



# Environment and Natural Resources Trust Fund

## 2023 Request for Proposal

### General Information

**Proposal ID:** 2023-102

**Proposal Title:** Zumbro River Biological Monitoring Pre/Post Habitat Improvement

### Project Manager Information

**Name:** Terri Peters

**Organization:** Wabasha County Soil and Water Conservation District

**Office Telephone:** (651) 560-2044

**Email:** terri.peters@mn.nacdnet.net

### Project Basic Information

**Project Summary:** This project will evaluate benefits and effectiveness of current restoration efforts on the Zumbro River in addition to future restoration efforts at confluences of cold water and warm water streams.

**Funds Requested:** \$154,000

**Proposed Project Completion:** June 30, 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): SE

**What is the best scale to describe the area impacted by your work?**

Region(s): SE

**When will the work impact occur?**

During the Project and In the Future

## Narrative

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

The Zumbro River (ZR) is currently impaired by mercury in fish, PCB's in fish, turbidity, E. coli, and macroinvertebrates bioassays (2017 WRAPS Report). Some restoration work have been completed on sections of Zumbro River and many of its cold-water streams. However limited work has been completed to evaluate the success of restoration efforts as it pertains to the goal of improving fish and invertebrate populations in addition to known impairments. By including sampling locations at restored and non-restored sites, along with at the confluences of restored and non-restored cold-water influence, we will be able to evaluate the effectiveness of current restoration efforts and the potential for future restoration. The MPCA currently have some biological monitoring sites along the Zumbro and its tributaries that are sampled every 10 years. Additional sites in targeted locations for purposes of evaluation of habitat improvement would improve our understanding of the Zumbro River and identify areas that would benefit from restoration efforts. Finally, cold-water inputs into warm-water streams provide thermal refuge and habitat during warmer months for many species. Sampling within these habitats, is crucial to identify potential future habitat loss because of climate change, and how future restoration efforts could help mitigate these changes.

### **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 establish the effectiveness or restoration efforts within the Zumbro River and its tributaries on the overall water quality and biology within the Zumbro River itself. Simultaneously we plan to identify areas that would benefit from future restoration efforts, along with identifying biologically important areas that are at risk from climate change. We are seeking funding to sample 7 sites along the Zumbro River following MPCA sampling methods for fish and macroinvertebrates which will be shared with the MPCAs current dataset on stream Index of Biotic Integrity scores. Furthermore, this assessment not only more accurately evaluates the Zumbro River, but also creates a template to be used in future monitoring and restoration efforts not only in the Zumbro River Watershed, but the state of Minnesota. This multilevel collaborative effort also highlights work that is being done by the state and provides an outreach opportunity to highlight the importance of the state biological monitoring plan. This project will highlight restoration work completed within the County SWCDs, Watershed Alliance of the Greater Zumbro and outreach to landowners with opportunities to see the results of restoration projects within the Zumbro River watershed. These results will also be shared with regionally.

### **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 the past projects, we can improve upon effectiveness and efficiency of future restore work. This will improve habitat for aquatic species, water quality of the Zumbro River, and improve recreational opportunities for the public. We will also be able to identify sites for future restoration work that would address the "Issue Areas" outlined in the Greater Zumbro River Watershed Comprehensive Watershed Management Plan. This project provides an outreach opportunity for a variety of agencies to highlight the work they are doing and show the public tangible results emphasizing the importance habitat improvement.

## Activities and Milestones

### Activity 1: 2023 Fish IBI Field and Survey Report

**Activity Budget:** \$47,000

**Activity Description:**

Sampling: Boat electrofish seven 500m reaches of the Zumbro River 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.

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

Data Analysis: Data to be analyzed with IBI values being calculated in the MPCA IBI metrics specified for that sampling reach. Summary Assessment will be completed of collected data.

**Activity Milestones:**

Description	Completion Date
Sampling	August 31, 2023
Data Analysis	December 31, 2023
Summary Assessment	December 31, 2023

### Activity 2: 2024 Fish IBI Field and Survey Report

**Activity Budget:** \$47,000

**Activity Description:**

Sampling: Boat electrofish seven 500m reaches of the Zumbro River 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.

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

Data Analysis: Data to be analyzed with IBI values being calculated in the MPCA IBI metrics specified for that sampling reach. Summary Assessment will be completed of collected data.

**Activity Milestones:**

Description	Completion Date
Sampling	August 31, 2024
Data Analysis	December 31, 2024
Summary Assessment	December 31, 2024

### Activity 3: 2025 Fish IBI Field and Survey Report

**Activity Budget:** \$47,000

**Activity Description:**

Sampling: Boat electrofish seven 500m reaches of the Zumbro River 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.

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

Data Analysis: Data to be analyzed with IBI values being calculated in the MPCA IBI metrics specified for that sampling reach. Summary Assessment will be completed of collected data.

