Introduction:

The Resource Conservation District of Monterey County (RCDMC) will implement the Weston-Champagne Cachagua Creek Fish Passage project (Project) with the purpose of providing fish passage and improving flood conveyance while also providing and maintaining safe vehicle access to two private residences. The Project entails removing the existing concrete culvert (18-foot wide by 50-foot long with a three-foot-wide by one-foot-deep notch covered by a steel plate) and replace it with a single span low-flow bridge located in the existing crossing alignment in accordance with CDFW design standards. The new crossing will consist of a 45-foot-long precast concrete voided slab bridge founded on cast-in-place concrete footings. The bridge deck is set approximately 14 inches above the lowest point on the deck of the existing ford, with a low chord (soffit) elevation that leaves approximately 3 feet of clearance from the low chord to the finished grade of the design channel bed. The deck is 12.75 feet wide, with 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 associated of debris loading during very large floods. 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. A single pool will be constructed at the downstream face of the crossing, replacing an existing pool just downstream of the ford.

The Project is designed to remedy an existing concrete ford barrier that is identified as the second highest priority fish passage barrier in the Carmel River system and will open an additional 8.3 miles of upstream spawning and rearing habitat for adult and juvenile steelhead trout. Although Cachagua Creek is currently utilized by steelhead, there are four known concrete automobile fords (of which this site is one) in the watershed area of anadromy that affect migration in most flows. The Assessment of Steelhead Passage Barriers in Portions of Four Tributaries to the Carmel River (MPWMD IRWM - Project 3 Final Project Report - July 2014) prepared by the Monterey Peninsula Water Management District (MPWMD Assessment) states that even though lower Cachagua Creek dries up most years, this tributary system is one of the most productive in the Carmel River watershed. Fish rescue efforts have captured over 6,000 young-ofthe-year steelhead in some years. The most downstream ford-barrier on Cachagua Creek will be replaced in summer 2021 with partial funding received from FRGP. The next barrier upstream from that is this second highest priority barrier.

In December 2020 after review with CDFW engineering and fisheries personnel and the landowner and landowner's neighbor, the preferred alternative of the lower-statured 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.

The Permitee 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)

Objective(s):

The Project will remove a ford which is a full barrier to fish passage and replace it with a free span bridge that will allow the full range of design fish passage flows for juvenile and adult steelhead to pass beneath the structures while satisfying the access needs of the landowner and his neighbors. 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 which work for the fish and work for 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 1.6 river miles upstream of the confluence of Cachagua Creek and the mainstem 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 Road. The concrete ford serves as the automobile access from the county road, across the creek, to existing rural residential homes. Project coordinates are Latitude 36.391714, Longitude -121.631107.

Project Set Up:

The RCDMC will be the Project Manager, Permit Coordinator, 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. Paul Robins, RCDMC Executive Director will provide grant oversight, contracts management and track labor compliance under all tasks. RCDMC Program Coordinator will act as Project Manager under all tasks and will manage project reporting and budgeting, oversee photomonitoring, conduct weekly site checks throughout the construction process, maintain communication with subcontractors and landowners, and lead Task 4 revegetation. RCDMC Environmental Scientist will lead environmental permitting, compliance and reporting under Tasks 2, 3 and 4. 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; 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.); Perform Record survey and prepare final engineering approval letters (Task 3: Waterways Consulting Inc.); Perform passage flow testing post-construction (Task 4: Waterways Consulting Inc.). The above tasks will be performed by Matt Weld, Brent Zacharia, and Carter Hayes from Waterways Consulting Inc. as well as Brad Streeter from Streeter Group and Adrian Garner from CMAG Engineering.

Alnus Ecological will conduct and oversee biological services associated with Pre-Construction and Construction periods specifically regarding potential dewatering and special status species surveys and relocation. Principal Jim Robins will lead this service with one other colleague under Tasks 2 and 3.

Weston-Champagne Cachagua Creek Fish Passage Project

Humboldt State University Cultural Resources Facility (CRF) will be contracted to conduct Cultural Resources (Archeological and Historical) surveys and Tribal consultation consistent with CEQA under Task 2.

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.

