

## Develop biologically-based delisting goals for listed salmon and steelhead



### Problem Statement

More than two dozen “Evolutionarily Significant Units” (ESUs) of Pacific salmon are already listed as threatened or endangered species under the federal Endangered Species Act (ESA), and many other wild salmon populations have declined throughout much of Washington, Oregon, Idaho, and California. Recovery plans will succeed only if they are based on sound biological principles.

### Critical Factors

- The National Marine Fisheries Service (NMFS) is legally mandated to conserve and restore threatened and endangered salmon populations.
- The Northwest Fisheries Science Center (NWFS) is developing a sound scientific basis for ESA recovery planning.
- Center scientists are working with colleagues from other agencies to craft a recovery planning strategy that focuses on distinct geographic areas, or domains. A Technical Recovery Team (TRT) will be responsible for recovery planning within each domain. A NWFS scientist will chair each team.
- Successful recovery efforts will require:
  - securing cooperation among state, local, federal, and tribal governments, plus international management agencies.
  - integrating a wide range of scientific information over a broad geographic area.
  - monitoring the health of salmon populations and their habitat.
  - evaluating the impact of specific management actions.
  - conducting research on factors that may promote or limit recovery success.

### Status of Research

TRTs have been formed in two recovery domains (Puget Sound and Willamette/Lower Columbia River). Each team is chaired by a NWFS researcher and includes scientists from federal, state, and local agencies, tribes, universities, and other interested parties. Center scientists are working with TRT members to apply the concepts described in the “Viable Salmonid Populations” document (NOAA Tech Memo NMFS-NWFS-42) to development of biologically-based recovery goals. This process involves identifying demographically-independent salmon populations, assessing their status, and integrating information regarding the status, distribution, and diversity of individual populations to identify scenarios that lead to viability of an entire ESU. Center scientists are also working to develop relationships between habitat characteristics and fish productivity (see EC 6506). These relationships will be used by TRTs to describe the amount, type, and distribution of habitat required to support viable populations of salmon and steelhead. Center scientists have worked with other regional biologists to develop a framework for carrying out monitoring and evaluation as an integral part of formal ESA recovery planning.

A Recovery Science Review Panel (RSRP) of independent scientists with international reputations (including three members of the National Academy of Sciences) has been formed to help guide the scientific and technical aspects of recovery planning. The Center has established a Recovery Planning web page ([www.nwfsc.noaa.gov/cbd/trt](http://www.nwfsc.noaa.gov/cbd/trt)) that facilitates document and information sharing among TRT members. The site also provides a mechanism for disseminating information about recovery planning to the general public.

### Future Considerations

In FY01, formal ESA recovery planning is expected to expand from the two current recovery domains to areas in California, southern Oregon, and perhaps the upper Columbia and Snake Rivers. In addition, more details of the framework for carrying out monitoring and evaluation of salmon recovery will be developed as elements of specific management actions come into sharper focus.



**Develop biologically-based delisting goals for listed salmon and steelhead (continued)**

**Key Players**

**Conservation Biology (CB) Division, NWFSC**

Environmental Conservation (EC) Division, NWFSC

Fish Ecology (FE) Division, NWFSC

Resource Utilization and Enhancement Technologies (REUT) Division, NWFSC

Cumulative Risk Initiative (CRI) Team, NWFSC

Northwest Regional Office, NMFS

Southwest Regional Office, NMFS

Southwest Fisheries Science Center, NMFS

U.S. Fish and Wildlife Service

U.S. Forest Service

Washington Department of Fish and Wildlife

Oregon Department of Fish and Wildlife

Idaho Department of Fish and Game

Northwest Indian Fisheries Commission

Columbia River Inter-Tribal Fish Commission

Local government entities and NGOs

Environmental groups

Independent Science Panel (Washington)

Independent Multidisciplinary Science Team (Oregon)

Independent Science Advisory Board (Columbia River)

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