

Rogue Summer Steelhead

Existing Populations

The Rogue Summer Steelhead SMU consists of two populations within the Rogue River basin in southwest Oregon (Table 115). Neither of the populations within this SMU are extinct.

Table 115. Population list and existence status for Rogue Summer Steelhead SMU.

Exist	Population	Description
Yes	Middle Rogue	Rogue River basin from mouth of Illinois River upstream to Gold Ray Dam.
Yes	Upper Rogue	Rogue River basin upstream from Gold Ray Dam.

Habitat Use Distribution

The criterion was evaluated based on current and historically accessible areas. It must be recognized that these estimates are derived at the 1:100,000 scale and thus *will not* capture habitat lost in many smaller (1:24,000) streams resulting from barriers such as culverts. Habitat lost in smaller streams will vary by population, but is not likely to account for 50% of any population, and thus does not alter assessment outcomes derived using data at the 1:100,000 scale. Data presented in this report on accessibility of habitat should be viewed as general approximations and not as a definitive analysis on habitat availability/accessibility. These issues will be more thoroughly addressed through the conservation planning process. Construction of Lost Creek Dam in the upper Rogue Basin eliminated access to 25 miles of steelhead habitat (USFWS 1954), and Applegate Dam blocked 34 miles in the Applegate River.

Table 116. Habitat accessibility data used in evaluating interim criteria for the Rogue Summer Steelhead SMU.

Population	Accessible (miles)	Inaccessible (miles)	Percent Accessible
Middle Rogue	640	34	95%
Upper Rogue	407	25	94%

Abundance

Abundance data for populations within the Middle Rogue is limited to index redd surveys in Fooths and Kane creeks. Surveys in those two creeks date back to 1976 and were provided by ODFW (pers. comm., Jerry Vogt, 6/7/04). Abundance in the Upper Rogue was indexed using counts of adults passing Gold Ray Dam, less fish harvested above the dam. Harvest above the dam prior to 1991 was set at 11% as determined by Kenaston (1989). Following 1991, harvest regulations eliminated harvest of naturally-produced summer steelhead above Gold Ray Dam. A mortality rate of 1% was maintained to account for hook and release mortality.

Table 117. Abundance estimates (adult indices) used in evaluating interim criteria for the Rogue Summer Steelhead SMU.

Population	30 Year Average	25% of Average	Abundance by Return Year					No. Years >25% of Full Seeding
			2000	2001	2002	2003	2004	
Middle Rogue ^a	56.2	14.1	33	39	50	109	81	5
Upper Rogue	6,085	1,521	2,299	2,645	7,861	16,684	10,983	5

a. Abundance estimate is presented as redds per mile. 30-year average based on 28 years of data between 1975 and 2004.

Productivity

Productivity in the Middle Rogue was calculated using age compositions presented by Chilcote (2001). All spawners in Kane and Foots creeks are presumed to be naturally-produced so both recruits and parents were represented by observed redd densities. Age compositions for the Upper Rogue population were provided by ODFW (pers. comm., Mark Chilcote, 2/9/04). Parents in the Upper Rogue were calculated by summing hatchery and naturally-produced spawners. Naturally-produced spawners were calculated as described in the “Abundance” section. Hatchery spawner abundance for the years 1970-1994 was calculated in the same manner as naturally-produced fish except that the 11% harvest rate was applied through 2004, and returns to Cole Rivers Hatchery were subtracted from the Gold Ray Dam count. From 1995-2004, the hatchery fraction in the Rogue was represented by proportions of hatchery and naturally-produced fish trapped at the Elk Creek weir. Elk Creek enters the Rogue River at river mile 152, which is only five miles downstream of the entrance to Cole Rivers Hatchery. The Elk Creek basin accounts for about 10% of the spawning habitat of adult steelhead that pass Gold Ray Dam. Given the relative size of the Elk Creek basin and its proximity to the release location for smolts reared at Cole Rivers Hatchery, it was determined that hatchery fraction estimates from the Elk Creek weir would best represent the hatchery fraction of natural spawners in the Upper Rogue population.

Table 118. Productivity estimates used in evaluating interim criteria for the Rogue Summer Steelhead SMU.

Population	Recent Complete Brood Years of Below Average Abundance	Productivity (R/S)					
		Year 1	Year 2	Year 3	Year 4	Year 5	Years ≥ 1.2
Middle Rogue	1995-99	2.3	5.4	2.0	6.0	6.1	5
Upper Rogue	1992-93, 1995, 1997-98	1.5	0.6	0.7	1.4	6.6	3

Reproductive Independence

Essentially no hatchery fish are present in Kane and Foots creeks in the Middle Rogue population (pers. comm., Jerry Vogt, ODFW, 6/7/04). Hatchery-to-naturally produced ratios for the Upper Rogue were based on hatchery-to-naturally produced ratios of fish observed at the Elk Creek weir.