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 (45-foot x1 2.75-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 underlaid with 4-inch to 8-inch diameter quarried stone to pave road approaches and
- 5. 45 feet of High Density Polyethylene (HDPE) 18-inch diameter pipe with a precast concrete drop inlet for a storm drain to convey road runoff safely away from the bridge.

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 RCDMC.

Tasks:

Task 1: Project Management and Administration

The RCDMC will provide Project management and administrative services associated with performing and completing the work for this Project, including engaging Project subcontractors as needed for meetings, Project and team oversight of Project performance, preparing and submitting invoices and progress reports, preparing Annual Reports, developing and managing subcontracts, convening project meetings and communications as needed to keep Project on track and communications clear, coordinating with funders and partners, coordinating with landowners during the project, and disseminating

Project materials and results, submitting final landowner access agreement and preparing final reports.

Task 2: Project Pre-Construction Activities and Surveys

RCDMC, Waterways Consulting Inc. Streeter Group, CMAG, Alnus Ecological, and Humboldt State University CRF 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 redlegged 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 redlegged 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

Humboldt State University CRF will conduct the necessary Cultural Resources Surveys including the archaeological and historical surveys, and Tribal consultations 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 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.

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, the Permitee 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.

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 and include 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:

Task 1: Project Management and Administration

- 1. Invoices
- 2. Progress Reports
- 3. Annual Reports
- 4. Subcontractor Contracts
- 5. Copies of Project communications materials/links
- 6. Final Landowner Access Agreements
- 7. Draft Final Report, Final Report
- 8. Data generated because of this project

Task 2: Project Pre-Construction Activities and Surveys

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

Task 3: 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
- Site visit reports and documented confirmation of permit compliance

Task 4: Post Construction Riparian Restoration and Monitoring

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

Timelines:

Task 1: June 1, 2022, to September 30, 2024 Task 2: June 1, 2022, to December 1, 2023 Task 3: July 1, 2023, to December 31, 2023 Task 4: November 1, 2023, to August 31, 2024

Additional Requirements:

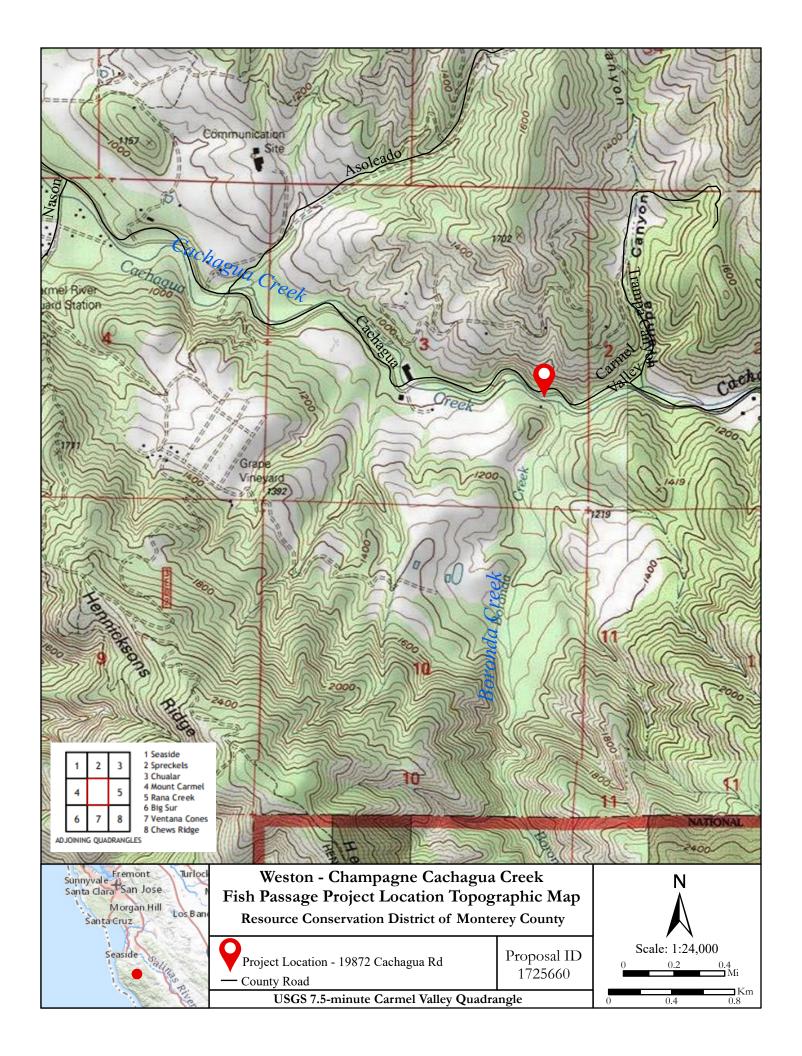
No equipment maintenance will be performed within or near the stream channel where pollutants (such as petroleum products) from the equipment may enter the channel via rainfall or runoff. Appropriate spill containment devices (e.g., oil absorbent pads, tarpaulins) will be used when refueling equipment. Any and all equipment will be removed from the streambed and flood plain areas at the end of each workday.

