



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: **2188 Operations and Personnel**

Date: **28 October 2021**

Explain how this Project addresses a specific Project 2188 License Article(s): **Funding is for the wages and operations of FWP 2188 project personnel that identify, develop, assesses, monitor, and implement projects that meet the FERC 2188 license conditions.**

Provide justification for Priority 1, 2 or 3 (above) that you selected: **MFWP 2188 Project Personnel will be involved in all three priority levels.**

Project Sponsor (submitted by): **-MFWP**

Location of Proposed Project: **Ennis, Madison River drainage**

Narrative: **The Ennis Field Office was established to identify, develop, assess, and implement fisheries monitoring and enhancement projects as described in the 6/29/2018 MOA between NorthWestern Energy and FWP and in the FERC 2188 license. This proposal will fund staff time and operations required to comply with 2188 Articles 404, 408, 409, 412, 413, and 412. FWP 2188 project personnel Travis Lohrenz and Jenna Dukovic will conduct monitoring and enhancement activities under the direction of FWP R3 Hydropower Program Supervisor Matt Jaeger.**

Geocode (in decimal degrees ex 46.89743) Lat: _____ Long: _____

Total Project Cost: **\$186,250**

TAC Funds (Cost-Share) Requested for Project:

- I. Introduction; brief statement of project to be completed with pertinent background information.
This proposal will fund staff time and operations required to comply with 2188 Articles 404, 408, 409, 412, 413, and 412 as described in the 6/29/2018 MOA between NorthWestern Energy and FWP.
- II. Objectives; explicit statement(s) of what is intended to be accomplished.
This proposal will fund staff time and operations required to comply with 2188 Articles 404, 408, 409, 412, 413, and 412 as described in the 6/29/2018 MOA between NorthWestern Energy and FWP.
- III. Methods; description of how Project objectives will be accomplished.
FWP 2188 project personnel Travis Lohrenz and Jenna Dukovic will conduct monitoring and enhancement activities required to comply with Articles 404, 408, 409, 412, 413, and 412 under the direction of Matt Jaeger FWP R3 Hydropower Program Supervisor.
- IV. Schedule; when the Project work will begin and end.
Jan 1, 2022 - June 30, 2023
- V. Personnel; who will do the work? Identify Project leader or principal investigator.
FWP 2188 project personnel Travis Lohrenz and Jenna Dukovic will conduct the monitoring and enhancement activities specified in the 6/29/2018 MOA between NorthWestern Energy and FWP under the direction of Matt Jaeger FWP R3 Hydropower Program Supervisor.
- 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

Staff	Item	FTE	Hours	Pay rate including benefits	Amount	Amount
Monitoring & Enhancement Activities						
TL - 37331	F&W Tech	1.00	2080	36.06		75,580
JD - 37322	F&W Tech	0.80	1664	28.41		47,641
	Travel				6,170	
	Operations				20,000	
	Subtotal				26,170	123,221
	Indirect					14,170
	Subtotal	1.80	3,773		26,170	137,391
Native Species Management & Hydropower						
MJ	Program Supervisor	0.17	356	52.12		18,555
	Travel				2,000	
	Indirect					2,134
	Subtotal	0.17	356		2,000	20,689
	Subtotal of	1.97	4,129		28,170	\$158,080
	Total					\$186,250

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

VII. Deliverables: describe work product (reports, habitat restoration, etc.) which will result from this Project. How will “success” for this project be monitored or demonstrated? **Preparation and submittal of an annual report to NWE describing the work of the previous year’s activities as described in the 6/29/2018 MOA between NorthWestern Energy and FWP and how they meet FERC article requirements.**

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:

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:

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

☎ 406-444-8115

☎ 406-565-7549

208 N. Montana Ave

Suite 205

Helena, MT 59601



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: **Ennis Office Rent**

Date: **October 15, 2021**

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

Provides office, shop and storage for the FWP 2188 Madison Fisheries program.

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

Provides office, shop, and storage for 2188 operations, which addresses all three priority levels.

Project Sponsor (submitted by): **MFWP**

Location of Proposed Project: : **Ennis**

Narrative: **The office will provide a local base of operations for MFWP 2188 fisheries personnel in the Madison Drainage. The Ennis Field Office was established to identify, develop, assess, and implement fisheries monitoring and enhancement projects as described in the 6/29/2018 MOA between NorthWestern Energy and FWP and in the FERC 2188 license. This office space is required to house personnel and equipment needed to do the work that complies with 2188 Articles 404, 408, 409, 412, 413, and 412.**

Geocode (in decimal degrees ex 46.89743) Lat; _____ Long: _____

Total Project Cost: **\$7,200**

TAC Funds (Cost-Share) Requested for Project: **\$7,200**

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

This proposal funds rent for one year for the office and shop space for MFWP Madison 2188 fisheries personnel.

- II. Objectives; explicit statement(s) of what is intended to be accomplished. **Provide a local base of operations for 2188.**
- III. Methods; description of how Project objectives will be accomplished.
Normal billing and payment
- IV. Schedule; when the Project work will begin and end.
2022 billing cycle
- V. Personnel; who will do the work? Identify Project leader or principal investigator.
FWP 2188 project personnel Travis Lohrenz
- 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

The total budget is \$7200, all of which is for office rent.

