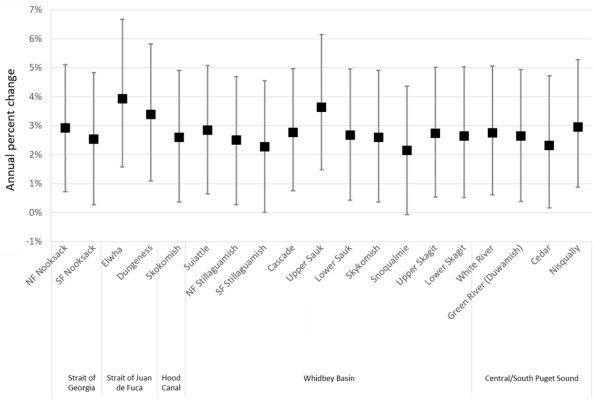
PUGET SOUND
VITAL SIGNS

INDICATOR
NUMBER OF NATURAL-ORIGIN CHINOOK SALMON ON SPAWNING GROUNDS

This indicator evaluates the abundance and trends of the 22 Chinook salmon populations by measuring the number of natural-origin adult fish on the spawning grounds of five Puget Sound regions. Abundance estimates here do not include hatchery-origin fish (with few exceptions) or Chinook taken in harvest or by predators like orcas. The indicator is intended to reflect the goal of achieving wild population recovery of Puget Sound Chinook, which are federally listed as threatened.



Annual percent change in spawner abundance from 1999 (year of Endangered Species Act listing) to 2023 for each Puget Sound Chinook salmon population, shown by geographic region. 19 of 22 populations are shown; abundance data were not available at the necessary spatial scale for three populations (Mid-Hood Canal, Puyallup River, and Sammamish River). The lines show the 25th to 75th credibility intervals (CIs). CIs represent a range of values the true annual percent change likely falls within. CIs for only one population (Snoqualmie River) contain zero. CIs greater than zero suggest increasing spawner abundance from 1999 to 2023.

Key Vital Sign Indicator Results

- These results reflect the most up-to-date data and model for salmon abundance as of 2/3/2025 (provided by WDFW), though we are still working to address concerns with the data and model from our partners, including Tribes. If you have questions, please reach out to Kenna Kuhn (kenna.kuhn@psp.wa.gov).
- There have been small signs of recovery of Puget Sound Chinook populations in each biogeographic region since they were listed as threatened under the Endangered Species Act in 1999. Almost all populations are increasing in natural-origin, naturally-spawning abundance in recent years (i.e., the credibility interval for only one population overlaps with zero in the percent change figure). However, the trends vary across populations with some exhibiting only very small change. **Thus, combined with uncertainty about the underlying data and model, our conclusion about progress of the populations of Puget Sound Chinook salmon is "Mixed Results."**
- While most populations remain far below the recovery planning targets adopted by NOAA Fisheries, some are doing better (see the indicator map on the full indicator report). For instance, the recent 5-year abundance geomean Suiattle spring Chinook salmon, Upper Sauk River spring Chinook salmon, and Upper Skagit River summer Chinook salmon are at 78%, 41%, and 40%, respectively, of their low productivity planning targets. Several populations, however, are at a much lower percent of their targets.
- The Puget Sound Partnership has set a recovery target for all Chinook salmon populations to increase and at least half of the populations to reach their recovery goals by 2050.

Indicator Progress

MIXED RESULTS

Target Status

BELOW TARGET

Target

By 2050, all Chinook salmon populations increase, and at least 50 percent of the populations reach their recovery goals.

Target fact sheet

Data Source

Washington Department of Fish and Wildlife (WDFW), Salmon Population Indicators (SPi) abundance data

Northwest Fisheries Science Center. 2015. Status review update for Pacific salmon and steelhead listed under the Endangered Species Act: Pacific Northwest.

Indicator Lead

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CONTRIBUTING PARTNERS

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