

Oregon Coast Coho Conservation Plan

2013 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).

Summary of Overall Status of this ESU

In 2013, the OC Coho ESU had approximately 124,411 naturally-produced spawners, which was 17.4% of the abundance goal identified in the OCCCP. Though the percent of goal reached was not high, it was an increase from the previous year. All data reviewed suggested that the strategies in the OCCCP should continue to be implemented without revision. Habitat restoration planning and implementation actions to address primary and/or secondary limiting factors occurred across the ESU to support OC Coho conservation and recovery.

Terminal (estuary/freshwater) wild coho fisheries were implemented in thirteen river basins under the Fishery Management and Evaluation Plan (FMEP) approved by NOAA Fisheries in 2009. For most of the basins, adult returns were lower than forecasted; however, freshwater recreational fishery exploitation rates were lower than expected, and creel-monitored terminal fishery harvest rates were consistent with the conservation measures identified in the FMEP.

Western Oregon Rearing Project (WORP) monitoring of parr abundance in pools and the Oregon Adult Salmonid Inventory & Sampling (OASIS) monitoring of abundance of female spawners that produced them suggested there are limitations to parr production in freshwater habitats.

Data Reviewed

Coho Adult Monitoring

OC Coho spawner abundance increased in 2013 compared to 2012. Abundance in 2013 (124,411) was similar to the 23 year abundance average (1990 through 2012); however, it was considerably lower than the recent peak abundance (356,244) of wild coho spawners in 2011. In 2013, four of the five strata were at or above the 23 year average abundance. The North Coast stratum was substantially below, at 54% of the average.

Distribution and density of wild coho salmon spawners increased in 2013 compared to 2012, going from 60% to 66% of surveyed sites in the ESU being occupied. Fifteen of the 24 populations averaged higher wild coho salmon per mile in 2013 than in 2012.

Coho Juvenile Monitoring

Juvenile coho density estimates in 2013 were higher than any previous year as measured by summer snorkel surveys. The site occupancy rate in 2013 was similar to 2012. The latest three cohorts had the 1st, 3rd, and 2nd highest occupancy rates estimated over the duration of the WORP.

Habitat

The Aquatic Inventories Project assessed OC Coho habitat conditions from 2006-2010 across four monitoring strata (North Coast, Mid-Coast, Mid-South Coast, and Umpqua) in the OC Coho ESU. The assessment found that winter rearing habitat continues to be limited with low pool complexity and structure, and the amount of gravel relative to fine substrate resulted in high quality spawning and summer rearing habitats. Coho winter rearing capacity ranged from 1733 parr/km in the North Coast to 1122 parr/km in the Umpqua. The Mid-Coast had the most sites with high quality habitat (52 sites), and the Mid-South Coast had the highest percentage of high quality habitats (21% \pm 6.67%). In contrast, the Umpqua had the fewest sites with high quality habitat (15 sites) and the lowest percentage of high quality habitats (12.29% \pm 5.05%). The median values for most of the habitat attributes evaluated were within the range of the upper and lower breakpoints designated by reference conditions.

Population estimates from snorkel surveys in stream pool habitat in 2013 were similar to 2012 and similar to the average of the last three cohorts. Overall, there was a small, positive trend in juvenile occupancy across the ESU from 1998-2013.

WORP monitoring of parr abundance in pools and OASIS monitoring of abundance of female spawners that produced them, suggested available spawning habitats were limited and/or early rearing habitat was limited when spawner abundance was high. This was evident with egg-to-parr survival rates being greatest when female spawner abundance was low and the rate decreased as the number of spawners increased.

Coho Harvest Impact

OC Coho harvest is managed by the Pacific Fishery Management Council (PFMC) following direction under Amendment 13 (A-13) to their Fishery Management and Evaluation Plan. A-13 uses a conservative harvest matrix found by NOAA Fisheries to be consistent with the recovery of OC Coho.

The overall trend for naturally-produced coho was up compared to 2012. The PFMC's pre-harvest abundance forecast was 191,000 fish. However, for all except the Alsea and Coquille basins (104% and 155% respectively), returns were lower than forecasted. Despite the lower returns, the freshwater exploitation rates were lower than expected and creel-monitored terminal fishery harvest rates were consistent with intended conservation measures.

