

# **Environment and Natural Resources Trust Fund**

# 2023 Request for Proposal

## **General Information**

Proposal ID: 2023-179

Proposal Title: Elm Creek Restoration Biological Monitoring

## **Project Manager Information**

Name: Heather Nelson Organization: City of Champlin Office Telephone: (763) 923-7120 Email: hnelson@ci.champlin.mn.us

## **Project Basic Information**

**Project Summary:** Habitat restoration been completed in five phases on Elm Creek. Our project will evaluate fish and invertebrate populations to determine the success and effectiveness of these restoration efforts.

Funds Requested: \$106,000

Proposed Project Completion: December 31, 2026

#### LCCMR Funding Category: Small Projects (H)

Secondary Category: Methods to Protect, Restore, and Enhance Land, Water, and Habitat (F)

# **Project Location**

- What is the best scale for describing where your work will take place? Region(s): Metro
- What is the best scale to describe the area impacted by your work? Region(s): Metro
- When will the work impact occur? During the Project

# Narrative

#### Describe the opportunity or problem your proposal seeks to address. Include any relevant background information.

Elm Creek is currently impaired by, E. coli, chloride, DO, fish/macroinvertebrates bioassays (MPCA Surface Water Data access). Restoration efforts have been completed on Elm Creek due to previous loss of habitat and biomass populations as well as water quality impairments. However limited work has been done to evaluate the success in these restoration efforts as it pertains to the goal of improving on; known impairments, overall biology/ecology within the stream, and recreational use opportunities. Current biological monitoring sites have been established by the Three Rivers Park District in Phase V in 2017 and the MPCA in the middle of Phase IV in 2020 with sampling planned for 2030. The problem lies with unavailable data within the next eight years to examine what the effects of restoration work has on the instream biology and overall water quality. As a result, we will not be able to identify what potential restoration efforts had the greatest impact and may also miss the opportunity to learn what restoration efforts effectively result on the stream biota. By including seasonal sampling, we also will identify spawning runs and determine if restoration resulted in increased recruitment of native fish species.

# What is your proposed solution to the problem or opportunity discussed above? Introduce us to the work you are seeking funding to do. You will be asked to expand on this proposed solution in Activities & Milestones.

Our goal is to evaluate the effectiveness of restoration efforts within Elm Creek from Mill Pond to Hayden Lake and determine the how the overall water quality and biology changed within the designated project area because of restoration efforts. Simultaneously we plan to identify areas that would benefit from future restoration efforts, along with identifying the current status of restoration efforts. We are seeking funding to sample all five (5) sections of Elm Creek that have been restored and within Mill Pond. Sampling will include fish and macroinvertebrate sampling and follow MPCA sampling methods. The intent is to add to the MPCA surface water dataset and to be used by Elm Creek Watershed, Three Rivers Park District, and Champlin. Furthermore, this assessment will allow for a better understanding of the biology/ecology within Elm Creek and the outcome of restoration efforts. This project will also provide a tool to be used not only in the local partners, but the state of Minnesota to create more efficient and effective restoration work, and outreach opportunities for the state and city to highlight the importance of the monitoring restoration projects that are currently being completed throughout the state.

# What are the specific project outcomes as they relate to the public purpose of protection, conservation, preservation, and enhancement of the state's natural resources?

Through examining past projects, we can improve upon effectiveness and efficiency of current future habitat restoration work. Which will improve habitat for aquatic species, water quality of Elm Creek, and improve recreational opportunities for the public. A better understanding of biotic utilization and recolonization of habitat improvement projects allows for a more predictable outcome for future restoration work. This project also provides outreach opportunities with the public and collaborative partners to highlight the work they are doing and show the public results emphasizing the importance this project and previous projects completed on elm creek.

# Activities and Milestones

## Activity 1: 2023 Field Survey and Summary Report

Activity Budget: \$36,000

#### **Activity Description:**

Pre-sampling: Initial site inspections will be conducted to identify stream reaches, gain access to sites, and evaluate overall feasibility of each sampling site.

