

Pacific States Marine Fisheries Commission

FINAL REPORT

California Department of Fish and Game
Fisheries Restoration Grant Program

Grant # P0850015

Prepared by

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and

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Pacific States Marine Fisheries Commission

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Grantee Contact:

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INTRODUCTION

Since January 1980 the California Conservation Corps (CCC) has worked cooperatively with the California Department of Fish and Game (DFG) and the National Oceanic and Atmospheric Administration (NOAA) to complete stream restoration projects to benefit Pacific salmon and steelhead. After over 30 years, the partnership known as the Salmonid Restoration Program (SRP) is the largest and longest running project of its kind in the country and is recognized as a leader in the field of fisheries and watershed restoration. It has enabled the CCC and CDFG to build capacity for additional collaborative efforts and expand the CCC's fisheries restoration activities from California's remote North Coast south to Los Angeles County in Southern California.

Demand and need coupled with ever increasing complexity of administrative requirements, rapidly expanding geographic range, and intricate federal and state permitting processes have greatly increased the workload of SRP staff. In an effort to fill this critical workload need, DFG and CCC agreed in 1999 to jointly fund four Fish Habitat Assistants. Since that time they have strategically impacted the affected areas, resulting in many successful projects enhancing fish habitat and expanding the services of CCC to fill the growing demand. Because of the lack of staff within DFG and CCC as well as lack of expertise in stream and riparian restoration in southern California, Pacific States Marine Fisheries Commission (PSMFC) has stepped forward as a partner to provide much needed support as concerted restoration efforts have been very limited in this highly urbanized area. Southern California steelhead trout have been listed as a federally endangered species. There is a critical need to increase restoration efforts in the area while populations of steelhead persist.

Since 2004, the CCC Camarillo Center has been involved in developing and implementing restoration projects to benefit endangered southern California steelhead trout in Los Angeles, Ventura and Santa Barbara counties in conjunction with SRP. Land-use change in the majority of watersheds within the project area started as livestock ranching and dry-farming. Irrigated row crops and orchard crops followed. In Ventura and Santa Barbara counties, the majority of the upper watersheds are located within the Los Padres National Forest. Residential development, irrigated row crops and orchard crops occur throughout most of the coastal and middle portions of these watersheds. A number of watersheds throughout the Santa Monica Mountains fall within the Santa Monica National Recreation Area, and the seven state parks and beaches. Watersheds within this area are influenced mostly by residential development and public recreation areas. Urbanization such as dams, diversions, ground water extraction, culverts, road crossings, agriculture, channelized sections of stream and reduced estuary habitat have diminished steelhead habitat in Southern California.

While working closely with the DFG, NOAA, and other federal, state and local partners, the Camarillo Center has worked on fish passage barrier removal/modification, invasive species removal, stream-bank stabilization, bioengineering, fish habitat and barrier assessment, in-stream habitat improvement, livestock exclusionary fencing, native vegetation planting and more. Since July of 2010, a CCC Fisheries Special Corpsmember has been assisting the Fish

Habitat Specialist (FHS) at the Camarillo Center with funding awarded from FRGP. The FHS is co-mentor to 2 AmeriCorps/CCC Watershed Stewards placed with CDFG Santa Barbara, South Coast Habitat Restoration and the CCC Camarillo Center for service year 2011/2012. This is the first year that the Watershed Steward Program has been present on the Southern California Coast.

