

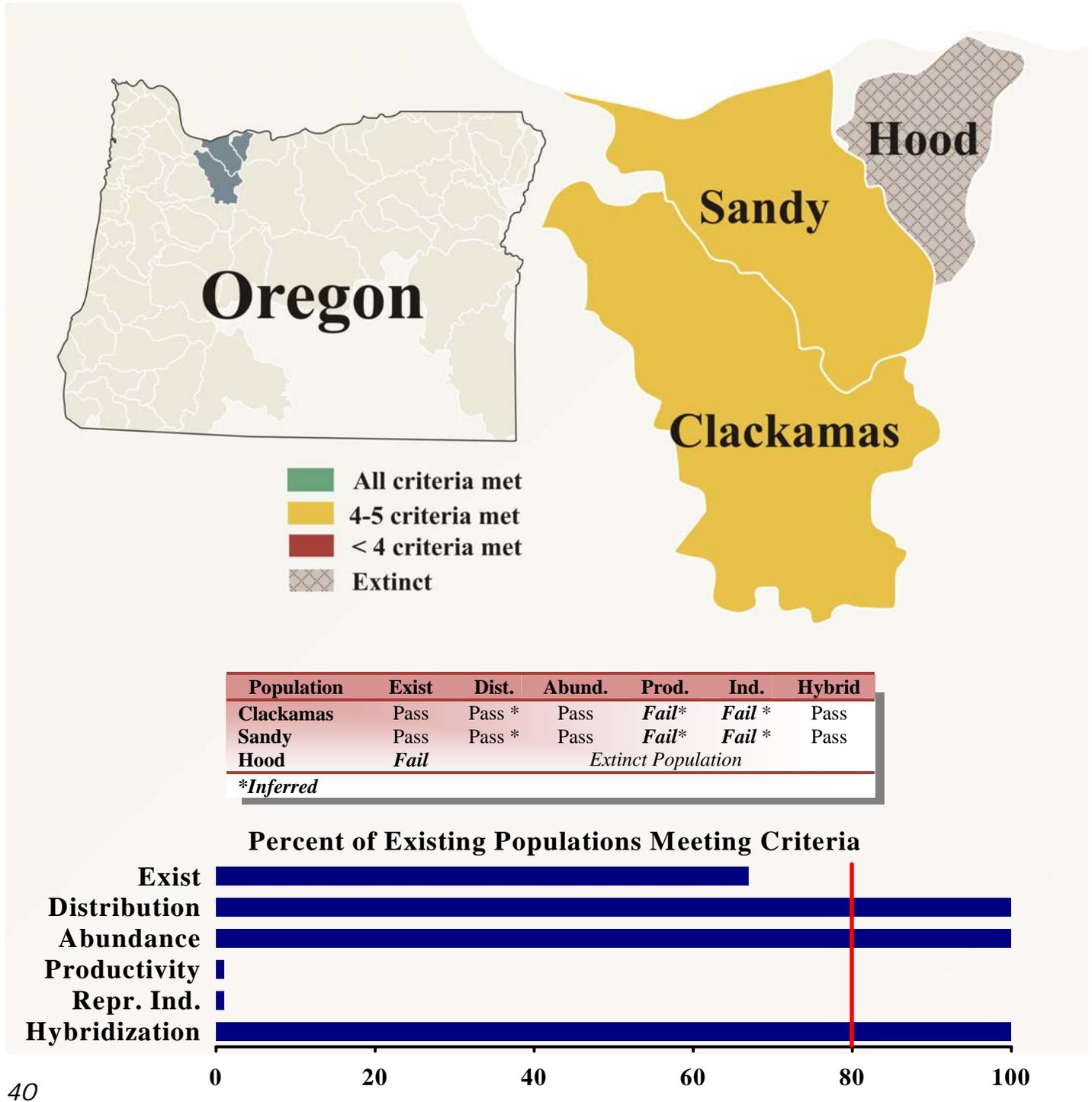
Lower Columbia Spring Chinook SMU

ESA Designation:
Threatened 1999

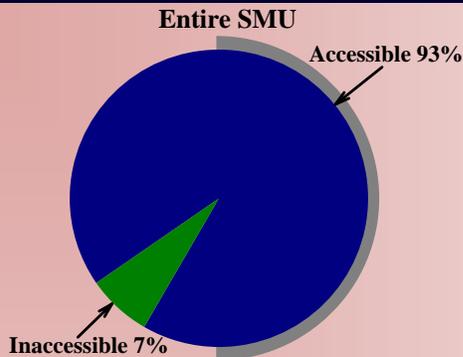
State Status:
Not Listed

Interim Assessment:
At Risk

This SMU includes Clackamas, Sandy, and Hood historical populations. The Clackamas and Sandy have been substantially influenced by hatchery fish. The Hood population is extinct. The SMU only met three of the interim criteria indicating the near-term sustainability is at risk. Suitable data and other information on populations in this SMU provide a moderate level of confidence in the assessment of the interim criteria.



