Lessard-Sams Outdoor Heritage Council

Roseau Lake Rehabilitation: Phase II

Laws of Minnesota 2024 Accomplishment Plan

General Information

Date: 06/26/2024

Project Title: Roseau Lake Rehabilitation: Phase II

Funds Recommended: $3,054,000

Legislative Citation: ML 2024, Ch. 106, Art. 1, Sec. 2, Subd. 5(u)

Appropriation Language: $3,054,000 the second year is to the commissioner of natural resources for an agreement with the Roseau River Watershed District to restore and enhance the Roseau Lake and Roseau River habitat complex in Roseau County, Minnesota.

Manager Information

Manager's Name: Tracy Halstensgard
Title: Administrator
Organization: Roseau River Watershed District
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Location Information

County Location(s): Roseau.

Eco regions in which work will take place:

- Northern Forest
- Forest / Prairie Transition

Activity types:

- Enhance
- Restore

Priority resources addressed by activity:

- Wetlands
- Habitat

Narrative

Abstract

This multi-purpose project will partially restore a large drained lake, restore and reclaim stream reaches, provide water level management capacity to substantially improve wildlife habitat conditions and provide flood damage reduction benefits, and will contribute to water quality improvements in the Roseau River.

Design and Scope of Work

Roseau Lake was drained in the early 1900s when the Roseau River was channelized and dredged and associated ditch systems were constructed to increase agricultural production in the watershed. Prior to drainage, Roseau Lake provided excellent fish and waterfowl habitat. After drainage, much of the lake basin was farmed for many years and produced crops in drier times, but production was low and unreliable in wetter years. Over time, there has been recognition by local landowners that farming the lake bed would always be tenuous and large portions of the lake basin became part of the Roseau Lake Wildlife Management Area in the 1960s. Interest in a partial restoration of the lake has grown in recent year because the DNR, the watershed district, local governments, and citizens recognize that there are opportunities to develop a multipurpose project with significant wildlife habitat and flood damage reduction benefits.

The project has two primary design purposes:

1) To improve the quantity and quality of fish and wildlife habitat in and surrounding the Roseau Lake basin area. A key objective of the project is to provide migratory habitat (including an abundance of forage) for waterfowl and shorebirds in spring and in fall.

2) To effectively use the water storage capacity of the lake basin to reduce peak flows on the Roseau River downstream of the lakebed by 10% or more compared to current conditions as well as reduce the footprint of the 100-year floodplain.

The scope of work for this funding is to construct 7.5 miles of embankment, inlet control structure and channel, and outlet structure.

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

Fish and wildlife habitat benefits will be achieved by constructing a system of levees and water control structures to provide capacity to actively manage water levels in the lake basin. This infrastructure will allow wildlife managers to manage lake levels throughout the year to achieve wildlife management objectives. Specifically, timely water level management in spring and fall will create conditions to provide suitable forage in abundance for migratory waterfowl and shorebirds. In addition, better management of water levels in the basin during the growing season will enhance the relative value of surrounding grass cover for nesting and provide brood-rearing cover for waterfowl and other waterbirds. Benefits to aquatic invertebrates, amphibians, reptiles, and aquatic mammals will accrue whenever water is present. Fish habitat on the river will improve as a result of stream restoration features of the project that improve water quality, hydrologic conditions and the habitat corridor along the Roseau River.

At the same time, this infrastructure will provide water managers the ability to manipulate the timing of flood flows in the area to optimize the water storage capacity of the lake bed to achieve flood damage reduction objectives. In its current state, the Roseau Lake basin area floods in the early portion of the flood hydrograph such that flood storage is unavailable when the flood peak passes through the area. Flood damage reduction benefits will be achieved by altering the timing of water storage in the Lake Basin area so the available flood storage is more effectively used to reduce peak flows downstream.

The project has secondary benefits including improved hydrologic conditions in the Roseau River, which will contribute to improved water quality, stream stability, and fish habitat and will also benefit plant communities in the Big Swamp area downstream. The project is consistent with the watershed plan and will compliment other ongoing work in the watershed to improve fish and wildlife habitat, improve water quality, and reduce flood damage.

What are the elements of this plan that are critical from a timing perspective?

This application for LSOHC funds will ensure construction phasing continues with this allocation. A watershed project team has developed this multipurpose project through the design phase utilizing previous LSOHC, State Flood Hazard Mitigation (FHM), and local funds. All environmental and cultural resource reviews are complete and all required permits are in hand. Construction can be phased. Phase 1 is under construction (began Sept. 2023) and funded using the original LSOHC grant (held by the MN DNR), State FHM bonding funds, Red River Watershed Management Board, and local levy funds. An attached map shows proposed construction phasing as the progresses.