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

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

- 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:

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

☎ 406-444-8115

☎ 406-565-7549

208 N. Montana Ave

Suite 205

Helena, MT 59601

2021 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: 2022 Custer Gallatin NF's seasonal technician funding

Date: 11/19/2021

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

This project would partially fund two Custer Gallatin National Forest Fish Technicians to assist NWE, MFWP, and USFS biologists with multiple projects including monitoring and surveys during the 2022 field season. General duties that address the following articles include: population & habitat monitoring for species of special concern (population estimates, presence/absence surveys, nonnative removals, collection of genetic material, temperature monitoring, riparian & stream channel monitoring, etc.); assisting with stream and lake enhancement projects; and, fish barrier site identification, reconnaissance, and maintenance.

ARTICLE 408

7) Monitor fish species of special concern (i.e., Arctic grayling and westslope cutthroat trout).

ARTICLE 409

3) Fish habitat enhancement both in main stem and tributary streams, including enhancement for all life stages of fishes.

6) Inclusion or exclusion of fish barriers.

ARTICLE 412

4) Protect and aid the recovery of threatened and endangered fish species and other aquatic species of special concern, including Arctic grayling, in Madison Reservoir and the lower Madison River.

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

Priority 2: The USFS technicians would assist with projects which meet License Article requirements and PM&E for fisheries populations and their habitats in primary tributaries and provide PM&E for Madison River resources, as directed by USFS, MFWP and NWE fisheries personnel.

Project Sponsor (submitted by): Allison Stringer, Custer Gallatin National Forest, Bozeman and Hebgen Lake Ranger District's

Location of Proposed Project: Upper Madison River and tributaries

Total Project Cost:

GS-6 Technician TAC \$166 x 20 days	\$ 3,320
GS-5 Technician TAC \$151 x 20 days	\$ 3,020
GS-6 Technician In-Kind Contribution \$166 x 40 days	\$ 6,640
GS-5 Technician In-Kind Contribution \$151 x 40 days	\$ 6,040

Overhead (1.0%)

Total = $\frac{\$ 63}{\$19,083}$

TAC Funds (Cost-Share) Requested for Project:

$\$3,320 + \$3,020 + \$63$ (1% overhead) = \$6,403

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

This funding request is for cost sharing USFS Fisheries Technician salaries. The USFS Region 1 Fisheries Program has undergone considerable reductions. Limited resources are available to local FS biologists to obtain the seasonal work force required to assist NWE and MFWP in implementing the Fisheries, Wildlife, and Water Quality Protection, Mitigation and Enhancement Plan in the Madison River drainage as part of FERC licensing requirements for Project 2188.

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

The FS technicians would aid State, Federal, and NWE biologist during the summer field season with the following:

- Tepee Creek westslope trout restoration project vetting
- Instream flow reservations
- Riparian vegetation and stream channel monitoring
- WCT population monitoring
- Thermograph deployment and retrieval
- WCT genetics collection
- Amphibian surveys and monitoring
- Aquatic Invasive Species (AIS) inventory and monitoring in the Madison River drainage – high risk waters.
- Assist MFWP and NWE staff with their annual program of work on Madison River, Hebgen and Ennis Reservoir as needed.

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

Forest Service seasonal technicians would work cooperatively with NWE and MFWP crews throughout the summer field season to accomplish the fisheries objectives outlined above within the Madison River drainage.

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

May 2022 – October 2022

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

One GS-6 and one GS-5 Fisheries Technician. Project lead is Allison Stringer, CGNF West Zone Fisheries Biologist

VI. Project budget must include amounts for the following:

Direct Labor = **\$6,403**

Travel and Living

Materials

Other Direct Expenses

Direct Overhead = **\$61**

All cost-share sources and amounts, including estimation of “in-kind” contributions

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?

The success of this project will be demonstrated by reporting the field work days spent and annual accomplishments related to Articles 408, 409 and 412 in the Madison River drainage, reservoirs, and tributaries.

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:

N/A

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

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

N/A

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

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

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



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: 2022 Beaverhead-Deerlodge NF Seasonal Technician Funding Request

Date: 11/19/2021

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

This project would partially fund USFS Fisheries Technicians to assist USFS and MFWP biologists on multiple projects and monitoring efforts in field season 2022. General duties that address the following articles include: population monitoring for species of special concern (population estimates, presence/absence surveys, nonnative removals, collection of genetic material); assisting with tributary stream habitat enhancement projects; fish barrier site identification, reconnaissance, and barrier maintenance; and assist NWE & MFWP fisheries personnel with their 2022 program of work (monitoring and project) as needed in the upper Madison River drainage.

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

Priority 2: The USFS technicians would assist with projects which meet License Article requirements and PM&E for fisheries populations and their habitats in primary tributaries and provide PM&E for Madison River resources, as directed by USFS, MFWP and NWE fisheries personnel.

