



# Environment and Natural Resources Trust Fund

2024 Request for Proposal

## General Information

**Proposal ID:** 2024-079

**Proposal Title:** Collaborative Natural Resources Data Evaluation and Decision-Making

## Project Manager Information

**Name:** Kristine Maurer

**Organization:** Hennepin County

**Office Telephone:** (612) 235-1251

**Email:** kristine.maurer@hennepin.us

## Project Basic Information

**Project Summary:** This project will coordinate natural resources conservation by identifying shared and needed datasets, developing a GIS tool to capture boots-on-the-ground knowledge, and sharing this information through a web portal.

**Funds Requested:** \$405,000

**Proposed Project Completion:** June 30, 2026

**LCCMR Funding Category:** Foundational Natural Resource Data and Information (A)

## 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 and In the Future

## Narrative

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

Hennepin County has diverse natural landscapes that provide habitat for wildlife, protect water quality, offer recreational opportunities, and serve as the foundation for the region's overall well-being. Yet there is no shared vision or framework for protecting them.

The time to act is now – 14,000 more acres are planned for development by 2040 and more land will likely be slated for development in the upcoming 2050 comprehensive plan updates.

Comprehensive plans are required by law, updated every ten years, and only require that communities “identify goals, intentions and priorities concerning ... natural resources” (Met Council 2022) - yet they serve as the legal basis for development decisions.

The project team, convened to leverage capacity, readiness, and diverse knowledge bases, recently interviewed 15 organizations to understand how natural resources influence comprehensive plans. We learned:

- 1) Natural resources consideration range from bare minimum to intensive inventories and analysis,
- 2) Most organizations rely on common outdated datasets
- 3) Communities experiencing the most development pressure have the least planning and management capacity,
- 4) There is broad interest in tools, maps, and data to assist with NR planning.

Yet, no one agency is responsible for coordinating natural resources goals across comprehensive plans.

**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 project will improve the alignment of the natural resources 2050 comprehensive plans across municipalities, county, and regional entities through three main actions:

First, we will catalog and characterize the natural resources datasets utilized in comprehensive planning, identifying what datasets are being used and how, what new data is needed, and what data should be improved.

Second, we heard from multiple organizations that boots-on-the-ground information is essential to planning. This ‘institutional’ knowledge is not often incorporated into accessible datasets or reflected in long-range planning and prioritization efforts. We will build an interactive GIS tool to capture this knowledge on a cross-organization map.

Lastly, we will provide these data through a web portal, which will be accessible to all municipalities in Hennepin County and provide examples for how to use the data in comprehensive plans for multiple benefits.

The result of these activities will be a common set of data that all communities and partners can integrate easily into their comprehensive plans and associated work. Additionally, this work is intended to be reproducible and expandable, growing the potential extent of impact from Hennepin County to the greater Twin Cities region and beyond.

**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?**

This project will result in multiple benefits through the creation of common datasets and mapping tool that will support the development and implementation of a shared natural resources vision for Hennepin County. This tool will utilize the best available data and serve as the foundation for proactive natural resources outcomes (i.e. future comprehensive plans and associated requirements: land use, zoning, ordinances, etc.; natural resources projects: protection,

restoration, and management; and funding priorities: grants, co-sharing arrangements, etc.). It will streamline and remove inefficiencies in planning efforts and work to build consensus and spur innovation collaboration across partners and jurisdictions.

## Activities and Milestones

**Activity 1: Identify, compile, evaluate and catalog natural resources datasets used by local and regional governments, non-profits, developers and consulting firms.**

**Activity Budget:** \$61,000

**Activity Description:**

We will identify, compile, evaluate, and categorize natural resources data sets that are used by local and regional natural resources management entities (governments/agencies, non-profits, developers, and consulting firms). This activity is broken down into the following steps to be done by UMN graduate students overseen by senior research staff:

A. Interviews: Interview a diversity of natural resources (approx. 30) partners/stakeholders to develop a comprehensive understanding of 1) publicly available and commonly used data sets, 2) private data sets, and 3) desired data sets. This step will be conducted via a standard interview form and checklist.

B. Compile Data: Compile all available data sets into a centralized location, including evaluating potential for recently-flown LiDAR data for Hennepin County.

C. Evaluate and Catalog Data: Develop a standard rubric to evaluate the data’s accuracy, gaps/challenges, existing use, and potential uses and develop/conduct a scientific sampling system and process for ground truthing data.

