

Lindsay Creek (Kramer/Daley Property) Instream Salmonid Habitat Improvement Project (Project ID: 1727989) 2022

Introduction:

The Pacific Coast Fish, Wildlife and Wetlands Restoration Association will implement the Lindsay Creek (Kramer/Daley Property) Instream Salmonid Habitat Improvement Project. The primary purpose of the proposed project is to implement the 100% designs completed for the Lindsay Creek In-Stream Coho Habitat Improvement Design Project, previously funded. The Project includes increasing in-stream habitat complexity by installing LWM structures and enhancing existing off-channel conditions through the installation of inset floodplains and alcove enhancement activities. The intent is to improve in-stream habitat conditions for salmonids in this reach of Lindsay Creek.

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*.

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

Objectives:

The primary purpose of the Lindsay Creek In-Stream Coho Habitat Improvement Project is to increase habitat complexity and improve in-stream and off-channel habitat conditions for salmonids in a reach of Lindsay Creek by introducing large woody material into the stream channel and enhancing an existing off-channel feature. Using heavy equipment, we propose to physically reconfigure a mostly abandoned alcove area to allow for more frequent and longer duration connectivity with the mainstem channel during winter flow events. Habitat features composed of woody debris will be constructed throughout the project site.

Project Description:

Location:

The location of this project is approximately 3.5 upstream from the confluence of Lindsay Creek and Mad River and approximately 14 miles upstream from the Mad River confluence with the Pacific Ocean.. Project coordinates are: 40.960487999999998 North, 124.04696199999999 West.

Project Set Up:

PCFWWRA Personnel Categories Project Manager (PM). The Project Manager oversees all aspects of the project. This includes coordination and problem solving with agencies, landowner, and subcontractors. Permits, landowner agreements and grant agreements are the Manager's responsibility to make sure they are in place and that they are followed. The PM regularly reviews the progress of the project and completed work with respect to the approved budget, as well as working regularly with technical consultants to make sure it is being done to the required standards. Evaluating information developed during the project and identifying realistic permitting strategies for implementation will be a task for the Project Manager. The PM will also expend time on tasks for compliance with requirements contained in the Agreement's Exhibit 1.b Non-Public Entities General Grant Provisions during the entire project period. The PM is responsible for the review, editing, and submission of all invoices and reporting on projects. The Manager's time is split between the field, meetings, and the office.

Plant Ecologist: The Plant Ecologist performs botanical work. Tasks include performing a comprehensive floristic survey of the project site; inventorying and mapping any special status plants or sensitive natural communities found; photographing plants and habitats; conducting a jurisdictional wetland delineation; finalizing revegetation plan and invasive species management plan; and providing other supporting materials as needed for permit acquisition. The Plant Ecologist's time is split between the field and office.

GIS Specialist: Tasks include supporting field collection of botanical data and analyzing geospatial data. The GIS Specialist will prepare special status plants and natural communities maps, wetland maps, and other maps needed for reporting and permitting.

Field Support Labor: The laborer will be responsible for helping the scientific specialists in all field tasks including rare plant surveys for CEQA, wetland delineations and characterizations for the 401/404 permit applications.

ENGINEERING AND GEOLOGIC SUBCONTRACTOR PACIFIC WATERSHED ASSOCIATES, INC. (PWA), Personnel will support PCFWWRA with heavy equipment contractor selection, project implementation, construction oversight/management & will perform the required pre/post-construction monitoring and as-built topographic surveys for the replacement of culverts,

channel reconstruction and restoration activities. In addition, PWA will provide PCFWWRA with assistance in bid document development technical engineering oversight of contractor activities during construction, evaluation and selection of construction materials, & conduct summary, annual and final reporting pursuant to FRGP contract deliverables. Ensures compliance with Professional Engineers Act(California Business & Professions Code 7800).

Conducts water quality compliance monitoring before, during and after all construction and dewatering activities; conducts CEQA pre-construction presence/absence survey for species of special concern, including foothill yellow-legged frogs (*Rana boylei*) and other amphibians; conducts amphibian removal before and during construction; as an RGP-12 Qualified Biologist coordinates and works with CDFW Grants Manager on 2081-ITP or MOU permitting, assists with fish removal/relocation for dewatering; conducts lamprey species capture and relocation for ammocoetes during fish removal and as emerging from fine sediments during and after dewatering; conducts the First Winter Observations Summary; conducts functional use surveys for biological utilization for coho, the target species, other salmonids, and lamprey species to include post-construction surveys for flow testing within the range of the design flows, and water quality monitoring during the first and second post construction seasons. Provides weekly water quality monitoring results to the Grant Manager. Provides results from amphibian survey and capture/relocation during construction, lamprey capture and relocation from the dewatering efforts, the first winter observation summary report, post-construction functional use and flow surveys with water quality monitoring results for the final report and the monitoring report. Collects and enters field data into electronic database(s) to include reporting to BIOS, as necessary. Develops reports of field survey results. Reports directly to Project Manager.

PWA Staff Scientists: Will help specialist professionals with all field tasks. These will include staking, surveying, flagging, spoils management, monitoring, and construction management.

PWA GIS/CAD Staff: Provides project support through development of GIS/CAD maps and products, database interfaces, and GPS data organization and analysis. Produces field maps in support of construction, monitoring and required final report maps.

ARCHEOLOGICAL CEQA SUBCONTRACTOR (William Rich and Associates): This subcontractor will be responsible for performing sensitive cultural resource surveys prior to construction.

WILDFILE BIOLOGIST CEQA SUBCONTRACTOR (WBCS): A qualified biologist will be selected to perform spotted owl, willow flycatcher, &/or any other sensitive bird surveys, if necessary, prior to construction.

LICENSED TIMBER OPERATOR (LTO) AND/OR LICENSED ARBORIST (LA): Implementation. The LTO and/or LA will prepare for, fall, limb, buck and stockpile LWM donated from the Landowners. Locally derived LWM will be prepared in a manner to make it directly suitable for construction of in-stream structures.

HEAVY EQUIPMENT & LABOR CONTRACTOR: Implementation. The equipment and labor contractor will construct the project. Additionally, the equipment contractor will maintain temporary fish barriers & flow diversion during construction. Personnel categories include excavator, dozer, loader, dump truck, water truck & compactor operators, & laborers. The Heavy Equipment and Labor Contractor will only be considered for the project if they are a State licensed General Engineering Contractor and/or Licensed Timber Operator (LTO) with demonstrated successful experience on projects of a similar nature. The contractor will be determined through a rigorous, competitive selection process after the grant contract is signed.

TRIBAL CONSULTATION (Blue Lake Rancheria /Wiyot Tribes): This subcontractor will be responsible for performing sensitive cultural resource surveys prior to construction. The proposal development for this project has included a Native American Heritage Commission search and communication with appropriate California Native American Tribes for identifying Areas of Concern. The funding will be provided for designated tribal representatives to review project information, attend a pre-project review meeting and provide for project site visits if needed.

Materials:

Rock ballast- Rock will be used as ballast in the construction of LWM structures.

Erosion Control Materials - Includes straw and seed, geo-textile fabric, wire, and other small hand tools. Straw will be used to provide interim erosion control at areas of ground disturbance. Other materials will help construct silt fences. This is necessary to protect water quality. Procured by applicant.

