Executive Summary
Rogue Fall Chinook Salmon Species Management Unit
Draft Conservation Plan of September 12, 2012

The purpose of this Conservation Plan is to ensure the continued viability of the Rogue Fall Chinook Salmon Species Management Unit (SMU) and to achieve a desired status that will provide significant ecological, economic, and cultural benefits for all Oregonians.

This plan meets the requirements for conservation plans as described in Oregon's Native Fish Conservation Policy (NFCP). The NFCP (OAR 635-007-0502 to 0509) was adopted by the Oregon Fish and Wildlife Commission in 2002 to support and increase the effectiveness of the 1997 Oregon Plan for Salmon and Watersheds. This conservation plan does not replace or supersede the Oregon Plan. Rather, the plan is designed to improve the status of the SMU by managing fall Chinook salmon, and their habitat, so as to attain a quantitative level of desired status. The plan describes commitments by the State of Oregon that will conserve the sustainability of this SMU and restore biological attributes necessary to achieve a science-based, socially established, desired status goal.

As defined in Oregon Administrative Rule, the term *conservation* means managing for sustainability of native fish so that present and future generations may enjoy sustained ecological, economic, recreational and aesthetic benefits (OAR 635-007-0501-10). Native fish are defined as those fish which are indigenous to Oregon, and the definition includes both naturally and hatchery produced fish (OAR 635-007-0501-36).

The NFCP employs conservation plans to identify and implement appropriate strategies and actions necessary to restore native fish in Oregon to levels that provide benefits to the citizens of the state. Primary steps in plan development followed a sequential process:

1. Define the species management unit and constituent populations.
2. Identify primary limiting factors.
3. Develop strategies and actions that address primary limiting factors.
4. Develop criteria that define desired status.
5. Determine current status.
6. Develop conservation criteria to guide warranted short-term adjustments to management.
7. Develop methods to monitor and evaluate population and SMU status.

The draft plan evolved as an iterative process by considering substantial review, discussion, and recommendations from a public advisory committee, and review by technical experts and co-management agencies. The public advisory committee met 22 times during the course of plan development.

Relationship to Federal Recovery Plans and Oregon Conservation Plans

Fall Chinook salmon in the SMU are not listed as either threatened or endangered under the Federal Endangered Species Act; nor are they considered to be a candidate species for a federal listing. One State of Oregon fish conservation plan has been finalized for the affected geographical area. In 2007, the Oregon Fish and Wildlife Commission adopted a conservation plan for the Rogue Spring Chinook Salmon SMU. The fall Chinook salmon conservation plan was developed to directly interface with the Rogue spring Chinook conservation plan. This

direct interface is critical because the Rogue spring Chinook salmon is depressed, while populations of fall Chinook salmon in the Rogue River Basin are healthy. Adoption and implementation of the fall Chinook salmon conservation plan will result in a continued management emphasis on the restoration of spring Chinook salmon in the Rogue River Basin.

Structure and Biology of the SMU

Fall Chinook salmon populations in the SMU exhibit two distinctly different life histories that have a genetic and spatial basis. Populations in the Rogue River Basin (Rogue Stratum) enter freshwater earlier, spawn earlier, and mature at younger ages as compared to populations found in the smaller coastal basins (Coastal Stratum). Based on current information, there appear to be five distinct populations in Rogue Stratum and four distinct populations in the Coastal Stratum. Fish produced in both strata rear in the ocean and contribute to fisheries in coastal Oregon and California.

Current Status of the SMU

All of the distinct populations in the SMU are viable and exhibit a very low extinction risk. Population sizes in the coastal stratum are likely lower than historical, pre-development conditions. In contrast, contrary to many salmon populations in the Pacific Northwest, fall Chinook salmon populations in the Rogue stratum appear to be more abundant than prior to the late 1800s. These populations have increased significantly as a result of fishery enhancement flows originating from two large federal reservoirs. However, populations in the Rogue River Basin will decrease in abundance as more reservoir storage is purchased for consumptive uses in future years.

For the last ten complete brood years, the SMU annually produced an average of 124,000 age3-6 naturally produced recruits (potential spawners). The Rogue Stratum accounted for 113,000 fish while the Coastal Stratum accounted for the other 11,000 fish. During the last ten years, hatchery fish composed an average of less than 2% of the fall Chinook salmon that naturally spawned within the SMU. Hatchery fish composed less than 1% of the natural spawners in the Rogue Stratum and 9% of the fish that spawned naturally in the Coastal Stratum.

Desired Status and Measurable Criteria

This conservation plan describes a desired status for the condition and performance of the Rogue Fall Chinook Salmon SMU. The desired status statement evolved during protracted discussions with the public advisory committee and represents a science-based product that has a good chance of attainment and maintenance of attainment. Within the desired status statement, there are elements that relate to adult abundance, juvenile abundance, adult migration timing, age composition, spatial distribution, persistence, and spawner composition. These status elements are measurable criteria that will be annually monitored to determine whether desired status criteria are attained.