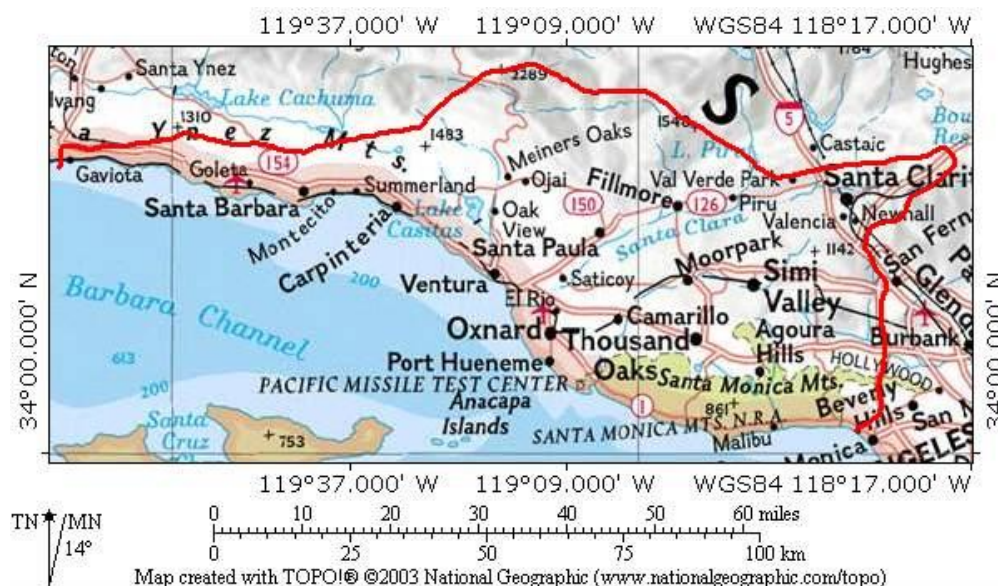


Figure 1. Geographic area covered by Camarillo based Fish Habitat Assistant.

The Fish Habitat Specialist (FHS), under contract to PSMFC and stationed at the CCC Camarillo Center, reports directly to the local DFG staff Senior Environmental Scientist in Region 5. Local DFG staff provides support to the Senior Environmental Scientist (SES) responsible for statewide oversight of SRP. The FHS position assists the SES in planning, directing, and coordinating activities relating to the development and administration of CCC fisheries habitat restoration projects; and provides technical training to CCC staff and corpsmembers.

Specific goals to be met through these staff positions include:

- Conduct landowner outreach and education about upslope, riparian and in-stream restoration and the benefits of such projects to the community and the local watershed through participation in Tri-county FISH Team meetings as well as other watershed and community environmental group meetings, conferences and workshops;
- Assist landowners and local watershed restoration groups to develop collaborative partnerships with the CCC to accomplish fisheries restoration work;
- Arrange for DFG and CCC access to private and public lands by identifying property owners and obtaining permission to evaluate habitat as well as accomplish watershed and fish habitat improvements on anadromous streams;

- Develop and implement projects and seek grant funding for fish habitat improvement projects from state and federal grant programs, and other available funding sources per year, which include but is not limited to structure modification or replacement, riparian fencing, riparian improvement projects such as tree planting and exotic species removal;
- Implement currently funded projects;
- Conduct frequent inspections of CCC work projects to ensure quality control at each work site, including field inspection reports documenting project status, specific details on work modifications to be made, and completing “Project Site Completion Forms” for each finished project;
- Coordinate CCC crew activities with DFG regional fisheries personnel, other government agencies, private organizations, and watershed groups for developing fish habitat improvements;
- Plan and conduct training sessions for CCC staff and corpsmembers in watershed and fish habitat improvement techniques and methodologies as described in the *California Salmonid Stream Habitat Restoration Manual*;
- Evaluate fish habitat improvement projects as described in the *California Salmonid Stream Habitat Restoration Manual*;
- Assist with post-project effectiveness monitoring of completed restoration projects utilizing the new DFG monitoring protocols, and develop specific plans in instances where the projects are not functioning properly.

RESULTS

Final Budget:

Grant # P0850015 was in effect from May 1, 2009 through March 1, 2012.