Water Diversion Materials - Includes flex pipe, water pumps (water quality management), sandbags, sand, plastic sheeting, tape, wire, and other small hand tools. Materials will help construct the water bypass diversion system. This is necessary to protect water quality. Procured by applicant.

Small Equipment rental - Includes chainsaw (for managing LWM), heavy-duty drill (Hole Hawg) with timber bit for drilling through LWM structure logs prior to anchoring, generator and impact driver to cinch down the nuts and washers, and water trailer to manage dirty water at the site. Procured by Sub-contractor. Log tongs- Log tong excavator attachments will be used to grapple logs and install the large wood features within the project area. Procured by Sub-contractor.

Trees, shrubs, plants, and seed - These materials will be used to re-plant the disturbed project areas to facilitate re-growth of the vegetation community proximal to the proposed project. Procured by applicant.

Survey gear rental and materials- A total station and associated tools will be used to set and check grading boundaries for the proposed excavation and will also be used to establish baseline post construction geometries for physical monitoring of the project performance. Stakes, spikes, paint, and flagging will be purchased as reference points and markers for grading extents. Procured by subcontractor.

Fuel - Gasoline and diesel fuel will be required to run the heavy equipment and to provide transportation to the project site. Procured by subcontractor.

Biological survey gear rental - includes the rental of waders and wading boots for conducting cold weather flow surveys and water quality sampling; the rental of dry suit, mask and snorkel, and minnow traps for conducting the functional use biological surveys per the FRGP Guidelines for this project type; and rite-in-the-rain paper for recording data and making field notes on observations. Procured by subcontractor.

Water quality sampling equipment rental and related materials - Includes the rental of hand-held water quality meters designed for field applications that conform to and utilize a USEPA-approved algorithm/method for the sample readings. Water quality monitoring is required to collect base-line data, monitor water quality during dewatering and pre-construction activities, to document water quality post-construction and during re-watering of the construction site once natural flows are re-established, and to monitor water quality during habitat feature construction and all other in-water work. Water quality sampling for the required first and second post-construction seasons monitoring requirements as per the FRGP Guidelines. Documentation of water quality parameter results will be recorded on the required Daily Water Quality Sample Form as provided in the FRGP Guidelines. Rite-in-the-rain paper for the required daily water quality sampling form and pencils. See Water Quality Sampling Plan attached in the Supplemental Documents. Procured by Sub-contractor.

Large woody material (LWM) Anchoring hardware materials and equipment rental - Required to fasten and tie wood habitat structures together, as needed. The LWM material will be generated during preparation and clearing the site for treatment as well as trucked in sources. Procured by subcontractor.

Fish management gear and rental - Electrofisher, dip-nets, fish screen, rebar, wire, and aerated fish tanks rental. Procured by subcontractor.

Flow monitoring gear (rental) - Pigmy and/ or AA meter, stadia rod and hip chain/or 100-meter tape, time-lapse cameras and staff plates for monitoring flows

at the inlet and outlet of the off-channel feature for the first and second season post-construction monitoring as described in the FGRP Guidelines. Procured by subcontractor.

Field supplies - flagging, sharpies, pencils, pens, clip boards, t-stakes, PVC pipe and fittings, clamps, tape measures, small equipment, etc. Procured by subcontractor.

GPS equipment - A handheld GPS will be required by the Botany team to locate and characterize rare plant locations and wetland features. Procured by Applicant.

GIS computer and software rental - A GIS computer will be required by the Botany team to document the existing and proposed spatial distribution of sensitive plant species and wetlands. Procured by Applicant.

Tasks:

Task 1: Initial Landowner Meeting and Pre-Construction tasks

An initial Landowner Meeting with the landowners within the project vicinity, and landowners of the properties the equipment access will go through. This meeting will discuss any limited access times due to construction, appropriate notification of the residents, where there is a sufficient turn-around area to establish the equipment access, and any upgrades that may be necessary for the temporary access routes. Once the timelines and communication methods have been established,

A pre-construction walkthrough with the Project Engineer, Project Geologist, Project Biologist, and all prospective contractors for the heavy equipment operators.

Task 2: Permits and surveys

PCFWWRA will submit the necessary permit applications including but not limited to: CDFW LSAA 1602, ACOE 404 Permit, SWRCB 401 Certification, Humboldt County Grading Permit and Special Streamside Management Permit. CDFW's FRGP may include programmatic coverage for the LSAA and SWRCB 401 Certification under their Regional General Permit. PCFWWRA will conduct vegetation mapping, special status plant and natural communities surveys, and assessment of wetland vegetation.

Botanical and Wetland, and Wildlife CEQA Surveys

PCFWWRA botanist will conduct the necessary pre-project CEQA botanical surveys for rare plants and wetlands delineation if wetlands are present. In addition, A qualified biologist will perform spotted owl, willow flycatcher, &/or any

other sensitive bird surveys, if necessary, prior to construction. This data will be incorporated into the necessary permit applications prepared by PCWWRA for CEQA submittal requirements.

Archeological CEQA Surveys

The archaeological subcontractor will conduct the necessary pre-project archeological and cultural resource surveys. This data will be provided to PCFWWRA to incorporate into the necessary permit applications, CEQA submittal requirements, and for consultations with local Native American Tribes.

Paleontology CEQA Investigation

The PWA paleontologist will perform surveys and evaluate the site significant paleontological resources. This data will be provided to PCFWWRA to incorporate into the necessary permit applications and CEQA submittal requirements.

Foot Hill Yellow-Legged Frog and Other Amphibian Surveys

The qualified PWA biologist will conduct presence/absence pre-construction surveys no more than 7 days prior to construction for the foothill yellow-legged frog and other amphibian species.

Task 3: Construction and Construction Oversight Construction and construction oversight.

Construction Stakeout

PWA will provide construction layout and stakeout for the project. The stakeout will include establishment of elevation control and placement of stakes to denote the location and stationing of the proposed inset floodplains, LWD structures, and backwater alcove within the Lindsay Creek project area. Anchor trees to be used for the large wood structures will also be clearly marked. Once staking is complete, it will be the obligation of the contractor to maintain the stake locations, to officially notify the PWA Project Manager of any disturbances to the stakes, and to determine locations of non-staked items. PWA Project Manager and PWA staff will layout the temporary construction access, define the stockpile locations, and establish the limits of disturbance for the contractor utilizing flagging, stakes and/or paint.

Water Quality Monitoring Compliance

PWA will conduct water quality monitoring by gathering baseline water quality data before dewatering and construction begins and will follow that up by measuring water quality parameters during any de-watering activities. Water quality monitoring will continue three times daily taken at the beginning, middle, and end of the day, during all construction activities. Once the construction is completed, water quality monitoring will be made as the channel is rewatered and after flows are completely restored to the channel. Additional water quality

monitoring will be conducted every 4 hours during any in-water work for constructing and anchoring fish habitat improvement features. See the attached Water Quality Plan in the Supplemental Documents section.

