Lessard-Sams Outdoor Heritage Council

ML 2022 Request for Funding

General Information

Date: 06/03/2021

Proposal Title: DNR Aquatic Habitat Restoration and Enhancement - Phase 5

Funds Requested: $10,092,300

Manager Information

Manager's Name: Jamison Wendel
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Location Information

County Location(s): Clearwater, Le Sueur, Roseau, St. Louis, Nicollet, Big Stone, Otter Tail and Clay.

Eco regions in which work will take place:

- Northern Forest
- Forest / Prairie Transition
- Prairie
- Metro / Urban

Activity types:

- Restore
- Enhance

Priority resources addressed by activity:

- Habitat

Narrative

Abstract

Diverse habitat is critical to sustaining quality fish populations in lakes and rivers. The Minnesota Department of Natural Resources (MNDNR) will complete nine fish passage projects to restore habitat connectivity for fish and other aquatic life, and restore reaches of five different rivers, creating nine miles of diverse aquatic habitat. Though the actual footprint of fish passage projects is relatively small, these projects will reconnect over 10,000 acres of lake and river habitat. Aquatic habitat projects were selected from a statewide list, prioritized by factors such as ecological benefit, scale of impact, urgency of completion, and local support.

Design and Scope of Work

The Minnesota Department of Natural Resources (MNDNR) annually updates a statewide list of stream habitat projects. Project proposals come both from MNDNR staff and from partner organizations. Projects are prioritized based on scale-of-impact, urgency, local support, and critical habitat for rare species. Based on this list, MNDNR and our partners are proposing nine fish passage projects and four channel restorations, leveraging a confirmed $4,016,000 from a variety of federal, state, and local sources.

Access to diverse habitats is critical for fish and other aquatic organisms to complete various life stages. The habitats they use at different life stages may all vary widely. These habitats can be fairly unique, such as high-gradient riffles favored by many spawning fish, and may be miles apart. When dams or other obstructions prevent aquatic life from reaching ideal habitat, they are forced to use less optimal locations that can reduce their success. In some cases this leads to the complete loss of sensitive species upstream of a barrier. Research by MNDNR River Ecologist Luther Aadland found that on average, species richness declined by 37% upstream of near complete barriers to fish passage. Subsequent removal of 11 barriers in this study resulted in upstream recolonization of an average of 66% of the species that had been absent.

Modifying or removing the barriers through our nine proposed fish passage projects would have a total footprint of 9 acres, but create upstream access to over 10,000 acres of lake and river habitat. Restoring fish passage will benefit fish such as Walleye and Brook Trout present in these rivers, as well as five mussel species classified as threatened or special concern. Restoring connectivity also expands fishing opportunities by acting as a conduit for recolonization following catastrophic events such as drought that may happen in one portion of a watershed.

Meandering rivers and streams naturally form diverse habitat. Deeper, slower habitat is created by scour into the bed of the river around the outside of bends, while faster water and a rockier bottom is found in the straight sections in between. Wood, overhanging vegetation, and boulders serve as cover and current breaks for fish. In degraded sections of river, these natural processes are disrupted. Some reaches have been artificially straightened, preventing the meandering that forms diverse habitat. In other places, streams have become surrounded by tall banks that prevent high flows from spilling out onto a floodplain. When floods are trapped within the stream channel, the river erodes the banks. This not only mobilizes tons of sediment that degrades downstream habitat, but results in a wide, shallow channel during low-flow periods that is avoided by adult fish. Channel restoration projects will utilize reference locations with high-quality habitat to improve habitat. Working with partners, we will restore and enhance 8.1 miles of habitat on five streams.

How does the proposal address habitats that have significant value for wildlife species of greatest conservation need, and/or threatened or endangered species, and list targeted species?

The Phelps Mill and Rock Dam projects are key components to Lake Sturgeon restoration efforts in the Red River basin. Lake Sturgeon are an important game species and also listed as a species of Special Concern in Minnesota.

Dams that blocked migrations to spawning habitat, overharvest, and poor water quality contributed to the extirpation of Lake Sturgeon from the Red River basin in the early 1900's. Lake Sturgeon reintroduction in the Red River basin has been ongoing for 20 years and mature fish are being captured during spring surveys now. However, barriers such as these two dams block upstream migrations of mature Lake Sturgeon on the Otter Tail and Red Lake River. Removing these barriers to fish passage is key to restoring a naturally reproducing population of Lake Sturgeon in the Red River basin.

The Buffalo River culverts fish passage projects are known to have rare mussel species in the vicinity. These projects have the potential to benefit those species by allowing their upstream movement past the barriers. Juvenile mussels use fish as a host species to move to new areas within the watershed. Once they mature, they release from the host and colonized the new area. Restoration of fish passage will help to return fish and mussel diversity that was present upstream of dams prior to their construction. Potential to benefit rare species is one of the criteria by which stream projects are ranked in this proposal.

There are 68 species of greatest conservation need that utilize headwaters to large streams, including birds, turtles, frogs, fish, and insects. Stream habitat projects are not designed with one species in mind, but instead are intended to benefit multiple functions and habitats of the river both within the stream and in the riparian area, which will have benefits for rare species.

