

Project Title: O'DELL CREEK PHASE 20 (FINAL PHASE)
STREAM AND WETLAND RESTORATION PROJECT DESIGN & PERMITTING

Date: November 15, 2024

Applicability to Project 2188 License Article(s)

O'Dell Creek Phase 20 Project will offset impacts to river resources associated with Project 2188 (Madison-Missouri River). The project meets the purpose and intent of License Article 423, which requires development of a vegetation and wildlife monitoring and enhancement plan intended to enhance native plants and wildlife populations on Project 2188 wildlife habitats adjacent to the Madison River. Specifically, NorthWestern Energy is successfully enhancing Project 2188 wildlife habitats through funding aimed to protect, restore, and enhance riparian, wetland, and upland habitats on private lands. The O'Dell Creek project and the benefits that have resulted from 20 years of restoration work in the O'Dell Creek headwaters, are specifically referenced in Article 423 (see Updated Five Year 2013-2017 Project 2188 Wildlife Plan). NorthWestern Energy continues to monitor prior phases of work to assess the effectiveness of previously implemented projects, including the benefits to stream temperature, streamflow quantity, avian species richness and numbers, sensitive plants, and acres of restored/enhanced wetlands.

Justification for Priority 2 Classification

The O'Dell Creek Phase 20 Stream and Wetland Restoration Project classifies as a Priority 2 2188 license project. The project is located on O'Dell Creek, a major cold-water spring creek tributary to the Madison River, within 0.8 miles of the Madison River, and will address limiting factors related to degraded wildlife, wetland and aquatic resources.

Project Sponsor(s): NorthWestern Energy, Inc.
Granger Ranches, L.P.
Madison River Foundation
River Design Group, Inc. (now part of SWCA)

Location of Proposed Project

The project is located in Madison County approximately three miles south of the town of Ennis, Montana. The project is located on State of Montana School Trust Land, leased by Granger Ranches, LLC for livestock pasture. The legal description of the project area is Sections 16 and 17, Township 6 South, Range 1 West. Please refer to Figure 1.

Geocodes: 25-0423-16-1-01-01-0000
Latitude: 45.316; **Longitude:** -111.741

Total Project Cost: \$55,320

WildTAC Funds (Cost-Share) Requested for Project: \$45,320

I. INTRODUCTION

O'Dell Spring Creek and floodplain wetlands are important ecological resources to the Madison River. Over the past 20 years, 18 major phases of restoration work have culminated in the restoration of 19 miles of spring creek and approximately 900 acres wetlands. Restoration suitability, willing landowners, and private-public partnerships are the reasons for the success of this large-scale, comprehensive restoration project. In 2018, NorthWestern Energy, Granger Ranches, Longhorn Ranch, and the US Fish and Wildlife Service received the ***Society for Ecological Restoration Northwest Restoration Project of the Year Award***. The award recognizes the important wildlife habitat gains resulting from permanently protecting and restoring wetland habitats.

Accomplishments include:

- Approximately 900 acres of restored wetlands, with over 265 wetland plant taxa detected on restored floodplain surfaces, representing 20% of Montana's wetland flora including 5 rare species. A range of wetland types and wetland plant communities including fens, saline meadows, open water and emergent complex.
- 115 bird species are now documented in the project area compared to 29 species prior to restoration, with 18 Montana Species of Concern.
- The project now supports over 50 over-wintering trumpeter swans following the successful release of juvenile birds in 2012.
- 8 documented species of waterfowl broods compared to 4 species prior to restoration.
- Increasing distribution and abundance of songbirds and wetland-dependent species.
- 19 miles of stream channel restoration, with an estimated ten-fold increase in the availability of adult holding and juvenile rearing habitat compared to pre-restoration conditions.
- Reduction in stream water temperatures due to improvement to channel morphology and hyporheic exchange between surface water and groundwater.

In 2018, the NorthWestern WildTAC funded a master plan to identify and prioritize restoration opportunities on O'Dell Creek from Fever Point (end of Phase 16 project) to Highway 287 near Ennis, Montana. **The Master Plan Identified Phase 20 as the last remaining phase of work on O'Dell Creek.** Reach conditions are characterized by high channel entrenchment, eroding streambanks, and high width-to-depth ratio channel geometry. The purpose of this project is to improve aquatic habitat conditions of O'Dell Creek and associated riparian wetland functions (Figure 1). This will be accomplished by restoring appropriate channel and floodplain dimensions by lowering channel width-to-depth ratios, lower high terraces to bankfull elevation to encourage establishment of emergent wetland vegetation, and reshaping portions of the reach with riffle, pool, run and glide habitat features. New floodplain surfaces supporting emergent and scrub-shrub wetland communities will be created in over-widened channel areas. Specifically, the goals of this project include: 1) improving aquatic, riparian, and terrestrial habitat diversity for fish and wildlife; 2) establishing riffle and pool sequences and reducing channel width-to-depth ratios; 3) creating a complex matrix of variable depth wetlands in over-widened channel sections; and 4) converting areas within the existing upland herbaceous plant communities to wetlands by creating new, lower floodplain surfaces adjacent to O'Dell Creek.

