



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:

Hebgen Basin Pollinator Survey

Date:

October 22, 2024

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

This project addresses Article 423, which requires the development of a plan to monitor and enhance native plants and wildlife populations that includes specific goals, objectives, and standards on the lands and waters associated with the project. This Article places emphasis on monitoring of riparian vegetation and avian communities but also specifies that the monitoring and enhancement plan should not be limited to those requirements. The most effective way to implement the broad requirements of Article 423 over such a large and diverse area would be to use an adaptive management approach that involves the monitoring of vegetation and wildlife populations in key areas and working with state and federal agencies, local government, conservation organizations, and private landowners to identify and implement monitoring and restoration projects. This project addresses the monitoring requirements in Article 423.

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

This project would be located immediately adjacent to the Madison River, primary tributaries, and Hebgen Lake and on adjacent lands in the Basin. As surveys would be concentrated in the area immediately adjacent to the development and the Madison, South Fork Madison, and tributaries, the project would be considered Priority 1.

Project Sponsor (submitted by): **Randy Scarlett, West Zone Wildlife Biologist, USDA Forest Service, Hebgen Lake Ranger District, West Yellowstone, MT**

Location of Proposed Project:

The Project would be in the Hebgen Basin. Survey sites would be situated adjacent to Hebgen Lake and the Madison River and tributaries, including the South Fork Madison, Spring Creek, Cherry Creek, Watkins Creek, Trapper Creek, Beaver Creek, Cabin Creek, Red Canyon, and Teepee Creek.

Approximate center of Project Area: Lat: 44.734° Long: -111.221°

Total Project Cost: \$9,550

TAC Funds (Cost-Share) Requested for Project: **\$4,900**

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

Pollinators play an essential role in sustaining ecosystem health and sustainability by pollinating flowers in natural and urban areas and contributing to successful production on farmlands. Bumble bees in particular are easily recognized pollinators due to their large size and distinctive color patterns. North America is home to about fifty different species of bumble bees. Montana is a hotspot for bumble bee diversity, with 29 known species. Most species of bumble bees are social insects that live in colonies like honey bees, although the colonies are much smaller (50–500 members, compared with over 10,000) and their life cycle is annual rather than perennial (only the newly produced queens hibernate over the winter and emerge to create new colonies in the spring). Bumble bees forage on a diverse group of plants, though individual species preferences in plants vary in part due to differences in tongue length.

Many bumble bee species face an uncertain future. Recent studies indicate that one quarter of North America's nearly fifty species of bumble bees are undergoing dramatic population declines. Some of the species found in Montana, including the western (*Bombus occidentalis*), Suckley cuckoo (*B. suckleyi*), American (*B. pensylvanicus*) and Morrison's (*B. morrisoni*) bumble bees, are declining. Several species have been petitioned for protection under the Endangered Species Act, and many more are recognized in State Wildlife Action Plans as Species of Greatest Conservation Need. The U.S. Fish and Wildlife Service has concluded that the petitions to list the western bumble bee and southern plains bumble bee under the Endangered Species Act presented substantial information that indicated that action may be warranted due to potential threats. Status reviews of these species are currently being conducted by the Service to determine if listing under the Endangered Species Act is warranted. There are at least four species of bumble bees that are of conservation concern in Montana, including the western bumble bee (*Bombus occidentalis*), the Suckley cuckoo bumble bee (*B. suckleyi*), the American bumble bee (*B. pensylvanicus*), and the Ashton cuckoo bumble bee (*B. bohemicus*). The Suckley cuckoo bumble bee is ranked G2G3 (Imperiled/Vulnerable) globally and S1 (Critically Imperiled) in the state of Montana. It is a Species of Concern in the state as it appears to be rare and declining. This species has been documented in Gallatin and Madison Counties, but not in the West Yellowstone area or larger Hebgen Basin.

The causes of these declines are not fully understood; a combination of habitat loss/conversion, drought, pesticide use, climate change, low genetic diversity, and the introduction and distribution of pathogens through commercial pollinators are likely to blame. Regardless of the ultimate cause of bumble bee declines, protecting and managing existing habitat and creating new habitat are some of the most immediate and productive steps that can be taken to conserve pollinators. Given these widespread declines, it has become apparent that there is a critical need to collect baseline data on bumble bee distribution and species ranges. Understanding the status of pollinators and specifically bumble bees in the state of Montana is critical. Baseline data on the presence, abundance, and habitat use of bumble bee species is essential to understanding what habitats are most important, where to protect them, and where to implement restoration actions. Due to Montana's wild and remote nature, there are many unknowns about the status

of bumble bees and the environmental conditions they need to thrive. In 2024, the U.S. Forest Service partnered with the Xerces Society to launch the Montana Bumble Bee Atlas. Data collected under this project would directly contribute to our knowledge of pollinator species presence and abundance in the Hebgen Basin portion of the project area and compliment the broader knowledge base by contributing to the Montana Bumble Bee Atlas.