Project Sponsor (submitted by): Patrick Luckenbill, USFS Fisheries Technician & Monica Berreman, USFS Madison/Jefferson Ranger District Fisheries Biologist

Location of Proposed Project: Upper Madison River and associated tributaries
 Narrative

Geocode (in decimal degrees ex 46.89743) Lat: _____ Long: _____

Total Project Cost:	\$35,372
TAC B-D GS/7 Technician \$180.25/day x 35 days	=\$6,309
B-D GS/7 Tech USFS Contribution \$180.25/day x 100 days	=\$18,025
TAC B-D GS/5 Technician \$145.54/day x 20 days	=\$2,911
B-D GS/5 Tech USFS Contribution \$145.54/day x 50 days	=\$7,277
TAC Field Gear for Technicians	=\$ 850
TAC Funds (Cost-Share) Requested for Project:	=\$10,070

- I. Introduction; brief statement of project to be completed with pertinent background information.
This funding request is for cost sharing USFS Fisheries Technician salaries in 2022. The USFS Region 1 has undergone considerable budget reductions. Limited resources are available to local FS biologists to obtain the seasonal work force required to assist NWE and MFWP in implementing the Fisheries, Wildlife, and Water Quality Protection, Mitigation and Enhancement Plan in the Madison River drainage as part of FERC licensing requirements for Project 2188. The requested funding would augment internal dollars and enable hiring of one GS/5 and one GS/7 Fisheries Technician out of the Madison Ranger District.
- II. Objectives; explicit statement(s) of what is intended to be accomplished.
Upper WF Madison Stream Habitat Enhancement
Lower WF Madison Stream Habitat Enhancement Project Outline
Bear Creek Days Fish Dissections
Wigwam and Teepee Creek Habitat Monitoring
Papoose, Upper West Fork, Standard, Soap, and Horse Creeks Barrier Survey and Genetic Sampling
Saint Joe and Jourdain Creek Habitat Survey and Sampling
Inventory and Monitoring of Arctic Grayling and Westslope Cutthroat Trout in the Madison River drainage
WCT Genetics Collection and Population Monitoring
Sensitive Amphibian Surveys and Monitoring
Aquatic Invasive Species (AIS) Inventory and Monitoring in the Madison River drainage High Risk Waters
Assist MFWP and Custer-Gallatin NF with 2022 field work in the Madison River drainage
Assist MFWP with Madison drainage high mountain lakes inventory work
- III. Methods; description of how Project objectives will be accomplished.
Forest Service seasonal technicians would work cooperatively with NWE and MFWP crews throughout the FY22 field season to accomplish the fisheries program of work and associated PM&E projects in the Madison River drainage.
- IV. Schedule; when the Project work will begin and end.
May 2022 – November 2022
- V. Personnel; who will do the work? Identify Project leader or principal investigator.
Two Fisheries Technicians (GS/5 and GS/7), project lead is USFS Fisheries Biologist
- VI. Project budget must include amounts for the following:
 - Direct Labor = \$9,220
 - Travel and Living
 - Materials = \$850
 - Other Direct Expenses
 - Direct Overhead*

- All cost-share sources and amounts, including estimation of “in-kind” contributions

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

VII. Deliverables; describe work product (reports, habitat restoration, etc.) which will result from this Project. How will “success” for this project be monitored or demonstrated?
The success of this project will be demonstrated by reporting the field workdays spent and annual accomplishments related to Articles 408, 409 and 412 in the Madison River drainage, reservoirs, and tributaries.

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:

Not Applicable - cultural resource management is not required as part of this proposal.

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: N/A

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

☎ 406-444-8115

☎ 406-565-7549

208 N. Montana Ave

Suite 205

Helena, MT 59601

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

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

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

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

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

All TAC project proposals must include the following information:

Project Title: Emergency/contingency fund

Date: 11/1/2021

Explain how this Project addresses a specific Project 2188 License Article(s): Priority 1: This fund will be used for, but not be limited to, emergency purchasing of equipment, scoping potential stream rehab proposals, and support of 2022 approved proposals.

Provide justification for Priority 1, 2 or 3 (above) that you selected: During ongoing operations and proposal work there are times when this approved proposal would allow for immediate funding of equipment, stream restoration assessments or other conditions that may require immediate attention. This proposal will eliminate (within the \$10,000 limit) the need for TAC approval of a new proposal for spending of TAC funds.

Project Sponsor (submitted by): Jon Hanson

Location of Proposed Project: Within TAC approved proposals.

Total Project Cost: \$10,000

TAC Funds (Cost-Share) Requested for Project: \$10,000

- I. Introduction; Contingency funding to be used in emergency situations
- II. Objectives; To have TAC approved funding for emergency situations as noted above.
- III. Methods; Funding will used for situations as noted above.
- IV. Schedule; Used when needed during 2019
- V. Personnel; NWE will determine and report usage of funding.

VI. Project budget must include amounts for the following:

Direct Labor
Travel and Living
Materials...yes
Other Direct Expenses...yes
Direct Overhead
All cost-share sources and amounts, including estimation of "in-kind" contributions

VII. Deliverables; describe work product (reports, habitat restoration, etc.) which will result from this Project. Spending will be reported at annual meeting.