What is the degree of timing/opportunistic urgency and why it is necessary to spend public money for this work as soon as possible?

The projects on our list have local support that may not be present in the future if public sentiment were given time to change, which can happen with dam removal or modification projects. Matching funds are currently available for four of our projects. Completing these projects would take advantage of those funds while they are available.

Describe how the proposal uses science-based targeting that leverages or expands corridors and complexes, reduces fragmentation or protects areas identified in the MN County Biological Survey:

Science-based targeting was used to identify, design, and prioritize restoration and enhancement projects included in this proposal. Projects were prioritized based on multiple criteria, including scale-of-impact, critical habitat, technical feasibility, and compatibility with other resource initiatives. Projects that benefit or reconnect areas of high or outstanding biological significance or lakes of biological significance are targeted and prioritized.

Our proposal features projects intended to reduce fragmentation. Dams and other obstructions in rivers fragment areas of suitable habitat, similar to when pieces of prairie are separated by large areas of row-crop farmland. By removing or modifying barriers in streams, we will allow fish and other aquatic life to move between different patches of habitat that may be critical for their life-processes, such as spawning. Connectivity also expands fishing opportunities by acting as a conduit for recolonization after catastrophic events such as drought happen in one portion of a watershed. We have prioritized fish passage projects that connect large areas of high-quality habitat.

Similarly, our stream channel restoration projects target reaches of river where habitat is poor due to past alterations. Lengths of poor habitat can themselves act as barriers to animal movement, where a fish may choose not to migrate through a reach without adequate depth or cover to reach more suitable habitat upstream. Restoring the stream channel removes that "barrier" of poor habitat that fragments the stream. In the process, we also create high-quality habitat within the formerly degraded reach.

Which two sections of the Minnesota Statewide Conservation and Preservation Plan are most applicable to this project?

- H5 Restore land, wetlands and wetland-associated watersheds
- H6 Protect and restore critical in-water habitat of lakes and streams

Which two other plans are addressed in this proposal?

- Minnesota DNR Strategic Conservation Agenda
- Red River of the North Fisheries Management Plan

Describe how your program will advance the indicators identified in the plans selected:

The DNR's Strategic Conservation Agenda includes strategies to identify priority land and waters at greatest risk, and manage lands and waters for ecosystem health and resilience. Our proposal will address each of these initiatives through our prioritization of projects, and the management actions we will take.

The Red River of the North Fisheries Management plan includes goals to re-establish a self-sustaining population of Lake Sturgeon, reconnect the Red River and its tributaries, and rehabilitate habitat in the watershed to support viable native fish populations. The Phelps Mill Dam, Rock Dam, Buffalo River fish passage, Roseau River, and Whiskey Creek projects all work toward those goals by restoring and enhancing connectivity and in stream habitat.

Which LSOHC section priorities are addressed in this proposal?

Forest / Prairie Transition

- Protect, enhance, and restore wild rice wetlands, shallow lakes, wetland/grassland complexes, aspen parklands, and shoreland that provide critical habitat for game and nongame wildlife

Metro / Urban

- Enhance and restore coldwater fisheries systems

Northern Forest

- Protect shoreland and restore or enhance critical habitat on wild rice lakes, shallow lakes, cold water lakes, streams and rivers, and spawning areas

Prairie

- Protect, enhance, or restore existing wetland/upland complexes, or convert agricultural lands to new wetland/upland habitat complexes

Describe how your program will produce and demonstrate a significant and permanent conservation legacy and/or outcomes for fish, game, and wildlife as indicated in the LSOHC priorities:

The fish passage and channel restoration projects included in this proposal represent opportunities to make major and lasting positive changes for those streams. Fish passage projects such as at the Whetstone River project have the potential to create access to high-quality upstream habitat for species that are currently blocked, which includes game fish and state-listed mussel species. A defined project done in one location can benefit several of miles of river upstream, and the benefit will last in perpetuity. Little to no follow-up maintenance is needed. Similarly, our stream channel restoration projects would restore previously-altered reaches of river back to high quality habitats. This not only creates habitat within the project area, but also makes it easier for fish and other

aquatic life to move between upstream and downstream habitats. All of this enhanced connectivity makes for much healthier and resilient populations.

What other fund may contribute to this proposal?

- Clean Water Fund

Does this proposal include leveraged funding?

Yes

Explain the leverage:

The Whiskey Creek project has a variety of federal, state, and local leverage, including EPA 319, Great Plains Fish Habitat, BWSR, NWQI, CREP, and Buffalo Red River Watershed District. The total amount of leverage included in this proposal is $2,341,000.

For the Whetstone River project, $1,200,000 general obligation bonding funds for flood hazard mitigation will contribute to the overall project.

US Fish and Wildlife Service is contributing $300,000 to the Phelps Dam project.

The Roseau River Watershed District and Red River Watershed Management Board are contributing $175,000 to complete the Roseau River project.

All leverage committed to projects included in this proposal are cash commitments.

Per MS 97A.056, Subd. 24, Please explain whether the request is supplanting or is a substitution for any previous funding that was not from a legacy fund and was used for the same purpose.

