

Abstract for the 2021 Pacific Coast Steelhead Management Meeting

Status and Management of Oregon Steelhead Stocks

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Oregon steelhead *Oncorhynchus mykiss* have been classified by NOAA Fisheries into seven distinct population segments (DPS). Four of the DPSs are listed as threatened under the Endangered Species Act (ESA), and one is considered a species of concern.

Steelhead in Oregon have experienced a general decline in abundance over the last five years, though some subpopulations remained stable or even increased during that time. The statewide nature of the decline, periods of severe regional drought and suboptimal ocean conditions suggest that poor juvenile and marine survival are among the likely causes. We present trend data from dam counts, spawning surveys, and juvenile surveys (where available) for each DPS and discuss new conservation and management approaches that are being implemented for coastal stocks.

In the *Oregon Coast DPS (not ESA-listed)*, the estimated return of wild winter steelhead in 2019 was 76,786; the second lowest count in the past 17 years and far below the previous 16-year average of 112,327. Redd counts for 2019 mirrored this pattern, with 40,004 redds representing about 66% of the historic (16-year) average. These populations remained above critical abundance but below desired abundance as designated in the Coastal Multi-species Plan adopted by ODFW in 2014. Umpqua River winter steelhead approached or exceeded desired abundance for about the last decade, while North Umpqua summer steelhead declined over the same period and remained below desired abundance levels.

In the Rogue and South Coast basins (*Klamath Mountains DPS; not ESA-listed, Species of Special Concern*), wild winter steelhead abundance is stable or declining slightly, as determined from adult counts, while a recent trend analysis of snorkel counts of juvenile *O. mykiss* in that system suggested a more substantial decline (provisional data). Critical abundance and desired abundance thresholds are being developed for these populations in the draft Rogue-South Coast Multi-species Conservation and Management Plan that ODFW intends to adopt in 2021.

After falling to a record low 822 individuals in the 2016-17 run year, Willamette basin winter steelhead (*Upper Willamette DPS; ESA Threatened*) appear to have made a modest rebound in response to management actions to reduce pinniped predation, increasing to 2,707 and 5,510 in the 2018-19 and 2019-2020 run years.

The *Southwest Washington DPS* (not *ESA-listed*) was characterized by generally declining wild adult and redd counts for most subbasins, except for the Clatskanie River, which had higher counts than the previous two run years.

Natural-origin spawner abundance (NOSA) for east side and west side summer steelhead in the Deschutes basin (*Mid-Columbia DPS; ESA Threatened*) continued a substantial decline that began 4-6 years ago; recent counts for both groups have been among the lowest recorded in the last three decades. Declines were even more pronounced for NOSA of Grande Ronde summer steelhead in the *S Snake River DPS (ESA Threatened)*. In the John Day basin (*Mid-Columbia DPS; ESA Threatened*), NOSA was well below the ESA minimum abundance threshold for three of the five population strata, but the North Fork and South Fork John Day rivers exhibited increases in 2018 and 2019, with both populations remaining above this threshold. *Lower Columbia DPS (ESA Threatened)* wild winter steelhead adult counts (3,396) and redd counts (1,450) for 2019 were both the lowest observed since 2012.

Contemporary challenges for Oregon steelhead include predation, dams and passage, ocean conditions, freshwater habitat, and a lack of adequate data/infrastructure for monitoring populations in some systems. These issues will be examined in detail in Session Four of the meeting. Additional areas of concern that ODFW is currently investigating include naturally-spawning hatchery fish (i.e., pHOS), genetic effects such as introgression with hatchery stocks, and the effects of a changing climate.