Sampling: Backpack electrofish 5 sections Elm Creek and one lake sampling event collecting and identifying all fish down to 25mm. Counts, size range, and total mass of each species caught will be recorded, and all methods will mirror that of the MPCA biological monitoring unit (see attached). All fish will be immediately released after data is collected. Two vouchers of each species will be preserved in formalin and sent off to a third party to ensure accurate identifications.

Macroinvertebrates: Sampling will be taken from each of the nine locations following MPCA methods, the samples will then be preserved and sent off to an independent lab to process and identify the invertebrates

Data management: Data is to be analyzed with IBI values being calculated in the MPCA IBI metrics specified for that stream. Raw data will also be made available to the public and shared with the MPCA to use in their biological monitoring assessment of Mississippi River (Twin Cities) watershed. Potential collaboration would allow for cool-water IBI testing.

#### **Activity Milestones:**

Description	Completion Date
Pre-Sampling	July 31, 2023
Sampling	July 31, 2023
Data Summary	December 31, 2023

# Activity 2: 2024 Field Survey and Summary Report

#### Activity Budget: \$30,000

#### **Activity Description:**

Pre-sampling: Initial site inspections will be conducted to identify stream reaches, gain access to sites, and evaluate overall feasibility of each sampling site.

Sampling: Backpack electrofish 5 sections Elm Creek and one lake sampling event collecting and identifying all fish down to 25mm. Counts, size range, and total mass of each species caught will be recorded, and all methods will mirror that of the MPCA biological monitoring unit (see attached). All fish will be immediately released after data is collected. Two vouchers of each species will be preserved in formalin and sent off to a third party to ensure accurate identifications.

Macroinvertebrates: Sampling will be taken from each of the nine locations following MPCA methods, the samples will then be preserved and sent off to an independent lab to process and identify the invertebrates

Data management: Data is to be analyzed with IBI values being calculated in the MPCA IBI metrics specified for that stream. Raw data will also be made available to the public and shared with the MPCA to use in their biological monitoring assessment of Mississippi River (Twin Cities) watershed. Potential collaboration would allow for cool-water IBI testing.

#### **Activity Milestones:**

Description	<b>Completion Date</b>
Pre Sampling	July 31, 2024
Sampling	July 31, 2024
Data Summary	December 31, 2024

### Activity 3: 2025 Field Survey and Summary Report

#### Activity Budget: \$30,000

#### **Activity Description:**

Pre-sampling: Initial site inspections will be conducted to identify stream reaches, gain access to sites, and evaluate overall feasibility of each sampling site.

Sampling: Backpack electrofish 5 sections Elm Creek and one lake sampling event collecting and identifying all fish down to 25mm. Counts, size range, and total mass of each species caught will be recorded, and all methods will mirror that of the MPCA biological monitoring unit (see attached). All fish will be immediately released after data is collected. Two vouchers of each species will be preserved in formalin and sent off to a third party to ensure accurate identifications.

Macroinvertebrates: Sampling will be taken from each of the nine locations following MPCA methods, the samples will then be preserved and sent off to an independent lab to process and identify the invertebrates

Data management: Data is to be analyzed with IBI values being calculated in the MPCA IBI metrics specified for that stream. Raw data will also be made available to the public and shared with the MPCA to use in their biological monitoring assessment of Mississippi River (Twin Cities) watershed. Potential collaboration would allow for cool-water IBI testing.

#### **Activity Milestones:**

Description	Completion Date
Pre Sampling	July 31, 2025
Sampling	July 31, 2025
Data Summary	December 31, 2025

#### Activity 4: Final Summary Report

#### Activity Budget: \$10,000

#### **Activity Description:**

All sampled data will be analyzed with IBI values being calculated in the MPCA IBI metrics specified for that stream. Data will be summarized and trends calculated to accurately define the yearly status of biological data. The final report will also include summary bulletins which will be available for public outreach.

#### **Activity Milestones:**

Description	Completion Date
Final Summary Report	June 30, 2026

# **Project Partners and Collaborators**

Name	Organization	Role	Receiving Funds
Diane Spector	Elm Creek Watershed Commission	Technical Support	No
Brian Valch	Three Rivers Park District	Technical Support	No

# Long-Term Implementation and Funding

Describe how the results will be implemented and how any ongoing effort will be funded. If not already addressed as part of the project, how will findings, results, and products developed be implemented after project completion? If additional work is needed, how will this work be funded?

