

Coastal Multi-Species Conservation and Management Plan

2023 Implementation Report

Oregon Department of Fish & Wildlife



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Introduction

The *Coastal Multi-Species Conservation and Management Plan* (CMP) was developed to ensure the continued viability and conservation of Chinook salmon, spring Chinook salmon, chum salmon, winter and summer steelhead trout, and cutthroat trout Species Management Units (SMUs) along the Oregon Coast from the Necanicum River in the north to the Elk River in the south, and to achieve a desired status that provides substantial ecological and societal benefits. The plan also provides a framework for how hatchery salmon and steelhead and fisheries are to be managed. The CMP is consistent with requirements for conservation plans described in the Oregon Native Fish Conservation Policy (OAR 635-007-0502 to 0509) and was approved by the Oregon Fish and Wildlife Commission in June 2014.

CMP implementation is also guided by the Climate and Ocean Change Policy (OAR 635-900-0001 to 0020) adopted by the Oregon Fish and Wild Commission in July 2020. To track progress toward plan goals, the CMP calls for annual reports of monitoring information through *Hatchery Program Summaries* and *Wild Fish Monitoring Summaries*, as well as annual updates on plan implementation. This report summarizes CMP implementation and SMU metrics in 2023¹.

Progress Toward Desired Status

Since the adoption of the CMP in 2014, coastal salmon and steelhead have experienced multiple years of severe to extreme drought, declines in ocean productivity, and marine heat waves (e.g., the [Blob](#)). These conditions resulted in declines in abundances of coastal salmon and steelhead stocks from recent highs in 2014 and 2015. Coastal hatchery returns have also been adversely affected (see *Hatchery Program Summaries*). This is similar to observations in many other salmon and steelhead stocks throughout Oregon and the Northwest. Population trends vary among species and locations within the SMU, reflecting differences in freshwater habitat conditions, life histories (e.g., time spent rearing in freshwater), and ocean migration patterns. Although many populations have exhibited resilience during this period, returns have been highly variable and some populations have shown very concerning trends. Therefore, actions to reduce and buffer risk to wild fish will continue to be necessary in coming years. Summaries of each SMU are provided below, and data and additional details are available in this report's companion *Wild Fish Monitoring Summaries*.

Oregon Coastal Chinook Salmon

Chinook populations in the Coastal Chinook SMU include early returning (spring or summer) and late returning (fall) adult components. In the CMP, early components, where they occur, are referred to as “spring-run” or “summer-run” Chinook, while the more abundant late components are referred to as “fall-run” Chinook. Two independent populations of spring returning Chinook are called “spring Chinook” (as opposed to spring-run Chinook), and these are considered to be a separate Spring Chinook SMU (see below). Monitoring indicated substantial declines in returns of Oregon Coastal Chinook Salmon populations in the years following CMP adoption. The most pronounced decline occurred in the Coquille population, where the effects of adverse environmental conditions have been exacerbated by non-native fish predators. Overall abundance in the SMU was particularly low in 2018 and 2019, when many populations had at least one year below the critical abundance threshold.

¹ Though this report was completed in February 2025, the data, actions, and summaries reflect what occurred in 2023. One exception is winter steelhead monitoring results, which include the most recent season (2024).

Returns since lows in 2018–2019 have been highly variable from year to year and among populations. In 2023, two populations were above desired abundance targets (Salmon, Alsea), two were below critical abundance thresholds (Coquille, Elk), and the remaining populations were between critical and desired abundance targets. Abundance trends for the early-run components of coastal Chinook populations have varied and ODFW will continue to monitor this run component, where it occurs, as time and resources allow. It should be noted that the CMP’s Desired and Critical Abundance thresholds for Coastal Chinook Salmon populations were recalculated in 2019 after significant revisions to the abundance time series on which the thresholds are based. These revised abundance criteria replace the plan’s original criteria and are detailed in this report’s companion *Wild Fish Monitoring Summaries*.

