

Pinedale Region Aquatic Habitat Priorities

Region: Pinedale

Priority: 5

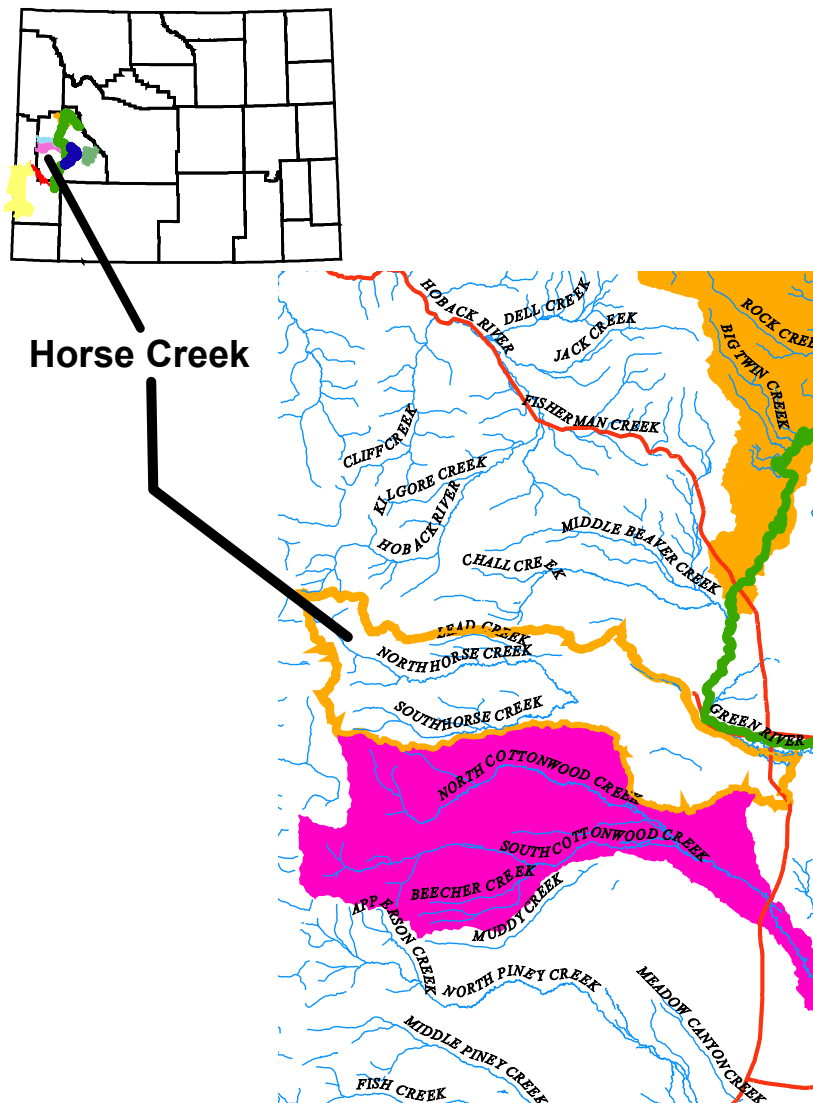
Watershed Name: Horse Creek Watershed

HUC: 1404010105

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The Horse Creek watershed, including both the North and South Forks, is the Pinedale Region's fourth highest priority for the Fish Division. The Colorado River Cutthroat trout (CRC) population in this watershed is considered a conservation population. The specific creeks and tributaries within this watershed that currently have self-sustaining populations of CRC are: North Horse Creek Watershed (major tributaries - North Horse, North Fork and South Fork of North Horse, and Lead creeks); South Horse Creek Watershed (major tributaries – South Horse, Dead Cow, and Camp creeks).

Horse Creek drains the northern portion of the east slope of the Northern Wyoming Range. This watershed lies immediately north of the Cottonwood Creek Watershed, which is the Pinedale Region's third highest priority for the Fish Division.



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LAND STATUS: 30% Private 70% Public

SPECIES THAT COULD BENEFIT FROM ACTIVITY IN THIS WATERSHED:

The Pinedale Region's Fish Division has focused habitat conservation efforts in this watershed on the native CRC. The management goal for the Horse Creek watershed is to assure the long-term conservation of genetically pure CRC by providing a diverse, healthy, productive and sustainable ecosystem, and eliminate threats from nonnative salmonids. The biggest threats to North Horse and South Horse watersheds appear to be land management practices.

