AGREEMENT

BETWEEN NORTHWESTERN CORPORATION, A DELAWARE CORPORATION D/B/A NORTHWESTERN ENERGY AND THE MONTANA DEPARTMENT OF FISH, WILDLIFE AND PARKS

TO COST-SHARE CERTAIN FISHERIES MONITORING AND ENHANCEMENT ACTIVITIES REQUIRED BY THE FEDERAL ENERGY REGULATORY COMMISSION (FERC) FOR HYDROELECTRIC FACILITIES OPERATED BY NORTHWESTERN ENERGY ON THE MISSOURI RIVER

I. BACKGROUND

An application was filed with the Federal Energy Regulatory Commission (FERC) for a license to continue operating hydroelectric facilities at nine dams on the Madison and Missouri Rivers in 1992. Seven of these dams, (Hauser, Holter, and the five Great Falls dams) are located on the Missouri River. FERC published an Order Issuing New License for these facilities (Project 2188) to PPL Montana on September 27, 2000. The FERC license and ownership of these hydroelectric projects was transferred to NorthWestern Energy (NWE) in November, 2014.

The FERC Project 2188 license contains a number of provisions to provide for the protection, mitigation and enhancement (PM&E) of fisheries resources. NWE signed a Memorandum of Understanding with state and federal resource management agencies to provide funding and to form several Technical Advisory Committees to implement License requirements for protection, mitigation and enhancement of fisheries, wildlife and water quality in the Madison and Missouri river drainages. NWE will provide, under this MOU, $621,385 per year (increased at 2.0% annually) from 2018 thru 2026 to the Missouri River Fisheries Technical Advisory Committee to satisfy Missouri River FERC fisheries PM&E requirements.

Several provisions in the FERC License specify annual fisheries monitoring or contain elements that would be partially satisfied by an adequate long-term fisheries monitoring program (see Attachment I for applicable License Articles). The Montana Department of Fish, Wildlife and Parks (MFWP) is the primary agency responsible for fish population management in the state's waterways and currently monitors fish populations in many of the areas specified in the FERC License.

II. PURPOSE

The purpose of this Agreement is to: 1) establish a long-term agreement with MFWP for annual monitoring of fisheries resources in the Missouri River and its reservoirs operated by NWE; and, 2) to commit Region 4 MFWP staff and matching funds to participate in the development and implementation of the fisheries PM&E program for these waters in cooperation with NWE and other agencies and groups.

Implementation of the proposed fisheries monitoring cost-share program will enable NWE to meet the requirements of its FERC license and will continue to provide valuable information necessary for the effective management of the states' fisheries resources. This Agreement will also allow MFWP to make long-term commitments to its personnel involved in monitoring and enhancement activities.

III. STATEMENT OF WORK

Specific objectives and schedules are listed in Attachment I. Work efforts and methods may vary from year to year by mutual agreement of the parties and approval by the Missouri River Fisheries Technical Advisory Committee.

IV. COMMITMENTS

A) MFWP Shall:

1) Conduct fisheries monitoring and enhancement activities as outlined in Attachment I, with possible annual revisions based on consultation and agreement with NWE and the Missouri River Fisheries Technical Advisory Committee.
2) Prepare and submit annual reports to NWE that describe the results of the previous years' fisheries monitoring and enhancement efforts.
3) Participate in periodic meetings with NWE staff and the Missouri River Fisheries Technical Advisory Committee to develop and implement the fisheries PM&E program on area waters.
4) Provide personnel time, equipment, operations and other assets as described in Attachment I amounting to approximately $356,000 per year to implement project activities. This includes personnel and other assets in the Helena, Great Falls, and Lewistown offices.
5) Provide additional staff and resources, when available on a case-by-case basis, to assist in other aspects of PM&E program implementation. This could include specialists in water rights and allocation, habitat protection and enhancement, engineering, and land acquisition and easement.

B) NorthWestern Energy Shall:

1. Administer fisheries PM&E activities as required by the FERC License and the MOU, which are incorporated here by reference, with state and federal agencies for the Missouri-Madison FERC Project 2188.

