Lessard-Sams Outdoor Heritage Council

Lake Nokomis Shoreline Enhancements for Turtles and Pollinators, Phase 2

Laws of Minnesota 2023 Accomplishment Plan

General Information

Date: 12/29/2022

Project Title: Lake Nokomis Shoreline Enhancements for Turtles and Pollinators, Phase 2

Funds Recommended: $735,000

Legislative Citation: ML 2023, Ch. X, Article 2, Section 2, subd

Appropriation Language:

Manager Information

Manager's Name: Adam Arvidson
Title: Project Manager
Organization: Minneapolis Parks and Recreation Board
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Website:

Location Information

County Location(s): Hennepin.

Eco regions in which work will take place:

- Metro / Urban

Activity types:

- Enhance

Priority resources addressed by activity:

- Habitat

Narrative

Abstract

MPRB requests $665,000 to continue shoreline habitat enhancements at Lake Nokomis in Minneapolis. This project would add 4,000 linear feet of shoreline habitat to the roughly 4,500 linear feet implemented in 2020 with previous LSOHC funding. Completion of Phase Two would ensure naturalization of a total of 65% of this urban lakeshore. Habitat improvements would specifically target multiple turtle species and native plant species beneficial to pollinators.

Design and Scope of Work

In 2020, the Minneapolis Park and Recreation Board (MPRB) completed a project that restored approximately 4500 linear feet of shoreline around Lake Nokomis, a large recreational lake in south Minneapolis. That project re-graded eroded banks, removed some hard armored shoreline, eliminated invasive species, and planted acres of native upland and emergent plants. Though still early in its life, this restoration project is already well loved by the community and has introduced key native species beneficial to pollinators. Plants like butterfly and whorled milkweed, yarrow, and purple coneflower now attract warblers, monarchs, and other pollinators to a landscape that was formerly mown turf. Designated fishing access points allow for public recreation that minimizes erosion and coexists with the habitat benefits.

Despite these benefits, however, the Phase One LSOHC-funded project only restored approximately one-third of the lakeshore. The remaining shoreline is heavily hard-armored, with lawn reaching right up to the shoreline and lake reaching around behind failed stone walls. The potential is here to continue building on the Phase One work with a similar 4,000 linear foot Phase Two project that would restore an additional 30% of the lakeshore, bringing the total restored lakeshore to 65%. In addition to the re-grading, planting, and shore access points that were part of Phase One, the Phase Two project will also focus on the needs of several species of native turtles. The project will incorporate protected sandy nesting areas that appeal to softshell species, and will include amenities for basking turtles, such as low rocks and dead snags in the water.

According to the original land survey map of Hennepin County prior to the development of the Minneapolis, Lake Nokomis was originally a shallow lake. It was likely full of emergent vegetation and was an effective spawning ground for fish and nesting area for turtles. Dredging in the early 1900's disturbed Nokomis's littoral habitat. The concurrent construction of the storm sewer conveyance system added nutrients and sediment to the lake and nearby Minnehaha Creek. Park development removed native vegetation in favor of lawn. In 2016 MPRB adopted a Master Plan for Lake Nokomis that envisions conversion of the park area to 50% native landscape (up from about 10% of the park today). The lakeshore is a key piece of that. Through the Master Plan and on the heels of the successful Phase One project, the public strongly supports more naturalization and more habitat.

Put most simply, this project would fully convert an urban, lawn-dominated, hard-armored lakeshore into a restored ecosystem of prairie and aquatic plants with ample habitat opportunities for birds, insects, and nesting turtles.

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?

This project will target two specific categories of wildlife, with follow-on benefits for a third.

Softshell turtles, specifically spiny softshells, have been sighted in Lake Nokomis but there is no evidence of

nesting. Nearby, at Lake Hiawatha, spiny softshells have nested and are more frequently seen. An ongoing scientific study of turtles in the Minneapolis park system (commissioned by MPRB and performed be researcher Jenny Winkelman) suggests that the hard-armored shoreline of Lake Nokomis is likely preventing nesting by softshells. This is because softshell turtles tend to nest near shore and desire sandy areas. Because this tendency protects them from interaction with roadways, this is a turtle that can be well supported through shoreline restoration alone. The project's removal of hard-armored shoreline, incorporation of native plans and soil restoration, and inclusion of specific protected sandy nesting areas will benefit spiny softshell turtles, as well as several other turtle species known to be present and nest at Lake Nokomis, including snapping and painted, as well as others that could arrive, such as false map and Blanding's.

