

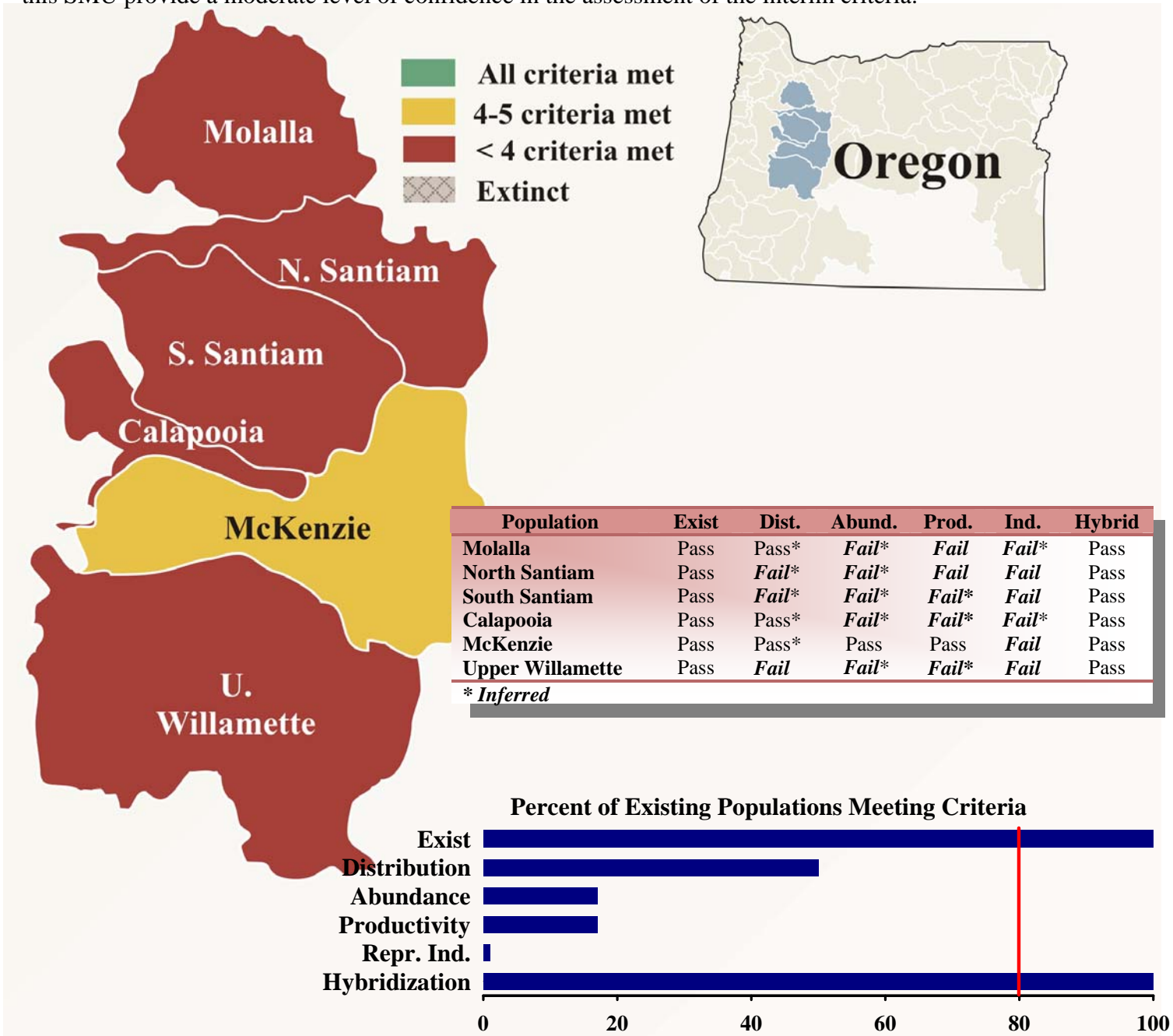
# Willamette Spring Chinook SMU

ESA Designation:  
*Threatened 1999*

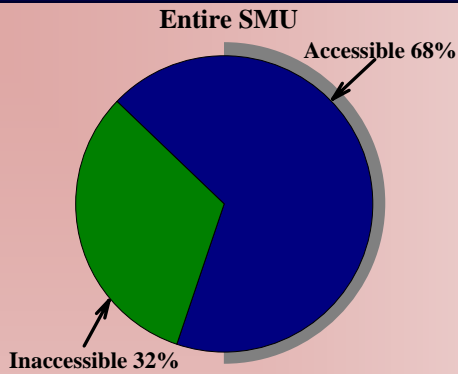
State Status:  
*Not Listed*

Interim Assessment:  
*At Risk*

This SMU includes six populations in the basin above Willamette Falls. The SMU only met two of the six interim criteria leading to the conclusion that the near-term sustainability of the SMU is at risk. The largest remaining natural population in the SMU is in the McKenzie River. Tributary dams block passage to most historical habitats, and have altered habitat quality in downstream reaches. Hatchery fish make up a substantial portion of natural spawning within the Willamette Basin. Suitable data and other information on populations in this SMU provide a moderate level of confidence in the assessment of the interim criteria.

