



## Lessard-Sams Outdoor Heritage Council

DNR Aquatic Habitat Restoration and Enhancement - Phase 8  
ML 2025 Request for Funding

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### General Information

**Date:** 06/04/2024

**Proposal Title:** DNR Aquatic Habitat Restoration and Enhancement - Phase 8

**Funds Requested:** \$13,411,800

**Confirmed Leverage Funds:** \$14,250,000

**Is this proposal Scalable?:** Yes

### Manager Information

**Manager's Name:** Dean Paron

**Title:** Stream Habitat Supervisor

**Organization:** Mn DNR Section of Fisheries

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### Location Information

**County Location(s):** Becker, Olmsted, Lac qui Parle, Pine, Stevens and Big Stone.

**Eco regions in which work will take place:**

- Prairie
- Northern Forest
- Southeast Forest
- Forest / Prairie Transition

**Activity types:**

- Enhance
- Restore

**Priority resources addressed by activity:**

- Habitat

## Narrative

### Abstract

The Minnesota Department of Natural Resources (MNDNR) will complete five fish passage projects to reconnect reaches of habitat for fish and other aquatic life and restore reaches of four different rivers, creating over 16 miles of diverse habitat. The footprint of fish passage projects is small, but projects will reconnect 11,680 acres of lake and river habitat. Stream 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. Submissions 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 five fish passage projects and four channel restorations, leveraging \$14,250,000.00.

Access to different habitats is critical for fish and other aquatic organisms to complete various life stages. The habitats they use to spawn, live as juveniles, over-winter, and feed as adults may all be different. 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. Modifying or removing the barriers through our four proposed fish passage projects would have a footprint of 8 acres but create upstream access to 11,680 acres of lake and river habitat and restore river ecological processes that have ecosystem wide benefits. This will benefit fish such as Walleye, Northern Pike, and Lake Sturgeon present in these rivers, as well as five mussel species classified as threatened or special concern.

Streams naturally form habitat through the meandering of the river. 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. Working with partners, we will restore over 16 miles of habitat on four streams. These restored reaches also will connect reaches of quality habitat.

Department resources for stream habitat work falls short of the need; funding from the Outdoor Heritage Fund has been critical to an acceleration of stream habitat work by the department and partners. Funding for two restoration coordinator, river specialist, and interns are included in this proposal. These positions provide critical technical assistance, and construction oversight to partners working on Legacy-funded stream restoration and enhancement projects. These positions improve coordination efficiency by providing single points of contact and enhance outcomes of aquatic habitat projects through technical assistance.

## **Explain how the proposal addresses habitat protection, restoration, and/or enhancement for fish, game & wildlife, including threatened or endangered species conservation**

The Upper Otter Tail Connectivity and Buffalo River 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 this project, block upstream migrations of mature Lake Sturgeon on the Otter Tail River. Removing these barriers to fish passage is key to restoring a naturally reproducing population of Lake Sturgeon in the Red River basin. These projects also will have enhanced restoration goals by leveraging almost 8 million in federal grants.

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 are the elements of this proposal that are critical from a timing perspective?**

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 \$14,250,000 of our projects. Completing these projects would take advantage of those funds while they are available.

There are multiple one-time federal funding opportunities for aquatic habitat restoration and enhancement through the Bipartisan Infrastructure Law. We have been aggressively pursuing these funding sources using Outdoor Heritage Fund appropriations as leverage. Working out the timing between federal funding and Outdoor Heritage Fund appropriations is always challenging so we only include federal funding that has already been committed as leverage. However, we will continue to aggressively pursue all federal funding opportunities with these appropriations.

