



Oregon's Disappearing Rivers

by the CAP Public Lands Team February 2018

Note: On April 9, 2018, the authors added policy recommendations to this fact sheet.

Rivers are the lifeblood of Oregon. They irrigate crops, provide clean drinking water, serve as habitat for fish and wildlife, and fuel a \$16.4 billion¹ outdoor recreation economy in the state.

But rivers are under immense pressure. As documented in the Disappearing Rivers analysis—the first comprehensive snapshot of the state of Western rivers—climate change, dams, development, and an ever-changing landscape are placing increasingly more stress on the waterways that are so inextricably tied to the health of Western communities and economies.

Across the West, nearly half of all rivers—49 percent—are modified from their natural state. That's more than 140,000 unnatural river miles, or enough to circle the earth nearly six times.

In Oregon, 52 percent of all rivers are altered.

That's equal to 22,706 unnatural river miles—enough to cross the state nearly 57 times.

Of the 11 Western states in the Disappearing Rivers analysis, Oregon had the sixth most altered rivers in the West. When broken down by size, 79 percent of all major rivers, 50 percent of all smaller streams and rivers, and 43 percent of all headwaters are altered.

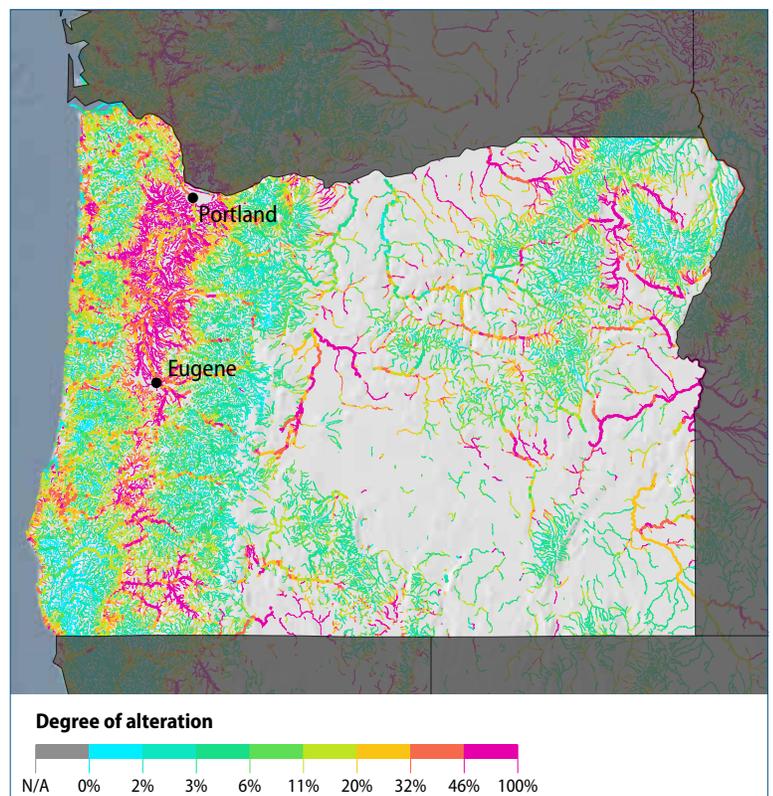


FIGURE 1
Unnatural rivers in Oregon

Modification by flow restriction and floodplain alteration

| Share of headwaters that have been modified | Share of smaller rivers and streams that have been modified | Share of major rivers that have been modified | Share of all rivers that have been modified |
|---|---|---|---|
| 43.2% | 49.6% | 79.3% | 52.0% |

Source: Dylan Harrison-Atlas and others, "Description of the approach, data, and analytical methods used to evaluate river systems in the western U.S." (Truckee, CA: Conservation Science Partners, 2017), available at <https://disappearingwest.org/rivers/methodology.pdf>.

In Oregon, three of the most-altered, major rivers are the Powder River, the Snake River, and the Willowa River, at 58 percent, 56 percent, and 51 percent, respectively.

River degradation is being driven both by development within waterways and in the surrounding floodplains. In Oregon, 15 percent of rivers no longer flow freely due to obstructions and development within rivers—most notably the 866 major dams in the state. Forty-seven percent of rivers flow through lands that are significantly developed and altered by human activity.

Rivers also play an important role in Western economies. The Disappearing Rivers analysis found that watersheds in the West with the highest concentration of rivers drive 717 percent more outdoor recreation spending than those with the fewest rivers. In Oregon, there is 698 percent more outdoor recreation spending in watersheds with the highest concentration of rivers, fueling an impressive portion of the state's \$16.4 billion² outdoor recreation economy.

Despite the degraded state of rivers in Oregon and across the West, policies that promote conservation and protect public lands can have an enormous effect on water. The Disappearing Rivers analysis found that rivers that flow through protected lands are on average 50 percent more natural than rivers that flow through unprotected areas.

Recommendations

There are several actions that policymakers could take to conserve remaining natural rivers; restore damaged rivers; and protect the economic and ecological health of the state.

1. **Protect what's left of the large, natural rivers in Oregon.** Through the Wild and Scenic Rivers Act and other tools that protect both land and water, the state should set an ambitious goal to prioritize protections for its 870 miles of major rivers that are natural and currently unprotected. The Oregon Legislature and its Parks and Recreation Department should use their authorities under the Oregon State Scenic Waterways Act to help accomplish this goal.³
2. **Conserve and restore Oregon's headwaters.** The state should work with federal land agencies, cities, and drinking water utilities to expand watershed restoration efforts. It should also secure consistent funding to projects that protect forest headwaters, as well as to attract greater investment for culvert and road removals that protect headwater resources.
3. **Rethink Oregon's river infrastructure.** The state has made positive steps toward evaluating dams for their net benefit and enabling removal where appropriate.⁴ It should continue this re-evaluation and support work to better use flood plains for their multiple benefits to people and nature.
4. **Collaborate with private landowners in Oregon.** The state is a leader in planning and supporting innovative solutions such as short-term water leases to protect river ecosystems.⁵ It should work with its cities to invest in conservation and demand reduction, as well as with landowners on river restoration that secures water resources for wildlife and rural communities.

To explore the data, sources, interactive map, and the full project, visit DisappearingWest.org/rivers.

Endnotes

1 Outdoor Industry Association, "Oregon," available at <https://outdoorindustry.org/state/oregon/> (last accessed November 2017).

2 Ibid.

3 Oregon Department of State Lands, "State Scenic Waterways," available at <http://www.oregon.gov/dsl/WW/Pages/SSW.aspx> (last accessed March 2018).

4 Oregon Watershed Enhancement Board, "Small Dam Removal Effectiveness Monitoring," available at http://www.oregon.gov/oweb/monitor/Pages/monitor_small dams.aspx (last accessed March 2018).

5 Oregon Water Leases Department, "Instream Leasing Program," available at http://www.oregon.gov/owrd/pages/mgmt_leases.aspx (last accessed March 2018).