Oregon Coastal Spring Chinook Salmon

Only two independent Spring Chinook salmon populations—both in the upper Umpqua Basin—are identified in the CMP. Following several years of decline, the North Umpqua population fell below critical abundance for the first time in 2018. The population rebounded in 2019 and 2020, followed by a decline to levels slightly higher than the critical abundance threshold in 2021 and 2022. In 2023 the population again fell below critical abundance. In the South Umpqua population, abundance declined more substantially through 2018, and returns have remained low. ODFW is concerned about recent low abundance in the South Umpqua and enacted a mark-selective fishery in the mainstem Umpqua River in 2020–2022 to protect wild South Umpqua spring Chinook salmon. In the North Umpqua, ODFW is investigating the distribution of hatchery and wild spawners to assess the percentage of hatchery fish on natural spawning grounds (pHOS) more accurately and will implement actions to reduce pHOS if there is spatial overlap on natural spawning grounds above the pHOS limit.

Oregon Coastal Winter Steelhead

Current monitoring resources do not allow for population-scale assessment of CMP criteria in most of the SMU’s constituent populations. Stratum-level abundances of winter steelhead indicate trajectories similar to other SMUs. Abundance in the North Coast stratum was higher than the CMP desired status target in 2023 and 2024. Abundance estimates for Mid Coast winter steelhead have generally fluctuated between the critical and desired abundance thresholds (2018 was > desired abundance), and the 2024 estimate was intermediate. Annual abundance estimates in the Umpqua Stratum and North Umpqua population have generally remained closer to or above desired abundances. Returns in 2024 were above desired abundance thresholds in both the North Umpqua population and the Umpqua stratum as a whole. The Mid-South Coast stratum has alternated above and below the critical abundance threshold since 2017 but abundance has remained below the critical abundance threshold for the past two years. It should be noted that the CMP’s desired and critical abundance criteria for Coastal Winter Steelhead were updated in 2019 to ensure that both the criteria and annual abundance estimates share a common basis for converting redd abundance estimates to fish abundance estimates. These revised abundance criteria replace the plan’s original criteria and are detailed in this report’s companion *Wild Fish Monitoring Summaries*.

The CMP pHOS targets for steelhead are assessed as a nine-year moving average. Population-scale estimates of pHOS are not available for most winter steelhead populations; with few exceptions, pHOS can only be assessed at the stratum scale. Nine-year average pHOS estimates for the North Coast and Umpqua strata have been near or below the limits identified in the plans for their constituent populations. However, the Mid Coast and Mid-South Coast strata-level pHOS estimates have been above many of the population-scale limits identified in the plan. Monitoring indicates the nine-year average pHOS is

declining toward 10% in the Mid-Coast but has stayed more consistently above pHOS targets in the Mid-South Coast. However, in both strata, observations of mark status have been insufficient for confident estimation of pHOS in some years since plan approval. ODFW is currently evaluating specific locations contributing to the high strata pHOS estimates in the Mid-South Coast Stratum so adaptive management actions can be taken to reduce pHOS within constituent populations if needed.

Oregon Coastal Summer Steelhead

There are two native populations of Oregon Coastal Summer Steelhead, one in the Siletz River and the other in the North Umpqua River. In 2021, both populations experienced pronounced declines in abundance. Abundance estimates in the North Umpqua population were the lowest in the record dating to 1946, and the count of wild summer steelhead at Siletz Falls (Siletz Population) was similar to previous lows in the record from 1994-2021. Similar declines in summer steelhead returns in 2021 were observed elsewhere in Oregon, likely attributable to poor ocean conditions, and coincided with poor conditions (e.g., drought, high temperatures) for rearing and adult migration in 2021 and several preceding years. Both populations rebounded to above critical abundance in 2022, but in 2023 abundances in both populations were below critical abundance targets. Available data suggests significant spatial segregation between hatchery and wild spawners in the North Umpqua, but pHOS estimates are likely higher than the CMP target even after accounting for differences in spawning distribution. The North Umpqua summer steelhead program has been eliminated, pending results of litigation, and pHOS is expected to meet the CMP target (9-yr average pHOS $\leq 10\%$) in the future. In 2023, pHOS was below 10%, likely reflecting the wildfire-related loss of smolts that would have been released in 2021. No hatchery origin spawners are passed above Siletz Falls in the Siletz Population, and pHOS is expected to be below the CMP's 5% target upstream from the falls.