Elm Creek restoration projects phase I-V were designed for long-term ecological and hydraulic stability. Long-term monitoring of the integrity of the improvements are currently done in conjunction with routine inspections by the City of Champlin as appropriate. This project includes biological monitoring for a period of three years. Monitoring continue after completion of the project collaboratively by Three Rivers Park District, Elm Creek Watershed and the MPCA. The previous projects long term goals are to restore aquatic habitat and restore structural elements. Our project will provide tangible data and understanding of existing vs constructed habitat restoration invertebrate and fish populations.

# Other ENRTF Appropriations Awarded in the Last Six Years

Name	Appropriation	Amount Awarded
Elm Creek Habitat Restoration Final Phase	M.L. 2021, First Special Session, Chp. 6, Art. 6, Sec. 2, Subd. 08r	\$521,000
Elm Creek Restoration - Phase IV	M.L. 2021, First Special Session, Chp. 6, Art. 5, Sec. 2, Subd. 09j	\$500,000

# Project Manager and Organization Qualifications

#### Project Manager Name: Heather Nelson

Job Title: Assistant City Engineer

#### Provide description of the project manager's qualifications to manage the proposed project.

The City of Champlin will be the fiscal agent receiving funds for the project. Heather Nelson will be the project manager. Heather's qualifications for management of this grant request includes numerous grant funded City of Champlin projects that include local Elm Creek Watershed Commission grants, Elm Creek Phase IV LCCMR grant and Elm Creek Phase V Conservation Partners Legacy (CPL) grant. These grants required developing work plans, budget and progress reporting and management of outside environmental, engineering and construction services to complete the projects.

#### Organization: City of Champlin

#### **Organization Description:**

The City of Champlin will be the fiscal agent receiving funds for the project. The following local agencies will assist by providing technical input: Three Rivers Park District, and Elm Creek Watershed Commission. Outside services required to complete the project include environmental biological monitoring and reporting.

# Budget Summary

Category / Name	Subcategory or Type	Description	Purpose	Gen. Ineli gible	% Bene fits	# FTE	Class ified Staff?	\$ Amount
Personnel				8.0.0				
							Sub Total	-
Contracts and Services								
TBD	Professional or Technical Service Contract	Technical Services				0.75		\$105,000
							Sub Total	\$105,000
Equipment, Tools, and Supplies								
	Equipment	Water Level Meters	Collect water level elevations and water temperature					\$1,000
							Sub Total	\$1,000
Capital Expenditures								
							Sub Total	-
Acquisitions and Stewardship								
							Sub Total	-
Travel In Minnesota								
							Sub Total	-
Travel Outside Minnesota								
							Sub Total	-

Printing and					
Publication					
				Sub	-
				Total	
Other					
Expenses					
				Sub	-
				Total	
				Grand	\$106,000
				Total	

# Classified Staff or Generally Ineligible Expenses

Category/Name	Subcategory or	Description	Justification Ineligible Expense or Classified Staff Request
	Туре		

# Non ENRTF Funds

Category	Specific Source	Use	Status	Amount
State				
			State Sub	-
			Total	
Non-State				
In-Kind	City of Champlin MN	Administrative Services	Secured	\$15,000
			Non State	\$15,000
			Sub Total	
			Funds	\$15,000
			Total	

# Attachments

## **Required Attachments**

# Visual Component

File: <u>55c9f437-804.pdf</u>

#### Alternate Text for Visual Component

Grant Site Figure...

#### Board Resolution or Letter

Title	File
Letter Supporting the Project	8bfe52fc-7a3.pdf

#### Administrative Use

Does your project include restoration or acquisition of land rights?

No

- Does your project have potential for royalties, copyrights, patents, or sale of products and assets? No
- Do you understand and acknowledge IP and revenue-return and sharing requirements in 116P.10?  $$\rm N/A$$
- Do you wish to request reinvestment of any revenues into your project instead of returning revenue to the ENRTF? N/A
- Does your project include original, hypothesis-driven research?

No

Does the organization have a fiscal agent for this project?

No

