

Oregon Coast Coho Conservation Plan

2022 Annual Report

The Oregon Coast Coho Conservation Plan (OCCCP) was adopted by the Oregon Fish and Wildlife Commission in March 2007. The plan serves as the State of Oregon's management plan for the Oregon Coast (OC) Coho Salmon Evolutionarily Significant Unit (ESU). The OC Coho Salmon ESU is comprised of 5 strata (North Coast, Mid-Coast, Mid-South Coast, Lakes, and Umpqua) and 21 independent OC Coho Salmon populations within these 5 strata.

ESU Status Summary

In 2022, the wild OC Coho Salmon spawner abundance estimate for the ESU was 170,002 fish, which is 133% of the previous 32-year average and the third highest estimate in the past 10 years. Continuing challenges with hiring and retaining surveyors forced a reduction in the number of surveys conducted, resulting in a lack of estimates at the population scale in the North Coast stratum. Wild adult coho spawner abundance was above average in 7 of the 19 populations where population estimates were generated. One significant anomaly was the extremely low abundance of coho spawners in the South Umpqua population, where no adult coho were observed in the 16 sites successfully surveyed in 2022. The juvenile coho abundance estimate for the ESU in 2022 (4.87 million parr) was the second highest in the 25-year monitoring record.

Freshwater productivity continues to be a primary limiting factor in the ability of the ESU to reach the broad sense recovery goals identified in the OCCCP. State and federal agencies, tribes, and other non-governmental organizations are continuing to collaborate and focus efforts to develop and implement population-specific strategic action plans to address limiting factors. Given that freshwater production continues to be limiting, implementation of the Oregon Coast Coho Conservation Plan should continue.

Measurable Criteria

As mandated by Oregon's Native Fish Conservation Policy (OAR 635-007-0502 to 0509), measurable criteria were developed to evaluate progress towards reaching the desired status goals for each of the independent populations in six criteria categories: (1) abundance, (2) persistence, (3) productivity, (4) distribution, (5) diversity, and (6) habitat. Using data and summaries from the Western Oregon Rearing Project (WORP) and the Oregon Adult Salmonid Inventory & Sampling (OASIS) Project, the results of each criterion's status for 2022 are summarized below. More information on these measurable criteria can be found at the ODFW Recovery Tracker website (<https://nrimp.dfw.state.or.us/RecoveryTracker>).

The OCCCP's targets for measurable criteria reflect broad sense goals for the ESU, not delisting goals under the federal Endangered Species Act (ESA). The OCCCP broad sense goals represent a future condition and performance of the OC Coho ESU that is significantly higher than a level at which the ESU would be considered a candidate for federal ESA-listing. The OCCCP

describes the broad sense goals as ambitious goals that are expected to be reached over 50 years of sustained conservation actions including habitat protection, restoration, and enhancement.

Abundance

This criterion is intended to ensure adequate numbers of naturally produced spawners return from the ocean to guarantee the health of the population and provide economic, societal, and ecological benefits. The naturally produced [OC Coho Salmon spawner abundance estimate](#) for the ESU decreased from 242,185 fish in 2021 to 170,002 in 2022. Total spawner abundance was 133% of the previous 32-year average (127,421). Abundance was above average in the North and Mid Coast strata, near average in the Mid-South Coast stratum and below average in the Lakes and Umpqua strata. One notable anomaly was the extremely low abundance of adult coho spawners in the South Umpqua population. Since 1990, this population has had an average of approximately 8,600 wild coho spawners annually. In 2022, however, no adult coho spawners were observed in the 16 sites successfully surveyed. Coho spawners were present in the South Umpqua population in 2022, as evidenced by the presence of juvenile coho in many of the snorkel surveys conducted in the summer of 2023, but no adult population estimate is available due to the lack of observations during spawning surveys.

The ESU spawner abundance estimate was approximately 23.8% of the marine survival-specific abundance goal identified in the OCCCP (the marine survival category for adult coho returning in 2022 was Medium in the Amendment 13 Harvest Management Matrix). Escapement abundance goals representing broad sense recovery were developed for each of the independent populations to ensure that naturally produced spawners are distributed throughout the ESU. However, spawner abundance estimates at the population scale were not available for the North Coast stratum in 2022 due to an insufficient number of sample sites.

Persistence

This criterion uses the forecast probability of persistence for each independent population based on results from population viability simulation models. This metric was originally assessed during plan development and 11 of the 21 independent populations passed the criteria. For the 2019 12-Year OCCCP Assessment (see Assessment [here](#)), ODFW estimated persistence probability for each independent population using updated population viability simulation methods. Persistence probabilities from that analysis are not directly comparable to those in the original OCCCP assessment because of differences in methods, and additional analytical work is needed to make a valid comparison between recent results and the original persistence criteria.