Oregon Coastal Chum Salmon

The CMP does not include abundance thresholds for Oregon Coastal Chum Salmon, but abundance of spawners is indexed at a series of standard survey sites. Peak densities on standard surveys have tended to increase through time, with recent declines less pronounced than observed in many other salmon and steelhead SMUs. Peak counts on standard surveys in 2022 were lower than the past several years but increased in 2023 in most population areas. Staffing limitations since 2021 have resulted in lower survey effort for chum salmon in some North Coast survey areas.

Oregon Coastal Cutthroat Trout

As with chum salmon, the CMP does not include specific abundance targets for coastal cutthroat trout. However, abundance of coastal cutthroat trout is indexed and tracked through resting hole counts in the North Coast (Wilson, Trask and Nestucca rivers) on surveys for early-run Chinook salmon, and at Winchester Dam on the North Umpqua. Recent resting hole densities in the Wilson, Trask, and Nestucca basins have generally been higher than during the 1980s and 90s, and long-term averages have been stable. In the North Umpqua, counts of coastal cutthroat trout climbed to post-CMP highs in 2019-20 and 2020-21. Counts declined substantially in the 2021-22 period (21st percentile of past 25 years) but counts in the 2022-23 and 2023-24 counting periods increased to approximately average and above average, respectively, for the post-CMP period.

Management Actions

To address the limiting factors causing the gap between Current and Desired Status, as well as provide greater population resilience to potential adverse climate change and development impacts, the CMP identifies short- and long-term strategies and actions in four categories (*Hatchery Fish Actions*, *Fishing/Harvest Actions*, *Predation Actions*, and *Habitat Actions*). The following sections provide several implementation highlights for each of those categories in 2023. Many habitat actions are occurring across the SMUs at various scales; a sampling of those actions completed or initiated in 2023 are included in the highlights below. For a more comprehensive summary of implementation since plan adoption, including many ongoing actions that continued in 2023, see reports from previous years [here](#).

Hatchery Fish Actions

- In the Elk River, ODFW continued to implement actions to decrease pHOS and improve the viability of wild **fall Chinook salmon**. Over the past nine years, pHOS in the Elk River has averaged 29%, which is below the limit in the plan (see *Wild Fish Monitoring Summaries*). Additional actions to assure that pHOS remains below the plan target are in progress (see **Research and Monitoring; Evaluation and Adaptive Management**).
- In the Coos Basin, ODFW continued to implement changes to the **fall Chinook salmon** hatchery program that came primarily from results of the 2009-13 Coos Fall Chinook Monitoring and Evaluation (M&E) Project. Namely, in-basin geographic returns of coded wire tagged hatchery fish from releases from multiple sites and acclimation/release strategies were evaluated for potential pHOS. Following completion of the Coos M&E Project, fish reared in the West Fork Millicoma River have been transported to the lower estuary for release and contribution to the fishery below Highway 101 to reduce potential pHOS in upper basin spawning areas. ODFW has also implemented later releases of some pre-smolts.
- ODFW analyzed data from a multi-year study in the Necanicum Basin to evaluate stray rates and fishery contribution from hatchery **winter steelhead** released in different locations. When the analysis is complete, study results will be published in a report and will inform actions to reduce pHOS and maintain or increase harvest of hatchery winter steelhead.

Fishing/Harvest Actions

- In 2023, ODFW implemented the wild **fall Chinook salmon** harvest sliding scale with additional adaptive management changes (see **Evaluation and Adaptive Management** section for details).
- ODFW implemented the harvest sliding scale for wild **spring Chinook salmon** in the Umpqua basin to determine bag limits for the 2023 fishery. Based on observed and forecast returns, wild Chinook salmon bag limits of 1/5 (daily/season) for the mainstem Umpqua River and 1/10 for the North Umpqua River applied from February 1–June 30.

Predation Actions

- Double-crested cormorant numbers have declined approximately 10-20% along the Oregon Coast since CMP implementation. The decline is likely associated with increasing bald eagle

abundance and possibly effects related to management in the Columbia River estuary. The double-crested cormorant population across the Pacific Flyway has declined about 38% since 2014, primarily as a result of management in the Columbia River estuary.