Table 119. Reproductive independence estimates used in evaluating interim criteria for Rogue Summer Steelhead SMU.

Population	Percent of Spawning Fish of Hatchery Origin					Years $\leq 10\%$
	2000	2001	2002	2003	2004	
Middle Rogue	0%	0%	0%	0%	0%	5
Upper Rogue	2%	2%	2%	1%	1%	5

Hybridization

Hybridization has not been identified as an issue for Rogue summer steelhead.

Assessment Conclusions

This SMU included Middle and Upper Rogue populations. Monitoring data for the Middle Rogue includes spawner surveys in Kane and Foots creeks. Abundance in the Upper Rogue is monitored by passage at Gold Ray Dam. The near-term sustainability of the SMU is not at risk because both populations met each of the interim criteria.

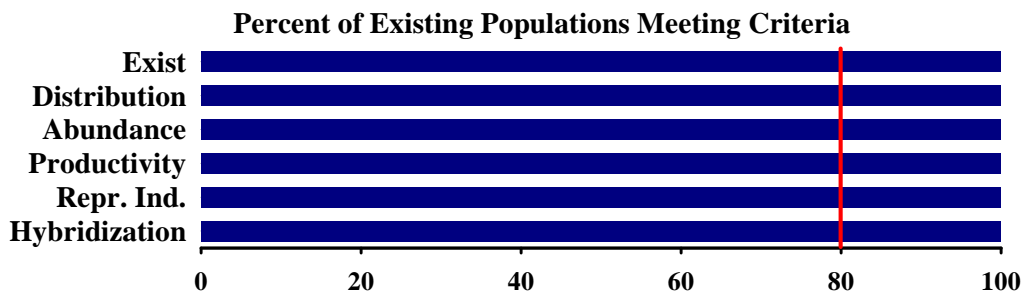
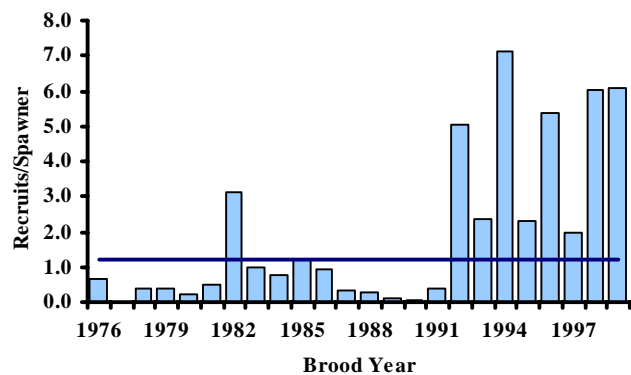
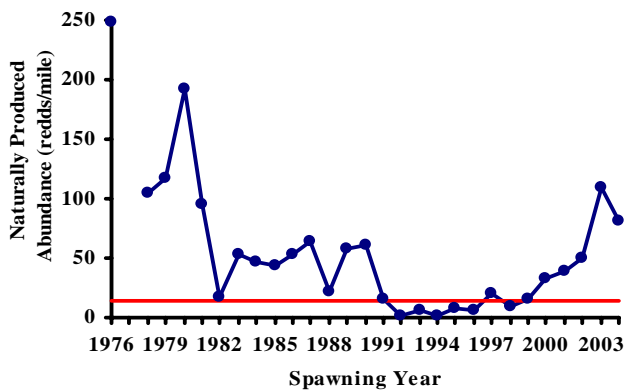
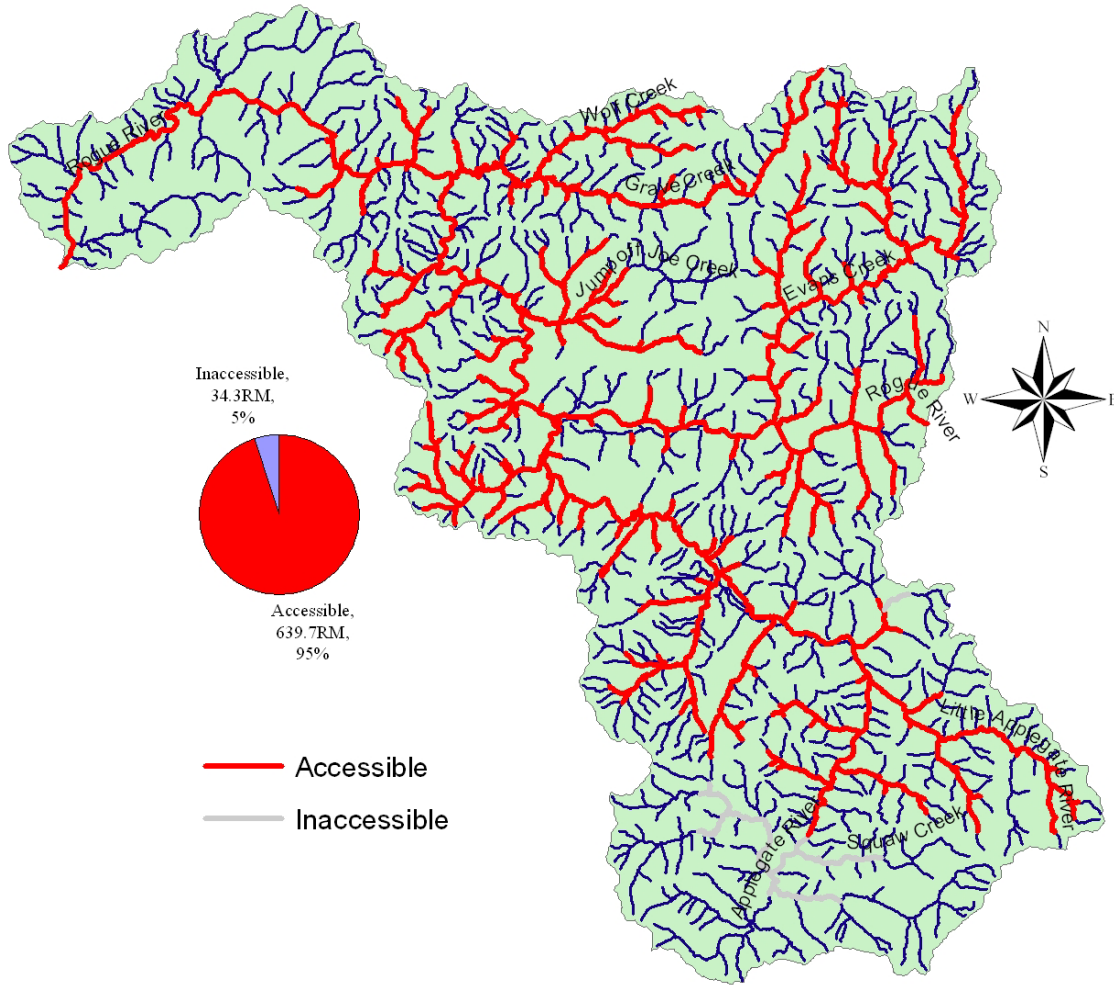