Productivity

The criterion for productivity is the annual estimate of naturally produced recruits per spawner (R/S) in each independent population and the ESU. This criterion was assessed during the 2019 12-Year OCCCP Assessment using an interim approach described in OCCCP, and none of the populations have yet achieved broad sense goals for productivity.

Although not directly used in the productivity metric, juvenile density and abundance information relative to spawners provides insight into freshwater productivity (the R/S productivity metric includes both freshwater and marine productivity, as the “recruits” are returning adult spawners). The 2022 juvenile abundance estimate from summer snorkel surveys conducted throughout the ESU was 4.87 million parr. This is the second highest estimate in the 25-year project record (see report [here](#)). Abundance estimates have varied between 2.6 and 4.9 million parr annually since 2000 after increasing from lows averaging 910,000 in 1998-1999.

Within Population Distribution

The metric for this criterion is the percentage of random, spatially balanced surveys that have greater or equal to four wild adult coho spawners/mile for each independent population. Hiring challenges and retention of surveyors forced a reduction in the number of surveys conducted in 2022, resulting in a lack of population estimates in the North Coast strata. Therefore, only strata and ESU scale estimates were reported.

Juvenile occupancy of available rearing habitat is another indicator of within population distribution. Although juvenile occupancy is not one of the measurable criteria in the OCCCP, it is a criterion in the Decision Support System (DSS) used by the National Marine Fisheries Service (NMFS) to inform federal status reviews. In 2022, juvenile coho salmon site occupancy in summer snorkel surveys was 88%, tying the record high from 2011, and was >80% in all four strata. One of the NMFS recovery criteria is to have $\geq 80\%$ of available habitat occupied. On the ESU scale, site occupancy averaged 82% over the last 12 years.

Diversity

The metric for this criterion is the average of the 100-year harmonic mean of spawner abundance (projected from a population viability model) for each independent population. This criterion was assessed during the 2019 12-Year OCCCP Plan Assessment using actual spawner abundance estimates from the contemporary period (1990-2019), and 13 of the 21 independent populations exceeded the threshold value of at least 1,200 naturally produced adult spawners.

Habitat Condition

This metric is defined as the amount of available high-quality habitat in each independent, non-lake population. High-quality habitat is defined as habitat that can produce 2,800 smolts/mile. The habitat condition criterion was assessed in the 2019 12-Year OCCCP Plan Assessment, and the results indicated that the mileage of high-quality habitat remains low relative to the plan’s broad sense goals in most populations. This was not unexpected given the deficit of HQH identified in the OCCCP and the protracted time periods required to restore landscape and geophysical processes and instream habitat. Even though restoration efforts have been ongoing, significant and continued investment in habitat restoration focused on restoring complex pools and off channel habitats, large wood recruitment, and reversing declining trends in highly productive habitats like alcoves and beaver pools is needed to reach the broad sense recovery goals. Overall, freshwater productivity continues to be a primary limiting factor in the ability of the ESU to attain the broad sense recovery goals.

Conservation Plan Strategy Implementation

In 2022, ODFW continued to implement its commitments identified in the OCCCP. The status of those commitments is discussed below by action, as identified in the OCCCP.

Hatchery Management- This commitment was met and is being maintained. Hatchery releases were significantly curtailed; the last hatchery Coho Salmon releases into the North Umpqua occurred in May 2006 and the last hatchery releases into the Salmon River occurred in May 2007.

Harvest Management- This commitment was met and is being maintained. Harvest impact rates to naturally produced OC Coho Salmon from fisheries continue to be managed through the PFMC's Salmon Fishery Management Plan and the use of Amendment 13 Harvest Management Matrix, found by NOAA-Fisheries to be consistent with the recovery of OC Coho Salmon. In 2022, the maximum allowed exploitation rate for North-Central stock component of Oregon Coast Natural (OCN) coho was 15.0%, and the preliminary postseason estimate was lower than the limit at 13.8%. The maximum exploitation rate for the North and South-Central stock components was 30%, and the preliminary postseason estimates were lower than the limit at 13.2% and 20.0%, respectively.

Western Oregon Stream Restoration Program- This commitment is on-going. Budget constraints in previous years reduced the number of ODFW biologists supporting this program to two positions (North Coast and Umpqua). In 2022, increased funding allowed ODFW to restore two positions (Mid-Coast and Mid-South Coast). These biologists provided a significant amount of support in coordinating, planning, and implementing priority actions to address limiting factors in the strata where these biologists are located.