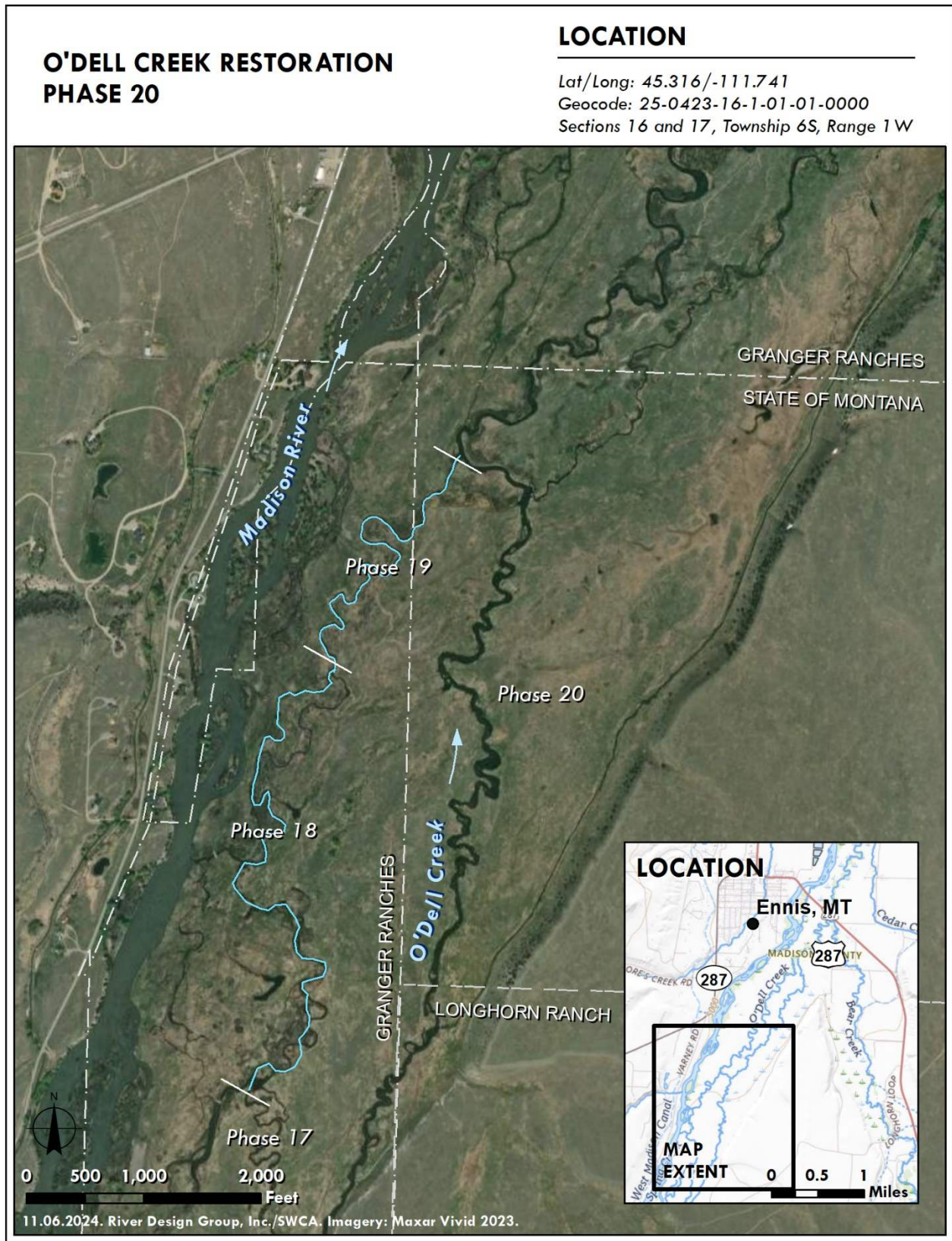


Figure 1. Phase 20 Project Location Map. The project encompasses 4,000 feet of O'Dell Creek.



Figure 2. Typical channel and floodplain conditions in the Phase 20 project area.

