enhancement Project. This project is necessary due to decades of forest legacy impacts that left riparian stands ill-equipped for natural instream wood recruitment as well as considerable stream clearing efforts in the 1960s-1980s that left the watershed lacking in adequate habitat complexity and geomorphic function. The Albion River Basin Assessment (2004) recommends installing large woody debris in the watershed to retain gravels and create complex habitats. The results of this assessment show poor residual pool depths and low percent cover in the watershed. Low habitat values were also documented in 2015 CDFW Stream Inventory Reports for the Albion River, and in the 2012 CDFW Stream Inventory Reports for Tom Bell Creek.

The Albion River currently supports runs of coho salmon (*Oncorhynchus kisutch*) and steelhead trout (*Oncorhynchus mykiss*), as well as intermittent runs of Chinook Salmon (*Oncorhynchus tshawytscha*). Recovery plans and assessments consider the Albion River watershed to have a high recovery potential due to the consistent year-to-year numbers of target fish species despite poor ratings for large wood frequency, habitat complexity, and sedimentation. Recovery plans and assessments also identified the installation of instream large wood structures as a high priority recovery action to improve instream habitat conditions, sort spawning gravels, and store suspended fine sediments.

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, Section VII (<https://www.wildlife.ca.gov/Grants/FRGP/Guidance>)

Objective(s):

The specific objective of this project is to increase stream complexity, pool frequency, pool depth, high-flow refugia, and over-summer and over-winter rearing habitat for Coho Salmon, Steelhead Trout, and Chinook Salmon by installing 117 pieces of large wood along 0.9 miles (4,655 feet) of one contiguous reach of the mainstem Albion River (0.3 miles) and Tom Bell Creek (0.6 miles). Large wood structures will increase pool frequency and depth, sort and store stream sediments, and decrease water velocities. Installed structures will also help to sort and store suspended fine stream sediments, which coupled with an increase in pool frequency and depth, will improve stream temperature and water quality conditions. This project will meet or exceed target metrics for large wood density as defined by the NMFS CCC Coho Recovery Plan (2012). The project area currently has only 13 existing key pieces of large wood (1.06 key pieces/100

meters). Implementation of this project will result in a total of 94 key pieces within the project area and a target wood density metric of ~7.54 key pieces per 100 meters.

Project Description:

Location:

This project is located along one contiguous stream reach of Tom Bell Creek (2,955 feet; tributary to Albion River) and the mainstem Albion River (1,700 feet; tributary to the Pacific Ocean). The project reach begins at the confluence of Tom Bell Creek with the Albion River, which is located approximately 10.5 miles upstream from the mouth of the Albion River. The project is located in Township 16N, Range 16W, Sections 3, 4, 9, & 10 of the Mathison Peak 7.5 Minute U.S. Geological Survey (USGS) Quad map. Project coordinates are: 36.26691 north Latitude, -123.64361 west longitude at the center point of the project reach.

Project Set Up:

-Permittee: Task 1, Project Management and Administration. The Permittee Project Manager will provide all grant and contract oversight and administration tasks including but not limited to obtaining permits, securing contracts scheduling, implementation oversight, invoicing, reporting, and agency and landowner communications

- California Conservation Corps (CCC) Corpsmembers: Task 4, implementation. Under the direct supervision of the crew supervisor (Conservationist 1), California Conservation Corps (CCC) Corpsmembers will move LW into place utilizing wire rope rigging techniques, grip hoists, and other hand tools. CCC Corpsmembers will also anchor and/or pin the features according to designs, conduct forest floor rehab, and install small wood as instructed.

- CCC Fish Habitat Assistant (FHA): Tasks 1-7. The FHA will assist with reporting and invoices, track purchases and budgets, provide other administrative support services, and help to coordinate California Environmental Quality Act (CEQA) surveys; work with Mendocino Redwood Company (MRC) Forester to identify trees, update site designs as necessary, assist Licensed Timber Operator (LTO), flag and prepare feature locations for construction, prepare/purchase tools and materials for implementation; ensure adherence to designs by providing technical support to CCC crews and crew supervisor at project site during implementation; prepare and conduct training for instream construction; train staff on water quality monitoring methods and techniques, and monitor water quality during implementation; provide logistical support by delivering tools, materials, and spike supplies as needed; collect metrics data, create as-built drawings, conduct first winter observations, and collect any other information to meet reporting requirements.

