

Upper Klamath Basin Redband Trout SMU

ESA Designation:
Not Proposed

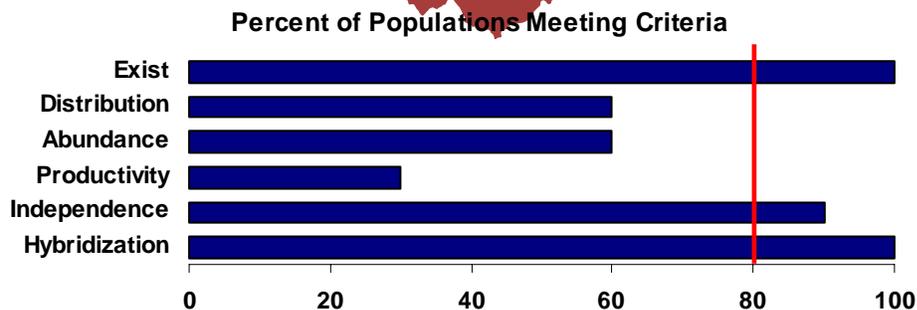
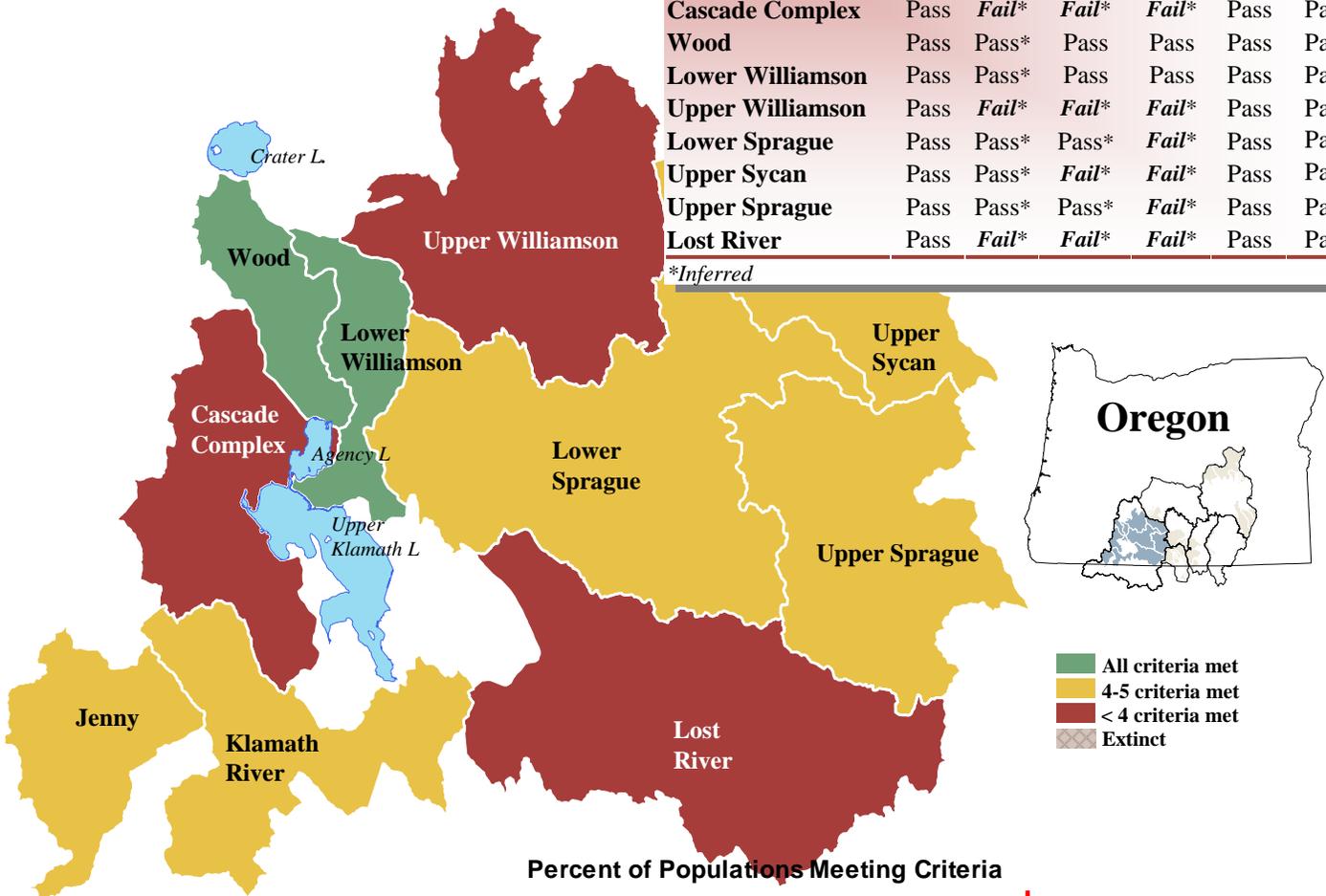
State Status:
Vulnerable