This request is an acceleration of DNR aquatic habitat work to a level not attainable but for the appropriation.

Non-OHF Appropriations

Year	Source	Amount
2019	Game and Fish, Heritage Enhancement, and Federal Grants	$3,943,700
2016	Game and Fish, Heritage Enhancement, and Federal Grants	$3,267,000
2015	Game and Fish, Heritage Enhancement, and Federal Grants	$3,596,000
2017	Game and Fish, Heritage Enhancement, and Federal Grants	$3,681,500
2018	Game and Fish, Heritage Enhancement, and Federal Grants	$4,094,900

How will you sustain and/or maintain this work after the Outdoor Heritage Funds are expended?

MNDNR has multiple potential avenues that could be used for ongoing maintenance of projects, including the Game and Fish fund which is supported by license sales, the Heritage Enhancement account funded by taxes on lottery tickets, funds raised through the sale of Trout Stamps, people who volunteer to help the department with projects, and future potential OHF appropriations.

Actions to Maintain Project Outcomes

Year	Source of Funds	Step 1	Step 2	Step 3

Annual	Game and Fish	Inspect Project	Control Invasives	Make instream adjustments as needed

Identify indicator species and associated quantities this habitat will typically support:

The estimated abundances below provide general averages for potential aquatic indicator species in Minnesota. These averages are generated from available data and published sources, and do not capture the variability inherent in populations of fish and mussels. Natural populations, including healthy populations with good habitat, vary among locations, and also rise and fall within lakes and rivers. Most fish surveys conducted by DNR produce an index of abundance (catch per unit effort) rather than a population estimate. For the Kingsbury Creek and Tischer Creek projects we expect to raise the brook trout abundance to 40 lbs/acre. For the Whetstone River, Buffalo River, Phelps Mill, Rock Dam, Roseau River, Lake Sakatah, Seven Mile Creek, and Whiskey Creek projects we expect to support northern pike at 10 adults/acre, and mussels at 8000/acre.

How will the program directly involve, engage, and benefit BIPOC (Black, Indigenous, People of Color) and diverse communities:

The DNR Aquatic Habitat Restoration and Enhancement proposal has the following specific ties to BIPOC and diverse communities:

- Projects included in this proposal provide benefits at the watershed scale. These benefits extend well beyond the footprint of each individual project and benefit all Minnesotans.
- Tribal partners have been significant partners in efforts to restore Lake Sturgeon in the Red River basin. Multiple projects included in this proposal contribute to these efforts.
- DNR has closely coordinated with Red Lake Band on the Rock Dam project. The band is strongly supportive of this initiative and a Letter of Support from the Red Lake Band is attached to this proposal.

DNR's OHF projects aim to serve all Minnesotans. At the same time, we are bringing more focus in all our work to BIPOC and diverse communities. The Minnesota DNR has adopted advancing diversity, equity and inclusion (DEI) as a key priority in its 2020-22 strategic plan. The plan focuses on increasing the cultural competence of our staff, creating a workforce that is reflective of Minnesota, continuing to strengthen tribal consultation and building partnerships with diverse communities.

The OHF funds high quality habitat projects that provide ecosystem services like clean water and carbon sequestration that support environmental justice. OHF also supports public access and recreational opportunities on these lands. OHF projects and outcomes benefit BIPOC and diverse communities through recreational opportunities that are close-to-home, culturally responsive and accessible to Minnesotans with disabilities.

The DNR has diversity, equity and inclusion strategies that benefit all OHF projects:

- Multilingual and culturally specific hunting and fishing education programs take place on public lands.
- All hiring is equal opportunity, affirmative action, and veteran-friendly. Contracting seeks out Targeted Group, Economically Disadvantaged and Veteran-Owned businesses.
- Public engagement seeks out BIPOC voices and involves diverse communities. Outreach and marketing of projects has this focus as well.
- Partnerships are at the center of all projects. Tribes in particular are consulted in all pertinent areas of the DNR's work, under EO 19-24.

Activity Details

Requirements

If funded, this proposal will meet all applicable criteria set forth in MS 97A.056?
Yes

Will restoration and enhancement work follow best management practices including MS 84.973 Pollinator Habitat Program?
Yes

Is the restoration and enhancement activity on permanently protected land per 97A.056, Subd 13(f), tribal lands, and/or public waters per MS 103G.005, Subd. 15?
Yes

Where does the activity take place?

- AMA
- County/Municipal
- Public Waters
- WMA
- Other : Tribal Lands

Land Use

Will there be planting of any crop on OHF land purchased or restored in this program?
No

Other OHF Appropriation Awards

Have you received OHF dollars in the past through LSOHC?
Yes

Approp Year	Approp Amount Received	Amount Spent to Date	Leverage Reported in AP	Leverage Realized to Date	Acres Affected in AP	Acres Affected to Date	Complete/Final Report Approved?
2019	$3,208,000	$134,800	$279,000	$120,000	959	16	No
2012	$3,480,000	$3,480,000	-	$2,736,400	359	224	Yes
2013	$525,000	$5,249,800	-	$2,502,900	14,025	1,849	Yes
2014	$2,560,000	$2,483,200	$250,000	$660,000	1,440	2,507	Yes
2015	$4,540,000	$4,467,600	-	$880,864	1,263	908	No
2016	$2,074,000	$1,999,500	$85,000	$92,000	14	6	No
2017	$2,466,000	$1,372,500	$1,003,000	$934,000	1,263	16	No
2018	$2,834,000	$1,018,000	-	$660,000	1,440	6	No
2020	$2,790,000	$168,300	$929,600	-	44	-	No