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. Generally NA but maybe used for this if needed

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

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

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

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

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

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



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: *Madison Westslope Cutthroat trout conservation; Migration Barrier Construction on Pine Butte and Deadman Creeks*

Date: *10/20/2021*

Explain how this Project addresses a specific Project 2188 License Article(s): *This project addresses specifically article 408 7) Monitor fish species of special concern (i.e., Arctic grayling and westslope cutthroat trout) and article 409 6) Inclusion or exclusion of fish barriers.*

Provide justification for Priority 1, 2 or 3 (above) that you selected: *The proposed project is a Priority 2 proposal: The proposed scope of work is to construct two fish migration barriers that would protect habitat occupied by 99% genetically pure WCT from the threat of displacement or hybridization with non-native fish.*

Project Sponsor (submitted by): *- Northwestern Energy and Montana Fish, Wildlife and Parks (FWP)*

Location of Proposed Project: *Pine Butte and Deadman Creek Madison River drainage*

Narrative: *Westslope cutthroat trout (WCT) is native to the cold-water streams of the Upper Missouri River Basin. An analysis by Shepard et al. (1997) indicated most remaining populations in the Missouri River drainage face a high to very high risk of local extinction over the next 100 years due to threats such as habitat fragmentation and competition from or hybridization with nonnative trout. To ensure the long-term persistence of WCT in the Upper Missouri River Basin a goal to restore WCT to 20% of their historic distribution in each of the Missouri Headwaters sub-basins was established with the development of a Memorandum of Understanding and Conservation Agreement for Westslope Cutthroat Trout in Montana (MOU) between federal and state resource agencies (including BLM, Montana Fish, Wildlife & Parks [FWP], USFS, and Yellowstone National Park), non-governmental conservation*

and industry organizations, tribes, resource users, and private landowners (FWP 1999, FWP 2007). Populations of WCT are of conservation value are fish that are <10% hybridized and are considered secure when they are isolated from non-native fishes, typically by a physical barrier to fish passage, have a population size of at least 2,500 fish, and occupy enough habitat (>5 miles) to ensure long-term persistence (FWP 2007, FWP 2019).

WCT conservation efforts have restored and secured WCT populations of conservation value to about 17% of their historic distribution in the Madison sub-basin. It is anticipated that with continued support and cooperation among agencies and other partners that the 20% conservation goal for WCT in the Madison sub-basin can be obtained in the next 10 years.

This proposal is for the construction of two fish barriers on streams in the Madison sub-basin that are currently occupied by WCT populations of 98.4% and 97.8 % genetic purity. Construction of the barriers would secure approximately 6 miles of habitat for WCT on private and public lands.

Geocode (in decimal degrees ex 46.89743) Pine Butte Lat; 44.86471 Long: -111.54104

Geocode (in decimal degrees ex 46.89743) Deadman Lat; 44.86384 Long: -111.53145

Total Project Cost: \$37,812.00

TAC Funds (Cost-Share) Requested for Project: \$37,812.00

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

Pine Butte and Deadman creeks are tributaries to the Madison River occupied by WCT populations of 98.4% and 97.8% genetic purity respectively. To eliminate further hybridization and or competition with nonnative trout, Northwestern Energy in partnership with FWP, would install migration barriers on both Pine Butte and Deadman Creeks. Successful implementation of the proposed project would likely ensure long term persistence of these populations.

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

Protecting about 6 miles of habitat occupied by WCT conservation populations from competition or hybridization with nonnative trout through the construction of a fish barrier.

III. Methods.

Construction of the barriers will be completed by a contractor. All funds will go to a construction contract. Northwestern Energy will complete contracting and FWP will complete permitting and obtain landowner agreements to complete the work.

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

Summer-Fall of 2022

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

Project contract will be administered by Jon Hanson Northwestern Energy 2188 Fisheries Biologist.

FWP 2188 project personnel Travis Lohrenz and Jenna Dukovic will complete permitting, obtain landowner agreements, and conduct any necessary monitoring activities under the direction of Matt Jaeger MFWP R3 Hydropower Program Supervisor and Jon Hanson Northwestern Energy Fisheries Biologist.

VI. Project budget must include amounts for the following: Total budget is \$37,812 (see attached). All costs are for direct materials and installation cost at \$15,000 per barrier with a \$5,000 contingency recommended by the contractor, given the volatility of lumber, steel, and fuel prices projected out to next summer or fall. \$2,812 is the cost for a consultant to complete cultural resource requirements.

- Direct Labor
- Travel and Living

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

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

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

A report following construction will be provided to NWE by FWP that documents completion of and any deviations from expected work. FWP will conduct periodic collection of genetic tissue samples from fish above the barrier to monitor genetic purity and each year, the barrier will be visually inspected for damage following high water, cleaned of debris that could inhibit barrier function. Results of findings will be conveyed to Northwestern Energy in an annual report submitted by FWP.

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:

Cultural resource requirements will be completed by a consultant. NWE will contract directly with the consultant to ensure the CRM consultation requirements are completed. All permitting, and assessments will be done in compliance with the State of Montana and Federal law.