- Mendocino Redwood Company (MRC) Forester: Tasks 1 & 3. Will approve selected trees to be felled for project sites and helps coordinate spike camp and land access logistics.
- MRC Hydrologist: Task 1. Will provide occasional assistance with access, general stream/project area information and informs of any other potential operations in the area.
- MRC Aquatic Biologist - Task 2. This project will follow all guidelines for avoidance and minimization of impacts to amphibian species per the FRGP CEQA Mitigated Negative Declaration, as well as any measures required by the CDFW's Lake and Streambed Alteration Agreement (LSAA). Upon approval from CDFW, the qualified aquatic Biologist from Mendocino Redwood Company will perform the initial survey and on-site monitoring activities
- All in 1 Tree & Timber (LTO): Task 4. Under direction from CCC fisheries staff (FHS and/or FHA), the LTO will fell flagged redwood and Douglas-fir trees at feature locations.
- William Rich and Associates: Task 2. Pursuant to the California Environmental Quality Act (CEQA), the Principal Investigator, Research Associate (Archaeology), and Research Associate (Botany) will conduct archeological and botanical surveys/investigations throughout the project reach. Reports will be prepared to document potentially significant impacts on archaeological and botanical resources and describe subsequent avoidance/minimization measures.
- Pacific Watershed Associates: Task 2. Pursuant to CEQA, the geologist and clerical staff will conduct a paleontological investigation of the project reach. A report will be prepared documenting any significant findings and subsequent avoidance/minimization measures.

Materials:

Permittee Supplies - Supplies may include (but are not limited to): flagging, measuring tapes, rite-in-the-rain paper, notebooks and notepads, writing utensils, charting pads, envelopes, poster board, fastening supplies, and printing/duplication costs.

CCC Portable Toilets: To be used while crew is camping on MRC Property near project site. Required as a condition of camping on property.

CCC Spike Supplies (propane, lights, tarps, tent repair, water filters, hoses, batteries etc.): Used for preparing Corpsmember meals and providing any miscellaneous amenities necessary for a camp of 12-16.

Logs (large wood - MRC): The logs are the material used for the in-stream habitat enhancement features. Large wood material will be provided by MRC.

CCC Structure Anchoring Supplies (1-inch diameter by 8 foot length Threadbar, Steel hex nuts, plates (washers), Wood auger bits, Rock bits, Epoxy): Used for

anchoring in- stream structures. Threadbar is the structural component of the anchor used to fasten logs to each other and to live trees on the bank. Nuts get fastened on ends of Threadbar over washers, and wood auger and rock bits are used to drill anchor point holes. Epoxy secures cable to rock for structure anchoring (where required). Anchors are used to provide structural integrity, resist buoyancy, and hold structures in place, thereby increasing overall feature effectiveness.

CCC Decontamination chemicals: Used for decontamination of tools/gear as per contract requirements to prevent the spread of aquatic invasive species and sudden oak death.

CCC Safety & 1st Aid Supplies: (gloves, hard hats, ear protection, chaps, safety glasses, etc.) Used to prevent and/or treat personal injuries.

CCC Hand Tools, Supplies, and associated expendable miscellaneous items (chain, bar oil, files, hacksaws, pipe wrenches, shearpins, GFCI's, chokers, peaveys, hammers, chizels, etc.) (bulk): These hand tools are essential for setting logs and anchoring operations.

CCC YSI multiparameter water quality sampling meter: The handheld unit will be used to monitor water quality during implementation to track and document any impacts to water quality associated with construction.

Tasks:

Task 1 - Grant Administration and Project Management

Permittee personnel will provide all contracting oversight and administration as pursuant to grant and regulatory guidelines. This includes but is not limited to obtaining permits, securing contracts, scheduling, implementation oversight, invoicing, reporting, and agency and landowner communications. Upon Final execution of the Grant and prior to receiving a Final Notice to Proceed, Permittee will deliver the landowner access agreements, subcontracts, and assure all permits are finalized. Additionally, the Permittee Project Coordinator will be available to assist with invoicing and financial tracking.

Task 2 - Environmental Compliance and CEQA Surveys

Permittee will work with the CCC, CDFW, and other regulatory agencies as required to secure all necessary permits and will ensure all permit conditions are followed over the course of the project. Permittee and the CCC will ensure that interim reports are submitted to CDFW to comply with requirements of FRGP Programmatic RGP and 401 Certification. Permittee will work with the CDFW Grant Manager to secure a project-specific 1600 LSAA permit. Permittee and the CCC will work with CDFW and the Regional Water Board to develop a project-specific Water Quality Monitoring Plan prior to construction.

Task 2.1 - Resource Survey Documentation & Permits

Permittee and the CCC will provide proof of any required threatened and endangered species surveys; cultural, archaeological, & paleontological resource surveys; and botanical resource surveys. Staff from NCRM, WRA, and PWA will perform CEQA-related resource surveys. Permittee and the CCC will consult with MRC staff biologists (in-kind cost share) to ensure any and all protected species are considered prior to construction.

Task 2.2 - Water Quality Monitoring Documentation

Permittee and the CCC will provide a water quality monitoring plan and associated data to the North Coast Regional Water Quality Control Board for construction activities associated with dewatering waterways. Permittee and its subcontractors will monitor and report water quality during dewatering activities. Parameters, such as dissolved oxygen, temperature, conductivity, and turbidity may be reported.

