

BACKGROUND

The *Oregon Coast Coho Conservation Plan* (OCCCCP) (OAR 635-500-6500) was approved by the Oregon Fish and Wildlife Commission in 2007 as the State of Oregon’s conservation and management plan for the Oregon Coast Evolutionarily Significant Unit of Coho (OC Coho ESU). The plan provides a conservation framework for attaining a broad sense desired status at which Oregon Coast (OC) coho will be sufficiently abundant, productive, and diverse to be self-sustaining *and* provide significant environmental, cultural, and economic benefits. Note that OC coho are listed as “threatened” under the federal Endangered Species Act (ESA), and the broad sense goals addressed in the OCCCCP are significantly above what might be necessary for ESA delisting. Broad sense goals are long-term ambitions (~50 years), expected to be attained after sustained conservation actions and investments in habitat protection and restoration. In addition to annual implementation reports, the plan calls for reviews at 12-year intervals. This is the first 12-year review of the OCCCCP.

PUBLIC INVOLVEMENT

The 12-Year assessment was developed by the Oregon Department of Fish and Wildlife (ODFW) and has already been reviewed by NOAA Fisheries. The public will have a chance to provide comment as part of the Commission presentation process.

ISSUE 1

OREGON COAST COHO CONSERVATION PLAN 12-YEAR ASSESSMENT

ANALYSIS

This first 12-year review of the OCCCCP considers data collected through return year 2019. It includes an assessment of:

- (1) ESU status, including evaluation of progress toward broad sense goals for the ESU, its constituent populations, and habitat conditions;
- (2) Implementation progress and effectiveness of restoration and management actions; and
- (3) A future influenced by climate and ocean change.

Key findings of this 12-year assessment are:

- An updated assessment of persistence and sustainability criteria indicates that the ESU remains persistent and sustainable despite challenging conditions for both freshwater and ocean survival over the past several years.
- Spawner abundance during recent poor ocean conditions (2013-2019) has been higher than during a period of similarly poor ocean conditions in the 1990's indicating that the combination of actions to date has improved resiliency.
- Despite these positive signs, the OC Coho ESU has not yet attained broad sense recovery, a status representing a condition well beyond viable, threatened, or endangered. For example, updated population viability modeling indicates that most populations have

relatively high probabilities of persistence over 100 years, but less than half of independent populations have attained the broad sense objective for persistence. This outcome is consistent with the OCCCCP's expectation that broad sense recovery will be achieved only after several decades of sustained conservation actions.

- Overwintering habitat continues to be the contemporary primary factor limiting freshwater capacity in most OC coho populations. Attaining the OCCCCP's broad sense goals will require continued investment in habitat protection, restoration, and enhancement with a focus on critical habitats (e.g., complex pools, off channel habitat) and processes (e.g., large wood recruitment), and a reversal of declines in highly productive habitats like alcoves and beaver pools.
- Harvest management will continue to play an important role in maintaining the genetic and life history diversity of OC coho and supporting fishing opportunities consistent with ESU recovery. Current harvest management under the Amendment 13 framework considers both parental escapement and ocean survival, and is responsive to downturns. This framework has ensured harvest rates remain consistently low, while allowing increased fishing opportunities when ocean survival and adult abundance are high.
- Hatchery management in the OC Coho ESU will continue to focus on augmenting harvest opportunity in the ocean and select terminal areas while minimizing genetic and ecologic risks to wild fish. Recent changes in brood stock management for the North Fork Nehalem and Trask hatchery programs, which have relied on highly domesticated brood stocks for many years, are expected to further reduce genetic risks, as well as improve hatchery fish survival and harvest opportunities.
- Climate change-driven alterations of freshwater and marine habitat are expected to impact the abundance and productivity of OC coho populations. Although some projected changes could be positive for coho, negative impacts are more likely overall when the full spectrum of habitats and life stages are considered.
- While impacts of climate and ocean change for OC coho are likely to be negative overall, there is some uncertainty in the spatial and temporal nature of impacts and how ecosystems and species will adapt. Impacts are expected to vary substantially across the ESU, as some populations are more vulnerable than others due to current habitat status and the magnitude of expected change. Risk to population viability will also depend on the scope and effectiveness of actions taken to promote resilience and reduce vulnerability to climate impacts.
- The primary management strategy to minimize the long-term impacts of climate and ocean change on OC coho centers on the protection, restoration, and enhancement of key freshwater and estuarine habitats. Maintaining and restoring diverse and productive rearing habitats will support the expression of the full complement of life history diversity and sustain populations through cycles in ocean productivity, which may become more extreme and unfavorable in the future.
- While winter parr capacity will continue to limit smolt production in the near term in most populations, an increasing focus on protecting and restoring water temperature and

summer flows will be necessary to mitigate for ongoing and intensifying impacts from climate change.

- Achieving habitat goals and meeting the habitat challenges posed by climate change will require continued support for, and enhancement of (1) local capacity to implement habitat restoration projects and (2) capacity for state and federal natural resource agencies to provide technical support for these efforts.

Despite good recent biological performance of the OC Coho ESU, fluctuations should continue to be expected. Future periods of poor ocean survival and/or poor freshwater conditions will likely cause low spawner abundances, though we expect that abundance will not be as low as in the 1990's because hatchery and harvest impacts have been greatly reduced or eliminated and habitat has been improved to some degree. The inevitability of future cycles of poor ocean survival and periodic low abundance underscores the importance of resiliency to the ESU's long-term sustainability. Existing freshwater productivity has sustained the ESU through a prolonged period of low ocean survival, supported subsequent improvement in its biological status, and relatively strong performance during the most recent downturn in ocean productivity. This offers some assurance that the ESU will be resilient to similar periods in the future.

However, significant improvements to freshwater productivity will be necessary to achieve the broad sense goals for the OC Coho ESU. Actions to improve the status of the OC Coho ESU through the habitat, hatchery, and harvest actions of the OCCCCP conservation strategy have improved the ESU's viability and resiliency to unfavorable environmental conditions. Unfortunately, this 12-year assessment indicates that current freshwater productivity remains insufficient to achieve broad sense goals. Habitat protection, restoration, and enhancement will be crucial for reducing climate and ocean change risk and providing for continued progress toward broad sense recovery for the OC Coho ESU.

The next 12-year assessment of the OCCCCP will include data through run year 2031. In the meantime, ODFW will continue to report progress through annual implementation reports, and data on measurable criteria will continue to be made publicly available through online data sharing platforms (currently the ODFW Salmon and Steelhead Recovery Tracker).

OPTIONS

1. N/A

STAFF RECOMMENDATION

1. N/A

DRAFT MOTION:

N/A

EFFECTIVE DATE: N/A