D. Data Recommendations: The final product will be a written report summarizing the findings and crafting recommendations (i.e. data sets due for updates, missing/needed data sets, etc.) to further guide the subsequent activities.

**Activity Milestones:**

Description	Approximate Completion Date
Interview Set 1 and Data Compilation (~10 orgs)	October 31, 2024
Develop Draft 1 of Evaluation Rubric and Catalog Data	December 31, 2024
Interview Set 2 and Data Compation (~20 orgs)	October 31, 2025
Refined Data Evaluation Rubric and Integrate Remaining Data	December 31, 2025
Write final report and make recommendations	June 30, 2026

**Activity 2: Develop a web based-interactive tool to capture natural resources experts’ ‘institutional’ knowledge, on-going work, and on-the-ground site observations.**

**Activity Budget:** \$196,000

**Activity Description:**

Develop a technical tool to fill data gaps using natural resources professionals’ ‘institutional’ knowledge (i.e. personal expertise, work and observations) not reflected in public datasets. Standardized methods do not exist for inventorying institutional knowledge in a way that is accessible to other organizations.

Natural resources professionals will help develop a tool and process (i.e. web based tool where a professional can drop a pin on a map, add data attributes, and upload information) for capturing ‘missing’ data. Tool development will be done by UMN graduate students and include:

- Hosting interactive meetings/interviews with natural resources professionals to 1) learn how data is currently

- collected, stored, and shared, 2) identify desired data attributes, and 3) brainstorm a process to capture the data.
- Developing and testing a prototype for accuracy, simplicity and completeness with a small, diverse group of natural resources professionals.
  - Finalizing the prototype based on partner feedback.
  - Host a meeting to use the final system with partners.
  - Incorporate collected information into data that informs Activity 3.

Natural resources professionals will have access to the technical tool to upload information on an as needed basis as well as through a semi-annual natural resources ‘call’.

**Activity Milestones:**

Description	Approximate Completion Date
Partner testing of tool prototype and feedback	September 30, 2023
Round 1 Facilitated Meetings	December 31, 2024
Tool Prototype 1	May 31, 2025
Refined Tool Release	January 31, 2026
Hosted Meetings for Tool Use by Professionals and Partners	June 30, 2026

**Activity 3: Develop an innovative web-based natural resources map/tools to aid in ecologically sound comprehensive/development planning and natural resources conservation.**

**Activity Budget:** \$148,000

**Activity Description:**

We will build on prior work by Hennepin County GIS staff to develop a centralized clearinghouse and web-based map and associated technical tools to aid natural resources partners in comprehensive and development planning, prioritization, and natural resources protection, restoration, and management efforts. The map will be available to partners and public members with the goal of building broad awareness of the location and state of our natural resources, providing a consistent data set increasing efficiencies and coordination across jurisdictional boundaries, and providing the basis for a shared natural resources vision across the entire County.

The data and innovative tools will be informed by previous activities and developed to:

- Ensure natural resources are considered consistently in development planning by providing readily available natural resources data.
- Classify natural resources (high, med, low) based on input priorities (climate resiliency, water quality, cultural value, etc.)
- Identify areas with restoration potential or ecological connectivity value
- Conduct development scenario planning and visualization

Accompanying these online data resources will be case studies illustrating how the data can be used by cities large and small in their comprehensive planning to enhance natural resources, better coordinate with other natural resources partners, and align natural resources

**Activity Milestones:**

Description	Approximate Completion Date
Collate data into GIS database from Activity 1 and 2	June 30, 2025
Develop and Expand Web-based Mapping Tool	December 31, 2025
Partner Feedback on Tool	March 31, 2026



## Project Partners and Collaborators

Name	Organization	Role	Receiving Funds
Karen Galles	Hennepin County	Vision, Planning, Oversight, Engagement and Feedback	No
Jami Markle	Three Rivers Park District	Vision, Planning, Oversight, Engagement and Feedback	No
Kelly Grissman	Three Rivers Park District	Vision, Planning, Oversight, Engagement and Feedback	No
Kristina Geiger	Minnesota Land Trust	Vision, Planning, Oversight, Engagement and Feedback	No
Bryan Runck	University of Minnesota	Planning, Oversight, Technology Execution Management, Convening	Yes

## 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?**

The on-going costs of data and tool hosting to be in the worst case \$10,000 per year. On-going facilitation will be required to continue collecting data from field-staff insights to ensure we maintain overall capacity and readiness across organizations. Staff will facilitate a semi-annual call for keeping data up-to-date with the online tool. To start, tool hosting will be done at one of the partner institutions on this proposal. Eventually, these workflows and tools could be transferred to an appropriate State Agency or other regional unit of government if the model for cross-organization plan coordination is broadly adopted.

