



NWE-2188-4174

Ms. Kimberly D. Bose  
Secretary  
Federal Energy Regulatory Commission  
888 First Street, NE  
Washington, DC 20426

December 06, 2022

Re: NorthWestern Energy (NorthWestern) filing Updated Five Year (2023 thru 2027)  
Madison and Missouri River Wildlife and Terrestrial Habitat Plan per Project 2188  
License Articles 411, 418, 421, 423 and 424

Dear Secretary Bose,

The September 27, 2000 Project 2188 Order Issuing New License directed the licensee to file, for Commission approval, five plans for protection, mitigation and enhancement (PM&E) of wildlife, threatened and endangered (T&E) species and terrestrial habitat resources on the Madison and Missouri rivers. These five plans, listed below with the correlating license article, are collectively referred as the "Project 2188 Wildlife Plan".

Article 411 - Macrophyte Delineation and Use Plan for Hebgen Reservoir, Madison Reservoir and Lake Helena

Article 418 - Missouri River Riparian Flow Study Plan

Article 421 - Threatened and Endangered Species Protection Plan

Article 423 - Wildlife Habitat Monitoring and Enhancement Plan

Article 424 - Project Transmission Line Raptor Protection Plan

Northwestern, in consultation with state and federal agencies and conservation groups, has been implementing the current Project 2188 Wildlife Plan (2018 thru 2022) per the five License Articles with positive results. Northwestern provides annual funding and employs a formal consultation framework through a voluntary Memorandum of Understanding (MOU) signed by Northwestern Energy and resource agencies which supports four Technical Advisory Committees (TACs) that implement fisheries, wildlife, habitat, and water quality PM&E measures along the 524 mile Madison and Missouri River corridor as required by the 2188 License. These collaborative efforts have resulted in significant fisheries, wildlife and river habitat conservation projects with local, state and national recognition.

Northwestern provides in Exhibit I an Updated Project 2188 Wildlife Plan for the next five-year period (2023 thru 2027). This updated Plan will continue to provide important PM&E measures and coordination with agencies on conservation measures for Madison and Missouri River wildlife and terrestrial and river habitat resources.

Also included, herein, is Exhibit II, summary progress reports on protection, mitigation and enhancement measures implemented under the past (2018-2022) Project 2188 Wildlife Plan.

Northwestern proposes to consult with agencies and file the next updated Five Year (2023 thru 2027) Wildlife Plan under Articles 411, 418, 421, 423 and 424 with the Commission by December 31, 2022.

Northwestern has consulted with the US Forest Service, US Fish and Wildlife Service, Montana Department of Fish, Wildlife and Parks, and the US Bureau of Land Management on the Updated (2023 thru 2027) Project 2188 Wildlife Plan in Exhibit I. Signatures of approval for this Plan from these agencies appear on the following page.

Sincerely,



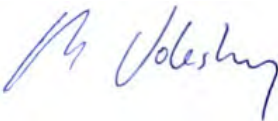
**Mary Gail Sullivan**

*Director, Environmental and Lands*

CC: Andy Welch, NWE  
John Tabaracci, NWE  
Grant Grisak, NWE  
Adam Zerrener, USFWS  
James Boyd, USFWS  
Cory Loecker, MFWP

Claire Gower, MFWP  
Heather Harris, MFWP  
Chris Boone, BLM  
Jason Brey, USFS  
Randy Scarlett, USFS

Northwestern Energy has consulted with agencies in the preparation and filing of this Updated Five-Year (2023 thru 2027) Project 2188 Wildlife Plan per License Articles 411, 418, 421, 423 and 424. As signed below, the following agencies agree with this Updated Wildlife Plan described above and attached in Exhibit I:

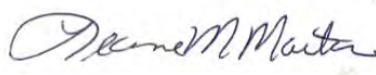
By:   
Title: Chief of Operations

Representing Montana Department of Fish, Wildlife and Parks  
Date: 10/18/2022

By: **JACOB MARTIN** Digitally signed by JACOB MARTIN  
Date: 2022.11.02 15:47:14 -06'00'

Title: Assistant Field Supervisor  
Representing U.S. Fish and Wildlife Service

Date: November 2, 2022

By:  Digitally signed by LEANNE MARTEN  
Date: 2022.11.03 14:08:57 -06'00'

Title: Northern Region, Regional Forester

Representing U.S. Forest Service

Date: November 3, 2022

By: **RUTH MILLER** Digitally signed by RUTH MILLER  
Date: 2022.10.28 12:57:49 -06'00'

Title: Deputy State Director, Resources and Planning

Representing U.S. Bureau of Land Management

Date: October 28, 2022

# **Exhibit I**

Updated Project 2188 Wildlife Plan

2023 thru 2027

# **FERC License 2188 Five Year (2023-2027) Wildlife Plan**

Articles 411, 418, 421, 423 and 424



September 2022

**NorthWestern<sup>®</sup>  
Energy**

*Delivering a Bright Future*

***Cover photo by Erin Madison, 2021. Release of Trumpeter Swan cygnet at Ennis Lake, Montana, August 2021. NorthWestern Energy provides funds to purchase and monitor Trumpeter Swan cygnets raised by the Wyoming Wetland Society. Montana Fish, Wildlife & Parks selects release sites in the Madison Valley to establish 5 nesting pairs to help fulfill the goals of the 2017 Trumpeter Swan Pacific Flyway Management Plan.***

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## Introduction

A new 40-year license was issued by the Federal Energy Regulatory Commission (FERC; Project 2188) to PPL Montana in 2000 for operation of nine hydroelectric developments, including two on the Madison River (Hebgen and Madison dams) and seven on the Missouri River (Hauser, Holter, Black Eagle, Rainbow, Cochrane, Ryan and Morony dams). Ownership and operation of these developments and the associated FERC license was transferred from PPL to NorthWestern Energy (NorthWestern) in November, 2014. Project 2188 License Articles 411, 418, 421, 423, and 424 require the licensee to consult with state and federal agencies to prepare plans to protect, mitigate and enhance wildlife resources and habitat along more than 500 miles of the Missouri River and its tributaries from Hebgen Lake in the headwaters of the Madison River, to the upstream end of Fort Peck Reservoir in eastern Montana (Figure 1).