**Activity Milestones:**

Description	Completion Date
Sampling	August 31, 2025
Data Analysis	December 31, 2025
Summary Assessment	December 31, 2025

**Activity 4: Final Report**

**Activity Budget:** \$13,000

**Activity Description:**

Final Summary Report and Public Outreach

**Activity Milestones:**

Description	Completion Date
Final Summary Report	June 30, 2026
Public Outreach Summary	June 30, 2026

## Project Partners and Collaborators

Name	Organization	Role	Receiving Funds
Beau Kennedy	Goodhue County SWCD	Goodhue County is located adjacent to Wabasha County. Their efforts and interests are similar to Wabasha County SWCD regarding implementation of habitat features in the correct locations along the Zumbro River. Their role will include project planning and supplying existing condition data upgradient of the proposed monitoring project.	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?**

Our project includes monitoring methods established by the MPCA which will identify current biological conditions of pre and post habitat restoration, providing an understanding of existing and proposed habitat restoration ecological improvements. Once the project is completed the data will be utilized by the watershed district and project partners to determine existing and future sustainable of habitat outcomes. Post project long-term monitoring will be continued by the MPCA and MNDNR to ensure continued data will be collected as part of our long term monitoring and public outreach programs. We anticipate funding requests will be required for future habitat restoration phases.

## Project Manager and Organization Qualifications

**Project Manager Name:** Terri Peters

**Job Title:** District Manager

**Provide description of the project manager’s qualifications to manage the proposed project.**

Terri Peters has served as the District Manger for Wabasha County Soil and Water Conservation District since 2014. She manages numerous grant funded projects each year from multiple funding sources some of those include Conservation Partners Legacy, MN Clean Water, National Fish and Wildlife Foundation, Lessard Sams Outdoor Heritage Council Outdoor Heritage fund. While managing the district Terri has managed over \$6,000,000 in in grant projects in the past five years.

**Organization:** Wabasha County Soil and Water Conservation District

**Organization Description:**

The SWCD is a subdivision of State government that is governed by a locally elected Board of Supervisors. The SWCD provides technical and financial assistance for natural resource issues. Our mission is to provide technical, financial, and informational resources for land and water management in a way that promotes a sound economy and sustains and enhances natural resources.

## Budget Summary

Category / Name	Subcategory or Type	Description	Purpose	Gen. Ineligible	% Benefits	# FTE	Classified Staff?	\$ Amount
<b>Personnel</b>								
Environmental Technician		Biomonitoring			0%	0.15		\$15,000
Grant Administrator		Project Administration			0%	0.15		\$15,000
							<b>Sub Total</b>	<b>\$30,000</b>
<b>Contracts and Services</b>								
TBD	Professional or Technical Service Contract	Survey and Technical Services				0.9		\$120,500
							<b>Sub Total</b>	<b>\$120,500</b>
<b>Equipment, Tools, and Supplies</b>								
	Equipment	5 Meters	Water level and Temperature					\$500
							<b>Sub Total</b>	<b>\$500</b>
<b>Capital Expenditures</b>								
							<b>Sub Total</b>	-
<b>Acquisitions and Stewardship</b>								
							<b>Sub Total</b>	-
<b>Travel In Minnesota</b>								
							<b>Sub Total</b>	-
<b>Travel Outside Minnesota</b>								

							<b>Sub Total</b>	-
<b>Printing and Publication</b>								
	Printing	Public Outreach Bulletins and Flyers	Public Outreach to landowners and Organizations					\$3,000
							<b>Sub Total</b>	<b>\$3,000</b>
<b>Other Expenses</b>								
							<b>Sub Total</b>	-
							<b>Grand Total</b>	<b>\$154,000</b>

Classified Staff or Generally Ineligible Expenses

Category/Name	Subcategory or Type	Description	Justification Ineligible Expense or Classified Staff Request
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## Non ENRTF Funds

Category	Specific Source	Use	Status	Amount
<b>State</b>				
In-Kind	Soil & Water Conservation District funds through State Capacity Funding/Clean Water Fund Program where outreach dollars are dedicated	Project Related Public outreach	Secured	\$5,000
			<b>State Sub Total</b>	<b>\$5,000</b>
<b>Non-State</b>				
In-Kind	319 Federal funds for outreach identified in the 319 Nine Key Element Plan for West Indian Creek Watershed	Outreach/Monitoring with partners	Secured	\$5,000
			<b>Non State Sub Total</b>	<b>\$5,000</b>
			<b>Funds Total</b>	<b>\$10,000</b>

## Attachments

### Required Attachments

#### *Visual Component*

File: [2686021c-a16.pdf](#)

#### *Alternate Text for Visual Component*

The attached figure includes the location of sampling sites on the Zumbro River....