Lamprey and Amphibian Measures

PWA qualified biologist will observe the areas identified for dewatering as the instream water recedes and after the area is dewatered for ammocoetes to emerge from the fine substrates as they desiccate. After being removed, the top layer of streambed material will be examined for more ammocoetes. All rescued ammocoetes or other organisms will be documented and relocated to a similar area with suitable habitats containing fine sediments and allochthonous materials. The PWA qualified biologist, or their designated representative, will also conduct pre-construction surveys for amphibian species daily. Any captured species will be relocated out of the construction area and ongoing monitoring efforts will take place to prevent amphibians moving into the construction area or becoming exposed to harm during the construction period. A particular emphasis will be placed on capturing and relocating any foothill yellow-legged frogs (*Rana boylei*) if they happen to be found near the project area.

Fish and Amphibian Relocation

PWA will conduct all pre-project fish and amphibian relocation activities under the supervision of CDFW. These include: a pre-construction site walk; stream draw down; fish and amphibian relocation; water quality monitoring before, during, and after removal/relocation activities to include the relocation site(s) and reporting. The PWA Biologist will also be available for calls on an as needed basis during construction. The necessary 2081 permitting ITP and/or MOUs will be developed by the PWA RGP-12 Qualified Biologist in co-ordination with the CDFW Grant Contract Manager.

Construction and Construction Oversight

Oversight: The PWA Project Manager, Project Engineer, and Technical Staff will coordinate to provide daily construction operations management and oversight to resolve any contractual issues and ensure that construction is completed in a timely fashion and conforms with the plans and land management goals of the landowner and the project. The PWA Project Manager and Project Engineer will evaluate and select suitable salvaged backfill material for streambank construction and ensure that materials are compacted to design standards. The PWA Project Manager will notify PCFWWRA of when to order and schedule the delivery of required rock and materials. The PWA Project Manager and Technical Staff will oversee materials stockpiling and evaluate the effectiveness of erosion control efforts throughout construction. Appropriate recommendations will be made to the contractor if additional erosion control efforts are required. PWA will perform oversight during the implementation phase to oversee grading operations and large wood structure placement in the channel. PWA will also be available for fit-in-the-field of large wood structures and verification of buoyancy calculations, as needed.

Implementation: All earthwork, erosion and sediment control, water pollution controls, stream dewatering, instream structure construction, and revegetation will conform to the 100% Design Submittal Plans and Special Provisions detailed in the Lindsay Creek In-Stream Coho Habitat Improvement Design Project. Any deviations from these Plans and Special Provisions MUST garner written approval from the PWA Project Engineer AND PCFWWRA prior to being implemented. It is expected that installation of wood structures, inset floodplains, and backwater alcove on Lindsay Creek will take approximately 3-4 weeks. Heavy equipment (e.g., excavator, bulldozer, dump truck(s)) and labor are required to complete these tasks and will require other materials including large woody debris, rock, plants, and erosion control materials. All project contractors and personnel will adhere to CDFW invasive species prevention and equipment decontamination protocols prior to arriving at the work site. When applicable, all heavy equipment, survey and field gear will abide by the protocols outlined by CDFW (see Supplementary Documents). Moreover, all mitigation measures described in the CDFW Regional General Permit will be followed and the Contractor(s) shall also adhere to all other required permit provisions.

Task: 4 Construction Closeout:

Final walkthrough:

Following substantial completion, PWA, PCFWWRA, the landowner, and the general contractor will walk the site for the final inspection. Either a final listing of required corrective actions will be made to the contractor or project will be approved.

Task 5: Pre/Post Construction Monitoring and Reporting
Pre/Post construction monitoring and reporting.

Task 5.1: As-built Survey

PWA will prepare as-built drawings using the construction drawings with red-line markups of the construction documents of any changes that occurred during construction. Final elevations of the channel, if they differ from the design drawings, will be noted on the as-built drawings. These as-built surveys and drawings will be used to meet final reporting

Task 5.2: Photographic Monitoring

PWA will take pre- and post-construction photographs at established photo point monitoring stations to capture site conditions before, during, and after implementation. Photographic monitoring will also be conducted during the First Winter Observations, as required, for the backwater alcove and complex large wood structures.

Task 5.3: Post Construction Hydraulic Conditions Evaluation

(PWA) A minimum of 2 post-construction hydraulic cross sections will be surveyed within the project area at both the alcove site and mainstem Lindsay Creek work sites. The cross sections will be located within or proximal to the new constructed structures for both the Lindsay Creek and alcove sites. Additional cross section(s) may be included in the evaluation effort as deemed necessary by CDFW or the Project Engineer. Hydraulic cross sections will be evaluated for average velocity, surface water elevation and water depth through a variety of average daily exceedance flow events and these parameters will be compared to design hydraulics or reference conditions to ensure the project meets the intended fish access goals. Because future hydrologic conditions remain unknown, some flexibility in monitoring events need to be maintained. A short technical memorandum will be developed which summarizes the results of the post-construction hydraulic evaluation. If after the evaluation, hydraulic conditions are deemed unsuitable for fish access, recommendations will be made to correct or mitigate deficiencies with the design and/or construction.

Task 5.4: Water Quality Monitoring Compliance Reporting

(PWA) Water quality will be monitored with in situ samples taken before, during, and after construction is completed, and including the dewatering and re-watering of the streams within the project area. Water quality monitoring parameters will include, but may not be limited to, dissolved oxygen, temperature, turbidity and pH. Water quality monitoring will be conducted a minimum of three times daily during all construction work to include the crossing upgrades on Lindsay Creek, and all in-stream work for improving salmonid habitats associated with this project. The intent of the water quality monitoring is to better understand the water chemistry changes as they relate to project implementation and to preemptively identify any water quality attributes that may be an area of concern with respect to suitability for the target species and other aquatic vertebrates and invertebrates utilizing the project area habitats. The Water Quality Monitoring Plan specific to this project, including spatial and temporal sampling scales, water quality meter compliance, parameters monitored, and water quality reporting, is included in the supplemental documents for this proposal. The Water Quality Monitoring Plan also includes an equipment rental rate quote for water quality meters and the Daily Water Quality Sample Form from the FRGP Guidelines that is required for recording water quality sampling results to document monitoring compliance. This task includes all required reporting according to the Water Quality Monitoring Plan.

Task 5.5: First Winter Observations Summary

PWA will complete post-project monitoring of the alcove habitat and complex wood structures following the first post-construction winter. This will include inspecting the structures for changes such as storm damage and missing key pieces, as well as counts of both large and small wood pieces accumulated on the structure. Photo observations will also be included. In addition, the winter observation summary will include any sightings of adult and/or juvenile salmonids and their activities, or any other species observed.

Task 5.6: Fish Removal and Relocation Reporting

Pre- construction fish removal and relocation will include enumerating captured salmonids by species and age or size noting that coho salmon are the target species. All fish will be relocated within similar, suitable habitat along with any non-target fish species captured. All other aquatic species amphibians or otherwise, will be enumerated and relocated in similar habitats suitable for the species with care being given to native predatory amphibians being relocated distant from the salmonid relocation sites. All pre-removal efforts will be preceded by the required reporting and coordinated with the CDFW Grant Manager. All documentation efforts will include photographs and results will be provided to the CDFW Grant Manager and as per the 2081 permit or MOU requirements to include reporting to BIOS, as needed, for undocumented species encountered.

