

# ***Bradley (Ringer) Cachagua Creek Fish Passage Project (Project ID:127774) 2022***

## **Introduction:**

The Resource Conservation District of Monterey County (RCDMC) will implement the Bradley (Ringer) Cachagua Creek Fish Passage project (Project) with the purpose of providing fish passage, enhancing sediment transport, improving flood conveyance, and also providing and maintaining safe vehicle access to two private residences.

The Project entails removing the existing stream crossing (concrete slab, 13-foot wide by 90-foot long with a three-foot drop from the driving surface to the downstream channel bed) and replace it with a free-span, low-deck concrete bridge located in the existing crossing alignment in accordance with CDFW design standards, developed through FRGP Project #Q1940407. The new crossing will consist of a 37-foot-long precast concrete voided slab bridge founded on cast-in-place concrete footings. The bridge deck is set approximately 20 inches above the lowest point on the deck of the existing ford, with a low chord (soffit) elevation that leaves approximately 4.5 feet of clearance from the low chord to the finished grade of the design channel bed. The deck consists of four 36-inch-wide precast voided-slab concrete girders topped by a 4.5-inch slab to provide a 12-foot clear driving lane. The deck height was established by balancing the need to pass smaller floods and fish passage flows under the structure while minimizing the risk of debris loading during large flood events. The proposed bridge allows the full range of design fish passage flows to pass beneath the structures. The low flow channel geometry is informed by adjacent reaches in both cross section and profile slope. This will promote sediment transport continuity throughout the site and mimic hydraulic conditions upstream and downstream of the project site.

The Cachagua Creek watershed, currently utilized by steelhead, contains four known concrete automobile fords (of which this site is one) that affect fish migration at most flow levels. The most downstream ford-barrier on Cachagua Creek has been removed with partial funding received from FRGP. The next barrier upstream from that is this the second highest priority barrier, which has been selected for funding by FRGP and will begin construction in summer 2023. Another automobile ford impacting the Cachagua Creek watershed, along Finch Creek, has completed design and will be issued a Habitat Restoration and Enhancement Act approval by CDFW. The Bradley (Ringer) Ford (this Project) would remedy an existing concrete ford that is identified as the third highest priority fish passage barrier in the Carmel River system, and with its removal, all known barriers in the Cachagua Creek watershed will have been removed. This Project will make 8.1 miles of upstream spawning and rearing habitat accessible for adult and juvenile steelhead trout.

After review with CDFW engineering, fisheries personnel, and the landowner, the preferred alternative of the low-flow, free-span bridge was selected. The proposed design approach follows Stream Simulation design methodology in *California Salmonid Stream Habitat Restoration Manual* Volume 1, Section IX (<https://www.wildlife.ca.gov/Grants/FRGP/Guidance>) to provide fish passage hydraulics matching conditions observed upstream and downstream at reaches outside the influence of the crossing. Following sale of the Project parcel, this ford has been renamed the Bradley (Ringer) Ford to provide consistency between old and new documents related to the project.

The Grantee shall not proceed with on the ground implementation until all necessary permits, consultations, and/or Notice to Proceed are secured. All habitat improvement(s) will follow techniques in the *California Salmonid Stream Habitat Restoration Manual* Volume II Section X11. Fish Passage Design and Implementation (<https://www.wildlife.ca.gov/Grants/FRGP/Guidance>)

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

### **Objective(s):**

The Project will remove an existing concrete ford which is a migration barrier to fish passage and replace it with a free-span, low deck bridge that will allow the full range of design fish passage flows for juvenile and adult steelhead to pass beneath the structure while satisfying the access needs of the landowner(s). A secondary objective of the project is to continue progress in the enhancement of the Carmel River system and further demonstrate to Cachagua Creek residents that solutions are available that benefit both fish and the landowner without causing undue stress, expense, or regulatory enforcement.

### **Project Description:**

#### **Location:**

Project site is located on Cachagua Creek, tributary to the Carmel River in Monterey County, in unincorporated Carmel Valley. Project area is approximately 2.7 river miles upstream of the confluence of Cachagua Creek and the main-stem of the Carmel River, the confluence being approximately 1.5 miles downstream of Los Padres Dam on the Carmel River.

Access to the site is from an existing 2-lane county-maintained road, Cachagua

Creek Road. The concrete ford serves as the automobile access from the county road, across the creek, and to existing rural residential homes. Project coordinates are Latitude 36.39408, Longitude -121.61330.