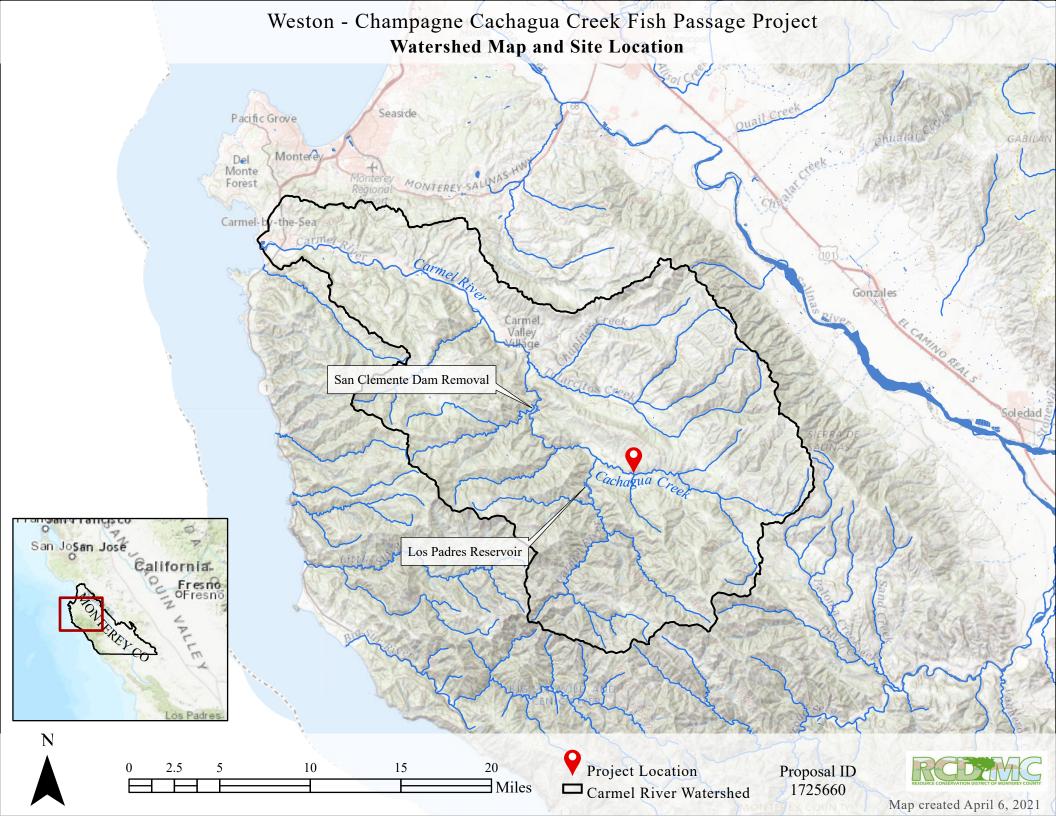
All equipment and gear will be brushed with a stiff brush prior to leaving each stretch of stream to avoid the transport of aquatic invasive species (AIS). All crew members will decontaminate equipment and shoes for AIS according to the standards detailed in the California Department of Fish & Wildlife 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 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 California Department of Fish and Wildlife 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 California Natural Diversity Database



Query Criteria:

Quad IS (Carmel Valley (3612146) OR Rana Creek (3612145) OR Rana Creek (3612136) OR Ventana Cones (3612136) OR Big Sur (3612137) OR Mt. Carmel (3612147) OR Seaside (3612157) OR Chualar (3612155))

