2026 Northwestern Energy Wildlife TAC Proposal

Title: Upper O'Dell Creek Rare Plant Population Monitoring Project

Date: October 22nd, 2025

Project 2188 License Article(s): The proposed monitoring project provides, under Article 2188, direct benefits for fisheries, wildlife habitat and native plant populations in the Madison River Watershed and its primary tributaries (Priority 2); and by providing scientific results (Priority 3) from wetland restoration and rare plant population monitoring results. Data and 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 watershed between landowners, agencies and Northwestern Energy.

Project Sponsor: Tara Luna (Rocky Mountain Botany)

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

Geo Code: 45° N.2632036/ -111°W.74109343

TAC Funds Cost-Share Requested for Project: $ 7,907.60

1. Introduction

Northwestern Energy collaborates with state and federal agencies involved in the protection, mitigation and enhancement of fisheries, wildlife, and water quality resources. The Upper O' Dell Creek Restoration Project has resulted recovery of a diverse range of wetland vegetation habitats. Previous work has resulted in substantial increases in rare plant populations, resulting from restoration work that improved or enhanced ecological niches and site hydrology. Previous results have shown that all restoration techniques (dam removal, stream realignment, pond creation, native sod placement, and passive hydrologic restoration) greatly enhanced and expedited native vegetation recovery and rare plant recruitment in six natural and created wetland habitat types.

The Upper O'Dell Creek site is an important area for rare wetland vascular plant species and includes a wide range of rare, newly documented and diverse wetland plant communities. A total of 265 vascular plant species have been recorded from this site, accounting for 40% of the total number of wetland vascular plants known in the state of Montana. High wetland plant species richness is due to the diverse range of wetland plant communities present across the breadth of the floodplain and variable floodplain landforms, soils, water chemistry and hydrology present at this site.

Upper O'Dell Creek, following 20 years of restoration work, contains critical habitat for rare wetland vascular plants, including the northernmost known population of globally-rare regional endemic, alkaline primrose (*Primula alcalina*) (G3/S2), the largest known population of mealy

primrose (*Primula incana*) (G4/S3) in the lower 48 states, a new rare plant state record Greenland primrose (*Primula egalikensis*) (G3/G4/SNR), that is extremely rare outside Canada and Alaska, and increasing and stable populations of slender paintbrush (*Castilleja gracillima)* (G4/S2). Two rare annuals are also found at this site, annual paintbrush (*Castilleja minor)* (G5/S3) and wedgeleaf saltbush (*Atriplex truncata)* (G4/S3), that recruit from the seedbank following ground disturbance. Any additional rare plant populations or wetland vascular plant species that are encountered during field work, will recorded and summarized for the NWE TAC program and landowners.

2. Objectives

-Monitor established rare plant plots and incorporate new data into summarized rare plant population monitoring trends;

-Provide recommendations to TAC Program and landowners based on monitoring results and trends;

-Collaborate with landowner and manager on strategies to enhance, preserve or protect existing rare plant populations;

-Provide landowner(s) with all rare plant GPS points for use in conjunction with property weed management activities, targeted winter grazing prescriptions and educational-professional field trips at this site;

-Summarize all data and results into NWE TAC rare plant population monitoring report.

3. Methods

GPS and photo-points will be collected at each rare plant monitoring plot. Non-permanent, 30 to 50 square meter rectangular monitoring plots will be re-examined at Upper O'Dell Creek and its tributaries, for a minimum total of 30 transects for 6 rare species. New plots will be established where additional rare plant populations are found. Post-restoration vegetation monitoring plots will be re-examined for a minimum total of 15 plots. Total number of adults and seedlings for each rare species will be counted in each monitoring transect. Vegetation canopy cover and total bryophyte, standing water and bare ground cover will be recorded in each monitoring plot (minimum of 5 plots/transect). All vascular plant species will be identified using regional floras; including Manual of Montana Vascular Plants, Lesica (2022), Flora of North America (1993-2024) and Flora of the Pacific Northwest, Hitchcock and Cronquist (2017).

Data will be entered into MS Access Database and analyzed for rare plant population trends, vegetation trends and site variables. Population trends and site conditions for rare species occurring in more than one habitat type (alkaline meadow, fen, riparian stream) will be analyzed and compared to develop management recommendations to enhance or preserve rare plant populations. In collaboration with the landowner and land manager, thatch layer density and depth will be measured on sites that have not been grazed for several years, to develop a winter grazing prescription that can improve or enhance rare plant seedling recruitment.

4. Schedule

Rare plant populations will be examined during peak anthesis during mid-May, late May and early July 2026 for a total of three trips to the Upper O'Dell site. The contractor will contact the landowner(s) and their land managers prior to and upon arrival of scheduled work trips. During each work trip, the contractor will contact the landowners and land manager to inform of arrival, access point and travel route through the property, estimated time at each site and departure.

Specific activities performed during each site visit and completion of deliverables are shown below:

Activity	**Month**	**Location**
Monitor *Primula alcalina* populations	Mid-May2026	Upper O'Dell (Granger Ranch)
Monitor *P. egalikensis* and *P. incana* populations	Late-May2026	Upper O'Dell (Granger Ranch)
Monitor *Castilleja gracillima*, *C. minor* and *Atriplex truncata* populations	Early July 2026	Upper O'Dell Creek (Granger Ranch)
Deliver final report to NWE TAC Program	September 2026	----

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	$6,100.00	Field data collection, rare plant surveys, data analysis and report preparation (153 hours total@ 40.00/hr
Travel and Living Expenses	$ 1807.60	Mileage=1668 miles (3 trips) (.70/mile) and per diem rate(3 trips-7 days) (640.00 total)
Materials	$0.00	
Other Direct Expenses	$0.00	
Direct Overhead	$0.00	
Cost-Share Amounts- in-kind contributions	$0.00	
Total	**$ 7,907.60**	

Deliverables

A monitoring report will be prepared and delivered to Northwestern Energy, landowners and project collaborators by October 2026.

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. The project 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.