## **Project Set Up:**

The RCDMC will be the Project Manager, Permit Wrangler, Biological Monitor and Grant Administrator. RCDMC will hire and oversee engineering, ecological and construction subcontractors, as well as coordinate grant reporting, invoicing and communications between landowner, CDFW and subcontractors. RCDMC Executive Director will provide grant oversight, contracts management and track labor compliance under all tasks. RCDMC Environmental Scientist will act as Project Manager under all tasks; they will manage project reporting and budgeting, oversee photomonitoring, conduct weekly site checks throughout the construction process, maintain communication with subcontractors and landowners, and lead environmental permitting, compliance, and reporting. RCDMC Program Coordinator will support Barker with photomonitoring and site checks under Tasks 2, 3 & 4. A Forest Health Coordinator will conduct any needed botanical surveys under Tasks 2 & 4. RCDMC Finance Manager will manage project invoicing and expenses under Task 1.

Waterways Consulting Inc. (and their subcontractor team of Streeter Group and CMAG), registered civil engineers, structural and geotechnical engineers (the Project Design Team) will be sub-contracted to support project permitting, prepare final design revisions, and perform construction phase engineering services during Project implementation (Tasks 2, 3 & 4). Waterways Consulting Inc. will lead the Project Design Team coordinating efforts of the other subconsultants and will engage with RCDMC and the Grant Manager under Task 1. Tasks to be performed by the Project Design Team include the following: Provide technical support to permitting efforts (Task 2: Waterways Consulting Inc, Streeter and CMAG); Develop final bid documents (plans, specifications, and cost estimates) based on agency and contractor review and input of the 100% Project designs and specifications (Task 2: Waterways Consulting Inc with Streeter and CMAG); Provide bid-support services including attendance of a pre-bid meeting, response to Request for Information and issuance of addenda (Task 2: Waterways Consulting Inc.); Provide construction observation during implementation (Task 3: Waterways Consulting Inc., Streeter and CMAG); Perform record survey and prepare final engineering approval letters (Task 3: Waterways Consulting Inc., Streeter, CMAG); Perform passage flow testing post-construction (Task 4: Waterways Consulting Inc.).

Alnus Ecological will conduct and oversee biological services associated with pre-construction and construction periods specifically regarding worker training, preconstruction surveys, potential dewatering and fish relocation, and will be available on an as-needed basis to provide biological oversight. This service will be provided under Tasks 2 and 3.

A Cultural Resources Consultant (to be selected based on RCDMC procurement policies and practices) will be contracted to conduct Cultural Resources (Archeological and Historical) surveys and Tribal consultation consistent with CEQA under Task 2..

A Trout Unlimited (TU) representative will be contracted to assist in permitting, coordination with landowner and contractors, and outreach, under Tasks 2 and 3..

Construction Contractor (to be selected through bid process), a qualified contractor with experience working on stream and stream restoration projects, will be selected in accordance the RCDMC Procurement Policy and contracted for all construction related items within Task 3 including removal of the existing ford, construction of the bridge and abutments, installation of rock slope protection, channel regrading, approach road drainage improvement, and selected willow transplanting.

A Tribal Monitor, requested by the Esselen Tribe of Monterey County, is to be present during excavation and fill activities of this Project to confirm the protection of potentially-exposed items of cultural significance under Task 3.

#### **Materials:**

Materials for bridge construction, grading, drainage, and bank protection will be purchased and installed by the construction contractor (to be selected by bid process after grant award). Those materials are specified in the engineer's estimated budget and include:

1. Cast-in-place concrete used for bridge deck (approximately 37-foot x13.33-foot), abutment, wingwalls, and foundation;
2. Prefabricated from reinforced concrete bridge girders;
3. Imported quarried rock slope protection used for channel armoring near abutments;
4. Imported baserock and asphalt concrete pavement to pave road approaches

Streambed materials are currently anticipated to be entirely sourced from on-site native material. Plantings (willow transplants and canes) will be salvaged or sourced on site, with the exception of seed mix and mulch, to be purchased by the construction contractor.

