



Lessard-Sams Outdoor Heritage Council

DNR St. Louis River Restoration Initiative – Phase 10
Laws of Minnesota 2023 Accomplishment Plan

General Information

Date: 06/09/2023

Project Title: DNR St. Louis River Restoration Initiative – Phase 10

Funds Recommended: \$2,596,000

Legislative Citation: ML 2023, Ch. 40, Art. 1, Sec. 2, subd. 5(t)

Appropriation Language: \$2,596,000 the first year is to the commissioner of natural resources to restore and enhance priority aquatic, riparian, and forest habitats in the St. Louis River estuary. Of this amount, up to \$140,000 is for an agreement with Minnesota Land Trust. A list of proposed restorations and enhancements must be provided as part of the required accomplishment plan.

Manager Information

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Location Information

County Location(s): St. Louis.

Eco regions in which work will take place:

- Northern Forest

Activity types:

- Restore

Priority resources addressed by activity:

- Habitat

Narrative

Abstract

MNDNR's St. Louis River Restoration Initiative (SLRRI) is a collaborative program enhancing and restoring the St. Louis River estuary and contributing watershed. The 11,000-acre estuary is a unique resource of statewide significance. SLRRI's vision includes diverse, productive, and healthy aquatic and terrestrial ecosystems of the river and watershed. Through SLRRI Phase 10 we will restore an additional 8 acres of priority aquatic and wetland habitat for important fish, game, and Species of Greatest Conservation Need. To date, LSOHC has supported approximately 900 acres of SLRRI habitat restoration, leveraging over \$24 million in federal funding.

Design and Scope of Work

The SLRRI will restore and enhance priority habitats in the St. Louis River estuary and its watershed. The SLRRI employs a collaborative approach using a network of resource managers, researchers, and key stakeholders. As partners, the MNDNR and MN Land Trust (MLT) have successfully restored wetland, stream and open water aquatic habitats while leveraging significant federal support.

We will continue to restore and enhance 8 acres of aquatic habitat and improve fish passage in approximately 1,600 feet of coldwater stream habitat with an emphasis on the following:

Mud Lake is a warm water fish and migratory bird habitat restoration project. Mud Lake is an estuarine bay and coastal wetland complex. Mud Lake habitat and water quality have been degraded by a railroad causeway that bisects that bay. This project will improve the hydrologic function of Mud Lake and restore coastal marsh habitat. Baseline sampling and project designs are currently in progress. The SLRRI team will work in close coordination with the MPCA, USEPA, and the City of Duluth to restore ecological function to support birds and aquatic life.

Lower Knowlton Creek is a trout stream flowing into the estuary. Upper reaches of Knowlton Creek were previously restored using OHF and Federal appropriations under the St. Louis River AOC program. In the creek's lower reaches, a culvert under the state's Munger Trail is a barrier to both fish and wildlife passage. We will increase connectivity, restore adjacent stream reaches, and improve the resiliency of previous downstream restoration efforts.

In addition to specific projects mentioned above, the SLRRI will continue coordinating with our partners to develop additional projects to improve fish and wildlife populations throughout the estuary and surrounding watershed. Work on project sites previously identified within the SLRRI program will continue.

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?

At the head of Lake Superior, the 11,000-acre St. Louis River estuary is a unique Minnesota resource. With extensive wetlands and warmer waters, it is the primary source of productivity for western Lake Superior fisheries and a critical flyway for waterfowl and other migratory birds. As the world's largest freshwater shipping port, nearly two-thirds of the estuary's native wetlands have been altered, eliminated, or impaired as a result of historic impacts of industrial activities. The proposed projects represent an opportunity to balance economic activities, while restoring the negative impacts of historic uses. Additionally, restorations will directly benefit Species of Greatest Conservation Need (SGCN) and other species by improving habitat quality and quantity in strategic locations to maximize benefits to populations.

As the Outdoor Heritage Fund's 25-year framework states, "Success in conservation will depend highly on leveraging traditional and other sources of conservation funding with available OHF funds and coordinating efforts with conservation partners." The proposed project is integrated with local, state, federal, tribal, and non-government partners that have worked together to advance projects and secure non-OHF funding of approximately 47% of the total cost. Minnesota's legacy funds are an integral part of the overall strategy to restore the health of this valuable resource.

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:

Science-based targeting is used to identify, design, monitor, and ensure the quality of all SLRRI projects. This comes in the form of comprehensive planning, team-lead project development, and partnering with researchers and subject matter experts.

The SLRRI team works with many local, state, tribal, and federal resource professionals and stakeholders to develop and update the Habitat Plan, a comprehensive science-based plan for protecting, restoring, and managing the estuary's fish and wildlife habitat. The Habitat Plan guides and prioritizes restoration work, and it has been the foundation of the SLRRI and AOC program.