## **Describe how the proposal expands habitat corridors or complexes and/or addresses habitat fragmentation:**

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 top 2 Conservation Plans referenced in MS97A.056, subd. 3a are most applicable to this project?**

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

### **Explain how this proposal will uniquely address habitat resilience to climate change and its anticipated effects on game, fish & wildlife species utilizing the protected or restored/enhanced habitat this proposal targets.**

Improving fish passage is one of the most effective ways to help conserve vulnerable species and improve climate resilience. Access to different habitats is critical for fish and other aquatic organisms to complete various life stages. The habitats they use to spawn, live as juveniles, over-winter, and feed as adults may all be different. 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.

### **Which LSOHC section priorities are addressed in this proposal?**

#### **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

#### **Southeast Forest**

- Protect, enhance, and restore habitat for fish, game, and nongame wildlife in rivers, cold-water streams, and associated upland habitat

### **Describe how this project/program will produce and demonstrate a significant and permanent conservation legacy and/or outcomes for fish, game, and wildlife, and if not permanent outcomes, why it is important to undertake at this time:**

The fish passage and channel restoration projects included in this proposal represent opportunities to make major and lasting positive changes for those watersheds. Fish passage projects such as at the Otter Tail Connectivity, Long Lake Dam removal, Buffalo River Culvert Replacements, Crissy Lake Dam, Grindstone Dam removal 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.

## 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 ~ *This project aligns with “Reconnect the Red” efforts (Goal #3, Red River Fisheries Management plan; Phase 2 Lake Sturgeon Restoration Plan), and the Otter Tail River 1W1P (“enhancing aquatic connectivity” goal). This multi-phase collaboration builds on 30 years of Red River connectivity progress to date, 47 of 79 major barriers on the Red River and Minnesota tributaries have been removed or modified to allow fish passage. For this 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*

### Programs in the northern forest region:

- Improved aquatic habitat indicators ~ *For the Grindstone River Dam project, warmwater fish communities will be assessed before and after project completion.*

### Programs in prairie region:

- Other ~ *The Whetstone, Upper Buffalo River, Florida Creek 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 Long Lake Dam fish passage project, we will use routine fish surveys to gauge changes to the fish community and compare with pre-project data.*

### Programs in southeast forest region:

- Rivers, streams, and surrounding vegetation provide corridors of habitat ~ *The Cascade Creek channel restoration project in this region will improve in-channel and riparian habitat. We will use metrics that evaluate instream and floodplain habitat to assess our success.*

### What other dedicated funds may collaborate with or contribute to this proposal?

- Clean Water Fund

### 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.

### 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, the General Fund, and people who volunteer to help the department with projects.

## 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.

### Provide an assessment of how your program may celebrate cultural diversity or reach diverse communities in Minnesota, including reaching low- and moderate-income households:

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’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 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

**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 or on lands to be acquired in this program?**

Yes

**Where does the activity take place?**

- Public Waters
- AMA
- WMA
- County/Municipal

**Land Use**

**Will there be planting of any crop on OHF land purchased or restored in this program, either by the proposer or the end owner of the property, outside of the initial restoration of the land?**

No

**Will insecticides or fungicides (including neonicotinoid and fungicide treated seed) be used within any activities of this proposal either in the process of restoration or use as food plots?**

No

**Other OHF Appropriation Awards**

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

Yes

**Are any of these past appropriations still OPEN?**

Yes

Approp Year	Funding Amount Received	Amount Spent to Date	Funding Remaining	% Spent to Date
2023	\$4,122,000	\$157,705	\$3,964,295	3.83%
2022	\$5,177,000	\$928,060	\$4,248,940	17.93%
2021	\$2,790,000	\$1,787,966	\$1,002,034	64.08%
2020	\$3,790,000	\$3,161,424	\$628,576	83.41%
2019	\$3,208,000	\$2,727,899	\$480,101	85.03%
Totals	\$19,087,000	\$8,763,054	\$10,323,946	45.91%

**Timeline**

Activity Name	Estimated Completion Date
Design of fish passage and channel restoration projects	March 2026
Permitting and environmental review of fish passage and channel restoration projects	December 2026
Construction of fish passage and channel restoration projects	September 2028
Vegetation maintenance on fish passage and channel restoration projects	June 2028

