



Cost-Share Proposal Form for NorthWestern Energy (NWE) Project 2188 TAC Funds

Project Title: Breeding bird monitoring of Madison-Missouri River habitat project areas

Date:10/28/2025

Explain how this Project addresses a specific Project 2188 License Article(s): This project meets Project 2188 License Article 423 requirements by continuing long-term monitoring of bird communities in riparian habitats of the Missouri and Madison Rivers, and is specifically referenced in the Five Year Project 2188 Wildlife Plan under article 423. The project meets the purpose and intent of Article 423 by measuring bird community change over time as an indicator of riparian conditions for wildlife, identifying habitat and environmental factors critical for maintaining bird populations, providing feedback on techniques employed to enhance native plants and wildlife populations, and monitoring wildlife response at enhancement project sites funded by the Missouri-Madison Wildlife Technical Advisory Committee (WildTAC).

Provide justification for Priority 1, 2 or 3 (above) that you selected:

This project meets the criteria for a **Priority 1** project because monitoring is located within riparian habitats of the main stem of the Missouri and Madison River and floodplain wetland complexes, as well as **Priority 2** because locations also include habitat enhancement and protection project areas on adjacent lands and major tributaries within 1 mile of the mainstem.

Project Sponsor (submitted by): University of Montana Bird Ecology Lab

Location of Proposed Project:

Habitat project areas on the Madison River at O'Dell Creek five miles south of Ennis, and lower Moore Creek (Figure 1). Geographic coordinates in decimal degrees for project areas:

Moore Creek: 45.395°N, 111.717°W

O'Dell Creek: 45.247 °N, -111.727 °W

Total Project Cost: \$51,469

TAC Funds (Cost-Share) Requested for Project: \$51,469

I. Introduction

Since 2004, the University of Montana (UM) has monitored bird populations and riparian vegetation on approximately 500 miles of the Madison and Missouri Rivers on behalf of the Northwestern Energy Missouri-Madison Wildlife Technical Advisory Committee (WildTAC) with cost-share funding from the Bureau of Land Management Montana/Dakotas State Office. This monitoring program was designed to meet the wildlife monitoring requirements of the Project license agreement by measuring bird community change over time as an indicator of riparian conditions for wildlife, identifying habitat and environmental factors critical for maintaining bird populations, providing feedback on techniques employed to enhance native plants and wildlife populations, and monitoring wildlife response at enhancement project sites funded by the WildTAC. Birds are ideal indicators of natural resource conditions because they have diverse habitat requirements, are easily surveyed, and provide feedback from an entire community rather than a single species^{1,2}. In addition, birds are a priority for monitoring in riparian areas, because riparian and wetland habitats support a large number of bird species during breeding, dispersal, and migration, including at least 134 (55%) of Montana's 245 bird species and 30 of the 66 Montana Species of Concern. As the largest river system in the state, the Madison and Missouri rivers are critical to the future of Montana's bird populations.

We propose to continue monitoring breeding bird populations within habitat enhancement and protection projects within the license area funded by the WildTAC (Figure 1). We plan to conduct monitoring at O'Dell Creek habitat project area on a mix of public and private lands located five miles south of and on private property on Moore Creek within the Madison River floodplain. We will also continue to capitalize on opportunities to fill data gaps on rare and priority bird species, while completing long-term monitoring objectives. Specifically, we will continue to collaborate with BLM and Montana Fish Wildlife and Parks (MTFWP) on a regional inventory effort to collect presence data for two Montana Species of Concern: Black-billed and Yellow-billed Cuckoos.

This proposal builds on over 20 years of monitoring investment by Northwestern Energy and partners and contributes scientifically robust measures of wildlife response to habitat enhancement and protection projects supported by the Wildlife TAC, as required by 2188 license 423 and described in the updated 2188 Five Year Wildlife Plan. Continued monitoring will capitalize on this long-term dataset, providing a valuable tool for managers to evaluate the status and trends of migratory bird species and habitat conditions, providing critical feedback on best practices for land managers working to restore wildlife habitats along Montana's large rivers.