2. Continue to make NWE staff or consultants available to assist in monitoring on Hauser and Holter tailwaters, Great Falls reservoirs, and the Missouri River below Morony Dam.

3. Provide Missouri River Fisheries Technical Advisory Committee funds of $271,888 annually, which includes the current applicable MFWP overhead rate (14.5% for State fiscal year 2018) at the beginning of each calendar year to MFWP to perform fisheries monitoring and enhancement tasks outlined in Attachment I. Funding will be adjusted annually to account for inflation, changes in MFWP employee compensation rates, and changes in MFWP overhead rate.

V. TERMS OF AGREEMENT

A) Duration. This Agreement shall be effective on January 1, 2018 and shall remain in effect until the earlier of:
   1) December 30, 2026; or
   2) Termination of the Project 2188 FERC license.

B) Renewal of Agreement. This Agreement may be renewed upon expiration by mutual consent of NorthWestern Energy, Montana Department of Fish, Wildlife & Parks in consultation with the Missouri River Fisheries Technical Advisory Committee.

C) Termination of Agreement. This Agreement may be terminated at any time by mutual written agreement of NorthWestern Energy and Montana Department of Fish, Wildlife and Parks provided that parties agree to negotiate in good faith.

D) Binding Effect. This Agreement shall inure to the benefit of, and shall be binding upon the respective successors and permitted assignees of the parties hereto.

E) Assignment. The parties hereto may not assign this Agreement without consent of the other party, provided that parties agree to negotiate in good faith.

F) Modification. This Agreement may be modified only in writing by mutual agreement of NorthWestern Energy (or its successor), Montana Department of Fish, Wildlife and Parks, in consultation with the Missouri River Fisheries Technical Advisory Committee; provided that such consent will not be unreasonably withheld.

IN WITNESS WHEREOF, the parties have executed this Agreement on the dates indicated below:

NORTHWESTERN CORPORATION, A DELAWARE CORPORATION D/B/A NORTHWESTERN ENERGY

By: _____
MARYGAIL SULLIVAN

Title: MANAGER, ENVIRONMENTAL PERMITTING & COMPLIANCE

Date: 10/20/17

MONTANA DEPARTMENT OF FISH, WILDLIFE AND PARKS

By: _____

Title: Fish Chief

Date: 10/5/17

_____ 11/5/17
Approved for Legal Content Date
Fish, Wildlife & Parks

ATTACHMENT I.
MISSOURI RIVER AND RESERVOIRS FISHERIES MONITORING PROPOSAL APPROVED BY THE MISSOURI RIVER FISHERIES TECHNICAL ADVISORY COMMITTEE IN AUGUST, 2017.

Project Title: **Missouri River and Reservoirs Fisheries Monitoring 2018-2026**

Date: July 19, 2017

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

This proposal addresses the following FERC Project 2188 License Articles:

ARTICLE 414
(1): Monitor Hauser Dam and tailwaters for evidence of fish loss from Hauser Lake as a result of impingement, entrainment, or spillage (particularly during high flows).
(3): Propose additional measures to mitigate for avoidable and unavoidable impacts.
(4): Evaluate the effect of short-term flow fluctuations on the resident fish community in the tailwaters.
(5): Evaluate the impact of fish spilled from Hauser on the resident fish populations in Holter Lake.
(8): Monitor the effects of project operations on Hauser Lake fish populations.
(9): Evaluate the potential to enhance tributary spawning to increase the contribution of natural reproduction to the Hauser Lake fishery.

ARTICLE 416
(1): Monitor Holter Dam and tailwaters for evidence of fish loss from Hauser Lake as a result of impingement, entrainment, or spillage (particularly during high flows).
(3): Propose additional measures to minimize fish loss and to mitigate for avoidable and unavoidable impacts.
(4): Evaluate the effect of short-term flow fluctuations on the resident fish community in the tailwaters.
(5): Evaluate the impact of fish spilled from Holter on the resident fish populations downstream.
(6): Monitor the effects of project operations on Holter Lake fish populations.
(7): Evaluate the potential to enhance tributary spawning to increase the contribution of natural reproduction to the Holter Lake fishery.

