



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: South Fork Sheep Creek Bridge

Date: October 24, 2022

Explain how this Project addresses a specific Project 2188 License Article(s):

FERC License 2188, Article 416 (3), states NorthWestern Energy should "...Propose additional measures to minimize fish loss and to mitigate for avoidable and unavoidable impacts...These measures may include but will not be limited to:
1. Spawning and rearing habitat enhancement projects in the reservoir and in tributaries to the reservoir and tailwaters..."

This is a Priority 2 project because it occurs on a tributary to the Missouri River.

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

Sheep Creek is an important spawning tributary to the Missouri River. License Article 416 specifically states efforts should be made to improve fish spawning and rearing habitat in tributaries. Previous studies have shown Sheep Creek is an important spawning tributary for Missouri River rainbow trout and brown trout (Grisak 1999, Grisak 2012).

Grisak, G. G. 1999. Missouri River rainbow trout spawning study, Missouri River young of the year trout investigations II and Montana statewide whirling disease investigations. Progress report. Montana Fish, Wildlife & Parks, Bozeman.

Grisak, G. 2012. Rainbow trout and brown trout spawning redd survey and fecundity analysis for the Missouri River –Holter Dam tailwater fishery. PPL-Montana MOTAC projects 003- 08, 753-09, 757-10. Progress report. Montana Fish, Wildlife & Parks, Great Falls.

Project Sponsor (submitted by): Grant Grisak, NorthWestern Energy

Location of Proposed Project:

SF Sheep Creek, Cascade County, MT

Geocode (in decimal degrees ex 46.89743) Lat; 47.155874 Long: -111.794956
Total Project Cost: \$58,852

Landowner = \$2,000

Missouri River Flyfishers/Montana TU = \$2,000

TAC Funds (Cost-Share) Requested for Project: \$54,852

I. Introduction; brief statement of project to be completed with pertinent background information.

SF Sheep Creek is a major spawning tributary for Missouri River rainbow trout and brown trout. In 2022, NWE partnered with Montana FWP, Missouri River Flyfishers and Montana Trout Unlimited to replace a major SF Sheep Creek bridge (Cotter crossing) that was in disrepair resulting in users fording the stream in vehicles. During that project, another stream crossing (Ulmer crossing) was identified as a potential site to correct. The Ulmer ford is located 2.2 miles up SF Sheep Creek from the confluence with the Missouri River (Figure 1). This ford is constructed with concrete and allows water to flow through a small section, only 5 feet wide, during base flow (Figure 2, Figure 3, Figure 5). The stream channel at this site is 82% covered by concrete that is approximately 20 inches thick. Removing the concrete from the streambed and replacing with a bridge would open up the stream channel for proper water and bedload movement and fish migrations. Visual characteristics at the site suggest the crossing is not serving as a gradient check. Maintenance of the current ford involves adding concrete to cracks and holes. Maintaining this structure for longer term simply means adding more concrete. Removing the ford structure and replacing with a clear span bridge would change this stream channel to free flowing for bedload, water and fish and eliminate the maintenance liability.

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

Remove the concrete ford and replace with a clear span bridge similar to the Cotter Bridge (Figure 4). Installing a clear span bridge would open up approximately 534 sqft of stream bed currently covered by concrete. Current ford width is about 43 feet. The proposed bridge crossing is approximately 59 feet, which would open up the free flowing floodway approximately 16 feet wider than it is now. This would result in a free flowing stream bed. Replacing with a bridge would eliminate the long term maintenance liability and commitment to use concrete in the stream bed. This action would ultimately result in better fish spawning and rearing habitat for the SF Sheep Creek drainage.

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

Remove concrete ford with an excavator. Contour streambed to upstream and downstream reference sections, as necessary. Install precast concrete abutments on each bank. Install railcar as primary superstructure of bridge. Deck the railcar with treated lumber. Backfill abutments to create approaches from SF Sheep Creek Road to the bridge, and from the bridge to Ulmer building site. Some of the ford concrete may be repurposed as approach fill.

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

Project would be conducted between June 15 and September 1 which is after rainbow trout spawning and hatch date and before brown trout spawning season. Project is expected to take 10-14 days to complete.

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

NorthWestern Energy would

- provide funding for the project
- facilitate a Cultural Resources Management review, report, and obtain SHPO concurrence
- hire a contractor to remove ford and install bridge
- secure landowner permission to implement the project

VI. Project budget must include amounts for the following:

- Direct Labor
- Travel and Living
- Materials
- Other Direct Expenses
- Direct Overhead*
- All cost-share sources and amounts, including estimation of “in-kind” contributions

***NorthWestern Energy TAC funds will not be used for agency overhead on projects that do not fund personnel. Applications for materials and equipment should not contain overhead.**

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?