Task 5.7: Contingency Plan if Project Maintenance is Needed

The proposed project is designed to be self-maintaining. However, if post-project conditions exceed monitoring thresholds then maintenance may be necessary. PCFWWRA and PWA will attend meetings with the appropriate resource agencies, including CDFW, to determine if a maintenance action is warranted. If action is warranted, PWA will provide construction oversight. PCFWWRA will coordinate all permitting and project coordination. If necessary, heavy equipment or laborers may perform temporary periodic intervention to maintain or enhance the functional use of the channel and habitat features.

Task 5.8: Final CDFW Project Report

PWA and PCFWWRA will complete a final project summary report near the end of the contract term. The following components will be included in the project summary report:

- A. Actual performance measures per site, as described in the grant agreement.
- B. As-built drawings that include feature placement, alignment, sizes, and quantity of material added in addition to any design changes.
- C. Before and after photos of individual feature locations.
- D. Pre- and post-project longitudinal profiles and cross-sections where channel grade is restored or otherwise modified by the project.
- E. The results from the water quality monitoring, lamprey mitigation rescues from the dewatering, fish removal and relocation results, pre-construction amphibian survey results and any mitigation rescues from dewatering, the first winter observations summary, and if appropriate flows are received, any project testing and how these results relate to salmonid passage and utilization at age.

Deliverables:

Completed installation of wood structures, backwater alcove, and associated channel modifications in Lindsay Creek. Construction logs, meeting notes, punch list and final inspection outcome.

As-built drawings.

Final CDFW report.

Timelines:

Initial landowner meetings are during the summer of 2023

The pre-construction walk throughs are from 6/30/2023 to 6/30/2024. Permitting and project surveys are from 6/30/2023 to 12/31/2024. Construction is to be complete by 10/31/2026. As-built designs and CDFW final report to be provided by 3/31/2027.

Additional Requirements:

The Permittee will not proceed with on the ground implementation until all necessary permits and consultations are secured. Work in flowing streams is restricted per the United States Army Corp of Engineers (USACE) Regional General Permit. Actual project start and end dates, within this timeframe, are at the discretion of the California Department of Fish and Wildlife (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.

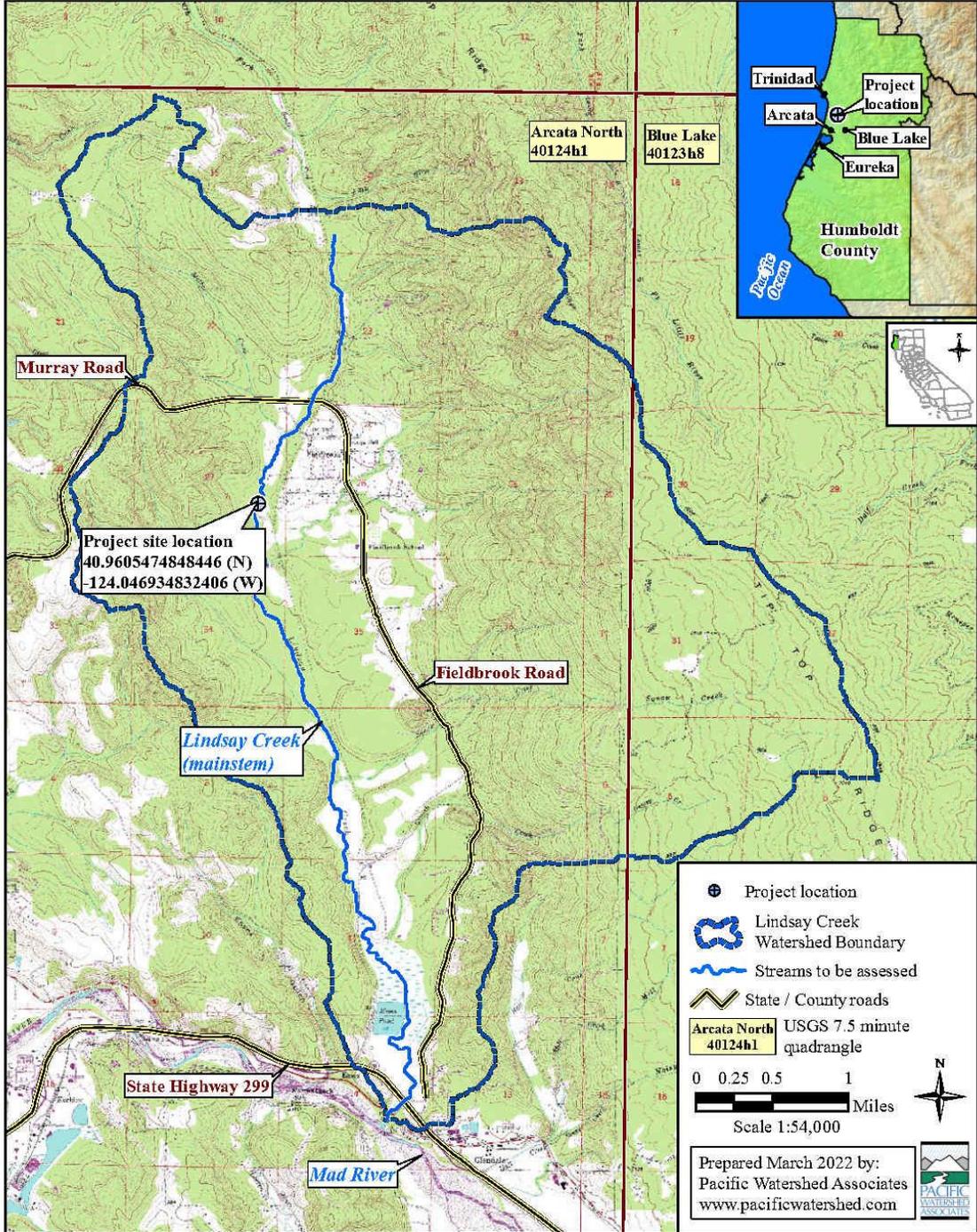
The Permittee shall notify the CDFW a minimum of five working days before the project site is de-watered and the stream flow diverted. The notification will provide a reasonable time for CDFW personnel to oversee the implementation of the water diversion plan and the safe removal and relocation of salmonids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

and the relocation of salmonids, the Permittee will implement the following measures to minimize harm and mortality to listed salmonids:

- a. Fish dewatering and relocation activities shall only occur between June 15 and October 31 of each year.
- b. Additional measures to minimize injury and mortality of salmonids during fish relocation and dewatering activities shall be implemented as described in Part IX, pages 52 and 53 of the *California Salmonid Stream Habitat Restoration Manual*.
- c. The Grantee shall minimize the amount of wetted stream channel dewatered at each individual project site to the fullest extent possible as approved by the CDFW Grant Manager and pursuant to conditions in the USACE Regional General Permit and National Marine Fisheries Service (NMFS) Biological Opinion.
- d. All electrofishing shall be performed by a qualified fisheries biologist and conducted according to the NMFS, Guidelines for Electrofishing Waters Containing Salmonids Listed under the Endangered Species Act, June 2000.
- e. USFWS Approved fisheries biologists will provide fish relocation data via the Permittee to the CDFW personnel on a form provided by CDFW.