#### **Tasks:**

##### **Task 2: Project Pre-Construction Activities and Surveys**

RCDMC, Waterways Consulting Inc. Streeter Group, CMAG, Alnus Ecological, TU and Cultural Resources Contractor (to be selected) will engage in Project preparations to ensure that all necessary permits, surveys, and consultations are in place; to provide any plan modifications needed in response to those consultations; to solicit, contract, and schedule construction contractor; and to prepare the site and photo points for start of Construction work. RCDMC and subcontractors will engage in subtasks as follows:

**Task 2.1. Permit Acquisition**

RCDMC will secure all necessary permits not provided by FRGP, including CDFW 1600 Lake and Streambed Alteration Agreement (LSAA) and any county or local permits. Alnus Ecological will be responsible for holding any other permit or authorization required for capturing and handling steelhead and California red-legged frogs; Waterways Consulting Inc. and Streeter Group will provide permit review consultation with CDFW, and the County of Monterey as needed and make and provide any associated modifications to Project Plans. A copy of all permits and resolution obtained for the project will be submitted to the Grant Manager prior to the commencement of construction.

**Task 2.2. Submission of Plans and Work Schedule**

Waterways Consulting Inc. will provide and RCDMC will submit a hard and electronic copy of Final Engineered Plans and specifications for the Project within two (2) weeks after execution of the grant, to CDFW. Any subsequent modifications of plans associated with Task 2.1 permit acquisition will be communicated to the CDFW by RCDMC, and Waterways Consulting Inc. will provide and RCDMC will submit them to the CDFW Grant Manager once signed off by CDFW and the County of Monterey permitting departments.

### **Task 2.3. Resource Surveys**

Alnus Ecological will conduct pre-construction surveys following US Fish and Wildlife guidance protocol (2005). Surveys will be conducted by a qualified biologist (one holding appropriate permits) at least two weeks before the onset of construction activities. If needed, Alnus Ecological will move California red-legged frog and steelhead trout from the construction area and relocate them to appropriate habitat. In addition, monitoring of the channel will be conducted by a qualified biologist, permitted to handle the species, during the installation of coffer dams (or other dewatering structures) and during construction.

### **Task 2.4. Cultural Resources Survey**

A Cultural Resources Contractor (to be selected) will conduct the necessary Cultural Resources Surveys (including archaeological and historical surveys) and deliver a Tribal consultation report consistent with the requirements of CEQA for the subject site.

### **Task 2.5. Secure Construction Contractor:**

RCDMC and Waterways Consulting Inc. will develop a contractor bid package and conduct a solicitation of formal bids in accordance with RCDMC Procurement Policy. Solicitation will be timed to procure a contractor in a timely manner for project implementation and will involve a site meeting, response to questions, and public notification of award. RCDMC will work with the selected contractor to develop the contract and provide a copy of the executed agreement to the CDFW Grant Manager.

### **Task 2.6. Photo Points Establishment**

RCDMC Project Manager will establish photo points in consultation with TU, Waterways Consulting Inc. and the landowner for use throughout the Project to document work site conditions.

### **Task 3: Construction**

All construction will be done according to the accepted Project specifications and accepted Final Engineering Plans.

A local tribal Monitor will observe excavation and fill activities to confirm protection of potentially-exposed items of cultural significance

#### **Task 3.1. Construction Period Communication**

RCDMC will hold a pre-construction meeting with the Grant Manager, Grantor Engineer, and subcontractor representatives to establish roles and responsibilities and set expectations for record-keeping, scheduling, monitoring, safety, sensitive species, and invasive species protocols.

RCDMC will notify the Grant Manager a minimum of two weeks prior to the start of construction to enable the Grant Manager to begin monitoring of the project. Once each week during construction, RCDMC shall electronically submit to the Grant Manager and the Grantor Engineer a construction progress report and required photos.

### **Task 3.2. Dewatering and Rewatering**

It is expected that the stream will be dry during construction which will eliminate the need for fish relocation. However, if dewatering is necessary due to unanticipated rainfall events, Waterways Consulting Inc. and Alnus Ecological will oversee dewatering and any fish or other wildlife rescue needed pre- or during-construction. All materials used for dewatering shall be removed and disposed of appropriately off site at the completion of the project. Any materials used for rewatering will be removed after construction is complete.

A dewatering plan shall be provided at least one month before the commencement to dewatering, to the Grant Manager for review and acceptance.

