

**Environment and Natural Resources Trust Fund**

# 2023 Request for Proposal

## **General Information**

**Proposal ID:** 2023-025

**Proposal Title:** Root River Habitat Restoration

## **Project Manager Information**

**Name:** Colleen Foehrenbacher

**Organization:** Eagle Bluff Environmental Learning Center

**Office Telephone:** (507) 467-2714

**Email:** colleenf@eaglebluffmn.org

## **Project Basic Information**

**Project Summary:** The Root River Restoration project is 3,300 linear feet of stream bank and instream habitat restoration located within Eagle Bluff and state owned land north of Lanesboro, Minnesota.

**Funds Requested:** $866,000

**Proposed Project Completion:** June 30, 2028

**LCCMR Funding 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.**

Flood events since 2011 have drastically changed the Root River within the project area. Flood damage and sediment accumulation has disconnected the river channel and floodplains, directing flows against the riverbanks creating erosive conditions and loss of riparian habitat and fish habitat. Eagle Bluff has established this project as one of high need to address the loss of stream banks and aquatic habitat, and unsafe sloughing slopes. As a result of aggradation due to current riverbank erosion and unstable channel dimensions, instream fish habitat has drastically declined. Prior to flood events this area was populated with Brown Trout, Channel and Flathead Catfish, Walleye, Sauger, Rock Bass, Shovelnose Sturgeon, Longnose Gar, and white and smallmouth bass. One notable species historically present that occurs infrequently in the Root River is the Lake Sturgeon. The river has macroinvertebrate and total suspended solids impairments as well. This project would address both the sediment load entering the river, a priority of the Root River One Watershed One Plan, and macroinvertebrate and fish.

**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.**

The proposed project exhibits steep slopes with highly erodible soils, sloughing soils, and uprooted and fallen trees. The riverine habitat within this area is degraded but includes geomorphic features such as riffles, runs, and pool habitat that will support diverse aquatic species if restored. Preliminary conceptual plans have been completed to address current conditions of the project in cooperation with the MNDNR area fisheries office which include installation of rock boulder toe, toe-wood, rootwads, boulder clusters, riffles and floodplain restoration to enhance aquatic species habitat including brown trout, smallmouth bass, northern pike and sensitive species. The riparian areas of the river will be restored with native riparian and upland buffers using both live plantings and native seeding that will filter sediments and nutrients from surface water runoff. This area has also been called, “the most diverse, remote, and fascinating piece of property left in the Root River Watershed'' by former regional DNR fisheries manager, Steve Klotz. Biological monitoring will be conducted as part of the Eagle Bluff educational curriculum in cooperation with the local MNDNR staff from the Lanesboro Fisheries office to determine how the habitat improvements affect changes in fish and aquatic species populations, and water quality.

**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?**

Restoration of this section of the Root River will provide the following long term benefits: increased fish populations resulting from instream fish habitat structures such as root wads, boulder toe, and toe-wood benches; improved water quality by reducing soil erosion and sediment pollution; enhanced vegetated riparian buffer to filter sediment, nutrients, and debris from runoff; and habitat for wildlife species. The proposed project will provide restored habitat open to the public for recreation and fishing. Our project will also create opportunities to develop lesson plans about ecological restoration and environmental careers, and water quality, habitat, and aquatic species monitoring data.

## **Activities and Milestones**

### **Activity 1: Final Design, Engineering, Permitting and Construction Oversight**

**Activity Budget:** $140,000

**Activity Description:**This activity includes engineering, design, permitting, supervision of construction, permit compliance inspection, pre-construction, and post construction survey.

