



Environment and Natural Resources Trust Fund

2025 Request for Proposal

General Information

Proposal ID: 2025-180

Proposal Title: The Impacts of Climate Change on Northeastern Minnesota

Project Manager Information

Name: Chris Knopf

Organization: Friends of the Boundary Waters Wilderness

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Project Basic Information

Project Summary: We will aggregate research, data, and other information regarding the impacts of climate change on the habitat and wildlife of northeastern Minnesota into a publicly available, web-based database.

ENRTF Funds Requested: \$830,000

Proposed Project Completion: July 31, 2028

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): NE

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

Region(s): NE

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.

Climate change is rapidly increasing temperatures in the Quetico-Superior ecosystem of northeastern Minnesota, impacting the habitat and wildlife of the region. A range of government, tribal, academic, and private entities have conducted studies and other research relating to existing and future impacts of climate change on the region; however, this information is siloed and fragmented across multiple databases and sources. As a consequence, it is difficult to develop a comprehensive understanding of the impacts of climate change on the region's habitat and wildlife and assess appropriate responses to these impacts.

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.

For nearly 50 years, Friends of the Boundary Waters Wilderness ("Friends") has worked to protect the Quetico-Superior ecosystem in northeastern Minnesota, working with a range of public and private partners.

To address the challenges identified above, Friends will:

(1) Engage local, state, and federal governments; tribal governments; academic institutions; and nonprofit organizations to collect and aggregate studies, research, management plans and other data relating to the impacts of climate change on the habitat and wildlife of northeastern Minnesota and identify gaps in this data.

(2) Develop a publicly available, web-based, electronic database of studies, research, management plans, and other information relating to the impacts of climate change on the habitat and wildlife of northeastern Minnesota. The website will serve dual purposes. First, it will provide a crucial resource for all stakeholders and partners engaged in research pertaining to the habitat and wildlife of northeastern Minnesota. Second, it will educate the public on the impacts of climate change on the habitat and wildlife of northeastern Minnesota through data visualization tools, including infographics, videos, and maps. The website would also enable engaged members of the public to connect with citizen-science programs run by researchers.

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?

1. Create a resource for stakeholders. Stakeholders will be able to easily access research from other entities, allowing for an interdisciplinary approach to understanding the impacts of climate change on the habitat and wildlife of northeastern Minnesota.
2. Foster collaboration among professionals. Researchers and conservation professionals will be able to communicate with one another more easily, fostering collaboration on understanding the impacts of climate change in northeastern Minnesota.
3. Educate the public. The website will present the data in engaging and understandable formats, resulting in a public that is better informed on the impacts of climate change in northeastern Minnesota.

Activities and Milestones

Activity 1: Engage stakeholders, assemble data, and identify data gaps relating to the impacts of climate change on northeastern Minnesota.

Activity Budget: \$299,000

Activity Description:

Initial stakeholder engagement. The Friends will reach out to stakeholders, including but not limited to state, federal, and local governments; tribal governments, 1854 Treaty Authority, and Great Lakes Fish and Wildlife Commission; academic institutions; and nonprofit organizations. From these stakeholders, we will obtain studies, research, data, management plans, and other information relating to the impacts of climate change on the habitat and wildlife of northeastern Minnesota. The Friends will hire a Wildlife Conservation Director and Wildlife Conservation Associate to implement this project. These staff members will engage stakeholders through in-person meetings, virtual meetings, and small-group discussions.

Assemble data. We will collect and aggregate studies, research, management plans, and other data relating to the impact of climate change on the habitat and wildlife of northeastern Minnesota.

Assess gaps in data. We will identify gaps in existing data and research relating to the impacts of climate change on the habitat and wildlife of northeastern Minnesota. We will reach out to stakeholders to discuss ways to fill in these data gaps.

Continuous stakeholder engagement. We will continuously engage stakeholders through regular in-person and virtual meetings, culminating in a symposium at Minnesota North College - Vermilion Campus in Ely.