Timeline

Activity Name	Estimated Completion Date
Permitting and environmental review of fish passage and channel restoration projects	December 2023
Construction of fish passage and channel restoration projects	September 2025
Design of fish passage and channel restoration projects	March 2023
Vegetation maintenance on fish passage and channel restoration projects	June 2026

Budget

Totals

Item	Funding Request	Antic. Leverage	Leverage Source	Total
Personnel	$547,500	-	-	$547,500
Contracts	$9,453,500	$4,016,000	Buffalo Red River Watershed District, NRCS, United States Fish and Wildlife Service, Roseau River Watershed District, flood hazard mitigation funds, Red River Watershed Management Board	$13,469,500
Fee Acquisition w/ PILT	-	-	-	-
Fee Acquisition w/o PILT	-	-	-	-
Easement Acquisition	-	-	-	-
Easement Stewardship	-	-	-	-
Travel	$20,000	-	-	$20,000
Professional Services	$27,000	-	-	$27,000
Direct Support Services	$34,300	-	-	$34,300
DNR Land Acquisition Costs	-	-	-	-
Capital Equipment	-	-	-	-
Other Equipment/Tools	-	-	-	-
Supplies/Materials	$10,000	-	-	$10,000
DNR IDP	-	-	-	-
Grand Total	**$10,092,300**	**$4,016,000**	**-**	**$14,108,300**

Personnel

Position	Annual FTE	Years Working	Funding Request	Antic. Leverage	Leverage Source	Total
Stream Restoration Interns	0.5	3.0	97500	-	-	$97,500
Stream Restoration Coordinator	1.0	3.0	450000	-	-	$450,000

Amount of Request: $10,092,300
Amount of Leverage: $4,016,000
Leverage as a percent of the Request: 39.79%
DSS + Personnel: $581,800
As a % of the total request: 5.76%
Easement Stewardship: -
As a % of the Easement Acquisition: -

Describe and explain leverage source and confirmation of funds:
Whiskey Creek project: EPA 319, Great Plains Fish Habitat, BWSR, NWQI, CREP, and Buffalo Red River Watershed District

Whetstone River project: General obligation bonding funds for flood hazard mitigation

Phelps Mill Dam project: Fish and Wildlife Service

Roseau River project: Roseau River Watershed District and Red River Watershed Management Board

Does this proposal have the ability to be scalable?
Yes

If the project received 70% of the requested funding

Describe how the scaling would affect acres/activities and if not proportionately reduced, why?
Projects come from a prioritized list. with partial funding, we would fund only the top projects from our list that fit within the amount allocated. At 70% funding, we estimate that we would still be able to achieve approximately 80% of our initial acres of restoration and enhancement.

Describe how personnel and DSS expenses would be adjusted and if not proportionately reduced, why?
Personnel funded through this appropriation work with partners to implement and develop projects. At 70% funding, we would not reduce personnel expenses from our original budget. Since nearly all of our DSS expenses are used to support personnel funding, the DSS budget line would not be significantly reduced either.

If the project received 50% of the requested funding

Describe how the scaling would affect acres/activities and if not proportionately reduced, why?
Projects come from a prioritized list. with partial funding, we would fund only the top projects from our list that fit within the amount allocated. At 50% funding, we estimate that we would be able to achieve approximately 45% of our initial acres of restoration and enhancement.

Describe how personnel and DSS expenses would be adjusted and if not proportionately reduced, why?
Personnel funded through this appropriation work with partners to implement and develop projects. At 50% funding, we would not reduce personnel expenses from our original budget. Since nearly all of our DSS expenses are used to support personnel funding, the DSS budget line would not be significantly reduced either.

Personnel

Has funding for these positions been requested in the past?
Yes

Please explain the overlap of past and future staffing and position levels previously received and how that is coordinated over multiple years?
Funding for the positions included in this request were previously funded in our ML20 appropriation. Once the personnel funds from that appropriation are extinguished, we will shift to charging salary to this appropriation.

Contracts

What is included in the contracts line?
100% of contracts are for R/E work.

Travel

Does the amount in the travel line include equipment/vehicle rental?
No

Explain the amount in the travel line outside of traditional travel costs of mileage, food, and lodging
All travel line costs will be used for mileage, food, and lodging.

I understand and agree that lodging, meals, and mileage must comply with the current MMB Commissioner Plan:
Yes

Direct Support Services

How did you determine which portions of the Direct Support Services of your shared support services is direct to this program?
DNR calculates the program's fair share to pay for support costs directly related to and necessary for the appropriation, and an internal Service Level Agreement (contract) guarantees each program will receive the services for the calculated amount.

