



Environment and Natural Resources Trust Fund (ENRTF)

M.L. 2020 ENRTF Work Plan (Main Document)

Today's Date: February 7, 2020

Date of Next Status Update Report: April 1, 2021

Date of Work Plan Approval:

Project Completion Date: October, 2026

Does this submission include an amendment request? ___

PROJECT TITLE: Mississippi River Aquatic Habitat Restoration and Mussel Reintroduction

Project Manager: Adam Arvidson

Organization: Minneapolis Park and Recreation Board

College, Department, or Division: n/a

Mailing Address: 2117 West River Road

City, State, Zip Code: Minneapolis, MN 55406

Project Manager Direct Telephone Number: 612-230-6470

Email Address: aarvidson@minneapolisparcs.org

Web Address: www.minneapolisparcs.org

Location: Central - Minneapolis, Hennepin County

Total Project Budget: \$1,800,000

Amount Spent: \$0

Balance: \$1,800,000

Legal Citation: M.L. 2020, Chp. xx, Sec. xx, Subd. xx

Appropriation Language:

PROJECT STATEMENT:

The Minneapolis Park and Recreation Board (MPRB) and its scientific partners, including malacologist Mike Davis and the Minnesota DNR's Center of Aquatic Mollusk Programs (CAMP), request \$1,800,000 from the ENRTF for a large-scale project to restore lost Mississippi River habitat and reintroduce mussels above St. Anthony Falls. The Upper Mississippi River in Minneapolis used to be rich in aquatic habitat for native fish, mussels, and other invertebrates. With the advent of navigation and associated dredging and industrial development, this habitat has been all but lost—especially the critical island and back-channel habitat so necessary for resident and migrating wildlife. MPRB has taken a significant step toward re-establishing Mississippi River habitat with the creation of Hall's Island, a historic natural island that was eliminated for industrial use in 1966. Three other islands remain, but are slowly degrading due to erosion, invasive species, and degradation of natural substrates. Navigation on the upper river has ceased with the closure of the St. Anthony Falls Lock and Dam. The opportunity is ripe for restoration of lost habitat and for wildlife reintroduction to the riverway.

The four islands considered in this request are all located within the Minneapolis reach of the Mississippi above St. Anthony Falls. The project includes the newly constructed Hall's Island near Plymouth Avenue, two islands near the east bank of the river just south of the Minneapolis Water Works, and one island just off the shore of North Mississippi Regional Park north of the Camden Bridge. Also included is 5,800 linear feet of non-island shoreline parcels owned by MPRB, including a portion of North Mississippi Regional Park. Through this request, ENRTF funding would be used to plan habitat restoration and reintroduction of mussels; to create construction plans for habitat restoration and enhancement; to construct all restored habitat, including vegetation, grading, and aggregate placement both on the islands and underwater; to reintroduce up to four native mussel species; to monitor introduced and any naturally recruiting mussel species on and around the islands for three years; and to develop a long-term management plan to ensure the success of island habitat.

All the proposed restoration areas are in public hands and the negative habitat impact of navigational dredging has ceased. Now is the time to act. The reintroduction of mussels to the river will improve water quality and provide benefits for other aquatic life, most notably game and non-game fish species. In the 1950s the first Mississippi River fish biologist described the upper river in Minneapolis as being littered with dead mussels. Mussel beds are the coral reefs of freshwater ecosystems. This project would significantly speed up recovery of the river's former abundance and put mussels back to work cleaning up and providing the foundation of a healthy ecosystem in the state's most important and well-loved river. By collaborating with respected scientists, MPRB can utilize ENRTF funding to have a tangible, large-scale impact on Minnesota's riverine habitat.

