



# Colorado'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 Colorado. They irrigate crops, provide clean drinking water, serve as habitat for fish and wildlife, and fuel a \$28 billion<sup>1</sup> outdoor recreation economy in the state.

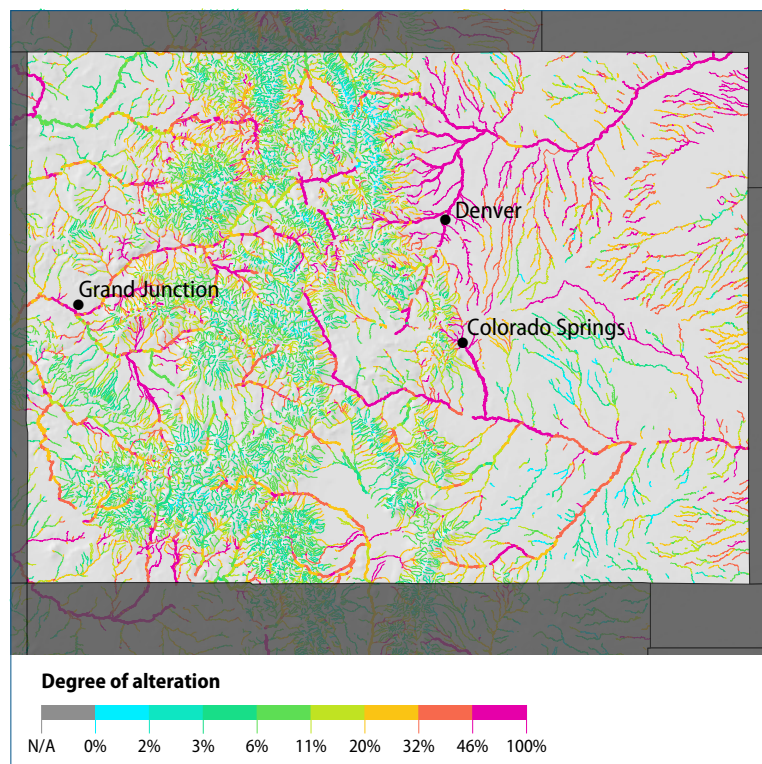
But rivers are under immense pressure. As documented in the Disappearing Rivers analysis—the first comprehensive snapshot of the state of Western rivers—climate change, dams, development, and an ever-changing landscape are placing increasingly more stress on the waterways that are so inextricably tied 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 Colorado, 63 percent of all rivers are altered.

That's equal to 16,654 unnatural river miles—enough to cross the state more than 59 times.

Of the 11 Western states in the Disappearing Rivers analysis, Colorado had the third most altered rivers in the West. When broken down by size, 97 percent of all major rivers, 61 percent of all smaller streams and rivers, and 51 percent of all headwaters are altered.



**FIGURE 1**  
**Unnatural rivers in Colorado**

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
50.6%	61.1%	97.1%	63.0%

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 Colorado, three of the most-altered, major rivers are the Colorado River, the Blue River, and the Green River, at 77 percent, 69 percent, and 63 percent, respectively.

River degradation is being driven both by development within waterways and in the surrounding floodplains. In Colorado, 32 percent of rivers no longer flow freely due to obstructions and development within rivers—most notably the 1,732 major dams in the state. Fifty-four 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 Colorado, there is 3,962 percent more outdoor recreation spending in watersheds with the highest concentration of rivers, fueling an impressive portion of the state's \$28 billion<sup>2</sup> outdoor recreation economy.

Despite the degraded state of rivers in Colorado 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. Colorado has the third least percentage of protected areas within its boundaries of all 11 Western states. This relatively low amount of protection for lands within the state is a driving reason that Colorado has the third most altered rivers in the West.

## 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 Colorado.** 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 64 miles of major rivers that are natural and currently unprotected. The Colorado Legislature should establish a state river protection system to help accomplish this goal.
2. **Conserve and restore Colorado's headwaters.** The state should continue to partner with federal land agencies, cities, and drinking water utilities to expand watershed restoration efforts and direct consistent funding to projects that protect forest headwaters.
3. **Rethink Colorado's river infrastructure.** The state must re-evaluate dams and flood-control structures by modernizing necessary functions and restoring natural processes where built infrastructure is no longer a net benefit.
4. **Collaborate with private landowners in Colorado.** The state should continue to follow its 2015 Water Plan to prepare proactively for water scarcity, as well as support innovative solutions such as alternative transfer mechanisms—short-term leases for water that protect streamflows and historic water rights.<sup>3</sup> It should also work with federal agencies and landowners to restore rivers and streams on private lands that are critical to healthy ecosystems and rural communities.

To explore the data, sources, interactive map, and the full project, visit [DisappearingWest.org/rivers](https://DisappearingWest.org/rivers).

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## Endnotes

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

2 Ibid.

3 Colorado Water Conservation Board, "Colorado's Water Plan" (2015), available at <https://www.colorado.gov/pacific/sites/default/files/CWP2016.pdf>; U.S. Bureau of Reclamation, "Pilot System Conservation Program (Pilot Program)," available at <https://www.usbr.gov/lc/region/programs/PilotSysConsProg/pilotsystem.html> (last accessed March 2018).