

Stonewall Creek Placer Mine Reclamation & Stream Restoration



Location: Lincoln, Montana

Client: Big Blackfoot Chapter of Trout Unlimited with the US Forest Service

Key Project Elements:

- ❖ Natural Channel Design
- ❖ Fish Habitat Enhancement Design
- ❖ Large Wood Structure Design
- ❖ Aquatic Habitat Inventories
- ❖ Hydraulic Analysis & Hydrologic Assessment
- ❖ LiDAR Processing and Terrain Modeling
- ❖ Specifications & Bid Document Preparation
- ❖ Grading Plans for Tailing Removal / Repositories
- ❖ Construction Oversight

Project Description:

RE, LLC provided design and construction oversight services on this collaborative effort between the Big Blackfoot Chapter of Trout Unlimited and the US Forest Service to restore westslope cutthroat trout habitat. The Stonewall Creek channel and riparian corridor were extensively placer mined through the 19th and 20th centuries. The channel is naturally a steep laterally confined mountain stream. Mining activities resulted in complete alteration of the channel and floodplain and left extensive tailings that further confined the channel and constricted the floodplain width. The result was limited natural recruitment of large wood to the channel and simplification of in-channel habitat.



The project involved processing LiDAR survey data, characterization and quantification of tailings, identification and characterization of repository sites, study of an analog / reference site, repository and floodplain grading plans, comprehensive stream and floodplain restoration design and revegetation design. The final design utilized logs and root masses to create complex in-stream structures that made use materials salvaged during tailing and repository site clearing. In addition to providing immediate in-channel habitat the

structures, in conjunction with floodplain large wood placements, are intended to restore the critical functions of sediment retention, large wood sourcing, habitat maintenance and flood energy dissipation. The construction of the project was completed in the Fall of 2016.