II. OVERALL PROJECT STATUS UPDATES:

First Update April 1, 2021

Second Update October 1, 2021

Third Update April 1, 2022

Fourth Update October 1, 2022

Fifth Update April 1, 2023

Sixth Update October 1, 2023

Seventh Update April 1, 2024

Eight Update October 1, 2024

Ninth Update April 1, 2025

Tenth Update October 1, 2025

Eleventh Update April 1, 2026

Final Report between project end (October 31) and December 15, 2026

III. PROJECT ACTIVITIES AND OUTCOMES:

ACTIVITY 1 Title: Habitat Restoration and Wildlife Reintroduction Planning

Description: In consultation with scientists and engineers, prepare a restoration and reintroduction plan for the Mississippi Islands, in concert with construction plans for habitat restoration and island stabilization. Restoration and reintroduction plans will be prepared internally by the DNR in consultation with MPRB. Construction plans to stabilize and restore the shorelines of four Mississippi River islands and approximately 5800 linear feet of Mississippi River Shoreline will be prepared by an outside contractor selected by MPRB through a competitive selection process. This Activity includes all external design and engineering costs, but not MPRB staff costs, which will be borne by that agency. Coordination with permitting agencies (including the DNR and Army Corps of Engineers) is included in this Activity but the permits themselves are included in Activity 2.

ACTIVITY 1 ENRTF BUDGET: \$283,000

Outcome	Completion Date
<i>1. Completion of restoration plan to guide construction activities</i>	<i>December, 2020</i>
<i>2. Completion of construction plans for stabilization and habitat restoration</i>	<i>February, 2021</i>
<i>3. Completion of reintroduction plan for aquatic invertebrates</i>	<i>June, 2021</i>

First Update April 1, 2021

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ACTIVITY 2 Title: Habitat Restoration Implementation

Description: Implement Activity 1 plans to stabilize and restore the shorelines of four Mississippi River islands and approximately 5800 linear feet of Mississippi River Shoreline. All work will occur between Plymouth Avenue and the Camden Bridge in Minneapolis, with the addition of a single island just north of the Camden Bridge. Activities will include invasive species removal, grading, placement of rock substrate, necessary erosion control, and planting of native species according to BWSR’s “Native Vegetation Establishment and Enhancement Guidelines (see attachment D). Permits from the Minnesota DNR and US Army Corps of Engineers are likely required and will be obtained under this activity, along with any other permits required by the Mississippi Watershed Management Organization and/or the City of Minneapolis. Soil testing and (if necessary) remediation are also included in this activity, but the latter could be funded with other sources. Any remediation would need to be consistent with [Minnesota Statutes 116P.08, Subd. 2](#), which states that the Environment and Natural Resources Trust Fund may not be spent for purposes of environmental compensation and liability under chapter [115B](#) and response actions under chapter [115C](#). This activity also includes all bidding costs, contractor mobilization fees, and construction observation and administration.

ACTIVITY 2 ENRTF BUDGET: \$1,265,744

Outcome	Completion Date
<i>1. Release of construction plans for public bid</i>	<i>April, 2021</i>
<i>2. Construction of habitat elements</i>	<i>December, 2022</i>

First Update April 1, 2021

Second Update October 1, 2021

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ACTIVITY 3 Title: Species Reintroduction and Monitoring

Description: In consultation with scientists, propagate, rear, and stock three existing mussel species using local female mussel donors into the new habitat areas in the Mississippi River to create mussel “beds”; then introduce up to four state and/or federal listed mussel species. Propagation and rearing will begin in July of 2020 and continue through 2024 in order to produce five generations of each species for release. Rearing of juvenile mussels to a releasable size may require up to three

years in captivity.

Monitor these populations each year through 2025. Approval from USFWS is required prior to releasing federally endangered mussels.

ACTIVITY 3 ENRTF BUDGET: \$251,256

Outcome	Completion Date
<i>1. Propagation and rearing of targeted mussel species.</i>	<i>March, 2025</i>
<i>2. Reintroduction of mussels, according to plans developed in Activity 1</i>	<i>October, 2024</i>
<i>3. Annual monitoring of reintroduced and any naturally recruiting mussel populations</i>	<i>June 30, 2025</i>

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IV. DISSEMINATION:

Description:

