CALIFORNIA OCEAN PROTECTION COUNCIL

Staff Recommendation
May 15, 2008
Southern Steelhead Resources Project (Phase Three)
File No.: 08-044-01
Project Manager: Valerie Termini

RECOMMENDED ACTION: Authorization to disburse up to $166,021 to the Center for Ecosystem Management and Restoration (CEMAR) for the Southern Steelhead Resources Project

LOCATION: Selected watersheds south of the Golden Gate Bridge to the Mexican border

STRATEGIC PLAN OBJECTIVE: Governance and Habitat Structure

EXHIBITS

Exhibit 1: Project Location and Site Map

Exhibit 2: Endangered Species Act Status of West Coast Salmon and Steelhead

Exhibit 3: Letters of Support

RESOLUTION AND FINDINGS:

Staff recommends that the Ocean Protection Council adopt the following resolution pursuant to Sections 35500 *et seq.* of the Public Resources Code:

"The Ocean Protection Council hereby approves the disbursement of an amount not to exceed $166,021 (one hundred sixty-six thousand twenty-one dollars) to *Center for Ecosystem Management and Restoration, (*CEMAR*)* to develop the Southern Steelhead Resources Project subject to the condition that prior to disbursement of funds, CEMAR shall submit for the review and approval of the Secretary to the Council a work plan, including scope of work, schedule of completion, project budget, and any contractors to be employed.

Staff further recommends that the Council adopt the following findings:

"Based on the accompanying staff report and attached exhibits, the Council hereby finds that:

1. The proposed project is consistent with the purposes of Division 26.5 of the Public Resources Code, the California Ocean Protection Act.
2. The proposal is consistent with the Ocean Protection Council's project funding guidelines.

PROJECT SUMMARY:

Phase three of the Southern Steelhead Resources Project will conduct a quantitative analysis to establish the highest priority watersheds for steelhead restoration along the California coast south of the Golden Gate Bridge, and identify the key stream reaches and restoration projects in each of these watersheds. The results will be published in a report (and online) to guide decision making by agencies, local jurisdictions, watershed groups, funders, and others toward a set of short-term restoration activities intended to conserve the greatest amount of existing steelhead habitat in the most efficient manner south of the Golden Gate Bridge.

Southern Steelhead trout are a significant part of California's natural heritage; however, the current populations of Southern Steelhead are listed as threatened and endangered under the Federal Endangered Species Act (ESA) and the California Endangered Species Act (CESA). Steelhead trout (*Oncorhynchus mykiss*) belong to the family Salmonidae which includes all salmon, trout, and chars. Steelhead are similar to Pacific salmon in their life cycle and ecological requirements. They are born in fresh water streams, where they spend their first 1-3 years of life. They then migrate to the ocean where a majority of their growth occurs. After spending between one to four growing seasons in the ocean, steelhead return to their native fresh water stream to spawn. Unlike Pacific salmon, steelhead do not necessarily die after spawning and are able to spawn more than once.

Statewide, California steelhead populations have declined by more than 90 percent since the 1850's. A rough estimate of the total statewide steelhead population is 250,000 adults. Southern Steelhead trout are listed as a threatened and endangered species in California. Specifically they are endangered in southern California from naturally spawned populations (and their progeny) in rivers from the Santa Maria River in San Luis Obispo County, to Malibu Creek in Los Angeles County.

PROJECT SUMMARY:

Project Background

CEMAR developed the Southern Steelhead Resources Project (SSRP), which proposed to examine watersheds south of the Golden Gate, in three phases. In Phase 1 all available stream survey and related information from the Department of Fish and Game (DFG) were digitally-archived and made available in an easily searched electronic format. In the second phase, CEMAR created a database of steelhead distribution information from the DFG archive and thousands of related documents produced by resource agencies, non-governmental organizations, consulting firms, academics, and others. CEMAR's Phase 2 report summarizes this information in a novel, stream-by-stream format including text descriptions, table summaries, and maps. The SSRP products already have been used in regulatory and recovery planning processes, as well as in less formal restoration planning efforts by a diverse array of stakeholders.