**Budget**

**Totals**

Item	Funding Request	Total Leverage	Leverage Source	Total
Personnel	\$2,285,000	-	-	\$2,285,000
Contracts	\$10,392,000	\$14,250,000	Bipartisan Infrastructure Law, America the Beautiful Grant, Minnesota Get Out MORE (Modernize Outdoor Recreation Experiences) funding, Upper Minnesota River Watershed District, Flood Damage Reduction Grant	\$24,642,000
Fee Acquisition w/ PILT	-	-	-	-
Fee Acquisition w/o PILT	-	-	-	-
Easement Acquisition	-	-	-	-
Easement Stewardship	-	-	-	-
Travel	\$100,000	-	-	\$100,000
Professional Services	\$360,000	-	-	\$360,000
Direct Support Services	\$214,800	-	-	\$214,800
DNR Land Acquisition Costs	-	-	-	-
Capital Equipment	-	-	-	-
Other Equipment/Tools	-	-	-	-
Supplies/Materials	\$60,000	-	-	\$60,000
DNR IDP	-	-	-	-
<b>Grand Total</b>	<b>\$13,411,800</b>	<b>\$14,250,000</b>	-	<b>\$27,661,800</b>

**Personnel**

Position	Annual FTE	Years Working	Funding Request	Total Leverage	Leverage Source	Total
Fish Passage Specialist	1.0	4.0	\$360,000	-	-	\$360,000
Intern - 4 positions	1.0	4.0	\$200,000	-	-	\$200,000
River Specialist	1.0	3.0	\$300,000	-	-	\$300,000
Restoration Coordinator 2nd	1.0	5.0	\$750,000	-	-	\$750,000
Restoration Coordinator	1.0	3.5	\$525,000	-	-	\$525,000



**Amount of Request:** \$13,411,800  
**Amount of Leverage:** \$14,250,000  
**Leverage as a percent of the Request:** 106.25%  
**DSS + Personnel:** \$2,499,800  
**As a % of the total request:** 18.64%  
**Easement Stewardship:** -  
**As a % of the Easement Acquisition:** -

Total Leverage (from above)	Amount Confirmed	% of Total Leverage	Amount Anticipated	% of Total Leverage
\$14,250,000	\$14,250,000	100.0%	-	0.0%

**Detail leverage sources and confirmation of funds:**

Whetstone: \$610,000 Upper Minnesota River Watershed District; \$1.8M Flood Damage Reduction; \$3.3M Bipartisan Infrastructure Law (BIL),  
 Buffalo River: \$340,000 FDR  
 Otter tail River: \$2.2M America the Beautiful Grant, \$3.9M BIL,  
 Crissy Lake: Get Out MORE (Modernize Outdoor Recreation Experiences) \$2,400,000

**Does this proposal have the ability to be scalable?**

Yes

**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 still be able to achieve approximately 40-50% of enhancement and restoration acres.

**Describe how personnel and DSS expenses would be adjusted and if not proportionately reduced, why?**

Personnel would reduce to 50 to 60% of the requested amount. Staff time would focus on project coordination, administration, and project development.

Direct Support Services is determined by a standard DNR process taking into account the amount of funding and the number of allocations made with that funding.

**If the project received 30% of the requested funding**

**Describe how the scaling would affect acres/activities and if not proportionately reduced, why?**

Top ranked projects are watershed-scale connectivity projects; at 30% funding we will achieve approximate 30-40% of our initial proposed acres for enhancement and 11% of our initial restoration acres. Thirty percent funding will allow us to reconnect 75 miles of high-quality river habitat and over 5800 acres of lake habitat.

**Describe how personnel and DSS expenses would be adjusted and if not proportionately reduced, why?**

Personnel would reduce to 30 to 40% of the requested amount. Staff time would focus on project coordination, administration, and project development.

Direct Support Services is determined by a standard DNR process taking into account the amount of funding and the number of allocations made with that funding.