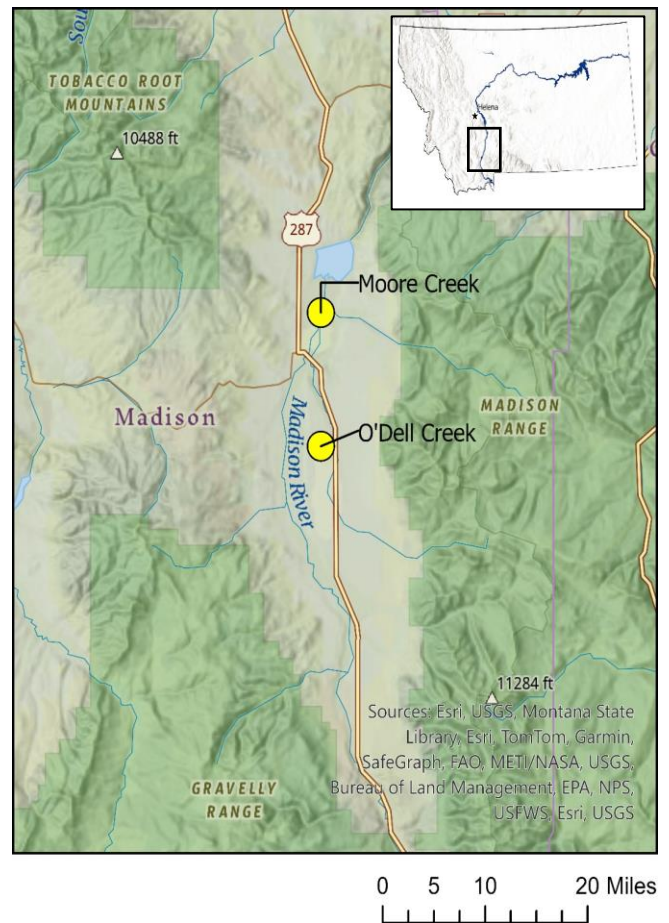


Figure 1. Location of proposed bird monitoring on Madison River in 2026.

¹ Carigan, V., and M.A. Villard. 2002. Selecting indicator species to monitor ecological integrity: a review. *Environmental Monitoring and Assessment* 78:45–61.

² Hutto, R.L. 1998. Using landbirds as an indicator species group. Pp. 75-92 in Marzluff, J.M. and R. Sallabanks (eds.), *Avian conservation: research and management*. Island Press, Covelo, CA.

II. Objectives

This project will fund continuation of long-term monitoring, including project implementation and annual reporting. Specific objectives for 2026 include:

- 1) Monitor bird community response to habitat enhancement and protection projects funded by Wild TAC, BLM, and other project partners to ensure project outcomes sustain and improve breeding bird populations.
- 2) Provided updated estimates of bird population and community change within the O'Dell Creek project area since 2006.

III. Methods

The methods used for field sampling and analyses are described briefly below. Refer to the 2007 report³ summarizing WildTAC-approved monitoring protocols for more detailed information.

We will conduct point count surveys of birds during the breeding season (May- July) within 5 hours of sunrise on days with minimal precipitation and wind at locations shown in Figure 2. Observers will record all birds seen or heard during a 10-minute period, and distances to birds will be measured using a rangefinder. We will conduct vantage surveys and area searches for waterfowl and other waterbirds in open water wetlands within the project areas. We will also broadcast playbacks for four secretive marshbird species at least two times during the breeding season (American Bittern, Earred Grebe, Sora, and Virginia Rail).

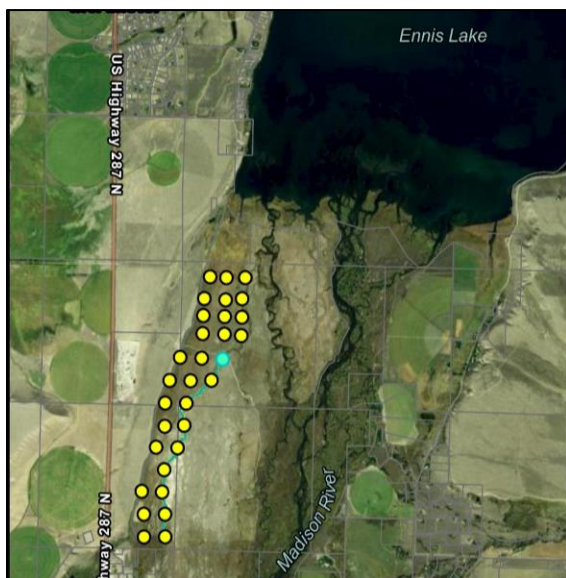
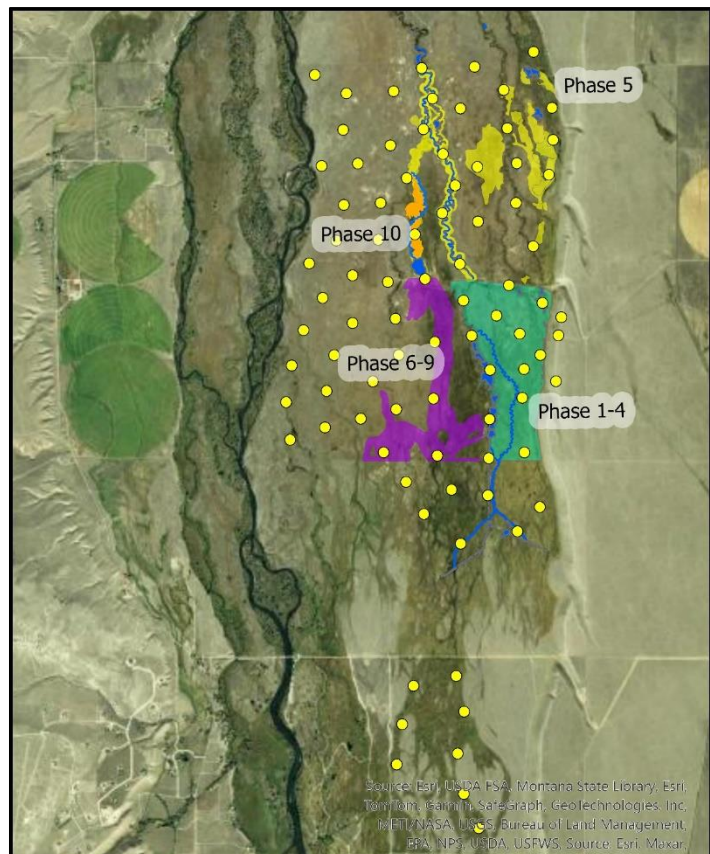