Distribution – Pass



- Both remaining populations passed the criterion.
- 93% of the historical spring Chinook habitat within the SMU remains accessible today, though actual habitat use is unknown.
- Hydrosystem modifications on the Sandy have eliminated 18 miles of historic habitat.
- All of the historical spring Chinook habitat in the Hood Basin (56 miles) is still accessible today.

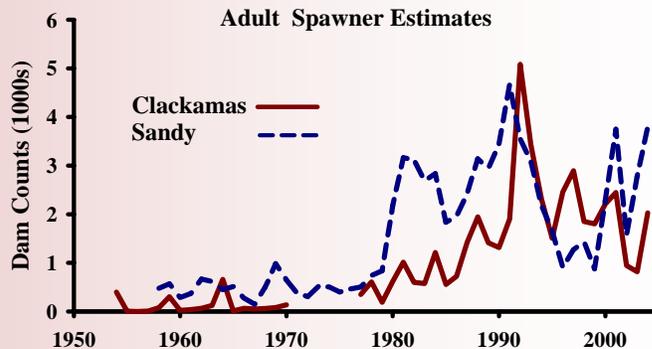
Productivity – Fail

- Uncertain hatchery fractions among spawners prior to 2002 in the Clackamas and 1996 in the Sandy made estimating productivity difficult. High numbers of hatchery spawners resulted in low estimates of productivity for both populations. However, parent abundance levels were typically above the 30-year natural return average.
- The Clackamas failed because in one of two years of low abundance, productivity was below 1.2. The Sandy failed based on insufficient information. Precautionary application of the interim criteria treat incomplete data as a failure in assessment of risks to the SMU.

Additional Information

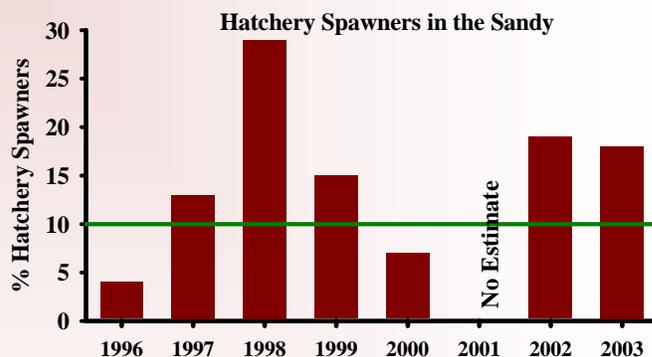
- The Confederated Tribes of the Warm Springs Reservation of Oregon, Bonneville Power Administration, and ODFW are currently operating a supplementation program to re-introduce spring Chinook in the Hood Basin using Deschutes stock. Initial returns over the past decade have been low.
- Management practices are aimed at reducing passage of hatchery adults into natural production areas. In recent years, all spring Chinook smolts released into the Clackamas and Sandy have been adipose fin-clipped. Only unclipped adults returning to North Fork Dam and Marmot Dam are allowed upstream.

Abundance - Pass



- Trends above reflect returns of both wild and hatchery fish prior to 2002 in the Clackamas, and prior to 1996 in the Sandy, because spawner origin could not be identified.
- Prior to major hatchery fish returns in the 1980s, natural returns were consistently at low levels.
- Both the Clackamas and Sandy have exceeded the interim criterion in each of the last five years.

Independence - Fail



- Both the Clackamas and Sandy failed this criterion.
- Prior to 2002, not all hatchery returns were adipose fin-clipped so many hatchery fish were passed above the dams in each basin onto the spawning grounds.
- Since 2002, only unmarked fish have been passed above the dams. However, research has found that there are many hatchery fish even among the unmarked fish passed above the dam.
- Despite passing only non-finclipped fish, studies found that 24-30% of spawners above North Fork Dam, and 18-19% of spawners above Marmot Dam were hatchery fish in 2002 and 2003.