## 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 of Restoration Coordinator was funded in the ML22 and ML23 appropriations and River Specialist was funded in the and ML23 appropriations. Once the personnel funds from those appropriations are extinguished, we will shift to charging salary to this appropriation.

## Contracts

**What is included in the contracts line?**

100% of contracts are for Restoration and Enhancement work.

## Professional Services

**What is included in the Professional Services line?**

- Design/Engineering

## 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	182	182
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	10	10
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>192</b>	<b>192</b>

### Total Requested Funding by Resource Type (Table 2)

Type	Wetland	Prairie	Forest	Habitat	Total Funding
Restore	-	-	-	\$9,295,500	\$9,295,500
Protect in Fee with State PILT Liability	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-
Protect in Easement	-	-	-	-	-
Enhance	-	-	-	\$4,116,300	\$4,116,300
<b>Total</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>\$13,411,800</b>	<b>\$13,411,800</b>

### Acres within each Ecological Section (Table 3)

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest	Total Acres
Restore	0	0	8	174	-	182
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	0	2	-	7	1	10
<b>Total</b>	<b>0</b>	<b>2</b>	<b>8</b>	<b>181</b>	<b>1</b>	<b>192</b>

### Total Requested Funding within each Ecological Section (Table 4)

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest	Total Funding
Restore	-	-	\$1,187,500	\$8,108,000	-	\$9,295,500
Protect in Fee with State PILT Liability	-	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-	-
Protect in Easement	-	-	-	-	-	-
Enhance	-	\$623,700	-	\$1,995,800	\$1,496,800	\$4,116,300
<b>Total</b>	<b>-</b>	<b>\$623,700</b>	<b>\$1,187,500</b>	<b>\$10,103,800</b>	<b>\$1,496,800</b>	<b>\$13,411,800</b>

### Average Cost per Acre by Resource Type (Table 5)

Type	Wetland	Prairie	Forest	Habitat
Restore	-	-	-	\$51,074
Protect in Fee with State PILT Liability	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-
Protect in Easement	-	-	-	-
Enhance	-	-	-	\$411,630

**Average Cost per Acre by Ecological Section (Table 6)**

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest
Restore	-	-	\$148,437	\$46,597	-
Protect in Fee with State PILT Liability	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-
Protect in Easement	-	-	-	-	-
Enhance	-	\$311,850	-	\$285,114	\$1,496,800