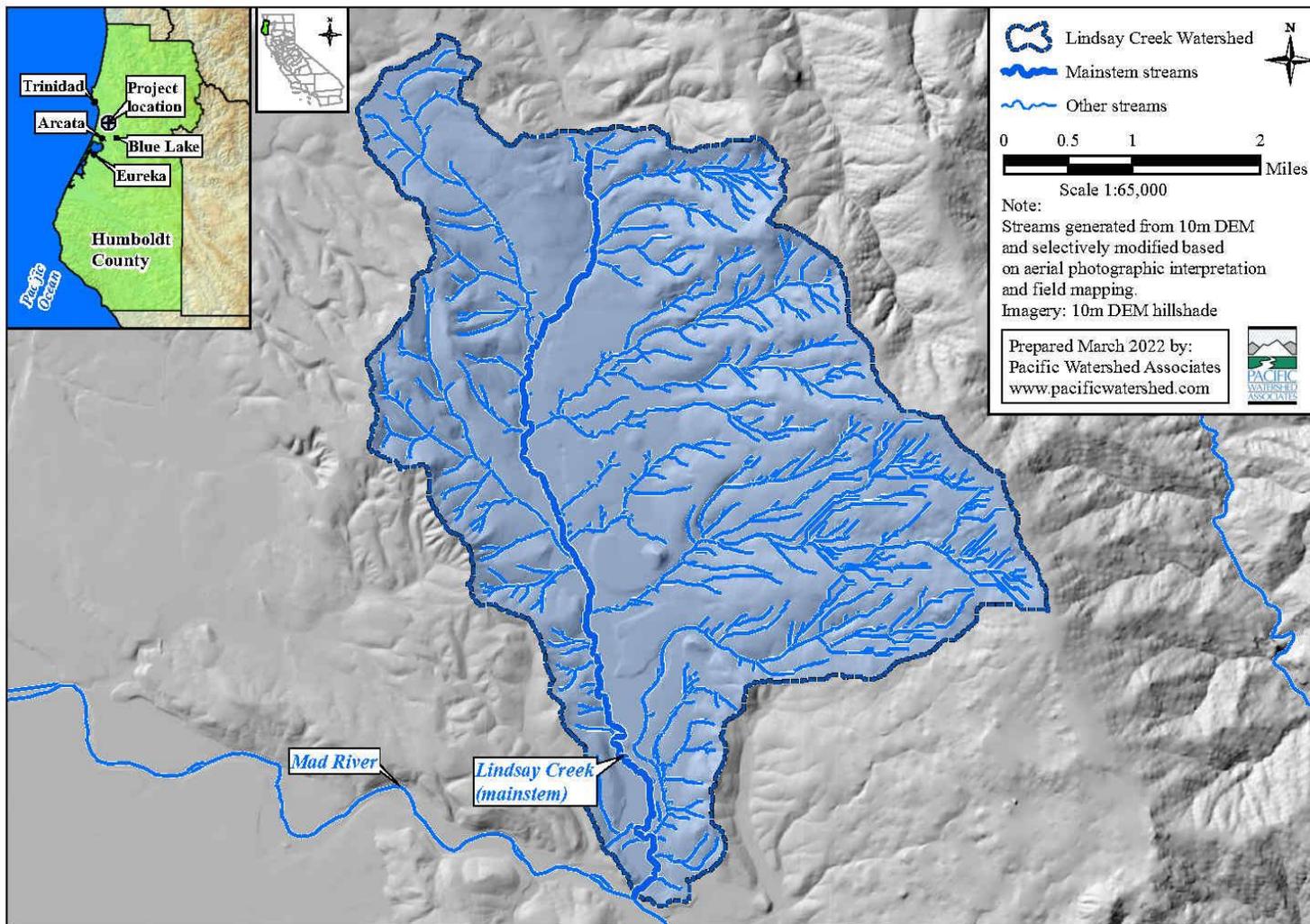
Final structure design and placement will be determined by field consultation between the Permittee and the CDFW Personnel.

Planting of tree seedlings will take place after December 1 or when sufficient rainfall has occurred to insure the best chance of survival of the seedlings.



Map 1. Project location topographic map for the Lindsay Creek In-stream Salmonid Habitat Improvement Project, Humboldt County, California. Grantee: Pacific Coast Fish, Wildlife and Wetlands Restoration Association.

Grantee: Pacific Coast Fish, Wildlife and Wetlands Restoration Association



Map 2. Watershed map for the Lindsay Creek In-stream Salmonid Habitat Improvement Project, Humboldt County, California.
 Grantee: Pacific Coast Fish, Wildlife and Wetlands Restoration Association.

CALIFORNIA DEPARTMENT OF
FISH and WILDLIFE *RareFind*

Query Summary:

Quad IS (Arcata North (4012481) OR Tyee City (4012482) OR Blue Lake (4012388) OR Trinidad (4112412) OR Crannell (4112411) OR Panther Creek (4112318) OR Eureka (4012472) OR Arcata South (4012471) OR Korbel (4012378))

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CNDDDB Element Query Results

Scientific Name	Common Name	Taxonomic Group	Element Code	Total Occs	Returned Occs	Federal Status	State Status	Global Rank	State Rank	CA Rare Plant Rank	Other Status	Habitats
<i>Abronia umbellata</i> var. <i>breviflora</i>	pink sand-verbena	Dicots	PDNYC010N4	61	15	None	None	G4G5T2	S2	1B.1	BLM_S-Sensitive, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Coastal dunes
<i>Accipiter cooperii</i>	Cooper's hawk	Birds	ABNKC12040	118	1	None	None	G5	S4	null	CDFW_WL-Watch List, IUCN_LC-Least Concern	Cismontane woodland, Riparian forest, Riparian woodland, Upper montane coniferous forest
<i>Acipenser medirostris</i> pop. 1	green sturgeon - southern DPS	Fish	AFCAA01031	14	1	Threatened	None	G2T1	S1	null	AFS_VU-Vulnerable, IUCN_NT-Near Threatened	Aquatic, Estuary, Marine bay, Sacramento/San Joaquin flowing waters
<i>Anodonta californiensis</i>	California floater	Mollusks	IMBIV04220	6	1	None	None	G3Q	S2?	null	USFS_S-Sensitive	Aquatic
<i>Aplodontia rufa humboldtiana</i>	Humboldt mountain beaver	Mammals	AMAF01017	28	17	None	None	G5TNR	SNR	null	null	Coastal scrub, Redwood, Riparian forest
<i>Arborimus albipes</i>	white-footed vole	Mammals	AMAFF23010	3	3	None	None	G3G4	S2	null	CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern	North coast coniferous forest, Redwood, Riparian forest
<i>Arborimus pomo</i>	Sonoma tree vole	Mammals	AMAFF23030	222	22	None	None	G3	S3	null	CDFW_SSC-Species of Special Concern, IUCN_NT-Near Threatened	North coast coniferous forest, Oldgrowth, Redwood
<i>Ardea alba</i>	great egret	Birds	ABNGA04040	43	2	None	None	G5	S4	null	CDF_S-Sensitive, IUCN_LC-Least Concern	Brackish marsh, Estuary, Freshwater marsh, Marsh & swamp, Riparian forest, Wetland
<i>Ardea herodias</i>	great blue heron	Birds	ABNGA04010	156	8	None	None	G5	S4	null	CDF_S-Sensitive, IUCN_LC-Least Concern	Brackish marsh, Estuary, Freshwater marsh, Marsh & swamp, Riparian forest, Wetland
<i>Ascaphus truei</i>	Pacific tailed frog	Amphibians	AAABA01010	491	62	None	None	G4	S3S4	null	CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern	Aquatic, Klamath/North coast flowing waters, Lower montane coniferous forest, North coast coniferous forest, Redwood, Riparian forest
<i>Astragalus pycnostachyus</i> var. <i>pycnostachyus</i>	coastal marsh milk-vetch	Dicots	PDFAB0F7B2	24	1	None	None	G2T2	S2	1B.2	BLM_S-Sensitive, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, SB_SBBG-Santa Barbara Botanic Garden, SB_UCBG-UC Botanical Garden at Berkeley	Coastal dunes, Coastal scrub, Marsh & swamp, Wetland
<i>Bombus caliginosus</i>	obscure bumble bee	Insects	IIHYM24380	181	10	None	None	G2G3	S1S2	null	IUCN_VU-Vulnerable	null
<i>Bombus crotchii</i>	Crotch bumble bee	Insects	IIHYM24480	437	1	None	None	G2	S1S2	null	null	null