ARTICLE 417
(1): Monitor the relative abundance of the most abundant fish species in the Great Falls reservoirs and in the Missouri River downstream of Morony Dam.
(2): Implement adaptive management practices to mitigate fisheries impacts associated with dewatering 0.5 mile of the Missouri River below Rainbow Dam.
(3): Implement adaptive management practices to mitigate fisheries impacts associated with Cochrane Reservoir and Morony Reservoir fluctuations in conjunction with peaking operations at the Cochrane and Ryan developments.
(4): Protect and provide for the recovery of threatened and endangered fish species and other aquatic species of special concern in the Great Falls reservoirs and below Morony Dam.
(5): Provide assistance to the FWS and Montana DFWP for ongoing evaluation of pallid sturgeon in the Missouri River downstream of Morony Dam.

Provide justification for Priority 1, 2 or 3 (above) that you selected: PM&E is required by the FERC license.
This is a Priority 1 project because it meets License requirements on the mainstem Missouri River from Hauser Reservoir to Fort Peck Reservoir.

Project Sponsor (submitted by): Grant Grisak, Montana Fish, Wildlife & Parks

Location of Proposed Project: Missouri River from Hauser Reservoir to Fort Peck Reservoir.

Total Project Cost: Estimated $627,888 per year.

TAC Funds (Cost-Share) Requested for Project:

Estimated $271,888 per year with annual adjustments for changes in inflation, salaries, and overhead rate.

I. Introduction.

Throughout most of the 2188 project area in the mainstem Missouri River drainage, the FERC license requires annual fish population monitoring, evaluation, and development of measures to reduce hydroelectric project impacts on fisheries and aquatic habitats (see list of conditions above). Fisheries monitoring is critical to: 1) determine the influence of hydroelectric projects operations on river and

reservoir fish populations; 2) to evaluate the need and type of protection mitigation and enhancement projects; and 3) to evaluate the success of protection, mitigation and enhancement activities. Montana Department of Fish, Wildlife and Parks (MFWP) has conducted periodic monitoring in many areas of the drainage, but due to changing priorities and fiscal conditions there is no long-term guarantee that current monitoring activities will continue. The intent of this proposal is to forge a long-term cooperative agreement that insures NorthWestern Energy (NWE) is able to meet FERC-mandated fisheries monitoring and evaluation requirements as well as to facilitate MFWP participation in the development and implementation of mitigation and enhancement measures in a cost-effective manner.

II. Objectives.

Hauser and Holter Reservoirs:

1) Reservoir fish populations will be monitored annually in spring and fall using experimental floating and sinking gillnets set in 33 standardized locations on Hauser Reservoir and 30 locations on Holter Reservoir. This netting series has been conducted by MFWP annually since 1986 and is the best indicator of fish population change and impacts of fish from upstream sources. Biological data collected includes number caught by species; length and weight characteristics; age composition of selected species; hatchery vs. wild origin (if known); food habits of selected species; disease information; and impacts of spilled fish from upstream areas on resident reservoir fish populations.

2) Vertical gillnetting to monitor kokanee salmon trends was previously conducted during summer months since 1986 in Hauser and Holter Reservoirs. Due to low kokanee population abundance, vertical gillnetting was discontinued in Hauser in 2009 and in Holter in 2012. Vertical gillnetting to monitor kokanee trends would resume should other population indicators (i.e., fall horizontal gillnets, creel surveys) show an increase in abundance. Vertical gillnetting would also resume if kokanee salmon are stocked in Hauser or Holter to monitor recruitment of stocked fish.

3) Beach seining is conducted during summer at 20 standardized locations in each reservoir. This series is the primary indicator of young-of-the-year production and forage fish availability. Biological data collected includes number of fish per haul, number of species, size (growth) of selected species, and impacts of fish spilled from upstream waters.

