West Coast Salmon
Genetic Stock Identification Collaboration

http://projectcroos.com/west-coast-genetic-stock-identification-collaborative

Project Summary *(as of March 1, 2011)*

Background

- The West Coast Salmon Genetic Stock Identification Collaboration is an interdisciplinary partnership between the salmon troll industry and university, federal, state and tribal agency scientists and managers.
- Independent projects in California, Oregon (Project CROOS) and Washington (Ocean Genetics Project) united in 2007 to develop strategies to achieve common goals and objectives.
- Federal Klamath River disaster relief, the Oregon Watershed Enhancement Board, a Saltonstall-Kennedy Grant and other state and federal funds provide support for California and/or Oregon Projects. Washington projects were supported by the Pacific Salmon Commission and Washington State General Funds.
- The concept for this project emerged in 2005 during discussions with Oregon's Congressional delegation in developing approaches to address the Klamath salmon disaster.
- Sampling protocols developed in 2006 have produced two years of fine-scale fish distribution data and fishing effort to support long term ecosystem-based fisheries science and management.

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 by avoiding harvest of weak salmon stocks, thereby enhancing economic benefits to the salmon fishery and fishery-dependent coastal communities.
- Identify – in "real time" – movement and location of individual stocks in relation to oceanographic conditions.
- Improve ecosystem-based fisheries management by applying ecological, economic, and environmental information to management decisions.
- Link management of freshwater, estuarine, and coastal salmon ecosystems, and maintain salmon fisheries while conserving salmon stocks.
- Evaluate ocean life history and etiology of the *Shasta* parasite to determine the effects of parasites during the marine life phase of Klamath salmon.
- Create an interactive, "real time", and "market driven" website to enable fishery managers, scientists, fishermen, consumers, marketers, educators, and the public to effectively use project data and findings.
- Support innovative market development through use of bar codes/digital technologies.

Organization

- Leadership: Oregon Salmon Commission, California Salmon Council and Washington Troller's Association.
- Partnership: Oregon State University, Oregon Department of Fish and Wildlife, Oregon Sea Grant, Community Seafood Initiative, National Marine Fisheries Service Northwest and Southwest Fisheries Science Centers, California Department of Fish and Game, University of California, Santa Cruz, Washington Department of Fish and Wildlife, and Northwest Indian Fisheries Commission.

Progress

- At-sea sampling using standardized data collection protocols occurred along Washington, Oregon and California coasts from May – September, 2010.
- Over 330 salmon fishermen representing 15 counties in Oregon, California, and Washington sampled in 2010.
- Members of the fishing community, including vessel operators and crew members, fleet managers, and port-liaisons have received approximately $2,500,000 in compensation since project inception.
- 9,600 Chinook salmon were sampled in 2683 boat-days, using high-spatial resolution at-sea sampling protocols, during 2010.
- PFMC allocated sampling impacts and NMFS, NWR issued a Scientific Research Permit to support non-retention sampling in closed times and areas.
- California and Oregon state-based projects are uploading data directly to a new centralized database through the www.pacificfishtrax.org website.

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, this project will help industry access healthy stocks, protect weak stocks, improve economic benefits, and become a model for future collaborative fishery research. The tri-state partnership between California, Oregon and Washington will support a Coast-wide integrated approach to salmon science, management, and has potential to provide economic benefits to the fishing industry.

Figure 1. Preliminary stock-specific catch per unit effort (CPUE) from Santa Barbara, CA to Tillamook, OR from June, 2010 GSI sampling. Twenty six (26) stocks or stock groupings are represented. The map also displays sampling effort and catch locations. Stocks are ordered north to south. CPUE scale is logarithmic; vertical line indicates one fish per boat day. Vertical green bar on left axis is log effort.