



Lessard-Sams Outdoor Heritage Council

Laws of Minnesota 2019 Accomplishment Plan

General Information

Date: 11/29/2021

Project Title: Big Rice Lake Wild Rice Enhancement

Funds Recommended: \$845,000

Legislative Citation: ML 2019, 1st Sp. Session, Ch. 2, Art. 1, Sec. 2, subd, 4(g)

Appropriation Language: \$845,000 the first year is to the commissioner of natural resources to enhance and restore wild rice wetland habitat in Big Rice Lake in St. Louis County.

Manager Information

Manager's Name: Ricky Lien

Title: Wetland Habitat Supervisor

Organization: Minnesota DNR

Address: 500 Lafayette Road

City: St. Paul, MN 55155

Email: ricky.lien@state.mn.us

Office Number: 651-259-5227

Mobile Number:

Fax Number: 651-297-4961

Website: www.dnr.state.mn.us

Location Information

County Location(s): St. Louis.

Eco regions in which work will take place:

- Northern Forest

Activity types:

- Enhance

Priority resources addressed by activity:

- Wetlands

Narrative

Abstract

Wild rice abundance has greatly declined across Big Rice Lake, while other competitive vegetation has drastically increased. This proposal will utilize knowledge gained from small-scale vegetation work as well as hydrological alterations and apply it to a lake-wide scale to enhance conditions for wild rice success. A total of 2,072 acres of wild rice habitat will be enhanced as a result of the OHF lake outlet work that will impact water levels. 850 acres of the existing 1,000 pickerel weed will be treated to allow wild rice to regenerate.

Design and Scope of Work

Big Rice Lake historically was one of the best producing wild rice lakes in northeastern Minnesota for wild rice harvesters and migratory waterfowl use. Today, due to hydrologic alterations, stabilization of water level, and other variables, like changes in climatic conditions and impacts from wildlife herbivory, wild rice has declined across the lake and pickerelweed has become the dominant vegetation.

This proposal will accomplish 2,072 acres of wild rice habitat enhancement work on Big Rice Lake. A multi-agency effort will assist in the completion of the project and long-term success. The agencies involved include the US Forest Service, 1854 Treaty Authority, Bois Forte Band of Chippewa, Fond du Lac Band of Lake Superior Chippewa, and the Minnesota DNR Wildlife and Shallow Lakes Program. In addition to these key players, Big Rice Lake has a large recreational user group and concerned citizen following. Due to the extent of the issue and importance of the enhancement to all entities involved, it is critical that this project be completed as soon as possible.

The project will include three sections to address issues of concern. One section will address the outlet control structure that is inefficient and impacting hydrology. The structure is a rock weir which will be removed and the outlet will be restored to the pre-weir conditions to promote natural flow dynamics. The second section will address the public access to ensure large equipment can be launched. The third section will address the pickerelweed dominance and enhance wild rice abundance. Pickerelweed will be reduced by utilizing a combination of Fond du Lac Band's airboats and harvester barge, Bois Forte Band's harvester barge, and a DNR airboat and boat with a mudmotor. Once pickerelweed is removed, wild rice will be more likely to re-establish. If wild rice does not re-establish naturally from the resident seed in the substrate, seed from another location will be evaluated and used to reseed Big Rice Lake. 850 acres of the current 1000-acre area of pickerel weed infestation will be removed.

The equipment needs will be essential to the long-term success since this project, specifically vegetation control, is predicted to require some small-scale maintenance until pickerelweed is no longer the dominant species.

Based on small-scale vegetation work already completed at Big Rice Lake and the information gathered from sources that have completed similar vegetation enhancement projects, there is a high level of confidence that this

project will be successful and will enhance 2,072 acres of wild rice habitat for waterfowl, as well as the recreational users, wild rice harvesters, and waterfowl hunters.

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

Big Rice Lake is one of the largest shallow, wild rice lakes in northeastern Minnesota. The habitat present is dominated by pickerelweed which does not provide the migratory food source, brood rearing and nesting cover, or offer the diversity of other aquatic plants that a wild rice dominated habitat can provide. Enhancing wild rice will offer that critical habitat for resident and migratory waterfowl as well as other shorebirds and wetland favoring species. Based on observational information gathered from waterfowl hunters and wild rice harvesters from the years that rice was more abundant on Big Rice Lake, it was common to see many thousands of waterfowl utilizing the lake throughout the migration. Currently, since the habitat conditions have declined, very few waterfowl are observed during the fall migration.