Restoration Site Teams (RSTs) are developed for each project to identify restoration objectives. Resource managers, ecologists, biologists, and other partners examine conceptual project alternatives, evaluating habitat benefits and trade-offs between using qualitative and quantitative habitat metrics. Restoration objectives consider both the individual site and its role within the St. Louis River watershed. Knowledge transfer from previously completed OHF-funded projects is facilitated by engaging local resource experts on multiple SLRRI projects. State, federal, and academic researchers continue to monitor and evaluate the estuary's fish and wildlife populations and habitat to prioritize restoration projects, model expected outcomes of restoration alternatives, and evaluate restoration outcomes.

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

- H2 Protect critical shoreland of streams and lakes
- H6 Protect and restore critical in-water habitat of lakes and streams

Which two other plans are addressed in this program?

- Lower St. Louis River Habitat Plan
- Other : St. Louis River Area of Concern Remedial Action Plan

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

Outcomes

Programs in the northern forest region:

- Healthy populations of endangered, threatened, and special concern species as well as more common species ~ *Program monitoring conducted by DNR and other resource management/research partners will evaluate the response of habitat and indicator species at project sites.*

Does this program include leveraged funding?

Yes

Explain the leverage:

To date, the SLRRI program has secured \$27M in OHF funding and \$24M in non-OHF funds, a ratio of 53:47 OHF to non-OHF funds.

While not yet acquired, EPA is prioritizing a significant amount of GLRI funding towards the construction of the Mud Lake restoration project due to its status as an Area of Concern management action; these funds will be identified as leverage after they are received to continue the SLRRI programs strong history of obtaining non-OHF leverage.

The MNDNR and MN Land Trust have completed projects with many different agencies and organizations, who all share the goals of the SLRRI. Though not formally tracked as leverage, the MPCA provides management support and technical expertise. The USEPA, NOAA, USFWS, USACE, and other federal and tribal agencies have provided funding, technical expertise, or in-kind services.

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.

Not applicable

Non-OHF Appropriations

Year	Source	Amount
2022	GLRI Management Assistance Award - Environmental Justice & Climate Resiliency Initiative	\$1,500,000
2020	GLRI via USACE Partnership - Mud Lake restoration	\$520,000
2020	Coastal Program (NOAA) - Interstate Island Ph. 2 restoration	\$15,000
2020	GLRI - Avian forest habitat restoration	\$65,000
2019	Coastal Program (NOAA) - Interstate Island Ph. 2 restoration	\$5,200
2019	Coastal Program (USFWS) - Interstate Island Ph. 2 restoration	\$200,000
2019	Great Lakes Fish & Wildlife Restoration Act - Interstate Island Ph. 2 restoration	\$145,000
2019	GLRI - Interstate Island Ph. 2 restoration	\$839,650
2018	GLRI via USACE Partnership - Perch Lake restoration	\$400,000
2018	GLRI - Perch Lake restoration	\$3,512,000
2017	GLRI - Kingsbury Bay and Grassy Point	\$7,770,000

	restoration	
2017	NRDA Settlement - Kingsbury Creek restoration	\$637,500
2017	NRDA Settlement - Kingsbury Bay restoration	\$5,003,242
2015	GLRI - Knowlton Creek restoration	\$700,000
2012	USFWS Cooperative Agreement - Interstate Island Ph. 1 restoration	\$40,000
2014	Clean Water Fund - Chambers Grove restoration	\$70,000
2014	GLRI via UACE Partnership - Chambers Grove restoration	\$130,000
2013	GLRI - Radio Tower Bay restoration	\$1,500,000
2013	NFWF/SOGL - Knowlton Creek restoration	\$400,000
2013	GLRI - Chambers Grove restoration	\$400,000
2012	NFWF/SOGL - Wild rice restoration	\$160,000
2011	GLRI - Capacity funds	\$800

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

St. Louis River habitat restoration projects are designed to be maintained by the natural processes that define these systems. Barring catastrophic events, these projects will not require future adjustment, or clean-up.

MNDNR Duluth Area Fisheries manages the Lower St. Louis River through regular monitoring, assessment, and regulation. They partner with Wisconsin DNR, MN Pollution Control Agency, USEPA Great Lakes Toxicology and Ecology Lab, and NOAA's National Estuarine Research Reserve in the effort to monitor and address issues associated with the long-term maintenance of habitat restoration outcomes in the estuary.

Healthy and robust native plant communities are resistant to invasion by exotic species. If invasive species successfully establish on a site they can disrupt the food web of the native community and result in reduced populations of desirable native species. Restoration of native plant communities will inhibit the establishment of invasives, and MNDNR is partnered with the other entities described above to control them.