In Phase 3 of the SSRP, CEMAR will establish a "road map" of restoration opportunities in the study area based on the innovative approach used in the successful *San Francisco Estuary Watersheds Evaluation*. It will incorporate the information in the more than 5,000 references in the SSRP archive and the experiences of the many project collaborators in a transparent, comprehensive, and intuitive screening of habitat in the watersheds along the coast. The

watersheds evaluation provides an efficient method to advance restoration by identifying "essential streams" in the regions, so called "anchor watersheds." The output of this effort will be a unique, thoroughly-supported and easily-interpreted list of the highest priority specific passage barrier, habitat, and flows projects in the most valuable steelhead streams south of the Golden Gate.

Project Details and Scope of Work

In Phase 3 of the SSRP, CEMAR will identify watersheds that have the greatest potential for supporting runs of steelhead south of the Golden Gate Bridge. The project will create a database that is easily accessible by state agency staff and other watershed organizations to help direct funding efforts to the watersheds listed as a high priority.

The goal of the project is to provide geographic focus for restoration of steelhead trout on the California coast. Given the large number of coastal watersheds and the limited amount of funds for restoration, the strategic approach is to compile data to focus restoration efforts on those watersheds with the greatest potential for stabilizing and then increasing the steelhead population in the region.

To achieve this goal the project objectives are to: (1) conduct a quantitative analysis that will establish the highest priority watersheds for steelhead restoration along the California coast south of the Golden Gate; (2) produce a report (and related web resources) that summarizes the analysis to provide a "road map" of the next-step restoration activities in these watersheds by identifying key projects, stream reaches, and stakeholder capacity needs; (3) vet the draft findings extensively with specific individuals and agencies to obtain comments and recommendations; and (4) present the results of the analysis to focus statewide restoration efforts on watersheds with the highest potential for restoration.

The project would consist of the following six tasks:

1) **Determine watersheds for analysis:** CEMAR recently released a report '*Steelhead/Rainbow Trout Resources South of the Golden Gate'*, which presents information on more than 100 watersheds south of San Francisco. These watersheds will be initially screened to reduce the number of "candidate" watersheds that are evaluated in detail. The main screening criterion will be the existence of recently reproducing *O. mykiss (Steelhead)* populations. CEMAR expects that approximately 30-35 watersheds will be removed from further consideration through initial screening.
2) **Collect additional data**: This project will have a powerful launching point in the body of digitally-stored and referenced information developed for the SSRP. Supplementary information will be collected largely through CEMARs contacts with experts from the National Marine Fisheries Service (NMFS), the Department of Fish and Game (DFG), local water districts, the U.S. Forest Service, State Parks, County governments, consulting firms, and others. CEMAR will also communicate with the larger watershed and stakeholder groups.
3) **Determine anchor watersheds and essential streams**: CEMAR will evaluate the habitat data to determine which watersheds offer the most potential for steelhead production. They will then present information clearly in text, tables, figures, and maps. For the anchor

watersheds, CEMAR will evaluate the various reaches of streams and tributaries for their relative contribution to the steelhead population to produce a list of essential streams.

4) **Characterize anchor watersheds and describe specific restoration strategies:** CEMAR will present a concise review of each anchor watershed including historical steelhead resources and current status, known factors limiting production, pressures that existing water rights may place on critical streamflows, results of planning studies and project prioritizations, stakeholder cooperation, and on-going restoration activities. In this context CEMAR will present a list of the critical "next steps" for each watershed that will consist of planned but not implemented actions (such as dam removals) and a set of not-yet-identified actions, studies, and suggested policies that are necessary for successful restoration.
5) **Conduct expert review; finalize:** The results of the analysis will be presented in a draft report to be reviewed by NMFS, DFG, project advisors, and interested members of the restoration community. Based on comments received on the draft, and multiple personal interviews with those providing comments, CEMAR will finalize the report.
6) **Present findings:** The final report will be publicly available both in written form and via posting on the internet. CEMAR will share the findings regarding key restoration activities and attempt to build local support for undertaking activities related to barrier modification, provision of fish flows, or other restoration efforts. The intent is to demonstrate the regional importance of such local activities, and to familiarize stakeholders with other priority watersheds in the region.