Describe how the plan expands habitat corridors or complexes and/or addresses habitat fragmentation:

This project will improve habitat connectivity between the Roseau Lake and Big Swamp habitat complexes. In addition, habitat fragmentation in the Roseau Lake habitat complex will be greatly reduced by this project. Presently the project area has an array of habitat, however due to the drainage networks constructed in the early 1900's these communities are fragmented. In addition to the physical barriers, the effects of drainage on natural habitat have resulted in a loss in quality of habitat and increase of invasive vegetation.
The proposed project will support a large mosaic of interconnected wetland, upland and stream habitat. The upper reaches of the project consist of 4000+ acres of peatlands, which will be hydrologically connected to the basin through disabling the present drainage ditches and diverting flows along their natural gradient towards the Roseau Lake Basin. Immediately downgradient of the peatlands are a complex of emergent and shrub dominated wetland communities, punctuated by bands of upland habitat formed on former beach ridges. Downgradient of the emergent and shrub wetlands are shallow and deep marsh habitat which comprise the former shallow lake basin. Within the basin, Pine Creek which is currently channelized, will be re-introduced to its historic channel, mimicking the pre-drainage dynamics of the stream and its connection to its floodplain and the lake basin. Within the Roseau River, the weir installed in the channelized reach will ensure that base flows will remain within the historic channel, thus enhancing aquatic and riparian habitat. Once completed, the project will support a large complex of predominantly wetland habitat extending from the Roseau Lake Basin into the province of Manitoba. Stream restoration components of the project are addressed in Phase I.

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

- Long Range Duck Recovery Plan
- North American Waterfowl Management Plan

Explain how this plan 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.

Climate resiliency is incorporated through prescriptive management of surface water and groundwater resources as detailed in the operation plan. The project area presently experiences both high and low water extremes when compared with historical data. These extremes result in degraded quality of habitat and productivity of the native plants and animal species within the project. Through capture of water from the Roseau River and alterations to existing drains within the project area, the project will improve habitat within the drained Roseau Lake basin reducing impacts to aquatic and terrestrial habitats downstream. Capture of water and management of its release helps to address climactic changes which have already been realized in the region. The prolonged storage of water and restoration of a mosaic of wetland communities increases carbon and other nutrient capture, as these features accumulate plant and organic matter which creates a carbon sink addressing future climate impacts.

Which LSOHC section priorities are addressed in this program?

Forest / Prairie Transition

- Protect, enhance, and restore migratory habitat for waterfowl and related species, so as to increase migratory and breeding success

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

Outcomes

Programs in forest-prairie transition region:

- Water is kept on the land ~ *Water levels within the basin will be monitored weekly during spring through fall by MN DNR personnel to ensure that water elevation targets are met for shallow lake habitat management. Such water levels are designated in the operating plan for the project, which was agreed to by the project partners (MN DNR and the RRWD).*

Programs in the northern forest region:

- Improved availability and improved condition of habitats that have experienced substantial decline ~ *The site will be monitored through a joint 5 year monitoring plan between the RRWD and DNR. Monitoring will include an evaluation of bird species use; plant community condition; water quality; water quantity as measured against project outcomes and current conditions.*

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 will not supplant or be substituting for other funds for the project.

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

The Roseau River Watershed District and MN DNR will be responsible for all future maintenance of this project's infrastructure under the terms of a joint powers agreement. The Watershed District is authorized under Minnesota Statutes 103D to participate in long-term maintenance of this project.

Habitat enhancements within the rehabilitated lake basin will be the responsibility of the MN DNR Section of Wildlife as part of ongoing habitat maintenance on the Wildlife Management Area.

Actions to Maintain Project Outcomes

Year	Source of Funds	Step 1	Step 2	Step 3
2025 - 2030	Local RRWD Levy & MN DNR	Monitor	Maintain	-

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

The Project will provide:
-Free public access for fishing and hunting near a population center (city of Roseau)
-No-cost access to wildlife viewing mounds
Project Partners have done:
-outreach to tribal authorities on natural resource benefits
-consultation with tribal authorities on cultural resources associated with the Roseau Lake basin.
Project Partners plan additional education outreach on the cultural significance and history of the area.

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 or on lands to be acquired in this program?
Yes

Where does the activity take place?

- WMA
- Permanently Protected Conservation Easements
- Other : Watershed District owned land

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 program either in the process of restoration or use as food plots?
No

Timeline

Activity Name	Estimated Completion Date
construction	12-31-2027

Date of Final Report Submission: 11/01/2028

Availability of Appropriation: Subd. 7.
Availability of Appropriation
(a) Money appropriated in this section may not be spent on activities unless they are directly related to and necessary for a specific appropriation and are specified in the accomplishment plan approved by the Lessard-Sams Outdoor Heritage Council. Money appropriated in this section must not be spent on indirect costs or other institutional overhead charges that are not directly related to and necessary for a specific appropriation. Money appropriated for fee title acquisition of land may be used to restore, enhance, and provide for public use of the land acquired with the appropriation. Public-use facilities must have a minimal impact on habitat in acquired lands.

