



Frequently Asked Questions

Coastal Multispecies Recovery Plan

What is NOAA Fisheries releasing?

NOAA Fisheries is releasing the final Coastal Multispecies Recovery Plan for the California Coastal (CC) Chinook Salmon (*Oncorhynchus tshawytscha*) Evolutionarily Significant Unit (ESU), Northern California (NC) Steelhead (*O. mykiss*) Distinct Population Segments (DPS) and Central California Coast (CCC) Steelhead (*O. mykiss*) DPS (Recovery Plan). The Recovery Plan provides a road map to achieve the recovery of CC Chinook salmon, NC steelhead, and CCC steelhead. These species are listed as threatened under the federal Endangered Species Act (ESA).

Section 4(f) of the ESA directs NOAA Fisheries to develop and implement recovery plans for threatened and endangered species. This Recovery Plan serves as a resource to organize on-the-ground actions to recover each species. It provides guidance to federal, state, local, and tribal resource managers, as well as private organizations and landowners, on steps they can take to help recover Chinook salmon and steelhead in California.

Where can I access the recovery plan?

- Electronic version of the Coastal Multispecies Recovery Plan, as well as accompanying materials, on NOAA Fisheries West Coast Region's website at: http://www.westcoast.fisheries.noaa.gov/protected_species/salmon_steelhead/recovery_planning_and_implementation/north_central_california_coast/north_central_california_coast_salmon_recovery_domain.html
- To receive a CD-ROM of the recovery plan and accompanying materials, please contact Andrea Berry at Andrea.Berry@noaa.gov or mail a request to NOAA Fisheries, ATTN: Erin Seghesio, Recovery Coordinator, 777 Sonoma Ave, Santa Rosa, CA 95404.

Who can I contact for more information?

For more information related to the Coastal Multispecies Recovery Plan or for ways to get involved in recovering Northern and Central Coast salmon and steelhead, please contact Recovery Coordinators: Erin Seghesio at: Erin.Seghesio@noaa.gov, 707-578-8515 or Julie Weeder at: Julie.Weeder@noaa.gov, 707-825-5168.

Where are these species located?

The Recovery Plan covers approximately 8 million acres along California's central coast, extending from the Redwood Creek watershed in Humboldt County, south to the Aptos Creek watershed in Santa Cruz County. The area includes the San Francisco Bay estuary and its tributaries, as well as Humboldt Bay and its tributaries, but it excludes the Sacramento and San Joaquin rivers. The diverse geographic setting includes redwood and oak forestlands, rural

working forests and agricultural lands, as well as the highly urbanized areas surrounding San Francisco Bay.

CC Chinook salmon extend from Redwood Creek in Humboldt County, south to, and including, the Russian River in Sonoma and Mendocino counties. NC steelhead extend from Redwood Creek in Humboldt County, south to, and including, the Gualala River in Sonoma and Mendocino counties. CCC steelhead extend from the Russian River in Sonoma and Mendocino counties, south to Aptos Creek in Santa Cruz County. CCC steelhead utilize tributaries to the San Francisco Bay, as far east as Suisun Creek.

Why are CC Chinook salmon, NC steelhead, and CCC steelhead facing extinction?

Several factors contributed to the decline of CC Chinook salmon, NC steelhead, and CCC steelhead. Development activities throughout northern and central California have changed the landscape significantly for these fish over the last 100 years. Dams, water diversions, agricultural development, and resource extraction, among other activities, reduced the quantity and quality of habitat available to these species, in turn impacting their overall health. Collectively, these activities contributed to each species' decline and led to their listings as "threatened" under the Endangered Species Act.

How did NOAA Fisheries revise the final recovery plan based on public comments it received on the 2015 proposed recovery plan?

In 2015-2016, NOAA Fisheries received comments on the proposed recovery plan from local, state, and federal entities, stakeholders, nonprofits, and interested citizens. These public comments received were constructive and resulted in helpful fine tuning of several sections. Many of the population's profiles, recovery action and results were updated or revised based on comments received. One notable addition in the final plan is Appendix H: Prioritization of Populations for Restoration and Funding. While working to restore and recover all populations simultaneously would be preferable, the cost to implement such an effort is prohibitive. Instead, initially focusing efforts in fewer watersheds provides the best chance for species recovery. We developed a prioritization protocol to identify populations that are closest to achieving recovery and that are important to the recovery of the overall ESU/DPS.

Am I legally required to implement the Recovery Plan?

The Recovery Plan is not a regulatory document, and its implementation is voluntary. The Recovery Plan uses the best available scientific information to identify the actions needed to prevent the species' further decline and achieve its recovery.

If the Recovery Plan serves as guidance, and is not a regulatory document, what does NOAA Fisheries seek to accomplish?

Working with a broad group of recovery partners (e.g., federal, state and local agencies, watershed groups, etc.), NOAA Fisheries will use this Recovery Plan as the road map to recover CC Chinook salmon, NC steelhead, and CCC steelhead. The Recovery Plan identifies the actions needed to achieve recovery, and includes objective, measurable criteria by which we will determine when recovery has been reached. By clearly articulating the conditions under which each species will be considered "recovered," and the actions needed to reach that point, the

Recovery Plan allows partners to integrate actions that will promote species recovery into existing restoration programs and processes.

What types of actions are required to recover CC Chinook salmon, NC steelhead, and CCC steelhead?

The Recovery Plan identifies actions designed to restore ecological processes that support healthy salmon and steelhead populations and addresses the various activities that harm these processes and threaten the species' survival. For example, actions call for ensuring regulatory mechanisms are adequately protective of salmon and steelhead; restoring riparian conditions by improving timber harvest and grazing practices; restoring floodplains and channel structure by increasing the amount of large wood in streams; improving in-stream flows by changing the amount and timing of water withdrawals; restoring passage for salmon and steelhead as they migrate to and from the ocean; and protecting and restoring estuarine habitat, among other actions.

