



**Recovery Planning
Background**

**Archived Recovery
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Recovery Planning for West Coast Salmon

National Marine Fisheries Northwest and Southwest Regions.

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Part 1: CONSERVATION CRISIS

Over the past several decades, populations of salmon and steelhead throughout the West Coast have declined to dangerously low levels. In 1991, the National Marine Fisheries Service (NMFS) began a comprehensive review of the status of salmonid and steelhead throughout Washington, Oregon, Idaho, and California. NMFS identified 52 Evolutionarily Significant Units (ESUs) of West Coast salmon and steelhead. Twenty-six of those ESUs have now been listed as endangered or threatened species under the Endangered Species Act (ESA). In addition, it is estimated that scores of historic populations are now extinct.

These population declines and extinctions are the result of numerous habitat-affecting factors (such as economic development, resource extraction, and other land uses), harvest practices, hatchery production, and other factors. Human actions that depress population abundance have also caused salmon to be more susceptible to natural environmental fluctuations such as poor ocean conditions and drought.

If this pattern is to be reversed, it is critical that comprehensive, focused recovery efforts take place throughout the region. NMFS is committed to this effort, and this document describes the approach the agency will take in planning for West Coast salmon and steelhead recovery.

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Part 2: RESPONSE TO THE CRISIS

The geographic extent of declining salmon and steelhead runs - and the area affected by ESA salmonid listings - includes large portions of the states of Washington, Oregon, Idaho, and California. State agencies, local and regional governments and organizations, tribal governments, Federal agencies, and private organizations have responded to this conservation crisis by developing programs to help protect and restore salmon and steelhead and their habitats.

These tribal, Federal, state, local, regional, and private efforts will play a key role in recovering threatened and endangered salmon. Also contributing to recovery will be the regulatory tools provided by the ESA. These tools include prohibitions against harming listed species and prohibitions against Federal agency actions that reduce the likelihood that the species will survive and recover.

All these programs together provide important protections but add up only to a piecemeal approach to recovery, and that is not sufficient.

Comprehensive recovery plans are needed to provide a framework for addressing problems across entire ESUs and among all of the activities that threaten salmon, and for prioritizing actions necessary for recovery.

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Part 3: RECOVERY PLANNING AND THE ESA

The ESA requires that recovery plans contain (1) objective, measurable goals for delisting; (2) a comprehensive list of the actions necessary to achieve the delisting goals; and (3) an estimate of the cost and time required to carry out those actions. In addition, NOAA Recovery Planning Guidelines suggest that recovery plans include an assessment of the factors that led to population declines and/or which are impeding recovery. Finally, it is important that the plans include a comprehensive monitoring and evaluation program for gauging the effectiveness of recovery measures and overall progress toward recovery.

Element (1) above is largely a technical exercise, with policy input, while elements (2) and (3) are largely a policy exercise, with technical input. The NMFS will address element (1) by forming geographically-based Technical Recovery Teams (TRTs), in coordination with existing science teams and ongoing conservation planning efforts. For elements (2) and (3), NMFS intends to work with state, local, regional, tribal, and private entities to craft a recovery planning process suited to each planning area. As discussed below, TRTs are also expected to provide technical support and analysis to these efforts. Although the processes that accomplish element (1) and elements (2) and (3) will overlap, NMFS refers to these two sets of tasks as "Phase I" and "Phase II" of recovery planning.

NMFS believes it is critically important to ground the recovery planning process in the many state, regional, tribal, local, and private conservation efforts already underway throughout the region. NMFS intends to work throughout the process of identifying recovery goals to develop linkages between the technical process and these ongoing planning efforts. In the process of identifying actions to achieve the goals, we hope that co-managers and ongoing conservation planning efforts assume a major role.

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Part 4: SCOPE STRUCTURE OF NMFS RECOVERY PLANNING

The species scope of recovery planning will encompass Chinook (*Oncorhynchus tshawytscha*), Coho (*O. kisutch*), Sockeye (*O. nerka*), Chum (*O. keta*), and Pink (*O. gorbuscha*) salmon, and Steelhead trout (*O. mykiss*).

