



# San Francisco Bay Recreational Fishing Education Class: Final Programmatic Report (AMENDED)

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*Recipient Organization/Agency: Hayward Area Recreation and Park District*

*Date Submitted: January 17, 2014*

*Project Period: 4/18/2013 to 2/18/2014*

*Award Amount: \$20,000*

*Matching Contributions: \$5,250.00*

*Total Disbursement: \$19,868.58*

*Project Number: #8006.12.033510*

## **1. Summary of Accomplishments**

The Hayward Area Recreation and Park District was able to successfully complete all of the grant requirements. The Park District created an expanded fishing program, purchased new fishing gear and supplies for the class, created four (4) new educational signs for the public, and offered the fishing class to more than 154 low income youth that otherwise would not been able to attend the fishing classes.

## **2. Project Activities & Outcomes**

### **Activities**

- Expanded a fishing program to educate the public about recreational fishing combined with environmental information about habitat, fish ecology and the effects of pollution, such as oil spills in aquatic environments.
- Created four (4) new public educational signs that will be seen by thousands of park visitors.
- Purchased fishing gear and supplies (much of which can be re-used by future classes).
- Allowed the Park District to reach out to more than 154 low income students and offer “hands on” fishing classes to youth that otherwise may not have had the opportunity to participate in these classes.
- Followed the activities agreed upon per the contract.

### **Benefits**

- More than 15 classes or one week fishing camps were offered to educate the public about recreational fishing, including fish ecology, license requirements, and effects of pollution, such as oil spills in aquatic environments.
- The terms of the grant agreement were followed and in some cases were exceeded. For example, when the District found that transportation was a barrier to many low income youth taking part in the fishing classes offered by the grant, the Park District used its own funds to transport low income youth to the class location.
- The Park District was able to offer the popular fishing classes to many more youth and adults than expected (and used its own funds to pay for the additional instructor time).

- The Park District was able to reach out to new contacts at a low income youth community center and at low income schools that would otherwise not have been able to participate in the fishing education classes.

### **3. The Future**

The Fishing Education Class has created signage for thousands of future visitors to the Hayward Shoreline Interpretive Center, and the Fishing Class now has a teaching program that will serve as a model for future classes.

### **4. Lessons Learned**

This grant program was a wonderful experience for all of our naturalists. We found that even offering free classes to low income students did not allow many students to get to our shoreline property. The Park District provided vans to transport low income youth to the site, so that they could take part in the fishing programs. Having the grant funds to obtain the needed fishing equipment and supplies enabled all youth and adults to have “hands on” fishing experiences that many said would last a lifetime. The Hayward Area Recreation and Park District is very thankful for the opportunity to obtain the grant funds from the funders and use them to reach out to all of the new fishing students, young and old alike.

### **5. Project Documents**

- Photos and public education signs are attached.

***POSTING OF FINAL REPORT:*** This report and attached project documents may be shared by the Foundation and any Funding Source for the Project via their respective websites. In the event that the Recipient intends to claim that its final report or project documents contains material that does not have to be posted on such websites because it is protected from disclosure by statutory or regulatory provisions, the Recipient shall clearly mark all such potentially protected materials as “PROTECTED” and provide an explanation and complete citation to the statutory or regulatory source for such protection.



Photograph 1: Naturalist Patrick Downs, Hayward Shoreline Interpretive Center, demonstrates to fishing program participants how to use the fishing equipment.



Photograph 2: Using a minnow trap to catch bait along the channel at the Hayward Shoreline next to the San Francisco Bay Trail.



Photograph 3: For many of our participants, this grant was their first fishing experience!



Photograph 4: Fishing instruction at San Francisco Bay Trail Bridge in Hayward, CA.

# BUILT FOR THE WATER

Slime, lines, and nares are handy tools for fish.

**F**ish exhibit a number of structural and behavioral adaptations that help them survive and thrive in a watery environment. As a start, they are coated with oil. This slimy film helps smooth any irregularities of the scales and reduces friction as the fish swims. The oil helps maintain the chemical balance between the fish's internal electrolytes and the surrounding water chemistry. It also makes it hard for fungi, bacteria, and parasites to take hold.

In addition, fish have a "lateral line," a sensory organ located on their sides that detects changes in water pressure. Knowing the direction of waves, chop, tidal currents, and incoming stream flow helps fish navigate in the water.

Fish have sensory organs called nares that detect odors in the water. Odors can be interpreted as food, danger, a mate, or a rival. They also have the capacity to determine depth by interpreting the amount of light present in the water column.



Photography by Lee Austin



Funding for this signage was provided in part by the  
Cosco Busan Recreational Use Grant Program

# STRANDS IN THE WEB OF LIFE

From worms to willets, wildlife enjoys a feeding frenzy at the Bay.

**D**on't let this murky water fool you. The suspended organic matter clouding the San Francisco Bay-Estuary makes this body of water one giant bowl of fish food. Nutrients from the Delta, ocean, and local streams flow into the Bay and sustain a complex food web. In the open water, marshes, and mudflats, plants and filter-feeding animals depend on this "broth."

The salt marsh offers a maze of hiding places for small fish and invertebrates. There in a tangle of cordgrass and pickleweed, they find protection and food. But when appetites stir, larger fish like striped bass and even leopard sharks venture into the marsh to snag a snack.

The mudflats are like a giant buffet line where mud, decaying matter, and algae form the base of a food web. Clams, worms, and other invertebrates feed on this organic ooze and in turn at low tide, become food for shorebirds. As the tide returns, small fish, such as stickleback, rainwater killifish, sculpin, gobies, and gunnels, arrive to feed on the invertebrates. They in turn become food for herons and other wading birds that stalk their meals in shallow water.