- In 2023, avian hazing efforts occurred in the Nehalem, Tillamook, Nestucca, Alsea, Siuslaw, Coquille, and Coos Bay estuaries.
- Smallmouth bass removal (electrofishing) continued in the Coquille Basin, in partnership with the Coquille Indian Tribe. Striped bass and largemouth bass were also removed when encountered.
- ODFW assisted the Port of Coquille in conducting a derby for the removal of smallmouth bass by anglers. Fish removal was incentivized by the placement of PIT tags in smallmouth of all sizes that could be exchanged for monetary prizes.
- ODFW implemented a seasonal temporary rule (June 1 – October 31) allowing for spearfishing as a legal harvest method for smallmouth bass in the Coquille River.
- Data from the 2021 "Smallmouth Blitz" assessment event and subsequent smallmouth removal efforts were analyzed by the ODFW REDD program to inform smallmouth bass control strategies to benefit Chinook salmon and other native fishes in the Coquille Basin.

Habitat Actions

- ODFW Western Oregon Stream Restoration Program (WOSRP) habitat restoration biologists in all four CMP strata coordinated, planned, reviewed, and implemented numerous restoration projects in 2023. This was accomplished by coordination with and direct technical support to Watershed Councils, private landowners, other state agencies, federal agencies, and other partners.
- In the North Coast Stratum, three restoration projects commenced in the Nehalem Basin associated with Oregon Department of Forestry (ODF) timber sales. All three projects included the placement of large wood debris (LWD) structures in streams, including Gilmore Creek, Beneke Creek, and Lousignont Creek (Upper Nehalem River HUC), with projects to be completed in 2024 or later. An additional LWD project was completed in the Nehalem Basin (Headwaters Nehalem River HUC) that included the placement of 16 LWD structures over 1.4 stream miles. In the Nestucca Basin a small LWD project was completed in Detrick Creek. In the Sand Lake Basin, three LWD projects were completed in Sand, Andy, and Jewel Creeks. In total, 48 LWD structures were installed with 190 logs and 187 root wads over 3.1 stream miles in the three streams. In the Necanicum River Watershed, a failing crossing with two pipe culverts that did not meet ODFW's fish passage criteria was replaced with an open bottom, multiplate arch and natural stream simulation.
- In the Mid-Coast Stratum, district staff implemented a LWD project and an off-channel pond re-configuration project to improve stream complexity; partnered with the US Forest Service and Bureau of Land Management (BLM) to develop a LWD helicopter placement project that crosses management areas in three subbasins; and partnered with the BLM and Weyerhaeuser Company to replace fish passage impediments in the Alsea basin. Staff also revisited past LWD projects to assess whether more LWD needs to be placed after 25 years since the original effort and planned a large-scale willow planting project in the Yaquina basin to restore

beaver habitat.

- In the Umpqua Stratum, ODFW collaborated with the Partnership for the Umpqua Rivers, Smith River Watershed Council, Bureau of Land Management, private landowners, and other partners to complete nine restoration projects totaling 174 sites, 3,859 boulders, and 1,379 wood pieces in over 15 miles of stream. Projects were completed in Spencer Creek, North and South Sisters creeks, Yellow Creek, Rock Creek, and other streams. The Glover Creek tide gate replacement project, which will benefit salmon, steelhead, and cutthroat trout, was also implemented in 2023.
- In the Mid-South Coast Stratum, district staff in the Tenmile Lakes Basin provided technical support with final designs, permitting and funding application for the Benson Creek wetland project and technical assistance with the Tenmile Lakes Strategic Action Plan with Willamette Partnership. In the Coos Basin, Tioga Falls Fish Passage Restoration Phase 1 and Kentuck Creek Phase 2 (wetlands and ponds) were completed with district staff assistance. Eight other projects, including the South Slough National Estuarine Research Reserve (SSNERS) Wasson Creek stage-zero project, were advanced to final permitting or developed to 90% designs and fully funded in collaboration with habitat staff. In the Coquille Basin, ODFW district staff cooperated with the SWCD, BLM, USFS and Watershed Council on implementation or designs for nine projects including three tidal projects, an upland cold-water refuge project with the Rogue River-Siskiyou National Forest, and Coquille Watershed Strategic Action Planning.
- Implementation of the [Private Forest Accord](#) continued in 2023, including development of the Private Forest Accord Grant Program, which will be capable of delivering over \$10 million in conservation grants annually.
- In 2023, ODFW completed a Three-year Action Plan for Beaver-Modified Landscapes ([link](#)) that outlines the goals and strategies ODFW will implement over the next 36 months to advance the protection and restoration of beaver habitat and beaver-modified habitat in Oregon.