Bombus occidentalis	western bumble bee	Insects	IIHYM24250	306	8	None	None	G2G3	S1	null	USFS_S-Sensitive	null
Cardamine angulata	seaside bittercress	Dicots	PDBRA0K010	38	1	None	None	G4G5	S3	2B.1	null	Lower montane coniferous forest, North coast coniferous forest, Wetland
Carex arcta	northern clustered sedge	Monocots	PMCYP030X0	13	2	None	None	G5	S1	2B.2	IUCN_LC-Least Concern	Bog & fen, North coast coniferous forest, 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 forest
Carex leptalea	bristle-stalked sedge	Monocots	PMCYP037E0	8	4	None	None	G5	S1	2B.2	IUCN_LC-Least Concern	Bog & fen, Freshwater marsh, Marsh & swamp, Meadow & seep, Wetland
Carex lyngbyei	Lyngbye's sedge	Monocots	PMCYP037Y0	37	17	None	None	G5	S3	2B.2	IUCN_LC-Least Concern	Marsh & swamp, Wetland
Carex praticola	northern meadow sedge	Monocots	PMCYP03B20	14	1	None	None	G5	S2	2B.2	null	Meadow & seep, Wetland
Carex viridula ssp. viridula	green yellow sedge	Monocots	PMCYP03EM5	8	1	None	None	G5T5	S2	2B.3	null	Bog & fen, Marsh & swamp, North coast coniferous forest, Wetland
Castilleja ambigua var. humboldtensis	Humboldt Bay owl's-clover	Dicots	PDSCR0D402	31	18	None	None	G4T2	S2	1B.2	BLM_S-Sensitive	Marsh & swamp, Salt marsh, Wetland
Castilleja litoralis	Oregon coast paintbrush	Dicots	PDSCR0D012	44	9	None	None	G3	S3	2B.2	null	Coastal bluff scrub, Coastal dunes, Coastal scrub
Castilleja mendocinensis	Mendocino Coast paintbrush	Dicots	PDSCR0D3N0	52	1	None	None	G2	S2	1B.2	BLM_S-Sensitive	Closed-cone coniferous forest, Coastal bluff scrub, Coastal dunes, Coastal prairie, Coastal scrub
Cerorhinca monocerata	rhinoceros auklet	Birds	ABNNN11010	10	2	None	None	G5	S3	null	CDFW_WL-Watch List, IUCN_LC-Least Concern	null
Charadrius montanus	mountain plover	Birds	ABNNB03100	90	2	None	None	G3	S2S3	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_NT-Near Threatened, NABCI_RWL-Red Watch List, USFWS_BCC-Birds of Conservation Concern	Chenopod scrub, Valley & foothill grassland
Charadrius nivosus nivosus	western snowy plover	Birds	ABNNB03031	138	6	Threatened	None	G3T3	S2	null	CDFW_SSC-Species of Special Concern, NABCI_RWL-Red Watch List	Great Basin standing waters, Sand shore, Wetland
Chloropyron maritimum ssp. palustre	Point Reyes salty bird's-beak	Dicots	PDSCR0J0C3	80	13	None	None	G4?T2	S2	1B.2	BLM_S-Sensitive	Marsh & swamp, Salt marsh, Wetland
Cicindela hirticollis gravida	sandy beach tiger beetle	Insects	IICOL02101	34	1	None	None	G5T2	S2	null	null	Coastal dunes
Circus hudsonius	northern harrier	Birds	ABNKC11011	54	1	None	None	G5	S3	null	CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern, USFWS_BCC-Birds of Conservation Concern	Coastal scrub, Great Basin grassland, Marsh & swamp, Riparian scrub, Valley & foothill grassland, Wetland
Collinsia corymbosa	round-headed Chinese-houses	Dicots	PDSCR0H060	13	1	None	None	G1	S1	1B.2	null	Coastal dunes
Coptis laciniata	Oregon goldthread	Dicots	PDRAN0A020	122	11	None	None	G4?	S3?	4.2	null	Meadow & seep, North coast coniferous forest, Wetland
Corynorhinus townsendii	Townsend's big-eared bat	Mammals	AMACC08010	635	2	None	None	G4	S2	null	BLM_S-Sensitive, CDFW_SSC-	Broadleaved upland forest,