(b) Money appropriated in this section is available as follows:
(1) money appropriated for acquiring real property is available until June 30, 2028;
(2) money appropriated for restoring and enhancing land acquired with an appropriation in this section is available for four years after the acquisition date with a maximum end date of June 30, 2032;
(3) money appropriated for restoring or enhancing other land is available until June 30, 2029;
(4) notwithstanding clauses (1) to (3), money appropriated for a project that receives at least 15 percent of its funding from federal funds is available until a date sufficient to match the availability of federal funding to a maximum of six years if the federal funding was confirmed and included in the original approved draft accomplishment plan; and(5) money appropriated for other projects is available until the end of the fiscal year in which it is appropriated.

Budget

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

Totals

Item	Funding Request	Leverage	Leverage Source	Total
Personnel	-	-	-	-
Contracts	$2,900,000	$725,000	Local funds	$3,625,000
Fee Acquisition w/ PILT	-	-	-	-
Fee Acquisition w/o PILT	-	-	-	-
Easement Acquisition	-	-	-	-
Easement Stewardship	-	-	-	-
Travel	-	-	-	-
Professional Services	$154,000	$38,500	Local funds	$192,500
Direct Support Services	-	-	-	-
DNR Land Acquisition Costs	-	-	-	-
Capital Equipment	-	-	-	-
Other Equipment/Tools	-	-	-	-
Supplies/Materials	-	-	-	-
DNR IDP	-	-	-	-
Grand Total	**$3,054,000**	**$763,500**	**-**	**$3,817,500**

Amount of Request: $3,054,000
Amount of Leverage: $763,500
Leverage as a percent of the Request: 25.0%
DSS + Personnel: -
As a % of the total request: 0.0%
Easement Stewardship: -
As a % of the Easement Acquisition: -

How will this program accommodate the reduced appropriation recommendation from the original proposed requested amount?
We plan on constructing the next phase of the project with the appropriated funds.

Detail leverage sources and confirmation of funds:
The Watershed District, as a member of the Red River Watershed Management Board (RRWMB), has the authority to levy an ad valorem tax for the purpose of constructing and maintaining projects for the common benefit to the district and RRWMB. Those levy funds will provide the leverage dollars.

Does this project have the ability to be scalable?
No

Contracts

What is included in the contracts line?
Construction work.

Professional Services

What is included in the Professional Services line?

- Design/Engineering

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	-	-	-	-	-
Protect in Fee with State PILT Liability	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-
Protect in Easement	-	-	-	-	-
Enhance	3,000	-	-	1,900	4,900
Total	**3,000**	**-**	**-**	**1,900**	**4,900**

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	$1,832,400	-	-	$1,221,600	$3,054,000
Total	**$1,832,400**	**-**	**-**	**$1,221,600**	**$3,054,000**

Acres within each Ecological Section (Table 3)

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest	Total Acres
Restore	-	-	-	-	-	-
Protect in Fee with State PILT Liability	-	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-	-
Protect in Easement	-	-	-	-	-	-
Enhance	-	-	-	-	4,900	4,900
Total	**-**	**-**	**-**	**-**	**4,900**	**4,900**

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	-	-	-	-	$3,054,000	$3,054,000
Total	**-**	**-**	**-**	**-**	**$3,054,000**	**$3,054,000**