### **Task 3.3. Project Construction**

Project Construction to be undertaken by construction contractor includes the following:

- a. Staging and Mobilization: Conduct site preparation surveys to inform on-site operations for the safe movement of personnel, equipment, supplies, and incidentals to the work site; for the establishment of all offices and other facilities necessary for work on the project; and for all other work and operation which must be performed to complete tasks;
- b. Clearing and grubbing of vegetation and removal of debris from the construction site. All material removed shall be disposed of in accordance with all local regulations;
- c. Vegetation located beyond the limits for clearing and grubbing shall be protected from damage. Willows identified in the Engineered Plans for relocation will be removed and stored for post project transplanting per Engineered Plans;
- d. Demolish existing culvert/road crossing. Demolition will be done in accordance with all local regulations;
- e. The foundations, abutments, and wingwalls will be poured on site.
- f. The girders will be precast and placed onto the cured abutments with a crane or similar equipment. Following placement of the girders, a concrete slab would be poured in place to lock the girders together and provide a wearing surface;
- g. Channel excavation most likely to be performed using an excavator and loader. A grizzly will be used to sort excavated native materials into segregated piles for reuse as stream simulation material to be placed on the finished surface of the graded channel;
- h. Temporary pedestrian access will be provided by the existing pedestrian bridge. Vehicular access for residents will be infeasible during most portions of the work;
- i. Concentrated road drainage from upslope areas will be collected into a concrete drop inlet and conveyed via HDPE pipe to outlet on to rock slope protection;

- j. Channel to be restored and rock slope protection to stabilize the banks at abutment and provide scour protection for newly installed bridge and
- k. Willows to be transplanted per plans.

#### **Task 3.4. Engineering Oversight**

Waterways Consulting Inc. and subcontractors will provide engineering oversight of the Project to assure proper completion and will develop and submit the As-Built Plans and Longitudinal Profile as well as final engineer's approval letters.

#### **Task 3.5 Permit Compliance**

RCDMC and Alnus Ecological will document compliance with all environmental permits and RCDMC will confirm Labor Compliance per the Department of Industrial Relations requirements.

#### **Task 4: Post Construction Riparian Restoration and Monitoring**

Post Construction activities will include additional revegetation by RCDMC personnel and residents, post-project monitoring of site stability and revegetation through winter and the following summer, and related permit reporting documenting compliance and outcomes.

#### **Deliverables:**

##### Project Pre-Construction Activities and Surveys

1. Copies of all permits secured by the Grantee
2. Final construction plans, specifications, and cost estimate
3. Final Work Schedule
4. Fish and California red-legged frog surveys reports
5. Cultural Resources Survey Report
6. Copy of Executed Construction Contract
7. Pre-project photo documentation

## Construction

1. Weekly construction reports and photo documentation
2. De-Watering Plan (if used) prior to implementation; documentation of dewatering and any associated fish or wildlife relocation
3. Bridge, bank protection, channel grading and approaching road drainage installed per Engineered Plans
4. As-built plans, Longitudinal Profile, and final engineers' approval letters
5. Site visit reports and documented confirmation of permit compliance and cultural resource protection

## Post Construction Riparian Restoration and Monitoring

1. Photo documentation of revegetation
2. Photo monitoring imagery, site visit summaries, records of fish passage flow test

### **Timelines:**

pre-construction surveys such as Cultural Resources surveys are from August 1, 2023, to July 31, 2024. Construction will be from August 1, 2024, to December 15, 2024. Post construction and riparian monitoring is from November 1, 2024, to August 31, 2025

### **Additional Requirements:**

The Grantee will not proceed with on the ground implementation until all necessary permits and consultations are secured. Work in flowing streams is restricted per the United States Army Corp of Engineers (USACE) Regional General Permit. Actual Project start and end dates, within this timeframe, are at the discretion of the 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. 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 bridge (culvert) design and installation will meet flow carrying capacity determined by National Oceanic and Atmospheric Administration (NOAA) Fisheries and the CDFW, for adult and juvenile salmonid fish passage. The project will follow the National Marine Fisheries Service (NMFS 2001) Guidelines for Salmonid Passage at Stream Crossings and criteria for fish passage as described in Volume II, Part IX, of the *California Salmonid Stream Habitat Restoration Manual*. The engineered plans for the bridge (culvert) installation shall be visually reviewed and authorized by NOAA Fisheries or CDFW engineers prior to commencement of work.

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. The Permittee/landowner will maintain the new crossing, inspect the crossing in a timely manner and remove debris as necessary during the storm season.