The report will guide state and local watershed groups in a few ways, through restoration activities and guiding future land use. Through the report, specific restoration activities will be cited as a means to increase steelhead populations. In addition, the report can also serve as a guide for land use planners to guide future development to protect crucial habitat for salmonids.

Restoration Activities: CEMARs report will bring to light what streams and tributaries are of the highest priority for conservation of steelhead trout south of the Golden Gate Bridge. By identifying these key streams that are critical for protecting steelhead populations, agencies and nonprofits can guide their funding of restoration projects to the areas that are listed as the most important.

Guiding future land use: Moreover, the geographic areas outlined by the report could help guide future land use decisions to be planned in concert for the benefit of both salmonids and human populations. CEMAR will present a concise overview of the key watersheds which will include historical and current steelhead counts, factors limiting production, and pressures that existing water rights may place on critical streamflows. The report will also highlight actions and critical next steps for each watershed that will consist of planned but not yet implemented actions (such as dam removals) and a set of identified actions, studies, and policies that may be warranted.

Applicability Statewide: The southern steelhead project could be applicable for numerous other salmonid conservation projects statewide. The prioritization of watersheds can be used by state and federal agencies and nonprofit organizations to determine which rivers are the most valuable for steelhead restoration and to protect other salmonid species statewide. Such prioritization will

be important economically, in years when the state is challenged monetarily, so that monies can be directed to restoration projects where the chance of success is quite high.

Staff recommends the Southern Steelhead Resources Project as critical component to prioritizing watersheds to assist with the long term restoration and recovery of the declining populations of steelhead throughout the state. By prioritizing watersheds, state and local agencies can use this report as tool to guide where and how they should fund restoration projects given the limited pool of funds for restoration projects.

PROJECT GRANTEE:

CEMAR is an excellent candidate for OPC support due to their experience and knowledge of the issues related to salmonid restoration and management. CEMAR is a 501(c)(3) nonprofit organization, founded in 2000, whose primary purpose is the strategic restoration of aquatic and riparian habitat. CEMAR's mission is to make effective use of scientific information to promote the restoration and sustainable management of ecosystems. CEMARs current focus is the restoration of steelhead and salmon in California, where they are developing scientific information for collaborative decision-making to identify durable strategies for sustainable management of California's coastal watersheds. CEMAR has acquired extensive knowledge of fisheries resources in California in part from their staff's involvement with Robert A. Leidy of the US Environmental Protection Agency to complete the *San Francisco Estuary Steelhead Status Report*. CEMAR has also received Coastal Conservancy funding for the San Francisco Estuary Watershed Fisheries Evaluation, an Alameda Creek Fish Passage Alternatives Study, and a Coastal Fishery Habitat Inventory.

SITE DESCRIPTION:

The watershed analysis will assess areas south of San Francisco to the Mexican border. From this initial focus, watersheds will be narrowed by availability of suitable stream habitat and synthesis of steelhead populations in the watershed. An important caveat to this approach, is that in the most southern range, (south of Ventura) areas that generally have a small population of steelhead may be given extra weight in order to compete with streams that have larger populations located in the more northerly reaches of the study area due to the genetic importance these southern stocks may have given temperature increases that are likely in the oceans and coastal river systems in the future. See Exhibit 1.

PROJECT HISTORY:

CEMAR was funded by the Coastal Conservancy in 2007 to conduct an analysis which identified locations for steelhead restoration in tributaries of the San Francisco Estuary. The analysis provided planners and resource agency staff a guide to prioritizing expenditures on steelhead restoration in tributaries to the San Francisco Estuary. The report gathered information from scientific research, interviews from local experts to establish a comprehensive record of the distribution and habitat of steelhead. Phase three of this project will build upon this analysis to prioritize watersheds and restoration actions south of the Golden Gate Bridge to the Mexican border.