II. Objectives

The following objectives have been developed for the Phase 20 project area in conjunction with the project partners and landowners:

1. Produce clean water consistent with supporting aquatic life and beneficial uses in the O'Dell Creek watershed and downstream receiving waterbody, the Madison River;
2. Create complex aquatic habitat components such as depth, velocity, substrate, cover, and pools that support populations of wild trout and other aquatic organisms;
3. Construct a stream channel that is connected to and interacts with the floodplain in terms of hyporheic flow and nutrient exchange; and
4. Create a more complex matrix of wetlands in over-widened channel sections by creating backwater areas, open water wetlands, and new floodplain surfaces that support emergent and scrub-shrub wetland communities.

III. Methods

This cost-share proposal is for engineering and regulatory permitting services with an anticipated implementation date of 2026-2027. SWCA will deploy a two-person GPS survey crew to assess existing conditions and collect necessary geomorphic data to support project design and permitting including channel cross-sections, longitudinal profile, and a routine wetland delineation.

Ground based survey will be merged with terrestrial LiDAR data to create a seamless digital terrain model for design purposes.

IV. Schedule

The following project schedule has been developed for a spring 2025 data collection effort (Table 1). Project engineering and regulatory permitting will be completed in the summer / fall of 2025. Design work would be closely coordinated with NorthWestern Energy and the State of Montana Department of Natural Resources and Conservation Trust Lands Management Division.

Table 1. Project schedule for the Phase 20 design and permitting project (2025).

Task	May	June	July	August	September	October
Task 1. Field Data Collection						
Task 2. Engineering						
Task 3. Regulatory Permitting						

V. Personnel

Similar to past phases of restoration on O’Dell Creek, the project will be implemented under the auspices of a diverse group of stakeholders including NorthWestern Energy, Madison River Foundation, and Granger Ranches, LP. As a team, we have established a track record of successful collaboration on 19 projects on O’Dell Creek. Our continued collaboration and history working on this project underscores the importance we place on offering a team that will continue to be compatible with the community and stakeholders.

SWCA (formerly RDG) is an approved consultant on NorthWestern Energy’s Qualified Vendor’s List for stream and wetland restoration services. RDG prepared and implemented all previous phases of restoration on O’Dell Creek apart from Phases 1 and 2. John Muhlfeld will serve as the project oversight manager and technical lead on behalf of the design team. Nate Wyatt, P.E., with RDG, will serve as the project engineer. Selita Ammond, PWS, will conduct the routine wetland delineation and regulatory permitting.

VI. Budget

Table 2 includes a not-to-exceed cost estimate to perform the Scope of Work (SOW). The total cost to perform the SOW is \$51,910. Granger Ranches and Madison River Foundation have committed a \$10,000 cost share match as illustrated in Table 2 for a total WildTAC request of \$45,320.

Table 2. O'Dell Creek Phase 20 proposed budget.	
Task	Cost
1. Field Data Collection	\$ 14,000.00
Geomorphic Data Collection	\$ 8,500.00
Routine Wetland Delineation	\$ 4,000.00
Data Processing	\$ 1,500.00
2. Engineering	\$ 30,000.00
Preliminary Design and Drawings	\$ 15,000
Final Design and Drawings	\$ 10,000
Construction Cost Estimate and Pre-Construction Review	\$ 5,000
3. Regulatory Permitting	\$ 8,500
Wetland Delineation Report	\$ 3,500
Wetland Impact Analysis	\$ 1,500
Joint Permit Application and DNRC Land Use License	\$ 3,500
Direct Costs	\$ 2,820
Mileage	\$ 810
Per Diem (3 Person Crew for Three Nights)	\$ 610
Lodging (3 Person Crew for Three Nights)	\$ 1,400
Estimated Project Cost	\$ 55,320
*Cost-Share (Granger Ranches, LLC)	\$ 10,000
Total TAC Funds Requested	\$ 45,320

VII. Deliverables

Project deliverables will include the following:

- Preliminary and final design plan set, drawings and specifications
- Regulatory Permit Application and DNRC Land Use License

VIII. Cultural Resources

Not applicable – no ground will be disturbed.

IX. Water Rights

Appropriate analysis will be performed to demonstrate that the project complies with the intent of Montana DNRC’s “*Guidance for Landowners and Practitioners Engaged in Stream and Wetland Restoration Activities*”, issued by the Water Resources Division on March 9, 2016. DNRC guidelines state that “any wetland project (restoration) whose final design approximates the natural characteristics of adjacent natural wetlands or approximates something smaller in magnitude does not require a water right”. The guidelines also state that restored wetlands should have characteristics similar to other natural wetlands in the area and should function entirely in the absence of artificial controls and diversions of water that intentionally appropriate water for wetland use.