

Gallatin County – Beaver Mimicry on Mandeville Creek

Restoring wetlands, reducing nutrient and sediment pollution



Before:

Lacking woody, stabilizing vegetation
Flashy flows from upstream irrigation returns and municipal stormwater
Unmanaged horse access to creek



After:

Beaver mimicry structures spread out water –

- Slowing flow
- Recharging groundwater
- Trapping sediment and nutrients that are used by plants and shrubs

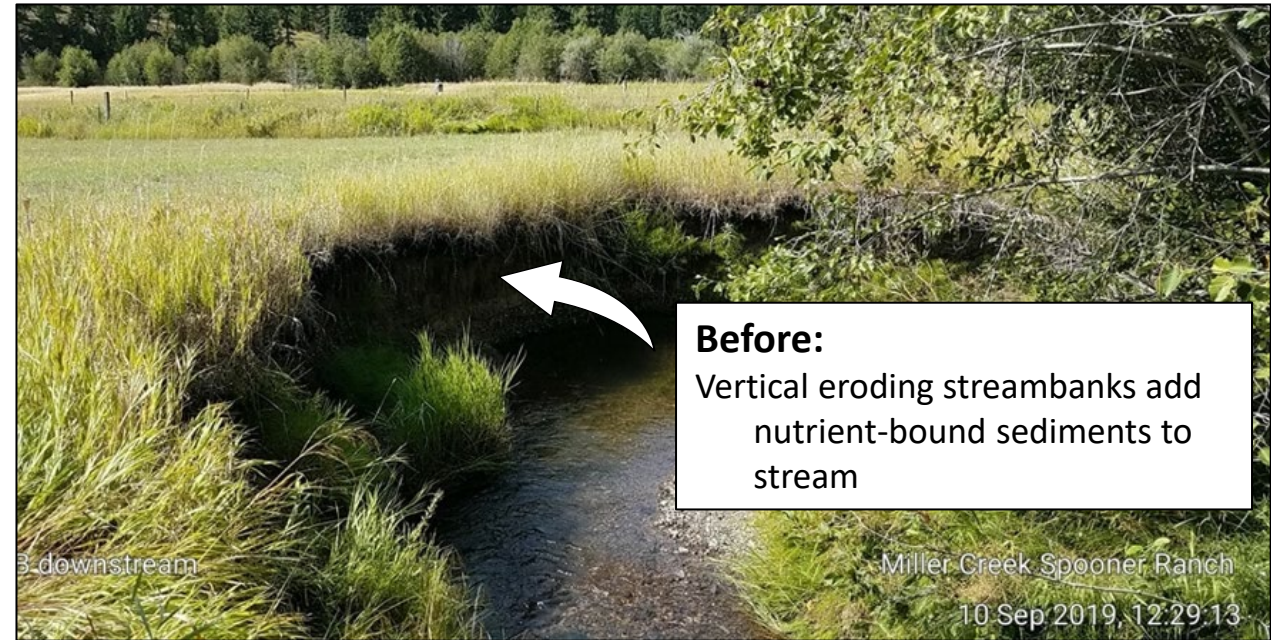
Reduced horse impacts to creek

- Project located near Mandeville Creek confluence with E. Fork Gallatin River, upstream of Bozeman's wastewater discharge
- Restored 1.2 miles of Mandeville Creek
- Ongoing project
 - *Preliminary* results reduced pollution to stream by: 9 lbs/day nitrogen, 1.9 lbs/day phosphorus, 1,300 lbs/day sediment
 - Improved pollution treatment expected with more vegetation growth
- Total Cost: \$305,127



Missoula County - Miller Creek Restoration

- Restored 4,500 ft of Miller Creek
 - 1 of 4 phases
 - other phases implemented riparian fencing to manage livestock access to the stream
- 346 tons/year sediment reduction (~20 dump truck loads/year) and associated land loss
- Total Cost: \$173,200



Madison County – Stream re-meandering and corral relocation along the Ruby River

- Restored 2,200 ft of the Ruby River
- 400 tons/year sediment reduction (~20 dump truck loads/year)
- Total Cost: \$839,085