OPC involvement is directly related to the passage of the funding priorities where Salmon were

identified as one of the priorities. Salmonid populations have declined dramatically along the West Coast and particularly in California since the 1850's. Recovering salmonids will require coordinated actions to mitigate the substantial loss of salmon habitat that has resulted from human activities over the last 150 years. Given the limited resources available for salmonid restoration, and inherent political complexity of coordinating sustained political support and action at the watershed scale, it is essential that on a regional basis we identify priority watersheds.

PROJECT FINANCING:

Ocean Protection Council	$166,021
Resources Legacy Fund Foundation	101,611
Total Project Cost	**$267,632**

The anticipated source of funds will be the fiscal year 2007-2008 appropriation from the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006 (Proposition 84). Proposition 84 authorizes the use of these funds for purposes consistent with the California Ocean Protection Fund (Pub. Res. Code § 75060(g); *see also* Pub. Res. Code § 75074).

This project is appropriate for prioritization under the criteria set forth in Section 75060(g) because the project will develop scientific data necessary to adaptively manage the state's marine resources and will facilitate the development and implementation of projects to conserve marine wildlife.

CONSISTENCY WITH CALIFORNIA OCEAN PROTECTION ACT:

This project is consistent the Ocean Protection Act, Division 26.5 of the Public Resources Code, in the following respects:

Section 35650(b)(2)(F) of the Public Resources Code authorizes grants to nonprofit organizations for projects that "improve management, conservation, and protection of coastal waters and ocean ecosystems." This project will help direct funding for steelhead trout habitat restoration in a meaningful way and will provide a geographic focus for these efforts along the California coast. By prioritizing watersheds along the coast, restoration efforts will make the best use of funding available by focusing on the watersheds with the greatest potential for stabilizing and then increasing the steelhead population in the region.

Under Section 35650(b)(2)(G), the council may undertake projects to "provide monitoring and scientific data to improve state efforts to protect and conserve ocean resources." This project will compile scientific data on watersheds and marine resources available to facilitate restoration projects with the highest probability to support healthy runs of steelhead in California. This study will have numerous applications to protecting ESA listed species and conserving steelhead habitat by prioritizing watersheds in California. With this prioritization, restoration and project funding can be channeled to the critical watersheds. With the idea being to conserve the limited amount of funding that is available for restoration activities where restoration will have the most significant impact on protecting steelhead for the future.

The OPC may also undertake projects to "protect, conserve, and restore coastal waters and ocean ecosystem," pursuant to Section 35650(b)(2)(G). Steelhead trout are an important component of the ocean ecosystem and are ecologically significant in the marine food web. The final report for this project will be used by resource agency staff as well as others that do restoration activities throughout the state and will thereby facilitate coordination of rehabilitation efforts in priority watersheds, consistent with Section 35650(d).

CONSISTENCY WITH OPC'S STRATEGIC PLAN GOAL(S) & OBJECTIVE(S):

The proposed project is consistent with the OPC's Five-Year Strategic Plan by furthering:

Section A, Governance, **Objective 1:** to "maximize the effectiveness of funds spent to protect and conserve coastal resources." This project will help maximize the effectiveness of funds by prioritizing streams and rivers for restoration funding. Narrowing the focus of restoration efforts in this manner will help direct funding to watersheds that will most benefit from restoration activities.

Section D, Physical Processes and Habitat Structure, Object 1: to "restore and maintain valuable ocean and coastal habitats and resources." The proposed project will use and build upon the data in the CalFish database to prioritize watershed for restoration to help guide agency funding decisions in the most efficient manner possible. The proposed project will also support efforts to restore riparian corridors focusing on restoration of habitat connectivity and quality within coastal watersheds, will help direct funds to restore habitat critical for salmonid survival, and will highlight restoration activities necessary to restore steelhead and salmon runs in California.

