Circle G Ranch Fish Passage Restoration

Introduction:

Earth Island Institute's South Coast Habitat Restoration project will implement the Circle G Ranch Fish Passage Restoration project. The purpose of this project is to facilitate fish passage by addressing the last major barrier to Southern California steelhead, a federally endangered species, in the Carpinteria Creek Watershed, Santa Barbara County. The project will make upstream habitat accessible by steelhead from the ocean to the headwaters of Carpinteria Creek.

This project is necessary because over several decades Carpinteria Creek, which was once home to plentiful runs of steelhead trout, has been negatively impacted by many factors, including loss of native vegetation, an influx of highly aggressive exotic species, increased scouring of creek beds, barriers to upstream passage, etc.

Permit Disclosure: 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 will follow techniques in the California Stream Habitat Restoration Manual Volume I and Volume II.

Objective(s):

The objective of this project is to provide access to 1.27 miles of steelhead habitat up to a natural waterfall. The waterfall may be passable at certain flows, which would provide access to an additional 4.72 miles. Improved passage will be achieved by the removal of an undersized bridge, removal of all concrete from the stream channel, re-grading and construction of a new stream channel that provides fish passage through the site, vegetation of creek bank with native plantings, and construction of a new bridge and abutments.

Project Description:

Location:

The project site is located on the mainstem of Carpinteria Creek, 2.94 miles upstream of the Pacific Ocean and 0.7 miles upstream of the confluence of Gobernador with Carpinteria Creek. From the 101 Freeway, exit Casitas Pass, turn North away from the ocean; at the stop sign turn right onto Casitas Pass, drive about ¾ of a mile, and take a left onto Lillingston Canyon Road; continue up Lillingston Canyon Road about a half mile; driveway is on the left (marked by stone wall on either side of the driveway.

The project is located at Latitude 34.40853000, Longitude -119.48156600 of the White Ledge Peak 7.5 Minute U.S.G.S. Quadrangle, as depicted in the Project Location Map (Attachment 1).

Project Set Up:
The Grantee's South Coast Habitat Restoration (SCHR) Project Director will coordinate the project through securing necessary permits, hiring of all subcontractors, coordinating project related meetings and communication, compiling of project status reports, grant management, and oversight of project implementation. SCHR's Project Manager will be involved in the day-to-day construction management, implementation of the restoration plan, and maintenance and monitoring of the restoration site following construction. SCHR will also hire a local land-use planner to assist with securing local county permits. Project construction will be implemented by a licensed contractor with experience working on stream restoration projects. A Waterways Consulting (Waterways) engineer will be on site during construction activities to ensure the project is implemented according to the designs. All native vegetation will be collected locally from seed stock or cuttings from the Carpinteria Creek watershed or adjacent watersheds and grown by a local native plant nursery. The California Conservation Corps will be used to assist with site preparation including the installation of exclusionary fencing and grubbing/salvaging of tree stakes, the installation of erosion control materials, native plants, and an irrigation system. The project will be implemented during the dry season; but if flow is present at the project site at the time of implementation, sensitive species will be removed and excluded from the project site and stream flows will be captured and diverted downstream. A biological monitor will periodically check for sensitive species within the work area. Fish relocation activities will likely not be necessary as the project site is will most likely be dry at the time of construction. If flow is present, the applicant will contact the Grantor's Project Manager for assistance with capturing and relocating any fish in the project site.

Materials:
The project will utilize engineered stream bed material (gravel, cobble rock), concrete, prefabricated bridge, bridge railings, road base and asphalt, native plants, rootwads, erosion control fabric and logs.

Tasks:
1. Pre-Implementation
    - Finalize plan sets (65%) to bring to Construction-ready level (100%)
    - Acquire all necessary county and state permits
    - Set up photo monitoring sites
2. Implementation of Fish Passage Improvement
    - Removal of concrete stream channel to improve fish passage.
    - Removal of undersized bridge and concrete abutments.

- Removal and relocation of utility lines, both water and electrical. Hiring of a utility consultant to coordinate relocation activities with Southern California Edison may be necessary.

- Removal and re-grading of near vertical stacked rock stream bank walls to a ~2:1 slope.

- Construction of new bridge abutments and installation of an approximately 53-foot clear span bridge.

- Geotechnical and structural monitoring during abutment constructing and structural back filling.

- Re-grading of road approaches, paving and chip-sealing of driveway.

- Re-building of rock walls and stone pillars along the driveway.