The second category of wildlife benefit are migratory birds and insect pollinators. The restoration of a diverse native flora will provide forage and shelter. The mix of this prairie-like landscape with nearby savanna and woodlands will specifically benefit several bird species identified by the Audubon Society in its Priority Birds of 2021 and with limited sightings at Lake Nokomis: Louisiana waterthrush (sightings in area), hooded warbler (one sighting in 2020), prairie warbler (sightings in area), rose-breasted grosbeak (periodic sightings), wood thrush (sightings in immediate vicinity), and scarlet tanager (regular sightings nearby, but few at Nokomis).

Lastly, the establishment of natural shoreline and removal of hard-armoring will benefit water quality and multiple game and non-game fish species, ranging from bluegill to muskellunge. Lake Nokomis has a varied bathymetry with shallow bays and deep holes, allowing for a wide variety of fish habitats. Recent carp removal work funded by ENRTF has begun to rebalance the food chain in the lake. The proposed shoreline enhancement, including dead snags loved by young fish, is an important next step.

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:

Lake Nokomis is part of the Minneapolis Grand Rounds, an interconnected system of waterways and landscape corridors that connects across the entire city. Lake Nokomis is connected by uninterrupted green space to Lake Hiawatha (an important natural habitat lake), the Chain of Lakes, the deep forests Wirth Park, and the Mississippi River via Minnehaha Creek. Restoring the Nokomis shoreline will create habitat connectivity spanning more than 100 miles of creek, lake, and river shoreline stretching north of downtown Minneapolis and south through Saint Paul.

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
- H4 Restore and protect shallow lakes

Which two other plans are addressed in this program?

- Minnesota DNR Strategic Conservation Agenda
- State Comprehensive Outdoor Recreation Plan

Which LSOHC section priorities are addressed in this program?

Metro / Urban

- Protect habitat corridors, with emphasis on the Minnesota, Mississippi, and St. Croix rivers (bluff to floodplain)

Does this program include leveraged funding?

Yes

Explain the leverage:

Leveraged funds include all Minneapolis Park and Recreation Board staff time necessary to manage the entirety of the project, including environmental review, permitting, community engagement, and design/construction oversight. The source of these funds is the MPRB General Fund, which comes primarily from the local tax levy.

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 neither supplants nor substitutes previous non-Legacy funds. The Phase One project received Legacy Funds and would not have happened but for them. The same is true for this requested Phase Two project.

Non-OHF Appropriations

Year	Source	Amount
2019	Minneapolis Park and Recreation Board	$115,600
2014	Minnehaha Creek Watershed District	$9,200
2013	Minnehaha Creek Watershed District	$72,598
2010	Minnehaha Creek Watershed District	$41,800
2000	Minnehaha Creek Watershed District	$300,000

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

The stewardship plan for enhanced habitat at Lake Nokomis will be led by MPRB environmental stewardship staff. Their primary focus will be to continue to remove invasive tree and herbaceous species from the shoreline, monitor and repair any recurring erosion, and monitor and repair shoreline restoration areas as needed. MPRB may contract with Conservation Corps Minnesota and will also utilize its own youth employment program, Teen Teamworks, to help with invasives removals. Teen Teamworks is a youth employment program that helps teens and young adults develop job skills focused on maintenance and natural resource management. Water resources staff will also conduct aquatic plant surveys. Volunteers from the Nokomis East Neighborhood Association and the Friends of Lake Nokomis will help sustain the enhanced habitat. After conclusion of the five-year grant, MPRB will continue to maintain and improve lake habitat.

Actions to Maintain Project Outcomes

Year	Source of Funds	Step 1	Step 2	Step 3
2025 and thereafter	MPRB General Operating	continued maintenance of shoreline restoration areas	continued water sampling	-

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

Lake Nokomis and the recreational areas around it are part of the Regional Park system, which attracts a wide demographic range of users. Though park use data that is disaggregated by race is not available, general knowledge suggests that Lake Nokomis is used by a higher percentage of BIPOC families and individuals than would be expected based on the demographics of the neighborhoods around the lake. This is attributable to the existence of a wide range of recreational options in close proximity. A Metropolitan Council study found that BIPOC families preferred spaces where large gathering areas were nearby other recreational options like

swimming, trails, impromptu sports fields, and fishing opportunities. This is true at Lake Nokomis, especially near the Main Beach.

