Restoring Fishing and Fish Habitat to Southern California

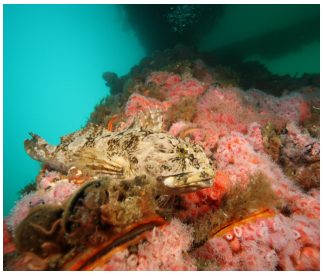


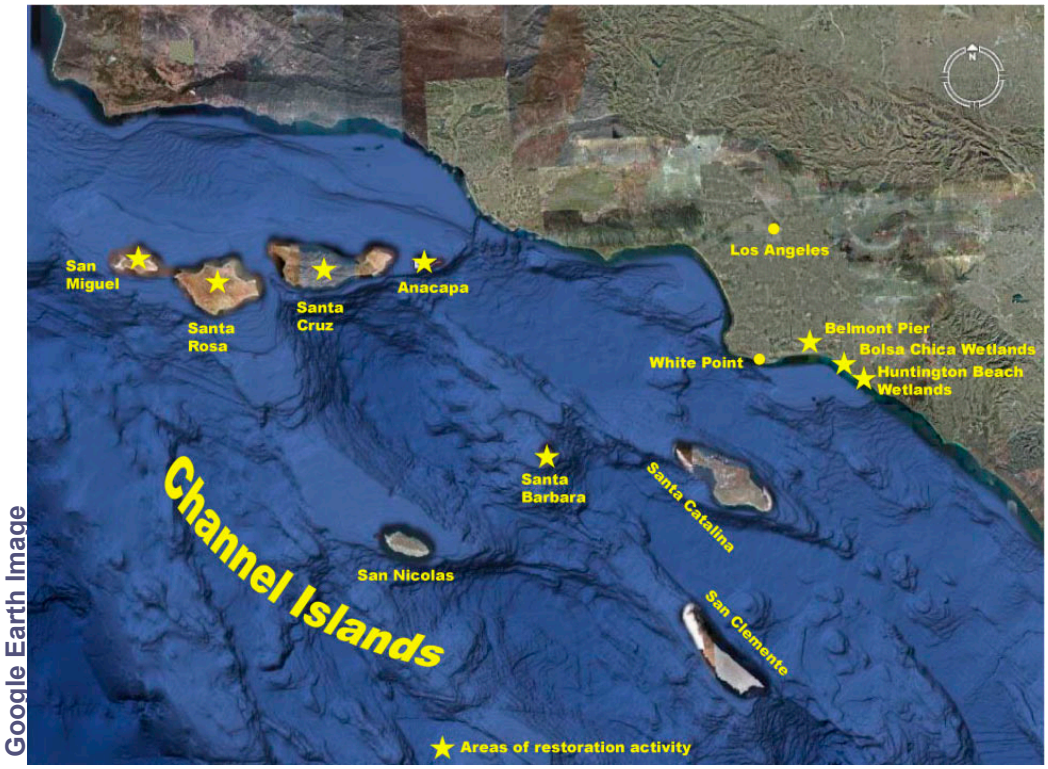
Photo Credits: **Garibaldi with Kelp** (David Witting, MSRP); **Anglers on Belmont Pier** (Gabrielle Dorr, MSRP); **Cabazon on an oil rig** (David Witting, MSRP); **Trawl survey of White Croaker** (Ken Nielson, Seaventures)

For more information contact:

Gabrielle Dorr
(562) 980-3236
gabrielle.dorr@noaa.gov

www.montroserestoration.gov

January 2009



MSRP fishing and fish habitat restoration projects take place on some of the California Channel Islands, and throughout the southern California region as shown on this map.

Restoring Fishing

In 1991, the State of California released Fish Consumption Advisories to protect humans from risk associated with eating certain species of fish that are contaminated with PCBs and DDTs. The loss of fishing opportunity caused by these Fish Consumption Advisories was one of the natural resource injuries of the Montrose case. One approach to restoring this injury is to provide complete and accurate information to anglers about fish contamination through the use of surveys and outreach products. A critical element of this approach is to identify and inform anglers about species of fish that are safer to consume than those that they are warned against consuming. Another approach is to diversify the habitat of fishing areas that are mostly soft bottom by changing them to rocky bottom. Increased diversity in the habitats available to angers results in increased diversity of the fish that they catch, allowing them the opportunity to make better choices about which species of fish they consume.

Restoring Fish Habitat

The presence of DDTs and PCBs contaminants in the sediments at the contamination site located on the Palos Verdes Shelf have impaired the function as fish habitat due to the ongoing contamination of the fish. This injury is persistent and is unlikely to disappear without by itself. The Environmental Protection Agency (EPA) is considering different alternatives for remediation of the impact site. MSRP is improving and restoring fish habitat in areas throughout southern California to enhance fish production in areas that produce less contaminated fish. Two major areas of restoration are wetlands and marine protected areas. Wetlands provide nursery habitat for fish. Marine protected areas function to increase fish production.