**Figure 1. Map of FERC Project 2188 project area with locations of NorthWestern Energy hydroelectric dams on the Madison and Missouri rivers in Montana.**



NorthWestern has entered into a renewed 10-year (2017 thru 2026) Memorandum of Understanding (MOU) with state and federal agencies to provide annual funding to implement Project 2188 FERC license requirements for the protection, mitigation and enhancement (PM&E) of fisheries, wildlife, and water quality resources in the project area. The MOU establishes four Technical Advisory Committees with a formal process for allocating

annual NorthWestern funding for PM&E projects using adaptive management principles. For the purposes of this plan, the 'project area' generally consists of areas within approximately one mile of the Madison River downstream from Yellowstone National Park and the Missouri River from Canyon Ferry Dam to the headwaters of Fort Peck Reservoir.

The Madison-Missouri River Wildlife Technical Advisory Committee (WildTAC) is composed of representatives from the Montana Department of Fish, Wildlife & Parks; the US Forest Service; US Bureau of Land Management; US Fish & Wildlife Service; and NorthWestern Energy. The WildTAC communicates actively throughout the year, but usually meets once in the latter part of each year to review TAC progress, budget status, and to consider new project proposals and projects to fund in the coming year. Project sponsors and vendors are also responsible for providing annual progress reports to the TAC, which are used to report PM&E program progress to FERC.

This document serves as the plan to implement the requirements of Articles 411 (reservoir macrophytes), 418 (Missouri River riparian flows), 421 (T&E species), 423 (vegetation and wildlife monitoring and enhancement), and 424 (transmission line raptor protection) of the FERC Project 2188 license for the five-year period 2023-2027. This plan revises and updates the previous plan, which covered the five-year period 2018-2022.

## License Article 411

***Article 411. Within one year of the issuance of the license, the Licensee shall file for Commission approval a plan approved by the Forest Service for a baseline study to delineate the growth and distribution of submerged macrophytes and their use by waterfowl and reservoir fisheries in Hebgen Reservoir, Ennis Lake, and Lake Helena. The plan shall include a proposal to implement the baseline study. In addition, the Licensee shall conduct time-series (trend analysis) studies of macrophyte abundance in Hebgen Reservoir at 3 to 5 year intervals for the term of the license. The Licensee shall prepare the plan after consultation with the Forest Service, FWS, BLM, Montana DFWP and other interested entities. The Licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The Licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the Commission. If the Licensee does not adopt a recommendation, the filing shall include the Licensee's reasons, based on project-specific information.***

The Licensee filed a plan with FERC on March 27, 2002 to implement the requirements of Article 411. The required baseline study of macrophytes, waterfowl and fisheries on Hebgen Reservoir, Ennis Lake and Lake Helena was conducted in 2003, with the final report submitted to FERC on February 23, 2004. The 2004 report included recommendations to improve survey procedures in future years and requested that fisheries data not be required in future reports because fisheries monitoring information for these waters is provided to FERC in other reports per the requirements of other Project 2188 license articles. In an Order dated March 15, 2005, FERC approved the recommendations detailed in the 2004 report and specified the next report would be due in 2007 and then every five years thereafter.

Although Article 411 requires time-series studies only on Hebgen Reservoir, macrophyte and waterfowl monitoring studies were repeated by the WildTAC on Hebgen Reservoir, Madison Reservoir and Lake Helena in 2006/2007 and again in 2011/2012 to gain better overall trend data. The results of these follow-up studies indicated the abundance of migrating waterfowl in these three reservoirs had little to do with macrophyte density. Abundance of migrating waterfowl was found to be more dependent on weather conditions during the spring and fall migration seasons and other cumulative factors in the flyway.

As a result of these findings, the Licensee, the TAC agencies, and FERC agreed to forego continued macrophyte and waterfowl monitoring requirements on Hebgen (and the other two reservoirs) during the 2013-2017 2188 Wildlife Plan. Provisions were made in the 2013-2017 Wildlife Plan for the TAC to re-initiate macrophyte and waterfowl monitoring if unique operational or biological conditions develop during the planning period. Such conditions have not developed and the TAC proposes to continue to defer reservoir macrophyte and waterfowl monitoring work during this planning period (2023-2027) unless the WildTAC agrees it is necessary due to changes in environmental or other conditions. Fisheries monitoring on same these reservoirs will continue to be conducted in accordance with other Project 2188 license requirements.

## License Article 418

***Article 418: Within one year of the date of issuance of the license, the Licensee shall submit for Commission approval a plan to fund research, along with the National Ecology Research Center Fort Collins, and Bureau of Reclamation (BOR), for a one-time riparian flow study of the Missouri River from Holter to Great Falls, and Morony Dam to Fort Peck Reservoir. The study shall be used to determine flows necessary for the maintenance and enhancement of streamline riparian vegetation in the Missouri River between Morony Dam and Fort Peck Reservoir, and to prepare a plan for appropriate riparian enhancement flows.***

***The Licensee shall prepare the plan in consultation with Fish and Wildlife Service (FWS), BOR, Montana Department of Fish, Wildlife and Parks (MFWP), and other interested entities. The plan shall include a schedule for implementation of the program, for reporting and consultation with the agencies concerning the annual results of the program, and for filing the results, agency comments, and the Licensee's response to agency comments with the Commission. The Licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The Licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the Commission. If the Licensee does not adopt a recommendation, the filing shall include the Licensee's reasons, based on project-specific information. The Commission reserves the right to require changes to the plan. Upon Commission approval, the Licensee shall implement the plan, including any changes required by the Commission.***

NorthWestern's seven dams on the main stem Missouri River (Hauser and Holter, and five dams in Great Falls) are collectively operated as a "run-of-river" system and have negligible usable storage capacity. As a result, they have no measurable effect on the seasonal hydrograph of the Missouri River. Canyon Ferry Reservoir, operated by the U.S. Bureau of Reclamation (USBR) is the single largest storage reservoir in the Missouri River drainage upstream from Fort Peck Reservoir, with a useable storage of approximately two million acre-feet. According to the results of a 1994 study conducted by a previous Licensee, flows in the Missouri River at Fort Benton during the spring runoff months of May and June have been reduced to about 80% of natural due mostly to the effects of Canyon Ferry operations. The USBR also operates storage reservoirs on tributaries (Gibson Reservoir on the Sun River and Tiber Reservoir on the Marias River) which also have some effect on the spring hydrograph of the main stem Missouri River downstream from Great Falls.