Research and Monitoring

[Table A-V: 4](#) of the CMP provides an overview of base monitoring components being conducted within SMUs to track measurable criteria that inform progress toward desired status. Data produced from the monitoring will be used to re-assess species productivity, persistence, spatial structure, and diversity every 12-years as called for in the plan. The CMP also identified several critical uncertainties relative to each SMU that require additional research to address ([Appendix V](#)). Research and monitoring developments in 2023 include the following:

- The Oregon Hatchery Research Center (OHRC) continued research on **fall Chinook salmon** olfactory imprinting and homing at Elk River Hatchery. This study was designed to test whether Chinook salmon exposed to a naturally occurring odorant during hatchery rearing display higher homing fidelity to their natal hatchery, compared to control fish not exposed as juveniles, when the same odorant is added to water leading into the hatchery. The experiment was initiated in 2020, replicated in 2021 and 2022, and treated fish will continue returning through 2026. In 2023, researchers and hatchery staff collected coded wire tags from returning adults in the treatment and control groups. This study promises to inform future efforts to reduce straying by hatchery fish in the Elk River and other basins.

- ODFW continued to develop analytical methods to estimate pHOS in coastal **fall Chinook salmon** populations.
- ODFW continued to investigate options for developing stratum-scale abundance forecasts for **winter steelhead** to allow for more proactive, timely actions in response to population downturns.
- ODFW partnered with the Coquille Indian Tribe and STEP volunteers to implement research on the efficacy of unfed fry releases to boost returns of **fall Chinook salmon** in the Coquille River. A review of the effectiveness of unfed fry releases in the Coquille is one of the management actions identified in the CMP. At the time of CMP approval, the primary purpose of fry releases was harvest augmentation, but the review now has potential conservation applications for the depressed Coquille Chinook population. The project began in 2022 and monitoring of adult returns will begin in 2025. The research project includes releases in the upper and lower Coquille Basin for comparison purposes, and release numbers have been determined based on study needs and brood availability. Unfed fry are not fin marked and so genetic methods (parentage-based tagging) will be used to determine the origin of unmarked returning adults.

Evaluation and Adaptive Management

The previously discussed monitoring efforts and subsequent evaluation and adaptive management are important components of CMP implementation. Key evaluation and adaptive management actions that occurred in 2023 include the following:

- In response to multiple recent years of critically low **fall Chinook salmon** returns in some basins, increasing freshwater harvest rates, environmental conditions that have caused abundance forecasts to become more uncertain, and other factors, ODFW implemented changes in the wild **fall Chinook salmon** harvest sliding scale. These adaptive management changes include: 1) reduced bag limits for wild Chinook salmon to ensure populations stay above critical abundance and avoid future closures; and 2) sliding scale bag limits for each river instead of an aggregate bag limit for multiple rivers in a stratum. Rivers within a stratum are no longer showing the same trends, so a river-specific approach is more appropriate.
- In addition to changes in the harvest sliding scale, ODFW implemented additional precautionary regulation changes in several rivers to protect wild **fall Chinook salmon**. These actions included:
 - Closing North Coast rivers (Necanicum, Nehalem, Tillamook, and Nestucca) to Chinook fishing in December for additional conservation, to preserve broodstock, and maintain regulation consistency.
 - Closing Lake Creek in the Siuslaw Basin to all salmon fishing.
 - Closing the Chinook salmon fishery in the Coquille River (see additional details below).
 - Implementing a low flow closure in the Sixes River from the mouth of Crystal Creek downstream to Hughes House Boat Ramp from October 1–31.
 - Closing the Elk River to retention of wild Chinook salmon (see additional details below).