Activity Milestones:

Description	Approximate Completion Date
Initial stakeholder engagement	December 31, 2025
Assemble data	September 30, 2026
Assess gaps in data	September 30, 2026
Continuous stakeholder engagement	June 30, 2028

Activity 2: Develop a publicly available, web-based database of the impacts of climate change on the habitat and wildlife of northeastern Minnesota

Activity Budget: \$531,000

Activity Description:

Develop website of publicly available data. We will contract with a website developer to establish a publicly available, web-based, electronic database of studies, research, management plans, and other information relating to the impacts of climate change on the habitat and wildlife of northeastern Minnesota. In consultation with our Communications Director, the Wildlife Conservation Director will supervise the website developer in producing the website.

Integrate data visualization functionality and geospatial tools into the website. We will contract with a data visualization consultant to integrate data visualization functionality and geospatial tools into the website. In consultation with our Communications Director and website developer, the Wildlife Conservation Director will supervise the data visualization consultant. This functionality and these geospatial tools (including infographics, videos, and maps) are very effective at synthesizing and presenting complex information in a format that is understandable and engaging for both the scientific

community and general public.

Integrate a citizen-scientist access into the website. Through the website, the general public will be able to connect within existing citizen-science programs. Professional researchers will use the data collected by citizens throughout northeastern Minnesota to fortify their research.

Activity Milestones:

Description	Approximate Completion Date
Develop website for the research, data, and other information regarding the impacts of climate change	December 31, 2027
Integrate data visualization functionality and geospatial tools into the website	June 30, 2028
Integrate a citizen-scientist portal into the website	June 30, 2028

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?

We will financially support this project through continued fundraising efforts via grants, individual donations, corporate sponsorships, and event revenue. We have over 5,000 due-paying members and a database of over 100,000 other supporters of our organization. We will also seek funding from foundations, including the McKnight Foundation, Carolyn Foundation, and Margaret A. Cargill Philanthropies.

Other ENRTF Appropriations Awarded in the Last Six Years

Name	Appropriation	Amount Awarded
Connecting Students to the Boundary Waters	M.L. 2019, First Special Session, Chp. 4, Art. 2, Sec. 2, Subd. 05b	\$450,000
Fostering Conservation by Connecting Students to the BWCA	M.L. 2023, , Chp. 60, Art. 2, Sec. 2, Subd. 05a	\$1,080,000

Project Manager and Organization Qualifications

Project Manager Name: Chris Knopf

Job Title: Executive Director

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

Chris Knopf has been an environmental and conservation professional for more than 30 years. Since 2017, Knopf has been Executive Director of Friends of the Boundary Waters Wilderness. Knopf practiced environmental law for several years and for nearly a decade served as a state director for The Trust for Public Land, a national, conservation organization. Knopf has also worked for the Indian Land Tenure Foundation and assisted Native Nations with land conservation projects. He is a graduate of Georgetown University and the University of Virginia School of Law.

Organization: Friends of the Boundary Waters Wilderness

Organization Description:

Since 1976, Friends of the Boundary Waters Wilderness has been the leading voice for the ongoing protection of the Boundary Waters Canoe Area Wilderness. Our organization was instrumental in the passage of the Boundary Waters Canoe Area Wilderness Act of 1978, which made the Boundary Waters what it is today.

The mission of Friends of the Boundary Waters Wilderness is to protect the Boundary Waters and to connect people of all backgrounds to the wilderness, so that this and future generations benefit from this special place. To achieve our mission, we have three interconnected strategies:

1. Wilderness. We work to protect the wilderness character of the Boundary Waters and surrounding ecosystem through advocacy and conservation.
2. People. Through working to educate, engage, and increase access, we inspire people from all backgrounds to experience the wonders of the Boundary Waters.
3. Community. By being part of the communities at the gateways to the Boundary Waters, we work to ensure that these communities thrive, and that they value and support the wilderness.

We have a staff of 15 full-time employees with offices in Saint Paul and Ely.