Person Hours Expended:

Chris Lima (05/01/09 – 12/15/11)	5,542.48
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Expenditures:

Personal Expenses	\$131,703.13
Operating Expenses	\$ 14,885.39
Indirect	<u>\$ 18,166.49</u>
Total Expenditures	\$164,755.01

Cost Share:

DFG Senior Specialist	\$ 5,626.40
DFG Associate Biologist	\$ 2,640.00
Benefits @ 32%	<u>\$ 2,645.25</u>
Total	\$10,911.65

Vehicle	\$18,480.00
Fuel	<u>\$ 4,717.95</u>
Total	\$23,197.95

Total Grant Expenditures: \$164,755.01

Total DFG Cost Share: \$34,109.60

Grant Activities Performed:

Activities performed under Grant # P0850015 included, but were not limited to those listed below.

Chris Lima, Fish Habitat Specialist, June, 17 2009 – December 15, 2011

I. Outreach and Education

An ongoing outreach effort has been made to coordinate with local landowners and funding agencies to educate landowners about their watersheds, habitat restoration possibilities, funding sources, and permitting. CCC staff (10) and corpsmembers (220) have been taught about steelhead life history, riparian and upland ecology, and habitat restoration and improvement techniques including in-stream water diversion, bank stabilization, in-stream large woody debris installation, boulder cabling, and bioengineering. In 2010, 206 6th grade students were educated about southern California steelhead trout, Matilija Dam, river ecology,

and related topics in the Ventura River Watershed through “Once Upon a Watershed Program”. In 2011, over 300 6th grade students were educated through the same program. Each year the students participated in river exploration and native species planting to enhance the OVLC’s Confluence Preserves Bank Stabilization Project on the Ventura River.

Numerous meetings were attended with federal, state, and local agencies as well as landowners including USDA’s Natural Resource Conservation Service; National Marine Fisheries Service; DFG; Santa Monica Mountains and Ventura County RCDs; Ventura County; Santa Barbara County; Wetlands Recovery Project’s Ventura, Santa Barbara and Los Angeles Counties Task Forces; Tri-County Fish Team (TCFT); Carpinteria Creek Watershed Coalition; Southern California Steelhead Coalition; Santa Clara River Watershed Coalition; Ojai Valley Land Conservancy; Ventura Hillside Conservancy; Ventura River Watershed Council; Ventura County Weed Management Area; Santa Barbara County Weed Management Area; Santa Clara River Invasive Weeds Task Force; Bouquet Canyon Conservation Partners, and Malibu Creek Watershed Council.

Several public events were attended to increase the public’s awareness and knowledge about southern California steelhead trout and CCC’s local restoration efforts. Some of the tabled events include Patagonia’s Salmon Run 2010 and 2011 in Ventura, Santa Barbara’s Earth Day 2011, City of Ojai’s Earth Day 2011, and Carpinteria Creek Watershed Council’s 10 year celebration at Carpinteria State Beach. Numerous community members were very interested in southern steelhead and appreciative for the restoration activities that have occurred to date.

Several training courses and workshops were attended, such as 1) Streambank Stabilization and Erosion Control hosted by Floodplain Management Association, 2) Western Pond Turtle Workshop hosted by Elkhorn Slough Coastal Training Program, 3) Watershed U: Ventura River Watershed hosted by the University of California Cooperative Extension and the Ventura River Watershed Council, 4) Fish Passage Design and Engineering Field School hosted by Salmonid Restoration Federation, 5) California Red-legged Frog Workshop hosted by Alameda County Resource Conservation District and Natural Resource Conservation Service, 6) Waves, Wetlands & Watershed hosted by California Coastal Commission, 7) Salmonid Restoration Conference (2010 and 2011) hosted by Salmonid Restoration Federation, 8) River RAT Training hosted by Skidmore Consulting and Brian Clure of NOAA Restoration, 9) The California Society for Ecological Restoration’s Annual Conference, 10) Digging In: A Guide to Community Based Habitat Restoration hosted by California Coastal Commission, 11) Americorps Watershed Stewards Mentor Training at CCC Fortuna Center.