The Horse Creek Watershed and tributaries support over 25 percent of the known CRC population within the Green River drainage. Genetic tests have indicated the cutthroat trout within these streams are genetically pure. The headwaters of the above mentioned streams appear to contain one of the few remaining pure strains and remnant CRC populations. In addition, these drainages are some of the few located within the Wyoming Mountain Range that allow migration and interaction between cutthroat populations within each watershed.

Lead Creek and South Horse Creek support the healthiest populations of CRC within these watersheds. However, data combined from index stations in the Wyoming Range indicate that CRC populations declined between 1993 and 1997. Furthermore, aquatic habitat conditions on both the Lead Creek and North Horse Creek index stations declined due to an increase in eroding banks and a decline in bank stabilizing vegetation.

Long-term watershed restoration efforts could provide benefits to assemblages of both native aquatic and native terrestrial wildlife species through the enhancement of watershed health and function by improving management and addressing identified vegetative community concerns. The ultimate goal would be to assure the long-term prosperity of CRC by protecting and enhancing the habitat to stabilize this self-sustaining meta-population, and to increase the abundance of populations in some watersheds. The Forest Service has agreed, in principle, to this plan through the Tri-State CRC Conservation Agreement and Strategy.

CURRENT HABITAT CONDITIONS/LIMITING FACTORS:

Possible reasons for the decline of the cutthroat trout populations within the Horse creek watersheds are most likely due to habitat degradation from timber harvest, livestock grazing and road construction. Specific habitat conditions of particular concern in this watershed that are potentially affecting CRC include sediment loading in the stream, health of riparian communities, and aspen-beaver habitat. Enhancement of aspen and woody riparian communities would improve habitat for beaver, which would be beneficial to CRC. Nonnative trout (brook and rainbow trout) densities are low in these watersheds and appear to have had little influence on the cutthroat trout population.

Restoration of healthy and diverse plant communities, particularly tall forb and aspen communities in the uplands as well as riparian and aspen communities adjacent to the streams, would optimize trout habitat over the long-term while providing benefits to numerous other wildlife species.

Additional limiting factors and potential activities listed in the Basin Management Plan for the Horse Creek Drainage include the following:

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- Extreme annual flow fluctuations, poor soil development, and livestock grazing along the riparian areas on North Horse Creek contribute to a wide, shallow stream channel with poor pool development and lack of trout habitat.
- High spring runoff and little side-channel or bank cover for young-of-the-year cutthroat limit natural recruitment in North Horse Creek.
- Private access, irrigation diversions, and grazing practices limit fisheries potential in Horse Creek.
- Look at ways to increase aquatic habitat for young cutthroat trout and create more habitat for adult cutthroat trout. Habitat structures are not practical due to the extreme flow variations and poor bank soil development through most of the public lands. Upland vegetative treatment to increase aspen production may increase beaver activity and provide materials that can withstand the high spring run-off. Resulting ponds should create side channels and cover for young trout as well as provide habitat for adults.

CONSERVATION EASEMENTS/AGREEMENTS

Restoration of the vegetative communities in this watershed is most limited by the ability to manage livestock grazing to allow for natural recovery. Furthermore, opportunities to develop vegetation treatments and proper follow up management and rest is severely limited. Readily available alternative locations to alleviate grazing pressure/demands in this watershed would provide greater opportunities for vegetation treatment/enhancement projects. The proposed preferred alternative in the below mentioned EA, could further limit flexibility and opportunities to develop treatment pastures by adding allotments that are currently vacant into the regular scheduled rotation without first correcting the existing stocking rate in the other allotments.

6. Describe opportunities, conflicts, current activities and/or prior projects for habitat enhancement (i.e. AMP, RMP, LSA, Forest Management Plans, priority for land managers, NEPA). One opportunity to correct identified problems is currently being analyzed by the USFS in the EA for the Wyoming Range Allotment Complex. Department personnel provided extensive comments on this EA regarding potential effects of domestic livestock grazing (primarily sheep) on overall watershed health with specific concerns emphasizing habitat needs for CRC and bighorn sheep. This analysis and associated Department comments could lead to opportunities to cooperate with the FS to collect additional vegetation data and possibly develop projects to enhance degraded habitats. Many tall forb communities in this allotment complex are dominated by mules ear wyethia with very little other ground cover. Associated concerns include the high sediment loading into the streams from the degraded uplands.