MINING IMPACTS
IN THE ROARING FORK WATERSHED

Photo: 9news.com
Current and historical mining activities in the watershed are not nearly to the extent that has occurred in other areas of the state, but the history of mining in the area has left a considerable mark on the landscape. Scars and relics of abandoned mines are widespread. Roads that fragment the landscape are largely the result of the area’s mining history.

The Colorado Geological Survey website indicates that there are an estimated 23,000 abandoned mine lands (AML) in the state. Nearly 800 of them are in Pitkin County. Gravel is currently mined adjacent to stream areas, but most of the impacts from mining in the watershed are the result of the legacy of the late 1880s mining boom. Efforts have been made by Pitkin County and nonprofits to purchase mining claims in the area to eliminate the possibility of future developments.
Types of Mining
Placer mining (mining streambed) destabilizes streambanks, aggregate mining (crush, gravel) harms groundwater systems, and lode mining (extract from tunnels) produces toxic mine drainage that harms riparian areas.

Mining Impacts
From The Burden of Gilt: The legacy of environmental damage from abandoned mines, and what America should do about it, published by the Mineral Policy Center in 1993: “erosion, leaching, and acidification – all natural occurrences – can trigger highly unnatural and undesirable phenomena when they interact with mine waste, tailings, and old workings.”

Roaring Fork Watershed Mining Impacts
The State of the Roaring Fork Watershed Report 2008 detailed some of the specific threats to the watershed. Disposal sites from metal and coal mining directly impact riparian areas with waste rock dumps, tailings, mill sites, and tailing ponds. Scars from past mining activity destabilize hillslopes, eliminate riparian vegetation, degrade riparian soils, and are a source of stream sediment.
The 2012 Roaring Fork Watershed Plan identified Coal Creek, Ruby Mine, Thompson Creek, and Smuggler Mountain as sites requiring sustained reclamation. Smuggler Mountain was designated by the EPA as a Superfund site because of elevated lead and cadmium levels in soils. Cleanup and remediation activities were completed in 1996, but ongoing mitigation activities are required. Ruby Mine discharges mine drainage into Lincoln Creek. And high iron levels in Coal Creek are likely attributed to mining activities. In addition Castle Creek contains historic mining roads that crisscross the landscape provide motorized access into relatively pristine habitat, facilitate damage to fragile tundra plants and soils from vehicles illegally driving off-road and promote the spread of noxious weeds.
In the 2012 Roaring Fork Watershed Plan, reclamation of mining sites was identified as a priority, but not in the most urgent category. The possibility of contamination on the scale of the Gold King mine spill into the Animas River is unlikely in this watershed. Projects using biochar have been promising. Biochar is a substance made from burning biomass in an oxygen-limited environment, resulting in a stable form of carbon that has superior water-and nutrient-retention abilities, which is used to reduce metal toxicity and boost fertility of compromised soil.

photo: https://www.aspennature.org/restore/forest-ecosystem-health/hope-mine-biochar-project
http://coloradogeologicalsurvey.org/mineral-resources/abandoned-mine-lands/


Crystal River Wild and Scenic. www.crystalriverwildandscenic.com

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http://www.hcn.org/blogs/range/new-hope-for-old-mines