**Activity Milestones:**

|  |  |
| --- | --- |
| **Description** | **Completion Date** |
| Pre-construction Stream Survey | July 31, 2023 |
| Engineering/Construction Plans and Bid Specifications | March 31, 2024 |
| Permit Requirements: MPCA, MNDNR, USACE, Local LGU | July 31, 2024 |
| Construction Oversight: Supervision, Permit Compliance | May 31, 2025 |
| Post Construction Stream Survey and Summary | July 31, 2025 |

### **Activity 2: Project Construction, Monitoring, and Maintenance**

**Activity Budget:** $651,000

**Activity Description:**This activity includes materials and construction of the project.

**Activity Milestones:**

|  |  |
| --- | --- |
| **Description** | **Completion Date** |
| Construction of restoration features, seeding and native buffers | June 30, 2025 |
| Construction materials, native seed and erosion control | June 30, 2025 |

### **Activity 3: Biological Monitoring**

**Activity Budget:** $75,000

**Activity Description:**Three years of monitoring to ensure that restoration efforts improve upon current conditions, specifically targeting known impairments. Includes 1) pre-sampling to identify stream reaches and sampling sites, 2) electrofishing two reaches of the river, 3) sampling two locations for macroinvertebrates, 3) summarizing data with IBI values and providing raw data to public and interested agencies such as DNR, MPCA, and SWCD. Sampling follows MPCA methodologies.   
  
All monitoring data will be reviewed/statistically analyzed and summarized in a report to compare restored and non-restored habitat sections, evaluate sizes pre/post restoration, and to examine the role of seasonality on the communities evaluated. This data and summary will help to target future restorations and success of restorations. The data collected each year will also be used by Eagle Bluff to develop educational programs such as adult or child learning opportunities to assist with data collection and to learn about restoration.

**Activity Milestones:**

|  |  |
| --- | --- |
| **Description** | **Completion Date** |
| Stream sampling: Fish, macroinvertebrates, water levels and temperatures | September 30, 2026 |
| Stream sampling: Fish, macroinvertebrates, water levels and temperatures | September 30, 2027 |
| Stream sampling: Fish, macroinvertebrates, water levels and temperatures, summary report and raw data distribution. | June 30, 2028 |

## **Project Partners and Collaborators**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Organization** | **Role** | **Receiving Funds** |
| Brightsdale Dam Channel Restoration | Fillmore SWCD | Educational partner: their project is in close proximity to Eagle Bluff which will allow us to use their site as another educational location when teaching about water quality, restoration practices, and aquatic species. | 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 design includes habitat and stream bank restoration techniques designed for long-term hydraulic stability and ecological improvements. Once the project is completed and vegetation established, minimal maintenance will be required to sustain the designed habitat outcomes. Maintenance inspections in conjunction with three years of biological monitoring, in cooperation with local MNDNR staff, will be a part of our educational program. The timeline for the overall project construction is approximately 2 years, with 3 years of biological monitoring of the site after construction is completed. Additional future project phases of other sections of stream reach would require separate funding requests.

## **Project Manager and Organization Qualifications**

**Project Manager Name:** Colleen Foehrenbacher

**Job Title:** Executive Director

**Provide description of the project manager’s qualifications to manage the proposed project.**Colleen Foehrenbacher has served as Executive Director for Eagle Bluff Environmental Learning Center since April of 2020. Before this, she served as Eagle Bluff’s Deputy and Education Director for 3 years. While at Eagle Bluff Colleen has managed over $2,000,000 in grant projects including $40,000 ENRTF funds from 2017-2019 as a sub-grantee for the environmental education project titled, “Expanding Raptor Center Online Education.”

**Organization:** Eagle Bluff Environmental Learning Center

**Organization Description:**Eagle Bluff is one of six residential environmental learning centers (RELCs) in Minnesota, and the only RELC in southeastern Minnesota. We are an accredited special purpose school that functions as both a day-use nature center as well as a residential center. Unlike a traditional summer camp, we offer programs year-round and our classes are taught by highly trained and certified full-time staff, with curriculum based on Minnesota State Academic Standard and National Science Standards.   
  
Eagle Bluff began as a grassroots project in 1978, serving 800 individuals annually through full- and half day classes based on forest management curriculum. 40 years later, Eagle Bluff now serves over 18,000 participants annually. Our center consists of a visitor center, 248-bed dormitory, dining hall, and classroom building.  
  
Our mission is dedicated to empowering people to care for the earth and each other. We are committed to offering experiential environmental education to students of all ages, and believe that together we can make a lasting difference by connecting individuals to nature through education. Through experiential classes in an outdoor setting, all Eagle Bluff students receive an interdisciplinary, well-balanced perspective founded on the principles of responsible action and stewardship.

