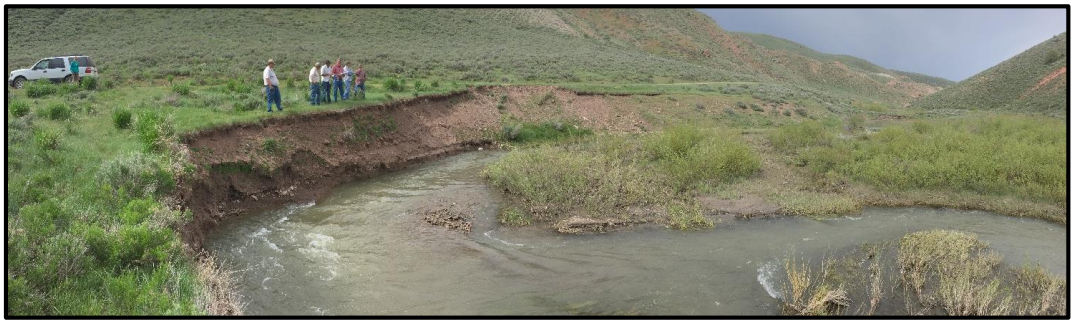
Coal Creek Sediment Reduction and Bank Stabilization

Background:

Aquatic habitats and stream function in Coal Creek have been degraded by high sediment loads from various sources. In particular, the Coal Creek Road (BLM Road #4216) has been identified as a major contributor because portions of the road were constructed within the active floodplain, leading to excessive bank erosion and degraded fish habitat.



Objectives (2 miles of stream habitat):

1) Reduce sediment loading;
2) Improve riparian and aquatic habitat condition and function;
3) Improve habitat for BRC and other native fishes;
4) Maintain and enhance stream habitat connectivity;
5) Improve road function while reducing sediment contribution

Approach:

Coal Creek Sediment Reduction and Bank Stabilization was completed in two phases. **Phase I** was completed in 2105 and addressed fish passage at two historical crossings by replacing an undersized culvert and eroding vehicle ford with properly sized culverts that improve connectivity and stream function. **Phase II** was completed in 2018 and addressed road safety, bank stability and stream habitat for Bonneville Cutthroat Trout by performing stream restoration at 10 remaining sites where construction of Road #4216 within the active floodplain of Coal Creek had caused excessive erosion, impaired stream function, and degraded fish habitat.

Partners

WESTERN NATIVE TROUT INITIATIVE

WLCI

Wyoming Wildlife & Natural Resource Trust

Photos from before (left) and after (right) bank re-sloping and construction of a bankfull bench to reduce sediment inputs from a large eroding bank.

Before/after of a channel reconstruction to reduce high near-bank stress and erosion; a backwater in the former river right channel now provides juvenile fish rearing habitat.

A vehicle ford on Little Muddy Creek was replaced with a bottomless arch culvert to improve stream function and road safety at this site.