Task 3 - Pre-Project Layout, Assessment, & Preparation

Final project layout and final pre-project assessment will be conducted by the CCC FHA and CCC FHS. Final feature locations and designs will be prepared if stream channel conditions have changed, and applicable metrics will be collected. FHS time will be contributed as cost share. Final structure design and placement will be determined by field consultation between Permittee, CCC, and CDFW Personnel.

Task 3.1 - Tree Identification

The CCC FHA will walk the project reach with the MRC forester to get approval for trees to be cut at project feature locations. Trees will be selected with consideration for riparian canopy and positioning once felled for efficient manipulation to feature locations. Trees will be marked and flagged in preparation of felling operations by LTO.

Task 3.2 - Final Feature Design and Site Preparation

The CCC Fish Habitat Assistant (FHA) and CCC Fish Habitat Specialist (FHS) will walk project reach and finalize feature designs based on changes in local stream conditions over the winter. Additionally, feature design or location changes may occur as a result of CEQA survey findings, and associated impacts to local resources. Any changes to project designs or locations will be discussed with CDFW grant manager. Anchor points will be painted, and flags will be hung at feature locations. Any avoidance areas that may have resulted from CEQA surveys will be clearly designated with flagging. FHA and FHS will collect pre-construction metrics at modified features and take pre-implementation photos.

Task 4 - Implementation

CCC Corpsmembers will install large wood features following the Conceptual Designs (see supplemental docs). Forty-three (43) instream features consisting of 117 pieces of large wood will be installed within a contiguous 4,655-foot section of the mainstem Albion River and Tom Bell Creek. Under the direction of the Conservationist 1, FHA, and FHS, CCC hand crews will utilize labor hours constructing in-stream LW features and completing site rehab and erosion control. This will include travel, setting up spike camp (including Porta Potty), and breaking down of spike-camp at project completion. CCC laborer meals, safety supplies, hand tools and tool equipment service/repairs will be utilized during implementation. The C1 will be responsible for direct crew supervision and operation. FHA and FHS will provide guidance and onsite instruction for all implementation tasks in order to comply with the grant agreement. FHS time will be contributed as cost share.

Task 4.1 - Large Wood Acquisition

The All-in-1 LTO will fell flagged trees near project features as specified in site-specific designs. Trees will be selected to minimize impacts on stream canopy, bank stability, and effects on wildlife. The majority of trees will be felled away from the channel and later pulled into the channel with the larger diameter end of log in the water.

Task 4.2 - Placement of Large Wood and Anchor Installation

Prior to moving logs, felled trees will be cut to length according to feature specific work plans. Logs and root-wads will be moved into place and anchored, per design, to living trees and/or stumps along the stream banks. Logs will be moved by using grip-hoist and wire rope rigging techniques. The anchoring of LW will require holes to be drilled through both large wood and anchor trees requiring the use of a generator to operate electric drills. 1- 1/8" wood auger bits will be used to make pilot holes. 1" diameter Threadbar will be inserted through the logs and anchor trees, then secured with nuts and washers. All pieces of LW to be used in feature construction are currently located in or near the riparian corridor or road and would likely not recruit naturally. 1-1/8" rock drill bits, epoxy, and cable will be utilized for wood to rock anchors. All features will be built in accordance with DFG California Salmonid Stream Habitat Restoration Manual, Section VII, and will consist of redwood and Douglas-fir logs or root wads which also meet the criteria for large wood.

Task 4.3 - Installation of Small Woody Debris (SWD)

Available slash and small wood will be installed into features as applicable to provide immediate cover for salmonids present at time of construction. Small wood will consist of branches and tops of felled redwoods ranging from 3 to 11 inches in diameter. Small wood will also be installed at specific features to capture additional floating debris, increasing the volume of wood in the channel

and the associated geomorphic effects. To prevent erosion and introduction of fine sediment into the stream channel, exposed dirt resulting from construction of features will be covered/mulched using on-site forest materials.

Task 4.4 - Decontamination

To address potential spread of aquatic invasive species, personnel gear as well as tools/equipment used in the field will be properly decontaminated before moving to a new location in order to comply with requirements of CDFW and Permittee's disinfection/decontamination protocol requirements.

Task 4.5 - Water Quality Monitoring

Permittee and the CCC will work with the CDFW Grant Manager and North Coast Regional Water Quality Control Board to develop a project-specific Water Quality Monitoring Plan prior to construction. It is anticipated that the CCC FHA, CCC FHS, CCC C1, and NOAA fisheries veteran will conduct water quality sampling with a multiparameter water quality sampling device (YSI) daily during implementation. Parameters such as dissolved oxygen, temperature, conductivity, and turbidity will be monitored every 4 hours or as directed by CDFW and the Water Board.