- In the Coquille River, **fall Chinook salmon** abundance was far below the critical abundance threshold for the sixth consecutive year in 2023. ODFW implemented a closure on all Chinook salmon harvest and structured the salmon fishery to minimize the risk of hooking mortality for wild Chinook salmon while allowing angling opportunity on a strong wild coho salmon return. Creel surveys were conducted to monitor the coho fishery while also gaining information on Chinook encounters.
- ODFW and the Coquille Indian Tribe continued implementation of the *Coquille Fall Chinook Conservation Hatchery Program Operational Plan*. In fall 2023, the first smolt release for the program occurred in the North Fork Coquille River. In addition, staff and volunteers collected 32 wild adult Chinook (16 males and 16 females) for broodstock. These fish were spawned at Bandon Hatchery and their offspring were reared at Elk River Hatchery for release in the North Fork and South Fork Coquille River in fall 2024 (see *Hatchery Program Summaries*).
- Broodstock availability limited production for the Coquille **fall Chinook salmon** harvest augmentation hatchery program for several years prior to 2022 (see *Hatchery Program Summaries*). In 2023, ODFW, the Coquille Indian Tribe, and volunteers continued a collaborative effort to increase broodstock collection and succeeded in meeting the program collection goal for the second consecutive year.
- In the Elk River, a mark-selective fishery for **fall Chinook salmon** was implemented for the fourth consecutive year to maximize hatchery salmon harvest and wild fish escapement as part of ongoing efforts to reduce pHOS.
- In April 2022, the Oregon Fish and Wildlife Commission decided to eliminate the Rock Creek (North Umpqua) **summer steelhead** hatchery program. Pursuant to subsequent litigation, in May 2023, 6,790 summer steelhead smolts were released from Rock Creek Hatchery.
- ODFW implemented a decision support framework for the **summer steelhead** fishery in the Umpqua basin based on in-season monitoring of abundance at Winchester Dam. The framework is used to determine the likelihood that wild summer steelhead counts will fall below the critical abundance threshold based on in-season counts and historical passage timing at Winchester Dam. In 2023, in-season monitoring indicated that summer steelhead returns would not exceed critical abundance and so all angling on the North Umpqua River and its tributaries was closed from July 31–November 30, 2023. The final estimate of wild summer steelhead abundance in 2023 was below the critical abundance threshold (see *Wild Fish Monitoring Summaries*).
- In 2023, ODFW staff continued to make significant hatchery production adjustments involving multiple facilities to maintain fish production for Umpqua hatchery programs after the loss of Rock Creek Hatchery in the September 2020 wildfires.

Summary

Since finalization of the CMP in 2014, coastal salmon, steelhead, and cutthroat trout have experienced multiple years of severe drought and poor ocean conditions. The effects of these adverse environmental conditions have been apparent in wild populations and hatchery returns, although the magnitude and timing of effects have varied substantially among populations and SMUs. Recent trends have

underscored the importance of implementing plan actions that reduce risk for these populations, as well as the need for robust monitoring and adaptive management. Most populations have demonstrated resilience in recent years, but several populations warrant particularly close attention given recent declines. These populations include summer steelhead in the North Umpqua; spring Chinook in the South Umpqua; and fall Chinook in the Coquille, Siuslaw, and Tillamook basins. Implementation priorities for 2024 include the following: 1) closely monitor North Umpqua summer steelhead returns and make any necessary changes in fishing regulations based on monitoring results; 2) continue implementation of the Coquille fall Chinook conservation hatchery program in partnership with the Coquille Indian Tribe and Coquille STEP; 3) continue work with the Coquille Indian Tribe and other partners to reduce bass predation risk for Chinook salmon and other native species in the Coquille River Basin; and 4) where pHOS estimates appear to be above plan thresholds, explore details of hatchery fish presence on natural spawning grounds in order to understand adaptive management needs. ODFW will continue to be responsive to variable and changing conditions by implementing meaningful adaptive management actions informed by monitoring.