Per requirements of Article 418, the Licensee, in consultation with state and federal agencies, completed studies on the timing and magnitude of river flows necessary to promote cottonwood regeneration in riparian areas along the Missouri River between Canyon Ferry Dam and Fort Peck Reservoir. Peer reviewed reports and manuscripts describing these studies have already been filed with the Commission. These studies concluded that maintenance of plains cottonwood stands (and associated riparian communities) in the Wild and Scenic Missouri River will require mean daily flow peaks in excess of approximately 49,000 cfs downstream of Fort Benton during mid-May to mid-June, with a recurrence interval of about 9 years. Although the spring hydrograph of the Missouri River is shaped primarily by water supply and the operation of USBR storage reservoirs, NorthWestern will continue to cooperate with federal and state agencies to determine whether riparian flows prescribed by these studies can be provided during above average flow years. NorthWestern will also continue to work with personnel from state and federal agencies, local government,

conservation organizations and private landowners to identify and implement projects to maintain, restore and enhance streamside riparian habitat, wetlands and adjacent upland wildlife habitat along the Madison and Missouri rivers and important tributaries.

## License Article 421

***Article 421: Within one year after the date of issuance of this license, the Licensee, after consultation with USFWS, USFS, BLM, and Montana FWP, as appropriate, shall prepare a Threatened and Endangered Species Protection Plan (T&E Plan) for species that occur within the project area of the Missouri-Madison Project. The T&E Plan shall include, but not be limited to, the following: (1) a project construction schedule, including transmission line construction, to avoid disturbances to threatened and endangered species; (2) the results of a preconstruction survey by a professional wildlife biologist, fisheries biologist, or botanist of all areas to be disturbed by construction or operations under the license; (3) measures to protect the listed species; (4) an implementation schedule for the protective measures; and (5) a monitoring plan and implementation schedule to evaluate the project's effect on threatened and endangered species and critical habitat in the project area. Per Article 421 requirements, all PPLM Project 2188 and related construction, including transmission line construction, will be planned and implemented to avoid or otherwise minimize impacts to threatened and endangered species in consultation with USFWS and other state and federal agencies.***

NorthWestern's Threatened and Endangered Species Protection Plan (T&E Plan) will continue to focus, as it has since 2000, on priority areas and actions for threatened and endangered species in the project area. NorthWestern will continue to implement conservation efforts to protect, restore and enhance T&E species and will satisfy USFWS consultation requirements as appropriate. Recovery efforts for Threatened & Endangered species are already underway and it is the responsibility of agency working groups to determine the monitoring/evaluation schedule, feedback mechanisms, and effectiveness of recovery methods outlined in the recovery plans for each species. NorthWestern will continue to participate in these working groups as needed and will assist in the recovery of those species that might be affected by NorthWestern operations.

## Endangered Species

Only one endangered species (pallid sturgeon) is known to occur within the FERC Project 2188 area, while two other endangered species can sometimes be found in nearby areas downstream from the project area boundary (Table 1). These endangered species have recovery plans published by the USFWS and interagency working groups or recovery teams exist to facilitate recovery. Where these species are found to occur in the Project 2188 area, NorthWestern works closely with State and Federal agencies and private land owners to assist in their recovery.

**Table 1. Endangered Species potentially found within or near the FERC Project 2188 area.**

Common Name	Scientific Name	Range in Montana
Pallid Sturgeon	<i>Scaphirhynchus albus</i>	Missouri River downstream from Great Falls and lower Yellowstone River
Black-footed Ferret	<i>Mustela nigripes</i>	Eastern Montana Prairie dog towns.
Whooping Crane	<i>Grus americana</i>	Migrates spring and fall thru Eastern Montana

### Pallid Sturgeon

The pallid sturgeon was listed as an endangered species in 1990 and the USFWS determined in 1998 that FERC Project 2188 operation would not likely have an adverse effect on this species. Population surveys suggest a remnant population of fewer than 50 wild adult pallids exists in the river upstream from Fort Peck Reservoir and there is no evidence of successful natural recruitment of these fish since surveys began in the 1980's. Hatchery-raised pallid sturgeon have been stocked in the river upstream from Fort Peck Reservoir most years since 1998 and survival of hatchery fish has generally been good. Under the terms of a fisheries monitoring agreement with MFWP, NorthWestern provides annual funding for fisheries protection, mitigation and enhancement work in the 210-mile segment of the Missouri River between Morony Dam (near Great Falls) and the headwaters of Fort Peck Reservoir. A substantial portion of this funding is used to support pallid sturgeon monitoring and restoration work, which includes: standardized annual setline and trammel net surveys to monitor growth and survival of stocked hatchery pallid sturgeon; maintenance of

remote radio telemetry stations to track pallid sturgeon movements; purchase and implantation of radio tags to track movements of adult and juvenile pallids; and capture of wild adult pallids for egg collection. In recent years focus has shifted to monitoring spawning activity of sexually mature hatchery-stocked fish. NorthWestern has funded new technology such as PIT tags and receivers, and satellite interfaces for data receivers (radio and PIT) that collect more location data and relay it to biologists much faster. In addition, NorthWestern personnel directly provide equipment and field assistance to MFWP and other agencies for pallid sturgeon evaluation and recovery efforts in this river section as needed and will continue to do so during this planning period.

### **Black-footed Ferret**

This species formerly occurred throughout the Great Plains, mountain basins, and semi-arid grasslands coincident with prairie dogs, their primary prey item. Ferrets have been the subject of experimental releases on prairie dog towns in Montana after the last known wild ferrets were removed from the wild and bred in captivity to increase the population. The release sites in Montana are not within the FERC Project 2188 area.

There is a large gap in the distribution of prairie dogs between the project area and the ferret reintroduction sites, which limits the possibility of ferrets from the release sites reaching the few prairie dog towns in the project area along the Missouri River. Black-footed ferrets were released in upland habitats downstream from the project area and are considered experimental non-essential populations because of their status as reintroduced animals. At this time no population of black-footed ferrets occur in the project area.

### **Least Tern and Whooping Crane**

On February 12, 2021, the USFWS delisted the Interior Least Tern (*Sternula antillarum*) from the Endangered Species Act protections, due to its population having met recovery goals. The delisting releases the species from ESA protections and applies to the entire range of the inland population. Whooping Cranes do not nest in Montana but migrate through the eastern part of the state during spring and fall during

their travels from wintering areas in Texas to breeding areas in the Northwest Territories of Canada. Whooping cranes are not known to migrate through the FERC Project 2188 area.

## Threatened Species

Five species classified as ‘threatened’ under the federal Endangered Species Act may occur in or near the Project 2188 area (Table 2).