Recovery plans will address all salmonid species within a series of discrete geographic areas, or domains. (Formal ESA recovery efforts that are already underway for listed Snake River and Sacramento River

populations may eventually be integrated into this process.) Tentatively identified recovery planning domains, and the currently listed ESUs they contain, are:

1. **Puget Sound and the Olympic Peninsula:** Puget Sound Chinook, Hood Canal Summer Chum, Ozette Lake Sockeye.
2. **Willamette and Lower Columbia River Basins and Southwest Washington Coast:** Lower Columbia River Chinook, Upper Willamette River Chinook, Columbia River Chum, Lower Columbia River Steelhead, Upper Willamette River Steelhead.
3. **Mid and Upper Columbia River Basins: Upper Columbia River Spring Chinook, Upper Columbia River Steelhead, Mid Columbia River Steelhead.**
4. **Snake River Basin:** Snake River Fall Chinook, Snake River Spring/Summer Chinook, Snake River Sockeye, Snake River Steelhead.
5. **Oregon Coast (Columbia River to Cape Blanco):** Oregon Coast Coho.
6. **Southern Oregon/Northern California Coast:** Southern Oregon/Northern California Coast Coho.
7. **North-central California Coast:** Central California Coast Coho, Central California Coast Steelhead, California Coast Chinook., Northern California Steelhead.
8. **South-central California Coast:** South-central California Steelhead, Southern California Steelhead.
9. **California Central Valley:** Central Valley Steelhead, Central Valley Spring Chinook, Sacramento River Winter Chinook.

As mentioned above, NMFS eventually will appoint a TRT for each domain. In the spring of 2000, TRTs were appointed for the Puget Sound and Willamette/Lower Columbia/SW Washington domains. We anticipate appointing additional TRTs later in 2000 and in 2001, as resources permit.

In addition, NMFS has established a Recovery Science Review Panel ("Panel") to guide the recovery planning process throughout the four-state area. The Panel will (1) review core principles and elements of the recovery planning process NMFS is developing; (2) ensure that well-accepted and consistent ecological and evolutionary principles form the basis for all recovery efforts; (3) review processes and products of all TRTs for scientific credibility and consistency; and (4) oversee a recovery plan peer review process.

RECOVERY GOALS

The TRTs will be asked to (1) identify population and ESU de-listing goals ; (2) characterize habitat/fish abundance relationships; (3) identify the factors for decline and limiting factors for each ESU; identify the early actions that are important for recovery; (4) identify research, evaluation, and monitoring needs; and (5) serve as science advisors to groups charged with developing measures to achieve recovery.

Recovery goals must, at a minimum, restore listed ESUs to levels at which they are no longer threatened and can therefore be delisted under the ESA.

The TRTs may also be asked to consider setting population abundance and productivity levels that provide opportunities for specified levels of sustainable harvest. If that occurs, the NMFS will work with state and tribal co-managers and stakeholders to identify target harvest levels for the technical teams to consider.

TRTs will identify recovery goals for all listed ESUs. Although the TRTs will not identify formal recovery goals for candidate species, they will identify factors of concern and measures to ensure the long-term conservation of such species. In addition, as recovery measures are eventually proposed, their effects on non-listed salmonid species will be evaluated to ensure that actions benefitting the listed or candidate species do not place non-listed species at significant risk.

The TRTs will work closely with existing technical teams, such as the Independent Multidisciplinary Science Team in Oregon and the Washington Independent Science Panel. The TRTs will be guided by the Recovery Science Review Panel.

In some areas, state and tribal managers and others have already begun the work of establishing recovery goals, and where this work has already occurred, NMFS intends that the TRTs will consider this work. There will be considerable opportunity for public involvement throughout the entire process, and TRT work products will be peer-reviewed and distributed for public comment.

RECOVERY MEASURES

The planning component of the ESA recovery planning process will focus on identifying the measures and actions necessary to achieve the recovery goals identified by the TRTs. Important steps in this process will include: (1) inventorying all ongoing state, tribal, local, and Federal conservation plans and planning efforts, as well as all existing Habitat Conservation Plans and 4(d) rule components in each planning area; (2) evaluating these existing conservation plans and efforts to assess how well they address identified factors for decline and limiting factors, and the extent to which they collectively achieve the identified recovery goals; (3) identifying and evaluating any additional or alternative measures necessary for achieving the identified recovery goals; (4) prioritizing the required recovery measures and identifying the entity or entities responsible for implementing them; and (5) estimating the costs and time needed to carry out the identified recovery measures.

The structure and timing of this portion of the recovery planning effort will depend to some extent on what processes are already underway in a given area. In some cases it may be appropriate for NMFS to establish a planning team by adding to the TRT individuals possessing a wider range of expertise (such as policy, economic analysis, land use planning, etc.) or representing ongoing planning efforts. In other cases it may be appropriate to appoint a separate policy-oriented planning team and have the technical team serve in as science advisors to that team. In still other cases, it may be that local efforts have matured to a point where it is unnecessary to appoint a formal recovery team for the planning process. In such cases, the TRT could serve as science advisors to the planning team.