Task 5 - Post-project Assessment and Surveys

Upon completion of the project and/or annual summer work periods, the CCC FHA and CCC FHS will collect as-built documentation, post-project photographs, post-project large wood inventories, and any other required post-project metrics for CDFW Final and Annual Reports. The CCC FHS and CCC FHA will also conduct the First Winter Observations survey work, as stated in the FRGP PSN.

Deliverables:

Task 1 - Grant Administration and Project Management

Project deliverables will include Final Landowner Access Agreements Executed Subcontractor agreements; Invoices & Progress Reports.

Task 2 - Environmental Compliance and CEQA Surveys

Copy of Permit Authorizations and Water Quality Monitoring Plan and data.

Task 2.1 - Resource Survey Documentation & Permits

Interim Cultural resource, botanical, biological, and paleontological reports; Final Cultural resource, botanical, and paleontological reports Preparation and payment of CDFW LSAA/1600 Agreement Application

Task 2.2 - Water Quality Monitoring Documentation

Water Quality Monitoring Plan and data.

Task 3 - Pre-Project Layout, Assessment, & Preparation

Final feature designs, pre-implementation photographs, and any required feature metrics to meet approval of CDFW Grant Manager

Task 3.1 - Tree Identification

Progress report to accompany invoice for Fish Habitat Assistant time and other materials.

Task 3.2 - Final Feature Design and Site Preparation

Final feature designs to meet approval of CDFW Grant Manager, pre-implementation photos and metrics.

Task 4 – Implementation

Treatment of 4,655 feet of stream with large wood. Project treatments will sufficiently achieve and/or exceed targets identified in applicable recovery plans.

Task 4.1 - Large Wood Acquisition

Invoice and progress report for subcontractor time and any CCC FHA time.

Task 4.2 - Placement of Large Wood and Anchor Installation

Installation of 43 LW features consisting of 117 large wood pieces within 4,655 feet of stream.

Task 4.3 - Installation of Small Woody Debris (SWD)

Completion of large wood features, CCC invoices and progress reports for Corpsmember hours and CCC C1 Overtime.

Task 4.4 – Decontamination

Adherence to protocols and permits; invoicing for decontamination materials; Progress Reports.

Task 4.5 - Water Quality Monitoring

Water Quality Reports, and invoices for personnel hours.

Task 5 - Post-project Assessment and Surveys

As-built drawings that include feature placement, design changes (if applicable), alignments, sizes, and quantity of large wood material added; Before- after photographs; and First Winter Observations Summary.

Timelines:

Task 1 - Grant Administration and Project Management. April 1, 2022, to April 30, 2026

Albion River and Tom Bell Creek Instream Habitat Enhancement Project

2021

Task 2 - Environmental Compliance and CEQA Surveys. April 1, 2022, to October 31, 2025

Task 2.1 - Resource Survey Documentation & Permits. March 1, 2022, to August 1, 2024

Task 2.2 - Water Quality Monitoring Documentation. April 15, 2022, to November 30, 2025

Task 3 - Pre-Project Layout, Assessment, & Preparation. April 15, 2022, to October 31, 2023

Task 3.1 - Tree Identification. April 15, 2022, to October 31, 2023

Task 3.2 - Final Feature Design and Site Preparation. April 15, 2022, to October 31, 2023

Task 4 – Implementation. June 15, 2022, to October 31, 2025

Task 4.1 - Large Wood Acquisition. June 15, 2022, to October 31, 2025

Task 4.2 - Placement of Large Wood and Anchor Installation. June 15, 2022, to October 31, 2025

Task 4.3 - Installation of Small Woody Debris (SWD). June 15, 2022, to October 31, 2025

Task 4.4 – Decontamination. June 15, 2022, to October 31, 2025

Task 4.5 - Water Quality Monitoring. June 15, 2022, to October 31, 2025

Task 5 - Post-project Assessment and Surveys. September 15, 2022, to February 28, 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 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.