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	$610	-	-	$642

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	-	-	-	-	$623

Target Lake/Stream/River Feet or Miles

Roseau River 3.8 miles

Parcels

Parcel Information

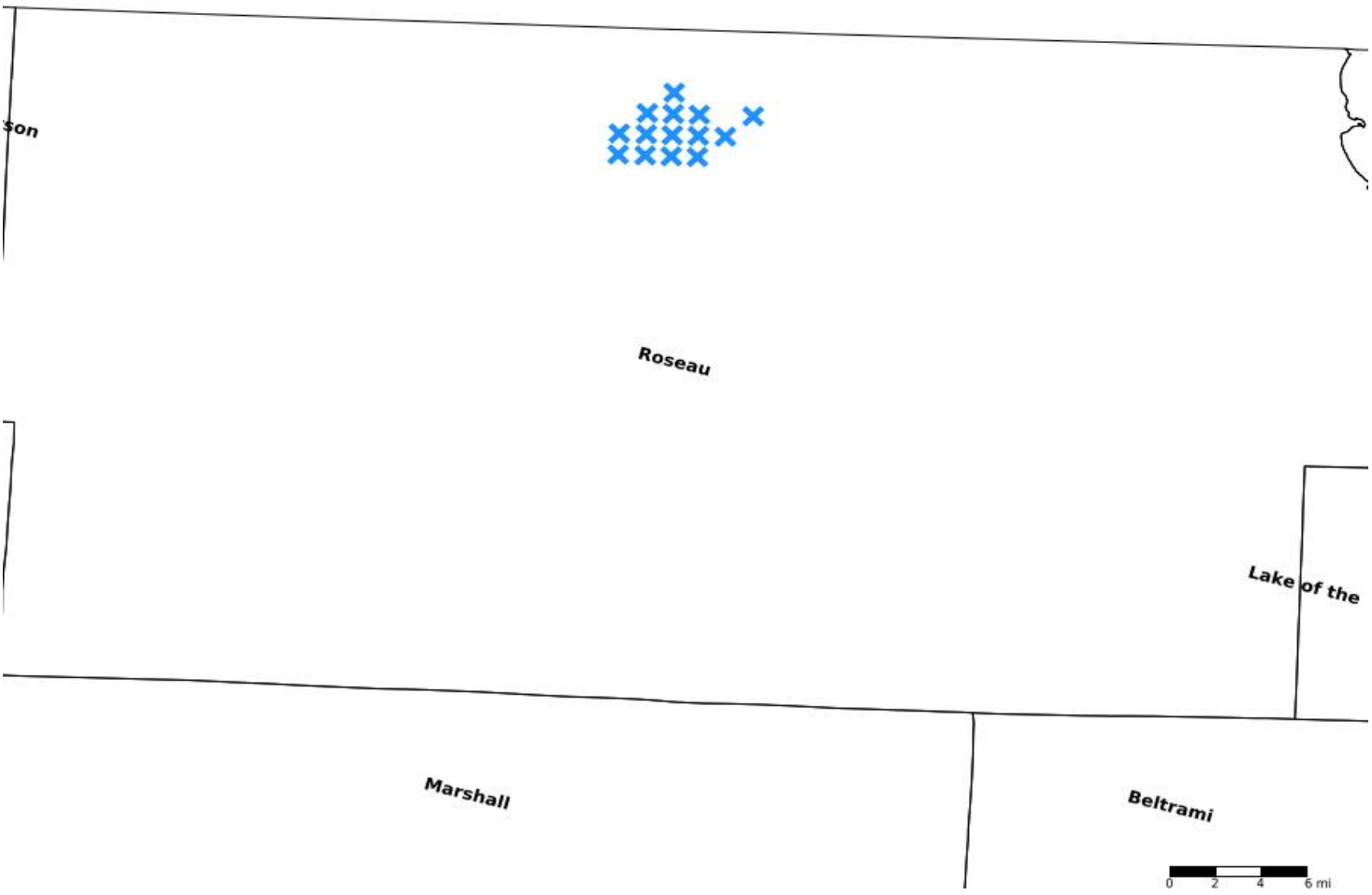
Sign-up Criteria?
No

Explain the process used to identify, prioritize, and select the parcels on your list:
Project related land rights have been or are in the process of being secured. This funding will be allocated to construction.

Restore / Enhance Parcels

Name	County	TRDS	Acres	Est Cost	Existing Protection	Description
Jadis Unorganized 15	Roseau	16340215	4	$6,666	Yes	lake basin
Jadis Unorganized 21	Roseau	16340221	320	$533,334	Yes	lake basin
Jadis Unorganized 19	Roseau	16340219	626	$1,043,334	Yes	lake basin
Jadis Unorganized 30	Roseau	16340230	104	$173,334	Yes	lake basin
Jadis Unorganized 29	Roseau	16340229	640	$1,066,666	Yes	lake basin
Jadis Unorganized 20	Roseau	16340220	640	$1,066,666	Yes	lake basin
Jadis Unorganized 17	Roseau	16340217	640	$1,066,666	Yes	lake basin
Jadis Unorganized 18	Roseau	16340218	640	$1,066,666	Yes	lake basin
Jadis Unorganized 7	Roseau	16340207	221	$368,334	Yes	lake basin
Dieter 25	Roseau	16341225	183	$305,000	Yes	lake basin
Dieter 26	Roseau	16341226	194	$323,334	Yes	lake basin
Dieter 23	Roseau	16341223	88	$146,666	Yes	lake basin
Dieter 24	Roseau	16341224	620	$1,033,334	Yes	lake basin
Dieter 13	Roseau	16341213	480	$800,000	Yes	lake basin

Parcel Map



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