

## **The health and state of the Uncompahgre River, its tributaries, and its watershed October 2022, report produced by Uncompahgre Watershed Partnership**

The Uncompahgre River Watershed is experiencing population growth, development, increased use, drought, and climate change. These mostly human-caused pressures are combined with historic mining impacts that have left a majority of water sources contaminated by metals. Consequently, the Uncompahgre River and its watershed requires careful management and planning for projects to improve water quality and supply. To understand the overall conditions of the watershed, you can refer to these two documents:

1. Watershed Handbook: <https://www.uncompahgrewatershed.org/wp-content/uploads/2019/12/Uncompahgre-Watershed-Basics-2019.pdf>
2. Uncompahgre Watershed Plan (especially pages 11-20): <https://www.uncompahgrewatershed.org/wp-content/uploads/2022/01/Uncompahgre-Watershed-Plan-2022.pdf>

While late summer precipitation and early snowfall briefly increased flows in 2022, flows in the Uncompahgre River below Ridgway were less than the median in most of July, August, and September; and year-to-date precipitation\* was 2.57 inches below normal. Abnormally dry soils and overuse in the Colorado River Basin mean local water supplies continue to be limited. For related information on Ridgway's water supply and municipal water use, see: [https://townofridgway.colorado.gov/sites/townofridgway/files/documents/Water%20Supply%20Assessment%20%282022-02-16%29\\_Public.pdf](https://townofridgway.colorado.gov/sites/townofridgway/files/documents/Water%20Supply%20Assessment%20%282022-02-16%29_Public.pdf)

The Uncompahgre River's 2022 peak flow, as recorded at Ouray CR24 just downstream of Ridgway, happened earlier than usual on May 14, due to unusually warm spring days as well as rainfall that contributed to faster snowmelt. The Ridgway Reservoir's 2022 storage level, which is an indicator of local water supply conditions, hovered between 74% and 82%, due to inflow from the Uncompahgre River, precipitation, and releases for downstream uses. This level was lower than summer 2021, which reached as high as 93%, but higher than winter 2021, which reached as low as 61%.

Decreased water supply as well as several flash flooding events led to periodic increases in sediment load, but no known long-term changes in watershed health. Besides on-going drought, the Uncompahgre River, its tributaries, and the watershed did not experience any known substantial decreases in water quality and health due to any specific event or new condition.

### Top Watershed Health Hazards

- Acidic and metals-laden drainage from historic mine sites continue to make the Uncompahgre River and some tributaries unsuitable for aquatic life.
- Climate change, drought, and aridification are making it difficult for groundwater to recharge, reservoirs and lakes to refill, and stream flows to reach levels adequate to sustain watershed health and provide for various human uses. Stream temperatures are also reaching summer highs that impact fish populations.
- Dust and microplastics in snow are impacting the rate and timing of snowmelt as well as water quality. While water treatment can improve the quality of public water supplies, the demands on the treatment processes are increased.
- The Cow Creek Pipeline and Ramshorn Reservoir, proposed by Ouray County and partners, could impact Cow Creek's ability to maintain natural flow sufficient for ecosystem health, especially as fish habitat for bluehead sucker, which the State of Colorado\*\* identifies as a species of "highest conservation priority." Though the water rights proposal for the two projects lists environmental benefits, among others, as reasons to build, no evidence has been shown on how such benefits would be achieved. The project also could impact Uncompahgre River water quality due to additional water depletions from the river and its tributaries, attributed to the

related project agreements. These and other issues such as project costs and responsible parties for operation and funding need to be resolved.

- Ouray Silver Mines Inc. has been an important partner in maintaining watershed health, both by ensuring that their operations don't contribute to decreases in water quality and by funding legacy mine site restoration projects. The company is now in receivership. If new owners are not found or if the new owners do not complete planned water quality improvement projects, metals concentrations will not be decreased. However, the Revenue Mine remains subject to permits from two state agencies, the Water Quality Control Division and the Division of Reclamation, Mining and Safety, which provide critical water quality and watershed health protections.
- Wildfires are a big concern in Colorado including our community. In addition to the risk to life, economic health, and wildlife habitats, the potential negative impacts on the watershed and public water supplies require that careful land management and source water protection measures be implemented.

#### Top Watershed Health Opportunities

- Potential collaborations between UWP, Trout Unlimited, and public and private partners like the Governor Basin Restoration Project promise to restore water quality in specific areas and incrementally improve ecosystem health. More support from various sources will be needed to complete the current Governor Basin project, as well as future projects.
- The Multi-benefit Uncompahgre River Project, funded by a public/private partnership, is being planned and designed upstream of Ridgway, aimed at improving agricultural ditch operation, reconnecting floodplains, improving water quality, and reestablishing native biodiversity.
- The Colorado Water Conservation Board approved an instream flow right on Cow Creek and filed an application for it with the state water court in 2021. This would be an important method of ensuring sufficient flows for the significant fish species that live there.
- The City of Ouray is currently building a new wastewater treatment facility. The existing facility is inadequate and failed to protect water quality in the Uncompahgre River. The new wastewater treatment facility will greatly improve the City of Ouray's ability to protect water quality in the Uncompahgre River. As part of the existing permit, monitoring is required to demonstrate that water uses, such as aquatic life, are protected.
- The Colorado Water Plan and federal infrastructure funds could fund more water quantity and quality improvement projects, if local agencies and nonprofits can make successful applications.
- The Town of Ridgway contracted with a consultant to characterize the riparian areas along the Uncompahgre River, and this 2021 report offers ideas for improving property design and management to better support river functions. See the report at: [https://townofridgway.colorado.gov/sites/townofridgway/files/documents/Ridgway\\_Channel\\_Characteristics\\_Assessment\\_Report.pdf](https://townofridgway.colorado.gov/sites/townofridgway/files/documents/Ridgway_Channel_Characteristics_Assessment_Report.pdf)
- Ouray County is planning the Corbett Creek Crossing Project that will mainly improve conditions on County Road 17, but with the right project engineering could also improve the Uncompahgre River by slightly reducing sediment flow into the river with decreased erosion of roads and mountainsides.

In conclusion, the Uncompahgre River, its tributaries, and its watershed face many challenges from the climate and human activity. Yet, dedicated stewardship and several potential solutions can be planned, designed, and implemented to help preserve and improve river and watershed health, so that it can continue to support a rich mixture of wildlife, residents, and economic activity.

\*Source: <https://www.drought.gov/states/colorado/county/ouray>

\*\*Source: Colorado Parks & Wildlife Gunnison River Basin Management Plan, 2019