**Target Lake/Stream/River Feet or Miles**

16 miles

## Parcels

**Sign-up Criteria?**

No

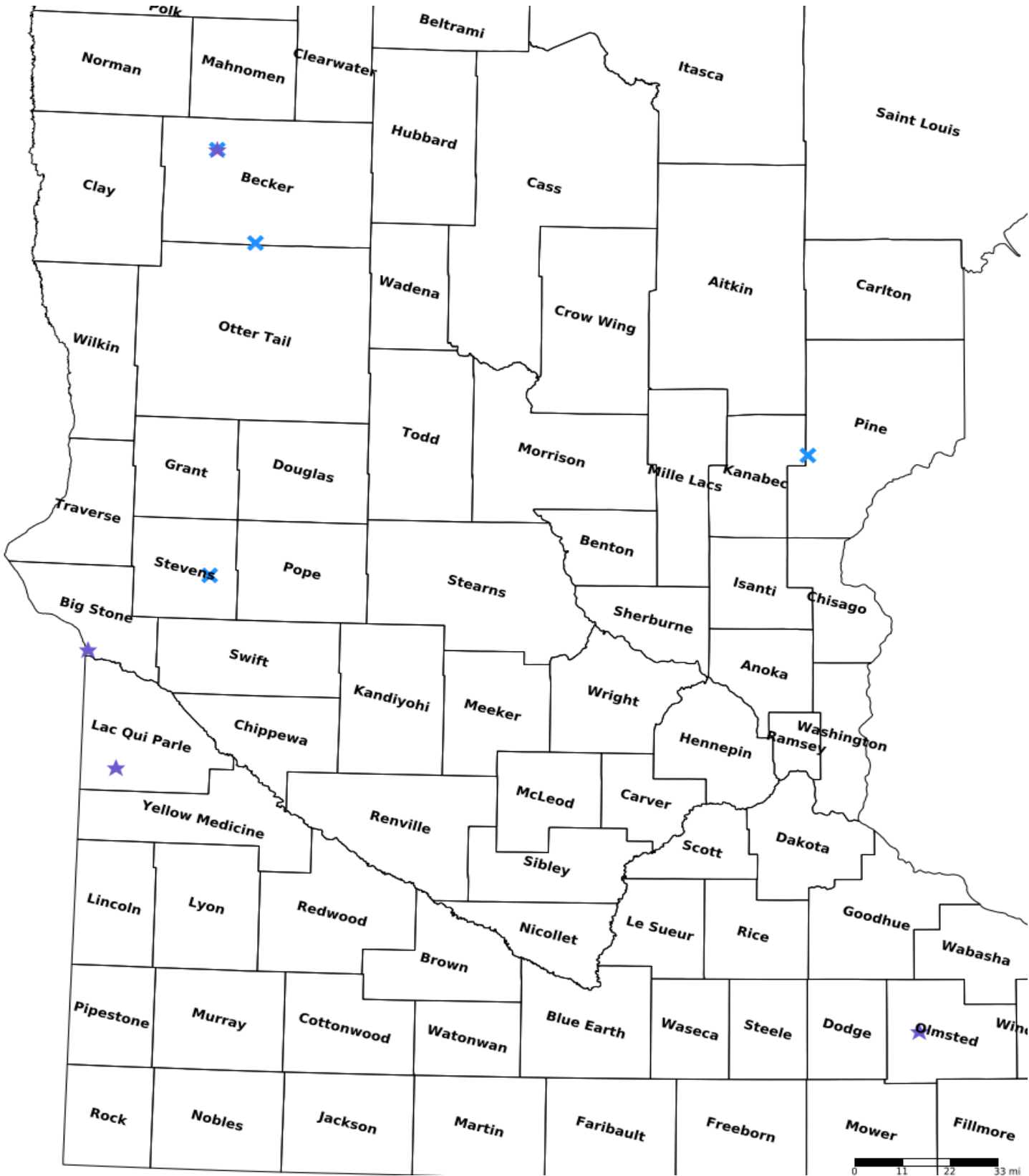
**Explain the process used to identify, prioritize, and select the parcels on your list:**

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.

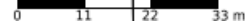
**Restore / Enhance Parcels**

Name	County	TRDS	Acres	Est Cost	Existing Protection	Description
Upper Buffalo River	Becker	14141207	5	\$1,500,000	Yes	Culvert Replacements
Otter Tail River	Becker	13840234	2	\$500,000	Yes	Culvert Removal
Upper Buffalo River	Becker	14141207	132	\$2,500,000	Yes	Channel Restoration
Whetstone	Big Stone	12146216	21	\$3,000,000	Yes	Channel Restoration and Fish Passage
Florida Creek Phase II	Lac qui Parle	11645204	22	\$1,000,000	Yes	Channel Restoration
Cascade Creek Phase II	Olmsted	10614205	8	\$952,000	Yes	Channel Restoration
Grindstone Dam	Pine	04121219	1	\$1,200,000	Yes	Dam Removal
Crissy Lake	Stevens	12442212	1	\$100,000	Yes	Dam Removal

### Parcel Map



- Protect in Easement
- ▲ Protect in Fee with PILT
- Protect in Fee W/O PILT
- ★ Restore
- ✕ Enhance
- ⊕ Other





