Lessard-Sams Outdoor Heritage Council
Laws of Minnesota 2020 Accomplishment Plan

Date: May 18, 2020

Program or Project Title: DNR Aquatic Habitat Restoration and Enhancement - Phase 3

Funds Recommended: $ 3,790,000

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Legislative Citation: ML 2020, Ch. 104, Art. 1, Sec. 2, subd 5(j)

Appropriation Language: $3,790,000 the second year is to the commissioner of natural resources to restore and enhance aquatic habitat in degraded streams and aquatic management areas and to facilitate fish passage. A list of proposed land restorations and enhancements must be provided as part of the required accomplishment plan.

County Locations: Clay, Lake, Olmsted, Otter Tail, Pine, and St. Louis.

Eco regions in which work will take place:

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

Activity types:

- Enhance
- Restore

Priority resources addressed by activity:

- Habitat

Abstract:

Diverse habitat is critical to sustaining quality fish populations in lakes and rivers. The Minnesota Department of Natural Resources (MNDNR) will complete two fish passage projects to restore habitat connectivity for fish and other aquatic life, and restore reaches of two different rivers, creating 1.8 miles of diverse aquatic habitat. Though the actual footprint of fish passage projects is relatively small, these projects will reconnect over 600 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. Project submittals 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 two fish passage projects and two channel restorations, leveraging a confirmed $463,400 and an additional $1,000,000 requested from other 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. Modifying or removing the barriers through our two proposed fish passage projects would have a total footprint of 2 acres, but create upstream access to over 600 acres of lake and river habitat. This 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.

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. Channel restoration projects will utilize reference locations with high-quality habitat to improve habitat. Working with partners, we will restore 1.8 miles of habitat on two streams.

Department resources for stream habitat work falls far short of the need; funding from the Outdoor Heritage Fund (OHF) has been critical to an acceleration of stream habitat work by the department and partners such as Trout Unlimited, as well as smaller groups such as lake associations. We propose to continue funding for one stream habitat coordinator and two stream habitat specialist positions to enable this increased effort. They provide technical assistance and oversight on Legacy-funded projects by MNDNR and partners, improve efficiency of coordination by providing single points of contact, and enhance outcomes of aquatic habitat projects through technical guidance.

How does the request address MN habitats that have: historical value to fish and wildlife, wildlife species of greatest conservation need, MN County Biological Survey data, and/or rare, threatened and endangered species inventories:

The Pelican Rapids Dam and Hockamin Creek 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. Restoration of fish passage will help to return fish and mussel diversity that was present upstream of dams prior to their construction. Projects with the potential to benefit rare species is one of the criteria by which stream projects are ranked.

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.

Describe the science based planning and evaluation model used:

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.

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 should something catastrophic 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 sections of the Minnesota Statewide Conservation and Preservation Plan are applicable to this program:

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

Which other plans are addressed in this program:

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

Which LSOHC section priorities are addressed in this program:

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

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

Relationship to other funds:

- Not Listed

Does this program include leverage in funds:

Yes

Lake County SWCD received a $390,000 Sustain Our Great Lakes grant for the Hockamin Creek project. The Buffalo Red River Watershed District has $73,400 in confirmed funds from Fargo-Moorhead Diversion Authority ($60,800) and Red River Basin Flood Damage Reduction Workgroup ($12,600).

Per MS 97A.056, Subd. 24, Any state agency or organization requesting a direct appropriation from the OHF must inform the LSOHC at the time of the request for funding is made, 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.

Describe the source and amount of non-OHF money spent for this work in the past:

Appropriation Year	Source	Amount
2018	Game and Fish, Heritage Enhancement, and Federal Grants	3,618,100
2017	Game and Fish, Heritage Enhancement, and Federal Grants	3,681,500
2016	Game and Fish, Heritage Enhancement, and Federal Grants	3,267,000
2015	Game and Fish, Heritage Enhancement, and Federal Grants	3,596,000
2014	Game and Fish, Heritage Enhancement, and Federal Grants	4,062,000

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.

Explain the things you will do in the future 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

Activity Details:

If funded, this program will meet all applicable criteria set forth in MS 97A.056 - **Yes**

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

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

Is the activity on permanently protected land per 97A.056, subd 13(f), tribal lands, and/or public waters per MS 103G.005, Subd. 15 - **Yes (AMA, County/Municipal, Public Waters)**

Accomplishment Timeline:

Activity	Approximate Date Completed
Design of fish passage and channel restoration projects	March, 2021
Permitting and environmental review of fish passage and channel restoration projects	December, 2021
Construction of fish passage and channel restoration projects	September, 2022
Vegetation maintenance on fish passage and channel restoration projects	June, 2024

Date of Final Report Submission: 11/1/2025

Federal Funding:

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

Outcomes:

Programs in the northern forest region:

- Improved aquatic habitat indicators *For the Hockamin Creek project, brook trout catch rates will be compared before and after project completion to evaluate the success of restoring fish passage upstream of these barriers.*

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 Pelican River. For the Pelican Rapids 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 southeast forest region:

- Large corridors and complexes of biologically diverse wildlife habitat typical of the unglaciated region are restored and protected

Programs in prairie region:

- The Stony Creek project will improve in-channel and riparian habitat. We will use metrics that evaluate instream and floodplain habitat to assess our success.