Coho Natural Fish Survival Rates

As part of the Oregon Plan for Salmon and Watersheds, the Salmonid Life Cycle Monitoring

(LCM) project monitors migration and survival of salmonids in western Oregon streams. In 2013, the LCM project estimated marine and freshwater survival rates for OC coho using abundance estimates of spawning adult and out-migrant juvenile OC coho that passed through seven ODFW LCM sites.

Returning OC coho adults in 2013 experienced a lower marine survival than the previous five years in the Mid-Coast strata, and the North Coast and Umpqua were both up from the previous year. ESU-wide survival was below average in 2013.

More information on the analyses of the measurable viability criteria identified in the OC Coho conservation and recovery plans can be found at the ODFW Recovery Tracker using the link provided here. <http://www.odfwrecoverytracker.org>

Conservation Project Implementation

In 2013, ODFW continued to implement its commitments identified in the OCCCP. The status of those commitments are discussed below by action, as identified in the OCCCP.

Hatchery Management- This commitment was implemented and is on-going. The last hatchery coho releases into the North Umpqua occurred in May, 2006. The last hatchery releases into the Salmon River occurred in May, 2007.

Harvest Management- This commitment was implemented and is on-going. Harvest impact rates to naturally-produced OC Coho salmon from fisheries continues 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.

Western Oregon Stream Restoration Program- This commitment was implemented and is on-going. High priority habitat restoration projects that create high quality OC Coho rearing habitat continue to be developed and implemented. Priority is placed on projects with willing landowners in areas that support high quality OC Coho rearing habitat. Technical assistance is being provided to local partners; and new restoration techniques for addressing key limiting factors are continually being explored.

Habitat Protection- This commitment was implemented and is on-going. ODFW continues to work collaboratively with state and federal agencies on a multitude of habitat related actions.

Promote Beaver Dams and Associated Habitat- This commitment was implemented and is on-going. ODFW continues to coordinate a Beaver Workgroup with a variety of participants that work collectively to improve understanding of beaver ecology, and promote beaver dams in OC Coho rearing habitats that support the objectives of the OCCCP.

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 was implemented and is on-going. ODFW has designated staff to coordinate with key partners on actions to address the objectives in the OCCCP.

The Oregon Watershed Enhancement Board (OWEB) Investment Tracking Tool was used to identify activities that OWEB funded to support conservation and recovery of the OC Coho ESU in 2013. The Table summarizes the OWEB's investments by category for each OC Coho population.

OWEB Oregon Coast Coho ESU 2013 Investments

Population	Education	Monitoring	Restoration	Technical Assistance	Total
North Coast				\$ 45,920	\$ 45,920
Necanicum			\$ 79,257	\$ 2,337	\$ 81,594
Nehalem			\$ 34,936		\$ 34,936
Tillamook		\$ 168,000	\$ 124,999		\$ 292,999
Nestucca			\$ 89,871	\$ 11,596	\$ 101,467
Mid-Coast		\$ 119,202			\$ 119,202
Salmon		\$ 42,317	\$ 51,917		\$ 94,234
Siletz					-
Yaquina			\$ 108,736		\$ 108,736
Beaver					-
Alsea			\$ 47,934		\$ 47,934
Siuslaw	\$ 19,990	\$ 10,937			\$ 30,927
Lakes					-
Siltcoos					-
Tahkenitch			\$ 304,033		\$ 304,033
Tenmile			\$ 29,259		\$ 29,259
Umpqua					-
Lower Umpqua			\$ 142,710		\$ 142,710
Middle Umpqua			\$ 182,583		\$ 182,583
North Umpqua			\$ 108,114		\$ 108,114
South Umpqua			\$ 29,590	\$ 16,020	\$ 45,610
Mid-South Coast	\$ 33,701		\$ 5,000		\$ 38,701
Coos	\$ 23,957	\$ 46,886	\$ 33,838	\$ 49,845	\$ 154,526
Coquille			\$ 697,707		\$ 697,707
Floras			\$ 5,996		\$ 5,996
Sixes					-

Recommendations Regarding the ESU

ODFW Recommendation: Continue implementation of all agency actions.