

## Jim Creek AOP Project

**State(s):** Colorado

**Managing Agency/Organization:** Trout Unlimited

**Type of Organization:** Nonprofit

**Project Status:** Ongoing

**Project type:** WNTI Project

**Project action(s):** Barrier Removal, Riparian or Instream Habitat Restoration, Watershed Connectivity, Monitoring. Removal of 2 barriers and reconnection of 3.0 miles of stream.

**Trout species benefitted:** Rio Grande Cutthroat Trout

**Population:** La Jara Creek Watershed (Jim Creek)

**Project summary:** This project will remove two barriers to aquatic organism passage (AOP) and eliminate water quality impacts at two road stream crossings in the Jim Creek watershed near La Jara reservoir in southern Colorado. Jim Creek is home to a core conservation population of Rio Grande Cutthroat Trout, and this project will build on previous and ongoing efforts that have protected and restored over two miles of riparian habitat and enhanced stream habitat on over one mile of Jim Creek to date.

**Problem the Project Addresses:** This project will reconnect over three miles of stream in the Jim Creek watershed for aquatic organism passage (AOP) including a core conservation population of Rio Grande cutthroat trout. Additionally, the project will eliminate the current water quality impacts that exist as a result of failed undersized culverts and vehicles using/creating unauthorized routes to cross streams. Trout Unlimited, Colorado Parks and Wildlife, and the U.S. Fish and Wildlife Service documented these failed culverts as severe impacts to fish passage and water quality in 2017. Using U.S. Fish and Wildlife Service's National Fish Passage Program funding, Trout Unlimited contracted with Riverbend Engineering to create 80% designs for three alternative options to address the road/stream crossing issues on Jim Creek. The State Land Board owns the property and they agree that project partners should pursue the recommended preferred alternative, which utilizes bottomless culverts. This option maximizes the protection of the resource and provides the best alternative for stream health and function.

The project will result in intact road crossings with very minimal road-based impacts to the stream, thus eliminating the current cause of degradation and providing for year-round aquatic organism passage. This aligns directly with Objective #2 of the range-wide Rio Grande Cutthroat Trout Conservation Strategy, to "secure and enhance conservation populations". The project also touches on Objective # 4, to "Secure and enhance watershed conditions", by re-establishing sediment transport and proper stream function. This project is a key piece to a suite of activities that have been undertaken, or are planned to be, for the benefit of the Rio Grande Cutthroat Trout population in Jim Creek. The projects to date have had a large volunteer component with plans for long term stewardship from two organizations (San Luis Valley Chapter of Trout Unlimited and Running Rivers), coupled with a diversity of funding and support from a variety of agencies and funders.

**Objectives:** The project will remove two undersized culverts that are currently affecting aquatic organism passage and resulting in severe impacts to water quality. The project will replace these culverts with bottomless structures that provide an intact road crossing with very minimal road-based impacts to the streams. The bottomless structures will provide space for a properly sized and functional stream channel that is intact and continuous through the structure. Essentially a stream with a lid on it. On the main-stem, the project will reconnect the one mile of habitat restoration/enhancement work that is immediately downstream of the road stream crossing with existing high quality habitat upstream on U.S. Forest Service lands. On the tributary section, the project will provide organism passage that may result in use by Rio Grande Cutthroat Trout for spawning, as fish were observed in the upstream section in 2019 during higher flows when passage is possible and cutthroat are spawning (June). However, in lower flows, the current culvert precludes passage and therefore may entrain young of year cutthroat from moving downstream to seek refuge. The project will provide year-round passage through this structure. This project will offer both protection and restoration for the conservation population of Rio Grande Cutthroat Trout in Jim Creek by constructing structures that eliminate impacts caused by roads and restore AOP connectivity and stream function. This project will also re-connect aquatic organism passage to intact headwaters upstream, and specifically restore habitat and ecosystem function that has been directly impacted by humans.

**Project activities:** Project actions are to remove the culverts and replace them with bottomless culverts that are correctly sized, following U.S. Forest Service AOP protocol. Habitat restoration work and vegetation plantings will re-align the channel through the structures and restore impacted stream banks and riparian vegetation. Pending a pending request for funding to the National Fish and Wildlife Foundation, the project

may also include strategic fence repairs/installation for further protection of the stream, riparian habitat, and project site.

**Partners: Project partners to date include:**

- Trout Unlimited
- The State Land Board
- Colorado Parks and Wildlife
- U.S. Fish and Wildlife Service
- U.S. Forest Service
- Colorado State Forest Service
- Conejos County (CO)
- Great Outdoors Colorado
- The LOR foundation
- Conejos Clean Water
- Running Rivers
- San Luis Valley Chapter of Trout Unlimited
- Western Native Trout Initiative

**Project Monitoring:** The project's success will be measured by the installation of bottomless culverts, stream habitat work to re-align the channel, and riparian re-vegetation. The monitoring will be included in the annual volunteer weekend co-hosted by the San Luis Valley chapter of Trout Unlimited and Running Rivers (RR) based on a qualitative assessment of the structures condition. Additionally, Trout Unlimited and Running Rivers will maintain fencing and perform riparian planting as needed at the project site for a minimum of 5 years.

**Funding Source(s):** National Fish Passage Program

**Project cost:** \$56,045

**Start Date:** 01/01/2020 **Completion Date:** 12/31/2021

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