**Table 2. Threatened Species potentially found within or near the FERC Project 2188 area.**

Common Name	Scientific Name	Range in Montana
Grizzly Bear	<i>Ursus arctos horribilis</i>	Alpine/subalpine coniferous forests; Western Montana.
Canada Lynx	<i>Lynx canadensis</i>	Higher elevation subalpine forests; both sides of the Continental Divide
Piping Plover	<i>Charadrius melodus</i>	East of Continental Divide during migration; nests in NE Montana wetlands and along Fort Peck Reservoir and Missouri River downstream from Fort Peck Dam
Red Knot	<i>Calidris canutus rufa</i>	Rarely observed at MT wetlands on both sides of Continental Divide during spring and fall migration
Ute Ladies' Tresses	<i>Spiranthes diluvialis</i>	River meander wetlands; Jefferson, Madison, Beaverhead, Gallatin counties.

## Grizzly Bear

The grizzly bear has been classified by the USFWS as a threatened species since 1975 and the recovery plan is currently coordinated through the Interagency Grizzly Bear Recovery Committee, which was formed in 1983. The USFWS determined in 1998 that operation of FERC project 2188 would not adversely affect this species. Grizzly bears formerly occurred throughout the Project area but now occur occasionally along the Missouri River downstream



of Morony Dam and occur commonly in the upper reaches of the Madison River. This portion of the project area is within the Primary Conservation Area for the Greater Yellowstone Ecosystem (GYE) grizzly bear population. The Greater Yellowstone Ecosystem population of grizzly bears was removed from the Federal List of Endangered and Threatened Wildlife on July 31, 2017. The Final Rule delisting the grizzly bear in the Yellowstone Ecosystem was vacated on September 24, 2018.

This ruling was confirmed in July 2020 and the U.S. Fish and Wildlife Service revised the List of Endangered and Threatened Wildlife to again include grizzly bears in the Greater Yellowstone Ecosystem (GYE) under the Endangered Species Act (ESA).

NorthWestern will continue to work with cooperating agencies to insure interagency conservation for this species through protection and enhancement of important habitats. The Project 2188 WildTAC has funded several habitat improvement projects in the Hebgen Lake area along the upper Madison River that may benefit grizzly bears, including aspen enhancement and wetland maintenance near Quake Lake, willow habitat enhancement near Hebgen Lake, and weed control in or near riparian areas on US Forest Service lands throughout the Hebgen/Quake Lake area. Funding has also been provided to support a project to reduce conflicts between grizzly bears and recreationists in the Hebgen Lake area. The WildTAC will continue to support and implement projects that benefit grizzly bear habitat within the 2188 Project Area using adaptive management as opportunities develop.

## **Canada Lynx**

Canada Lynx were listed as a threatened species in 2000 and the USFWS concluded in the same year that continued operation of FERC Project 2188 was not likely to have an adverse effect on lynx. Lynx are found on both sides of the Continental Divide in Montana, and prefer higher elevation (above 5400 feet) subalpine forests composed mostly of subalpine fir east of the Divide. Lynx are considered transitory in the FERC Project 2188 area due to their preference for higher elevation mountainous areas. According to the 2017 Species Status Assessment for Lynx, they are known to occasionally occur in the Greater Yellowstone Ecosystem, but there is uncertainty whether this area historically or recently supported a persistent resident population. This area may continue to occasionally or intermittently support a small number of resident lynx and some reproduction through the remainder of the century. It is very unlikely to support a resident population in the short-term (through 2025) and beyond.

## **Piping Plover**

The Piping Plover was listed as a threatened species in 1985 and the USFWS determined in 1998 that operation of FERC project 2188 would not adversely affect this species. Piping plovers are occasionally observed in Montana east of the continental divide during spring and fall migration. They nest on the southeast arm of Fort Peck Reservoir (Big Dry Arm) and on the Missouri River downstream from Fort Peck Dam but are not known to frequent or nest in the FERC Project 2188 area.

## **Red Knot**

The Red Knot is a species of sandpiper that was listed as a threatened in 2015. This species winters along the Texas coast and further south and breeds in arctic tundra areas. Red knots are rarely seen in Montana during spring and fall migration and do not inhabit or breed in the FERC Project 2188 area.

## **Ute Ladies' Tresses**

The Ute Ladies Tresses was listed as a threatened species in 1992 and was discovered in Montana in 1994. Ute ladies' tresses is a threatened obligate wetland plant found in meandered wetlands and swales in broad, open valley margins where soils are saline and calcareous. Only ten occurrences of this orchid are known from Montana, a number of them from within the Project area. Major threats to this species include alteration to groundwater flow regimes and noxious weeds. Threats to this species appear to be low and the most immediate need for this species is to continue to document the extent of its occurrence within the FERC 2188 Project area.

## **Proposed and Candidate ESA Species**

### **North American Wolverine**

The North American Wolverine (*Gulo gulo luscus*) was proposed by the USFWS to be listed as a threatened species in 2013, but the Service withdrew the proposal in 2014 based on re-examination of scientific information. The withdrawal decision was challenged in court and the USFWS initiated a new status review in 2016. On October 8, 2020 the USFWS reported the best available science show that the factors affecting wolverine populations are not as

significant as believed in 2013 when the U.S. Fish and Wildlife Service (Service) proposed to list the wolverine found in the contiguous United States as threatened. Accordingly, the Service withdrew its proposed rule to list the wolverine as Threatened in October 2020. During subsequent litigation, the Service chose not to defend the October 2020 withdrawal of its proposed rule to list wolverine as threatened and re-evaluated its decision during this remand period. On May 26, 2022 the District Court of Montana vacated the Service's 2020 decision to withdraw the 2013 proposed rule to list the wolverine Distinct Population Segment as threatened. The wolverine reverted back to its proposed for listing status under the 2013 proposal; this continues to be the case as of June 28, 2022. The Service was given 18 months to make a final ruling on the wolverine listing status. Wolverines are a very rare animal and sources commonly estimate a total population of only 300-500 animals in Montana. Wolverines prefer alpine tundra and boreal coniferous forests and have very large home ranges, on the order of 150 square miles. Wolverines are extremely rare in the FERC Project 2188 area and are considered transitory due to their overall low abundance and strong preference for high elevation and remote mountainous habitats.

## **Whitebark Pine**

The Whitebark Pine (*Pinus albicaulis*) was petitioned for ESA listing in 2008 and the USFWS determined in 2011 that listing was warranted but precluded by higher priorities. The USFWS initiated a new Species Status Assessment for whitebark pine in 2017 with a goal of making a decision on ESA listing by 2019. As of 2021 the species is listed by the USFWS as Proposed under section 4 of the Act. This species is common at higher elevations in subalpine forests and is found nearly all mountain ranges of western and central Montana. Whitebark pine is likely uncommon in most of the FERC Project 2188 area due to its preference for higher elevations, but scattered individuals may be present in the project area around Hebgen Lake. The species has suffered major declines primarily due to the establishment of a non-native fungus (white pine blister rust) and increased infestation by mountain pine beetles which may be promoted by recent climate warming trends.