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:

DNRC will be consulted and water right holders during the permitting process. However, construction of the barrier structures would not limit or deny water users of their water rights.

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

○ 406-444-8115

○ 406-565-7549

208 N. Montana Ave

Suite 205

Helena, MT 59601

Project Title: **Moore Creek Assessment and Conceptual Restoration Plan
Valley Garden Ranch near Ennis, Montana**

Date: November 18, 2021

Applicability to Project 2188 License Article(s)

The *Moore Creek Assessment and Conceptual Restoration Plan* will offset impacts to river resources associated with Project 2188 (Madison-Missouri River). The project meets the purpose and intent of License Articles 408, 409 and 412, which require: 1) developing plans to restore and protect important riparian areas; 2) enhancing fish habitat both in main stem and tributary streams to the Madison River, for all life stages of fish; 3) restoring riparian habitat; and 4) protecting and aiding in the recovery of threatened and endangered fish species including Arctic grayling. This proposal will fund a resource assessment and conceptual restoration design for a 5-mile reach of Moore Creek, a tributary to Ennis Lake north of the town of Ennis, Montana (Figure 1). This planning and conceptual design phase will ultimately lead to the implementation of on-the-ground restoration projects to help offset impacts to river resources associated with Project 2188 (Madison-Missouri River).

Priority Classification

The Moore Creek project area classifies as a Priority 2 2188 license project. The project is located on Moore Creek, a snowmelt dominated, cold-water tributary to Ennis Lake located within 0.5 miles of the Madison River. The project will address limiting factors related to degraded aquatic habitat conditions and riparian resources.

Project Sponsor(s): Valley Garden Land & Cattle, LLC
River Design Group, Inc.

Location of Proposed Project

The project is in Madison County approximately one mile north of the town of Ennis, Montana (Figure 1) and is located entirely on private land owned by Valley Garden Land & Cattle, LLC.

- Geocode: 25-0510-15-1-01-01-0000
- DMS: 45° 23' 54.38" N; 111° 42' 49.39" W
- DD: Latitude: 45.3984389°N; Longitude: 111.71372192°W

