



Lessard-Sams Outdoor Heritage Council

DNR St. Louis River Restoration Initiative Ph. 9
Laws of Minnesota 2022 Accomplishment Plan

General Information

Date: 06/20/2022

Project Title: DNR St. Louis River Restoration Initiative Ph. 9

Funds Recommended: \$4,916,000

Legislative Citation: ML 2022, Ch. 77, Art. 1, Sec. 2, subd. 5(q)

Appropriation Language: \$4,916,000 the second 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 \$964,000 is for an agreement with Minnesota Land Trust. A list of proposed restorations 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
- Enhance

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. This 12,000 acre estuary is a unique resource of statewide significance. SLRRI's vision for the estuary includes diverse, productive, and healthy aquatic and terrestrial ecosystems of the river and watershed. Through SLRRI Phase 9 MNDNR and MLT will restore or enhance an additional 90 acres of priority aquatic, wetland, and forested habitat for important fish, game, and SGCN. To date, the OHF has supported approximately 763 acres of SLRRI habitat restoration, leveraging over \$22 million in federal funding.

Design and Scope of Work

The SLRRI Phase 9 will restore and enhance priority habitats in the St. Louis River estuary. With LOSHC support, SLRRI has successfully developed and implemented critical projects in the estuary since 2014. SLRRI employs a collaborative approach using a network of resource managers, researchers, and key stakeholders. As partners in the SLRRI, the MNDNR and MN Land Trust have effectively and efficiently restored wetland, stream and open water aquatic habitats while leveraging significant federal support.

Minnesota DNR will restore 45 acres and up to 23,300 feet of priority habitats identified in the 2002 Lower St. Louis River Habitat Plan and 2020 St. Louis River Area of Concern (AOC) Remedial Action Plan (RAP), with an emphasis on the following:

Perch Lake is a shallow sheltered bay that is isolated from the estuary by Minnesota Highway 23. The goal is to restore a hydrologic connection with the estuary and optimize bathymetry to improve water quality, promote diverse aquatic vegetation, and establish recreational boat access.

Mud Lake is a warm water fish and migratory bird habitat restoration project. Mud Lake is an estuarine bay and coastal wetland complex. It is degraded by legacy wood waste and a railroad causeway. 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.

Kingsbury, Lower Knowlton, and Keene Creeks are trout stream restoration projects. These multi-partnered projects will enhance the creeks' connection to their floodplains, reduce sedimentation, restore trout habitat, remove barriers, and increase resiliency of estuary restoration efforts currently being completed with earlier OHF appropriations.

MN Land Trust will continue restoring avian habitat for globally and regionally important bird guilds in and around the St. Louis River Estuary Important Bird Area (SLR IBA). The current phase of the effort includes restoring or enhancing 50 acres of coastal wetland and forested habitat for birds. Restoration will be conducted in coastal wetlands, wet forests and other important forested habitats. We will work within designated Natural Areas or other protected lands in Duluth. Improvements will restore or enhance habitat conditions to be more attractive to migrating and breeding birds and other native wildlife communities. Proposed work in the forested areas includes underplanting or replanting including areas at risk from emerald ash borer or invasive trees and shrubs. Work in the emergent wetlands includes recreating the historic ratio of water interspersed with emergent vegetation in locations now dominated by invasive species such as narrow-leaf cattail or reed canary grass.

MNDNR and MN Land Trust will continue to closely coordinate with SLRRI partners to integrate, prioritize, and develop additional fish and wildlife restoration projects to improve fish and wildlife populations throughout the estuary and surrounding watersheds. Work on project sites previously identified within the SLRRI program area 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?

The 12,000-acre St. Louis River estuary, at the head of Lake Superior, is a unique Minnesota resource. It is the largest source of biological productivity to Lake Superior as well as the world's largest freshwater shipping port. The combination of extensive wetlands, warmer waters, and the connection to Lake Superior resulted in it becoming the primary source of productivity for the western Lake Superior fishery and a critical flyway for waterfowl and other migratory birds. Nearly two-thirds of the estuary's native wetlands have been altered, eliminated, or impaired as a result of historic impacts of dredging, filling, and waste disposal associated with industrial activities. Although economic uses in the industrialized portion of the Estuary continue, many of the historic problems associated with waste disposal have been addressed through the Clean Water Act and subsequent actions. The proposed projects represent an opportunity to balance economic activities, while restoring the negative impacts of historic uses. Additionally, restorations will directly benefit SGCN and other species by improving habitat quality and quantity in strategic locations to maximize benefits to populations.