## **Sicklefin Chub and Sturgeon Chub**

Sicklefin Chub (*Macrhybopsis meeki*) and Sturgeon Chub (*Macrhybopsis gelida*) were both petitioned for ESA listing in 1994. In 2001, the 12-month finding determined both species did not warrant listing. In 2016, a petition to list was received and a positive 90 day finding in 2017 required the Service to evaluate the status for possible ESA listing. These species have been included in the Service's National Listing Priority Workplan

with a 12-month finding due in 2023. USFWS efforts in 2021 and 2022 have focused mainly on data gathering, communication with stakeholders and developing the Species Status Assessment. NorthWestern participates in stakeholder meetings and provides funding for, and assists with, annual monitoring of both species. NorthWestern Energy assisted in collecting genetic samples from these species in the Missouri River in 2020 and 2021 that will be used to evaluate the genetic fitness throughout their range and within the project boundary. NorthWestern Energy provides funding to process genetic samples.

## Other Species of Concern

Due to the very large size and diversity of habitats within the FERC Project 2188 area, there are many animal, fish and plant species present that appear on state and federal “species of concern” lists. These species are highlighted because they are known to have declined or simply because there is a lack of good information on their distribution, abundance, and long term population trends. Habitat types within the FERC 2188 Project Area range from high elevation alpine environments with cold, clear rivers and streams in the Madison River drainage near Yellowstone National Park to low elevation arid grasslands with warm, turbid rivers and streams in the Missouri River drainage downstream from Great Falls. These varied habitats result in the overall project area having an extremely high diversity of wildlife, fish and plant species. The Montana Natural Heritage website lists 227 species of concern, 97 potential species of concern, and 48 special status species (not including plants). Some have been candidates for federal ESA listing in the past or may become candidates in the future.

## Bald Eagle

The Bald Eagle (*Haliaeetus leucocephalus*) was listed as endangered in 1975, downlisted to threatened in 1995, and delisted from the Federal List of Endangered and Threatened Wildlife in 2007. However, the bald eagle remains protected under the Bald and Golden Eagle Protection Act of 1940 and the Migratory Bird Treaty Act of 1918. Bald Eagles are currently being monitored by state and federal agencies and their populations have expanded dramatically statewide, increasing from 31 nesting territories in 1980 to 713 territories in 2014 (Montana Bald Eagle Working Group 2016). Nesting bald eagles occur at numerous locations along rivers in the Project Area and in recent years NorthWestern has provided funding to the

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US Forest Service to support monitoring of nesting success in 15 bald eagle territories in the Hebgen Lake area. We anticipate that support will continue into the future. If detrimental effects of hydroelectric operations on bald eagles are identified, NorthWestern will work to resolve those problems through adaptive management.

Repeated surveys of bird populations in the O'Dell Creek restoration area and in riparian areas along the entire 525-mile Madison/Missouri river corridor have identified 122 different species, of which 25 are species listed by the Montana Natural Heritage Program as 'Montana Species of Special Concern' and 18 species listed by the US Fish and Wildlife Service as 'Birds of Conservation Concern' (Table 3). Habitat restoration and enhancement at O'Dell Creek has approximately doubled the total number of bird species and riparian-dependent bird species inhabiting the project area, including several species of concern. Riparian fencing, cottonwood restoration, and conservation easement projects completed along the mainstem Missouri River have improved habitat for a number of bird species of concern and efforts to identify and implement these types of projects will continue in the current planning period.

**Table 3. Bird species of special concern detected in surveys of the entire Madison and Missouri river corridor during 2004-2021 or in the O'Dell Creek restoration project area along the Madison River during 2011-2020.**

Species	Detected in river-wide surveys	Detected in O'Dell Cr surveys	USFWS Species of Conservation Concern (2021)	MT Species of Special Concern (2022)
American Bittern		X	X	X
Black-billed Cuckoo	X*		X	X
Long-billed Curlew	X	X	X	X
Bald Eagle	X	X	X	
Golden Eagle	X*		X	X
Prairie Falcon	X*	X	X	
Willow Flycatcher	X	X	X	
Olive-sided Flycatcher	X		X	
Marbled Godwit	X		X	
Evening Grosbeak	X*		X	X
Franklin's Gull	X	X		X
Great Blue Heron	X	X	X	X
Ferruginous Hawk		X	X	X
Swainson's Hawk	X		X	
White-faced Ibis	X*	X		X
Pinyon Jay	X*		X	X
McCown's Longspur		X	X	X

Species	Detected in river-wide surveys	Detected in O'Dell Cr surveys	USFWS Species of Conservation Concern (2021)	MT Species of Special Concern (2022)
Common Loon	X*			X
Ovenbird	X			X
Burrowing Owl		X	X	X
Short-eared Owl	X*	X	X	X
Western Screech Owl	X		X	X
Sprague's Pipit		X	X	X
Clark's Nutcracker	X*		X	X
American White Pelican	X	X	X	X
Brewer's Sparrow	X	X	X	X
Trumpeter Swan	X*	X		X
Caspian Tern	X*			X
Sage Thrasher	X*		X	X
Veery	X		X	X
Pileated Woodpecker	X			X

\*Species detected outside of standard survey procedure

The Wildlife and Fisheries TAC's have placed considerable emphasis on funding projects to improve knowledge or assist in recovery of other wildlife and fish species of special concern and will continue to do so during the 2023-2027 planning period. Over the past few years, the WildTAC has funded projects to enhance habitat, improve populations, or learn more about the biology and habitat requirements of species of special concern including spadefoot and western toads, trumpeter swans, and spiny softshell turtles. Monitoring and habitat enhancement projects for bats and amphibians have also been funded. The Madison and Missouri Fisheries TAC's have also funded numerous restoration and research projects for fish species of concern, including westslope cutthroat trout, sauger, burbot, blue sucker, arctic grayling, paddlefish, sicklefin chub, sturgeon chub and three species of dace.

