

Jack Creek Ranch Wetland Mitigation Reserve



Location: Jeffers, Montana

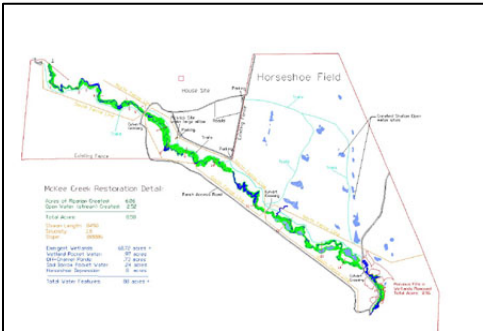
Client: Montana Department of Transportation

Key Project Elements:

- ❖ Initial Site Inspection & Feasibility Analysis
- ❖ Wetland Design & Alternatives Analysis
- ❖ Stream Restoration Design & Construction
- ❖ Wetland Delineation & Functional Assessment
- ❖ Revegetation Design & Implementation

Project Description:

RE, LLC team members led this project which involved the design and construction of an 80+ acre emergent wetland and restoration of 8,600 feet of spring creek on the Jack Creek Ranch near Ennis, Montana. The site had been progressively drained over the course of forty years through the development of an extensive ditch system. The land was regularly cultivated and farmed throughout those years. A spring creek on the southern boundary of the drained wetland was overwidened from years of agricultural use, and fifteen on-channel ponds had been excavated over a 3000+ foot reach of the creek.



Project activities included historical aerial photo interpretation, developing grading plans, water budgets, performance standards and revegetation strategies for the wetland and riparian components of the project. Stream restoration tasks included historical aerial photo interpretation, geomorphic assessments, reference reach characterization, design and construction specifications to create a new channel within an overwidened reach of the creek with excessive silt accumulations, and relocation plans to route a reach of the channel around the series of excavated on-channel ponds.

A pre-construction wetland delineation and functional assessment was verified by Montana Department of Transportation and Army Corps of Engineers personnel. Much of the wetland and riparian areas were designed to naturally revegetate following restoration of the sites hydrology. This natural recovery was based on the documented presence of remnant wetland vegetation and hydric soils within an actively drained field, but in areas of high disturbance, a combination of wetland seed, containerized wetland plugs, and willow cuttings were utilized to facilitate wetland revegetation.

Shallow areas of inundation created by low-head berms, shallow excavations, and restored hydrology has created excellent avian habitat as evident by the 40+ bird species that have been observed on-site, including trumpeter swans which are considered a species of special concern in Montana. Also present is a thriving trout population, and abundant aquatic invertebrates, amphibians and mammals.