CALIFORNIA DEPARTMENT OF  
**FISH and WILDLIFE RareFind**

**Query Summary:**

Quad **IS** (Rana Creek (3612145) **OR** Carmel Valley (3612146) **OR** Palo Escrito Peak (3612144) **OR** Spreckels (3612156) **OR** Chualar (3612155) **OR** Gonzales (3612154) **OR** Ventana Cones (3612136) **OR** Chews Ridge (3612135) **OR** Sycamore Flat (3612134))

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**CNDDB Element Query Results**

Scientific Name	Common Name	Taxonomic Group	Element Code	Total Occs	Returned Occs	Federal Status	State Status	Global Rank	State Rank	CA Rare Plant Rank	Other Status	Habitats
Abies bracteata	bristlecone fir	Gymnosperms	PGPIN01030	80	23	None	None	G2G3	S2S3	1B.3	IUCN_NT-Near Threatened, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, USFS_S-Sensitive	Broadleaved upland forest, Chaparral, Lower montane coniferous forest, Oldgrowth, Riparian woodland, Ultramafic
Agelaius tricolor	tricolored blackbird	Birds	ABPBXB0020	955	3	None	Threatened	G1G2	S1S2	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_EN-Endangered, NABCI_RWL-Red Watch List, USFWS_BCC-Birds of Conservation Concern	Freshwater marsh, Marsh & swamp, Wetland
Ambystoma californiense pop. 1	California tiger salamander - central California DPS	Amphibians	AAAAA01181	1265	30	Threatened	Threatened	G2G3T3	S3	null	CDFW_WL-Watch List, IUCN_VU-Vulnerable	Cismontane woodland, Meadow & seep, Riparian woodland, Valley & foothill grassland, Vernal pool, Wetland
Anniella pulchra	Northern California legless lizard	Reptiles	ARACC01020	383	4	None	None	G3	S3	null	CDFW_SSC-Species of Special Concern, USFS_S-Sensitive	Chaparral, Coastal dunes, Coastal scrub
Arctostaphylos hookeri ssp. hookeri	Hooker's manzanita	Dicots	PDERI040J1	24	1	None	None	G3T2	S2	1B.2	BLM_S-Sensitive	Chaparral, Cismontane woodland, Closed-cone coniferous forest, Coastal scrub
Arctostaphylos montereyensis	Toro manzanita	Dicots	PDERI040R0	18	9	None	None	G2?	S2?	1B.2	BLM_S-Sensitive, SB_SBBG-Santa Barbara Botanic Garden	Chaparral, Cismontane woodland, Coastal scrub
Arctostaphylos pumila	sandmat manzanita	Dicots	PDERI04180	17	1	None	None	G1	S1	1B.2	BLM_S-Sensitive, SB_SBBG-Santa Barbara Botanic Garden	Chaparral, Cismontane woodland, Closed-cone coniferous forest, Coastal dunes, Coastal scrub
Athene cunicularia	burrowing owl	Birds	ABNSB10010	2011	2	None	None	G4	S3	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern, USFWS_BCC-Birds of Conservation Concern	Coastal prairie, Coastal scrub, Great Basin grassland, Great Basin scrub, Mojavean desert scrub, Sonoran desert scrub, Valley & foothill grassland
Bombus caliginosus	obscure bumble bee	Insects	IIHYM24380	181	1	None	None	G2G3	S1S2	null	IUCN_VU-Vulnerable	null
Bombus occidentalis	western bumble bee	Insects	IIHYM24250	306	1	None	None	G2G3	S1	null	USFS_S-Sensitive	null
Buteo swainsoni	Swainson's hawk	Birds	ABNKC19070	2548	1	None	Threatened	G5	S3	null	BLM_S-Sensitive, IUCN_LC-Least Concern	Great Basin grassland, Riparian forest,