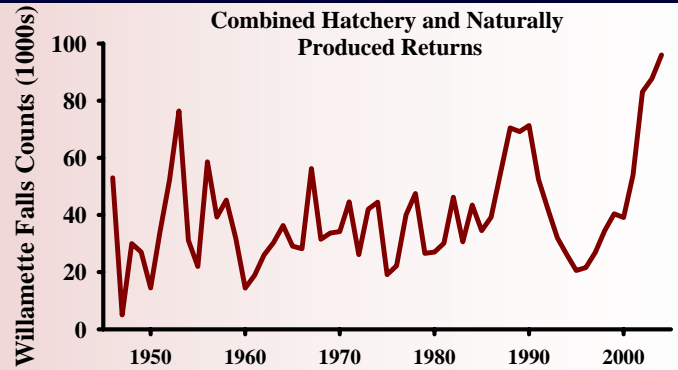


## Distribution – Fail



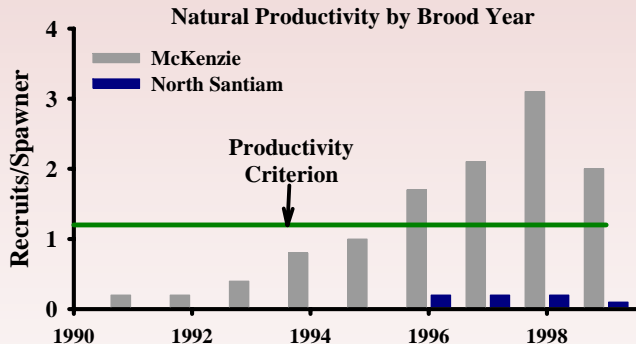
- 32% of the historically available habitat in the SMU is inaccessible today.
- Only three of six populations can still access over 50% of their historical range.
- Green Peter Dam (South Santiam), Foster Dam (South Santiam), Detroit Dam (North Santiam), Dexter Dam (Middle Fork Willamette) have all eliminated habitat historically accessible to spring Chinook, and have altered habitat quality in accessible areas.
- Cougar Dam and Blue River Dam have blocked habitat in the McKenzie.

## Abundance – Fail



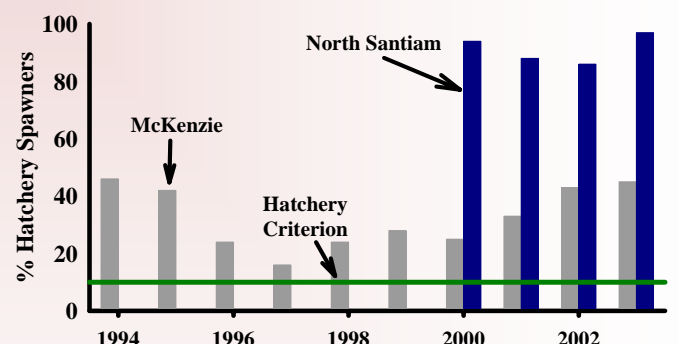
- Five of six populations did not meet the interim criterion causing the SMU to fail.
- Returns of naturally-produced fish in the North and South Santiam, Calapooia, Upper Willamette, and Molalla have been chronically low for many years.
- Counts of wild fish at Leaburg Dam in the McKenzie have risen since 1994.
- Combined counts of wild and hatchery fish at Willamette Falls have fluctuated widely over time, but in 2004 reached the highest level in 58 years. Most are hatchery origin.

## Productivity – Fail



- Only one of six populations (McKenzie) met the productivity criterion.
- Productivity estimates in the McKenzie have been increased steadily since the 1992 brood.
- Recruit per spawner estimates were very low in four years that estimates could be made for the North Santiam.
- South Santiam, Calapooia, and Upper Willamette populations failed the criterion because of altered habitat quality, chronically low returns of naturally produced fish, high hatchery fractions among spawners, and lack of data.
- The Molalla was presumed to have failed based on similarity to the Calapooia and S. Santiam.

## Independence – Fail



- None of the populations passed this criterion.
- Hatchery spawners have made up 15-46% of the spawning population in the McKenzie since 1994.
- Most spawners in the N. Santiam are hatchery origin.
- Hatchery fish comprise at least 10% and up to 97% of the spawning population in the South Santiam, Calapooia, and Upper Willamette.
- The Molalla population failed because hatchery releases are made in the basin. Two years of data indicate hatchery fractions in the Molalla are greater than 90%.