4) Summer and winter weekend creel surveys will be conducted on the reservoirs annually. These surveys have been conducted annually since 1986 and provide valuable fish trend information that corroborates information gathered by other methods. Creel survey information is also useful to verify or refute reservoir user perceptions and determine influence of angler harvest to fish populations. Creel data provides continuous seasonal data on fish growth, condition, and food habits not obtained with other more discrete sampling methods. Creel surveys also enhance sample sizes for biological fish data, particularly in years when net catches are low. Surveys are done April through October and January through March.

Hauser and Holter Tailwaters:

1) Monitoring of fish populations in the Hauser Dam tailwater will be completed on alternate years by electrofishing the section between Hauser Dam and Beaver Creek in cooperation with NWE staff. Fish captured during these surveys will be examined for evidence of hydro-related injury and whether the fish have hatchery or wild origins. Hatchery trout will be examined for marks that may indicate where they were stocked.

2) Monitoring of fish populations in the Holter Dam tailwater will be completed on alternate years by electrofishing the 3-mile section between Holter Dam and Wolf Creek Bridge in cooperation with NWE staff. Fish captured during these surveys will be examined for evidence of hydro-related injury and origin (hatchery or wild). Hatchery trout will be examined for marks that may indicate where they were stocked.

3) Annual trout population estimates will be made in two long-term monitoring sections of the Missouri River downstream from Holter Dam. The Craig section is 5.6 miles long, beginning at Wolf Creek Bridge and ending at the Craig Bridge. The Cascade/Pelican Point section is 4.1 miles long and spans from the mouth of Hardy Creek to the Fiehrer irrigation pump on river left. Brown trout estimates are made in the springtime (April/May) and rainbow trout estimates are made in the fall (Oct) to avoid potential biases caused by spawning migrations of the respective species. NWE staff assist with monitoring in the Cascade/Pelican Point section in the spring and fall.

4). Creel surveys will be conducted three days a week March through October, and one day a week November through February (as conditions allow) on the Hauser tailrace annually. These surveys have been conducted annually since 2012 and provide valuable fish trend information that corroborates information gathered by other methods. Creel survey information is also useful to verify or refute user perceptions and determine influence of angler harvest to fish populations. Creel data provides continuous seasonal data on fish growth, condition, and food habits not obtained with other more discrete sampling methods. Creel surveys also enhance sample sizes for biological fish data, particularly in years when entrainment is high.

Great Falls Reservoirs and Their Tailwaters:

1). Reservoir fish populations will be monitored annually in October/November in Ryan, Cochrane and Morony reservoirs as conditions allow. Variable pool levels and water conditions (debris) have traditionally influenced the success and value of this monitoring program. When sampled, experimental sinking gillnets will be set in 3-4 standardized locations on each reservoir. This netting series provides some measure of fish population change and impacts of fish from upstream sources. Biological data collected includes number caught by species; length and weight characteristics and impacts of spilled fish from upstream areas on resident reservoir fish populations.

2). Periodic evaluations of aquatic organisms and habitat will be made in Black Eagle Reservoir during maintenance drawdowns.

Morony Tailwater:

General Fish Population Monitoring

1) Electrofishing: Annual fall electrofishing will be used to monitor fish populations in five standard long-term study areas in the approximate 210-mile reach of Missouri River between Morony Dam and Fort Peck Reservoir. Each monitoring section is 5 to 6 miles long and they are in the Morony Dam, Fort Benton, Coal Banks, Judith Landing, and Fred Robinson Bridge areas. A total of approximately 10 hours of electrofishing effort will be completed in each trend area. Sampling will involve four runs, two starting on each side of the river, with sides alternated every mile. These surveys were first initiated by MDFWP in the late 1970's and have been conducted annually since 2001. NWE assists with these surveys. Biological data collected includes: catch per unit effort by species; length and weight of fish.