Federal Funds

Do you anticipate federal funds as a match for this program?
No

Output Tables

Acres by Resource Type (Table 1)

Type	Wetland	Prairie	Forest	Habitat	Total Acres
Restore	0	0	0	90	90
Protect in Fee with State PILT Liability	0	0	0	0	0
Protect in Fee w/o State PILT Liability	0	0	0	0	0
Protect in Easement	0	0	0	0	0
Enhance	0	0	0	15	15
Total	**0**	**0**	**0**	**105**	**105**

Total Requested Funding by Resource Type (Table 2)

Type	Wetland	Prairie	Forest	Habitat	Total Funding
Restore	-	-	-	$5,825,500	$5,825,500
Protect in Fee with State PILT Liability	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-
Protect in Easement	-	-	-	-	-
Enhance	-	-	-	$4,266,800	$4,266,800
Total	**-**	**-**	**-**	**$10,092,300**	**$10,092,300**

Acres within each Ecological Section (Table 3)

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest	Total Acres
Restore	0	0	0	82	8	90
Protect in Fee with State PILT Liability	0	0	0	0	0	0
Protect in Fee w/o State PILT Liability	0	0	0	0	0	0
Protect in Easement	0	0	0	0	0	0
Enhance	9	1	0	4	1	15
Total	**9**	**1**	**0**	**86**	**9**	**105**

Total Requested Funding within each Ecological Section (Table 4)

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest	Total Funding
Restore	-	-	-	$5,445,000	$380,500	$5,825,500
Protect in Fee with State PILT Liability	-	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-	-
Protect in Easement	-	-	-	-	-	-
Enhance	$1,070,200	$920,300	-	$1,926,300	$350,000	$4,266,800
Total	**$1,070,200**	**$920,300**	**-**	**$7,371,300**	**$730,500**	**$10,092,300**

Average Cost per Acre by Resource Type (Table 5)

Type	Wetland	Prairie	Forest	Habitat
Restore	-	-	-	$64,727
Protect in Fee with State PILT Liability	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-
Protect in Easement	-	-	-	-
Enhance	-	-	-	$284,453

Average Cost per Acre by Ecological Section (Table 6)

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest
Restore	-	-	-	$66,402	$47,562
Protect in Fee with State PILT Liability	-	-	-	-	-
Protect in Fee w/o State	-	-	-	-	-

PILT Liability					
Protect in Easement	-	-	-	-	-
Enhance	$118,911	$920,300	-	$481,575	$350,000

Target Lake/Stream/River Feet or Miles

8.8 Miles

Outcomes

Programs in forest-prairie transition region:

- Rivers and streams provide corridors of habitat including intact areas of forest cover in the east and large wetland/upland complexes in the west ~ *Both MNDNR and PCA conduct periodic surveys of the Otter Tail River watershed. For the Phelps Mill Dam project, we will compare warmwater fish communities before and after project completion. We will also compare catch rates for critical species before and after project completion as indicators of population density changes.*

Programs in metropolitan urbanizing region:

- Improved aquatic habitat indicators ~ *For the Tischer Creek Dam project, we will evaluate instream habitat and use routine fish surveys to gauge changes to the fish community to compare to pre-project data.*

Programs in the northern forest region:

- Improved aquatic habitat indicators ~ *For the Kingsbury Creek project, we will evaluate instream habitat as well as brook trout populations to assess success. For the Rock Dam project, warmwater fish communities will be assessed before and after project completion.*

Programs in prairie region:

- Other ~ *The Whiskey Creek and Roseau River channel restoration projects in this region will improve in-channel and riparian habitat. We will use metrics that evaluate instream and floodplain habitat to assess our success. For the Buffalo River, Seven Mile Creek, and Lake Sakatah fish passage projects, we will use routine fish surveys to gauge changes to the fish community, and compare with pre-project data. For the Whetstone Creek project, we will evaluate instream habitat and use routine fish surveys to gauge changes to the fish community to compare to pre-project data.*