Budget Spreadsheet

Budget reallocations up to 10% do not require an amendment to the Accomplishment Plan

How will this program accommodate the reduced appropriation recoomendation from the original proposed requested amount

We will implement stream projects based on our prioritized list, completing the highest priorities with available funding. We will also be able to fund the requested positions needed to implement these projects, develop future Legacy projects, and work with partners on other Legacy funded projects.

Total Amount of Request: $ 3790000

Budget and Cash Leverage

Budget Name	LSOHC Request	Anticipated Leverage	Leverage Source	Total
Personnel	$940,000	$0		$940,000
Contracts	$2,546,900	$463,400	Sustain Our Great Lakes grant, Buffalo Red River Watershed District	$3,010,300
Fee Acquisition w/ PILT	$0	$0		$0
Fee Acquisition w/o PILT	$0	$0		$0
Easement Acquisition	$0	$0		$0
Easement Stewardship	$0	$0		$0
Travel	$48,000	$0		$48,000
Professional Services	$175,200	$0		$175,200
Direct Support Services	$67,900	$0		$67,900
DNR Land Acquisition Costs	$0	$0		$0
Capital Equipment	$0	$0		$0
Other Equipment/Tools	$0	$0		$0
Supplies/Materials	$12,000	$0		$12,000
DNR IDP	$0	$0		$0
Total	$3,790,000	$463,400		$4,253,400

Personnel

Position	FTE	Over # of years	LSOHC Request	Anticipated Leverage	Leverage Source	Total
Stream Restoration Coordinator	1.00	2.00	$250,000	$0		$250,000
Stream Restoration Intern	0.60	2.00	$65,000	$0		$65,000
Stream Habitat Specialist	2.00	3.00	$625,000	$0		$625,000
Total	3.60	7.00	$940,000	$0		$940,000

Amount of Request:	$3,790,000
Amount of Leverage:	$463,400
Leverage as a percent of the Request:	12.23%
DSS + Personnel:	$1,007,900
As a % of the total request:	26.59%

How did you determine which portions of the Direct Support Services of your shared support services is direct to this program:

The DNR uses a formula based on direct and necessary costs to support the appropriation.

What is included in the contacts line?

Contracts for construction of stream projects with city of Pelican Rapids to modify Pelican Rapids dam, Lake County SWCD for Hockamin Creek culverts, and with Buffalo/Red River Watershed to restore a portion of Stony Creek, and include professional design services provided or contracted by partners.

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:

Describe and explain leverage source and confirmation of funds:

Lake County SWCD received a $390,000 Sustain Our Great Lakes grant for the Hockamin Creek project. The Buffalo Red River Watershed District has $73,400 in confirmed funds from Fargo-Moorhead Diversion Authority ($60,800) and Red River Basin Flood Damage Reduction Workgroup ($12,600).

Output Tables

Table 1a. Acres by Resource Type

Type	Wetlands	Prairies	Forest	Habitats	Total
Restore	0	0	0	11	11
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	3	3
Total	0	0	0	14	14

Table 2. Total Funding by Resource Type

Type	Wetlands	Prairies	Forest	Habitats	Total
Restore	$0	$0	$0	$708,100	$708,100
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	$3,081,900	$3,081,900
Total	$0	$0	$0	$3,790,000	$3,790,000

Table 3. Acres within each Ecological Section

Type	Metro Urban	Forest Prairie	SE Forest	Prairie	N Forest	Total
Restore	0	0	0	9	2	11
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	1	0	0	2	3
Total	0	1	0	9	4	14

Table 4. Total Funding within each Ecological Section

Type	Metro Urban	Forest Prairie	SE Forest	Prairie	N Forest	Total
Restore	$0	$0	$0	$394,200	$313,900	$708,100
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	$2,509,200	$0	$0	$572,700	$3,081,900
Total	$0	$2,509,200	$0	$394,200	$886,600	$3,790,000

Table 5. Average Cost per Acre by Resource Type

Type	Wetlands	Prairies	Forest	Habitats
Restore	$0	$0	$0	$64373
Protect in Fee with State PILT Liability	$0	$0	$0	$0
Protect in Fee W/O State PILT Liability	$0	$0	$0	$0
Protect in Easement	$0	$0	$0	$0
Enhance	$0	$0	$0	$1027300

Table 6. Average Cost per Acre by Ecological Section

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	Northern Forest
Restore	$0	$0	$0	$43800	$156950
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	$2509200	$0	$0	$286350

Automatic system calculation / not entered by managers

Target Lake/Stream/River Feet or Miles

1.2

Parcel List

For restoration and enhancement programs ONLY: Managers may add, delete, and substitute projects on this parcel list based upon need, readiness, cost, opportunity, and/or urgency so long as the substitute parcel/project forwards the constitutional objectives of this program in the Project Scope table of this accomplishment plan. The final accomplishment plan report will include the final parcel list.