2) Trammel Netting: Sampling with drifting trammel nets will be conducted two out of three years in the Fort Benton, Coal Banks and Judith Landing Sections. A total of 20 drifts will be attempted in each area during the mid-summer. Trammel nets are effective at sampling large fish living in deepwater areas that are not sampled effectively with electrofishing gear. The primary target species are shovelnose sturgeon, pallid sturgeon and blue sucker. Biological data collected includes catch per effort by species, and length and weight of captured fish.

3) Seining: Seining will be used to sample shallow shoreline areas annually during July and August. A 50-ft bag seine will be used to complete twenty, 100 ft long hauls, in 10 mile reaches in each of the five river sections. The sampling protocol developed in 2013 will be followed which involves assistance from NWE staff. This method provides useful trend information on the abundance of minnow species and production of juvenile game fish (especially smallmouth bass and sauger).

4). Summer creel surveys will be conducted on the Missouri River between Morony Dam and Fort Peck Reservoir once every four years. These surveys have been conducted in 2003, 2007, 2011 and 2015, and provide valuable fish trend information that corroborates information gathered by other methods and helps determine the influence of angler harvest on fish populations. Survey data gathered will include; angler origin, fishing methods, target species, catch and harvest by species, length and weight of harvested fish. Creel survey information is also useful to verify or refute information gathered during biological sampling. Creel data provides seasonal data on fish growth and condition not obtained with other more discrete sampling methods. The cost for these surveys is not included in the attached budget. Proposals for this work will be submitted for MoTAC approval every 4 years.

T&E Species and Species of Special Concern

1). Pallid Sturgeon: Monitoring of the longitudinal distribution and abundance of hatchery-raised pallid sturgeon and other species will be accomplished by drifting trammel nets on alternate years in three survey areas between Fort Benton and the Power Plant Ferry as described above. Results from a variety of longitudinal surveys in past years indicated that adult and hatchery pallids tend to concentrate in an approximate 16-mile reach of river near Fred Robinson Bridge. A standardized survey involving 50 timed trammel net drifts in this reach will be conducted annually during the fall to evaluate abundance, growth and survival of hatchery-released pallids. Initially the survey was designed to monitor the wild adult fish population, but it now provides useful trend information on hatchery-raised pallid sturgeon. At least 20 additional trammel net drift samples in the Fred Robinson Section or near radio-tagged pallid sturgeon will be done annually to monitor pallid sturgeon spawning status. Setlines have proved very effective for monitoring pallid sturgeon abundance. Setline sampling will use 100 ft length of main-line with 20 dropper lines with hooks baited with night crawlers and cut fish. A total of 90 sets will be made in a 50-mile reach in March and April to help estimate pallid sturgeon juvenile survival. Survival of hatchery pallid sturgeon to the adult stage has been documented. Surveys of spawning and other life history requirements will continue to aid in the maintenance and recovery of this species.

2). Sicklefin & Sturgeon Chubs: Population trends of sicklefin and sturgeon chubs will be determined by making 100 benthic trawl hauls in an approximate 50-mile reach of river in the Fred Robinson Bridge area, from Two Calf Island to the headwaters of Fort Peck

Reservoir. Trawl hauls also provide incidental information on young-of-year production of other species including sturgeon and channel catfish. Biological data collected includes catch per unit effort by species and length information on captured fish.

3). Blue Suckers: Blue suckers will be sampled by electrofishing or trammel netting during the spring in known staging areas on even years. A total of 15 hours (3 days) of electrofishing or trammel net sampling will be completed so that a large enough sample size for size structure analysis and age inference can be performed.

III. Methods.

Work will be performed using standard methods currently employed by MDFWP in similar surveys. Methods are subject to change pending discussion and approval by Technical Advisory Committee.

IV. Schedule.

Seasonal schedule of activities is provided for each item in Section II. Several elements in monitoring plan will require assistance from existing NWE Hydro Compliance personnel. Specific areas requiring assistance include Hauser & Holter tailwater electrofishing, Great Falls reservoirs monitoring, and monitoring of Missouri River downstream from Morony Dam. Deviations from seasonal and annual schedules may occur if approved by Technical Advisory Committee.