- Restoration of approximately 325 feet of channel by grading to a stable profile grade and installing streambed material that matches the size and gradation of the surrounding channel material.

- On-site construction monitoring by Waterways staff to ensure project is implemented as designed.

- Installation of planted rock slope protection to stabilize the banks and provide protection for the newly installed structure.

- Installation of one large woody debris structure to create pool habitat within the project reach.

- Re-vegetation of approximately 7,000 square feet of banks within the riparian corridor will include installation of erosion control fabric and re-vegetation with native seeding and plants (~200 1 gal) and live stakes (100).

3. Conduct post-project Implementation monitoring and maintenance.
   - Maintenance and monitoring of restoration site for a period of 3-5 years, including irrigation set up, weed planted areas and re-plant, if necessary.

   - Monitor storm events to see if weirs, water diversion and log structures are functioning as designed. Consult Grantor Project Manager, National Marine Fisheries Service (NMFS) and Waterways if problems are noted.

   - Evaluate fish habitat improvement projects as described in the California

Salmonid Stream Habitat Restoration Manual.

4. Prior to the bid and construction company selection process, the Grantee will define the role of the Waterways Engineering staff during construction. All subcontractors bidding on the project should understand that the design engineer(s) will be given the authority to direct the selection and placement of all rock during that phase of the project. During the selection process, the Grantee should select the subcontractor with prior experience installing bridges and/or bottomless arched culverts and rock weirs or the most comparable construction experience with regards to building rock weirs since this component is critical to the success and durability of the project.

5. The Grantee will notify Waterways that they will be required to provide weekly QA/QC reports to the Grantor's engineer using the Grantor's QA/QC reporting template.

6. Develop as-built drawings of final project post-implementation including longitudinal surveys.

7. Prepare final report including monitoring photos and continue to supply on-going monitoring data to regulatory agencies as required by permits and grant agreements.

   All work done under this project will comply with the additional requirements noted below.

Deliverables:

Unless otherwise specified, submit all progress reports, invoices, compliance reports and draft and final reports to the Grantor Project Manager.

- Implementation plans (Dewatering, Erosion control, Fish removal, Maintenance and Monitoring and Re-vegetation).
- Weekly QA/QC reports.
- Monthly progress reports.
- Final report, including copies of: final designs, permits and photos of project pre-, during, and post-construction.
- Monitoring of re-vegetation effort after project completion along with project monitoring report.
- As-built design drawings and report
- Post project longitudinal survey.

Upon completion of the project, the Grantee shall provide a full set of final project design plans, signed as-built construction drawings, a final construction report, permits and project photos from pre, during and post construction. An electronic copy of all material will also be submitted. All project photographs will also be included (as jpeg files) on the CD. Additional deliverables include any public outreach materials (a newsletter and summary of a public meeting) and copies of annual performance evaluation reports of the structural stability and fish passage condition as well as the success of the re-vegetation efforts.

Timelines:

The bridge construction phase of this project is expected to take place from August 2015 – November 2015 with installation of native riparian plantings complete by February 2016. The following outlines the various phases that must be accomplished in order to successfully complete the project:

- June to September 2015 - Permits submission and completion
- Summer 2015 – Finalization and approval of 100% design approval
- August 15 to October 30, 2015 - pre-construction monitoring and bridge construction
- November 2015 – December 2015: re-vegetation of site;
- March 2016 - April 2019: post-construction monitoring and maintenance

Additional Requirements:

1. The Grantee will not proceed with on-the-ground implementation until all necessary permits and consultations are secured and they have received a notice to proceed from the Grantor's Project Manager. Work in flowing streams is restricted per the U.S. Army Corps of Engineers' Regional General Permit. Actual project start and end dates, within this timeframe, are at the discretion of the Grantor.

2. Since Grantor will provide permit coverage under its Army Corp of Engineers Regional General Permit, the applicant must submit to the Grantor's Project Manager the following five specific implementation documents: Dewatering, Erosion Control, Fish Removal, Maintenance and Monitoring and Re-vegetation plans. The plans will be reviewed and approved by Grantor's Project Manager and NMFS before construction can begin. Submittal of these plans will occur once the 100% design for the bridge and stream channel have been finalized and approved by Grantor and NMFS.

3. In instances where water is present in the work area, the Grantee shall notify the Grantor's Project Manager a minimum of **five (5) working days** before the project site is de-watered and the stream flow diverted. The notification

will provide a reasonable time for Grantor 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 Grantee will implement the following measures to minimize harm and mortality to listed salmonids:

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

- The Grantee shall minimize the amount of wetted stream channel dewatered at each individual project site to the fullest extent possible.

