

2024 Northwestern Energy Wildlife TAC Proposal
Northwestern Energy, Wildlife Habitat Improvement Program, Great Falls, Montana

Title: O' Dell Creek Phase 19 and 20 Post Restoration Vegetation Monitoring and Rare Plant Surveys

Date: October 6, 2024

Project 2188 License Article(s): The proposed Vegetation Monitoring project provides, under Article 2188, direct benefits for fisheries and wildlife habitat in the Madison River Watershed and its primary tributaries (Priority 2); and by providing scientific results (Priority 3) from wetland restoration techniques; response of diverse wetland vegetation types to techniques used; and identification of important wildlife and fisheries habitats found at this project site. Monitoring results can be utilized for future O'Dell Creek restoration phases that occur in similar wetland habitat and for collaborative management objectives in the Madison River area between landowners, agencies and Northwestern Energy.

Project Sponsor: Tara Luna (Rocky Mountain Botany)

Location: O' Dell Creek Floodplain, Private Lands- Granger Ranch, Madison County, Montana

Geo Code(s): 45°N.18.53/ -111° 44' 33 W (Phase 19)/ 1523 meters
45°N.19.37/ -111° 44' 07 W (Phase 20)/ 1515 meters

Project Cost: \$ 8,995.00

TAC Funds Cost-Share Requested for Project: \$ 8,995.00

1. Introduction

Northwestern Energy participates with state and federal agencies involved in the protection, mitigation and enhancement of fisheries, wildlife, and water quality resources. Earlier phases of The O' Dell Creek Restoration Project has resulted in dramatic increases in wildlife populations, recovery of diverse wetland vegetation habitats and the increase in rare plant populations and their specific wetland habitats on private lands. Previous vegetation and rare plant population results has shown that all restoration techniques (dam removal, stream realignment, pond creation, native sod placement, and passive hydrologic restoration) greatly enhanced and expedited vegetation recovery in six natural and created wetland habitat types and resulted in the appearance, recruitment and increase of six rare wetland plant species, including one globally rare endemic species, (*Primula alcalina*).

O' Dell Creek Restoration (Phases 19 and 20) were completed from 2020 to 2022 in floodplain riparian habitat dominated by *Salix* species and herbaceous wetland communities. We propose establishing 15 to 20 post-restoration plots in representative wetland habitat types, to measure vegetation response to restored or enhanced hydrology. Restoration of *Salix* (willow) dominated wetland habitat is crucial mitigating stream temperatures, protecting and improving aquatic life and the Madison River fishery, as well as providing crucial habitat for area wildlife and their primary food sources.

2. Objectives

Project objectives are to examine post-restoration (1 to 2 yr) vegetation response following hydrologic restoration, provide analysis of vegetation communities present in O' Dell Creek Phases 19 and 20 and summarize data and provide management recommendations and guidelines for future O' Dell Creek restoration phases located in similar habitats north of Ennis, Montana. A second objective is to examine post-restoration sites for rare wetland plant species and provide data summaries and management recommendations if populations are found.

3. Methods

GPS and photo-points will be collected at each vegetation plot. Non-permanent, 30 to 50 square meter rectangular monitoring plots will be established in shrub and herbaceous dominated communities, to accurately assess species recruitment and recovery in dominant wetland vegetation types. Absolute canopy cover values will be conducted in each plot to determine vegetation composition, structure, regeneration and recruitment following restoration practices. Height classes will be assigned in shrub or tree dominated plots to assess vegetation structure recovery and recruitment.

Additional surveys for rare species will be conducted in conjunction with the establishment of vegetation restoration plots. Six plant Species of Concern have been found in previous wetland restoration phases, and several uncommon species have also been found in the project area. At least two rare species restricted to big sagebrush and upland grassland habitat are known to occur adjacent to Phases 19 and 20. Additional monitoring plots will be established where rare species are found. Rare plant population size, density, composition, and seedling recruitment will be measured using 1 to 2 meter sq plots. Rare plant habitat, ecological and hydroperiod requirements, as well as response to previous site disturbance and restoration practices, will also be assessed and summarized.

Habitat descriptions will be developed for all wetland vegetation types and rare wetland plant species found in the project area. Vegetation monitoring and rare plant surveys will be conducted during May, late June and early September 2024.

4. Schedule

May to September 2024

5. Personnel

Tara Luna (Rocky Mountain Botany) will conduct all field work, data analysis and report preparation for the proposed project.

Project Costs	Estimated Cost	Description
Direct Labor	\$7,000.00	Field data collection, rare plant surveys, data analysis and report preparation
Travel and Living Expenses	\$1,195.00	Gasoline and mileage (3 trips)
Materials	\$0.00	
Other Direct Expenses	\$800.00	Insurance
Direct Overhead	\$0.00	
Cost-Share Amounts- in-kind contributions	\$0.00	

Deliverables

A monitoring report will be prepared and delivered to Northwestern Energy, landowners and collaborators by November 2024. The monitoring report will include monitoring design, data summary, interpretation of monitoring results, habitat descriptions, restoration treatments used, and management recommendations. Any rare plant population data, locations, habitat data and management recommendations will also be included in the report.

Cultural Resources.

No ground disturbing activity is associated with this project. No Cultural resources or potentially sensitive cultural areas will be disturbed during this project.

- **Water Rights.**

There is no field work or ground disturbing activity associated with this project proposal and does not impact any State of Montana water rights, existing laws or policies and Northwestern Energy Company water rights guidelines associated with wetland restoration projects.