As the Outdoor Heritage Fund's 2009 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 50% of the total cost. Minnesota's legacy funds are an integral part of the overall strategy to restore the health of this unique 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 MNDNR worked with many local, state, tribal, and federal resource professional as well as stakeholders to develop the Habitat Plan, a comprehensive science-based plan for protecting, restoring, and managing the estuary's fish and wildlife habitat. Partners developed the Habitat Plan to guide and prioritize restoration work, and it has been the foundation of the SLRRI.

While developing a Remedial Action Plan for the estuary, AOC partners used a source-stressor model to identify legacy impairments to the Estuary. The model identified conservation targets, stresses limiting those targets, and recommended actions to address the source of the stress. All project areas supported by Great Lakes Restoration Initiative funding also require the development of a Quality Assurance Project Plan to further ensure successful outcomes of the conservation actions.

Restoration Site Teams (RSTs) are developed for each implementation project to identify site-specific restoration targets and objectives. Natural resource managers, ecologists, biologists, and other partners associated with the estuary examine conceptual restoration project alternatives and assess and evaluate habitat benefits and trade-offs

between conceptual designs using both qualitative and quantitative measures of habitat value. Site-specific habitat needs and opportunities are also evaluated in the context of Estuary-wide restoration objectives and planned or completed projects. Knowledge transfer from previously completed OHF-funded projects is facilitated in RSTs by engaging local resource experts on multiple SLRRI projects.

Scientists from University of Minnesota, National Oceanic and Atmospheric Administration, U.S. Environmental Protection Agency, U.S. Fish & Wildlife Service, MNDNR, and MPCA 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?

- H5 Restore land, wetlands and wetland-associated watersheds
- 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
- Minnesota's Wildlife Action Plan 2015-2025

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?

Yes

Explain the leverage:

To date, the SLRRI program has secured \$22.1M in OHF funding and almost \$23M in non-OHF funds, a ratio of 50% in non-OHF funds.

MNDNR has a Partnership Agreement (attached) with USACE to design the Perch Lake project. The 65% federal cost share equals \$400,000 and was awarded to USACE by EPA using GLRI funds.

EPA awarded \$3.5M in GLRI funds to MNDNR to construct the Perch Lake project. \$1M from this award was identified as leverage in ML2018, the remainder (\$2.5M) is leveraged in this proposal.

The MNDNR and MN Land Trust have completed projects with many different agencies and organizations, who all share the goals of the SLRRI. 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
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 restoration	\$7,770,000
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
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All years	WDNR, MPCA, USEPA, NOAA	Long-term monitoring at specific sites	-	-
All years	Fish & Wildlife Game & Fish fund	Regular Surveys/monitoring	-	-
2023-25	GLRI (USEPA)	Post restoration monitoring (AOC sites only)	-	-

How will the program directly involve, engage, and benefit BIPOC (Black, Indigenous, People of Color) and diverse communities:

West Duluth, where most of our restoration work takes place, has had greater impairments to the environment and tends to have 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 the estuary resources provides direct and meaningful benefits to residents in these comparatively low-income neighborhoods and user groups.

Much of the SLRRI work is done in close coordination with the Fond du Lac Band of Lake Superior Chippewa and the 1854 Treaty Authority to ensure that tribal issues are prioritized, Traditional Ecological Knowledge is integrated, and restoration projects benefit the native people living near the estuary and that continue to rely on it for traditional cultural uses as well as contemporary recreational pursuits.

The SLRRI team is also leading a Landscape Conservation Design (LCD) planning process that involves a large number of groups and organizations with an interest in the St. Louis River estuary and surrounding watersheds. The LCD approach explicitly identifies and includes multiple perspectives, encompassing ecological integrity, community health, and economic development. The LCD process will connect resource managers to BIPOC organizations as we work collaboratively towards a sustainable St. Louis River landscape.

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 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.

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?