Figure 2. Survey locations (yellow circles) proposed for point count surveys and secretive marshbird playbacks in 2026 within the Moore Creek (left), and O'Dell Creek (right) habitat project areas.



³ Fletcher, R. A. Cilimburg, and R. Hutto. 2007. Evaluating habitat restoration at O'dell creek using bird communities. 2007 report to PPL Wildlife TAC, 16p.

We will evaluate avian response to restoration by comparing baseline data collected prior to project start to changes over time using a Before-After-Control-Impact (BACI) study design, with long-term monitoring sites serving as untreated controls⁴. BACI sampling designs are particularly useful tools for evaluating bird assemblage responses to riparian restoration because they address the problem of high natural variability and year-to-year changes in river systems by effectively separating the absolute year-to-year change from treatment effects.

IV. Schedule

This project is part of long-term monitoring that follows a rotating schedule consisting of breeding bird surveys in different locations throughout the license area, followed by analysis and annual reporting in the following calendar year. For 2026, UMBEL requests funds to complete surveys in O'Dell Creek and Moore Creek project areas, including survey planning, training, field surveys, analyses, and reporting. Analysis and reporting will be completed by April 2027.

2026	
Jan-Apr	Field planning, coordination with project partners and private landowners, hire and train field technicians
June-Aug	Conduct bird surveys
Sep-Oct	Data entry and data management
Nov-Dec	Summarize field accomplishments and present to WildTAC
2027	
Jan-April	Complete data analyses and submit annual report to WildTAC

V. Personnel

Anna Noson (Research Director, UMBEL) will serve as Principal Investigator of the project. Anna Noson will coordinate and supervise field data collection and complete reporting and dissemination of findings. UMBEL staff will assist with hiring, field training, data collection, and data management. We will hire one temporary technician from May-August to collect and enter field data. The University of Montana Division of Biological Sciences will provide administrative staff support.

⁴ Schwarz C.J. 1998. Studies of Uncontrolled Events. In: Statistical Methods for Adaptive Management Studies. Res. Br, B.C. Min. For., Res. Br., Victoria, BC, Land Manage. Handb. No 42.

VI. Project budget

Direct Labor	\$39,445
Travel and living	\$4,681
Materials and supplies	\$430
Direct Overhead	\$6,713
Total	\$51,469

Cost-share funding sources and amounts for this project:

TBD- USDA Bureau of Land Management 5-year funding agreement in place through 2027, but no funds have been allocated for 2026.

VII. Deliverables

- 1) Spatially referenced bird data submitted to the Montana Natural Heritage Program species database to be made available for partners and for use in Montana habitat suitability models.
- 2) Communications, including a bird list, will be provided to interested landowners participating in the project (providing access to private lands for surveys).
- 3) Results will be summarized in a Final Report that will include;
 - a) Bird population status within identified restoration project areas.
 - b) Bird population and community change since 2006 within the O'Dell Creek project area.

VIII. Cultural Resources.

N/A- no land-disturbing activity or building modification will occur as a result of this project.

IX. Water Rights.

N/A- no development, restoration, or enhancement of wetlands will occur as a result of this project.