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

The objectives for this project include: 1. Survey appropriate habitat for bumble bees to gain a baseline knowledge of species presence and diversity in the Hebgen Basin and larger area; 2. Gather data that will help fill gaps and contribute to baseline knowledge related to presence, abundance, and habitat use; 3. Utilize survey data to inform Forest Service land management decisions near the development, the Madison River and its tributaries, and the larger Hebgen Basin that may impact at-risk species by developing habitat and management recommendations (e.g. to identify areas for temporal restrictions, spatial buffering, etc.); 4. Utilize survey data (which will establish a baseline) for measuring the success of future restoration and enhancement efforts.

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

The Montana Bumble Bee Atlas has divided the state into 178 equal-area grid cells. All proposed surveys would occur in grid cell MT_178, which includes the Hebgen Lake area. Based on pre-season reconnaissance of plant phenology and availability of nectar-producing plants, approximately 12 survey sites will be identified. Survey sites will include low and higher elevation sites, front country and backcountry/less roaded areas, and managed (fuels treatment, timber harvest, grazed) and unmanaged habitat. Surveys would occur between June 15 and August 31; plant phenology and the availability of nectar-producing plants will largely determine the timing of surveys with respect to the field season.

Point surveys would occur on calm (winds <15 mph), dry, sunny days when temperatures are between 60°F and 90°F. Point surveys would occur over a 1 hectare (2.5 acre) area. A total of 45 person-minutes would be devoted to active searching and netting of bumble bee surveys within the survey plot. The entire survey area would be searched, however, concentrations of flowering plants would be a focus of surveyors. Bumble bees that are noted would be captured, transferred to 30cc plastic vials, and put on ice. Host plants for each collected bumble bee would be identified and photographed. At the end of the 45 person-minute survey period, individual bumble bees would be preliminarily identified to species. Bees will be placed on a white background and photographs of tergites, head, back, legs, and other morphometric features taken for positive identification. A handheld digital camera with appropriate macro settings will be used to take photos.

A habitat assessment will also be conducted for each point survey. This data will be collected in order to document landscape features and flowering plants species available within the survey area.

Point data and photos will be submitted to BumbleBeeWatch.org for positive identification. Once positive identifications are received, data (including for sites where no bumble bees were noted or collected) will be entered into the NRM Wildlife database (database of record for FS surveys, observations, and sites).

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

Identification of survey sites will begin fall 2024/winter 2025. Surveys will begin in approximately mid June 2025 and would go through the end of August 2025. Data would be submitted to Bumble Bee Watch no later than September 15. Data would be entered into NRM Wildlife no later than May 15, 2026.

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

The project leader will be Randy Scarlett, West Zone Wildlife Biologist for the Custer Gallatin NF. The Hebgen Lake Wildlife Technician (TaylorJae Taber) will be the field lead. Field work will be accomplished by the District Wildlife Technician (GS-06) and Forestry Technicians (GS-5/6) out of West Yellowstone and by myself (Randy Scarlett).

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.

Category	Description	TAC	FS	FWP/In-Kind	Total
Direct Labor	FS Bio – 5 days	\$0	\$2,700	\$0	\$2,700
	Wildlife Tech – 15 days	\$2,500	\$1,250	\$0	\$3,750
	Forestry Tech – 10 days	\$2,100	\$0	\$0	\$2,100
Direct Overhead	2%	\$0	\$100	\$0	\$100
Travel and Living	FS vehicle & mileage	\$0	\$600	\$0	\$600
Materials	Nets, vials, and other survey equipment	\$300	\$0	\$0	\$300
Other Direct Expenses	None	\$0	\$0	\$0	\$0
Total		\$4,900	\$4,650	\$0	\$9,550

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?

Deliverables for this project will include a greater understanding of pollinator species presence and abundance in the Hebgen Basin and larger area. This survey will also provide a baseline to build from for project planning in the Basin. Ultimately, the data that is collected may aid in the development of management recommendations for this critical group.

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 disturbing activities are proposed; therefore, no coordination with cultural resource specialists is required.

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:

Not applicable to 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

Manager, Hydro License Compliance

Andrew.Welch@NorthWestern.com

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Potential Hebgen Basin Pollinator Survey Sites, 2025