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

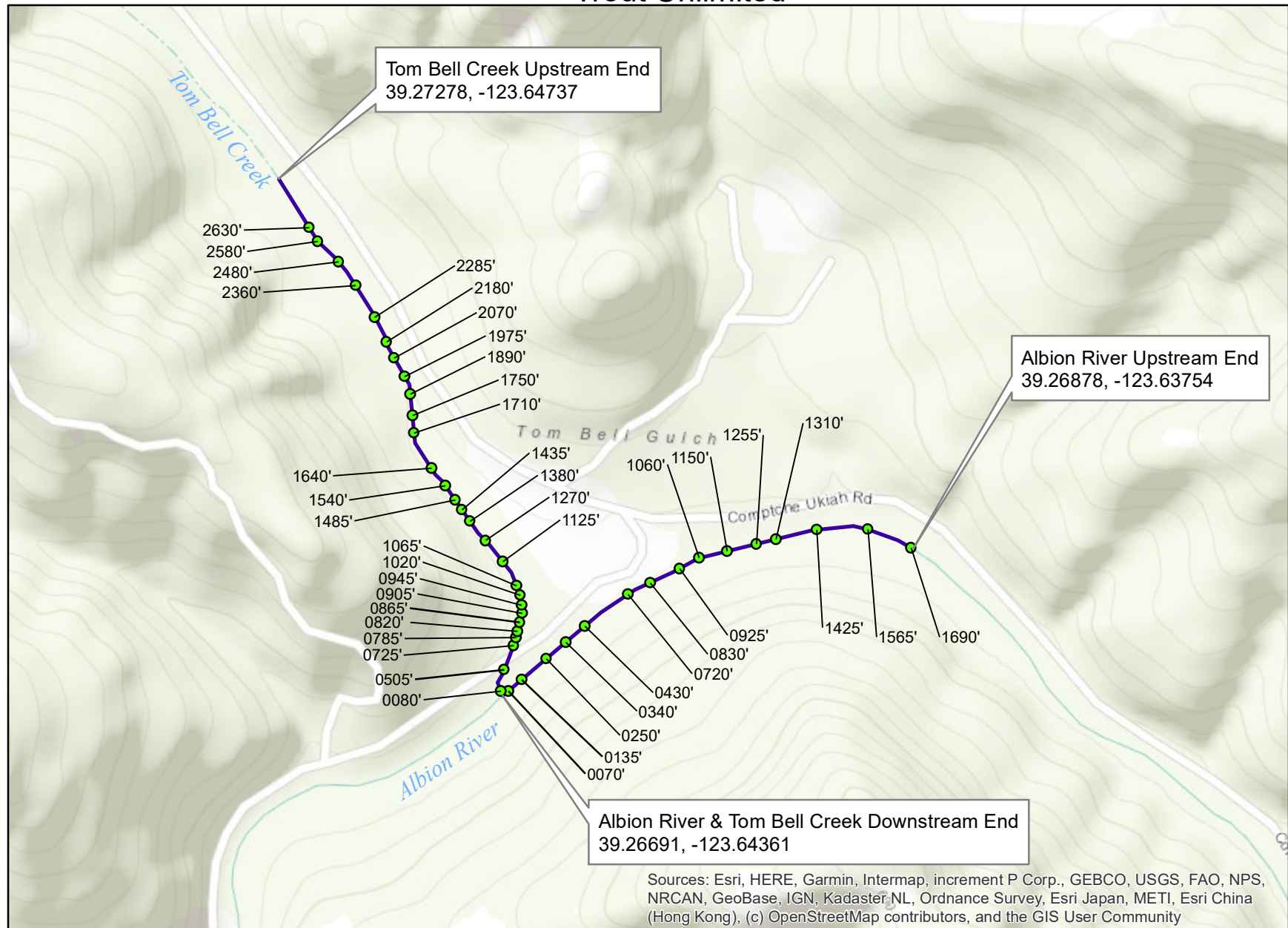
All habitat improvements will follow techniques described in the *California Salmonid Stream Habitat Restoration Manual*.