Total Project Cost: \$40,000

TAC Funds (Cost-Share) Requested for Project: \$7,500

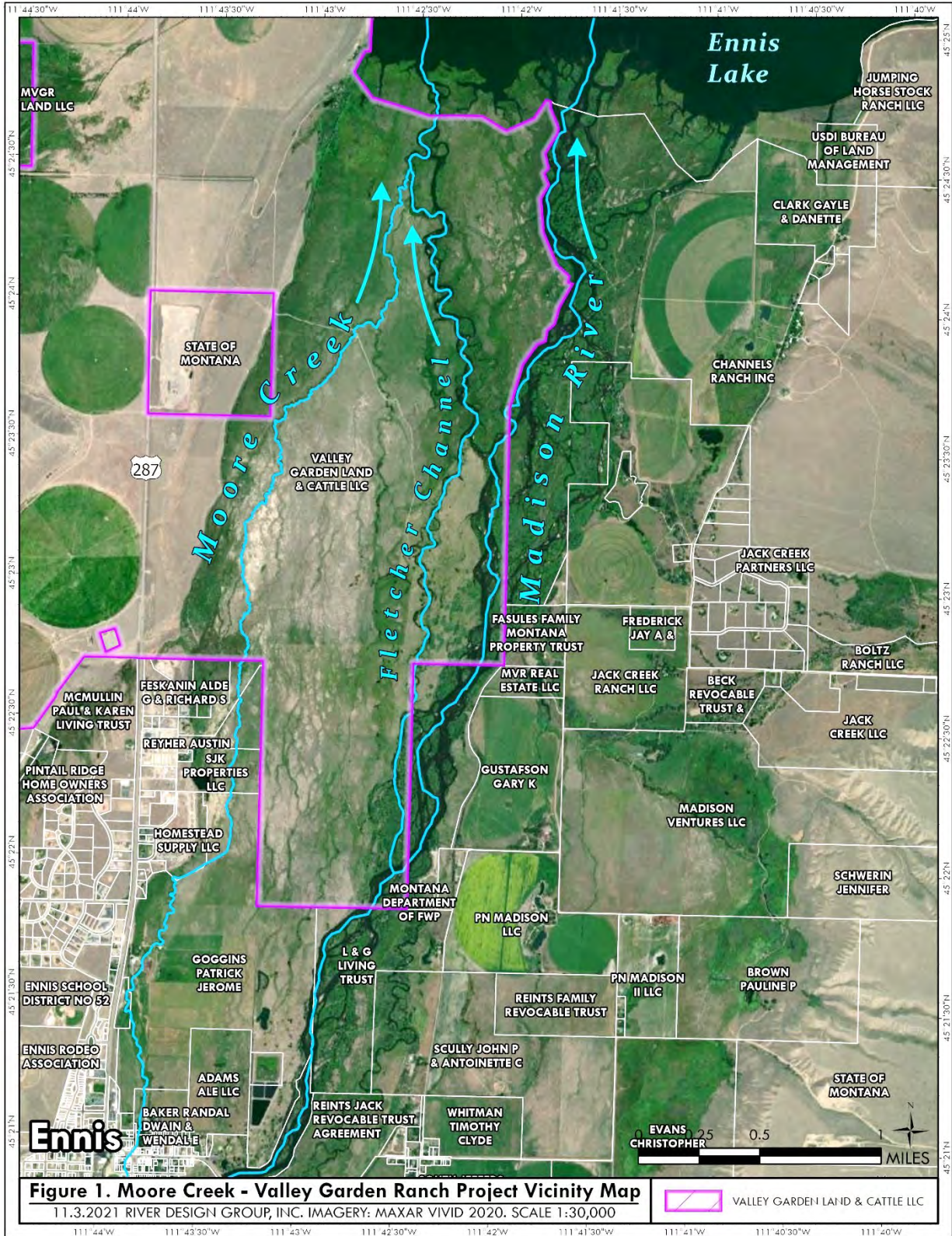


Figure 1. Moore Creek – Valley Garden Ranch Project Vicinity Map.

I. INTRODUCTION

Moore Creek is an important cold-water, snowmelt dominated tributary to Ennis Lake. Recently, agencies and resource managers have expressed interest in pursuing restoration actions on Moore Creek to improve water quality and address degraded aquatic habitat, riparian and wetland resources. This project will involve assessing existing stream morphology, instream habitat, and riparian- wetland conditions on a five-mile reach of Moore Creek located on the Valley Garden Ranch, a working cattle ranch owned by Valley Garden Land & Cattle, LLC. In June 2021, River Design Group, Inc. (RDG) was approached by the landowner, Mr. Patrick McGee, who expressed his family's desire to pursue wildlife and aquatic habitat conservation measures on Moore Creek and associated riparian and terrestrial habitats.

Montana Fish, Wildlife & Parks installed arctic grayling Remote Site Incubators (RSIs) in Moore Creek in 2015-2017 with a combined total of 30,000 eggs. Post monitoring showed some young of the year fish recaptured, and reports of anglers catching grayling in Fletcher Channel (personal communication, Jon Hanson, NorthWestern Energy). The landowners have expressed their interest in supporting aquatic habitat restoration strategies to benefit arctic grayling recovery and other focal species.

The project area includes approximately five miles of Moore Creek, tributary channels and springs, and prior converted wetlands. Moore Creek has been impacted by livestock grazing, channelization, ditching, and agricultural practices that have led to stream incision, entrenchment, high rates of bank erosion, and compromised aquatic and wetland habitats. In the mid-1900's, a four-mile-long drainage ditch was constructed on the west side of the valley to intercept springs and seeps to drain emergent and scrub-shrub wetlands. The ditch was subsequently plugged to create open water wetlands. These efforts were mostly unsuccessful, and the current ditch system and open water features provide marginal wetland functions and values and continue to alter wetland hydrology.



Figure 2. Impaired geomorphic and aquatic habitat conditions on Moore Creek, including high rates of bank erosion, simplified aquatic habitat conditions, and altered channel geometry (left photo). Reference conditions on lower Moore Creek include lower width-to-depth ratio channel geometry, stable streambanks supported by emergent wetland vegetation, and complex aquatic habitat features including runs and pools (right photo).

This assessment and preliminary design effort will identify restoration opportunities through a master plan approach. The purpose of future restoration projects will be to improve aquatic habitat conditions of Moore Creek and associated riparian and wetland habitats. We envision this will be accomplished by restoring Moore Creek to its likely historical geomorphic condition, and by enhancing and creating off-channel, shallow to deep emergent, and shallow to deep open water wetlands.

Specifically, restoration goals will include: 1) improving aquatic, riparian, and terrestrial habitat diversity for fish and wildlife; 2) establishing riffle and pool sequences and reconnecting floodplains; 3) modifying the existing ditch system to create a complex matrix of variable depth wetlands; 4) isolating wetlands from the channel to lower stream temperature; 5) converting areas within the existing upland herbaceous plant communities to emergent and scrub-shrub wetlands by creating new, lower floodplain surfaces adjacent to Moore Creek and tributary channels; and 6) restoring willow and riparian shrub communities in patches along streambanks and within portions of the floodplain.

II. Objectives

The following objectives have been developed for the Moore Creek Assessment and Conceptual Restoration Plan:

1. Complete a rapid geomorphic, vegetation, and wetland assessment of Moore Creek utilizing remote sensing (e.g. aerial imagery and LiDAR data) and standard field techniques;
2. Complete a geomorphic reference reach survey on a relatively undisturbed section of Moore Creek to characterize potential stream channel, streambank, and floodplain morphology, including vegetation communities;
3. Evaluate the existing ditch system and provide recommendations to improve wetland functions and values;
4. Develop a conceptual restoration plan that identifies project phases and restoration opportunities, along with final design, permitting and construction cost estimates for high priority project areas; and
5. Coordinate work with upstream restoration activities on Moore Creek being sponsored by NorthWestern Energy, Madison Conservation District and Montana Fish, Wildlife & Parks.