## **Budget Summary**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Category / Name** | **Subcategory or Type** | **Description** | **Purpose** | **Gen. Ineli gible** | **% Bene fits** | **# FTE** | **Class ified Staff?** | **$ Amount** |
| **Personnel** |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  | **Sub Total** | **-** |
| **Contracts and Services** |  |  |  |  |  |  |  |  |
| TBD Engineering Firm | Professional or Technical Service Contract | Creation of Engineering/Construction Plans and Bid Specifications |  |  |  | - |  | $140,000 |
| TBD Construction Contractor | Professional or Technical Service Contract | Construction of restoration features, seeding, and native buffers |  |  |  | - |  | $300,000 |
| TBD | Professional or Technical Service Contract | Biological monitoring |  |  |  | 0.75 |  | $75,000 |
|  |  |  |  |  |  |  | **Sub Total** | **$515,000** |
| **Equipment, Tools, and Supplies** |  |  |  |  |  |  |  |  |
|  | Tools and Supplies | Construction Materials | Construction materials for restoration features, seeding, and native buffers |  |  |  |  | $350,500 |
|  | Equipment | Water Level Meters | Water level elevations and temperature |  |  |  |  | $500 |
|  |  |  |  |  |  |  | **Sub Total** | **$351,000** |
| **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 Total** | **$866,000** |

### **Classified Staff or Generally Ineligible Expenses**

|  |  |  |  |
| --- | --- | --- | --- |
| **Category/Name** | **Subcategory or Type** | **Description** | **Justification Ineligible Expense or Classified Staff Request** |

### **Non ENRTF Funds**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Category** | **Specific Source** | **Use** | **Status** | **Amount** |
| **State** |  |  |  |  |
|  |  |  | **State Sub Total** | **-** |
| **Non-State** |  |  |  |  |
| In-Kind | Eagle Bluff Environmental Learning Center | Grant Administration | Secured | $15,000 |
| In-Kind | Eagle Bluff Environmental Learning Center | 5 years of maintenance and monitoring work | Secured | $50,000 |
| In-Kind | Eagle Bluff Environmental Learning Center | 1 year of curriculum development work to add in monitoring and create curriculum around this project and ongoing education programs. | Secured | $30,000 |
| In-Kind | Eagle Bluff Environmental Learning Center | Environmental Technician Biological Monitoring | Secured | $9,000 |
|  |  |  | **Non State Sub Total** | **$104,000** |
|  |  |  | **Funds Total** | **$104,000** |

## **Acquisition and Restoration**

### **Parcel List**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Name** | **County** | **Site Significance** | **Activity** | **Acres** | **Miles** | **Estimated Cost** | **Type of Landowner** | **Easement or Title Holder** | **Status of Work** |
| "The Point" Property | Fillmore | Contains restored prairies, forests, oak savannas. The area has been classified as an area of "outstanding biodiversity." | Restoration | 131 | - | - | Private | MN Land Trust | Has Not Begun |
| **Totals** |  |  |  | **131** | **0** | **-** |  |  |  |

### **Restoration**

**1. Provide a statement confirming that all restoration activities completed with these funds will occur on land permanently protected by a conservation easement or public ownership.**Yes. All restoration activities completed with these funds will occur on land permanently protected by a conservation easement..

**2. Summarize the components and expected outcomes of restoration and management plans for the parcels to be restored by your organization, how these plans are kept on file by your organization, and overall strategies for long-term plan implementation.**The habitat improvements are designed for long-term stability and no significance maintenance will be required to sustain project outcomes. A long-term monitoring and maintenance plan will be implemented by Eagle Bluff to assure all constructed habitat restoration measures are functioning as designed for the project. Maintenance includes inspecting the integrity of the habitat features, riverbank stabilization and vegetation management, in conjunction with routine inspections and biological monitoring conducted by MNDNR staff, volunteers, hired professionals, and Eagle Bluff students and staff.

**3. Describe how restoration efforts will utilize and follow the Board of Soil and Water Resources “Native Vegetation Establishment and Enhancement Guidelines” in order to ensure ecological integrity and pollinator enhancement.**This project will use native seed and plant material sourced from the local region to ensure that the plants are viable and adapt to the conditions of the site. Seed selection will include a high diversity of species that provides functions of pollinator habitat, foraging habitat for wildlife and fish species, floodplain management, and soil stability.