ODFW also continued to have staff committed to partnering with the Oregon Watershed Enhancement Board (OWEB), NOAA Restoration Center, Wild Salmon Center, and the National Fish and Wildlife Foundation on a Business Plan approach for the conservation of Oregon Coast Coho Salmon. Projects included in the Coho Business Plan are generated through a scientifically based planning process that local communities use to develop a Strategic Action Plan (SAP) for a given Coho Salmon population. In 2022, two partnerships ([Siuslaw Coho Partnership](#) and [Coos Basin Coho Partnership](#)) that have developed SAPs were awarded funding through the Oregon Watershed Enhancement Board (OWEB) Focused Investment Partnership (FIP) grant program. FIP initiatives are eligible for up to six years of OWEB funding, and the anticipated total investment in these two initiatives combined is approximately \$23 million.

High priority habitat restoration projects that create high quality OC Coho Salmon rearing habitat continue to be developed and implemented by various entities across the ESU. Priority is placed on projects with willing landowners in areas that support high quality OC Coho Salmon rearing habitat. Technical assistance is being provided to local partners, and new restoration techniques for addressing key limiting factors are continually being explored.

The OWEB Investment Tracking Tool located in [Oregon Explorer](#) was used to identify activities funded by OWEB grants to support conservation and recovery of the OC Coho Salmon ESU in

2022. Table 1 below summarizes the OWEB’s investments by category for each OC Coho Salmon population for actions implemented by organizations such as watershed councils, tribes, Soil and Water Conservation Districts, state, and federal agencies. Occasionally, grants awarded provide benefits to more than one population and those are indicated in the stratum column highlighted in grey. OWEB grants account for a significant portion of restoration investments in the OC Coho Salmon ESU but other entities, including federal agencies, also made significant investments that aren’t captured in Table 1.

Table 1. OWEB funded activities by population and activity type in 2022.

Population	Capacity Building	Stakeholder Engagement	Monitoring	Restoration	Technical Assistance	Total
North Coast	-	-	-	-	\$159,523	\$159,523
Necanicum	-	-	-	\$6,380	\$20,273	\$26,653
Nehalem	-	-	-	\$17,949	\$73,449	\$91,398
Tillamook	-	-	-	-	\$46,611	\$46,611
Nestucca	-	-	-	\$54,151	-	\$54,151
Mid-Coast	-	-	-	-	\$151,716	\$151,716
Salmon	-	-	-	-	-	-
Siletz	-	-	-	\$81,067	-	\$81,067
Yaquina	-	-	-	-	-	-
Beaver	-	-	-	-	-	-
Alsea	-	-	-	\$49,009	-	\$49,009
Siuslaw	-	-	-	-	-	-
Lakes	-	-	-	-	-	-
Siltcoos	-	-	-	-	-	-
Tahkenitch	-	-	-	-	-	-
Tenmile	-	-	\$53,227	\$9,257	\$22,130	\$84,614
Umpqua	-	-	-	-	-	-
Lower Umpqua	-	-	-	-	-	-
Middle Umpqua	-	-	-	\$26,362	-	\$26,362
North Umpqua	-	-	-	-	\$7,310	\$7,310
South Umpqua	-	-	-	-	-	-
Mid-South Coast	-	-	-	-	\$156,669	\$156,669
Coos	-	-	-	\$106,783	\$74,988	\$181,771
Coquille	-	-	\$281,980	\$25,372	-	\$307,352
Floras	-	-	-	\$10,944	-	\$10,944
Sixes	-	-	-	-	-	-
Totals	-	-	\$335,207	\$387,274	\$712,669	\$1,435,150

Habitat Protection- This commitment is on-going. ODFW staff continue to work collaboratively with state and federal permitting agencies to provide comments and alternatives to permitted habitat altering activities (fill and removals, water rights, forest operations) that minimize or eliminate the loss of fish habitat.

In 2022, there was a significant change in state regulatory protections with revisions to the Oregon Forest Practices Act (FPA) following a landmark agreement between timber and conservation groups (Private Forest Accord; report available [here](#)). New FPA rules implemented as an outcome of the Private Forest Accord increase stream buffer widths, establish new criteria for roads and stream crossings, increase tree retention on steep slopes among other changes to protect aquatic habitat, and increase beaver co-existence opportunities to foster HQH. In addition, the Private Forest Accord Mitigation Fund and its associated grant program was established. The [PFA Grant Program](#) will distribute millions of dollars annually to fund aquatic habitat restoration projects that benefit coho and other aquatic species covered by the Private Forest Accord Habitat Conservation Plan.

Promote Beaver Dams and Associated Habitat- This commitment is on-going. In 2022, the Oregon Fish and Wildlife Commission Beaver Management Work Group completed a [report](#) with recommendations for beaver management on federal lands.

Research, Monitoring and Evaluation Program- This commitment was implemented and is on-going. ODFW continues to conduct research, monitoring, and evaluation related to the OCCCP.

Oregon Plan Outreach Program- This commitment is on-going. ODFW has designated staff to coordinate with key partners on actions to address the objectives in the OCCCP.