Budget Summary

Category / Name	Subcategory or Type	Description	Purpose	Gen. Ineligible	% Benefits	# FTE	Classified Staff?	\$ Amount
Personnel								
Wildlife Conservation Director		Oversee project implementation. This is a new position established to implement this project. LCCMR funds will not supplant existing funds.			25%	3		\$357,000
Wildlife Conservation Associate		Assist in project implementation. This is a new position established to implement this project. LCCMR funds will not supplant existing funds.			25%	3		\$207,000
Wildlife Conservation Fellow		Graduate student to provide support to Wildlife Conservation Director and Wildlife Conservation Associate. This is a new position established to implement this project. LCCMR funds will not supplant existing funds.			0%	0.75		\$22,000
							Sub Total	\$586,000
Contracts and Services								
TBD	Professional or Technical Service Contract	Website development and maintenance.				0.75		\$65,000
TBD	Professional or Technical Service Contract	Integrate data visualization functionality (e.g., infographics, videos, maps) into the website.				0.75		\$65,000
							Sub Total	\$130,000
Equipment, Tools, and Supplies								
	Tools and Supplies	Software for data visualization functionality	The data visualization software will enable the production of infographics, video, and maps to present the data and other research information in a compelling and understandable format. It is estimated that the annual subscription of the software is \$4,500.					\$14,000

			Total Cost: \$4,500/year x 3 years = \$13,500. Round to \$14,000.					
	Tools and Supplies	Data storage	It is estimated that 1 terabyte of data storage capacity could be necessary to implement this project. It is estimated that this data storage will cost \$1,700 per month. Total Cost: \$1,700/month x 12 months x 3 years = \$61,200. Round up to \$62,000. It is possible that data storage needs could be served by online subscription through a service, such as Esri ArcGIS, thus eliminating the need for this expense item. This will be determined as project development proceeds.					\$62,000
							Sub Total	\$76,000
Capital Expenditures								
							Sub Total	-
Acquisitions and Stewardship								
							Sub Total	-
Travel In Minnesota								
	Miles/ Meals/ Lodging	Miles: 2,000 miles/year x 3 years x \$0.67/miles = \$4,020. Lodging (Hotels): 8 hotels/year x 3 years x \$150/room = \$3,600. Meals (Per Diem): 16/year x 3 years x \$80 = \$3,840. Total = \$11,460. Round to \$12,000.	This is travel for our Wilderness Conservation Director and Wilderness Conservation Associate to meet with stakeholders.					\$12,000
	Conference Registration Miles/ Meals/ Lodging	We anticipate that 50 researchers and conservation professionals will attend a two-day symposium in Ely. Venue Rental: \$3,000. AV Equipment: \$1,500. Meals (2 breakfasts, 2 lunches, 1 dinner, snacks and refreshments): 50 attendees x \$80 = \$4,000. Lodging: 50 attendees x 2 nights x \$150/night = \$15,000. Total = \$23,500. Round to \$24,000.	In Year 3 of this project, we would hold a two-day symposium in Ely for the researchers and other conservation professionals who are stakeholders in assessing the impact of climate change on the habitat and wildlife in northeastern Minnesota.					\$24,000
							Sub Total	\$36,000

Travel Outside Minnesota								
							Sub Total	-
Printing and Publication								
	Printing	Symposium Packet: 50 packets x \$40 = \$2,000	Prepare printed materials for two-day symposium in Year 3 of the project.					\$2,000
							Sub Total	\$2,000
Other Expenses								
							Sub Total	-
							Grand Total	\$830,000