## License Article 423

***Article 423: Within one year after the date of issuance of this license, the Licensee shall, after consultation with the appropriate agencies and other entities, develop a vegetation and wildlife monitoring and enhancement plan that includes specific goals, objectives, and standards to enhance native plants and wildlife populations on the lands and***

**waters associated with the project. The plan shall include, but not be limited to, the following recommended measures:**

- 1) Monitoring of nonriparian and wetland vegetation, upland habitat, and state-designated rare plants. The monitoring plan shall include a schedule for: (a) implementation of the program; (b) consultation with the appropriate federal and state agencies concerning the results of the monitoring; and (c) filing the results and agency comments with the Commission.**
- 2) Preparation of a riparian monitoring plan and implementation of a monitoring program to assess the effects of project operation on riparian plant communities and the trend in these various communities. The plan and program shall:**
  - a) include detailed linkage between stream flows and the control of cottonwood regeneration on the reaches of the Madison and Missouri rivers from Hebgen Dam to Fort Peck Reservoir;**
  - b) include general tracking of the vigor and productivity of riparian vegetation, especially areas subjected to heavily altered hydrologic and sediment regimes;**
  - c) include clear identification of the effect of project operation, in conjunction with the cumulative effects of other interacting hydrologic developments (such as the Canyon Ferry and Tiber dams) on critical aspects of the hydrologic regime (e.g., the frequency and magnitude of peak discharges); and**
  - d) incorporate in the monitoring program the principles of multi-scale monitoring (high and low intensity) and consideration of confounding variables such as grazing intensity, agricultural activities, ice, bank stabilization, and sediment supply.**
- 3) Preparation of a monitoring program to determine if the proposed pulsing or peaking of flows released from project dams on the Madison-Missouri system would affect the nest success of migratory birds, especially Canada geese. If needed, the Licensee shall develop management measures to mitigate the adverse effects of pulsed or peaking flows on migratory bird nesting.**
- 4) Implementation of a program to identify and stratify for sampling purposes major avian habitat types along the project corridor. The Licensee shall identify priority avian species or communities of species to serve as indicators within these major habitat types. The Licensee shall monitor and evaluate, in five-year increments, the effects of project operations on these avian species and the habitat types that**

***support them. The Licensee shall identify specific protection, mitigation, and enhancement strategies for these avian species.***

***The Licensee shall prepare the plan after consultation with the Forest Service, BLM, FWS, Corps of Engineers, Montana DFWP, appropriate federal and state soil conservation, water quality, and fish and wildlife agencies, and other interested entities. The Licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan.***

***The Licensee shall allow a minimum of 30 days for the resource agencies and landowners to comment and make recommendations before filing the plan with the Commission. If the Licensee does not adopt a recommendation, the filing shall include the Licensee's reasons, based on project-specific information.***

***The Commission reserves the right to require changes to the proposed plan. The plant and wildlife enhancement program shall not begin until the Licensee is notified by the Commission that the filing is approved. Upon Commission approval, the Licensee shall implement the plan including any changes required by the Commission.***

License Article 423 requires the development of a plan to monitor and enhance native plants and wildlife populations 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. From the beginning, the Licensee and agency representatives agreed the most effective way to implement the broad requirements of Article 423 over such a large project area (500+ miles of river corridor) containing such diverse habitat types and wildlife resources would be to use an adaptive management approach. This approach involves 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 habitat restoration and enhancement projects that best meet the requirements of the Project 2188 license within the constraints of previously agreed-upon funding levels. The habitat restoration program must, by necessity, be highly opportunistic and adaptive because nearly 75% of land in the 500+ mile river corridor is privately owned and it is very difficult to predict which landowners might be willing to participate in habitat restoration projects on their lands.

To implement the wildlife and vegetation monitoring and enhancement plan, NorthWestern solicits proposals from state and federal agencies, private landowners,

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conservation organizations and other cooperators each year. NorthWestern staff then meet with members of the Project 2188 WildTAC (MT Department of Fish Wildlife & Parks, US Forest Service, Bureau of Land Management, and US Fish & Wildlife Service) to: 1) review those proposals; 2) determine if proposals address FERC license requirements; 3) ensure the proposed projects are located in the Project Area; 4) set funding priorities; and 5) approve projects deemed most likely to successfully meet license requirements. Article 423 specifies the plan must provide for monitoring and enhancement of native plants and wildlife but does not specify how to best allocate funding to meet these requirements.

Consequently, the WildTAC (which includes NorthWestern) works cooperatively each year to find a suitable balance between projects that meet monitoring requirements and those projects that restore or enhance wildlife populations and habitat. Project sponsors and participants are responsible for providing annual progress reports, which are used to report PM&E program progress to FERC. Additionally, consultation with these agencies occurs throughout the year as many of the state and federal agencies are working with NorthWestern on cooperative projects.

Restoration and enhancement of riparian lands and wetlands in the project area has been a primary goal of the wildlife and vegetation enhancement plan since the establishment of the program and the Wildlife TAC in 2000. Since its inception, the program has provided funding for seven conservation easements that permanently protect 22 miles of riverbank and over 32,000 acres of prime riparian and upland habitat supporting excellent wildlife habitat along the Missouri River between Holter Dam and the Stafford Ferry, and another conservation easement that protects riparian areas along the Madison River and lower O'Dell Creek near Ennis. Funding has also been provided for several fencing projects along the Missouri River to better manage grazing and provide fenced livestock watering areas to protect sensitive riparian habitat. The program has funded several projects to monitor and restore cottonwood forests along the Missouri River and in the Missouri River Breaks National Monument downstream from Great Falls, MT. Projects have also been funded to control invasive Russian Olive trees and Saltcedar shrubs to protect and enhance riparian areas in the Missouri River Breaks downstream from Fort Benton. In recent years, projects have been funded to enhance and protect willow and aspen habitat and control weeds to enhance riparian areas in the Hebgen and Quake Lake areas in the headwaters of the Madison River. The main goal of the wildlife and vegetation enhancement program during this planning cycle will be to continue to seek and implement landscape-scale

projects that will have long-term positive impacts on riparian and wetland habitats in the project area.

The largest and most comprehensive wetland and riparian restoration project funded thus far has been the O'Dell Creek project in the Madison River Valley south of Ennis, MT. This project began in 2004 and involves restoration of an extensive wetland and spring creek complex that was ditched and drained in the 1950's to increase livestock grazing. The restoration project has involved plugging the drainage ditches, raising the water table, and rebuilding and restoring high quality wetland and spring creek habitat. Since its inception, approximately 18 restoration projects have been completed in the O'Dell Creek area, resulting in restoration and enhancement of more than 900 acres of high quality wetland habitat and more than 16 miles of prime spring creek habitat, with major benefits to wetland vegetation, migratory waterfowl, shorebirds, songbirds and fishery resources. A restoration Master Plan funded by the TAC in 2018 helped identify the habitat restoration strategy and future projects. Three riparian vegetation planting projects were implemented at O'Dell Creek to help establish a diverse riparian plant community for fish and wildlife habitat.