Interim Assessment:
At Risk

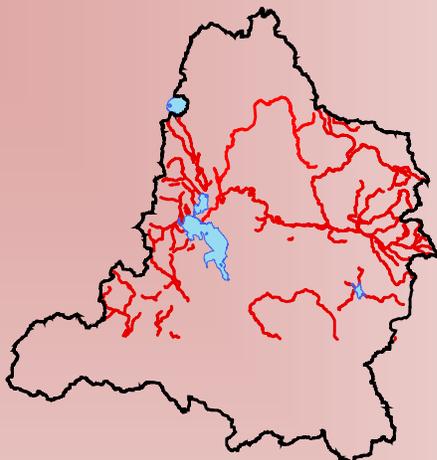
The Upper Klamath Lake basin contains the remnants of Pleistocene Lake Modoc, which redband trout may have entered from interior connections. Currently, the Upper Klamath Lake Basin supports the largest and most functional adfluvial redband trout populations of Oregon interior basins, however, some populations are severely limited in distribution and abundance by habitat quality and non-native species. The SMU is comprised of 10 populations that vary in life history, genetics, disease resistance, and status. Eighty percent of the populations meet three of the six interim criteria, thereby classifying this SMU as ‘at risk’. Limited data sets and inferences from other information for populations in this SMU provide a qualified level of confidence in the assessment of the interim criteria

Population	Exist.	Dist.	Abund.	Prod.	Ind.	Hybrid
Jenny	Pass	Fail*	Pass*	Pass*	Fail	Pass
Klamath River	Pass	Pass*	Pass*	Fail*	Pass	Pass
Cascade Complex	Pass	Fail*	Fail*	Fail*	Pass	Pass
Wood	Pass	Pass*	Pass	Pass	Pass	Pass
Lower Williamson	Pass	Pass*	Pass	Pass	Pass	Pass
Upper Williamson	Pass	Fail*	Fail*	Fail*	Pass	Pass
Lower Sprague	Pass	Pass*	Pass*	Fail*	Pass	Pass
Upper Sycan	Pass	Pass*	Fail*	Fail*	Pass	Pass
Upper Sprague	Pass	Pass*	Pass*	Fail*	Pass	Pass
Lost River	Pass	Fail*	Fail*	Fail*	Pass	Pass

*Inferred



Distribution - Fail



Redband Distribution

- Redband trout are widely distributed throughout the upper Klamath basin. Resident and/or migratory redband trout are present in Klamath River, the major tributaries of Upper Klamath and Agency Lakes, and headwater streams of the Gearhart and Cascade mountains.
- Four populations fail the distribution criterion. Jenny and Upper Williamson are isolated above natural barriers to migration. Distributions in Cascade and Lost River populations are extremely limited.
- Distribution of resident redband varies according to annual precipitation and instream flows.

Productivity - Fail

- Quantitative productivity data are not available. The criterion is assessed based on the qualitative evaluation of distribution, abundance, presence of large fluvial fish, habitat quality, and presence of non-native species.
- Long term redd counts in the Wood and Lower Williamson populations reflect stable or increasing trends in abundance. Both populations pass the criterion. The Jenny population passes the criterion based on habitat quality and diversity.
- Remaining populations fail due to degraded habitat conditions, presence of brown trout and brook trout, or limited expression of a migratory life history.

Additional Information

- Adult passage over the J.C. Boyle Dam has declined dramatically over the past 50 years. In 1959, 5,529 redband trout moved over the J.C. Boyle Dam; 70 redband trout passed the dam in 1991. These data demonstrate the severity of the impact that J.C Boyle Dam has had on movement and migratory behavior of redband trout.
 - Current and past agricultural and timber practices have degraded stream habitat in much of the basin; stream habitat suffers from channelization, sedimentation, irrigation diversions, and water withdrawal. Consequently some streams and populations are fragmented and have lost connection to lakes and marshes.
 - Federal, private, and tribal landowners are implementing habitat restoration projects including wetland restoration and riparian fencing.
-

Abundance - Fail

- The Wood and Lower Williamson populations are extremely abundant and may be the largest of Oregon's interior basins.
- Densities in the headwater populations, particularly Upper Williamson and Upper Sycan are apparently low and abundance is depressed. These populations fail the criterion. The Cascade Complex and Lost River populations also fail the criterion.
- Abundance fluctuates with water year and habitat quality.

Independence - Pass

- Stocking in moving waters, except Spring Creek, ceased in 1991.
- A coastal rainbow trout stock is planted in Spring Creek. These fish are susceptible to *C. shasta* and thought to not survive to reproduce with native fish. The Lower Williamson population passes the reproductive independence criterion but assumptions should be verified with genetic analysis.
- Coastal rainbow trout stocks are planted in Hyatt and Little Hyatt reservoirs and are assumed able to move into Jenny Creek. This population fails the criterion.
- The extent and impact of interbreeding with coastal rainbow trout stocks is unknown. Genetics studies have found evidence of introgression in the Jenny population and is suspected in Lost River.