Section 1 - Restore / Enhance Parcel List

Clay

Name	TRDS	Acres	Est Cost	Existing Protection?
Stony Creek	13746202	9	$335,800	Yes
Whisky Creek	13746218	72	$3,918,000	Yes

Lake

Name	TRDS	Acres	Est Cost	Existing Protection?
Hockamin Creek	05707219	2	$523,900	Yes

Olmsted

Name	TRDS	Acres	Est Cost	Existing Protection?
North Branch Whitewater River	10712216	26	$1,880,600	Yes

Otter Tail

Name	TRDS	Acres	Est Cost	Existing Protection?
Pelican River	13643222	1	$2,020,600	Yes

Pine

Name	TRDS	Acres	Est Cost	Existing Protection?
Grindstone River	04121224	11	$1,141,800	Yes

St. Louis

Name	TRDS	Acres	Est Cost	Existing Protection?
Kingsbury Creek	04915210	7	$621,900	Yes

Section 2 - Protect Parcel List

No parcels with an activity type protect.

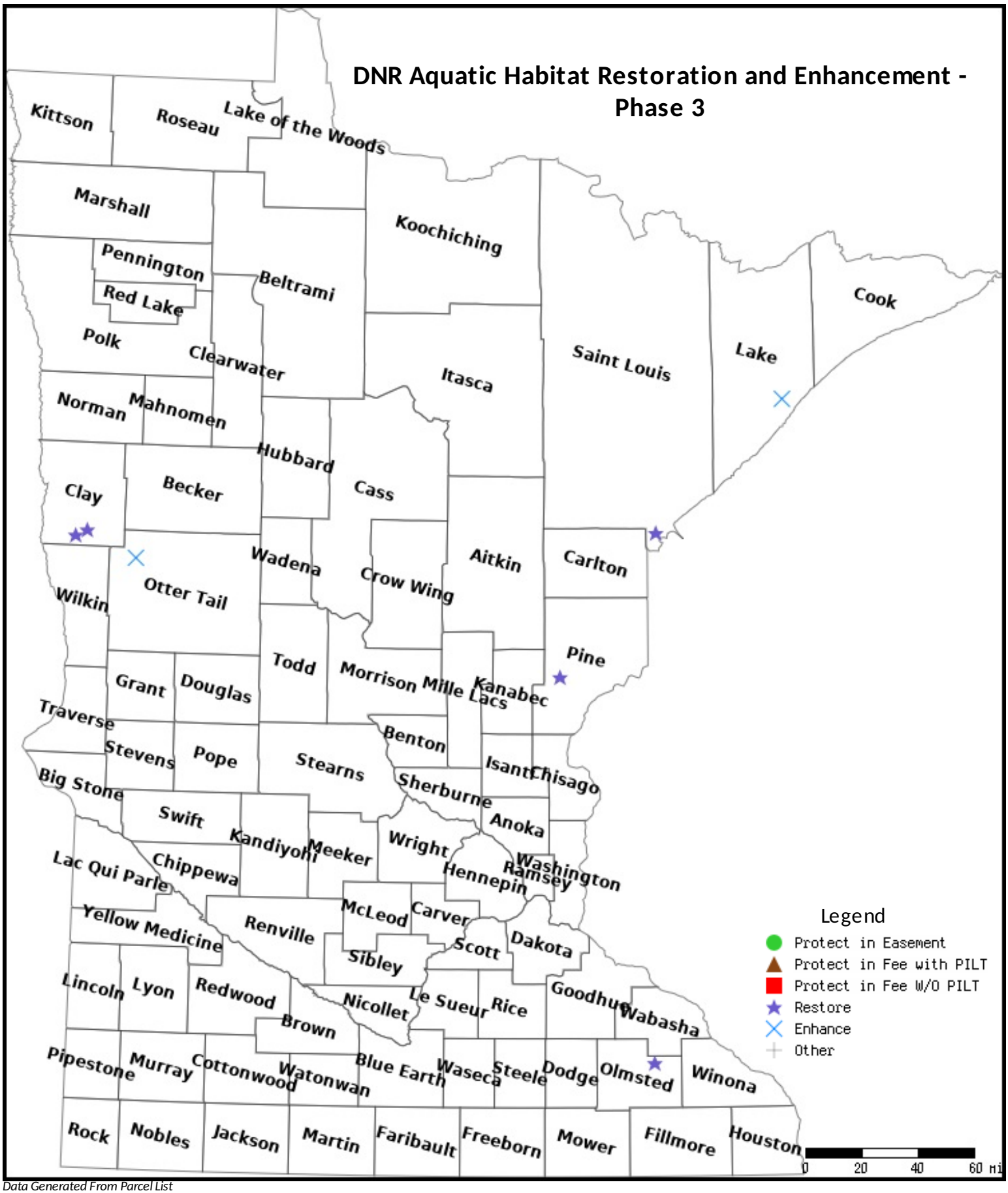
Section 2a - Protect Parcel with Bldgs

No parcels with an activity type protect and has buildings.

Section 3 - Other Parcel Activity

No parcels with an other activity type.

Parcel Map



Data Generated From Parcel List