Actions to Maintain Project Outcomes

Year	Source of Funds	Step 1	Step 2	Step 3
All years	Fish & Wildlife Game & Fish fund	Regular Surveys/monitoring	-	-
2023-26	GLRI (USEPA)	Post restoration monitoring (AOC sites only)	-	-

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

West Duluth, where most of our estuary restoration takes place, has had greater environmental impairments and a higher proportion of low income and BIPOC residents compared to Duluth as a whole. Native Americans and Hmong residents tend to be highly represented as shore fishing and local angling user groups in the estuary. Improving estuary resources provides direct and meaningful benefits to residents in these comparatively low-income neighborhoods and user group. It also supports and enhances tribal treaty rights to hunt, fish and gather.

The SLRRI team is leading the Lake Superior Headwaters Sustainability Partnership, an emerging initiative to continue the coordination and collaboration established by the AOC program into the future. This initiative seeks to align natural resource management efforts with community health and economic development.

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 coordination, and building partnerships with diverse communities.

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?

- County/Municipal
- 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
Lower Knowlton Creek – Remove fish passage barrier and restore a natural stream channel	December 2025
Mud Lake – Enhance hydrologic connection, remove legacy wood waste and restore ecological functions	December 2025
Project prioritization, integration, and development; site-specific coordination	June 2028

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 to acquire land in fee 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, 2027;

- (2) money appropriated for restoring and enhancing land acquired with an appropriation in this act is available for four years after the acquisition date with a maximum end date of June 30, 2031;
- (3) money appropriated for restoring or enhancing other land is available until June 30, 2028;
- (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.

Grand Totals Across All Partnerships

Item	Funding Request	Leverage	Leverage Source	Total
Personnel	\$480,000	-	-	\$480,000
Contracts	\$1,970,000	-	-	\$1,970,000
Fee Acquisition w/ PILT	-	-	-	-
Fee Acquisition w/o PILT	-	-	-	-
Easement Acquisition	-	-	-	-
Easement Stewardship	-	-	-	-
Travel	\$3,700	-	-	\$3,700
Professional Services	\$40,000	-	-	\$40,000
Direct Support Services	\$89,000	-	-	\$89,000
DNR Land Acquisition Costs	-	-	-	-
Capital Equipment	-	-	-	-
Other Equipment/Tools	\$11,000	-	-	\$11,000
Supplies/Materials	\$2,300	-	-	\$2,300
DNR IDP	-	-	-	-
Grand Total	\$2,596,000	-	-	\$2,596,000

Partner: Minnesota DNR**Totals**

Item	Funding Request	Leverage	Leverage Source	Total
Personnel	\$380,000	-	-	\$380,000
Contracts	\$1,965,000	-	-	\$1,965,000
Fee Acquisition w/ PILT	-	-	-	-
Fee Acquisition w/o PILT	-	-	-	-
Easement Acquisition	-	-	-	-
Easement Stewardship	-	-	-	-
Travel	\$2,500	-	-	\$2,500
Professional Services	\$35,000	-	-	\$35,000
Direct Support Services	\$62,000	-	-	\$62,000
DNR Land Acquisition Costs	-	-	-	-
Capital Equipment	-	-	-	-
Other Equipment/Tools	\$10,000	-	-	\$10,000
Supplies/Materials	\$1,500	-	-	\$1,500
DNR IDP	-	-	-	-
Grand Total	\$2,456,000	-	-	\$2,456,000

Personnel

Position	Annual FTE	Years Working	Funding Request	Leverage	Leverage Source	Total
EWR Team Supervisor	0.1	3.0	\$45,000	-	-	\$45,000
FAW Office and Administrative Specialist	0.4	3.0	\$85,000	-	-	\$85,000
EWR Project Manager	0.4	3.0	\$125,000	-	-	\$125,000
FAW Project Manager	0.4	3.0	\$125,000	-	-	\$125,000

Partner: Minnesota Land Trust**Totals**

Item	Funding Request	Leverage	Leverage Source	Total
Personnel	\$100,000	-	-	\$100,000
Contracts	\$5,000	-	-	\$5,000
Fee Acquisition w/ PILT	-	-	-	-
Fee Acquisition w/o PILT	-	-	-	-
Easement Acquisition	-	-	-	-
Easement Stewardship	-	-	-	-
Travel	\$1,200	-	-	\$1,200
Professional Services	\$5,000	-	-	\$5,000
Direct Support Services	\$27,000	-	-	\$27,000
DNR Land Acquisition Costs	-	-	-	-
Capital Equipment	-	-	-	-
Other Equipment/Tools	\$1,000	-	-	\$1,000
Supplies/Materials	\$800	-	-	\$800
DNR IDP	-	-	-	-
Grand Total	\$140,000	-	-	\$140,000

Personnel

Position	Annual FTE	Years Working	Funding Request	Leverage	Leverage Source	Total
Restoration Staff	0.25	4.0	\$100,000	-	-	\$100,000

Amount of Request: \$2,596,000**Amount of Leverage:** -**Leverage as a percent of the Request:** 0.0%**DSS + Personnel:** \$569,000**As a % of the total request:** 21.92%**Easement Stewardship:** -**As a % of the Easement Acquisition:** -**How will this program accommodate the reduced appropriation recommendation from the original proposed requested amount?**

The Boreal Wetlands project has been removed per council decision. The budget has been scaled according to the strategy outlined in the proposal with salary reduced to approximately 60% of the original request. Project budgets were reduced to 50% or less with priority given to the Mud Lake restoration project.