												Riparian woodland, Valley & foothill grassland
<i>Calyptidium parryi</i> var. <i>hesseae</i>	Santa Cruz Mountains pussypaws	Dicots	PDPOR09052	12	1	None	None	G3G4T2	S2	1B.1	BLM_S-Sensitive	Chaparral, Cismontane woodland
<i>Carlquistia muirii</i>	Muir's tarplant	Dicots	PDASTDU010	21	1	None	None	G2	S2	1B.3	BLM_S-Sensitive, USFS_S-Sensitive	Chaparral, Lower montane coniferous forest, Upper montane coniferous forest
<i>Caulanthus lemmonii</i>	Lemmon's jewelflower	Dicots	PDBRA0M0E0	91	1	None	None	G3	S3	1B.2	BLM_S-Sensitive, SB_SBBG-Santa Barbara Botanic Garden, USFS_S-Sensitive	Pinon & juniper woodlands, Valley & foothill grassland
Central Maritime Chaparral	Central Maritime Chaparral	Scrub	CTT37C20CA	19	1	None	None	G2	S2.2	null	null	Chaparral
<i>Centromadia parryi</i> ssp. <i>congdonii</i>	Congdon's tarplant	Dicots	PDAST4R0P1	98	17	None	None	G3T2	S2	1B.1	BLM_S-Sensitive, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Valley & foothill grassland
<i>Chorizanthe pungens</i> var. <i>pungens</i>	Monterey spineflower	Dicots	PDPGN040M2	51	2	Threatened	None	G2T2	S2	1B.2	BLM_S-Sensitive, SB_SBBG-Santa Barbara Botanic Garden, SB_UCBG-UC Botanical Garden at Berkeley	Chaparral, Cismontane woodland, Coastal dunes, Valley & foothill grassland
<i>Clarkia jolonensis</i>	Jolon clarkia	Dicots	PDONA050L0	21	3	None	None	G2	S2	1B.2	SB_SBBG-Santa Barbara Botanic Garden, USFS_S-Sensitive	Chaparral, Cismontane woodland, Coastal scrub, Riparian woodland
<i>Cordylanthus rigidus</i> ssp. <i>littoralis</i>	seaside bird's-beak	Dicots	PDSCR0J0P2	40	2	None	Endangered	G5T2	S2	1B.1	BLM_S-Sensitive, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, SB_SBBG-Santa Barbara Botanic Garden	Chaparral, Cismontane woodland, Closed-cone coniferous forest, Coastal dunes, Coastal scrub
<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	Mammals	AMACC08010	635	1	None	None	G4	S2	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern, USFS_S-Sensitive, WBWG_H-High Priority	Broadleaved upland forest, Chaparral, Chenopod scrub, Great Basin grassland, Great Basin scrub, Joshua tree woodland, Lower montane coniferous forest, Meadow & seep, Mojavean desert scrub, Riparian forest, Riparian woodland, Sonoran desert scrub, Sonoran thorn woodland, Upper montane coniferous forest, Valley & foothill grassland
<i>Delphinium hutchinsoniae</i>	Hutchinson's larkspur	Dicots	PDRAN0B0V0	27	1	None	None	G2	S2	1B.2	USFS_S-Sensitive	Broadleaved upland forest, Chaparral, Coastal prairie, Coastal scrub
<i>Delphinium umbracolorum</i>	umbrella larkspur	Dicots	PDRAN0B1W0	95	2	None	None	G3	S3	1B.3	BLM_S-Sensitive, USFS_S-Sensitive	Chaparral, Cismontane woodland
<i>Emys marmorata</i>	western pond turtle	Reptiles	ARAAD02030	1404	9	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
<i>Ericameria fasciculata</i>	Eastwood's goldenbush	Dicots	PDAST3L080	23	3	None	None	G2	S2	1B.1	BLM_S-Sensitive, SB_UCSC-UC Santa Cruz	Chaparral, Closed-cone coniferous forest, Coastal dunes, Coastal scrub
<i>Eriogonum nortonii</i>	Pinnacles buckwheat	Dicots	PDPGN08470	36	5	None	None	G2	S2	1B.3	BLM_S-Sensitive	Chaparral, Valley & foothill grassland
<i>Eumops perotis californicus</i>	western mastiff bat	Mammals	AMACD02011	296	1	None	None	G4G5T4	S3S4	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, WBWG_H-High Priority	Chaparral, Cismontane woodland, Coastal scrub, Valley & foothill grassland
<i>Euphilotes enoptes smithi</i>	Smith's blue butterfly	Insects	IILEPG2026	68	1	Endangered	None	G5T1T2	S1	null	null	Coastal dunes, Coastal scrub
<i>Euphydryas editha bayensis</i>	Bay checkerspot butterfly	Insects	IILEPK4055	30	1	Threatened	None	G5T1	S1	null	null	Coastal dunes, Ultramafic, Valley & foothill grassland
<i>Falco mexicanus</i>	prairie falcon	Birds	ABNKD06090	451	3	None	None	G5	S4	null	CDFW_WL-Watch List, IUCN_LC-Least Concern	Great Basin grassland, Great Basin scrub, Mojavean desert scrub, Sonoran desert scrub, Valley & foothill grassland
<i>Fritillaria falcata</i>	talus fritillary	Monocots	PMLIL0V070	16	2	None	None	G2	S2	1B.2	BLM_S-Sensitive, IUCN_EN-Endangered, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, SB_SBBG-Santa Barbara Botanic Garden, USFS_S-Sensitive	Chaparral, Cismontane woodland, Lower montane coniferous forest, Ultramafic
<i>Galium californicum ssp. luciense</i>	Cone Peak bedstraw	Dicots	PDRUB0N0E3	30	1	None	None	G5T3	S3	1B.3	USFS_S-Sensitive	Broadleaved upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest
<i>Galium clementis</i>	Santa Lucia bedstraw	Dicots	PDRUB0N0H0	15	5	None	None	G2	S2	1B.3	USFS_S-Sensitive	Lower montane coniferous forest, Ultramafic, Upper montane coniferous forest
<i>Gilia tenuiflora ssp. arenaria</i>	Monterey gilia	Dicots	PDPLM041P2	29	3	Endangered	Threatened	G3G4T2	S2	1B.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Chaparral, Cismontane woodland, Coastal dunes, Coastal scrub
<i>Horkelia cuneata var. sericea</i>	Kellogg's horkelia	Dicots	PDROS0W043	58	2	None	None	G4T1?	S1?	1B.1	SB_UCSC-UC Santa Cruz, USFS_S-Sensitive	Chaparral, Closed-cone coniferous forest, Coastal dunes, Coastal scrub
<i>Lasiurus blossevillii</i>	western red bat	Mammals	AMACC05060	128	1	None	None	G4	S3	null	CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern, WBWG_H-High Priority	Cismontane woodland, Lower montane coniferous forest, Riparian forest, Riparian woodland
<i>Lasiurus cinereus</i>	hoary bat	Mammals	AMACC05030	238	1	None	None	G3G4	S4	null	IUCN_LC-Least Concern, WBWG_M-Medium Priority	Broadleaved upland forest, Cismontane woodland, Lower montane coniferous forest, North