V. Personnel.

Project Leader:	Grant Grisak, Region 4 Fisheries Manager, MDFWP
Project Biologists:	Eric Roberts, Helena, MDFWP
	Jason Mullen, Great Falls, MDFWP
	Anne Tews, Lewistown, MDFWP
Project Technicians:	Troy Humphrey, Helena, MDFWP
	Matt Pumfery, Great Falls, MDFWP
	Rob Beattie, Lewistown, MDFWP
	Katie Vivian, Great Falls, MDFWP
	Other temporary and seasonal technicians

VI. Project budget:

The proposed budget for 2018 is detailed below:

	Item	FTE	Hours	Pay rate including benefits	Amount
Hauser and Holter Reservoirs and Tail waters					
	F&W Tech	0.29	603	$30.41	$18,343
	Creel Survey Tech	0.35	728	$22.15	$16,125
	F&W Tech	0.2	416	$22.43	$9,331
	F&W Tech (012-07)	0.3	624	$22.15	$13,822
	Operations				$11,142
	Subtotal				$68,763
	Overhead (14.5%)				$9,971
	Total	1.14	2,371		**$78,734**
Missouri River Below Holter Dam					
	F&W Tech	0.3	624	$32.13	$20,055
	Operations				$4,457
	NWE Fieldwork Tech	0.05	104	$32.13	$3,343
	Subtotal				$27,855
	Overhead (14.5%)				$4,038
	Total	0.35	728		**$31,894**
Great Falls Reservoirs and Tailwaters					
	F&W Biologist	0.5	1040	$48.67	$50,627
	F&W Tech	0.5	1040	$35.57	$37,003
	F&W Tech	0.4	874	$30.23	$26,421
	Operations				$14,736
	F&W Tech Trammel Net Repair	0.1	208	$30.23	$6,288
	NWE Fieldwork Tech	0.05	104	$30.23	$3,144
	Subtotal				$138,219
	Overhead (14.5%)				$20,042
	Trammel Net Cleaning				$3,000
	Total	1.55	3,266		**$161,261**
	Grand Total	3.04	6,365		**$271,888**

Cost Share:

MFWP will provide matching personnel time, equipment, operations, and other assets amounting to approximately $356,000 per year. This includes personnel and assets in the Helena, Great Falls, and Lewistown offices.

In addition, MFWP will continue habitat protection and enhancement activities throughout the system and will monitor other biological parameters in the system, such as the status of fish diseases, aquatic invasive species and westslope cutthroat trout. MFWP fisheries improvements will be funded primarily through the Future Fisheries Program, grants or donations which are likely cost-share for 2188 fisheries PM&E projects. MFWP specialists in water rights and allocation, habitat protection and enhancement, engineering, and land acquisition/easement will be available on a case-by-case basis for specific projects. MFWP fisheries staff in northcentral Montana will participate in the 2188 Technical Advisory Committee, and will be key personnel for identification and implementation of PM&E projects, including fisheries research, habitat protection and enhancement projects. MFWP also conducts a statewide

biennial fishing pressure survey, which provides useful fishing pressure information for the Missouri River and reservoirs. The exact value of these additional matching resources cannot presently be valued but is substantial and will vary year-to-year.

VII. Deliverables.

The main products of this project will be: 1) annual reports based on sound scientific procedures which describe the current trends of key fish populations and fish species of special concern in the Missouri River and reservoirs, and 2) effective fisheries and aquatic habitat PM&E projects in northcentral Montana. Reports will satisfy FERC requirements for annual monitoring of fish populations for the purposes listed in 2188 license. The information generated by this project will be critical for determining the effects of project operations on fisheries resources and will also be the primary method for determining the effectiveness of fisheries PM&E measures.

VIII. Cultural Resources.

There are no ground breaking activities associated with fisheries monitoring.

IX. Water Rights.

There are no water rights associated with fisheries monitoring.