Albion River & Tom Bell Creek Instream Habitat Enhancement Project

Feature Locations Map

Mathison Peak Quad, Mendocino County

Trout Unlimited

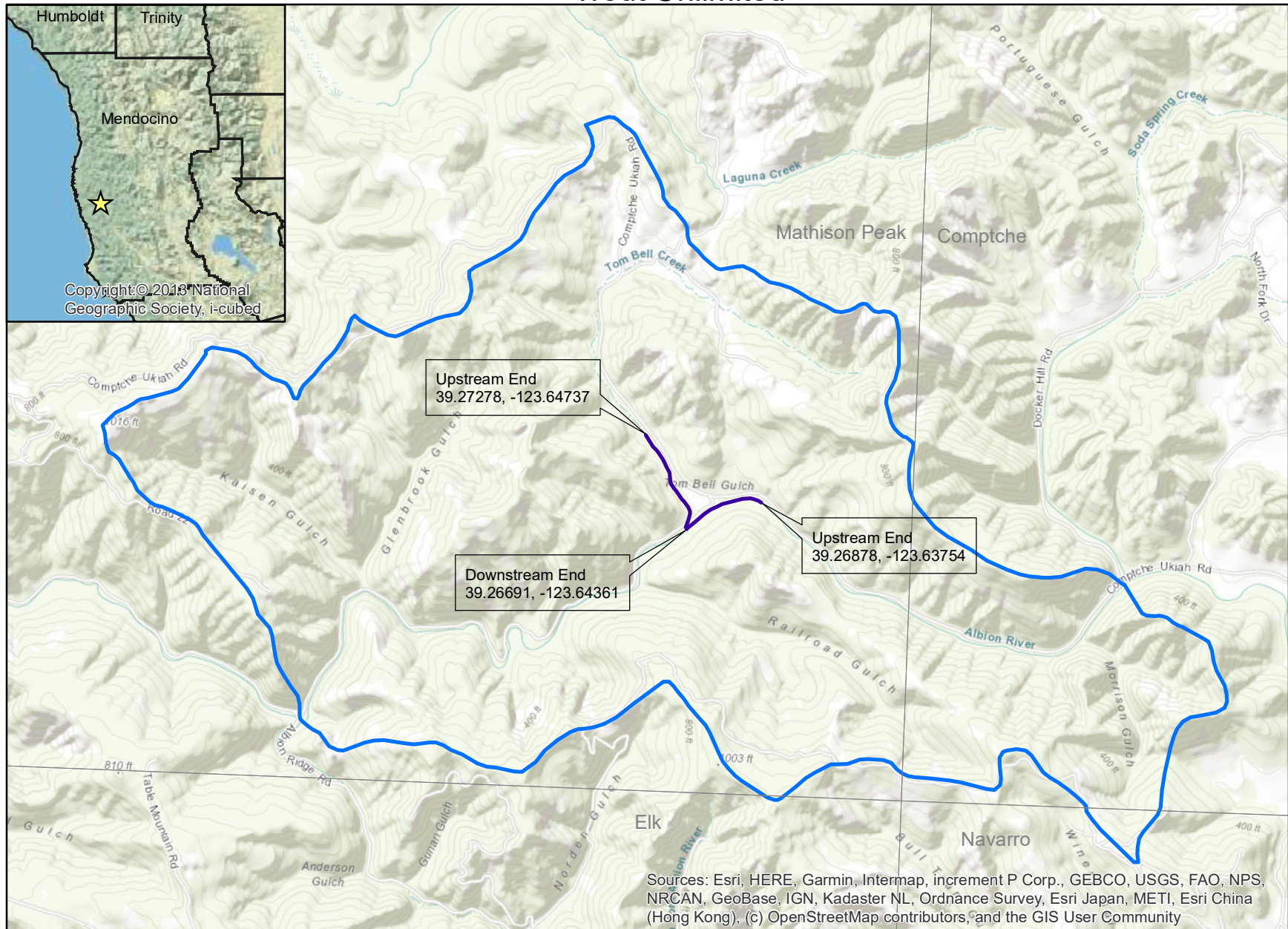


Albion River & Tom Bell Creek Instream Habitat Enhancement Project

Watershed Map

Mathison Peak Quad, Mendocino County

Trout Unlimited



- USGS Quads
- Project Reach
- Middle Albion River Planning Watershed



0 0.5 1 2 Miles



Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database



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

Possible species within the Mathison Peak and surrounding quads for 1725471 - Albion River and Tom Bell Creek Instream Habitat Enhancement Project, Mendocino County

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Abronia umbellata</i> var. <i>breviflora</i> pink sand-verbena	PDNYC010N4	None	None	G4G5T2	S2	1B.1
<i>Accipiter gentilis</i> northern goshawk	ABNKC12060	None	None	G5	S3	SSC
<i>Agelaius tricolor</i> tricolored blackbird	ABPBXB0020	None	Threatened	G1G2	S1S2	SSC
<i>Agrostis blasdalei</i> Blasdale's bent grass	PMPOA04060	None	None	G2	S2	1B.2
<i>Arboreus pomo</i> Sonoma tree vole	AMAFF23030	None	None	G3	S3	SSC
<i>Arctostaphylos nummularia</i> ssp. <i>mendocinoensis</i> pygmy manzanita	PDERI04280	None	None	G3?T1	S1	1B.2
<i>Ascapus truei</i> Pacific tailed frog	AAABA01010	None	None	G4	S3S4	SSC
<i>Astragalus agnicidus</i> Humboldt County milk-vetch	PDFAB0F080	None	Endangered	G2	S2	1B.1
<i>Atractelmis wawona</i> Wawona riffle beetle	IICOL58010	None	None	G3	S1S2	
<i>Blennosperma nanum</i> var. <i>robustum</i> Point Reyes blennosperma	PDAST1A022	None	Rare	G4T2	S2	1B.2
<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>Brachyramphus marmoratus</i> marbled murrelet	ABNNN06010	Threatened	Endangered	G3	S2	
<i>Calamagrostis crassiglumis</i> Thurber's reed grass	PMPOA17070	None	None	G3Q	S2	2B.1
<i>Calileptoneta wapiti</i> Mendocino leptonetid spider	ILARAU6040	None	None	G1	S1	
<i>Calystegia purpurata</i> ssp. <i>saxicola</i> coastal bluff morning-glory	PDCON040D2	None	None	G4T2T3	S2S3	1B.2
<i>Campanula californica</i> swamp harebell	PDCAM02060	None	None	G3	S3	1B.2
<i>Carex californica</i> California sedge	PMCYP032D0	None	None	G5	S2	2B.2
<i>Carex lenticularis</i> var. <i>limnophila</i> lagoon sedge	PMCYP037A7	None	None	G5T5	S1	2B.2