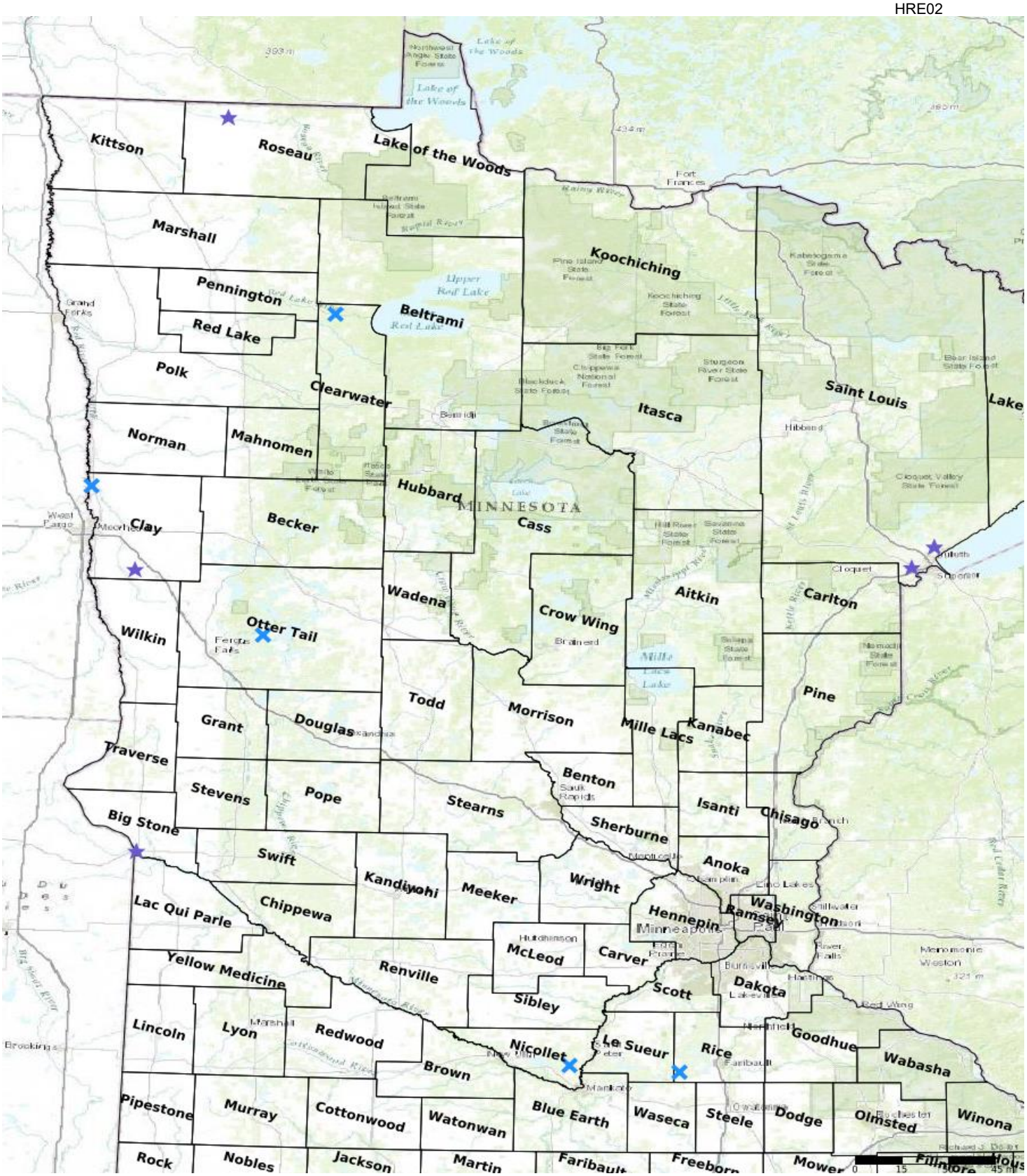
Parcels

Sign-up Criteria?
No

Explain the process used to identify, prioritize, and select the parcels on your list:
MN DNR uses a prioritized list to select stream habitat projects for submission. Project submissions are solicited from MN DNR staff as well as partner organizations. Criteria used to rank projects includes the scale of impact, critical habitat for rare species, the urgency of completing the project, feasibility, and local support. From that list we select the highest-ranked projects that we feel could be completed during the life of the OHF appropriation.

Restore / Enhance Parcels

Name	County	TRDS	Acres	Est Cost	Existing Protection
Whetstone River	Big Stone	12146216	21	$2,300,000	Yes
Buffalo River	Clay	14248230	3	$1,500,000	Yes
Whiskey Creek	Clay	13746218	23	$588,000	Yes
Rock Dam - Red Lake River	Clearwater	15238223	1	$350,000	Yes
Canon River - Lower Lake Sakatah Dam	Le Sueur	10922217	1	$300,000	Yes
Seven Mile Creek	Nicollet	10927204	1	$400,000	Yes
Otter Tail River - Phelps Mill Dam	Otter Tail	13441235	1	$860,000	Yes
Roseau River	Roseau	16343224	38	$1,800,000	Yes
Kingsbury Creek	St. Louis	04915210	7	$555,500	Yes
Tischer Creek	St. Louis	05014203	9	$1,000,000	Yes



- Protect in Easement
- Protect in Fee with PILT
- Protect in Fee W/O PILT
- Restore
- Enhance
- Other

Parcel Map
DNR Aquatic Habitat Restoration and Enhancement - Phase 5
(Data Generated From Parcel List)

Aquatic Restoration and Enhancement–Phase 5

Summary

Diverse habitat is critical to sustaining quality fish populations in lakes and rivers. The Minnesota Department of Natural Resources (MNDNR) will complete nine fish passage projects to restore habitat connectivity for fish and other aquatic life, and restore reaches of four different rivers, creating nine miles of diverse aquatic habitat. Though the actual footprint of fish passage projects is relatively small, these projects will reconnect over 10,000 acres of lake and river habitat. Aquatic habitat projects were selected from a statewide list, prioritized by factors such as ecological benefit, scale of impact, urgency of completion, and local support.