Personnel**Has funding for these positions been requested in the past?**

-

Contracts

What is included in the contracts line?

MNDNR: Contracts for project construction

MLT: Contracts for project support (data acquisition, invasives control, survey, etc).

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

n/a

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?

MNDNR Process: Used Direct and Necessary calculator provided by DNR OHF staff.

MLT Process: In a process that was approved by the DNR on March 17, 2017, we determined our direct support services rate to be 27%. The rate represents the relationship of indirect costs to direct costs and is fully explained in materials submitted to the DNR. The calculations are based on the most recent audited financial statements that were available at the time. We will apply the approved rate to personnel expenses funded by the grant.

Other Equipment/Tools

Give examples of the types of Equipment and Tools that will be purchased?

The Equipment and Tools budget line includes field and safety equipment or tools, space rental, and utilities.

Federal Funds

Do you anticipate federal funds as a match for this program?

Yes

Are the funds confirmed?

No

What is the approximate date you anticipate receiving confirmation of the federal funds?

December 2023 (anticipated GLRI funding for Mud Lake)

Output Tables**Acres by Resource Type (Table 1)**

Type	Wetland	Prairie	Forest	Habitat	Total Acres
Restore	-	-	-	8	8
Protect in Fee with State PILT Liability	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-
Protect in Easement	-	-	-	-	-
Enhance	-	-	-	-	-
Total	-	-	-	8	8

Total Requested Funding by Resource Type (Table 2)

Type	Wetland	Prairie	Forest	Habitat	Total Funding
Restore	-	-	-	\$2,596,000	\$2,596,000
Protect in Fee with State PILT Liability	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-
Protect in Easement	-	-	-	-	-
Enhance	-	-	-	-	-
Total	-	-	-	\$2,596,000	\$2,596,000

Acres within each Ecological Section (Table 3)

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest	Total Acres
Restore	-	-	-	-	8	8
Protect in Fee with State PILT Liability	-	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-	-
Protect in Easement	-	-	-	-	-	-
Enhance	-	-	-	-	-	-
Total	-	-	-	-	8	8

Total Requested Funding within each Ecological Section (Table 4)

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest	Total Funding
Restore	-	-	-	-	\$2,596,000	\$2,596,000
Protect in Fee with State PILT Liability	-	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-	-
Protect in Easement	-	-	-	-	-	-
Enhance	-	-	-	-	-	-
Total	-	-	-	-	\$2,596,000	\$2,596,000

Average Cost per Acre by Resource Type (Table 5)

Type	Wetland	Prairie	Forest	Habitat
Restore	-	-	-	\$324,500
Protect in Fee with State PILT Liability	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-
Protect in Easement	-	-	-	-
Enhance	-	-	-	-

Average Cost per Acre by Ecological Section (Table 6)

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest
Restore	-	-	-	-	\$324,500
Protect in Fee with State PILT Liability	-	-	-	-	-

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

Target Lake/Stream/River Feet or Miles

1600

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:

The SLRRI is a partner to the Great Lakes Restoration Initiative (GLRI) and the Area of Concern (AOC) Process. As such, there is a Remedial Action Plan that identifies projects that need to be completed in order to delist the AOC. The list of actions was developed by a broad group of partner agencies and groups. The MNDNR was identified as the Agency Lead on several of the projects on the action item list, and has prioritized these projects for funding in previous proposals. Mud Lake is MNDNR's final AOC project that is not fully funded and is therefore prioritized in this proposal.

Apart from the AOC delisting process, additional work identified in the Lower St. Louis River Habitat Plan and the Lake Superior Lakewide Action and Management Plan will need to be completed to achieve the full habitat restoration potential of the estuary and surrounding watersheds. Restoration work in the river's watershed is critical to maintaining water and habitat quality in the river and watershed.

Continued progress on non-AOC projects may be re-scaled, but remains critical to demonstrate to our Partners, including the federal GLRI, that the state is committed to continued success in the estuary, and to increase resiliency to protect previous investments.

Restore / Enhance Parcels

Name	County	TRDS	Acres	Est Cost	Existing Protection
Lower Knowlton Creek (1600 ft stream)	St. Louis	04915223	2	\$700,000	Yes
Mud Lake (10,000 ft river shoreline)	St. Louis	04815202	6	\$1,000,000	Yes

Parcel Map



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