Figure 27. Assessment outcome for each of the six interim criteria with respect to the 80% threshold identified by the NFCP.

Middle Rogue – Rogue Summer Steelhead

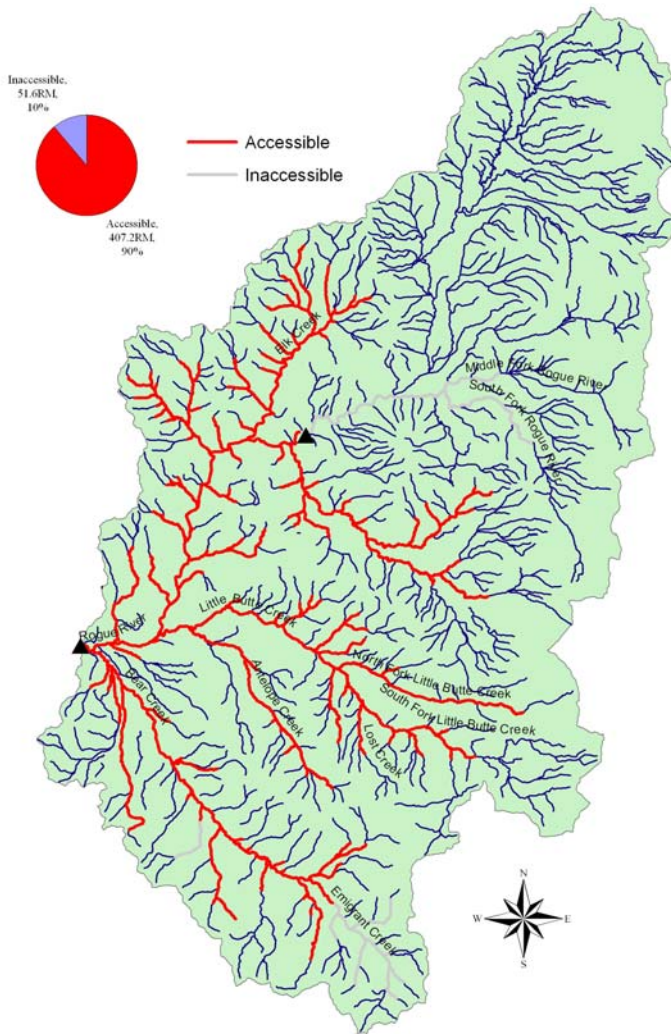


The Middle Rogue population passed each of the interim criteria. Abundance within the basin has been indexed by spawning surveys in Kane and Fooths creeks since 1976. No survey was done in 1977. While returns consistently fell below the criterion in the 1990s, they have recovered over the past six years. Applegate Dam in the Applegate River has blocked access to 34 miles of habitat.

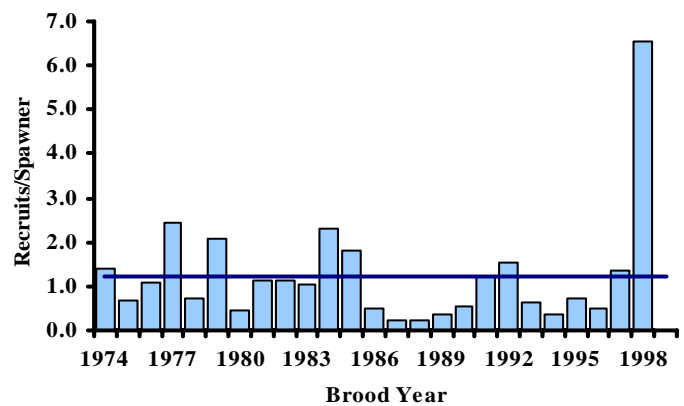
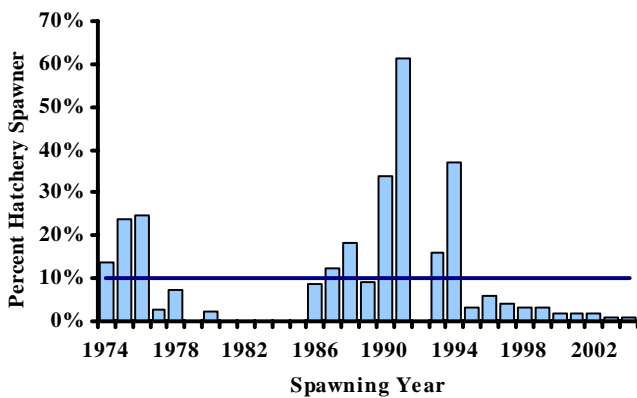
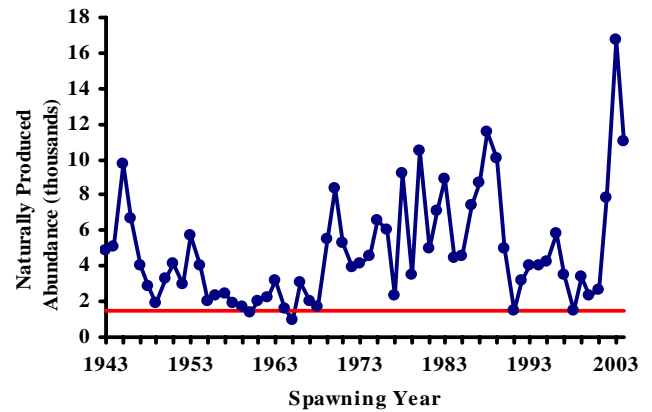
Assessment Outcome

Existence	Distribution	Abundance	Productivity	Independence	Hybridization
<i>Pass</i>	<i>Pass</i>	<i>Pass</i>	<i>Pass</i>	<i>Pass</i>	<i>Pass</i>

Upper Rogue – Rogue Summer Steelhead



The Upper Rogue population passed each of the interim criteria. Abundance in the population was indexed by counts at Gold Ray Dam which were adjusted for harvest above the dam. Hatchery spawners (through 1994) were estimated by also adjusting for returns to Cole Rivers Hatchery. From 1995-2004, hatchery-to-naturally produced ratios were indexed by trapping results in Elk Creek which showed very few naturally-spawning hatchery fish. Naturally-produced returns in the last two years have been the highest since 1943. Construction of Lost Creek Dam blocked access to approximately 25 miles of habitat.



Assessment Outcome

Existence	Distribution	Abundance	Productivity	Independence	Hybridization
Pass	Pass	Pass	Pass	Pass	Pass