II. Landowner and Watershed Group Collaborations

Many relationships have been fostered and developed with numerous land agencies, city and county departments, non-profit organizations, watershed groups and private landowners. All of the projects listed in Table 2 have resulted from these relationships. A few are discussed in detail below.

Since 2005, Solstice Creek has been the focus of many steelhead restoration projects, with support and collaboration from many agencies and organizations. These partners include but are not limited to the National Park Service, California Department of Fish and Game, City of Malibu, State Coastal Conservancy, Santa Monica Mountains Resource Conservation District, Heal the Bay, American Rivers, National Oceanic and Atmospheric Administration, Cal Trans, and the California Conservation Corps. In December of 2011 the CCC installed a large woody debris structure to enhance pool habitat and complexity to serve as a demonstration project for stakeholders in southern California. Eight of the nine barriers to steelhead have been removed, with the keystone barrier at the Pacific Coast Highway Culvert blocking access to steelhead trout. Cal Trans plans to modify the Pacific Coast Highway (Hwy 1) culvert, the keystone barrier in this watershed. Due to various delays, this project is now likely to be implemented in summer 2012.

In Los Angeles County, the Camarillo Center worked at the on-going restoration site of the former Rodeo Grounds Berm on Topanga Creek, a project that was awarded funding from the FRGP in 2006/2007. In the fall of 2009 and 2010, the CCC cumulatively removed approximately 30 cubic yards of asphalt, concrete, and rusted metal from the stream channel and removed 24 non-native trees in the riparian zone. The CCC partnered with State Parks, NOAA, Santa Monica Mountains Resource Conservation District, and CalFire for this component of the project.

Another collaborative watershed group effort has been occurring on the south coast of Santa Barbara County, in the Carpinteria Creek watershed. South Coast Habitat Restoration, California Department of Fish and Game, State Coastal Conservancy, Santa Barbara County, National Oceanic and Atmospheric Administration (NOAA), California Conservation Corps, Carpinteria Creek Watershed Coalition, among others, have been working together to restore steelhead trout in Carpinteria Creek and one of its tributaries, Gobernador Creek. To date, five large barriers have been removed or modified for fish passage within the watershed. Many future projects have already been planned and awaiting grant funding, and several others are in the planning phase. These future projects include removing additional barriers, removing pipe and wire revetment, stabilizing banks, installing instream fish habitat improvement structures, enhancing riparian cover, and watershed conservation outreach.

Since July of 2010 a CCC Fisheries Special Corpsmember has been assisting the FHS at the Camarillo Center with funding rewarded from FRGP. The FHS is co-mentor to 2 AmeriCorps/CCC Watershed Stewards placed with CDFG Santa Barbara, South Coast Habitat Restoration (local non-profit) and the CCC Camarillo Center for service year 2011/2012. This is the first year that the Watershed Steward Program has been present on the South Coast.

III. Grant Funding

From June 2009 to December 2011, 12 proposals have been submitted to four funding sources.

Please see Table 1 for proposals and dollar amounts. A few projects are discussed here. In 2008 a major restoration project near the estuary of Topanga Creek removed over 26,600 tons of contaminated fill that formed a berm constraining over 300 linear feet of the creek channel. NOAA-CCC Partnership Grant and NOAA-NMFS Recovery Act funded the continuing restoration effort to remove debris eroding out of the north bank, take out non-native invasive species and plant native species in 2009 and 2010. Funds from NOAA-CCC Partnership Grant allowed the CCC Camarillo Center to modify and enhance eight boulder clusters on Piru Creek in 2011. Awarded funds from DFG's Fisheries Restoration Grant Program (FRGP) and NOAA-CCC funded a large woody debris habitat enhancement demonstration project in the Santa Monica Mountains National Recreation Area of in Los Angeles County. A second term of two year funding was awarded for the CCC Fisheries Special Corpsmember position to assist the FHS from DFG's FRGP in for 2012-2014. The CCC assisted with the removal of the last major manmade barrier on Gobernador Creek, tributary of Carpinteria Creek with funding awarded from NOAA-CCC Partnership Grant in 2011 and 2012. The CCC assisted with the removal of removal of 5 low flow crossings in Tajiguas Canyon replaced by one free-span bridge collaborated by federal, state, local non-profit, and landowner partners. Many other projects were completed through other funding sources including private landowners, local government, and non-profit groups and are not listed in the table below.