# Aquatic Habitat Restoration and Enhancement—Phase 8

## Summary

Diverse habitat is critical to sustaining quality fish populations in lakes and rivers. The Minnesota Department of Natural Resources (MNDNR) will complete five fish passage projects to restore habitat connectivity for fish and other aquatic life, and restore reaches of four different rivers, creating sixteen miles of diverse aquatic habitat. Though the actual footprint of fish passage projects is relatively small, these projects will reconnect approximately 11,646 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

- Pomme de Terre River Association
- Steven, Lac qui Parle, East Otter Tail Soil and Water Conservation Districts
- City of Morris and City of Rochester
- Board of Water and Soil Resources
- US Fish and Wildlife Services
- South Dakota Game and Fish
- Buffalo-Red River and Upper Minnesota River Watershed Districts
- Sisseton-Wahpeton Oyate
- Minnesota Department of Transportation
- Red Lake Department of Natural Resources
- White Earth Reservation Business Council
- Pine Lake Improvement District
- Prairie Woods Chapter of Izaak Walton League
- Olmsted County



**Requested Amount: \$13,411,800**

**Leverage Amount: \$14,250,000**

## Projects in Progress



### Crissy Lake Dam

- Removes a dangerous dam located adjacent to a city park
- Reconnects 109 miles of habitat for 42 species of fish
- Partnership with Pomme de Terre River Association, Stevens SWCD, City of Morris



### Florida Creek Phase II

- Restores over four miles of stream channel
- Creates quality habitat for 24 species of fish including rare species and species of special concern
- Partnership with Lac qui Parle SWCD, BWSR, and USFWS

## Projects in Progress continued



### Whetstone

- Restores 9,000 feet of historic river channel
- Reconnects the Whetstone River basin and Big Stone Lake to the Minnesota River
- Reconnects and restores habitat for 47 species of fish including sturgeon and walleye
- Interstate project with diverse array of regional support
- Partnership with South Dakota Game and Fish, Upper Minnesota River Watershed District, Sisseton-Wahpeton Oyate



### Cascade Creek Phase II

- Restores dimension, pattern and profiles to 3,423 ft of ditched channel
- Improves habitat for 18 species of fish
- Benefits turbidity and fish impairments
- Partnership with Olmsted County and the City of Rochester



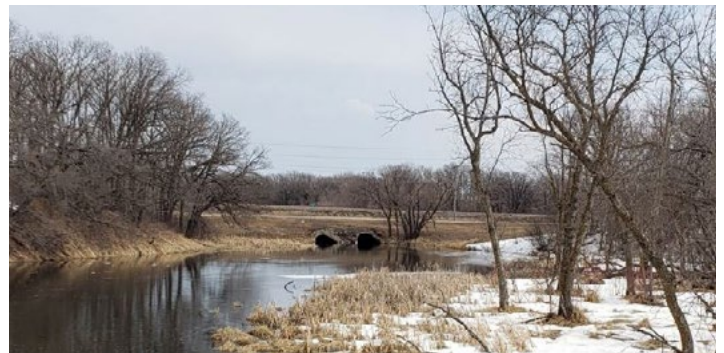
### Grindstone Dam

- Full removal of the Grindstone dam
- River will flow naturally again for the first time since 1931
- Reconnects 24 miles of stream for 37 species of fish



### Upper Buffalo Channel Restoration and Upper Buffalo Culverts

- Reconnects and restores a total of 9.8 river miles by remeaninging 7.2 miles of straightened ditch and reconnecting 2.6 miles of historic channel
- In coordination with the Upper Buffalo Channel, the project replaces five culverts that are barriers to fish passage for 13 species of fish
- Partnership with Buffalo Red River Watershed District



### Upper Otter Tail Connectivity

- Replaces two undersized culverts with two span bridges
- Multi-phase connectivity project to reconnect 36.5 miles of critical spawning habitat
- Partnership MNDOT, Red Lake Department of Natural Resources, White Earth Reservation Business Council, East Otter Tail SWCD, District, Pine Lakes Improvement District, Prairie Woods Chapter of the Izaak Walton League

### Questions?

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