III. Methods

A reconnaissance-level geomorphic, vegetation, and wetland assessment will be completed to support development of the conceptual restoration plan. Surveys and methods will follow standard protocols and include both existing and reference conditions in the project area. Reference data will be collected to support development of geomorphic, aquatic habitat, wetland habitat and vegetation design criteria, as appropriate, and will be used in conjunction with other methods to inform the conceptual design. Geomorphic data collection will include channel cross-sections, longitudinal channel profiles, streambed substrate characterization and channel

classification. Vegetation data collection will include observations of all occurring plants and absolute percent canopy cover of dominant species by strata. Reference floodplain surfaces that support active side channels, alcoves, and off-channel riverine wetlands will be assessed in the field to help guide development of floodplain, wetland, and vegetation design criteria. Historical aerial photos will be analyzed to evaluate geomorphic trends over time.

Data Collection Tasks

- Historical aerial photograph and LiDAR analyses;
- Rapid geomorphic investigations including typical channel cross-sections, longitudinal channel profiles, substrate enumeration, and planform geometry;
- Basin flood frequency analysis and determination of channel forming, or bankfull discharge;
- Remotely sensed existing vegetation assessment to categorize broad vegetation communities;
- Reference geomorphic and vegetation surveys to characterize potential conditions or desired future conditions; and
- Inventory of existing ranching infrastructure and constraints to restoration.

Following field data collection, and with assistance from Valley Garden Land & Cattle, LLC and NWE, conceptual restoration drawings will be developed for the project area. The conceptual plan will include plan views and GIS illustrations in an 11”x17” plan set prepared in ArcGIS or AutoCAD Civil 3d. A construction phasing plan will be developed and estimates for final design, permitting, and construction will be provided for high priority sites.

IV. Schedule

Table 1 includes a proposed project schedule. Work will begin immediately following contract award, and the field assessment and remote sensing tasks will be completed in the summer of 2022. A draft conceptual plan will be distributed to project stakeholders for comments in November 2022. Based on comments received, a final conceptual design plan set will be prepared.

Table 1. 2022 project schedule for the Moore Creek Assessment and Conceptual Restoration Plan.

Task	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Task 1. Project Management				
Task 2. Assessment and Data Collection				
Task 3. Conceptual Restoration Plan				
Task 4. Direct Costs				

V. Personnel

The project will be guided and implemented under the auspices of a diverse group of stakeholders including NorthWestern Energy, Valley Garden Land & Cattle, LLC, and agency partners. Our continued collaboration and history working in the Madison River Valley underscores the importance we place on offering a team that will continue to be compatible with the community and stakeholders.

RDG is an approved consultant on NorthWestern Energy’s Qualified Vendor’s List for stream and wetland restoration services. John Muhlfeld, Principal Restoration Hydrologist with RDG, will serve as the project manager and technical lead on behalf of the design team. Selita Ammond, RDG’s Geographic Information Systems analyst and Wetland Ecologist, will participate in the assessment and prepare the Conceptual Restoration Plan drawings.

VI. Budget

Table 2 includes a not-to-exceed cost estimate to perform the Scope of Work (SOW). The total cost to perform the SOW is \$40,000. The landowners have committed \$17,500 in cost-share to demonstrate their commitment to this project, and to broader, landscape-level conservation goals. The cost-share match accounts for approximately 45% of the total project cost. This proposal is requesting TAC funds in the amount of \$7,500. While not reflected in Table 2, an application was submitted to WildTAC in the amount of \$22,500, to support tasks related to the geomorphic and aquatic habitat investigations. If funded by MadTAC, we will reduce the grant request to WildTAC by \$7,500.

Task	Cost
1. Project Management	\$ 1,500.00
Coordination with NWE, Landowners and MCD	\$ 1,500.00
2. Field Assessment and Data Collection	\$ 17,250.00
Vegetation and Wetland Data Collection	\$ 7,250
Hydrologic and Geomorphic Data Collection	\$ 6,500
Remote Sensing Analysis (Imagery, LiDAR Data)	\$ 3,500
3. Conceptual Restoration Plan	\$ 18,500
Data Processing	\$ 3,500
Preliminary and Final Restoration Plans (Drawings)	\$ 11,000
Cost Estimating and Project Phasing Plan	\$ 4,000
4. Direct Costs	\$ 2,750
Mileage	\$ 650
Per Diem (4 Person Crew for Four Nights)	\$ 500
Lodging (4 Person Crew for Four Nights)	\$ 1,600
Estimated Project Cost	\$ 40,000
Cost-Share (Valley Garden Land & Cattle, LLC)	\$ 17,500
WildTAC Request	\$ 22,500
MadTAC Request[^]	\$ 7,500
[^] If funded, WildTAC request will be reduced to \$15,000.	

VII. Deliverables

Project deliverables will include the following:

- 11”x17” conceptual restoration plan.
- Cost estimates and phasing plan for high priority projects.