- All electrofishing shall be performed by a qualified fisheries biologist and conducted according to the National Marine Fisheries Service, Guidelines for Electrofishing Waters Containing Salmonids Listed under the Endangered Species Act, June 2000.

- The Grantee will provide fish relocation data to the Grantor's Project Manager on a form provided by the Grantor.

- 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.

4. The bridge (culvert) design and installation will meet flow carrying capacity required for a 100-year flood event, as identified by specifications determined by the National oceanic and Atmospheric Administration (NOAA) Fisheries and the Grantor, 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 XII, 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 Grantor's engineers prior to commencement of work.

5. Final structure design and placement will be determined by field consultation between the Grantee's and Grantor's Project Managers.

6. Any modification to the design that occurs during construction must be approved by the Grantee's design engineers and the Grantor's Engineer in writing prior to the change being implemented. The Grantor's Project Manager will also be notified by telephone. **Failure to do so will result in cancellation of the grant.**

7. All habitat improvements will follow techniques described in the California Salmonid Stream Habitat Restoration Manual, Volume I, Chapter VII, and Volume II, Chapter XII. The Grantee/landowner will maintain the new crossing, inspect the crossing in a timely manner and remove debris as necessary during the storm season.

Selected Elements by Common Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad is (White Ledge Peak (3411944) or Carpinteria (3411945) or Hildreth Peak (3411955) or Old Man Mountain (3411954) or Wheeler Springs (3411953) or Matilija (3411943) or Ventura (3411933) or Pitas Point (3411934))

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Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Abrams' oxytheca *Acanthoscyphus parishii var. abramsii*	PDPGN0J041	None	None	G4?T2	S2	1B.2
American badger *Taxidea taxus*	AMAJF04010	None	None	G5	S4	SSC
aphanisma *Aphanisma blitoides*	PDCHE02010	None	None	G3G4	S3	1B.2
arroyo chub *Gila orcuttii*	AFCJB13120	None	None	G2	S2	SSC
arroyo toad *Anaxyrus californicus*	AAABB01230	Endangered	None	G2G3	S2S3	SSC
Belding's savannah sparrow *Passerculus sandwichensis beldingi*	ABPBX99015	None	Endangered	G5T3	S3	
California condor *Gymnogyps californianus*	ABNKA03010	Endangered	Endangered	G1	S1	
California red-legged frog *Rana draytonii*	AAABH01022	Threatened	None	G2G3	S2S3	SSC
California satintail *Imperata brevifolia*	PMPOA3D020	None	None	G3	S3	2B.1
California Walnut Woodland *California Walnut Woodland*	CTT71210CA	None	None	G2	S2.1	
chaparral nolina *Nolina cismontana*	PMAGA080E0	None	None	G2	S2	1B.2
coast horned lizard *Phrynosoma blainvillii*	ARACF12100	None	None	G3G4	S3S4	SSC
Coast Range newt *Taricha torosa*	AAAAF02032	None	None	G4	S4	SSC
Coulter's goldfields *Lasthenia glabrata ssp. coulteri*	PDAST5L0A1	None	None	G4T2	S2	1B.1
Coulter's saltbush *Atriplex coulteri*	PDCHE040E0	None	None	G2	S2	1B.2
Davidson's saltscale *Atriplex serenana var. davidsonii*	PDCHE041T1	None	None	G5T1	S1	1B.2
Dulzura pocket mouse *Chaetodipus californicus femoralis*	AMAFD05021	None	None	G5T3	S2?	SSC
foothill yellow-legged frog *Rana boylii*	AAABH01050	None	None	G3	S2S3	SSC
globose dune beetle *Coelus globosus*	IICOL4A010	None	None	G1G2	S1S2	

