

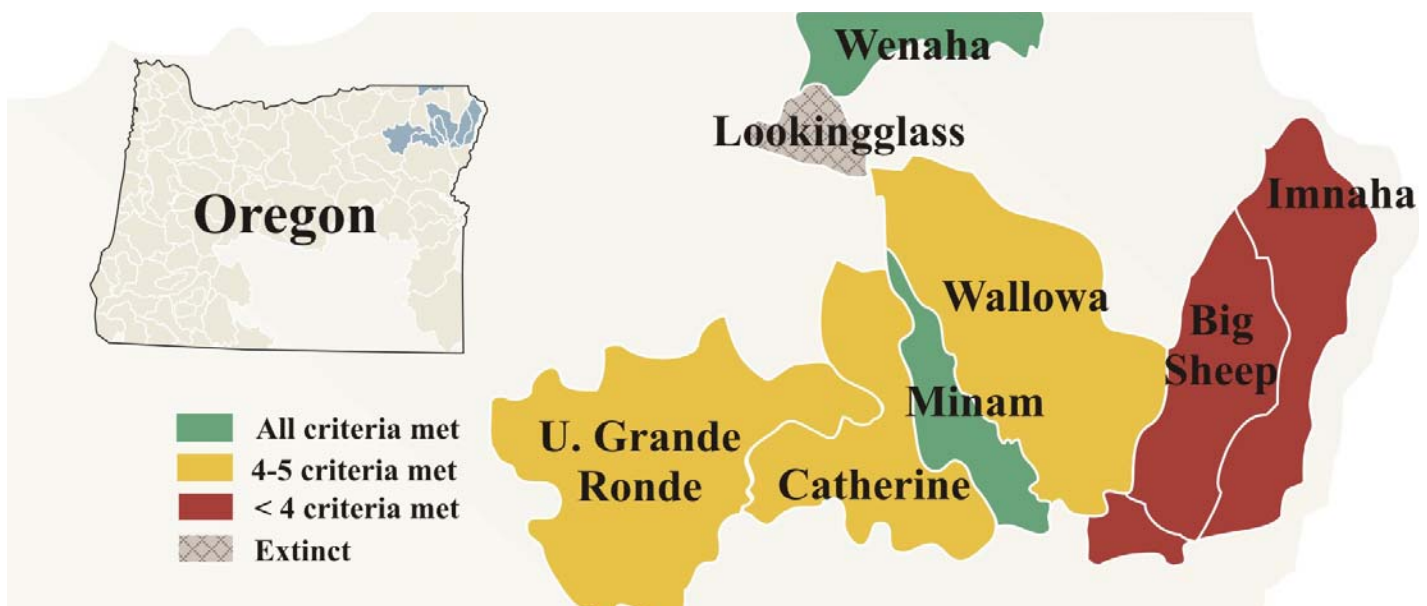
# Lower Snake Spring Chinook SMU

ESA Designation:  
*Threatened 1992*

State Status:  
*Threatened*

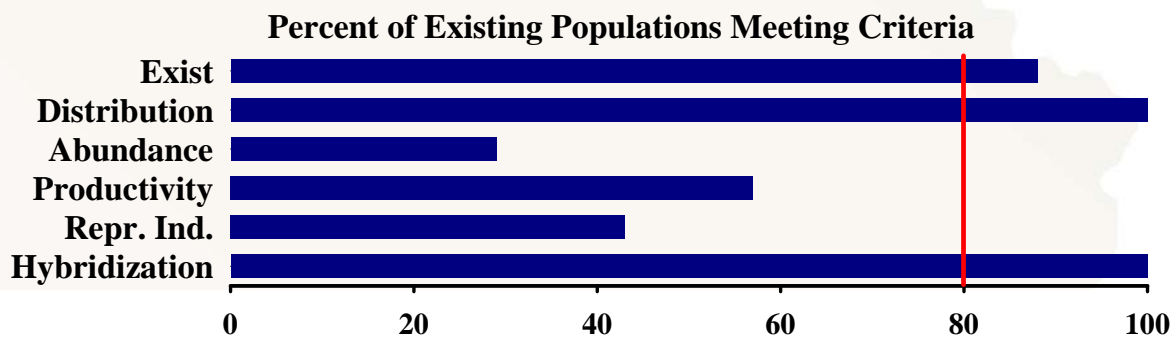
Interim Assessment:  
*At Risk*

This SMU includes eight populations in tributaries between the mouth of the Snake River and Hells Canyon Dam. Failure to meet three of six interim criteria led to the conclusion that the near-term sustainability of the SMU is at risk. The SMU includes a mixture of populations at varying levels of health depending on the quality of spawning and rearing habitats. All populations have been constrained by Snake and Columbia dam passage and migration conditions. Significant hatchery programs have occurred in Lookingglass Creek (Lower Grande Ronde), the Upper Grande Ronde, Catherine Creek, Lostine River, and the Imnaha River basin. Suitable data and other information on populations in this SMU provide a moderate level of confidence in the assessment of the interim criteria.