This project will engage and benefit BIPOC park users in two ways. First, MPRB will continue its regular community engagement strategy to connect with diverse park users. Every MPRB capital project begins with a community engagement plan and regularly evaluates outcomes against that plan. MPRB expects to engage with diverse park users and stakeholders during the design of the project. Second, the project itself will benefit the BIPOC users of the park, which, as described above, are numerous. In particular, the lake sees high use by Latinx, Black, and East African families during weekend gatherings and celebrations, and also by Asian individuals and families who tend to shore fish all around the lake. The project will improve fish habitat and angling access (and thereby fishing success), and also water quality for swimming and boating.

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
Monitor and evaluate results annually through fish and plant surveys	2027
Restore and enhance 4000 linear feet of riparian habitat (2023-2024)	2024

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.

Totals

Item	Funding Request	Antic. Leverage	Leverage Source	Total
Personnel	-	$93,000	MPRB General Fund	$93,000
Contracts	$617,000	-	-	$617,000
Fee Acquisition w/ PILT	-	-	-	-
Fee Acquisition w/o PILT	-	-	-	-
Easement Acquisition	-	-	-	-
Easement Stewardship	-	-	-	-
Travel	-	-	-	-
Professional Services	$118,000	-	-	$118,000
Direct Support Services	-	-	-	-
DNR Land Acquisition Costs	-	-	-	-
Capital Equipment	-	-	-	-
Other Equipment/Tools	-	-	-	-
Supplies/Materials	-	-	-	-
DNR IDP	-	-	-	-
Grand Total	**$735,000**	**$93,000**	**-**	**$828,000**

Personnel

Position	Annual FTE	Years Working	Funding Request	Antic. Leverage	Leverage Source	Total
Water Quality Staff	0.05	4.0	-	$15,000	MPRB General Fund	$15,000
Youth Worker(s)	0.4	4.0	-	$30,000	MPRB General Fund	$30,000
Youth Crew Supervisor	0.05	4.0	-	$10,000	MPRB General Fund	$10,000
Design Project Manager	0.1	3.0	-	$38,000	MPRB General Fund	$38,000

Amount of Request: $735,000
Amount of Leverage: $93,000
Leverage as a percent of the Request: 12.65%
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?
The appropriation recommendation constitutes 57% of the original request. This will result in fewer linear feet enhanced. Because smaller projects become less cost efficient in terms of consulting and contractor soft costs, the proposed enhancement is only 48% of the original request, or 4,000 linear feet.

Describe and explain leverage source and confirmation of funds:
Leverage comes from the Minneapolis Park and Recreation Board General Fund, which comes primarily from the local tax levy and some other sources.

Contracts

What is included in the contracts line?
Restoration contractor selected through competitive public bid.

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	-	-	-	5	5
Total	**-**	**-**	**-**	**5**	**5**

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	-	-	-	$735,000	$735,000
Total	**-**	**-**	**-**	**$735,000**	**$735,000**

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	5	-	-	-	-	5
Total	**5**	**-**	**-**	**-**	**-**	**5**

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	$735,000	-	-	-	-	$735,000
Total	**$735,000**	**-**	**-**	**-**	**-**	**$735,000**

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	-	-	-	$147,000

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	$147,000	-	-	-	-

Target Lake/Stream/River Feet or Miles

Lake Nokomis

Outcomes

Programs in metropolitan urbanizing region:

- Improved aquatic habitat indicators ~ *Increased diversity and quantity of native aquatic plants will be assessed through annual point-intercept plant surveys. Ongoing turtle surveys will determine effectiveness of new habitat areas for nesting and food production. Regular water sampling will provide nutrient loading information.*