Are all recovery actions of equal importance?

All actions listed in the Recovery Plan are needed to recover the species. However, some actions provide more immediate benefits than others. In the Recovery Plan, each recovery action's priority is based on: 1) whether an action is needed to prevent extinction or a significant decline of any population; and 2) the extent to which each action will address the significant decline in habitat quality, or other negative impacts. When choosing particular recovery actions to implement, partners should consider recovery action priorities.

What is the timeframe for achieving recovery of CC Chinook salmon, NC steelhead, and CCC steelhead?

If sufficient funds are available, many Recovery Plan actions could occur relatively quickly and contribute to lower extinction risks for many populations. Healthy populations, in turn, contribute to the recovery of the entire species. Given that habitat degradation has occurred over more than 100 years, some aspects of habitat restoration will take decades to be fully realized. For example, trees large enough to provide large wood to streams, which provide healthy instream habitat for fish, can take decades to grow to sufficient size.

The Recovery Plan estimates that complete recovery of these species could take 50 to 100 years. It includes recovery actions for each species organized into implementation schedules. Wherever practicable, the schedules satisfy the requirement of the Endangered Species Act that each recovery plan include "estimates of the time required and the cost to carry out those measures needed to achieve the plan's goal and to achieve intermediate steps toward that goal." Many actions will benefit two or more listed species.

Is salmon recovery possible given California's current drought conditions?

Yes. Providing sufficient and cool water flows for salmon in warm, critically dry years is difficult, but droughts are not new to California. Salmon evolved under these conditions. Effective water management must balance human needs, agricultural production, and species' conservation. To protect CC Chinook salmon, NC steelhead, and CCC steelhead during the current and future droughts, the Recovery Plan recommends enforcement of unpermitted diversions, identification

of in-stream flow needs for salmon and steelhead, and the development of voluntary water conservation and in-stream flow agreements in certain watersheds.

How will we know CC Chinook salmon, NC steelhead, and CCC steelhead have recovered?

The Recovery Plan includes criteria NOAA Fisheries will use to determine when each species has recovered and federal protections are no longer needed. There are two types of criteria identified in the plan: biological viability criteria and threat abatement criteria. The former includes goals for abundance, or the number of individuals in a population; productivity, or the growth rate of a population; spatial structure, or the geographic distribution of individuals; and diversity, which ensures the retention of the genetic, life history, and behavioral variation within a population. Recovery criteria also address the specific listing factor identified as a threat. Threats are typically land use activities, such as agriculture or development. When threat abatement criteria are met, the threats facing these species and contributing to their decline will have been sufficiently reduced to allow the species to recover to healthy numbers and survive into the future.

What are the economic benefits of recovering these species?

Healthy salmon and steelhead populations provide significant economic benefits. Entire communities, businesses, jobs and cultures have been built around the salmon and steelhead of California. Similarly, many communities, businesses and jobs have been lost as wild populations have steadily declined. In other words, unhealthy salmon and steelhead populations result in significant lost economic opportunities and an unhealthy environment. Every dollar spent on salmon and steelhead recovery will promote local, state, federal, and tribal economies, and should be viewed as an investment with both societal (e.g., healthy ecosystems and clean rivers where we and our children can swim and play) and economic returns.

The act of implementing the Recovery Plan itself, together with the actual recovery of the species, will provide substantial economic benefits. The largest economic returns resulting from recovered salmon and steelhead populations are associated with sport and commercial fishing. For example, the California commercial and recreational salmon fisheries are estimated to generate a total of \$118-279 million in income annually, and provide roughly two to three thousand jobs¹. As salmon runs recover, commercial and recreational fishing opportunities could also increase. A revived sport and commercial fishery would likely coincide with substantial economic gains and the creation of jobs across the range of CC Chinook salmon, NC steelhead, and CCC steelhead, most notably in river and coastal communities.

The economy also will be stimulated through the employment of workers needed to implement recovery projects. Habitat restoration projects stimulate job creation at a level comparable to traditional infrastructure investments, such as mass transit, roads, or water projects. Every dollar invested in watershed restoration projects travels through the state's economy. Design, implementation, and maintenance of habitat restoration projects require hiring consultants,

¹ Southwick Associates. 2009. Calculation of the Projected Economics and Jobs Impact of Salmon Recovery in California.

Michael, J. 2010. Employment Impacts of California Salmon Fishery Closures in 2008 and 2009. Business Forecasting Center, University of Pacific, Stockton, CA.

contractors, employees, and field crews and purchasing equipment, goods and services. People hired to carry out such projects spend their wages on goods and services in their local communities. In Oregon, for example, 90% of investments in habitat restoration have been shown to stay in the state. Although the total cost for species recovery will be a significant amount of money, it is important to note the cost for recovery of each species will bring many ancillary benefits to the public as well as other species. Once implemented, many of the identified recovery actions described in this plan will also directly benefit the recovery of other salmon populations throughout coastal California, and vice versa. Therefore, costs of salmon recovery will be shared among species within the recovery domain.

What additional benefits will be realized by recovering these species?

Habitats restored to properly functioning conditions for salmon and steelhead offer enhanced resource values and provide substantial non-monetary benefits to human communities. These benefits include: improving and protecting the quality of important surface and ground water supplies, reducing damage from flooding resulting from floodplain development, reducing expenditures on bank stabilization or flood control actions, and limiting incidence of high severity fire. Restoring and maintaining healthy watersheds also enhances important human uses of aquatic habitats, including outdoor recreation, ecological education, field-based research, aesthetic benefits, and the preservation of tribal and cultural heritage.