Table 1. Proposals submitted, potential funding agencies, and amounts requested (6/17/2009-12/15/2011).

<u>Project</u>	<u>Funding Agency</u>	<u>Amount Requested</u>
Solstice Creek Habitat Enhancement	DFG Restoration Grant Program	\$44,077
	NOAA-CCC Partnership Grant	\$6,600
Piru Creek Boulder Clusters	NOAA-CCC Partnership Grant	\$8,338
Cate School Bank Stabilization	NOAA-NMFS-ARRA	\$21,500
Topanga Creek Concrete and Asphalt Removal	NOAA-CCC Partnership Grant	\$7,392
Topanga Creek Debris Removal	NOAA-NMFS-ARRA	\$20,419
Fisheries Special Corpsmember (FY 09/10)	DFG Restoration Grant Program	\$88,297
Ojai Creek Palm Removal	NOAA-CCC Partnership Grant	\$48,230
	CCC Prop 84	\$59,143
Widdoes Fish Passage Improvement	NOAA-NMFS-ARRA	\$15,140
Fisheries Special Corpsmember (FY 11/12)	DFG Restoration Grant Program	\$80,980
Ojai Valley Trail Fish Barrier Removal	NOAA-CCC Partnership Grant	\$15,895

IV. Projects

The Fish Habitat Specialist has conducted site surveys and project plans in preparation for CCC crew work in the following watersheds (please see Table 2 for project status):

Santa Anita
Gaviota Creek
Tajiguas Creek
Venadito Creek
El Refugio
El Capitan Creek
San Jose Creek
Mission Creek
Carpinteria Creek
 Gobernador Creek
Rincon Creek
Ventura River
 San Antonio Creek
 Lion Creek
 Ojai Creek
Santa Clara River
 Santa Paula Creek
 Sespe Creek
 Lion Creek
 Piru Creek
 Bouquet Creek
Arroyo Sequit
Solstice Creek
Las Flores Creek
Topanga Creek