Specific species of greatest conservation need listed in the Minnesota's Wildlife Action Plan 2015-2025 that will benefit from the habitat work proposed include lesser scaup, northern pintail, American black duck, common moorhen, least bittern, American bittern, marsh wren, Virginia rail, yellow rail, and trumpeter swan.

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

This proposal incorporates the need for habitat enhancement at a local and regional scale when evaluating the overall change in habitat quality as well as the involvement of recreational users and the vested interested by partnering agencies; targeting Big Rice Lake is not only science-based but also interest-based. Big Rice Lake is listed as a Priority Shallow Lake for focused management by the Shallow Lakes Program. Additionally, Big Rice is a Designated Wildlife Lake. The Big Rice Lake area has been identified as a Conservation Focus Area in Minnesota's Wildlife Action Plan which identifies areas of high diversity and key areas for conservation management. Big Rice Lake has had multiple aquatic plant surveys completed by various entities within the DNR including the Shallow Lakes Program, Fisheries, and County Biological Survey. Additional aquatic plant surveys have been completed by tribal agencies to assist with on-going monitoring of lake habitat conditions.

This proposal includes successful management techniques completed on Big Rice Lake at a smaller scale, as well as Rice Lake National Wildlife Refuge and on lakes within the Fond du Lac Reservation. Additionally, the work completed on Big Rice Lake in the past five years has been copied by other tribal agencies in Wisconsin to restore wild rice. There is little scientific literature available or research completed on specific actions related to vegetation management for wild rice enhancement in the northern forest. However, in order to implement this proposal, the best science available is being utilized. Big Rice Lake has the potential to provide 2072 acres of high quality aquatic habitat that is located in an area dominated by small lakes (<200 acres), winding rivers, and vast forested wetland complexes. Such a large wild rice lake is rare and can provide the needed habitat for resident and migratory waterfowl.

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

- H4 Restore and protect shallow lakes
- H6 Protect and restore critical in-water habitat of lakes and streams

Which two other plans are addressed in this program?

- Long Range Duck Recovery Plan
- Managing Minnesota's Shallow Lakes for Waterfowl and Wildlife

Which LSOHC section priorities are addressed in this program?

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

Does this program include leveraged funding?

-

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 not supplanting and is not a substitution for any previous funding that was not from a legacy fund and was used for the same purpose.

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

Local DNR and tribal wildlife biologists will monitor the site to determine project outcomes. Future management of a well-established rice bed will include monitoring of the lake outlet to prevent obstructions such as beaver dams or fallen trees. Obstructions such as these will be removed to prevent rising water levels that can negatively impact wild rice. The equipment associated with this proposal will be essential to its long-term success since this project, specifically vegetation control, is predicted to require some small-scale maintenance for the foreseeable future until pickerelweed is no longer the dominant species. In addition to the required vegetation maintenance at Big Rice Lake, the acquired equipment would be available to address similar vegetation issues (pickerelweed, cattail, etc.) on wild rice lakes statewide.

Actions to Maintain Project Outcomes

Year	Source of Funds	Step 1	Step 2	Step 3
Annually	DNR staff funding from various sources	monitor wild rice abundance	monitor lake outlet and remove obstructions as needed	-

Activity Details

Requirements

If funded, this program 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?

- Public Waters

Land Use

Will there be planting of any crop on OHF land purchased or restored in this program?

No

Timeline

Activity Name	Estimated Completion Date
Modify access to accomodate large equipment, modify lake outlet flow restrictions	July 2020
Vegetation control	June 2023
Wild rice seeding	September 2023

Date of Final Report Submission: 09/15/2024

Budget

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

Totals

Item	Funding Request	Antic. Leverage	Leverage Source	Total
Personnel	\$114,000	-	-	\$114,000
Contracts	\$290,000	-	-	\$290,000
Fee Acquisition w/ PILT	-	-	-	-
Fee Acquisition w/o PILT	-	-	-	-
Easement Acquisition	-	-	-	-
Easement Stewardship	-	-	-	-
Travel	\$101,000	-	-	\$101,000
Professional Services	-	-	-	-
Direct Support Services	\$54,000	-	-	\$54,000
DNR Land Acquisition Costs	-	-	-	-
Capital Equipment	\$67,000	-	-	\$67,000
Other Equipment/Tools	\$30,000	-	-	\$30,000
Supplies/Materials	\$189,000	-	-	\$189,000
DNR IDP	-	-	-	-
Grand Total	\$845,000	-	-	\$845,000