This project will culminate in a ‘master plan’ for over 5 miles of spring creek and associated riparian wetland areas. The importance of investing in this planning effort is three-fold:

1. Developing a restoration vision for wetland and wildlife resources in the project area will help generate support from landowners, agencies, and local organizations who have contributed to past phases of restoration work in the Madison River Valley.
2. A “road map” for future restoration work leads to cost-effective implementation, as restoration constraints can be identified early in the planning process. Developing a realistic implementation phasing plan is critical when implementing restoration actions over such a large area.
3. Alternative funding sources exist, including Section 319 funding from Montana Department of Environmental Quality to address temperature and water quality impairments. The preliminary design, phasing plan, and cost estimates will prove useful in applying for grants and other state, federal, and local funding opportunities.

VIII. Cultural Resources

This project will not result in ground disturbance or active construction therefore a cultural resources survey is not needed.

IX. Water Rights

At a future date as final designs are prepared, appropriate analysis will be performed to demonstrate the projects comply with the intent of Montana DNRC’s “*Guidance for Landowners and Practitioners Engaged in Stream and Wetland Restoration Activities*”, issued by the Water Resources Division on March 9, 2016.

DNRC guidelines state that “any wetland project (restoration) whose final design approximates the natural characteristics of adjacent natural wetlands or approximates something smaller in magnitude does not require a water right”. The guidelines also state that restored wetlands should have characteristics similar to other natural wetlands in the area and should function entirely in the absence of artificial controls and diversions of water that intentionally appropriate water for wetland use

2020 Cost-Share Proposal Form for NorthWestern Energy (NWE) Project 2188 TAC Funds

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

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

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

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

All TAC project proposals must include the following information:

Project Title: South Fork Madison River floodplain reactivation and habitat improvement

Date: 11/9/20

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

This proposal project would partially fund habitat restoration in the South Fork Madison River. The proposal meets Article 409 of NorthWestern Energy's FERC 2188 License.

ARTICLE 409

- (3) Fish habitat enhancement both in main stem and tributary streams, including enhancement for all life stages of fishes.
- (5) improving or replacing stream culverts.

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

Priority 2. The project would improve fisheries habitat in the South Fork Madison River.

Project Sponsor (submitted by): Jason Brey and Allison Stringer, Custer Gallatin National Forest, Hebgen Lake District

Location of Proposed Project: South Fork Madison River where Forest Service Road 987 crosses the floodplain.

Geocode (in decimal degrees ex 46.89743) Lat; 44.6574 **Lon:** -111.1506

Total Project Cost: \$400,000 (Estimate)

TAC Funds (Cost-Share) Requested for Project: \$60,000 + \$600 (1% overhead) = **\$60,600 *APPROVED FOR 2022 BUDGET**

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

The bridge on Forest Service road 987 is undersized and has a long, contiguous causeway (~850') that bisects the wide floodplain of the South Fork Madison River (Figure 1). Currently, the bridge and causeway restrict the channel of the South Fork Madison River and limit its ability to access its floodplain. The Custer Gallatin National Forest (CGNF) proposes to replace the existing bridge (30' wide) with a wider bridge (46-50' wide) to eliminate the channel constriction and install up to 6 overflow hydraulic culverts along the road causeway to allow the South Fork Madison River to reactivate its floodplain. The CGNF also plans to rebuild the road surface through the entire site, reducing sedimentation (red and yellow polygons in Figure 1).

The South Fork Madison River is a critical spawning tributary to Hebgen Lake. These improvements would reduce water velocity, allowing more deposition of gravels and decreasing scour resulting in better habitat for resident trout and spawning trout

from the lake. Reconnecting the South Fork Madison with its entire flood plain would increase its ability to maintain quality fisheries habitat and continue to support strong fisheries in both Hebgen Lake and the River itself.

Figure 1. Proposed location of South Fork Madison River floodplain reactivation and habitat improvement project. The blue polygon shows the estimated causeway impact area, the red polygon shows the area of road with sedimentation impacts to be rebuilt, the yellow polygon shows the proposed improved parking area, and the dark blue line shows the length of the causeway across the floodplain of the South Fork Madison River.



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

To improve fisheries habitat and channel resilience of the South Fork Madison River by reactivating its floodplain, upgrading a channel constricting bridge, and reducing sedimentation from nearby motorized vehicle use.

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

Finalized project design is being drafted currently. The CGNF will put the project out to bid after design is complete, and have the selected contractor implement the project designs when the funding for the entire project is secured, but no later than fall of 2022.

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

The entire project will be completed by fall 2022.

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

Jason Brey is the project leader. Work will be completed by a contractor under the guidance of a U.S. Forest Service contracting officer.

VI. Project budget must include amounts for the following:

Direct Labor	\$0
Travel and Living	\$0
Materials	Six 48" hydraulic culverts (\$10,000 each) = \$60,000
Other Direct Expenses	\$0
Direct Overhead	1% overhead= \$600

All cost-share sources and amounts, including estimation of "in-kind" contributions

The remaining \$340,000 will be contributed by the CGNF through personnel time, Great American Outdoors Act funding, And Regional office funding.

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?

The work product will be floodplain reactivation and habitat improvement resulting from completed bridge replacement, culvert install, and road rebuilding.

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:

All ground disturbing activities will be assessed by our forest archaeologist to ensure compliance with all laws and the CRM requirement of NWE.

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:

NA

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

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

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