

Cottonwood Creek Irrigation Diversion & Fish Passage Structure



Location: Clyde Park, Montana

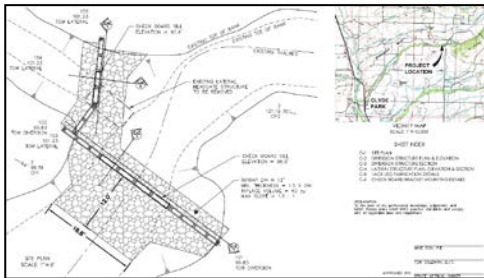
Client: Private Client and NRCS

Key Project Elements:

- ❖ Fish Passage/Barrier Analysis
- ❖ Hydraulic Analysis
- ❖ Hydrologic Assessment
- ❖ Stakeholder Coordination with Local Irrigation Group
- ❖ Surveying

Project Description:

Restoration Engineering team members were contracted by NRCS to conduct a hydraulic analysis and structural design for a channel wide pin-and-plank irrigation diversion structure on Cottonwood Creek, near Clyde Park, Montana. The intent of this project was to design and construct a diversion structure that will provide reliable irrigation withdrawals during all flow conditions. All design plans were prepared by RE Professional Engineers in accordance with NRCS engineering design standards in sufficient detail for assisting in all permitting and fundraising activities. We also provided construction oversight during the implementation phase of the project.



At the request of Montana Fish, Wildlife, and Parks, the project included in the analysis and design of a Denil fish ladder integrated into the pin-and-plank diversion structure. The Denil fish ladder structure allows for fish passage during all flow conditions. In addition to providing upstream fish passage, the design of the fish passage structure considered factors including entrainment, stream channel function, and maintenance.