

# PROJECT CROOS

## Collaborative Research on Oregon Ocean Salmon

[www.PacificFishTrax.org](http://www.PacificFishTrax.org) & [www.ProjectCROOS.com](http://www.ProjectCROOS.com)

### Project Summary (as of January 6, 2010)

#### **Background**

- ⇒ CROOS is an interdisciplinary partnership between the salmon troll industry and university, federal, and state agency scientists, educators, and managers.
- ⇒ The concept for this project emerged in 2005 during discussions with Oregon's Congressional delegation in developing approaches to address the Klamath salmon disaster.
- ⇒ Project initiated in 2006 with support from the Oregon Watershed Enhancement Board. The project is presently supported with a range of federal and state grants and contracts including Federal Klamath River disaster relief funds.
- ⇒ Sampling protocols developed in 2006 have produced two years of fine-scale fish distribution and fishing effort data to support long term ecosystem-based fisheries science and management.
- ⇒ Research work and sampling protocols are providing the foundation for a longer term project involving industry, agencies, and tribes along the entire West Coast.

#### **Project Goals and Objectives**

- ⇒ **Prevent coast-wide fishing closures and enhance economic benefits to the salmon fishery and fishery-dependent coastal communities.**
- ⇒ Improve salmon management and avoid harvest of weak salmon stocks by identifying – in “real time” – movement and location of individual stocks and relationship with oceanographic conditions.
- ⇒ Support innovative market development for Oregon salmon through use of bar codes/digital technologies.
- ⇒ Effectively communicate project data and findings through [www.pacificfishtrax.org](http://www.pacificfishtrax.org), an interactive, “real time”, and “market driven” website for fishery managers, scientists, fishermen, consumers, marketers, educators, and the public.
- ⇒ Improve ecosystem-based fisheries management by making ecological, economic, and environmental information available to inform management decisions.

#### **Organization**

- ⇒ Leadership: The CROOS Group is composed primarily of fishermen and scientists. Partners include the Oregon Salmon Commission, Oregon State University, Oregon Sea Grant, National Marine Fisheries Service (NMFS) Northwest Fisheries Science Center, Community Seafood Initiative, Seafood Consumer Center, and Oregon Department of Fish and Wildlife.
- ⇒ Additional coast-wide partners include the California Salmon Council, NMFS Southwest Fisheries Science Center, California Department of Fish and Game, Northwest Indian Fisheries Commission, Washington Department of Fish and Wildlife, Washington Trollers Association, and NOAA research cruises.

#### **Progress**

- ⇒ Over 190 salmon fishermen representing 11 Oregon counties have been trained in sampling protocols.
- ⇒ Members of the fishing community, including Fishermen (122 vessel operators and over 75 crew members), fleet managers, and port-liaisons have received more than \$535,000 in compensation.
- ⇒ Pacific Fish Trax interactive “real time” website [www.pacificfishtrax.org](http://www.pacificfishtrax.org) went online February, 2009.
- ⇒ Electronic data-loggers capable of collecting, storing and transmitting data on-demand via satellite or cell-phone links to the [www.pacificfishtrax.org](http://www.pacificfishtrax.org) database/website are being tested fall of 2009.
- ⇒ Pilot marketing project utilizing interactive kiosks launched at New Seasons markets in Portland, Oregon (February, 2009).
- ⇒ Final 2006 and 2007 reports are available on [www.pacificfishtrax.org](http://www.pacificfishtrax.org).
- ⇒ Mixed stock analysis results for Chinook salmon in Pacific whiting bycatch (2008) are available on [www.pacificfishtrax.org](http://www.pacificfishtrax.org) website. Project is ongoing in partnership with NOAA.

### Future Actions

Long term funds for ocean research need to be a part of federal efforts to aid the fishery and improve management and science. Based on research findings, Project CROOS expects this project to help industry access healthy stocks, while protecting weak stocks, improve economic benefits, and foster future collaborative fisheries research. Partnerships with California and Washington will support a Coast-wide integrated approach to salmon science, management, and marketing.

**Figure 1.** Chinook salmon harvest locations depend on upwelling conditions and sea surface temperature fronts (fishing effort data collected but not shown). The average sea surface temperature in °C for September 17 - 19, 2006, indicates a strong plume of cold, upwelled water occurs offshore, with Chinook catch locations distributed primarily along the upwelling front. One week later, the upwelling plume has weakened – the Chinook catch for the period from Sept 24 - 26, 2006, has moved inshore where the cold, upwelled water is limited to the coastline (Figure 1b).