Monitoring of riparian and wetland vegetation has been an important part of the wildlife and vegetation PM&E program in the past and periodic vegetation monitoring is planned to continue during the 2023-2027 planning period as approved by the Wildlife TAC. Researchers from the University of Montana (UM) have monitored bird populations and vegetation in 223 randomly selected riparian patches along 500+ miles of the Madison and Missouri rivers from 2004-2021. Monitoring of riparian vegetation will continue at these sites during the current planning period and it is anticipated such monitoring will occur once every 2-3 years.

In addition, monitoring of wetland vegetation has been conducted in the O'Dell Creek restoration area since 2010 and over 250 wetland plant species have been identified in that area to date. In recent years, this monitoring has included establishment of transects to monitor six species of rare plants found in the O'Dell project area, including two species of Indian Paintbrush (*Castilleja gracillima* & *C. exilis*); Mealy primrose (*Primula incana*); Wedge leaf saltbush (*Atriplex truncata*); Silverleaf milkvetch (*Astragalus argophyllus*) and Alkaline primrose (*Primula alcalina*). Data on the response of rare plants to restoration activities at O'Dell Creek is currently being analyzed and prepared for submission to a peer-reviewed scientific journal. Investigation of the linkage between river flows and cottonwood regeneration and project impacts on the overall hydrologic regime as specified in Article 423(2) have

already been completed with results summarized in the Article 418 section of this document.

Monitoring of riparian-dependent bird species composition and abundance per Article 423(3) and 423(4) has been a major component of the Madison-Missouri wildlife protection, mitigation and enhancement program. License Article 423(4) specifies that avian species and their habitats should be monitored at 5-year intervals, but the surveys have been conducted more frequently. From 2004-2021 seven surveys of avian abundance were conducted in 223 randomly selected riparian habitat 'patches' in the 500+ mile project area along the Madison and Missouri Rivers by University of Montana researchers. Analysis of these data in 2013 showed in order to detect changes in bird abundance the system wide survey frequency should be every other year. Since 2015 the survey has been conducted every odd year. There have been 2,184 point-count surveys across seven years of monitoring since 2004. Survey effort was highest in 2004 and 2008 when we surveyed points two times per year. To date, we have recorded 34,791 individual birds of 136 species during standardized point-count surveys. Additional bird species outside the standardized survey period or at distances >50 m, increase the total number of species observed to 159, representing 60% of species known to breed in Montana. It is currently the only long-term riparian bird monitoring program in Montana. Expanded passive monitoring using recording devices was supported by NorthWestern by purchasing equipment and assisting with deployment and recovery. This monitoring program will be continued on 2-5 year intervals, depending on approval by the WildTAC.

In addition to the system wide monitoring, avian abundance has also been monitored in the O'Dell Creek project area to determine avian population response to the numerous wetland restoration and enhancement projects that have been completed in that area. The total number of bird species recorded in O'Dell point counts has approximately doubled from 32-36 species in 2006-2007 (prior to most habitat restoration work) to 76 species in 2020 after major restoration work was completed. To date 121 species have been observed at O'Dell Creek including 18 species of special concern. Avian monitoring has been completed every 1-3 years in the O'Dell area. The University of MT Bird Ecology Lab staff recommend future monitoring of avian response to O'Dell habitat restoration be completed every 2-5 years.

Given the success of using bird counts at O'Dell as a measure of habitat improvement, this method is being expanded to other habitat restoration sites such as Beaver Creek, Heritage Park and Evans Bend, where riparian habitat improvement projects, funded by WildTAC and partners, have occurred.

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Article 423(3) specifies a monitoring program to determine if pulsing or peaking flows released from NorthWestern dams affect nest success of migratory birds, especially Canada geese. License Article 403 requires stable flows below Hebgen, Madison, Hauser, Holter and Morony dams with no power peaking, therefore the effects of peaking flows on nesting geese or other migratory birds on the Madison or Missouri rivers is not an issue.

Pursuant to Article 413, River flow is 'pulsed' occasionally in some years to lower summertime water temperatures on the Madison River downstream from Ennis Reservoir.

These pulses typically occur only for a few days during July and avian monitoring projects have revealed no adverse effects on Canada geese or other migratory birds. Canada geese remain extremely abundant along the Madison and Missouri rivers and their nesting is usually complete by early May. Canada geese are so abundant along these rivers that they can cause crop damage.

## License Article 424

***Article 424: The Licensee shall design and construct any new project transmission lines in accordance with the guidelines set forth in Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 1996 (Avian Power Line Interaction Committee, Edison Electric Institute). The Licensee, after consulting with the USFS, USFWS, BLM, and MFWP, and within 90 days of the start of construction, shall file a transmission line design plan that considers adequate separation of energized conductors, ground wires, and other metal hardware, adequate insulation, and any other measures necessary to protect raptors from electrocution hazards.***

***Within one year of the date of issuance of the license, the Licensee shall conduct an assessment of the project's overhead transmission lines on National Forest System land in accordance with the guidelines set forth in Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 1996. Within three years of the date of issuance of the license, the Licensee shall develop a plan, approved by the Forest Service, for the implementation of necessary modifications to the project's overhead transmission lines on National Forest System land, to provide adequate insulation or separation of energized conductors, groundwires, and other metal hardware, wire markers, wire location and any other measures necessary to protect raptors from electrocution and collision hazards. The Licensee shall file the assessment and the plan for Commission approval.***

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The previous Project 2188 licensee (PPL Montana) did not own or operate any transmission lines on USFS lands within the FERC Project 2188 project boundary. NorthWestern purchased the nine Project 2188 Madison and Missouri River dams from PPL Montana in November, 2014. NorthWestern owns and operates several transmission line networks in Montana and has a series of short transmission line segments on USFS lands within the FERC Project 2188 boundary near Hauser Dam. Some of these Hauser line segments were compliant with 2005 USFWS and Avian Power line Interaction Committee (APLIC) Avian Protection Plan Guidelines and some were not. To bring all Hauser lines located on USFS lands within the FERC project boundary up to APLIC standards, NorthWestern consulted with the USFS to develop an approved Avian Protection Plan (excerpts below);

## **USFS Approved Hauser Avian Protection Plan**

Northwestern has no record of raptor mortalities from any of the Hauser line structures and long-time operators at Hauser Dam are not aware of any historical avian/raptor deaths on any of these lines. As of December 2019 all Hauser lines covered under License Article 424 are in compliance with APLIC Guidelines to reduce the risk of both collision and electrocution at Hauser Dam. Provision in this Plan are as follows:

### **Measures to reduce/eliminate Hauser Line Avian Collisions**

The Hauser 69kV transmission line avian marking devices meet APLIC Guidelines. NorthWestern installed new APLIC approved line marking devices on the distribution line crossing the Missouri River below Hauser Dam in December 2019.