## Project Manager and Organization Qualifications

**Project Manager Name:** Kristine Maurer

**Job Title:** Sr. Conservation and Natural Resource Ecologist, Habitat Conservation Program Manager

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

Kristine is a Senior Natural Resource and Conservation Ecologist at Hennepin County and program manager of the Hennepin County Habitat Conservation Program which facilitates land and water protection through conservation easements and improves habitat on permanently protect natural areas. She also manages several grants, leads database and application development, oversees design and implementation of biomonitoring efforts, develops strategic plans and organizational structures, is active in cross-organizational collaboration groups, and participates in a variety of inter-agency working groups focused on data and application improvement. Kristine is also active in helping landowners meet their conservation goals through a variety of conservation programs and development of outreach and educational materials. Kristine holds Co-master’s degrees in Natural Resource Ecology and Environmental Science from Iowa State University and a Biology degree from the University of St. Thomas. Kristine has 10 years of experience in the natural resources sector across private, public, and non-profit sectors and is knowledgeable in terrestrial and aquatic plant and wildlife identification and natural history of the upper Midwest, is a published expert with skills in research design and implementation, local, state, and federal environmental compliance and permitting, GIS mapping and modeling, and data management and statistical analysis.

**Organization:** Hennepin County

**Organization Description:**

Hennepin County is home to nearly 1.2 million people (more than 22percent of the state population), covering 45 cities and 611 square miles. It is the largest unit of government in the state of Minnesota.

The County, operating under the authority of the state of Minnesota, is responsible for such functions as social and health services, library services, road building and maintenance, registration of deeds and titles, tax collection, election supervision, licensing, and law enforcement,.

Hennepin County also serves as the county Soil and Water Conservation District (SWCD). As the SWCD, Hennepin County strives to protect and enhance the quality of natural habitats, soil, and water resources for current and future generations.



## Budget Summary

Category / Name	Subcategory or Type	Description	Purpose	Gen. Ineligible	% Benefits	# FTE	Classified Staff?	\$ Amount
<b>Personnel</b>								
Grant and Partner Coordinator		This position will coordinate across project staff across partner organizations, perform reporting functions, track progress on milestones, and			25%	0.2		\$25,000
							<b>Sub Total</b>	<b>\$25,000</b>
<b>Contracts and Services</b>								
University of Minnesota	Sub award	0.5 FTE graduate students (Activity 1 support; Activities 2 and 3 app/map development) for the duration of the project with stipend and tuition benefit; a 0.5 data coordinator to perform activity 1. This team will be overseen by .1 UMN co-PI. 2 yr Server costs ~\$20,000.				3.2		\$380,000
							<b>Sub Total</b>	<b>\$380,000</b>
<b>Equipment, Tools, and Supplies</b>								
							<b>Sub Total</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>								
							<b>Sub Total</b>	-
<b>Other Expenses</b>								
							<b>Sub Total</b>	-
							<b>Grand Total</b>	<b>\$405,000</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>				
			<b>State Sub Total</b>	-
<b>Non-State</b>				
			<b>Non State Sub Total</b>	-
			<b>Funds Total</b>	-

## Attachments

### Required Attachments

#### *Visual Component*

File: [68e5c96e-077.pdf](#)

#### *Alternate Text for Visual Component*

Illustrates how data integration Activity 1 lead to and support collection of new data from natural resources professionals in Activity 2. Data from Activity 1 and 2 are then integrated in a mapping tool in Activity 3 to support Natural Resources Comprehensive Plan development across organizations....

#### *Board Resolution or Letter*

Title	File
Hennepin_Approval_to_Apply	<a href="#">7b18b4ec-f38.pdf</a>

### Optional Attachments

#### *Support Letter, Photos, Media, Other*

Title	File
Minnehaha Creek Watershed District Letter of Support	<a href="#">d47af14d-41c.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

**Does your project include the design, construction, or renovation of a building, trail, campground, or other capital asset costing \$10,000 or more?**

No

**Do you propose using an appropriation from the Environment and Natural Resources Trust Fund to conduct a project that provides children's services, as defined in Minnesota Statutes section 299C.61 Subd.7?**

No