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
hoary bat *Lasiurus cinereus*	AMACC05030	None	None	G5	S4?	
late-flowered mariposa-lily *Calochortus fimbriatus*	PMLIL0D1J2	None	None	G3	S3	1B.2
least Bell's vireo *Vireo bellii pusillus*	ABPBW01114	Endangered	Endangered	G5T2	S2	
light-footed clapper rail *Rallus longirostris levipes*	ABNME05014	Endangered	Endangered	G5T1T2	S1	FP
mesa horkelia *Horkelia cuneata var. puberula*	PDROS0W045	None	None	G4T1	S1	1B.1
Mexican long-tongued bat *Choeronycteris mexicana*	AMACB02010	None	None	G4	S1	SSC
Miles' milk-vetch *Astragalus didymocarpus var. milesianus*	PDFAB0F2X3	None	None	G5T2	S2	1B.2
monarch butterfly *Danaus plexippus*	IILEPP2010	None	None	G5	S3	
Nuttall's scrub oak *Quercus dumosa*	PDFAG050D0	None	None	G2	S2	1B.1
Ojai fritillary *Fritillaria ojaiensis*	PMLIL0V0N0	None	None	G2	S2	1B.2
Ojai navarretia *Navarretia ojaiensis*	PDPLM0C130	None	None	G1	S1	1B.1
Orcutt's pincushion *Chaenactis glabriuscula var. orcuttiana*	PDAST20095	None	None	G5T1	S1	1B.1
pale-yellow layia *Layia heterotricha*	PDAST5N070	None	None	G2	S2	1B.1
pallid bat *Antrozous pallidus*	AMACC10010	None	None	G5	S3	SSC
Palmer's mariposa-lily *Calochortus palmeri var. palmeri*	PMLIL0D122	None	None	G3T3?	S3?	1B.2
salt marsh bird's-beak *Chloropyron maritimum ssp. maritimum*	PDSCR0J0C2	Endangered	Endangered	G4?T1	S1	1B.2
Salt Spring checkerbloom *Sidalcea neomexicana*	PDMAL110J0	None	None	G4?	S2S3	2B.2
San Diego desert woodrat *Neotoma lepida intermedia*	AMAFF08041	None	None	G5T3?	S3?	SSC
sandy beach tiger beetle *Cicindela hirticollis gravida*	IICOL02101	None	None	G5T2	S1	
Sanford's arrowhead *Sagittaria sanfordii*	PMALI040Q0	None	None	G3	S3	1B.2
Santa Barbara honeysuckle *Lonicera subspicata var. subspicata*	PDCPR030R3	None	None	G5T2	S2	1B.2