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
State				
			State Sub Total	-
Non-State				
In-Kind	Contributions from individual donors support the salary of our Communications Director	Communications Director's time directed to the project. It is estimated that 15% of the Communications Director's time will be directed to this project over a three-year period. Computation: Salary + Benefits = \$125,000. $\$125,000/\text{year} \times 3 \text{ years} \times 0.15 = \$56,250$. Round to \$57,000.	Secured	\$57,000
In-Kind	Contributions from individual donors support the salary of our Legal Director	Legal Director's time directed to the project. It is estimated that 10% of the Legal Director's time will be directed to this project over a three-year period. Computation: Salary + Benefits = \$187,000. $\$187,500/\text{year} \times 3 \text{ years} \times 0.10 = \$56,250$. Round to \$57,000.	Secured	\$57,000
In-Kind	Contributions from individual donors support the Executive Director's salary	Executive Director's time directed to the project. It is estimated that 10% of the Executive Director's time will be directed to this project over a three-year period. Computation: Salary + Benefits = \$218,750. $\$218,750/\text{year} \times 3 \text{ years} \times 0.10 = \$65,625$. Round to \$66,000.	Secured	\$66,000
In-Kind	General operating funds	Friends staff will travel to Canada annually to meet with Canadian researchers and conservation professionals focusing on the Quetico-Superior ecosystem to discuss data and research that is relevant to understanding the impact of climate change on northeastern Minnesota. The Friends will use general operating funds for this travel that come from non-ENRTF sources (i.e., individual donors). Mileage: 450 miles (round trip)/year $\times 3 \text{ years} \times 0.67 = \904.50 . Toll: \$18/round trip $\times 3 \text{ trips} = \54 . Lodging: \$150 night $\times 2 \text{ nights} \times 3 \text{ years} = \900 . Food (Per Diem): \$80/day $\times 2 \text{ days/year} \times 3 \text{ years} = \480 . Total = \$2,356.50. Round to \$2,500	Secured	\$2,500
			Non State Sub Total	\$182,500
			Funds Total	\$182,500

Total Project Cost: \$1,012,500

This amount accurately reflects total project cost?

Yes

Attachments

Required Attachments

Visual Component

File: [757c1c7e-4e5.pdf](#)

Alternate Text for Visual Component

Friends Project Summary: Understanding the Impacts of Climate Change on Northeastern Minnesota. There are three components to the visual summary: (1) The Challenge, (2) Our Solution, and (3) Outcomes....

Financial Capacity

Title	File
Friends of the Boundary Waters Wilderness Form 990	cfaef97f-56a.pdf

Board Resolution or Letter

Title	File
Friends Board of Directors Resolution	937d94ee-7f6.pdf
Cover Letter from Board Chair Lee Vue 3-25-24	deef4ee-019.pdf

Supplemental Attachments

Capital Project Questionnaire, Budget Supplements, Support Letter, Photos, Media, Other

Title	File
Prof. Jeff La Frenierre-Gustavus letter of support	609c4c58-3f0.pdf
Prof. Doug Thompson-U of MN American Indian Studies letter of support	799cd086-a2d.pdf
Prof. Lee Frelich-U of MN Forest Ecology Center letter of support	37fa2023-9c5.pdf
Ryan Miller-MN North College letter of support	b66fb10f-5e6.pdf
The Nature Conservancy Letter of Support for Friends LCCMR Proposal	e4120be0-219.pdf
Audubon Letter of Support for Friends LCCMR Proposal	f37e6207-493.pdf
Kelly Applegate-Mille Lacs Band Letter of Support	202745d8-5f1.pdf
Jessica Hellmann-U of MN Institute on the Environment Letter of Support	23884b2d-8bc.pdf
Prof. Samantha Jones-Bemidji State Letter of Support	de8e9fb0-1c1.pdf
Prof. Paul Kivi-Bemidji State Letter of Support	c3095679-53f.pdf

Administrative Use

Does your project include restoration or acquisition of land rights?

No

Does your project have potential for royalties, copyrights, patents, sale of products and assets, or revenue generation?

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 pre-design, design, construction, or renovation of a building, trail, campground, or other fixed capital asset costing \$10,000 or more or large-scale stream or wetland restoration?

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 as "the provision of care, treatment, education, training, instruction, or recreation to children")?

No

Provide the name(s) and organization(s) of additional individuals assisting in the completion of this proposal:

Mike Linnemann, Development Director; Pete Marshall, Communications Director; Tom Donaho, Board Member.

