



CHINOOK SALMON

INDICATOR: CHINOOK SALMON POPULATION ABUNDANCE

INDICATOR LEAD AND AFFILIATION:

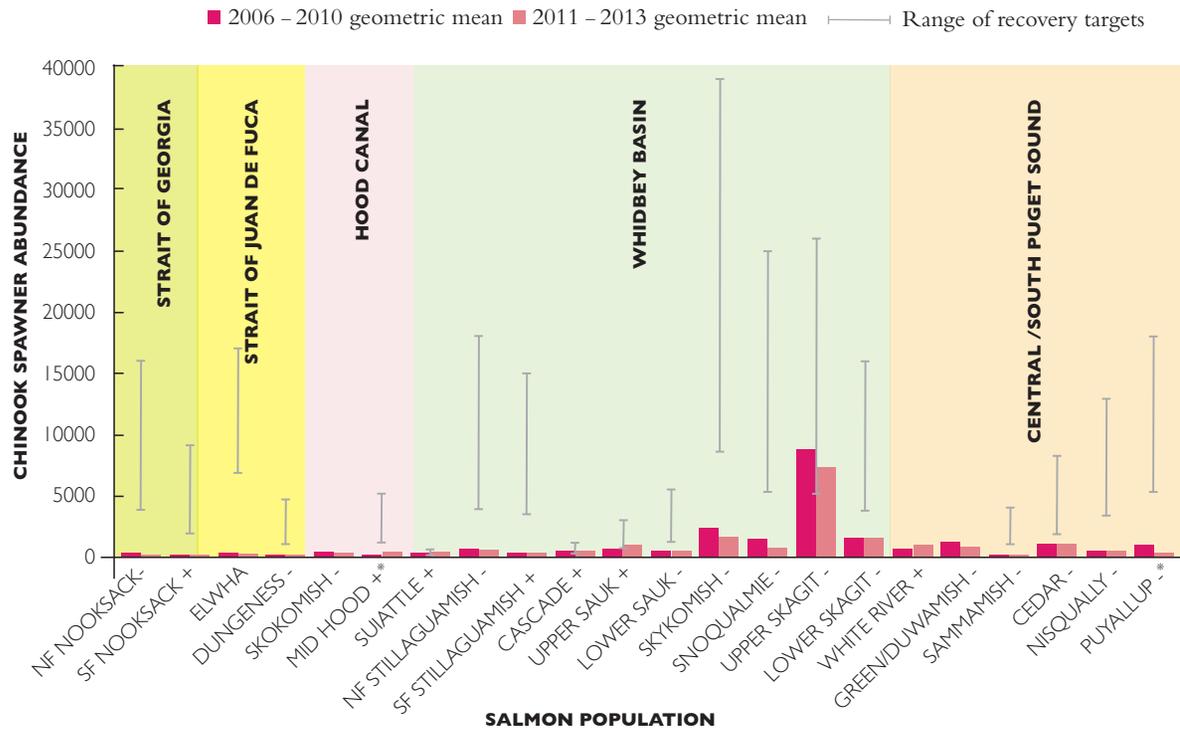
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2020 TARGET: Stop the overall decline and start seeing improvements in wild Chinook salmon abundance in two to four populations in each biogeographic region.

PROGRESS:



FIGURE 9. MEAN CHINOOK SALMON SPAWNER ABUNDANCE IN EACH POPULATION IN PUGET SOUND, SHOWN BY GEOGRAPHIC REGION. 2006 – 2010 vs 2011 – 2013



Spawner abundance is the number of naturally spawning Chinook salmon, either natural-origin natural spawners, or total natural spawners (in populations where hatchery-origin natural spawners are not discriminated). The brown and red bars show the geometric mean annual abundance for 2006 – 2010 and 2011 – 2013, respectively. The gray vertical lines show the recovery target ranges from National Marine Fisheries Service’s Final Supplement to the Shared Strategy’s Puget Sound Recovery Plan (2006). There are no targets available for Skokomish, White, and Green rivers. The + symbol for six populations and the - symbol for 13 of the 22 populations indicate that the population increased or declined, respectively, over the time period. The analysis of change over time for three populations was not possible. The * indicates the difference was statistically significant for two populations.

Source: Washington Department of Fish and Wildlife, SaSI database

Chinook salmon are the largest of the salmon species. They are a favorite food of orcas, are highly prized by anglers and commercial fisherman, and are an important cultural and economic resource for tribes. Puget Sound Chinook salmon are about one-third as abundant now as they were in the early 1900s, and were listed in 1999 as Threatened under the federal Endangered Species Act. Today, 22 populations of Chinook salmon spawn in Puget Sound rivers.

To evaluate change over time, the mean (annual) abundance of spawning Chinook salmon for the 3-year period 2011 – 2013 was compared to the 5-year baseline period 2006 – 2010. The comparison was done both for the total abundance (all populations combined), and the change in abundance of each population individually.

PROGRESS SUMMARY:

The total number of naturally spawning Chinook salmon has declined, the 2014 interim targets for spawning Chinook salmon have not been met, there is little sign of improvement in each biogeographic region, and most populations remain far below their recovery planning targets adopted by the National Marine Fisheries Service. Natural-origin natural spawners are wild Chinook, salmon spawning naturally in a stream or river. In contrast, total natural spawners are the count of all Chinook salmon spawning naturally in a stream or river, including both wild Chinook as well as hatchery-produced Chinook that did not return to the hatchery but instead spawned in a stream or river.

- The mean total abundance of naturally spawning Chinook was lower in 2011 – 2013 than in 2006 – 2010, and this decline was statistically significant (p=0.08).
- Among the 22 individual populations, 13 declined and 6 increased. In the three remaining cases (Elwha, North Fork Stilliquamish, South Fork Stilliquamish), the methods of estimating population abundance changed over the time period such that direct comparisons cannot be made.

ARE THE CHINOOK SALMON INTERIM TARGETS MET?		
2014 INTERIM TARGETS DESCRIPTION	2014 INTERIM TARGETS MET?	EXPLANATION
No declining abundance in any wild Chinook salmon populations		Total spawner abundance (all populations combined) declined in 2011 – 2013 compared to 2006 – 2010. Within individual populations, spawner abundance declined in 13 populations, although in only one case (Puyallup) was the decline statistically significant. There were no comparative data for three populations. Therefore, the interim target was not met.
Improvements in wild Chinook salmon abundance in one population in each (five) biogeographic region		Despite the statistically significant decline in the total number of spawning salmon when all populations are combined, six populations (spread across four of the five regions) actually increased in 2011 – 2013 compared to the 2006 – 2010 baseline. However, in only one case was that increase statistically significant (mid-Hood Canal). Therefore, the interim target was not met.

FOR MORE IN-DEPTH INFORMATION, PLEASE SEE:

www.psp.wa.gov/vitalsigns/salmon