The Minneapolis Park and Recreation Board will be the primary disseminator of information, and will do so in accordance with its Community Engagement Policy. That policy requires notification of adjacent and affected communities throughout the project. At the inception of the project, MPRB will create a Community Engagement Plan that will outline specific information sharing tools and opportunities. Likely notification and dissemination options will include:

- A project website at www.minneapolisparcs.org
- A subscription-based e-mail service to notify subscribers of project events and milestones
- Possible community events to describe the project and provide an opportunity for public questions

- Coordination with nearby neighborhood organizations, advocacy groups, and other agency partners, including nonprofits and the Mississippi Watershed Management Organization

The project final report will reside at www.minneapolisparks.org on the project webpage and will be stored in perpetuity in the MPRB archives. In addition to MPRB's information dissemination, the DNR's Center for Aquatic Mussel Programs (CAMP) will also make its own research available on its website. It is possible the reintroduction and monitoring information will be shared more broadly in the scientific community by CAMP.

The Minnesota Environment and Natural Resources Trust Fund (ENRTF) will be acknowledged through use of the trust fund logo or attribution language on project print and electronic media, publications, signage, and other communications per the [ENRTF Acknowledgement Guidelines](#).

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V. ADDITIONAL BUDGET INFORMATION:

A. Personnel and Capital Expenditures

Explanation of Capital Expenditures Greater Than \$5,000: N/A

Explanation of Use of Classified Staff: N/A

Total Number of Full-time Equivalent (FTE) Directly Funded with this ENRTF Appropriation: n/a

Enter Total Estimated Personnel Hours for entire duration of project: 2288	Divide total personnel hours by 2,080 hours in 1 yr = TOTAL FTE: 1.1
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Total Number of Full-time Equivalents (FTE) Estimated to Be Funded through Contracts with this ENRTF Appropriation: n/a

Enter Total Estimated Contract Personnel Hours for entire duration of project:	Divide total contract hours by 2,080 hours in 1 yr = TOTAL FTE:
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VI. PROJECT PARTNERS:

- A. Partners outside of project manager’s organization receiving ENRTF funding
Minnesota Department of Natural Resources, Center for Aquatic Mollusk Programs (CAMP)

- B. Partners outside of project manager’s organization NOT receiving ENRTF funding - None

VII. LONG-TERM- IMPLEMENTATION AND FUNDING:

This is a complicated but important project, which will require more time than the 36 months typically requested under the LCCMR program. It is expected to take two years (June 2020 through fall of 2022) to prepare plans for and then construct the habitat improvements. Mussel reintroduction must follow construction and would likely take place in 2023. A three-year monitoring program is recommended by scientists and would take place in 2024, 2025, and 2026. At that time the final management plan will be prepared and the three-year monitoring data will be disseminated through public channels to serve as a resource for other restoration efforts statewide.

The \$1,800,000 request is matched by \$200,000 of local tax levy to be spent during the project period to fund MPRB staff and administrative resources. In addition, to date, more than \$6,000,000 has been spent to reconstruct Hall’s Island from various state and local sources. MPRB has spent local dollars and has utilized grants from the Mississippi Watershed Management Organization to acquire shoreland properties for a total investment of more than \$8,500,000. In all, this grant request follows more than \$15 million in prior funding dedicated to the upper Mississippi in Minneapolis.

VIII. REPORTING REQUIREMENTS:

- Project status update reports will be submitted April 1 and October 1 each year of the project
- A final report and associated products will be submitted between October 31 and December 15, 2026

IX. SEE ADDITIONAL WORK PLAN COMPONENTS:

- A. Budget Spreadsheet
- B. Visual Component or Map - Missing
- C. Parcel List Spreadsheet - Missing
- D. Acquisition, Easements, and Restoration Requirements - Missing
- E. Research Addendum



Legal Citation:

Project Manager: Adam Arvidson

Project Title: Mississippi River Aquatic Habitat Restoration and Mussel Reintroduction