#### *Board Resolution or Letter*

Title	File
Resolution Letter	<a href="#">b23feac5-398.pdf</a>

### Optional Attachments

#### *Support Letter or Other*

Title	File
Letter of Support_ Wabasha SWCD Board	<a href="#">2ab9da52-474.pdf</a>
Project Letter of Support	<a href="#">0a54b7b8-168.pdf</a>

## 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?**

N/A

**Do you wish to request reinvestment of any revenues into your project instead of returning revenue to the ENRTF?**

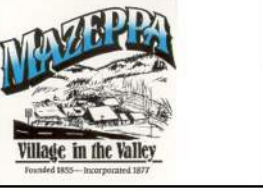
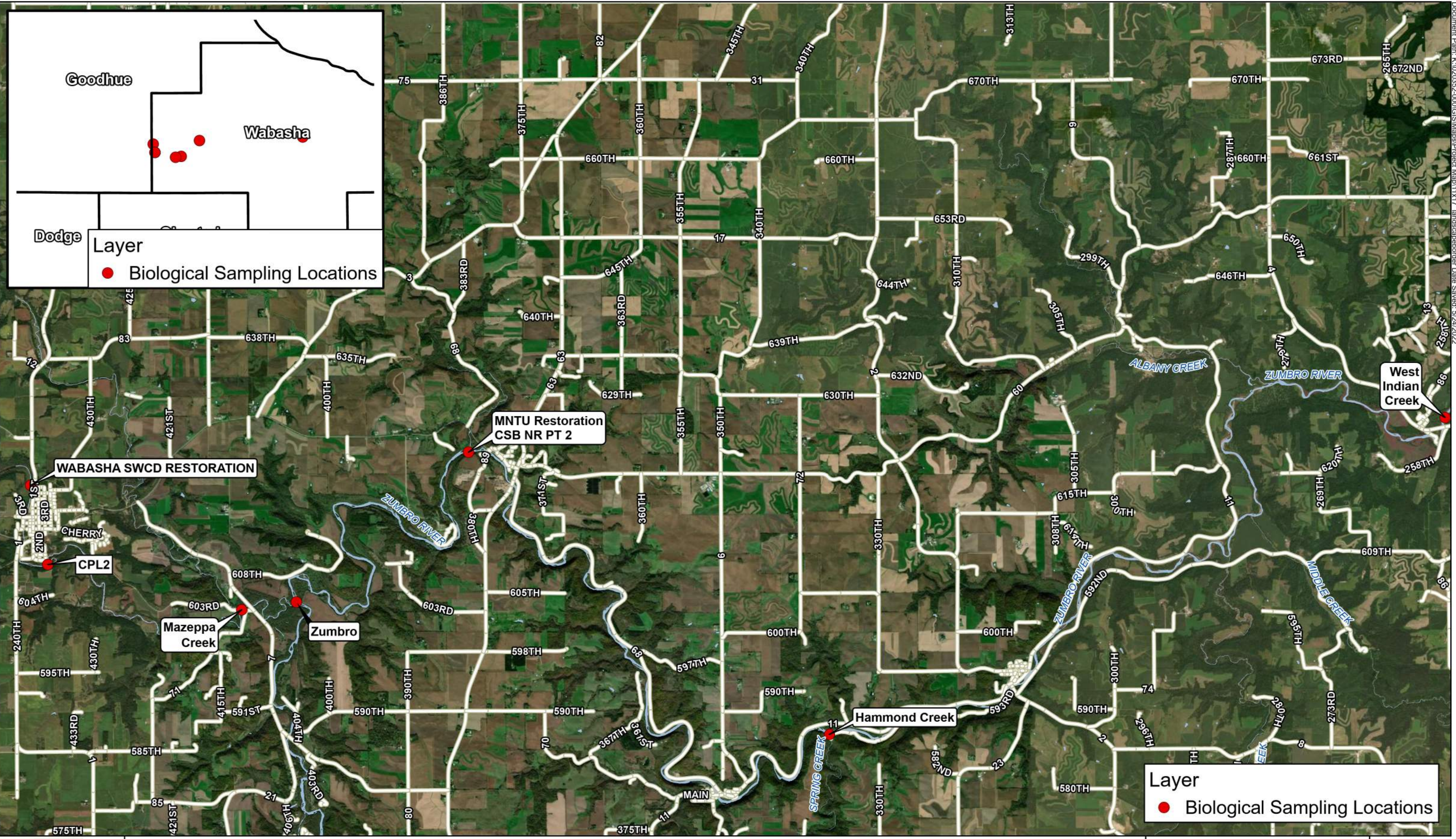
N/A

**Does your project include original, hypothesis-driven research?**

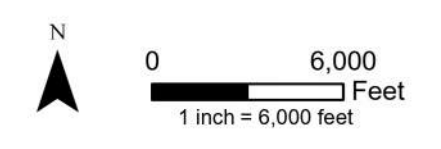
No

**Does the organization have a fiscal agent for this project?**

No



**Zumbro River Pre and Post Habitat Restoration Biological Monitoring Project**  
LCCMR 2023 Request



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