CONSISTENCY WITH OPC'S PROJECT FUNDING GUIDELINES:

The proposed project is consistent with the OPC's Project Funding Guidelines adopted June 14, 2007, in the following respects:

Required Criteria

Directly relate to the ocean and coast: This project will help direct funding for restoration of habitat in coastal streams along the coast of California for steelhead trout. The results will be published in a report (and online) to guide decision making by agencies (DFG, Coastal Conservancy, local jurisdictions, watershed groups, founders, and others) toward a set of short-term restoration activities intended to conserve the greatest amount of existing steelhead habitat in the most efficient manner.

Support of the Public: Restoration of anadromous species, such as the steelhead, enjoys broad public support. Given the recent crash of the fall Chinook species in California, it is important that agencies and those charged with anadromous fish protection start prioritizing where and how money should be used to protect watersheds that have the greatest potential for rehabilitation of steelhead trout and other anadromous species.

Greater-than-local interest: California steelhead are an integral part of the river and coastal

ecosystem. As certain strains of salmonids decline throughout the state due to temperature variation and water related issues, steelhead trout are an important species to conserve due to their resiliency. They are thought to be one of the species that will be able to withstand temperature changes as a result of climate change. By protecting these high priority watersheds, the OPC will be acting in a proactive manner by guarding these populations of steelhead for the future.

Additional Criteria

Resolution of more than one issue: The proposed project will help streamline funding efforts for restoration in the California coast, south of San Francisco. This study will describe where and what streams will make the most and best use of funds allocated to restoration efforts for steelhead. In addition, this project will be integrated into other watershed efforts such as restoration of habitat for salmon. This project could also help in the general plan process to guide development along riparian corridors and provide information on how to protect these resources indefinitely.

Leverage: The proposed OPC grant will leverage funds from the Resources Legacy Fund Foundation in the amount of $101,611.

Timeliness or Urgency: With the recent crash in salmonid populations throughout the entire west coast, increased spending on restoration activities is expected. The proposed project will develop a strategic plan on how these funds ought to be allocated, to ensure that areas targeted for restoration can support high populations of salmon; these areas are unknown at this time. CEMAR is uniquely equipped to complete this project in a quick time frame, which is essential so that the expected influx of funds can be allocated to the salmon disaster in the most efficient manner possible.

Innovation: This project is particularly innovative in that it will facilitate a coordinated approach to restoration. Data compiled through the study will be used by state agencies to guide funding efforts to protect and restore federally listed species. This proposed project will also have wide applicability to other anadromous species such as salmon.

Coordination: The proposed study will efficiently direct the use of public funds to projects with the best expectation of success. It will also help funders make informed choices of suitable restoration projects, including projects funded by the Coastal Conservancy, the California Department of Fish and Game's Fishery Restoration Grant Program, the Citizen Advisory Committee to the California Legislature on salmon and steelhead, and others.

CONSISTENCY WITH OPC'S 2007/2008 FUNDING PRIORITIES

Ocean and Coastal Ecosystems: Focus on Salmon Statewide and in the Klamath Basin and on Fishery Management Plans

The results of this project will provide the state with a geographic focus of high priority areas in the central coast for salmonid recovery. With this guide, restoration activities can be focused throughout the state to increase the population of steelhead trout. By prioritizing a few selected areas for restoration the hope is that these areas will provide for a healthier return of steelhead

trout to the selected ecosystems.

In addition, given that restoration funds are not infinite, the SSRP can help provide guidance for crucial funding efforts to be spent in the most efficient manner possible. By funding the Southern Steelhead Resources Project, CEMAR will provide state, and federal agencies as well as local NGO's with a comprehensive list of priority streams and rivers and restoration activities that should take place on the system. Without a comprehensive guide, restoration activities are likely to continue in a patchwork fashion, not considering the entire watershed, thereby, limiting success of projects.

COMPLIANCE WITH CEQA

The proposed project is categorically exempt from review under the California Environmental Quality Act ("CEQA") pursuant to 14 Cal. Code of Regulations Section 15306 because the project involves only data collection, research and resource evaluation activities that will not result in a serious or major disturbance to an environmental resource. Staff will file a Notice of Exemption upon approval by the council.