Mine Reclamation and Habitat Restoration in the Middle Clark Fork
Mining Legacy in the Ninemile Valley

- Ninemile Creek has a long history of surface mining.
- Placer mining peaked in the 1870s and dragline dredging became prominent in the early 1940s.
- Several abandoned hard rock mines are located within the Ninemile drainage.
Kennedy Creek

The site was a designated superfund site (CERCLA)

The reclamation area consisted of 2 abandoned hard rock mines that originally targeted lead-zinc ore associated with quartz veins that also contained gold & copper
Kennedy Creek

The major concerns were concentrations of arsenic, copper, mercury, lead, and zinc that exceed screening levels.
Kennedy Creek

6,000 cubic yards of mine waste per site
Kennedy Creek waste removal
Kennedy Creek

Mine waste removal complete.
Kennedy Creek

July 2015
Ninemile Placer Mine Reclamation

• Started as a partnership with the Lolo National Forest in 2005 and Missoula County in 2009
• Eleven abandoned mine reclamation projects
• $3.5 M in restoration
• 3 Projects in planning
Placer Mine Reclamation Process
Physical Damage – Repaired

2016 – Ninemile Creek, MT
Placer Mine Reclamation Process
For every mile of valley restored, an additional 1.01 acre-feet of groundwater entered the stream each day at baseflow.

860 tons/year sediment reduction per mile restored

Our work shows that restoration can have a substantial impact on sediment reduction, water storage and streamflow generation processes, and is a valuable tool for mitigating climate change effects on Western rivers and streams.
Partners TU Brings to the table

- Montana DEQ, DNRC, FWP, NRDP
- County and Local Governments
- Local Watershed Groups and Landowners
- Conservation Districts
- US Fish and Wildlife Service, BLM, EPA
- Educational and Research Institutions

Cedar Creek – Large Wood Structure and Road Relocation Project
2019 Projects

Floodplain Restoration & LWD – Cedar Creek
Road Decommissioning – Fish Creek
Placer Mine Restoration – Ninemile Creek
Mine Tailings Removal – Flat Creek

Project Partners
- Lolo National Forest
- DEQ
- Missoula County
- FWP
- NWF
- Landowners
- DNRC
- University of Montana
- Big Sky Brewing
- Turner Foundation
- Northwestern Energy
- River Design Group
- Geum Environmental
Thank You!

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