Table 2: Fisheries Projects Implemented and In-Progress 2009-2012

Project	Agencies / Partners	Project Status*	Funding Status**	Anticipated Dates	Total Budget	CCC Labor Portion
Topanga Creek Concrete and Asphalt Removal	NOAA, SMMRCD, SCC, State Parks	5	✓	Fall '09	\$34,602	\$14,400
Hollister Ranch Invasive Plant Removal	HROA	5	✓	Fall '09	\$11,792	\$8,640
Lion Creek Bridge Replacement Project	DFG, NOAA, SCHR, Landowner	5	✓	Summer '10	\$34,560	\$34,560
Fisheries Special Corpsmember	DFG, CCC	4	✓	Summer '10-'14	\$169,277	\$127,148
Topanga Creek Debris Removal	NOAA, State Parks	5	✓	Fall '10	\$21,591	\$18,019
Robles Weirs Boulder Cabling	Casitas Municipal Water District	5	✓	Fall '10	\$3,672	\$3,672
Cate School Bank Stabilization	SCHR, NOAA, Landowner	5	✓	Fall '10	\$38,780	\$35,299
Carpinteria Watershed Bridge Sites Revegetation and Erosion Control Install	SCHR, NOAA, Sempra Energy	5	✓	Winter '10	\$15,490	\$9,072
Piru Creek Boulder Cluster Enhancement	VCWPD, NOAA	5	✓	Summer '11	\$18,221	\$13,824
Lower Sespe Crossing Work	Landowner, Sespe Consulting	5	✓	Summer '11	\$10,080	\$10,080
Tajiguas Creek Barrier Removal	SCHR, DFG, Landowner	5	✓	Fall '11	\$47,808	\$47,808
Ojai Valley Trail Fish Barrier Removal	Ventura County, DFG, SCC	4	✓	Fall '11	\$25,920	\$25,920
Widdoes Fish Passage Improvement	DFG, SCC, SCHR, NOAA	4	✓	Fall '11	\$38,747	\$25,887
Bouquet Canyon Creek Arundo Removal	BCP, SCWRP	4	✓	Fall '11	\$28,000	\$8,700
Solstice Habitat Enhancement Project	DFG, NOAA, NPS	5	✓	Winter '11	\$71,627	\$39,520
Arroyo Sequit Creek Steelhead Barrier Removal	State Parks, SWQCB, American Rivers, NOAA, SMBRC	3	A	Summer '12	\$70,000	\$60,000
San Antonio Creek Willow Staking	Casitas Municipal Water District	4	✓	Fall '12	\$13,448	\$13,448
Lower Sespe Mine Mitigation	Sespe Consulting, Upland Rock	4	✓	Fall '12	\$129,026	\$111,456
Rincon Creek Arundo Removal	CIR, DFG, SB County	3	✓	Fall '12	\$19,720	\$19,720
Ojai Creek Palm Removal	Prop 84, BRC, Ventura County	4	✓	Fall '12	\$59,143	\$59,143
Fisheries Training Modules	CCC Camarillo	3	N	Winter '12	Unknown	Unknown
Projects TOTAL					\$861,504	\$686,316

* **Project Status:** 1 = beginning discussions w/ landowner, 2 = landowner support, planning/design phase, 3 = design selected, 4 = ready to implement, 5 = complete

** **Funding Status:** ✓ = funding obtained. A = applied for funding. N = no funding vet. U = unknown

PI Reporting Metrics

- Number of educational events: **20**
- Number of students, teachers, community member trained/educated: **800**
- Number of schools/institutions reached: **9**
- Number of educational documents prepared/distributed: **100 pamphlets**
- Number of interpretive signs/posters prepared: **2 posters**
- Number of different locations where signs/posters displayed: **6 locations**
- Number of public meetings attendees and their relationship to the watershed: **150+ (landowners, federal, state, county, city, and local agencies)**
- Number of landowners reached by project and a description of how landowners were contacted: **20 landowners reached by word of mouth and email.**
- Description of educational/outreach about the watershed and salmonid issues:
Southern California steelhead life history, urbanization in watersheds, riparian and upland ecology, habitat restoration and improvement techniques including in-stream water diversion, bank stabilization, in-stream large woody debris installation, boulder cabling, and bioengineering.
- Number and description of any planning or implementation projects that will be developed and a description of how they will be accomplished under the project or promoted by the project: **New projects will be developed by seeking out new project partners as well as current project partners.**
- Number of plans/designs for restoration/conservation actions developed as a result of this project: **20**
- Acres of land affected by landowner plans/designs for restoration/conservation actions: **17.61 acres**
- Dollar amount of donations made to restoration/conservation activities as a result of this project: **\$0**
- If the project results in habitat protection or restoration activities:
 - Number of restoration projects proposed: **22**

- Type of treatments applied, using the list of FRGP Proposal Project Types:
**Instream Habitat Restoration (HI), Fish Passage at Stream Crossings (FP),
Riparian Restoration (HR), Instream Bank Stabilization (HS), Public Involvement
and Capacity Building (PI).**
- Acres of salmonid habitat protected/restored: **17.61 acres, 16.5 stream miles
restored**
- Dollar value of habitat treatments applied: **\$367,142.00**
- Number of workshop/training event: **N/A**
- Number of participants in workshop/training events: **N/A**