### **Measures to reduce/eliminate Hauser Line Avian Electrocutions**

All Hauser transmission line structures currently meet APLIC Guidelines. Many of the 22 Hauser distribution line structures that previously did not meet APLIC Guidelines were replaced and upgraded with insulated cover up, lightning arrestors and/or jumpers for avian protection in December 2019.

NorthWestern updated its Avian Protection Plan (APP) in 2020 consistent with the 2005 USFWS/APLIC Avian Protection Plan Guidelines. The NorthWestern APP requires that all new or rebuilt transmission and distribution lines of all voltages meet

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current APLIC Guidelines for avian protection for both electrocution and collision. This includes designing lines and installing collision risk reduction measures as identified in current APLIC guidelines on all new or rebuilt line construction on river crossings. NorthWestern's APP also calls for retrofitting existing lines or line segments which are determined to present risk to birds from electrocution or collision using methods which meet current guidelines for both electrocution and collision. NorthWestern will, after consulting with appropriate state and federal agencies and within 90 days of the start of any new transmission line construction with the Project 2188 Project boundary, file a transmission line design plan, compliant with APLIC guidelines to reduce risk raptors and other birds from collision and electrocution hazards. Other measures to protect birds include investigating collision sites and relocating nests from energized poles to platforms on inert poles.

# **Exhibit II**

Summary Progress Reports on PM&E Measures

2018 thru 2022

The following table shows the status of summary reports for Wildlife Technical Advisory Committee approved projects. The reports included in red text are ongoing projects and final status reports are forthcoming.

## 2018-2022 WildTAC Project Report Status

Year-#	Project Name	Complete	Contact
2018-1	Bird Monitoring - O'Dell Cr Project Area	Yes	UM
2018-2	Cottonwood Restore & Weed Inventory - Mo River	Yes	Friends of Mo Breaks Monument
2018-3	Bald Eagle Monitoring - Hebgen & Quake	Yes	USFS
2018-4	Hebgen Area Aspen & Cottonwood Restoration	Yes	USFS
2018-5	Hebgen Grizzly Bear Conflict Mitigation	Yes	USFS
2018-6	Mo River Conservation Easement - ABN Ranch	Yes	MT Land Reliance
2018-7	Mo River Conserv Easement - Tall Grass Ranch	Yes	MT Land Reliance
2018-8	O'Dell Cr Construction - Phase 15 - Longhorn	Yes	River Design Group
2018-9	Middle O'Dell Cr Restoration Plan	Yes	River Design Group
2018-10	Weed Control - Hebgen & Quake	Yes	USFS
2018-11	Trumpeter Swan Restoration - Madison	Yes	Gower. See report 2022-2
2019-1	Missouri River Woods Bottom habitat	Yes	FWP
2019-2	Weed Control - Hebgen & Quake	Yes	USFS
2019-3	Bald Eagle Monitoring - Hebgen & Quake	Yes	USFS
2019-4	Spadefoot Toad Habitat	Yes	USFS
2019-6	Riparian Bird Monitoring Systemwide	Yes	UofM
2019-7	Missouri River Cottonwood Tree Planting	Yes	Friends of Mo Breaks Monument
2019-8	O'Dell Creek Revegetation Plan	Yes	RDG
2019-10	O'Dell Creek Restoration Phase 16	Yes	RDG
2020-1	O'Dell Creek Bird Monitoring	Yes	Noson
2020-2	Beaver Creek Riparian Restoration-Phase 1	Yes	USFS/RDG
2020-3	Trumpeter Swan Release	Yes	Gower. See report 2022-2
2020-4	Bat Roost Enhancement	Yes	Scarlett
2020-5	Bald Eagle Monitoring	Yes	Scarlett
2020-7	Missouri Breaks Cottonwood Planting	Yes	Friends MBM
2020-8	Missouri Breaks Whisky Ridge CE	No	Loecker/Anderson
2020-9	O'Dell Creek Restoration - phase 17	Yes	RDG
2020-10	Antelope Creek Prescribed Burn CRM inventory	Yes	FWS Granger



Year-#	Project Name	Complete	Contact
2021-1	O'Dell Creek Rare Plant Monitoring	Yes	Luna
2021-2	Beaver Creek Restoration Phase 2	No	USFS - project on hold until 2022
2021-3	Systemwide Bird Monitoring	Yes	Noson
2021-4	Lone Tree CE Native Plant Reseeding	Yes	Hemmer
2021-5	O'Dell Creek Restoration Phase 18	Yes	RDG
2021-6	O'Dell Creek Revegetation Phase 2	Yes	RDG
2021-8	Whisky Ridge CE Infrastructure	No	Andersen
2021-9	Madison Valley Swan Intro & Monitoring	Yes	Gower. See report 2022-2
2021-10	Hebgen & Quake Bald Eagle Monitoring	Yes	Scarlett
2022-2	Trumpeter Swan Restoration	Yes	Gower
2022-3	Heritage Tree Planting, Fence, Irrigation	Yes	NWE-Grisak
2022-4	Evans Bend Tree Exclusion Fences	Yes	NWE-Grisak
2022-5	Moore Ck Habitat Restoration Design (22-003)	No	Madison CD/RDG
2022-6	O'Dell Rare Plant Analysis and Publication	Yes	Rocky Mountain Botany -Luna
2022-7	Bird Monitoring & Data Analysis	No	UofM - Noson
2022-8	O'Dell Revegetation phase 3	Yes	RGD
2022-9	Moore Creek Valley Garden Master Plan	No	RDG
2022-10	Stafford Ferry Conservation Easement	No	FWP - Anderson
2022-11	Hebgen Basin Great Owl Survey	Yes	USFS - Scarlett
2022-12	Hebgen Bald Eagle Monitoring	Yes	USFS - Scarlett
2022-13	Missouri River Open Lands Easement	No	MROLP - Liknes
2022-14	Lone Tree Conservation Easement Infrastructure	Yes	FWP - Hemmer
2022-15	Missouri River Cottonwood Restoration	No	Friends UMBM - ?