Photography by Lee Auerch



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# WE'RE ALL IN THIS TOGETHER

The footprints we leave don't have to be heavy.

**T**hink about the consequences of your behavior as an angler. Discarded fishing line lasts years and can end up tangling fins, legs, and beaks. Bait wrappers look like food and can end up in the stomachs of birds. Hooks can snare more than fish. Proper disposal of trash means fewer hazards for wildlife and people.

## Catch and Release

If you plan to release the fish you catch, please use barbless hooks. They are easier to extract from a fish and do less damage. Release the fish you catch as quickly as possible.

## Watch where you walk!

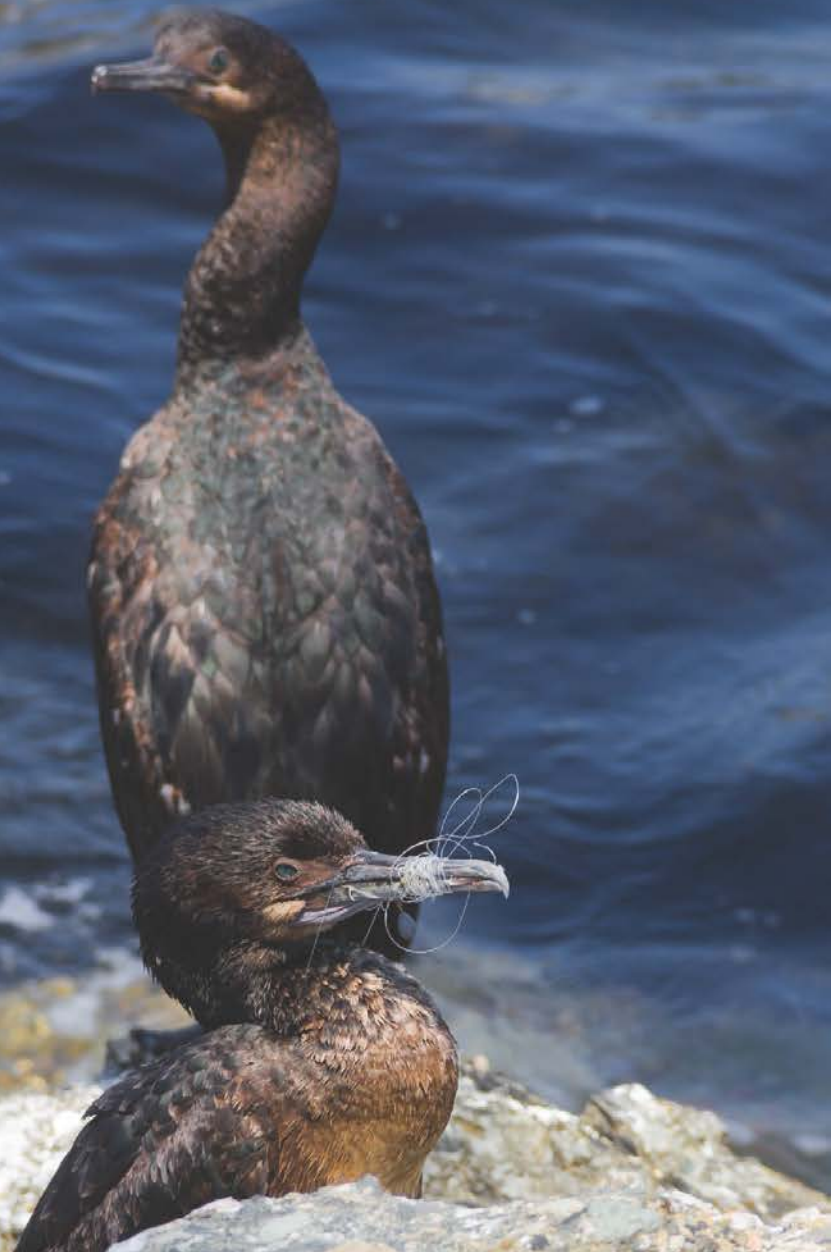
Be careful. Shoreline habitats can be deceiving. Mudflats are notorious for sucking shoes off unsuspecting visitors. Barnacle-encrusted rocks can cut like razors, and pickleweed can cover bits of broken glass or rusted metal.

## Bring your fishing license!

Be familiar with California Department of Fish and Wildlife fishing rules. A fishing license is needed for anyone 16 years and older.



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# WATERSHED STEWARDSHIP

Everyone plays a role in protecting the Bay.

**T**ake a look around you. Water flows downhill from those surrounding hills onto the flatlands where asphalt, lawns, and concrete define the landscape. There the water picks up oil, heavy metals, fertilizers, pesticides, and even pet waste. Eventually all of it makes its way to the Bay.

In the Bay Area, what we do at home, at work and in the community affects the water quality of the Bay, as well as the health of the plants and animals that call it home. With over 7 million people living in this region, watershed pollution is a big problem. We can help solve it by curbing the flow of contaminants.

## Minding your health

Heavy metals and other contaminants are cause for concern. And eating the fish you catch could pose a risk. Check the California Environmental Health Hazards website [oehha.ca.gov](http://oehha.ca.gov) for current information.

## The Hayward Shoreline Interpretive Center

Visit the Center and enjoy a fish-eye view of the estuary. With acres of mudflats, salt marsh, open water, and uplands, a mosaic of habitats is waiting to be explored. Naturalist-led programs assemble the puzzle pieces of the San Francisco Bay-Estuary and connect its stories to you through hikes, programs, exhibits, and community activities.



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