

Blackfoot River Fish Screening Project

Project Objective: Eliminate entrainment of native species to a major irrigation diversion off the upper Blackfoot River located within an important migratory corridor for fluvial populations of westslope cutthroat and bull trout.

Project Details: The upper Blackfoot River is an important migratory corridor for populations of fluvial bull trout and westslope cutthroat trout as documented by recent telemetry and redd count work by MTFWP and USFS biologists. Bull trout use the corridor between the Blackfoot River and Copper Creek/Snowbank Creek, which are the only two major spawning sites in the upper Blackfoot Basin. Populations of fluvial westslope cutthroat trout summer and winter in the upper Blackfoot Basin but spawning is limited to the headwaters of the upper Blackfoot Basin.

Historically, an unscreened irrigation ditch existed near river mile 112 and fish shocking data collected by MTFWP throughout this ditch system indicated that approximately 3-4 fish per 100 feet were being entrained (the ditch is approximately three miles long). Species collected included juvenile westslope cutthroat trout, brown trout, whitefish, longnose sucker and sculpin. Field assessments also noted bank erosion near the project site posed a risk to the long-term stability of the project and was impacting the irrigators ability to divert water.

To prevent the continued loss of several species of fish down this irrigation ditch, we installed a self-cleaning, paddlewheel fish screen with a sediment sluice and fish bypass downstream of the headgate in the existing ditch. To correct bank erosion issues, approximately 200 feet of river bank was treated with a bankfull bench, "toe-wood" and a woody debris jam. Several native silver berry were also transplanted. A log vane was also installed to reduce irrigator maintenance and repeated entry into the river.

Accomplishments: Through the completion of this project, fish entrainment has been eliminated near river mile 112. Over time, we should expect to see improved recruitment of native trout to the upper Blackfoot River, Copper Creek and Snowbank Creek (approximately 30 miles of river and tributaries).

Project Partners: Mary Faith Hoeffner, Montana Fish, Wildlife & Parks, USFWS Partners for Fish & Wildlife Service, Chutney Foundation, Department of Natural Resources & Conservation, Fisheries Restoration and Irrigation Mitigation Program (FRIMA) & Big Blackfoot Chapter of Trout Unlimited.



Before and after on Blackfoot River bank impacted by instability and erosion: Note constructed bankfull bench, toe-wood and debris jam.





Photos 3-4: Newly installed log vane and self-cleaning paddlewheel fish screen.