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>Carex livida</i> livid sedge	PMCYP037L0	None	None	G5	SH	2A
<i>Carex lyngbyei</i> Lyngbye's sedge	PMCYP037Y0	None	None	G5	S3	2B.2
<i>Carex saliniformis</i> deceiving sedge	PMCYP03BY0	None	None	G2	S2	1B.2
<i>Castilleja ambigua</i> var. <i>humboldtiensis</i> Humboldt Bay owl's-clover	PDSCR0D402	None	None	G4T2	S2	1B.2
<i>Castilleja litoralis</i> Oregon coast paintbrush	PDSCR0D012	None	None	G3	S3	2B.2
<i>Castilleja mendocinensis</i> Mendocino Coast paintbrush	PDSCR0D3N0	None	None	G2	S2	1B.2
<i>Charadrius nivosus nivosus</i> western snowy plover	ABNNB03031	Threatened	None	G3T3	S2	SSC
<i>Chorizanthe howellii</i> Howell's spineflower	PDPGN040C0	Endangered	Threatened	G1	S1	1B.2
<i>Clarkia amoena</i> ssp. <i>whitneyi</i> Whitney's farewell-to-spring	PDONA05025	None	None	G5T1	S1	1B.1
<i>Coastal and Valley Freshwater Marsh</i> Coastal and Valley Freshwater Marsh	CTT52410CA	None	None	G3	S2.1	
<i>Coastal Brackish Marsh</i> Coastal Brackish Marsh	CTT52200CA	None	None	G2	S2.1	
<i>Coelus globosus</i> globose dune beetle	IICOL4A010	None	None	G1G2	S1S2	
<i>Collinsia corymbosa</i> round-headed Chinese-houses	PDSCR0H060	None	None	G1	S1	1B.2
<i>Coptis laciniata</i> Oregon goldthread	PDRAN0A020	None	None	G4?	S3?	4.2
<i>Cornus canadensis</i> bunchberry	PDCOR01040	None	None	G5	S2	2B.2
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	AMACC08010	None	None	G4	S2	SSC
<i>Cuscuta pacifica</i> var. <i>papillata</i> Mendocino dodder	PDCUS011A2	None	None	G5T1	S1	1B.2
<i>Elanus leucurus</i> white-tailed kite	ABNKC06010	None	None	G5	S3S4	FP
<i>Emys marmorata</i> western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
<i>Erethizon dorsatum</i> North American porcupine	AMAFJ01010	None	None	G5	S3	
<i>Erigeron supplex</i> supple daisy	PDAST3M3Z0	None	None	G2	S2	1B.2



Selected Elements by Scientific Name
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California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Erysimum concinnum</i> bluff wallflower	PDBRA160E3	None	None	G3	S2	1B.2
<i>Erysimum menziesii</i> Menzies' wallflower	PDBRA160R0	Endangered	Endangered	G1	S1	1B.1
<i>Erythronium revolutum</i> coast fawn lily	PMLIL0U0F0	None	None	G4G5	S3	2B.2
<i>Eucyclogobius newberryi</i> tidewater goby	AFCQN04010	Endangered	None	G3	S3	
<i>Fratercula cirrhata</i> tufted puffin	ABNNN12010	None	None	G5	S1S2	SSC
<i>Gilia capitata ssp. pacifica</i> Pacific gilia	PDPLM040B6	None	None	G5T3	S2	1B.2
<i>Gilia millefoliata</i> dark-eyed gilia	PDPLM04130	None	None	G2	S2	1B.2
<i>Grand Fir Forest</i> Grand Fir Forest	CTT82120CA	None	None	G1	S1.1	
<i>Helminthoglypta arrosa pomoensis</i> Pomo bronze shoulderband	IMGASC2033	None	None	G2G3T1	S1	
<i>Hemizonia congesta ssp. congesta</i> congested-headed hayfield tarplant	PDAST4R065	None	None	G5T2	S2	1B.2
<i>Hesperovax sparsiflora var. brevifolia</i> short-leaved evax	PDASTE5011	None	None	G4T3	S3	1B.2
<i>Hesperocyparis pygmaea</i> pygmy cypress	PGCUP04032	None	None	G1	S1	1B.2
<i>Horkelia marinensis</i> Point Reyes horkelia	PDROS0W0B0	None	None	G2	S2	1B.2
<i>Hydrobates homochroa</i> ashy storm-petrel	ABNDC04030	None	None	G2	S2	SSC
<i>Juncus supiniformis</i> hair-leaved rush	PMJUN012R0	None	None	G5	S1	2B.2
<i>Kopsiopsis hookeri</i> small groundcone	PDORO01010	None	None	G4?	S1S2	2B.3
<i>Lasthenia californica ssp. bakeri</i> Baker's goldfields	PDAST5L0C4	None	None	G3T1	S1	1B.2
<i>Lasthenia californica ssp. macrantha</i> perennial goldfields	PDAST5L0C5	None	None	G3T2	S2	1B.2
<i>Lathyrus palustris</i> marsh pea	PDFAB250P0	None	None	G5	S2	2B.2
<i>Lavinia symmetricus navarroensis</i> Navarro roach	AFCJB19023	None	None	G4T1T2	S2S3	SSC
<i>Lilium maritimum</i> coast lily	PMLIL1A0C0	None	None	G2	S2	1B.1