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

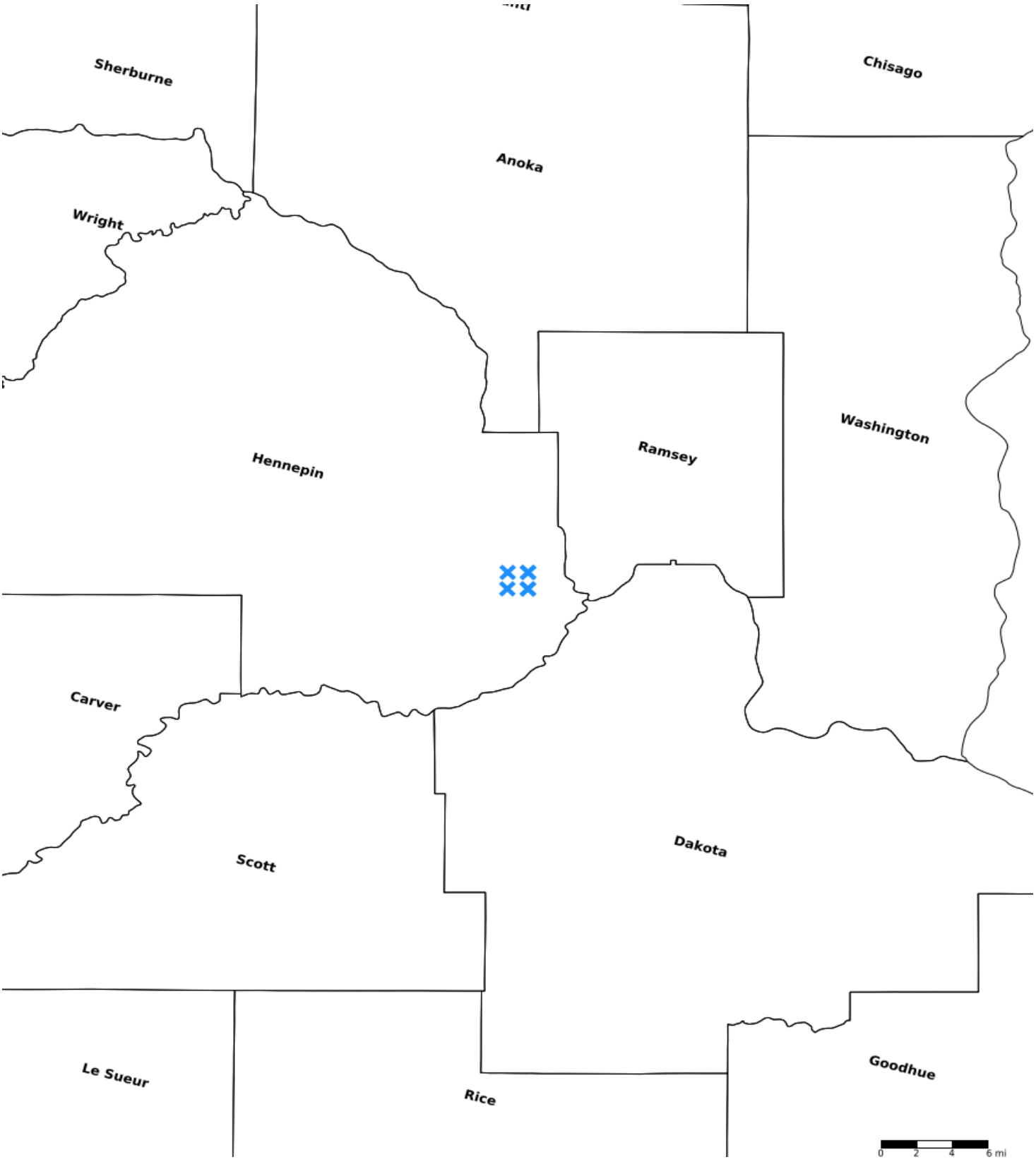
Sign-up Criteria?
No

Explain the process used to identify, prioritize, and select the parcels on your list:
These parcels constitute the shoreline of Lake Nokomis to be included in the Phase Two project.