												Species of Special Concern, IUCN_LC-Least Concern, USFS_S-Sensitive, WBWG_H-High Priority	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
Coturnicops noveboracensis	yellow rail	Birds	ABNME01010	45	3	None	None	G4	S1S2	null	CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern, NABCI_RWL-Red Watch List, USFS_S-Sensitive, USFWS_BCC-Birds of Conservation Concern	Freshwater marsh, Meadow & seep	
Discelium nudum	naked flag moss	Bryophytes	NBMUS2E010	2	1	None	None	G4G5	S1	2B.2	null	Coastal bluff scrub	
Egretta thula	snowy egret	Birds	ABNGA06030	20	2	None	None	G5	S4	null	IUCN_LC-Least Concern	Marsh & swamp, Meadow & seep, Riparian forest, Riparian woodland, Wetland	
Elanus leucurus	white-tailed kite	Birds	ABNKC06010	184	3	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	
Empetrum nigrum	black crowberry	Dicots	PDEMP03020	4	1	None	None	G5	S1?	2B.2	null	Coastal bluff scrub, Coastal prairie	
Emys marmorata	western pond turtle	Reptiles	ARAAD02030	1404	8	None	None	G3G4	S3	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_VU-Vulnerable, USFS_S-Sensitive	Aquatic, Artificial flowing waters, Klamath/North coast flowing waters, Klamath/North coast standing waters, Marsh & swamp, Sacramento/San Joaquin flowing waters, Sacramento/San Joaquin standing waters, South coast flowing waters, South coast standing waters, Wetland	
Entosphenus tridentatus	Pacific lamprey	Fish	AFBAA02100	9	4	None	None	G4	S3	null	AFS_VU-Vulnerable, BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, USFS_S-Sensitive	Aquatic, Klamath/North coast flowing waters, Sacramento/San Joaquin flowing waters, South coast flowing waters	
Erethizon dorsatum	North American porcupine	Mammals	AMAFJ01010	523	8	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
<i>Erysimum menziesii</i>	Menzies' wallflower	Dicots	PDBRA160R0	19	5	Endangered	Endangered	G1	S1	1B.1	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, SB_UCBG-UC Botanical Garden at Berkeley	Coastal dunes	
<i>Erythronium oregonum</i>	giant fawn lily	Monocots	PMLIL0U0C0	37	2	None	None	G5	S2	2B.2	null	Cismontane woodland, Meadow & seep, Ultramafic	
<i>Erythronium revolutum</i>	coast fawn lily	Monocots	PMLIL0U0F0	172	12	None	None	G4G5	S3	2B.2	null	Bog & fen, Broadleaved upland forest, North coast coniferous forest, Wetland	
<i>Eucyclogobius newberryi</i>	tidewater goby	Fish	AFCQN04010	127	8	Endangered	None	G3	S3	null	AFS_EN-Endangered, IUCN_VU-Vulnerable	Aquatic, Klamath/North coast flowing waters, Sacramento/San Joaquin flowing waters, South coast flowing waters	
<i>Eumetopias jubatus</i>	Steller sea lion	Mammals	AMAJC03010	38	5	Delisted	None	G3	S2	null	IUCN_EN-Endangered, MMC_SSC-Species of Special Concern	Marine intertidal & splash zone communities, Protected deepwater coastal communities, Rock shore	
<i>Falco peregrinus anatum</i>	American peregrine falcon	Birds	ABNKD06071	73	6	Delisted	Delisted	G4T4	S3S4	null	CDF_S-Sensitive, CDFW_FP-Fully Protected	null	
<i>Fissidens pauperculus</i>	minute pocket moss	Bryophytes	NBMUS2W0U0	22	3	None	None	G3?	S2	1B.2	USFS_S-Sensitive	North coast coniferous forest, Redwood	
<i>Fratercula cirrhata</i>	tufted puffin	Birds	ABNNN12010	17	6	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	
<i>Gilia capitata ssp. pacifica</i>	Pacific gilia	Dicots	PDPLM040B6	91	2	None	None	G5T3	S2	1B.2	null	Chaparral, Coastal bluff scrub, Coastal prairie, Valley & foothill grassland	
<i>Gilia millefoliata</i>	dark-eyed gilia	Dicots	PDPLM04130	54	13	None	None	G2	S2	1B.2	BLM_S-Sensitive	Coastal dunes	
<i>Haliaeetus leucocephalus</i>	bald eagle	Birds	ABNKC10010	332	3	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	
<i>Hesperovax sparsiflora var. brevifolia</i>	short-leaved evax	Dicots	PDASTE5011	72	4	None	None	G4T3	S3	1B.2	BLM_S-Sensitive	Coastal bluff scrub, Coastal dunes, Coastal prairie	
<i>Hydrobates furcatus</i>	fork-tailed storm-petrel	Birds	ABNDC04010	8	5	None	None	G5	S1	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern	Protected deepwater coastal communities	
<i>Iliamna latibracteata</i>	California globe mallow	Dicots	PDMAL0K040	40	1	None	None	G2G3	S2	1B.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, USFS_S-Sensitive	Chaparral, Lower montane coniferous forest, North coast coniferous forest, Riparian scrub	
<i>Juncus nevadensis var. inventus</i>	Sierra rush	Monocots	PMJUN011Z5	1	1	None	None	G5T3T4	S1	2B.2	null	Bog & fen, Wetland	
<i>Lampetra</i>	western brook	Fish	AFBAA02180	4	2	None	None	G4G5	S3S4	null	CDFW_SSC-	null	

richardsoni	lamprey											Species of Special Concern, USFS_S-Sensitive	
<i>Lasthenia californica</i> ssp. <i>macrantha</i>	perennial goldfields	Dicots	PDA5T5L0C5	59	1	None	None	G3T2	S2	1B.2	BLM_S-Sensitive	Coastal bluff scrub, Coastal dunes, Coastal scrub	
<i>Lathyrus japonicus</i>	seaside pea	Dicots	PDFAB250C0	24	5	None	None	G5	S2	2B.1	IUCN_LC-Least Concern	Coastal dunes	
<i>Lathyrus palustris</i>	marsh pea	Dicots	PDFAB250P0	13	3	None	None	G5	S2	2B.2	null	Bog & fen, Coastal prairie, Coastal scrub, Lower montane coniferous forest, Marsh & swamp, North coast coniferous forest, Wetland	
<i>Layia carnosa</i>	beach layia	Dicots	PDA5T5N010	25	7	Threatened	Endangered	G2	S2	1B.1	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, SB_SBBG-Santa Barbara Botanic Garden	Coastal dunes, Coastal scrub	
<i>Lilium occidentale</i>	western lily	Monocots	PMLIL1A0G0	16	3	Endangered	Endangered	G1G2	S1	1B.1	SB_BerrySB-Berry Seed Bank	Bog & fen, Coastal bluff scrub, Coastal prairie, Coastal scrub, Freshwater marsh, Marsh & swamp, North coast coniferous forest, Wetland	
<i>Lycopodiella inundata</i>	inundated bog-clubmoss	Ferns	PPLYC03060	3	1	None	None	G5	S1	2B.2	IUCN_LC-Least Concern	Bog & fen, Lower montane coniferous forest, Marsh & swamp, Wetland	
<i>Lycopodium clavatum</i>	running-pine	Ferns	PPLYC01080	120	76	None	None	G5	S3	4.1	null	Lower montane coniferous forest, Marsh & swamp, North coast coniferous forest, Wetland	
<i>Margaritifera falcata</i>	western pearlshell	Mollusks	IMBIV27020	78	1	None	None	G4G5	S1S2	null	null	Aquatic	
<i>Mitellastrum caulescens</i>	leafy-stemmed mitrewort	Dicots	PDSAX0N020	21	2	None	None	G5	S4	4.2	null	Broadleaved upland forest, Lower montane coniferous forest, Meadow & seep, North coast coniferous forest	
<i>Monotropa uniflora</i>	ghost-pipe	Dicots	PDMON03030	115	2	None	None	G5	S2	2B.2	null	Broadleaved upland forest, North coast coniferous forest	
<i>Montia howellii</i>	Howell's montia	Dicots	PDPOR05070	123	9	None	None	G3G4	S2	2B.2	null	Meadow & seep, North coast coniferous forest, Vernal pool, Wetland	
<i>Myotis evotis</i>	long-eared myotis	Mammals	AMACC01070	139	2	None	None	G5	S3	null	BLM_S-Sensitive, IUCN_LC-Least Concern, WBWG_M-Medium Priority	null	
<i>Nannopterum auritum</i>	double-crested cormorant	Birds	ABNFD01020	39	5	None	None	G5	S4	null	CDFW_WL-Watch List, IUCN_LC-Least Concern	Riparian forest, Riparian scrub, Riparian woodland	
Northern Coastal Salt Marsh	Northern Coastal Salt Marsh	Marsh	CTT52110CA	53	7	None	None	G3	S3.2	null	null	Marsh & swamp, Wetland	
Northern Foredune Grassland	Northern Foredune Grassland	Dune	CTT21211CA	1	1	None	None	G1	S1.1	null	null	Coastal dunes	
<i>Nycticorax nycticorax</i>	black-crowned night heron	Birds	ABNGA11010	37	5	None	None	G5	S4	null	IUCN_LC-Least Concern	Marsh & swamp, Riparian forest, Riparian woodland, Wetland	
<i>Oenothera wolfii</i>	Wolf's evening-	Dicots	PDONA0C1K0	29	4	None	None	G2	S1	1B.1	SB_BerrySB-Berry Seed Bank	Coastal bluff scrub, Coastal	