													coast coniferous forest
Lavinia exilicauda harengus	Monterey hitch	Fish	AFCJB19013	2	1	None	None	G4T3	S3	null	CDFW_SSC-Species of Special Concern	Aquatic, Klamath/North coast flowing waters, Klamath/North coast standing waters, Riparian forest	
Linderiella occidentalis	California linderiella	Crustaceans	ICBRA06010	508	4	None	None	G2G3	S2S3	null	IUCN_NT-Near Threatened	Vernal pool	
Malacothamnus aboriginum	Indian Valley bush-mallow	Dicots	PDMAL0Q020	63	1	None	None	G3	S3	1B.2	BLM_S-Sensitive, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, SB_SBBG-Santa Barbara Botanic Garden	Chaparral, Cismontane woodland	
Malacothamnus davidsonii	Davidson's bush-mallow	Dicots	PDMAL0Q040	78	1	None	None	G2	S2	1B.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Chaparral, Cismontane woodland, Coastal scrub, Riparian woodland	
Malacothamnus palmeri var. involucratum	Carmel Valley bush-mallow	Dicots	PDMAL0Q0B1	25	4	None	None	G3T2Q	S2	1B.2	BLM_S-Sensitive, USFS_S-Sensitive	Chaparral, Cismontane woodland, Coastal scrub, Ultramafic	
Malacothrix saxatilis var. arachnoidea	Carmel Valley malacothrix	Dicots	PDAST660C2	15	11	None	None	G5T2	S2	1B.2	USFS_S-Sensitive	Chaparral, Coastal scrub	
Meconella oregana	Oregon meconella	Dicots	PDPAP0G030	9	3	None	None	G2G3	S2	1B.1	null	Coastal prairie, Coastal scrub	
Neotoma macrotis luciana	Monterey dusky-footed woodrat	Mammals	AMAFF08083	8	1	None	None	G5T3	S3	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_DD-Data Deficient	Broadleaved upland forest, Chaparral	
Oncorhynchus mykiss irideus pop. 9	steelhead - south-central California coast DPS	Fish	AFCHA0209H	41	3	Threatened	None	G5T2Q	S2	null	AFS_TH-Threatened	Aquatic, Sacramento/San Joaquin flowing waters, South coast flowing waters	
Optioservus canus	Pinnacles optioservus riffle beetle	Insects	IICOL5E020	11	2	None	None	G2	S1	null	null	Aquatic	
Plagiobothrys uncinatus	hooked popcornflower	Dicots	PDBOR0V170	14	2	None	None	G2	S2	1B.2	USFS_S-Sensitive	Chaparral, Cismontane woodland, Valley & foothill grassland	
Rana boylei	foothill yellow-legged frog	Amphibians	AAABH01050	2478	6	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	
Rana draytonii	California red-legged frog	Amphibians	AAABH01022	1671	32	Threatened	None	G2G3	S2S3	null	CDFW_SSC-Species of Special Concern, IUCN_VU-Vulnerable	Aquatic, Artificial flowing waters, Artificial standing waters, Freshwater marsh, Marsh & swamp, Riparian forest, Riparian scrub, Riparian woodland, Sacramento/San Joaquin flowing waters, Sacramento/San Joaquin standing waters, South coast	