A full description of fishing and fish habitat restoration projects is on the back!

Fishing and Fish Habitat Project Descriptions

Restoring Fishing

Public Information

MSRP provides information to anglers so that if they consume the fish they catch, they can make sound decisions about where they fish and which species are not safte to consume. Outreach materials focus on the link between the ecology and life history of a particular species and its tendency to bioaccumulate contaminants. One of our most popular products, a comic book titled "What's the Catch?", tells the story of how contaminants were released into the ocean and how they impacted fish and wildlife. MSRP also provides funds for outreach programs that focus on educating families about fish contamination.

Artificial Reefs

Constructed reefs have often been employed to mitigate for environmental impacts to natural fish habitats. The MSRP constructed reef program has the specific objective of recruiting and producing fish lower in DDTs and PCBs for anglers to catch and displacing highly contaminated soft-bottom species from a fishing location. The geographic placement of reefs will depend on the number of soft-bottom species with high levels of contaminants in a particular area. Several critical design considerations such as the degree of sediment contamination, existing fishing pressure and accessibility, and suitability for kelp recruitment and establishment will also guide the location and development of all restoration reefs. A complementary part of this action may include fishing access improvements (e.g., improvements to piers) to facilitate and encourage fishing in the areas where reefs are built.

Fish Contaminant Survey

From Fall 2002 to Spring 2004, MSRP and EPA collected over 2500 fish from 28 locations in southern California coastal waters, representing 23 species of fish, most of which are often caught by local recreational and commercial anglers. Approximately 900 were analyzed for DDTs, PCBs, dieldrin, chlordane, and mercury, to provide a comprehensive assessment of fish contamination. These data will be used in planning restoration projects to enhance fishing opportunities where they have been impaired by Fish Consumption Advisories, and to enhance the effectiveness of public outreach and education programs. These data will also be used by the California Office of Environmental Health Hazard Assessment and Department of Fish and Game to update existing fish consumption advisories, bag limits, and the commercial catch ban area on White Croaker. Finally, the EPA will use the data to evaluate current and future risks and potential cleanup action for the Palos Verdes Shelf Superfund investigation. A full report of this study was released in June 2007.

Restoring Fish Habitat

Wetlands Restoration

Coastal estuarine wetlands are critical habitat for many species of marine fish. The restoration of these habitats is one approach to restoring fish and their habitats, as identified in the Montrose consent decree. By including wetland restoration among the fishing and fish habitat actions, the Trustees provide a diverse approach of addressing the ongoing injuries and lost services and compensating for interim losses. MSRP funding is directed at wetland restoration projects that will increase the production of commonly caught coastal fish species, such as the California Halibut.

Huntington Beach Wetlands

MSRP provided funding to the restoration of Huntington Beach wetlands, specifically to restore parts of the Talbert and Magnolia Marsh segments. Support for this project has filled a critical funding gap and the full restoration of the Huntington Beach Wetlands is now moving forward. When complete, this project will open up approximately 140 acres of full-tidal wetlands that will play an important role as nursery and foraging habitat for fish and birds. This project is scheduled to be completed in 2011.

Bolsa Chica Wetlands

MSRP provided funding for maintenance dredging of the Bolsa Chica wetlands. The Bolsa Chica wetlands project is one of the largest full-tidal-exchange wetland restoration projects in Southern California. Recently completed, full tidal exchange is a critical element in the wetlands function as nursery and foraging habitat for marine fish. Contributing to the maintenance of tidal flow will help to perpetuate this service.

Monitoring Marine Protected Areas

The goal of this action is to improve the fish habitat function in Southern California by providing funds needed to evaluate and implement Marine Protected Areas (MPAs) as part of an ecosystem-based management approach for fishery resources. The primary focus of this action is to provide needed funds for implementation of the Channel Islands network of MPAs to ensure they provide the best possible basis for further implementations of MPA networks throughout California. Although this action will provide specific benefits to the fish habitats adjacent to the Northern Channel Islands, the action will also provide longer-term benefits for fishing and fish habitats throughout California by helping to generate the empirical underpinnings for the site and design of future networks of MPAs. The network of MPAs in the Channel Islands is currently the most appropriate area for such an effort because those MPAs were specifically designed to evaluate the utility of using MPAs as a management tool. MSRP has provided funds for two MPA related projects within the Channel Islands National Park. Both projects focus on monitoring and recruitment of marine life in various habitat types within the MPA.

Juvenile California Halibut found during a trawl survey of the Huntington Beach Wetlands in 2007 (David Witting, MSRP).