	primrose													dunes, Coastal prairie
Oncorhynchus clarkii clarkii	coast cutthroat trout	Fish	AFCHA0208A	45	23	None	None	G5T4	S3	null	AFS_VU-Vulnerable, CDFW_SSC-Species of Special Concern, USFS_S-Sensitive	Aquatic, Klamath/North coast flowing waters		
Oncorhynchus kisutch pop. 2	coho salmon - southern Oregon / northern California ESU	Fish	AFCHA02032	10	5	Threatened	Threatened	G5T2Q	S2	null	AFS_TH-Threatened	Aquatic, Klamath/North coast flowing waters, Sacramento/San Joaquin flowing waters		
Oncorhynchus mykiss irideus pop. 16	steelhead - northern California DPS	Fish	AFCHA0209Q	12	3	Threatened	None	G5T2T3Q	S2S3	null	AFS_TH-Threatened	Aquatic, Klamath/North coast flowing waters		
Oncorhynchus mykiss irideus pop. 36	summer-run steelhead trout	Fish	AFCHA0213B	20	1	None	Candidate Endangered	G5T4Q	S2	null	CDFW_SSC-Species of Special Concern	Aquatic, Klamath/North coast flowing waters, Sacramento/San Joaquin flowing waters		
Packera bolanderi var. bolanderi	seacoast ragwort	Dicots	PDAST8H0H1	72	1	None	None	G4T4	S2S3	2B.2	null	Coastal scrub, North coast coniferous forest		
Pandion haliaetus	osprey	Birds	ABNKC01010	504	37	None	None	G5	S4	null	CDF_S-Sensitive, CDFW_WL-Watch List, IUCN_LC-Least Concern	Riparian forest		
Pekania pennanti	Fisher	Mammals	AMAJF01020	555	10	None	None	G5	S2S3	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, USFS_S-Sensitive	North coast coniferous forest, Oldgrowth, Riparian forest		
Piperia candida	white-flowered rein orchid	Monocots	PMORC1X050	222	1	None	None	G3?	S3	1B.2	null	Broadleaved upland forest, Lower montane coniferous forest, North coast coniferous forest, Ultramafic		
Plethodon elongatus	Del Norte salamander	Amphibians	AAAAD12050	151	10	None	None	G4	S3	null	CDFW_WL-Watch List, IUCN_NT-Near Threatened	Oldgrowth		
Polemonium carneum	Oregon polemonium	Dicots	PDPLM0E050	16	1	None	None	G3G4	S2	2B.2	null	Coastal prairie, Coastal scrub, Lower montane coniferous forest		
Rallus obsoletus obsoletus	California Ridgway's rail	Birds	ABNME05011	99	2	Endangered	Endangered	G3T1	S1	null	CDFW_FP-Fully Protected, NABCI_RWL-Red Watch List	Brackish marsh, Marsh & swamp, Salt marsh, Wetland		
Rana aurora	northern red-legged frog	Amphibians	AAABH01021	292	78	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 boylei	foothill yellow-legged frog	Amphibians	AAABH01050	2478	31	None	Endangered	G3	S3	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_NT-Near Threatened, USFS_S-Sensitive	Aquatic, Chaparral, Cismontane woodland, Coastal scrub, Klamath/North coast flowing waters, Lower montane coniferous forest, Meadow & seep, Riparian forest, Riparian woodland, Sacramento/San Joaquin flowing waters		
Rhyacotriton variegatus	southern torrent salamander	Amphibians	AAAAJ01020	416	92	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		
Riparia riparia	bank swallow	Birds	ABPAU08010	298	6	None	Threatened	G5	S2	null	BLM_S-Sensitive, IUCN_LC-Least	Riparian scrub, Riparian		

											Concern	woodland
Romanzoffia tracyi	Tracy's romanzoffia	Dicots	PDHYD0E030	9	5	None	None	G4	S2	2B.3	null	Coastal bluff scrub, Coastal scrub
Scaphinotus behrensi	Behrens' snail-eating beetle	Insects	IICOL4L070	4	1	None	None	G2G4	S2S4	null	null	North coast coniferous forest
Sidalcea malachroides	maple-leaved checkerbloom	Dicots	PDMAL110E0	136	24	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	7	None	None	G5T2	S2	1B.2	null	Coastal bluff scrub, Coastal prairie, North coast coniferous forest
Sidalcea oregana ssp. eximia	coast checkerbloom	Dicots	PDMAL110K9	19	2	None	None	G5T1	S1	1B.2	null	Lower montane coniferous forest, Meadow & seep, North coast coniferous forest, Wetland
Silene scouleri ssp. scouleri	Scouler's catchfly	Dicots	PDCAR0U1MC	23	2	None	None	G5T4T5	S2S3	2B.2	null	Coastal bluff scrub, Coastal prairie, Valley & foothill grassland
Sitka Spruce Forest	Sitka Spruce Forest	Forest	CTT82110CA	4	1	None	None	G1	S1.1	null	null	null
Spergularia canadensis var. occidentalis	western sand-spurrey	Dicots	PDCAR0W032	4	4	None	None	G5T4	S1	2B.1	null	Marsh & swamp, Wetland
Sphagnum Bog	Sphagnum Bog	Marsh	CTT51110CA	12	1	None	None	G3	S1.2	null	null	Bog & fen, Wetland
Spirinchus thaleichthys	longfin smelt	Fish	AFCHB03010	46	5	Candidate	Threatened	G5	S1	null	null	Aquatic, Estuary
Sulcaria spiralifera	twisted horsehair lichen	Lichens	NLT0042560	18	6	None	None	G3G4	S2	1B.2	BLM_S-Sensitive	Coastal dunes, North coast coniferous forest
Thaleichthys pacificus	eulachon	Fish	AFCHB04010	10	2	Threatened	None	G5	S2	null	null	Aquatic, Klamath/North coast flowing waters
Trichodon cylindricus	cylindrical trichodon	Bryophytes	NBMUS7N020	14	2	None	None	G4G5	S2	2B.2	null	Broadleaved upland forest, Meadow & seep, Upper montane coniferous forest
Usnea longissima	Methuselah's beard lichen	Lichens	NLLEC5P420	206	2	None	None	G4	S4	4.2	BLM_S-Sensitive	Broadleaved upland forest, North coast coniferous forest, Oldgrowth, Redwood
Viola palustris	alpine marsh violet	Dicots	PDVIO041G0	10	3	None	None	G5	S1S2	2B.2	null	Bog & fen, Coastal scrub, Wetland