Primary Factors that Account for Gaps between Current and Desired Status

There are some disparities between current status and desired status. All of these disparities relate to the number of naturally produced fall Chinook salmon that spawn in three of the four population areas of the coastal stratum and the status disparities are relatively low (shortfall range = 5-11%). Assessments of available data indicate there are five primary limiting factors that can be managed to some degree. These factors are: (1) volume of juvenile rearing habitat in streams

and estuaries, (2) water temperature in streams and in the estuaries during summer, (3) habitat quality in the estuaries during summer, (4) brood harvest rates that sometimes exceed maximum sustained yield, and (5) periodic low spawning escapements that follow poor ocean conditions.

In contrast, there are currently no gaps between current and desired status for populations in the Rogue Stratum. Assessments of available data indicate there are five primary limiting factors that can be managed to maintain desired status: (1) water temperature of the Rogue River in summer during adult migration, (2) water temperature of the Rogue River in summer during juvenile rearing, (3) the intensity of peak flows during egg and sac-fry incubation in the gravel, (4) brood harvest rates that sometimes exceed maximum sustained yield, and (5) periodic low spawning escapements that follow poor ocean conditions.

Management Strategies and Allied Actions

Multiple alternative suites of management strategies were crafted for both the Rogue and Coastal strata with the specific intent of managing fall Chinook salmon, and their habitat, so as to attain (or maintain) desired status within two or three fish generations. The alternatives differ significantly, but many commonalities also exist. All the alternatives describe potential management actions directed at (1) restoration, maintenance, and enhancement of critical habitat features, (2) fishery management strategies, and (3) management of hatchery fish.

For the Coastal Stratum, only two alternatives are preferred by members of the public advisory committee. Alternative 5 is preferred by a majority of the public advisory committee and by the Oregon Department of Fish and Wildlife (ODFW), while Alternative 6 is preferred by a minority of the public advisory committee. These two alternative suites of management strategies are very similar and differ solely in relation to one management strategy and two management actions. Alternative 5, but not Alternative 6, calls for ODFW to reduce hatchery fish releases in the Chetco River if levels of stray hatchery spawners exceed desired levels in the Winchuck population area. Alternative 6, but not Alternative 5, calls for ODFW to pursue modification of partial natural migration barriers.

For the Rogue Stratum, only two alternatives are preferred by members of the public advisory committee. Alternative 4 is preferred by a minority of the committee members and by ODFW, while Alternative 5 is preferred by a majority of the committee members. These two alternative suites of management strategies are very similar and differ solely in relation to one management strategy and two allied management actions that relate to native predators of juvenile and adult NP CHF. Alternative 5 commits ODFW to (1) continuous support of pinniped harassment and (2) initiate a program to decrease cormorant densities.

The Oregon Fish and Wildlife Commission will make the final selections for the suites of management strategies to be embedded in an adopted conservation plan. Beforehand, the commission will consider input received during public meetings held in southwest Oregon, written comments received from public and private entities, and will also consider public input received at the commission meeting. Primary elements of the conservation plan will become embedded in Oregon Administrative Rule after commission adoption of the plan.

Regardless of which alternative suite of management strategies is chosen by the commission, the plan does not propose new land-use regulations and continues support for non-regulatory

cooperative conservation. As such, this plan complements the Oregon Plan for Salmon and Watersheds, which supports efforts to improve habitat for fish and wildlife species through on-the-ground, non-regulatory work by community-based entities and individuals.

Key Conservation Commitments

• **Desired status statement.** This conservation plan establishes policy regarding the desired status of distinct populations, both population strata, and the SMU as a whole. The criteria embedded in the desired status statement are significant because the criteria are measurable metrics that will be used to track status of distinct populations, individual strata, and the entire SMU.

• **Conservation status statement.** This conservation plan establishes policy regarding potential situations indicative of significant deterioration in the status of the distinct populations. The measurable criteria embedded in the conservation status statement guide management changes when additional conservation measures are warranted.

• **Structured approach to management.** This conservation plan identifies the primary factors that should be addressed to achieve (or maintain) desired status, and outlines strategies designed to minimize the negative effects of those factors that can be managed.

• **Implementation of management strategies.** This conservation plan outlines practical actions designed to directly address primary limiting factors and are also designed to more effectively manage harvest.

• **Monitoring, evaluation, and research.** This conservation plan identifies (1) monitoring needed to track population status, (2) evaluations needed to assess the efficacy of management actions, and (3) research projects needed to directly assess the efficacy of key management strategies.

• **Accountability.** This conservation plan establishes policy regarding management strategies to be employed by ODFW. The plan also establishes policy regarding annual and long-term reports to be developed to document SMU status, changes in management actions, departures from the plan, and evaluations necessary for adaptive management.

• **Adaptive management.** This conservation plan establishes policy regarding adaptive management. New findings resulting from monitoring, evaluations, and research can be used to modify the management actions embedded in the plan, or revise management strategies after additional public input.

• **Cooperation among management agencies.** This conservation plan calls for ODFW to work closely with other governmental agencies.