Possible species within the Carmel Valley and surrounding quads for 1725660 - Weston-Champagne Cachagua Creek Fish Passage Project, Monterey County

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Abies bracteata	PGPIN01030	None	None	G2G3	S2S3	1B.3
bristlecone fir						
Agelaius tricolor	ABPBXB0020	None	Threatened	G1G2	S1S2	SSC
tricolored blackbird						
Agrostis blasdalei	PMPOA04060	None	None	G2	S2	1B.2
Blasdale's bent grass						
Allium hickmanii	PMLIL02140	None	None	G2	S2	1B.2
Hickman's onion						
Ambystoma californiense pop. 1	AAAAA01181	Threatened	Threatened	G2G3	S3	WL
California tiger salamander - central California DPS						
Anniella pulchra	ARACC01020	None	None	G3	S 3	SSC
Northern California legless lizard						
Arctostaphylos edmundsii	PDERI04260	None	None	G2	S2	1B.2
Little Sur manzanita						
Arctostaphylos hookeri ssp. hookeri	PDERI040J1	None	None	G3T2	S2	1B.2
Hooker's manzanita						
Arctostaphylos montereyensis	PDERI040R0	None	None	G2?	S2?	1B.2
Toro manzanita						
Arctostaphylos pajaroensis	PDERI04100	None	None	G1	S1	1B.1
Pajaro manzanita						
Arctostaphylos pumila	PDERI04180	None	None	G1	S1	1B.2
sandmat manzanita						
Athene cunicularia	ABNSB10010	None	None	G4	S3	SSC
burrowing owl						
Bombus caliginosus	IIHYM24380	None	None	G4?	S1S2	
obscure bumble bee						
Bombus occidentalis	IIHYM24250	None	Candidate	G2G3	S1	
western bumble bee			Endangered			
Buteo swainsoni	ABNKC19070	None	Threatened	G5	S3	
Swainson's hawk						
Calyptridium parryi var. hesseae	PDPOR09052	None	None	G3G4T2	S2	1B.1
Santa Cruz Mountains pussypaws						
Carex obispoensis	PMCYP039J0	None	None	G3?	S3?	1B.2
San Luis Obispo sedge						
Carlquistia muirii	PDASTDU010	None	None	G2	S2	1B.3
Muir's tarplant						



California Department of Fish and Wildlife California Natural Diversity Database



Out of the	F I	Full 16: :	0(-1, 0)		0(-1 5 :	Rare Plant Rank/CDFW
Species	Element Code	Federal Status	State Status	Global Rank	State Rank	SSC or FP
Central Maritime Chaparral	CTT37C20CA	None	None	G2	S2.2	
Central Maritime Chaparral	DD 4 07 4 D 0 D 4			007470	0.400	45.4
Centromadia parryi ssp. congdonii	PDAST4R0P1	None	None	G3T1T2	S1S2	1B.1
Congdon's tarplant				0.77	0.0	
Charadrius nivosus nivosus	ABNNB03031	Threatened	None	G3T3	S2	SSC
western snowy plover	DDD01104400			0.4	0.4	45.0
Chorizanthe minutiflora	PDPGN04100	None	None	G1	S1	1B.2
Fort Ord spineflower		Theresia	Nicos	0070	00	4D.0
Chorizanthe pungens var. pungens	PDPGN040M2	Threatened	None	G2T2	S2	1B.2
Monterey spineflower	DD 4 0T0E4 74	Mana	Nicos	000470	00	4D.0
Cirsium occidentale var. compactum	PDAST2E1Z1	None	None	G3G4T2	S2	1B.2
compact cobwebby thistle	DDONA 0501 0			00	00	45.0
Clarkia jolonensis	PDONA050L0	None	None	G2	S2	1B.2
Jolon clarkia	11001 44040	Mana	Nicos	0400	0400	
Coelus globosus globose dune beetle	IICOL4A010	None	None	G1G2	S1S2	
	DDCCDOLIODO	Nama	Nama	60	00	4D 0
Collinsia multicolor San Francisco collinsia	PDSCR0H0B0	None	None	G2	S2	1B.2
	DDCCD0 I0D0	Nama	Code a second	OFT2	00	4D 4
Cordylanthus rigidus ssp. littoralis seaside bird's-beak	PDSCR0J0P2	None	Endangered	G5T2	S2	1B.1
Corynorhinus townsendii	AMACC08010	None	None	G4	S2	SSC
Townsend's big-eared bat						
Cypseloides niger	ABNUA01010	None	None	G4	S2	SSC
black swift						
Dacryophyllum falcifolium	NBMUS8Z010	None	None	G2	S2	1B.3
tear drop moss						
Danaus plexippus pop. 1	IILEPP2012	Candidate	None	G4T2T3	S2S3	
monarch - California overwintering population						
Delphinium californicum ssp. interius	PDRAN0B0A2	None	None	G3T3	S3	1B.2
Hospital Canyon larkspur						
Delphinium hutchinsoniae	PDRAN0B0V0	None	None	G2	S2	1B.2
Hutchinson's larkspur						
Delphinium umbraculorum	PDRAN0B1W0	None	None	G3	S3	1B.3
umbrella larkspur						
Emys marmorata	ARAAD02030	None	None	G3G4	S3	SSC
western pond turtle						
Ericameria fasciculata	PDAST3L080	None	None	G2	S2	1B.1
Eastwood's goldenbush						
Eriogonum nortonii	PDPGN08470	None	None	G2	S2	1B.3
Pinnacles buckwheat						
Erysimum ammophilum	PDBRA16010	None	None	G2	S2	1B.2
sand-loving wallflower						



