

2022 Cost-Share Proposal Form for NorthWestern Energy (NWE) Project 2188 TAC Funds

Project 2188 (Madison-Missouri River) License Protection, Mitigation and Enhancement (PM&E) projects are required to offset impacts to river resources from the continued operation of one or more of NWE's nine hydro developments (Hebgen, Madison, Hauser, Holter, Black Eagle, Rainbow, Cochrane, Ryan and Morony Dams). PM&E projects need to be prioritized toward in-river or on-the-ground measures that directly benefit fisheries and/or wildlife populations and their habitats:

Priority 1: 2188 License projects which meet License Article requirements and PM&E for fisheries or wildlife populations or their habitats within the main stem Madison River (Hebgen Reservoir to Three Forks) or Missouri River (Hauser Reservoir to Fort Peck Reservoir)

Priority 2: 2188 License projects which meet License Article requirements and PM&E for fisheries or wildlife populations or their habitats in primary tributaries or on adjacent lands and, in doing so, provide PM&E for Madison River (Hebgen Reservoir to Three Forks) or Missouri River (Hauser Reservoir to Fort Peck Reservoir) resources.

Priority 3: 2188 License PM&E projects which meet License Article requirements by providing scientific or other tangible PM&E benefits to Madison-Missouri River fisheries or wildlife populations or their habitats. These projects must be located in the greater Missouri River drainage upstream from Fort Peck Reservoir, but not necessarily located on the main stem Madison River or Missouri River or their adjacent lands or primary tributaries.

All TAC project proposals must include the following information:

Project Title: **Judith River PIT Tag Antenna Array Additions - 2022**

Date: October 14, 2021

Explain how this Project addresses a specific Project 2188 License Article(s): Article 417: 1) Monitor the spawning migrations of Threatened and Endangered species, species of special concern, and popular sportfish in the Missouri River downstream of Morony Dam. 2) Protect and provide for the recovery of Threatened and Endangered species and other species of special concern in the Missouri River downstream of Morony Dam. This is priority one (Missouri) and two (Marias) since it evaluates movement between the two systems.

Provide justification for Priority 1, 2 or 3 (above) that you selected: The PIT tag arrays in the Judith River allow us to evaluate movement of fish between the Missouri (Priority 1) and this important tributary (Priority 2).

Project Sponsor (submitted by): Clint Smith, Fisheries Biologist, FWP

Location of Proposed Project: These readers will be installed in the Judith River and located at roughly river mile 20 (near Anderson Bridge) and river mile 45 (near the Beckman WMA).

Narrative:

Geocode (in decimal degrees ex 46.89743) Lat: 47.5592 (site 1) & 47.3575 (site 2) Lon:-109.5899 (site 1) & -109.6871 (site 2)

Total Project Cost: \$7,095

TAC Funds (Cost-Share) Requested for Project: \$7,095

I. Introduction:

Blue Suckers (Species of Concern) use the Judith River for spawning and we recently identified the presence of Pallid Sturgeon in the Judith River. PIT tags give us a cheaper alternative to radio telemetry for evaluating the timing of entry into Missouri tributaries, which better develops our understanding of the environmental conditions that drive tributary spawning for these species.

Pit tag readers were installed in the Judith River in 2021 to evaluate fish migrations from the Missouri River. These readers were extremely effective at detecting tagged fish. Detection data from 2021 provides evidence that stationary PIT readers are an effective method for studying movements of multiple species, including species of concern in large prairie rivers. Installing additional PIT tag readers further upstream will help us understand how far tagged fish are moving up the Judith.

Additionally, the PIT tag arrays in the Judith River will help us better understand the extent and frequency of Pallid Sturgeon using the Judith River as all Pallid Sturgeon captured in crews in the Missouri River above Fort Peck are implanted with a 134 kHz HDX tag in addition to a smaller FDX tag that will serve as the primary identifier.

II. Objectives; explicit statement(s) of what is intended to be accomplished.

-Install 2 additional PIT tag readers in the Judith River.

- Download stations seasonally or as needed.
- Perform maintenance as needed.

III. Methods; description of how Project objectives will be accomplished.

- Equipment will be purchased and stations will be installed in Spring 2022

IV. Schedule; when the Project work will begin and end.

March-July 2022

V. Personnel; who will do the work ? Identify Project leader or principal investigator.

- NWE will purchase the supplies
- FWP will deploy the stations, continue tagging fish, and download the stations.

FWP Personnel

- Clint Smith, Fisheries Biologist, FWP
- Rob Beattie, Fisheries Technician, FWP
- Jacob Williams, Fisheries Technician, FWP
- Nate Beckman, Fisheries Technician, FWP
- Mike Schilz, Fisheries Technician, FWP

VI. Project budget must include amounts for the following:

Materials

-OregonRFID ORSR-1 Single Antenna Reader x 2.....	\$4,300
-OregonRFID Auto Tuners x 2.....	\$550
-Renogy 100-watt solar starter kit w/ 30amp controller x 2.....	\$320
-#2 AWG welding wire x 500ft.....	\$950
-Super Start 27M deep cycle battery x 4.....	\$380
-Belden 9207 Twinaxial Cable x 40ft.....	\$80
-Arrowhead earth anchors x 25.....	\$340
-Estimated Shipping	\$175

MATERIALS TOTAL.....\$7,095

Direct Labor: NA; Travel and Living: NA; Other Direct Expenses: NA;
Direct Overhead: Not necessary if purchase is made by NWE

FWP will conduct the work to install the readers and antenna.

VII. Deliverables; describe work product (reports, habitat restoration, etc.) which will result from this Project. How will “success” for this project be monitored or demonstrated?

Results from the PIT monitoring will be presented in a report and/or presentation.

VIII. Cultural Resources. Cultural Resource Management (CRM) requirements for any activity related to this Project must be completed and documented to NWE as a condition of any TAC grant. TAC funds may not be used for any land-disturbing activity, or the modification, renovation, or removal of any buildings or structures until the CRM consultation process has been completed. Agency applicants must submit a copy of the proposed project to a designated Cultural Resource Specialist for their agency. Private parties or non-governmental organizations are encouraged to submit a copy of their proposed project to a CRM consultant they may have employed. Private parties and non-governmental organizations may also contact the NWE representative for further information or assistance. Applications submitted without this section completed, will be held by the TAC, without any action, until the information has been submitted.

Summarize here how you will complete requirements for Cultural Resource Management:

No ground disturbance associated with this project.

IX. Water Rights. For projects that involve development, restoration or enhancement of wetlands, please describe how the project will comply with the Montana DNRC’s “Guidance for Landowners and Practitioners Engaged in Stream and Wetland Restoration Activities”, issued by the Water Resources Division on 9March2016.

No water rights associated with this project.

All TAC Project proposals should be 7 pages or less and emailed (as a WORD file) to each of:

- Andrew.Welch@Northwestern.com
- Jon.Hanson@Northwestern.com
- Grant.Grisak@Northwestern.com

Further questions about TAC proposals or Project 2188 license requirements or related issues may be addressed to: Andy Welch, Leader Hydro License Compliance, NorthWestern Energy, 1315 N Last Chance Gulch, Helena, MT 59601; 406-444-8115 (office); 406-565-7549 (cell); Andrew.Welch@northwestern.com.