Project Partners

- Buffalo Red River Watershed District
- Red Lake Band
- Roseau River Watershed District
- South St. Louis Soil and Water Conservation District
- Otter Tail County
- U.S. Fish and Wildlife Service

Total Request $10,092,300
Leverages $4,016,000 in match

Projects in Progress

Whetstone River

- Reconnects the Whetstone River to its original channel
- Bypasses the first barrier on Whetstone River
- Expands floodplain to reduce flood impacts

Whiskey Creek

- Restores over 20 miles of a straightened river to a meandering stream.
- Will reestablish a 340 foot wide healthy riparian corridor along the restored stream.
- Federal, state, and local match.
- Partnership with the Buffalo-Red River Watershed District.

Rock Dam

- Partnership with Red Lake Band
- One of last remaining fish passage barriers on Red Lake River
- Important project for Lake Sturgeon restoration efforts

–continued on reverse

Tischer Creek

- Reconnect 3.5 miles of stream habitat
- Support from Hartley Nature Center, Trout Unlimited, and Arrowhead Fly Fishers

Roseau River

- Restores State Ditch 51 back to original channel
- Adds 12.5 miles of stream habitat
- Partnership with Roseau River Watershed District

Seven Mile Creek

- Remove Seven Mile Creek Dam to restore fish passage
- Reconnects 256 acres of upstream lake and river habitat

Lake Sakatah

- Modify Lower Sakatah Lake Dam to restore fish passage

Buffalo River Culverts

- Targeted and prioritized replacement of barrier culverts. Sites have been identified that would reconnect over 80 miles of stream for 53 species of fish.
- Identified as a priority in several local and agency plans.
- Partnership with BRRWD and USFWS.

Kingsbury Creek

- Restoration of approximately 0.6 miles of straightened river.
- Restores floodplain connectivity
- Partnership with South St. Louis Soil and Water Conservation District

Phelps Mill

- Restores fish passage on Otter Tail River
- Critical component of Lake Sturgeon restoration efforts in Red River basin
- Partnership with Otter Tail County and US Fish and Wildlife Service

Questions?

Jamison Wendel, Stream Habitat Supervisor,
Minnesota Department of Natural Resources
jamison.wendel@state.mn.us

Project Name	Project Type	Project Type	Resource Potential	Scale of Impact	Critical Habitat	Invasive Species	Community Support/ Acceptance	Timing	Technical Feasibility	Compatibility with other initiatives	Professional Judgement	Total Score	DNR Share of Project Cost	Total Project Cost	Region	Current Contact and Year Submitted	Township	Range(s)	Section(s)
Whetstone	Channel Reconnection and Fish Passage	9	10	10	10	9	5	5	5	3	4	70	$2,300,000	$6,600,559	4	REU and Chris Domeier (2016)	121	46	16
Whiskey Creek Phase II	Channel Restoration	10	10	10	7	9	5	5	4	3	5	68	$588,000	$6,180,000	1	Kristine Altrichter, BRRWD (2019)	133	46	18
Phelps Mill Phase II	Dam Modification	8	10	8	9	9	5	5	5	3	5	67	$860,000	$1,600,000	1	Howard Fullhart, FAW (2018)	134	41	34/35
Roseau River Phase II	Channel Reconnection	10	10	10	7	9	5	4	4	3	5	67	$1,800,000	$7,200,000	1	Tracy Halstengard, Roseau River WSD (2021)	163	42/43/44	19,20/14,21-24/6,14-16,22
Rock Dam	Dam Modification	8	9	10	10	9	4	4	3	3	3	63	$350,000	$700,000	1	Nick Kludt, FAW (2021)	152	38	23
Seven Mile Creek Dam	Dam Removal	9	9	4	8	10	5	5	4	3	5	62	$400,000	$400,000	4	Brooke Hacker, EWR (2017)	109	27	4
Buffalo River Culverts	Culvert Replacements	8	10	10	9	9	3	3	4	3	3	62	$1,500,000	$1,500,000	1	Kristine Altrichter, BRRWD (2020)	142	48	30
Kingsbury Creek	Channel Restoration	10	7	7	8	9	4	4	4	3	3	59	$355,540	$555,540	2	Ann Thompson, St. Louis SWCD (2019)	49	15	10
Tischer Creek Dam	Fish Passage and Channel Restoration	9	9	6	8	8	4	4	4	3	3	58	$1,000,000	$1,000,000	2	John Lindgren, FAW (2012)	50	14	2, 3
Lower Sakatah Lake Dam - Cannon River	Dam Modification	9	9	7	7	9	4	3	3	3	2	56	$300,000	$300,000	4	Craig Soupir, FAW (2021)	109	22	17
Lake Sarah Dam	Dam Modification	8	7	1	9	9	5	4	4	2	5	54	$370,000	$370,000	4	Justin Hoffmann, Murray County (2021)	108	41	21
Eden Lake Dam	Dam Modification	8	7	5	7	9	4	5	5	2	2	54	$375,000	$375,000	3	Nicola Blake-Bradely, EWR (2019)	122	31	23
Lime Lake Dam	Dam Modification	8	8	1	6	9	5	4	4	2	2	49	$550,000	$1,050,000	4	Justin Hoffmann, Murray County (2021)	106	40	32
Sand Lake Dam	Dam Modification	8	7	2	7	9	4	3	4	2	0	46	$250,000	$250,000	2	Dana Dostert and REU, EWR (2018)	60	18	28
Rapidan Dam	Dam Modification	10	10	10	10	8	4	5	4	3	5	69	$30,000,000	$30,000,000	4	Todd Kolander, EWR (2021)	107	27	5
Upper Buffalo River	BRRWD	10	10	10	10	9	5	4	4	3	3	68	$2,000,000	$2,000,000	1	Kristine Altrichter, BRRWD (2021)	141	41/42	7,18/11-16
South Branch of the Buffalo	Channel Restoration	10	9	10	9	9	5	4	4	3	3	66	$12,000,000	$15,000,000	1	Kristine Altrichter, BRRWD (2021)	135/136	46/47	4-6/18-20,29-31/2,12-13
Whisky Creek	Channel Restoration	10	9	10	9	9	5	3	4	3	3	65	$3,500,000	$3,900,000	1	Kristine Altrichter, BRRWD (2017)	137	46	18-23
Otter Tail River	Channel Restoration	10	10	10	10	9	3	1	4	3	4	64	$30,000,000	$30,000,000	1	Nick Kludt, FAW (2014)	143	45	33, 32, 31+
Wild Rice River	Channel Restoration	10	10	10	8	9	5	1	4	3	4	64	$46,000,000	$46,000,000	1	Nick Kludt, FAW (2015)	144	46	29, 30
N. Br. Whitewater	Channel Restoration	10	10	10	7	9	4	3	4	3	3	63	$1,400,000	$1,400,000	3	Jeff Weiss, EWR (2018)	107	12	16,21
Florida Creek	Channel Restoration	10	10	10	8	9	4	1	2	3	3	60	TBD	TBD	4	Brooke Hacker, EWR (2020)	116/117	45/45	4,5,8,9
Orwell Dam	Fishway	9	10	10	10	8	3	2	3	3	0	58	$1,250,000	$4,600,000	1	REU, EWR (2021)	132	44	26
S. Trib of Whisky Creek	Channel Restoration	10	7	10	7	9	5	2	4	3	0	57	$2,250,000	$2,500,000	1	Kristine Altrichter, BRRWD (2017)	137	46	14,15,23,24,25,36
Ganz Dam	Dam Modification	10	8	9	9	10	3	1	2	3	0	55	TBD	TBD	1	Nick Kludt, FAW (2021)	139	47	9
Elizabeth Dam/Pelican River	Dam Modification	4	9	9	8	9	2	2	3	3	5	54	$451,000	$451,000	1	Jim Wolters, FAW (2017)	134	43	32
Bucks Mill Dam	Dam Modification	6	9	7	10	8	5	1	4	3	0	53	$2,000,000	$2,000,000	1	Nick Kludt, FAW (2020)	138	41	34
Northcote Dam	Dam Removal	8	9	7	10	8	3	1	2	3	0	51	TBD	TBD	1	Nick Kludt, FAW (2021)	162	49	16
Cannon River- Malt-O-Meal Dam	Dam Modification	4	8	9	8	8	1	1	1	1	0	41	$500,000	$2,300,000	4	Ian Chisholm, EWR (before 2010)	111	20	1