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
Euphilotes enoptes smithi	IILEPG2026	Endangered	None	G5T1T2	S1	
Smith's blue butterfly						
Euphydryas editha bayensis	IILEPK4055	Threatened	None	G5T1	S1	
Bay checkerspot butterfly						
Falco mexicanus	ABNKD06090	None	None	G5	S4	WL
prairie falcon						
Fritillaria falcata	PMLIL0V070	None	None	G2	S2	1B.2
talus fritillary						
Fritillaria liliacea	PMLIL0V0C0	None	None	G2	S2	1B.2
fragrant fritillary						
Galium californicum ssp. luciense	PDRUB0N0E3	None	None	G5T3	S3	1B.3
Cone Peak bedstraw						
Galium clementis	PDRUB0N0H0	None	None	G2	S2	1B.3
Santa Lucia bedstraw						
Gilia tenuiflora ssp. arenaria	PDPLM041P2	Endangered	Threatened	G3G4T2	S2	1B.2
Monterey gilia						
Horkelia cuneata var. sericea	PDROS0W043	None	None	G4T1?	S1?	1B.1
Kellogg's horkelia						
Lasiurus blossevillii	AMACC05060	None	None	G4	S3	SSC
western red bat						
Lasiurus cinereus	AMACC05030	None	None	G3G4	S4	
hoary bat						
Lasthenia conjugens Contra Costa goldfields	PDAST5L040	Endangered	None	G1	S1	1B.1
Lavinia exilicauda harengus	AFCJB19013	None	None	G4T2T4	S2S4	SSC
Monterey hitch						
Linderiella occidentalis	ICBRA06010	None	None	G2G3	S2S3	
California linderiella						
Malacothamnus palmeri var. involucratus	PDMAL0Q0B1	None	None	G3T2Q	S2	1B.2
Carmel Valley bush-mallow						
Malacothamnus palmeri var. lucianus	PDMAL0Q0B2	None	None	G3T1Q	S1	1B.2
Arroyo Seco bush-mallow						
Malacothrix saxatilis var. arachnoidea	PDAST660C2	None	None	G5T2	S2	1B.2
Carmel Valley malacothrix						
Meconella oregana	PDPAP0G030	None	None	G2G3	S2	1B.1
Oregon meconella						
Meta dolloff	ILARA17010	None	None	G1	S1	
Dolloff Cave spider						
Microseris paludosa	PDAST6E0D0	None	None	G2	S2	1B.2
marsh microseris						
Monardella sinuata ssp. nigrescens	PDLAM18162	None	None	G3T2	S2	1B.2
northern curly-leaved monardella						