Restore / Enhance Parcels

Name	County	TRDS	Acres	Est Cost	Existing Protection
1302824230001	Hennepin	02824213	68	$665,000	Yes
1402824440002	Hennepin	02824214	10	-	Yes
2302824110001	Hennepin	02824223	34	-	Yes
2402824230010	Hennepin	02824224	16	-	Yes
2402824210001	Hennepin	02824224	9	-	Yes
1302824430001	Hennepin	02824213	13	-	Yes

Parcel Map


Sherburne
Anoka
Chisago
Wright
Hennepin
Ramsey
Washington
Carver
Scott
Dakota
Le Sueur
Rice
Goodhue
0 2 4 6 mi
Protect in Easement
Protect in Fee with PILT
Protect in Fee W/O PILT
Restore
Enhance
Other

Lessard-Sams Outdoor Heritage Council

Lake Nokomis Shoreline Enhancements for Turtles and Pollinators, Phase 2

Comparison Report

Program Title: ML 2023 - Lake Nokomis Shoreline Enhancements for Turtles and Pollinators, Phase 2
Organization: Minneapolis Parks and Recreation Board
Manager: Adam Arvidson

Budget

Requested Amount: $1,300,000
Appropriated Amount: $735,000
Percentage: 56.54%

Item	Requested Proposal	Leverage Proposal	Appropriated AP	Leverage AP	Percent of Request	Percent of Leverage
Personnel	-	$188,500	-	$93,000	-	49.34%
Contracts	$1,105,000	-	$617,000	-	55.84%	-
Fee Acquisition w/ PILT	-	-	-	-	-	-
Fee Acquisition w/o PILT	-	-	-	-	-	-
Easement Acquisition	-	-	-	-	-	-
Easement Stewardship	-	-	-	-	-	-
Travel	-	-	-	-	-	-
Professional Services	$195,000	-	$118,000	-	60.51%	-
Direct Support Services	-	-	-	-	-	-
DNR Land Acquisition Costs	-	-	-	-	-	-
Capital Equipment	-	-	-	-	-	-
Other Equipment/Tools	-	-	-	-	-	-
Supplies/Materials	-	-	-	-	-	-
DNR IDP	-	-	-	-	-	-
Grand Total	**$1,300,000**	**$188,500**	**$735,000**	**$93,000**	**56.54%**	**49.34%**

If the project received 70% of the requested funding

Describe how the scaling would affect acres/activities and if not proportionately reduced, why?
Scaling would result in fewer linear feet of shoreline enhancement. The reduction would be generally proportional, but because larger projects are more cost-efficient, a 30% percent reduction in funding could result in a deeper reduction in linear footage.

Describe how personnel and DSS expenses would be adjusted and if not proportionately reduced, why?
Scaling would result in lower personnel and other expenses. The reduction would be generally

proportional, but because design and administration costs have minimums regardless of final linear footage, a 30% percent reduction in funding could result in a smaller reduction in expenses.

If the project received 50% of the requested funding

Describe how the scaling would affect acres/activities and if not proportionately reduced, why?
Scaling would result in fewer linear feet of shoreline enhancement. The reduction would be generally proportional, but because larger projects are more cost-efficient, a 50% percent reduction in funding could result in a deeper reduction in linear footage.

Describe how personnel and DSS expenses would be adjusted and if not proportionately reduced, why?
Scaling would result in lower personnel and other expenses. The reduction would be generally proportional, but because design and administration costs have minimums regardless of final linear footage, a 50% percent reduction in funding could result in a smaller reduction in expenses.

Output

Acres by Resource Type (Table 1)

Type	Total Proposed	Total in AP	Percentage of Proposed
Restore	0	-	-
Protect in Fee with State PILT Liability	0	-	-
Protect in Fee w/o State PILT Liability	0	-	-
Protect in Easement	0	-	-
Enhance	10	5	50.0%

Total Requested Funding by Resource Type (Table 2)

Type	Total Proposed	Total in AP	Percentage of Proposed
Restore	-	-	-
Protect in Fee with State PILT Liability	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-
Protect in Easement	-	-	-
Enhance	$1,300,000	$735,000	56.54%

Acres within each Ecological Section (Table 3)

Type	Total Proposed	Total in AP	Percentage of Proposed
Restore	0	-	-
Protect in Fee with State PILT Liability	0	-	-
Protect in Fee w/o State PILT Liability	0	-	-
Protect in Easement	0	-	-
Enhance	10	5	50.0%

Total Requested Funding within each Ecological Section (Table 4)

Type	Total Proposed	Total in AP	Percentage of Proposed
Restore	-	-	-
Protect in Fee with State PILT Liability	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-
Protect in Easement	-	-	-
Enhance	$1,300,000	$735,000	56.54%