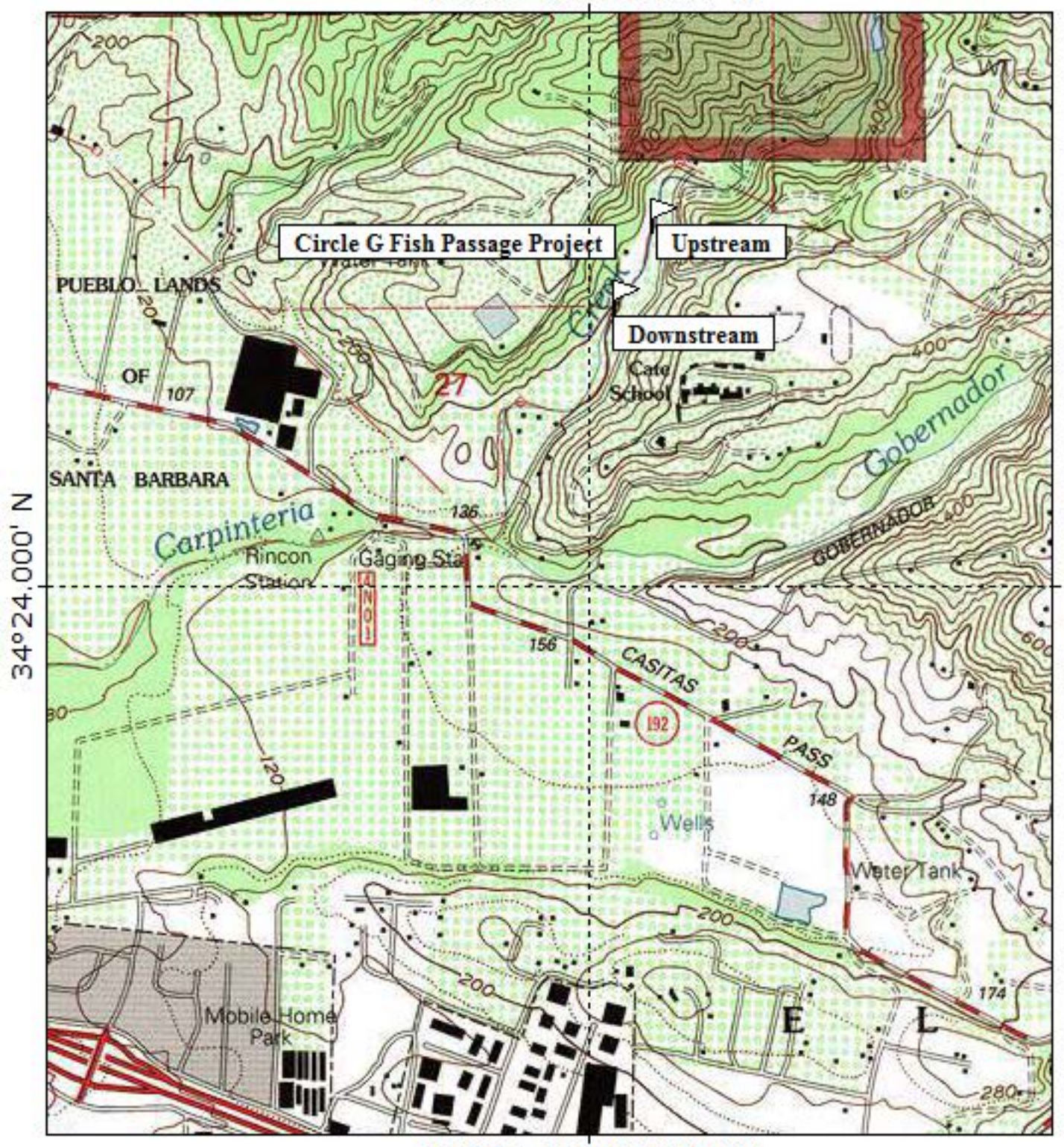
Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
silvery legless lizard *Anniella pulchra pulchra*	ARACC01012	None	None	G3G4T3T4Q	S3	SSC
Sonoran maiden fern *Thelypteris puberula var. sonorensis*	PPTHE05192	None	None	G5T3	S2.2?	2B.2
south coast saltscale *Atriplex pacifica*	PDCHE041C0	None	None	G3G4	S2	1B.2
Southern California Coastal Lagoon *Southern California Coastal Lagoon*	CALE1220CA	None	None	GNR	SNR	
Southern California Steelhead Stream *Southern California Steelhead Stream*	CARE2310CA	None	None	GNR	SNR	
Southern Coast Live Oak Riparian Forest *Southern Coast Live Oak Riparian Forest*	CTT61310CA	None	None	G4	S4	
Southern Coastal Salt Marsh *Southern Coastal Salt Marsh*	CTT52120CA	None	None	G2	S2.1	
southern jewelflower *Streptanthus campestris*	PDBRA2G0B0	None	None	G2	S2.3	1B.3
southern steelhead - southern California DPS *Oncorhynchus mykiss irideus*	AFCHA0209J	Endangered	None	G5T2Q	S2	SSC
Southern Sycamore Alder Riparian Woodland *Southern Sycamore Alder Riparian Woodland*	CTT62400CA	None	None	G4	S4	
southern tarplant *Centromadia parryi ssp. australis*	PDAST4R0P4	None	None	G3T2	S2	1B.1
southwestern willow flycatcher *Empidonax traillii extimus*	ABPAE33043	Endangered	Endangered	G5T1T2	S1	
tidewater goby *Eucyclogobius newberryi*	AFCQN04010	Endangered	None	G3	S2S3	SSC
Townsend's big-eared bat *Corynorhinus townsendii*	AMACC08010	None	Candidate Threatened	G3G4	S2S3	SSC
tricolored blackbird *Agelaius tricolor*	ABPBXB0020	None	None	G2G3	S1S2	SSC
two-striped garter snake *Thamnophis hammondii*	ARADB36160	None	None	G4	S3S4	SSC
umbrella larkspur *Delphinium umbraculorum*	PDRAN0B1W0	None	None	G3	S3	1B.3
Ventura Marsh milk-vetch *Astragalus pycnostachyus var. lanosissimus*	PDFAB0F7B1	Endangered	Endangered	G2T1	S1	1B.1
wandering (=saltmarsh) skipper *Panoquina errans*	IILEP84030	None	None	G4G5	S1	
western mastiff bat *Eumops perotis californicus*	AMACD02011	None	None	G5T4	S3?	SSC
western pond turtle *Emys marmorata*	ARAAD02030	None	None	G3G4	S3	SSC

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
western snowy plover	ABNNB03031	Threatened	None	G3T3	S2	SSC
Charadrius alexandrinus nivosus						
white-veined monardella	PDLAM180A3	None	None	G4T2T3	S2S3	1B.3
Monardella hypoleuca ssp. hypoleuca						

Record Count: 63

Circle G Fish Passage Project

WGS84 119°29.000' W



WGS84 119°29.000' W

TN 13½° MN

0 .5 1 MILE

0 1000 FEET 0 500 1000 METERS