Personnel

Position	Annual FTE	Years Working	Funding Request	Antic. Leverage	Leverage Source	Total
Seasonal Natural Resource Technicians	2.0	4.0	\$114,000	-	-	\$114,000

Capital Equipment

Item	Funding Request	Antic. Leverage	Leverage Source	Total
One airboat	\$67,000	-	-	\$67,000

Amount of Request: \$845,000

Amount of Leverage: -

Leverage as a percent of the Request: 0.0%

DSS + Personnel: \$168,000

As a % of the total request: 19.88%

Easement Stewardship: -

As a % of the Easement Acquisition: -

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

Amount of capital equipment has been reduced. The reduced funding will result in treatment of 850 acres of the existing 1000 acres of pickerel weed. Future resources will be needed to address the remaining pickerel weed.

Contracts

What is included in the contracts line?

Contract work includes: Fond du Lac harvester barge, airboat and operators; Bois Forte harvester barge and operator; contracted work to renovate the access ramp and move boulders to allow access by large equipment; contracted work at the outlet to remove the rock weir; wild rice seed evaluation to determine suitability.

Travel

Does the amount in the travel line include equipment/vehicle rental?

Yes

Explain the amount in the travel line outside of traditional travel costs of mileage, food, and lodging

Besides mileage, food, and lodging, the funding requested for Travel includes such items as fuel for a boat and anticipated maintenance for the airboats (a "fleet" expense in the DNR system).

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

No

Direct Support Services

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

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.

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	0	0
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	2,072	0	0	0	2,072
Total	2,072	0	0	0	2,072

Total Requested Funding by Resource Type (Table 2)

Type	Wetland	Prairie	Forest	Habitat	Total Funding
Restore	-	-	-	-	-
Protect in Fee with State PILT Liability	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-
Protect in Easement	-	-	-	-	-
Enhance	\$845,000	-	-	-	\$845,000
Total	\$845,000	-	-	-	\$845,000

Acres within each Ecological Section (Table 3)

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest	Total Acres
Restore	0	0	0	0	0	0
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	0	0	0	2,072	2,072
Total	0	0	0	0	2,072	2,072

Total Requested Funding within each Ecological Section (Table 4)

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest	Total Funding
Restore	-	-	-	-	-	-
Protect in Fee with State PILT Liability	-	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-	-
Protect in Easement	-	-	-	-	-	-
Enhance	-	-	-	-	\$845,000	\$845,000
Total	-	-	-	-	\$845,000	\$845,000

Average Cost per Acre by Resource Type (Table 5)

Type	Wetland	Prairie	Forest	Habitat
Restore	-	-	-	-
Protect in Fee with State PILT Liability	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-
Protect in Easement	-	-	-	-
Enhance	\$407	-	-	-

Average Cost per Acre by Ecological Section (Table 6)

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest
Restore	-	-	-	-	-
Protect in Fee with State PILT Liability	-	-	-	-	-

Protect in Fee w/o State PILT Liability	-	-	-	-	-
Protect in Easement	-	-	-	-	-
Enhance	-	-	-	-	\$407

Target Lake/Stream/River Feet or Miles

Outcomes

Programs in the northern forest region:

- Improved availability and improved condition of habitats that have experienced substantial decline ~ As noted in a 2008 report to the Minnesota legislature, *"The future of natural wild rice in Minnesota will depend in large part on its protection and management by state and tribal natural resource agencies."* Big Rice Lake has serious, but fixable issues. The proposed work for this lake will reestablish wild rice in a large, historically important wild rice lake. Success of the project will be readily apparent based on one measure - does wild rice become abundant in the project area. DNR and tribal biologists will monitor Big Rice Lake to evaluate wild rice abundance over time.

Parcels

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.

Parcel Information

Sign-up Criteria?

No

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

Restore / Enhance Parcels

Name	County	TRDS	Acres	Est Cost	Existing Protection
Big Rice Lake	St. Louis	06017211	2,072	\$845,000	Yes



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

Parcel Map
Big Rice Lake Wild Rice Enhancement
(Data Generated From Parcel List)