- 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
Perch Lake - Enhance hydrologic connection, establish optimal bathymetry	December 2023
Lower Knowlton Creek - Remove fish passage barrier and restore a natural stream channel	December 2023
Mud Lake - Enhance hydrologic connection, remove legacy wood waste and restore ecological functions	December 2024
Kingsbury Creek - Reduce sedimentation, restore cold-water fisheries habitat and enhance recreational fishing	December 2022
Project prioritization, integration, and development; site-specific coordination	June 2027
MLT Avian Habitat Restoration and Enhancement	June 2026
Keene Creek - Reduce sedimentation, restore cold-water fisheries habitat and enhance recreational fishing	December 2023
-	-

Date of Final Report Submission: 11/01/2027

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, 2026;

(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, 2030;

(3) money appropriated for restoring or enhancing other land is available until June 30, 2027;

(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	Antic. Leverage	Leverage Source	Total
Personnel	\$670,000	-	-	\$670,000
Contracts	\$3,445,700	\$2,900,000	-, GLRI (2 sources)	\$6,345,700
Fee Acquisition w/ PILT	-	-	-	-
Fee Acquisition w/o PILT	-	-	-	-
Easement Acquisition	-	-	-	-
Easement Stewardship	-	-	-	-
Travel	\$3,800	-	-	\$3,800
Professional Services	\$650,000	-	-	\$650,000
Direct Support Services	\$123,500	-	-	\$123,500
DNR Land Acquisition Costs	-	-	-	-
Capital Equipment	-	-	-	-
Other Equipment/Tools	\$18,000	-	-	\$18,000
Supplies/Materials	\$5,000	-	-	\$5,000
DNR IDP	-	-	-	-
Grand Total	\$4,916,000	\$2,900,000	-	\$7,816,000

Partner: MN Land Trust

Totals

Item	Funding Request	Antic. Leverage	Leverage Source	Total
Personnel	\$150,000	-	-	\$150,000
Contracts	\$749,000	-	-	\$749,000
Fee Acquisition w/ PILT	-	-	-	-
Fee Acquisition w/o PILT	-	-	-	-
Easement Acquisition	-	-	-	-
Easement Stewardship	-	-	-	-
Travel	\$500	-	-	\$500
Professional Services	\$20,000	-	-	\$20,000
Direct Support Services	\$40,500	-	-	\$40,500
DNR Land Acquisition Costs	-	-	-	-
Capital Equipment	-	-	-	-
Other Equipment/Tools	\$3,000	-	-	\$3,000
Supplies/Materials	\$1,000	-	-	\$1,000
DNR IDP	-	-	-	-
Grand Total	\$964,000	-	-	\$964,000

Personnel

Position	Annual FTE	Years Working	Funding Request	Antic. Leverage	Leverage Source	Total
Restoration Staff	0.5	3.0	\$150,000	-	-	\$150,000

Partner: MNDNR**Totals**

Item	Funding Request	Antic. Leverage	Leverage Source	Total
Personnel	\$520,000	-	-	\$520,000
Contracts	\$2,696,700	\$2,900,000	GLRI (2 sources)	\$5,596,700
Fee Acquisition w/ PILT	-	-	-	-
Fee Acquisition w/o PILT	-	-	-	-
Easement Acquisition	-	-	-	-
Easement Stewardship	-	-	-	-
Travel	\$3,300	-	-	\$3,300
Professional Services	\$630,000	-	-	\$630,000
Direct Support Services	\$83,000	-	-	\$83,000
DNR Land Acquisition Costs	-	-	-	-
Capital Equipment	-	-	-	-
Other Equipment/Tools	\$15,000	-	-	\$15,000
Supplies/Materials	\$4,000	-	-	\$4,000
DNR IDP	-	-	-	-
Grand Total	\$3,952,000	\$2,900,000	-	\$6,852,000

Personnel

Position	Annual FTE	Years Working	Funding Request	Antic. Leverage	Leverage Source	Total
FAW Project Manager	0.6	3.0	\$180,000	-	-	\$180,000
EWR Supervisor	0.2	3.0	\$80,000	-	-	\$80,000
FAW OAS	0.6	3.0	\$120,000	-	-	\$120,000
EWR Project Manager	0.4	3.0	\$140,000	-	-	\$140,000

Amount of Request: \$4,916,000

Amount of Leverage: \$2,900,000

Leverage as a percent of the Request: 58.99%

DSS + Personnel: \$793,500

As a % of the total request: 16.14%

Easement Stewardship: -

As a % of the Easement Acquisition: -

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

Contracts, Professional Services, travel, supplies, and equipment were scaled more or less proportional to the appropriation recommendation. Personnel were scaled to 80% to accommodate the amount of staff time needed to get a project to the point of implementation.