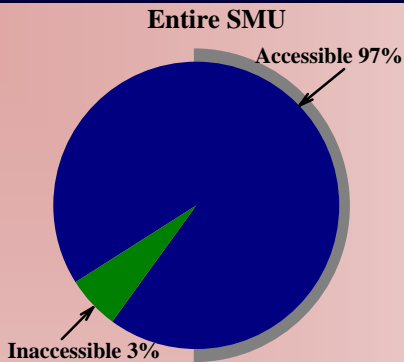


Population	Exist	Dist.	Abund.	Prod.	Ind.	Hybrid
Wenaha	Pass	Pass*	Pass	Pass	Pass	Pass
Wallowa	Pass	Pass*	<i>Fail</i>	Pass	<i>Fail</i>	Pass
Minam	Pass	Pass*	Pass	Pass	Pass	Pass
Catherine	Pass	Pass*	<i>Fail</i>	Pass	<i>Fail</i>	Pass
Lookingglass	<i>Fail</i>	<i>Extinct Population</i>				
U. Grande Ronde	Pass	Pass*	<i>Fail</i>	<i>Fail</i>	Pass	Pass
Imnaha	Pass	Pass*	<i>Fail</i>	<i>Fail</i>	<i>Fail</i>	Pass
Big Sheep	Pass	Pass*	<i>Fail</i>	<i>Fail*</i>	<i>Fail*</i>	Pass

\* *Inferred*

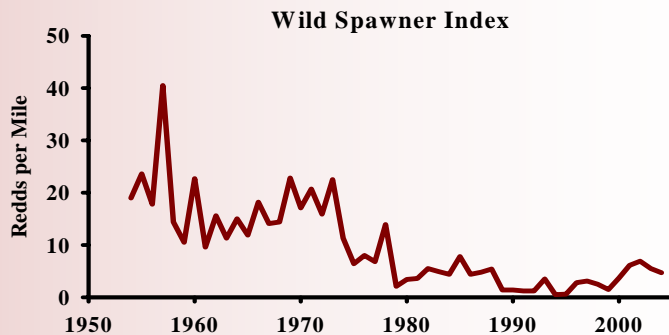


## Distribution – Pass



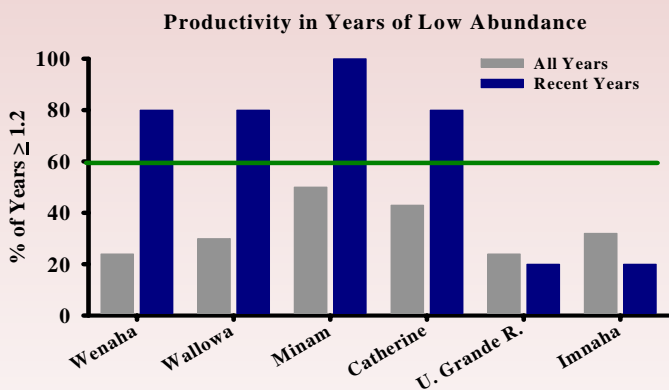
- Each of the seven existing populations passed the distribution criterion.
- Nearly all of the habitat historically accessible to Oregon populations of spring Chinook is still accessible today. However, declines in spawning and rearing habitat quality have reduced the extent of use.
- The Wallowa has lost the largest proportion of its historical habitat, but still maintains 92% accessibility.

## Abundance – Fail



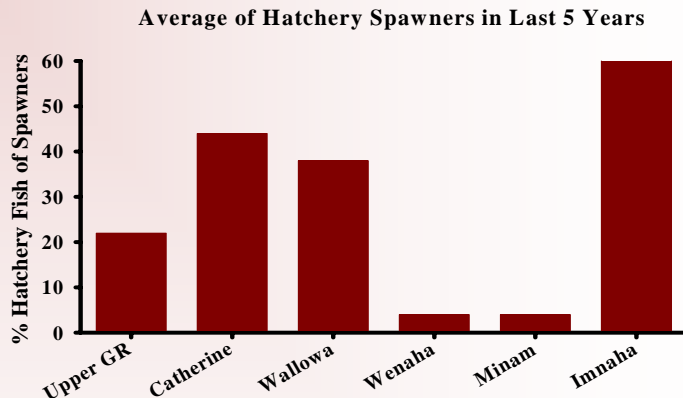
- Only two of seven populations (Wehnaha and Minam) within the SMU met the interim criterion.
- All of the populations within the SMU had a drastic reduction in adult returns from historical levels. Most populations have shown some increases in the last 3-5 years from critical lows in the mid 1990s. The Minam has increased to levels of the 1950s and 1960s.
- Increases in Catherine Creek and the Upper Grande Ronde have not been as strong as for other populations.

## Productivity - Fail



- Four of seven existing populations failed the criterion.
- In the years of low abundance within the last 50 years the Snake populations typically have not shown strong resilience. Productivity has been less than 1.2 in more than half of those years. Resilience in recent years of low abundance has been stronger.
- Long-term recruit per spawner estimates have averaged greater than 1.2 in the Minam, Catherine and Wallowa populations, and less than 1.2 for all other populations.
- Data were not available to evaluate the Big Sheep population. Significant natural spawning by hatchery fish occurs within the basin and it is suspected this would drive productivity below the criterion.

## Independence - Fail



- Only three of seven populations passed, causing the SMU to fail this criterion.
- Historical hatchery practices oriented to mitigation have resulted in substantial straying. In the early 1990s goals were re-directed towards genetic conservation and population recovery.
- Hatchery fractions in the Wenaha and Minam have consistently been low in recent years.
- Hatchery ratios were below 10% in three of five years in the Upper Grande Ronde.
- Natural spawning by hatchery fish has been very high in the Catherine, Wallowa, and Innaha.