**4. Describe how the long-term maintenance and management needs of the parcel being restored with these funds will be met and financed into the future.**Eagle Bluff Environmental Learning Center will be responsible for the long-term maintenance and management needs of the parcel. We already have personnel and funding to do so.

**5. Describe how consideration will be given to contracting with Conservation Corps of Minnesota for any restoration activities.**Eagle Bluff will consider contracting with the Conservation Corps Minnesota to aid in live plantings in addition to invasive species removal.

**6. Provide a statement indicating that evaluations will be completed on parcels where activities were implemented both 1) initially after activity completion and 2) three years later as a follow-up. Evaluations should analyze improvements to the parcel and whether goals have been met, identify any problems with the implementation, and identify any findings that can be used to improve implementation of future restoration efforts at the site or elsewhere.**Eagle Bluff Environmental Learning Center will complete evaluations after construction is completed, monitoring will be completed throughout the growing season annually as part of our ongoing educational program, and biological monitoring will occur for three years post-construction. A summary of our monitoring data will be completed after the initial habitat installation and then after three years post-construction. Monitoring data will be provided to the MPCA and other interested parties.

## **Attachments**

### **Required Attachments**

#### ***Map***

File: [8f078e2c-ff1.pdf](https://lccmrprojectmgmt.leg.mn/media/map/8f078e2c-ff1.pdf)

#### ***Alternate Text for Map***

Map 1: Shows the two restoration sites on the North Branch of the Root River.  
Map 2: Habitat Restoration Concept plan for site 1 which includes toe-wood benches, boulder toe protections, and lowering of point bar.   
Map 3: Habitat Restoration Concept plan for site 2 which includes riffle enhancement, boulder toe protection, and toe-wood benches....

#### ***Financial Capacity***

File: [f1d62cf5-0df.pdf](https://lccmrprojectmgmt.leg.mn/media/financial_capacity/f1d62cf5-0df.pdf)

#### ***Board Resolution or Letter***

|  |  |
| --- | --- |
| **Title** | **File** |
| Board of Directors Support Letter | [e6a14fca-2f6.pdf](https://lccmrprojectmgmt.leg.mn/media/attachments/e6a14fca-2f6.pdf) |

### **Optional Attachments**

#### ***Support Letter or Other***

|  |  |
| --- | --- |
| **Title** | **File** |
| Fillmore County Letter of Support | [439fad92-3bb.pdf](https://lccmrprojectmgmt.leg.mn/media/attachments/439fad92-3bb.pdf) |
| Fillmore County SWCD Letter of Support | [903d3a24-59e.pdf](https://lccmrprojectmgmt.leg.mn/media/attachments/903d3a24-59e.pdf) |
| Greg Davids Letter of Support | [1ef535d4-3a6.pdf](https://lccmrprojectmgmt.leg.mn/media/attachments/1ef535d4-3a6.pdf) |
| MN Land Trust Letter of Support | [59c3c5e7-3fd.pdf](https://lccmrprojectmgmt.leg.mn/media/attachments/59c3c5e7-3fd.pdf) |
| Friends of the Root River Letter of Support | [4967b5c0-bfb.pdf](https://lccmrprojectmgmt.leg.mn/media/attachments/4967b5c0-bfb.pdf) |
| Pheasants Forever Letter of Support | [77003db9-9ea.pdf](https://lccmrprojectmgmt.leg.mn/media/attachments/77003db9-9ea.pdf) |
| Molitor (EB Neighbors) Letter of Support | [6a0e4e8f-f73.pdf](https://lccmrprojectmgmt.leg.mn/media/attachments/6a0e4e8f-f73.pdf) |
| Eagle Bluff Site 1 photo | [4ab83587-eb3.pdf](https://lccmrprojectmgmt.leg.mn/media/attachments/4ab83587-eb3.pdf) |
| Eagle Bluff Site 2 photo | [6a9761b7-77e.pdf](https://lccmrprojectmgmt.leg.mn/media/attachments/6a9761b7-77e.pdf) |

## **Administrative Use**

**Does your project include restoration or acquisition of land rights?**   
 Yes: Restoration,

**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