Describe and explain leverage source and confirmation of funds:

MNDNR has a Partnership Agreement with USACE to design the Perch Lake project. The 65% federal share (\$400k,

GLRI) is secured. EPA awarded \$3.5M in GLRI funds to construct the Perch Lake project. \$1M was identified as leverage in ML2018, the remainder (\$2.5M) is leveraged in this proposal.

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?

FTEs listed in the proposal are based on the current MNDNR SLRRI staffing plan and are an estimate of the personnel time required to deliver the grant outputs included in this proposal and advance the overall mission of the SLRRI. An array of staff may work on projects to complete deliverables and manage the grant. MLT's basis for billing is the individual Protection or Restoration project we work on, ensuring allocation to the appropriate grant award. MLT also uses timesheet based accounting ensuring only those personnel funds actually expended are used to achieve the goals of the grant. Time involving coordination among projects is billed proportionately. Personnel funds are generally coordinated to spend down oldest funds first.

Contracts

What is included in the contracts line?

MNDNR budget: contracts for engineering and design, construction, and construction administration and quality control oversight

MLT budget: contracts for construction, enhancements, and invasive species control.

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
traditional travel costs only

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?

Yes

Is Confirmation Document attached?

[Yes](#)

- Cash : \$2,900,000

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

Type	Wetland	Prairie	Forest	Habitat	Total Acres
Restore	-	-	-	80	80
Protect in Fee with State PILT Liability	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-
Protect in Easement	-	-	-	-	-
Enhance	-	-	-	15	15
Total	-	-	-	95	95

Total Requested Funding by Resource Type (Table 2)

Type	Wetland	Prairie	Forest	Habitat	Total Funding
Restore	-	-	-	\$4,816,000	\$4,816,000
Protect in Fee with State PILT Liability	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-
Protect in Easement	-	-	-	-	-
Enhance	-	-	-	\$100,000	\$100,000
Total	-	-	-	\$4,916,000	\$4,916,000

Acres within each Ecological Section (Table 3)

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest	Total Acres
Restore	-	-	-	-	80	80
Protect in Fee with State PILT Liability	-	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-	-
Protect in Easement	-	-	-	-	-	-
Enhance	-	-	-	-	15	15
Total	-	-	-	-	95	95

Total Requested Funding within each Ecological Section (Table 4)

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest	Total Funding
Restore	-	-	-	-	\$4,816,000	\$4,816,000
Protect in Fee with State PILT Liability	-	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-	-
Protect in Easement	-	-	-	-	-	-
Enhance	-	-	-	-	\$100,000	\$100,000
Total	-	-	-	-	\$4,916,000	\$4,916,000

Average Cost per Acre by Resource Type (Table 5)

Type	Wetland	Prairie	Forest	Habitat
Restore	-	-	-	\$60,200
Protect in Fee with State PILT Liability	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-
Protect in Easement	-	-	-	-
Enhance	-	-	-	\$6,666

Average Cost per Acre by Ecological Section (Table 6)

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest
Restore	-	-	-	-	\$60,200
Protect in Fee with State PILT Liability	-	-	-	-	-

Protect in Fee w/o State PILT Liability	-	-	-	-	-
Protect in Easement	-	-	-	-	-
Enhance	-	-	-	-	\$6,666

Target Lake/Stream/River Feet or Miles

25800

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 others will evaluate the response of indicator species at project sites.*

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. Perch Lake and Mud Lake are MNDNR's final AOC project that are not fully funded; therefore, funding these projects is prioritized in order to complete construction projects by 2024.

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. 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
Forested avian habitat enhancement - various parcels in Duluth (centroid)	St. Louis	04915213	15	\$100,000	Yes
Keene Creek Channel (6,500 ft stream)	St. Louis	04915212	0	\$50,000	Yes
Lower Knowlton Creek (5,500 ft stream)	St. Louis	04915223	0	\$40,000	Yes
Perch Lake (3,500 ft river shoreline)	St. Louis	04815209	9	\$1,340,000	Yes
Mud Lake (10,000 ft river shoreline)	St. Louis	04815202	36	\$1,800,000	Yes
Coastal marsh avian habitat restoration - various parcels in Duluth (centroid)	St. Louis	04915213	35	\$625,000	Yes
Kingsbury Creek Channel Restoration (1,300 ft stream)	St. Louis	04915214	0	\$0	Yes

Parcel Map



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