

## Coordinating knowledge about Pacific salmon conservation and restoration efforts

### Problem Statement

Scientific data on Pacific salmon, collected to support the National Marine Fisheries Service's (NMFS) mission of recovering threatened and endangered salmon stocks, have not been integrated with data collected to support its parallel mission of managing sustainable ocean salmon fisheries.

### Critical Factors

- Lack of data integration hinders fishery management decisions and stock restoration activities carried out by state and federal agencies and tribes.
- A comprehensive management model is needed to anticipate multi-species impacts resulting from changes in environmental conditions and fishing regimes.
- The extensive database on salmon abundance, habitat, landings, and hatcheries gathered during Endangered Species Act status reviews is not incorporated into the StreamNet database maintained by the Pacific States Marine Fisheries Commission.
- A multi-species, multi-impact model for Pacific salmon is needed to effectively coordinate harvest issues with restoration efforts and conservation activities.

### Status of Research

Researchers at the NWFSC are integrating data on all salmon stocks in Washington, Oregon, and California generated by the NMFS's Endangered Species Act (ESA) status reviews with data housed in the StreamNet database maintained by the Pacific States Marine Fisheries Commission. This unified repository will be updated annually. In addition, NWFSC scientists are helping develop a multi-species, multi-impact analytical model that focuses on 1) differences in life history parameters, migration patterns, and environmental responses among fish stocks and 2) impacts to mixed-stock groups as a result of changes in environmental conditions and fishery regimes. When complete, the model will be able to estimate the ways in which changing ocean conditions affect the marine distribution of salmon.



The NWFSC has formed an interagency team to provide state and tribal fishery managers with data and analytical support focused on maintaining the long-term viability and genetic diversity of local breeding populations.

### Future Considerations

Collaboration between the NMFS and other government and tribal fishery managers is needed to identify important gaps in data collection, evaluate the adequacy of current management approaches, and develop new management options. Once the Pacific salmon databases have been fully integrated, the information they contain will be used as a basis for coordinating and prioritizing fishery management and stock restoration activities. At that point, data gathering must be extended to include Alaska and British Columbia and the database structure must be expanded to accommodate additional fields required to develop more detailed analytical models.

### Key Players

<b>Resource Enhancement &amp; Utilization Technologies (REUT) Division, NWFSC</b>	Northwest Indian Fisheries Commission
U.S. Fish and Wildlife Service	Tulalip Indian Tribe
Canada Department of Fisheries & Oceans	Skagit Systems Cooperative
Washington Department of Fish & Wildlife	University of Washington
Oregon Department of Fish & Wildlife	University of Idaho
Pacific States Marine Fisheries Commission	

**Contact: Dr. Robert Iwamoto, Director, REUT Division (206/860-3380)**