Organization: Minnesota Department of Natural Resources

Project Budget: \$1,800,000 total, MNDNR: \$251,000

Project Length and Completion Date: 6 years, until October 2026

Today's Date: 2/7/2020

ENVIRONMENT AND NATURAL RESOURCES TRUST FUND BUDGET		Budget	Amount Spent	Balance
BUDGET ITEM				
Personnel (Wages and Benefits)				
Program Consultant - .1 FTE (92%salary, 8% benefits) \$30,638		\$ 209,000	\$ -	\$ 209,000
Lab Specialist/diver - .75 FTE (72% salary, 28% benefits) \$126,762				
Data Manager/diver - .25 FTE (72% salary, 28% benefits) \$51,996				
Equipment/Tools/Supplies				
(Mussel propagation related supplies)		\$ 10,000	\$ -	\$ 10,000
Travel expenses in Minnesota				
Mussel related travel for brood collection, release of mussels and monitoring		\$ 8,000	\$ -	\$ 8,000
Other				
DNR's direct and necessary costs (~\$23,256 total) pay for activities that are directly related to and necessary for accomplishing appropriated programs/projects. Direct and necessary costs cover HR Support (~\$5,058), Safety Support (~\$915), Financial Support (~\$2,728), Communication Support (~\$1,388), IT Support (~\$12,030), and Planning Support (~\$1,138) that are necessary to accomplishing funded programs/projects.		\$ 24,000	\$ -	\$ 24,000
COLUMN TOTAL		\$ 251,000	\$ -	\$ 251,000
SOURCE AND USE OF OTHER FUNDS CONTRIBUTED TO THE PROJECT				
	Status (secured or pending)	Budget	Spent	Balance
Non-State: MPRB local levy contributed to project administrative costs for work performed under this request	secured	\$ 200,000	\$ -	\$ 200,000
Non-State: MPRB local levy and MWMO grants utilized to acquire lands for restoration and recreate Hall's Island	secured	\$ 8,661,727	\$ -	\$ 8,661,727
State: Regional Parks Funds, Parks and Trails Legacy Funds utilized to acquire lands for restoration and recreate Hall's Island	secured	\$ 6,154,581	\$ -	\$ 6,154,581
In kind:		\$ -	\$ -	\$ -
Other ENRTF APPROPRIATIONS AWARDED IN THE LAST SIX YEARS				
	Amount legally obligated but not yet spent	Budget	Spent	Balance
		\$ -	\$ -	\$ -

Attachment A: Project Budget Spreadsheet
 Environment and Natural Resources Trust Fund
 M.L. 2020 Budget Spreadsheet



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Project Manager: Adam Arvidson

Project Title: Mississippi River Aquatic Habitat Restoration and Mussel Reintroduction

Organization: Minneapolis Park and Recreation Board

Project Budget: \$1,800,000 total, MPRB: \$1,549,000

Project Length and Completion Date: 6 years, until October 2026

Today's Date: 2/7/2020

ENVIRONMENT AND NATURAL RESOURCES TRUST FUND BUDGET		Budget	Amount Spent	Balance
BUDGET ITEM				
Engineering and Design: preparation of restoration construction plans for island and shoreline habitat restoration. Consultant will be selected through a competitive RFP, following purchasing and civil rights rules of the City of Minneapolis and MPRB.		\$ 283,000	\$ -	\$ 283,000
Other				
Construction: A qualified contractor will be selected through a competitive public bidding process, under purchasing and civil rights rules of the City of Minneapolis and MPRB. Construction contractor will be responsible for all construction activities associated with restoration of island and shoreline habitat.		\$ 1,266,000	\$ -	\$ 1,266,000
COLUMN TOTAL		\$ 1,549,000	\$ -	\$ 1,549,000
SOURCE AND USE OF OTHER FUNDS CONTRIBUTED TO THE PROJECT				
	Status (secured or pending)	Budget	Spent	Balance
Non-State: MPRB local levy contributed to project administrative costs for work	secured	\$ 200,000	\$ -	\$ 200,000
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In kind:		\$ -	\$ -	\$ -
Other ENRTF APPROPRIATIONS AWARDED IN THE LAST SIX YEARS				
	Amount legally obligated but not yet spent	Budget	Spent	Balance
		\$ -	\$ -	\$ -

