

Umpqua National Forest

Summary of monitoring results from 2021-2022

Are we meeting our goals?

In the last few years, the Umpqua National Forest has faced challenges from longer, more severe wildfires, including back-to-back intense fire seasons in 2020 and 2021. Wildfire can be a driver of ecosystem health, but it has also left its mark on this unique volcanic landscape that includes the Wild and Scenic North Umpqua River, late-successional reserves set aside by the Northwest Forest Plan, and a beautiful forest corridor with abundant natural and cultural resources. Monitoring data helps us learn about the impacts of wildfire, as well as whether we are succeeding at ongoing work to restore stream and riparian ecosystems, protect wildlife habitat, promote sustainable recreation, and facilitate wildfire recovery.

Key findings:

- Across the Forest, data show a gradual **improvement in stream habitat complexity** reflected in substrate and presence of wood.
- **Tree mortality from insects** is increasing and affecting recreation as well as our ability to implement management treatments.
- Water temperatures have been degrading over the last 20 years.
- In 2021 and 2022 harvest levels topped **5 million cubic feet of timber**, exceeding the 2021 Region 6 target.
- In 2022, the forestry sectors provided about 7.9 percent of Douglas County's non-governmental employment, and paid **higher average annual wages** than private industry jobs.

Summary of monitoring results

Watershed and soil resources

41 percent of watersheds are functioning properly and 59 percent are functioning at risk. No watersheds were rated as impaired. Forest-wide stream survey data show a slight and gradual improvement in stream habitat complexity reflected in substrate and presence of wood.

However, both the South Umpqua and North Umpqua sub-basins are areas of concern due to habitat degradation associated with large wildfires.



Social and economic benefits, including recreation

In 2021, 96 percent of visitors stated that they were either “very satisfied” or “somewhat satisfied” with their trip to the Umpqua NF. The total number of visits to Umpqua NF in 2022 was slightly more than 475,000, an increase of roughly 29.6 percent since 2017.

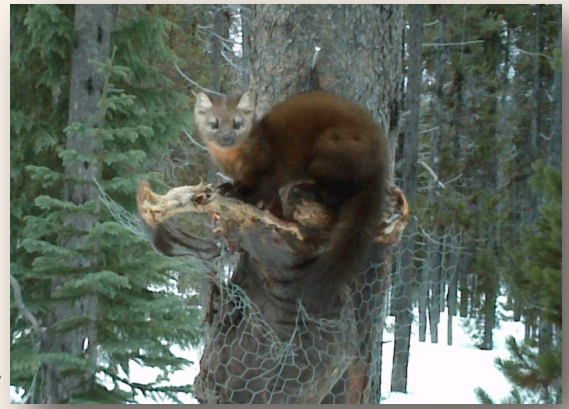
The forest products industry continues to be a key part of the Douglas County economy. In both 2021 and 2022, the Umpqua National Forest attained over 5 million cubic feet of timber harvest. As log and lumber markets have improved, Douglas County regained 204 forestry, logging, and wood products manufacturing jobs from a low in 2011.

In 2022, the logging, forestry, and wood products manufacturing sectors provided about 7.9 of Douglas County's non-governmental employment, and paid higher average annual wages than private industry jobs.

Species of concern

Modeling shows there is more mature and late successional mountain hemlock and lodgepole pine habitat for marten than was predicted in our 1990 forest plan.

There has been a substantial loss of northern spotted owl nesting, roosting, and foraging habitat and subsequent loss of historical owl nest sites due to large, catastrophic wildfires across the Umpqua NF. From 2017 -2023, 186,304 acres of reserve have been lost to wildfire. Between 1993 and 2022, the proportion of late-successional reserves exhibiting old-growth characteristics has declined in all Northwest Forest Plan land use allocations on the Umpqua National Forest.



Across its entire range, the northern spotted owl population has decreased by an estimated 61.8 percent in the last 25 years. The dominant reason for the owls' decline is the invasion and competition from the barred owl.

Population trends for deer and elk are declining steadily. Early seral habitat (used by deer and elk for foraging) from timber harvest has been declining. However, there has been over 130,000 acres of wildfire on the Umpqua NF since 2002, which has created a patchwork of early seral habitat and improved forage production.

Climate change and other stressors

In 2021, the Umpqua National Forest experienced extensive fire with mixed severity, mainly driven by topography and fine-scale weather. The majority of high-severity fire occurred in late-successional reserves. In 2022, the area severely burned was very small and outside late-successional reserves.

Water temperatures have been degrading over the last 20 years. Boulder Creek has seen dramatic shifts into a water temperature profile that is too high for salmonid life in its lower reaches.

In 2021-2022, trees in the Umpqua NF experienced increased damage from several native insects. Most of these mortality agents have increased dramatically relative to the preceding decade.



The compounding impacts of climate change-related drought, introduced insects and pathogens, and increased tree density as a result of fire exclusion may make it more difficult for forests to recover from contemporary insect outbreaks.