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>Lycopodium clavatum</i> running-pine	PPLYC01080	None	None	G5	S3	4.1
<i>Mendocino Pygmy Cypress Forest</i> Mendocino Pygmy Cypress Forest	CTT83161CA	None	None	G2	S2.1	
<i>Microseris borealis</i> northern microseris	PDAST6E030	None	None	G5	S1	2B.1
<i>Mitellastra caulescens</i> leafy-stemmed mitrewort	PDSAX0N020	None	None	G5	S4	4.2
<i>Northern Coastal Salt Marsh</i> Northern Coastal Salt Marsh	CTT52110CA	None	None	G3	S3.2	
<i>Noyo intersessa</i> Ten Mile shoulderband	IMGASC5070	None	None	G2	S2	
<i>Oncorhynchus kisutch pop. 4</i> coho salmon - central California coast ESU	AFCHA02034	Endangered	Endangered	G5T2T3Q	S2	
<i>Oncorhynchus mykiss irideus pop. 16</i> steelhead - northern California DPS	AFCHA0209Q	Threatened	None	G5T2T3Q	S2S3	
<i>Packera bolanderi var. bolanderi</i> seacoast ragwort	PDAST8H0H1	None	None	G4T4	S2S3	2B.2
<i>Pandion haliaetus</i> osprey	ABNKC01010	None	None	G5	S4	WL
<i>Phacelia insularis var. continentis</i> North Coast phacelia	PDHYD0C2B1	None	None	G2T2	S2	1B.2
<i>Pinus contorta ssp. bolanderi</i> Bolander's beach pine	PGPIN04081	None	None	G5T2	S2	1B.2
<i>Piperia candida</i> white-flowered rein orchid	PMORC1X050	None	None	G3	S3	1B.2
<i>Plebejus idas lotis</i> lotis blue butterfly	IILEPG5013	Endangered	None	G5TH	SH	
<i>Pleuropogon hooverianus</i> North Coast semaphore grass	PMPOA4Y070	None	Threatened	G2	S2	1B.1
<i>Progne subis</i> purple martin	ABPAU01010	None	None	G5	S3	SSC
<i>Puccinellia pumila</i> dwarf alkali grass	PMPOA531L0	None	None	G4?	SH	2B.2
<i>Ramalina thrausta</i> angel's hair lichen	NLLEC3S340	None	None	G5?	S2S3	2B.1
<i>Rana aurora</i> northern red-legged frog	AAABH01021	None	None	G4	S3	SSC
<i>Rana boylei</i> foothill yellow-legged frog	AAABH01050	None	Endangered	G3	S3	SSC
<i>Rhyacotriton variegatus</i> southern torrent salamander	AAAAJ01020	None	None	G3G4	S2S3	SSC



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<i>Rhynchospora alba</i> white beaked-rush	PMCYP0N010	None	None	G5	S2	2B.2
<i>Sanguisorba officinalis</i> great burnet	PDROS1L060	None	None	G5?	S2	2B.2
<i>Sidalcea calycosa ssp. rhizomata</i> Point Reyes checkerbloom	PDMAL11012	None	None	G5T2	S2	1B.2
<i>Sidalcea malachroides</i> maple-leaved checkerbloom	PDMAL110E0	None	None	G3	S3	4.2
<i>Sidalcea malviflora ssp. patula</i> Siskiyou checkerbloom	PDMAL110F9	None	None	G5T2	S2	1B.2
<i>Sidalcea malviflora ssp. purpurea</i> purple-stemmed checkerbloom	PDMAL110FL	None	None	G5T1	S1	1B.2
<i>Sphagnum Bog</i> Sphagnum Bog	CTT51110CA	None	None	G3	S1.2	
<i>Taricha rivularis</i> red-bellied newt	AAAAF02020	None	None	G2	S2	SSC
<i>Trifolium buckwestiorum</i> Santa Cruz clover	PDFAB402W0	None	None	G2	S2	1B.1
<i>Trifolium trichocalyx</i> Monterey clover	PDFAB402J0	Endangered	Endangered	G1	S1	1B.1
<i>Triquetrella californica</i> coastal triquetrella	NBMUS7S010	None	None	G2	S2	1B.2
<i>Usnea longissima</i> Methuselah's beard lichen	NLLEC5P420	None	None	G4	S4	4.2
<i>Viola palustris</i> alpine marsh violet	PDVIO041G0	None	None	G5	S1S2	2B.2

Record Count: 95