Deliverable would be a properly functioning stream crossing with improved streambed performance characteristics for mobilizing bed load, providing a wider (16 ft) stream bed, improving fish movements during spawning, improve rearing habitat and eliminating the long term maintenance liability of the aging concrete ford.

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:

NWE consulting archaeologist will perform all necessary review and reporting. NWE will secure a SHPO concurrence letter.

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 9 March 2016.

Summarize here how you will comply with Montana water rights laws, policies and guidelines:

No water rights would be interfered with from this project.



Figure 1. Ulmer bridge site located on SF Sheep Creek, Montana.



Figure 2. Ulmer ford crossing looking upstream, SF Sheep Creek, Montana.



Figure 3. Ulmer ford crossing looking downstream, SF Sheep Creek, Montana.



Figure 4. Cotter Bridge crossing of SF Sheep Creek, proposed bridge design for Ulmer crossing.

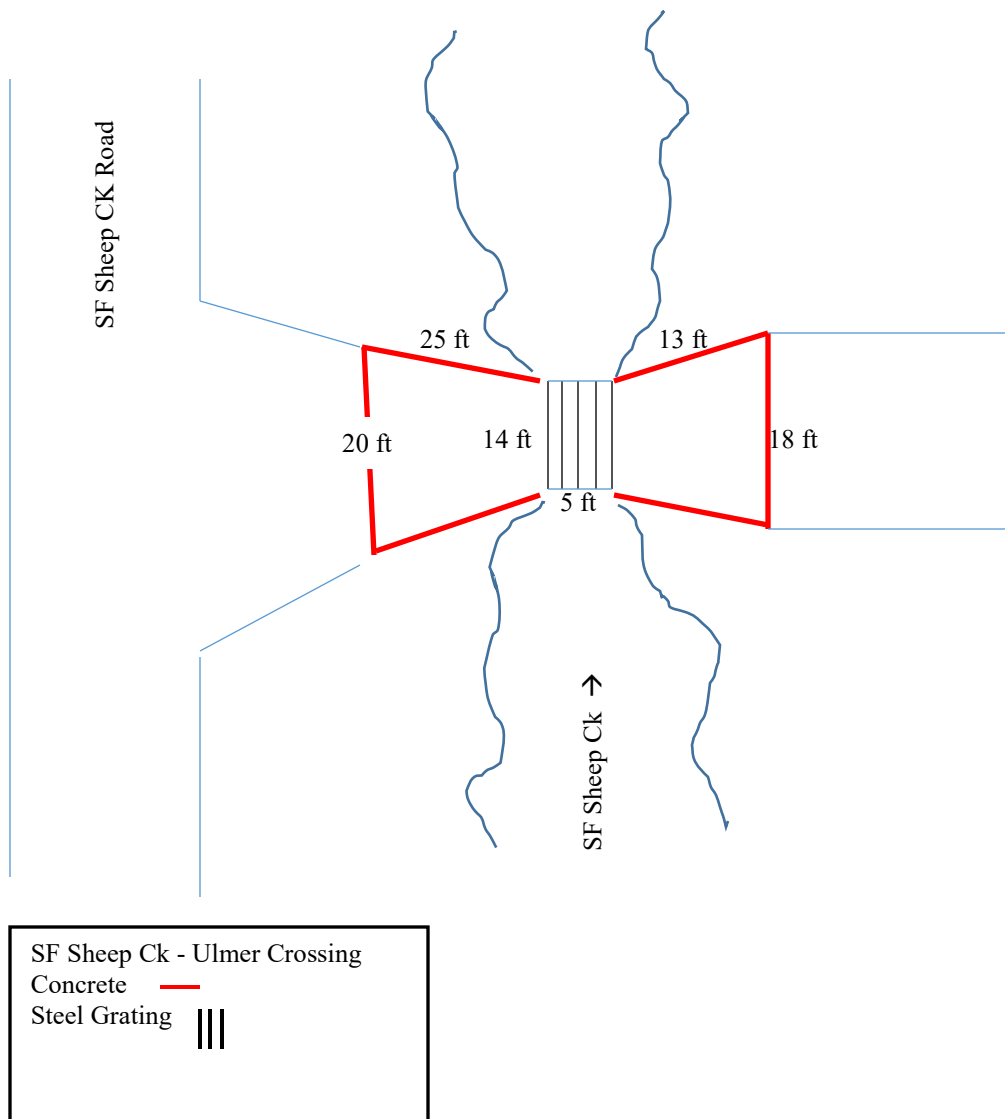


Figure 5. Ulmer concrete ford dimensions, SF Sheep Creek, Montana.