# Wall Creek Fish Barrier

**State(s):** Montana
**Managing Agency/Organization:** USDA Forest Service, Beaverhead-Deerlodge National Forest, Madison Ranger District
**Type of Organization:** Government
**Project Status:** Underway
**Project type:** WNTI Project
**Project action(s):** Barrier removal or construction, Riparian or Instream Habitat Restoration, Monitoring, Outreach/Education
**Trout species benefitted:** Arctic Grayling, Westslope Cutthroat Trout
**Population**: Wall Creek, Madison River drainage, upper Missouri

**Project summary:** This project consists of constructing a fish passage barrier in the Wall Creek drainage, tributary to the Madison River, in SW Montana. Survey and design for the Wall Creek Fish Barrier was contracted by Montana Fish Wildlife and Parks (MT FWP) and North Western Energy in 2016 for a location selected on National Forest, immediately upstream of the Kelly Ranch. The Madison Ranger District intends to oversee construction of this design in 2019 or 2020. The design was complete in June 2018. It incorporates USFS required design specifications and has included USFS engineering oversight throughout. The structure would be comprised primarily of concrete and earthen materials.

**Problem the Project Addresses**: The purpose of this project is to protect approximately eight miles of habitat occupied by 95% genetically pure Westslope Cutthroat Trout (WCT) in the Wall Creek drainage, tributary to the Madison River. This would be accomplished by constructing a fish passage barrier near the USFS and private land boundary in lower Wall Creek on U.S. Forest Service administered lands. WCT populations are at risk of extirpation due to competition and hybridization with non-native fish species, degradation of habitat and climate change, and are not likely to persist over the long term without appropriate conservation efforts. Extirpation of a population means the loss of unique adaptations which could affect the ability of the species as a whole to persist into the future. Populations are considered secured by MT FWP when they are isolated from non-native fishes, typically by a physical fish passage barrier, have a population size of at least 2500 fish, and occupy sufficient (5-6 miles) habitat to assure long term persistence.

**Objectives**: Currently non-native rainbow trout are able to ascend Wall Creek and hybridize with the WCT. In an effort to prevent further dilution of the genetic purity and risk having the Wall Creek WCT population fall out of conservation status, MT FWP in partnership with the Beaverhead-Deerlodge National Forest Madison Ranger District is seeking funding for the construction of a fish barrier. The barrier would protect 8 miles of the headwaters in the Wall Creek drainage currently occupied by the WCT population. MT FWP and the U.S. Forest Service have already received a stamped design for construction of the barrier. Because the barrier will be constructed on Forest Service land, materials and construction will be in accordance with the standard specifications for construction of roads and bridges on federal highways projects FP-14.

Phase one of the project was completed in 2018 (survey and design). Phase two of the project (barrier construction) will be completed in a matter of one month or so but is dependent on securing complete funding in order to award the construction contract.

Westslope Cutthroat Trout and Mottled Sculpin are currently present at the project site. Arctic Grayling will be translocated above the fish barrier; they are historic to the Madison River drainage and have been extirpated throughout. At present WCT populations are at risk of extirpation due to competition and hybridization with non-native fish species and are not likely to persist over the long-term without appropriate conservation efforts.

**Partners:**
- U.S. Forest Service – Beaverhead-Deerlodge National Forest, Madison Ranger District
- Montana Fish Wildlife and Parks
- NW Energy
- Montana Fish Wildlife and Parks – Future Fisheries Improvement Program
- Trout and Salmon Foundation
- Montana Trout Foundation

**Project Monitoring:** Barrier efficacy will be monitored by USFS and MTFWP employees by means of electrofishing to further assess population genetics and species distribution. The barriers integrity will be

monitored by annual inspection at the barrier site. The structure will be cleaned of all debris and inspected for cracks or other structural deficiencies. Future barrier repair, if needed (the structure is anticipated to have a 100yr life span) will be a shared responsibility of the partners (USFS and MT FWP). These responsibilities will be outlined and agreed upon in a signed project participation agreement once the barrier is constructed. The long-term benefits of the project include securing eight stream miles of Wall Creek and protection of genetically pure Westslope Cutthroat Trout from competition and hybridization with nonnative trout species.

**Funding Source(s):** National Fish Habitat Action Plan
**Project cost:** $9,448 (partial funding)
**Start Date:** 09/15/2019 **Completion Date:** 10/30/2020
**Project Contacts**: Darrin Watschke, dwatschke@fs.fed.us, 406-682-4253