Regardless of how the planning aspect of recovery is structured, the NMFS will need to ensure that all recovery plans are assessed to determine whether they will achieve the recovery goals, in what time frame, with what degree of certainty, and at what economic cost.

The TRTs will thus continue to play a role in the planning process by evaluating whether proposed recovery measures will achieve the desired recovery goals. In addition, the draft plans will be peer reviewed and undergo public review and comment to further ensure that they are scientifically credible and contain implementable measures that are publically supported and will lead to recovery.

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Part 5: APPOINTING THE RECOVERY SCIENCE REVIEW PANEL

The Recovery Science Review Panel will consist of three to five highly qualified and independent scientists with strong records of sustained scientific contributions in a field relevant to salmon recovery. Members of this Panel should:

1. **Be scientists of international reputation** who have distinguished records of scientific accomplishment in the fields of ecology, evolutionary biology, conservation biology, fisheries biology, or salmon biology.
2. **Have held positions of scientific leadership** during their career.
3. **Have demonstrated fairness** and cooperation during their career.
4. **Meet National Research Council standards** for independence and conflict of interest.

Candidates for the Panel are being solicited through a Federal Register notice (see 64 FR 56329, October 19, 1999) to encourage a broad set of nominations from scientific societies, academic institutions, established scientific bodies in the region, tribes, states, other co-managers and stakeholders, and Federal agencies. The nominations will be reviewed by an independent panel of scientists who will forward a list of qualified candidates to NMFS for selection.

The Panel will not have any NMFS members, but one or more NMFS scientists will be associated with the Panel to (1) facilitate coordination with Technical Recovery Teams, (2) provide background information and an historical context for salmon management, and (3) help fill any information requests from the Panel.

Initially, the Recovery Science Review Panelists will be appointed for a three-year term. At that point, the terms for all members will be reviewed, taking into consideration workloads, other commitments, and recovery planning progress and future needs.

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Part 6: APPOINTING TECHNICAL RECOVERY TEAMS

Technical Recovery Team members will consist of an appropriate mix of experts in salmon biology, population dynamics, conservation biology, ecology, and other disciplines relevant to the planning area. Each TRT will have at least one member with experience working in the geographic area in question and extensive knowledge of the area and the anadromous salmonids that inhabit it. Team members will be screened for compliance with the criteria listed below. Each member must satisfy the first three criteria (numbers 1-3) and at least one of the remaining three criteria (numbers 4-6).

1. **High achievement** in a relevant discipline, which may include ecology, genetics, fisheries, hydrology, river geomorphology, or other appropriate disciplines.
2. **High standards** of scientific integrity, independence, and objectivity.
3. **A demonstrated interest** in and ability to work effectively in an interdisciplinary team setting.
4. **Extensive knowledge of West Coast** salmon biology, status, or habitat.
5. **A record of scientific accomplishment** documented by contributions to peer-reviewed literature or other evidence of success in creative scientific endeavor.
6. **A demonstrated ability** to forge creative solutions to complex problems.

NMFS will solicit nominations for TRT members broadly, from state, local, tribal, and Federal co-managers, academic institutions, stakeholders, scientific organizations, and other interested parties. The Recovery Science Review Panel will review nominees to ensure they meet the criteria, and NMFS will appoint the team from among the qualified candidates.

We anticipate that each TRT will consist of six to nine members. We also expect that each TRT will include at least one scientist from the NMFS Northwest or Southwest Fisheries Science Center (who must meet the same selection criteria as other members). In addition, a representative from the NMFS Northwest or Southwest Regional Office will serve as the recovery plan coordinator for each team to provide ESA policy guidance and ensure that the team receives the administrative support it needs.

Initially, TRT members will be appointed for a two-year term. At that point, the terms for all members will be reviewed, taking into consideration workloads, other commitments, and recovery planning progress and future needs.

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Part 7: ADDITIONAL INFORMATION

As mentioned above, NMFS will begin recovery planning in the Puget Sound and Willamette/Lower Columbia River/Southwest Washington domains in early 2000. Recovery planning efforts for one domain in California may also begin in early 2000. Please visit the NMFS Northwest Region website at <http://www.nwr.noaa.gov> for updates on the status of recovery planning, or contact the appropriate area representative as indicated:

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