California Department of Fish and Wildlife California Natural Diversity Database



Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
AMAFF08083	None	None	G5T3	S3	SSC
CARA2631CA	None	None	GNR	SNR	
AFCHA0209H	Threatened	None	G5T2Q	S2	
IICOL5E020	None	None	G2	S1	
PDSCR1K180	None	Rare	G2	S2	1B.2
ARACF12100	None	None	G3G4	S3S4	SSC
PGPIN040V0	None	None	G1	S1	1B.1
			_		
PMORC1X070	Endangered	None	G1	S1	1B.1
PDBOR0V170	None	None	G2	S2	1B.2
AAABH01050	None	Endangered	G3	\$3	SSC
A A A DI 104 000	Theresia	Mana	0000	0000	000
AAABHU1022	Inreatened	None	G2G3	5253	SSC
AMAFF02032	None	None	G5T1	S1	
PDROS1J0W0	None	None	G2	S2	1B.2
PDAPI1Z0D0	None	Rare	G2	S2	1B.1
PDMAL110E0	None	None	G3	S 3	4.2
			0-7-170	0.00	
AMABA01105	None	None	G5T1T2	S1S2	SSC
PDAST6E050	None	None	G2	S2	1B.2
AAAAF02032	None	None	G4	S4	SSC
AMAJF04010	None	None	G5	S3	SSC
			G4	S3S4	SSC
	CARA2631CA AFCHA0209H IICOL5E020 PDSCR1K180 ARACF12100 PGPIN040V0 PMORC1X070 PDBOR0V170 AAABH01050 AAABH01022 AMAFF02032 PDROS1J0W0 PDAPI1Z0D0 PDMAL110E0 AMABA01105 PDAST6E050 AAAAF02032	CTT83130CA None AMAFF08083 None CARA2631CA None AFCHA0209H Threatened IICOL5E020 None PDSCR1K180 None ARACF12100 None PGPIN040V0 None PMORC1X070 Endangered PDBOR0V170 None AAABH01050 None AAABH01022 Threatened AMAFF02032 None PDROS1J0W0 None PDAPI1Z0D0 None PDMAL110E0 None AMABA01105 None AMABA01105 None AMABA01105 None AMABA01105 None PDAST6E050 None AAAAF02032 None	CTT83130CA None None AMAFF08083 None None CARA2631CA None None AFCHA0209H Threatened None IICOL5E020 None None PDSCR1K180 None Rare ARACF12100 None None PGPIN040V0 None None PMORC1X070 Endangered None PDBOR0V170 None None AAABH01050 None Endangered AAABH01022 Threatened None AMAFF02032 None None PDROS1J0W0 None Rare PDMAL110E0 None None AMABA01105 None None AMABA01105 None None AMABA01105 None None AMABA01105 None None PDAST6E050 None None AAAAF02032 None None	CTT83130CA None None G1 AMAFF08083 None None G5T3 CARA2631CA None None GNR AFCHA0209H Threatened None G5T2Q IICOL5E020 None None G2 PDSCR1K180 None Rare G2 ARACF12100 None None G3G4 PGPIN040V0 None None G1 PMORC1X070 Endangered None G1 PDBOR0V170 None None G2 AAABH01050 None Endangered G3 AAABH01022 Threatened None G5T1 PDROS1J0W0 None None G2 PDAP11Z0D0 None None G3 AMABA01105 None None G5T1T2 PDAST6E050 None None G4	CTT83130CA None None G1 S1.1 AMAFF08083 None None G5T3 S3 CARA2631CA None None GNR SNR AFCHA0209H Threatened None G5T2Q S2 IICOL5E020 None None G2 S1 PDSCR1K180 None Rare G2 S2 ARACF12100 None None G3G4 S3S4 PGPIN040V0 None None G1 S1 PMORC1X070 Endangered None G1 S1 PDBOR0V170 None None G2 S2 AAABH01050 None Endangered G3 S3 AAABH01022 Threatened None G2G3 S2S3 AMAFF02032 None None G5T1 S1 PDROS1J0W0 None None G2 S2 PDAP11Z0D0 None None None G5T1T2 S1S2



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
Trifolium buckwestiorum	PDFAB402W0	None	None	G2	S2	1B.1
Santa Cruz clover						
Trifolium polyodon Pacific Grove clover	PDFAB402H0	None	Rare	G1	S1	1B.1
Valley Needlegrass Grassland Valley Needlegrass Grassland	CTT42110CA	None	None	G3	S3.1	

Record Count: 84