Not requesting funding for ML2022*	Submitting directly to the Council for ML2022

Tie breakers:
1. Timing
2. Resource Potential
3. Critical Habitat

RED LAKE BAND
of CHIPPEWA INDIANS
RED LAKE NATION HEADQUARTERS

PO Box 550, Red Lake, MN 56671 Phone 218-679-3341 · Fax 218-679-3378

Henry Drewes
Minnesota Department of Natural Resources
2115 Birchmont Beach Road NE
Bemidji, MN 56601

May 26, 2021

Dear Henry:

My staff and I have recently reviewed the Minnesota Department of Natural Resources proposal to assist in the modification of the Rock Dam, which is located within the Red Lake Reservation, and we fully support this effort. This is one of the shared goals of our Departments, to restore connectivity of our riverine waterways, which have been fractured over the past 100 years. Many aquatic species rely on these waterways for seasonal movements and spawning migrations. Our lake sturgeon restoration efforts in the watershed are well on their way, and dam modification is one way we can continue to assist the rehabilitation of this species.

The Rock Dam was constructed in 1950's by the Army Corp of Engineers (ACOE) to mitigate damages that had occurred upstream by channelizing a section of the Red Lake River below the Red Lake Dam. This low head dam, did raise the water level behind the dam, but created a public safety drowning hazard, and cutoff the migration pathway of many fish species that live within this section of the Red Lake River. We have had preliminary discussions with the Minnesota Department of Natural Resources (MNDNR), ACOE, and the U.S. Fish and Wildlife Service (USFWS) to discuss our intentions to evaluate the feasibility of modifying this structure to allow for fish passage. We are in the planning stages of this effort at this time, but our partners are excited about the potential of this project.

We fully support this project and welcome the technical expertise and any monetary support that your agency may contribute to the success of this restoration work. In the end, it is the resource that wins, when agencies collaborate together with a common goal in mind. If you have any additional questions or concerns, please contact me or Pat Brown at 218-679-3959.

Sincerely,

Allen Pemberton
Red Lake DNR Director
Red Lake Band of Chippewa Indians
218-679-3959
apemberton@redlakenation.org