												flowing waters, South coast standing waters, Wetland
Rosa pinetorum	pine rose	Dicots	PDROS1J0W0	14	1	None	None	G2	S2	1B.2	null	Cismontane woodland, Closed-cone coniferous forest
Spea hammondii	western spadefoot	Amphibians	AAABF02020	1422	2	None	None	G2G3	S3	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_NT-Near Threatened	Cismontane woodland, Coastal scrub, Valley & foothill grassland, Vernal pool, Wetland
Stebbinsoseris decipiens	Santa Cruz microseris	Dicots	PDAST6E050	19	1	None	None	G2	S2	1B.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, SB_UCSC-UC Santa Cruz	Broadleaved upland forest, Chaparral, Closed-cone coniferous forest, Coastal prairie, Coastal scrub, Ultramafic, Valley & foothill grassland
Taricha torosa	Coast Range newt	Amphibians	AAAAF02032	88	2	None	None	G4	S4	null	CDFW_SSC-Species of Special Concern	null
Taxidea taxus	American badger	Mammals	AMAJF04010	594	7	None	None	G5	S3	null	CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern	Alkali marsh, Alkali playa, Alpine, Alpine dwarf scrub, Bog & fen, Brackish marsh, Broadleaved upland forest, Chaparral, Chenopod scrub, Cismontane woodland, Closed-cone coniferous forest, Coastal bluff scrub, Coastal dunes, Coastal prairie, Coastal scrub, Desert dunes, Desert wash, Freshwater marsh, Great Basin grassland, Great Basin scrub, Interior dunes, lone formation, Joshua tree woodland, Limestone, Lower montane coniferous forest, Marsh & swamp, Meadow & seep, Mojavean desert scrub, Montane dwarf scrub, North coast coniferous forest, Oldgrowth, Pavement plain, Redwood, Riparian forest, Riparian scrub, Riparian woodland, Salt marsh, Sonoran desert scrub, Sonoran thorn woodland, Ultramafic, Upper montane coniferous forest, Upper Sonoran scrub, Valley & foothill grassland
Thamnophis hammondii	two-striped gartersnake	Reptiles	ARADB36160	184	1	None	None	G4	S3S4	null	BLM_S-Sensitive, CDFW_SSC-	Marsh & swamp, Riparian scrub,

												Species of Special Concern, IUCN_LC-Least Concern, USFS_S-Sensitive	Riparian woodland, Wetland
Trifolium buckwestiorum	Santa Cruz clover	Dicots	PDFAB402W0	64	1	None	None	G2	S2	1B.1	BLM_S-Sensitive, SB_SBBG-Santa Barbara Botanic Garden, SB_UCSC-UC Santa Cruz, SB_USDA-US Dept of Agriculture	Broadleaved upland forest, Cismontane woodland, Coastal prairie	
Trifolium polyodon	Pacific Grove clover	Dicots	PDFAB402H0	21	3	None	Rare	G1	S1	1B.1	BLM_S-Sensitive, SB_USDA-US Dept of Agriculture	Closed-cone coniferous forest, Coastal prairie, Meadow & seep, Valley & foothill grassland, Wetland	
Valley Needlegrass Grassland	Valley Needlegrass Grassland	Herbaceous	CTT42110CA	45	4	None	None	G3	S3.1	null	null	Valley & foothill grassland	
Valley Oak Woodland	Valley Oak Woodland	Woodland	CTT71130CA	91	4	None	None	G3	S2.1	null	null	Cismontane woodland	