



Environment and Natural Resources Trust Fund

2021 Request for Proposal

General Information

Proposal ID: 2021-450

Proposal Title: Minnesota Freshwater Quest: Environmental Education on State Waterways

Project Manager Information

Name: Julie Edmiston

Organization: Wilderness Inquiry

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Project Basic Information

Project Summary: 30,000 diverse and underserved Minnesota youth (grades 6-12) participate in place-based, STEM environmental education to explore and preserve local ecosystems and waterways through the Minnesota Freshwater Quest online program.

Funds Requested: \$1,432,000

Proposed Project Completion: 2024-06-30

LCCMR Funding Category: Environmental Education (C)

Project Location

What is the best scale for describing where your work will take place?

Statewide

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

Statewide

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.

Research shows that direct experiences in nature as a child are the primary determinant in developing a stewardship ethic as an adult (White, 2006). Unfortunately many youth of color, youth with disabilities, and youth living in urban and rural areas are prevented from accessing these experiences due to financial, geographic, and experience-based barriers. As a result, there is an opportunity gap for youth to experience the outdoors and develop an ethic to protect, preserve, and enhance Minnesota's natural resources.

Wilderness Inquiry seeks to address this challenge through the Minnesota Freshwater Quest, a project linking hands-on field experiences to classroom learning to provide environmental education and stewardship opportunities. The Freshwater Quest increases the ability of 30,000 Minnesota students to access and participate in engaged learning in and outside the classroom.

The ENRTF was created to invest in programs that maintain and enhance Minnesota's natural resources by promoting and protecting water resources, exploring and limiting the impact of invasive species, preserving our public lands and natural habitats, and more.

Investing in the future champions of our state's wild spaces bridges the opportunity gap and connects youth to the actions and practices that promote the values of the ENRTF.

What is your proposed solution to the problem or opportunity discussed above? i.e. What are you seeking funding to do? You will be asked to expand on this in Activities and Milestones.

Minnesota Freshwater Quest is a project-based learning tool that connects youth to information about threatened species and ecosystems that impact their local community. Whole classrooms explore diverse habitats close to home, experience place-based environmental education while paddling in 24' Voyageur canoes, collect water quality data, and complete youth-led projects to improve their local ecosystem. This project is well suited for distanced learning during COVID-19 as students can participate remotely while still benefiting from outdoor engagement tied to in-school learning.

This proposal is for a 3-year project in the 2020 funding cycle and will connect 30,000 Minnesota youth to environmental education using the Freshwater Quest. Support from the ENRTF will engage youth from diverse backgrounds statewide in outdoor experiences that build a conservation ethic.

Through place-based environmental education and hands-on learning in the outdoors, this project will serve communities in every region of Minnesota, develop a statewide network of broad-based partnerships, and implement the Freshwater Quest for 30,000 youth to develop as future stewards of Minnesota's natural resources across 3 years. Investing in the next generation of nature lovers is key to preserving our state's outdoor economy and the vibrancy and health of our environment and residents.

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:

- * Connect 30,000 diverse and underserved students to educational outdoor experiences, investing in youth to cultivate a sustainable lifestyle and maintain a healthy natural environment.
- * Improve water quality in local waterways through education, data collection, and real-world projects implemented by youth.
- * Integrate hands-on science and environmental education activities into classroom learning. The Freshwater Quest is an

existing framework that aligns with school science curriculum.

* Develop a network of partners including schools, educators, parents, state and local governments, environmental learning programs, and local outdoor clubs, all invested in the development of Minnesota's next generation of environmental stewards.

Activities and Milestones

Activity 1: 30,000 Minnesota Youth Experience Place-based Environmental Education on Minnesota Waterways

Activity Budget: \$1,432,000

Activity Description:

The Minnesota Freshwater Quest delivers environmental education through classroom-based instruction and hands-on learning in the outdoors. The Freshwater Quest enhances the learning experience, supporting teachers and students through guided exploration of local ecosystems while pairing environmental education with in-school learning. The proposed project will deliver the Freshwater Quest to educators and learners across the state. Classroom learning and use of the tool is enhanced by Wilderness Inquiry's place-based environmental education programs, engaging youth in activities that include paddling in 24' Voyageur canoes on local waterways, water quality testing, macroinvertebrate collection, and more. Wilderness Inquiry provides environmental education in the outdoors as part of the Freshwater Quest, reaching schools in all regions of the state, including Alexandria, Brainerd, Grand Lake, Grand Rapids, Mankato, Saint Cloud, Thief River Falls, and the Twin Cities region.

Through the Minnesota Freshwater Quest:

- * Teachers register their classroom at <https://herofortheplanet.org/mnquest/>.
- * Students learn about species that are endangered in their local ecosystem and "adopt" a species.
- * Students participate in an outdoor, day-long environmental education experience on a local waterway, learning about their watershed and the health of the ecosystem.
- * Classrooms develop a project that improves the local watershed and positively impacts their chosen species.

Activity Milestones:

Description	Completion Date
Minnesota Freshwater Quest disseminated as an environmental learning tool to all 336 Minnesota school districts.	2022-12-31
400 educators participate in a training workshop on the Freshwater Quest and STEM curriculum integration.	2023-05-31
200 classrooms/educators register for the Freshwater Quest.	2023-10-31
10 student-led watershed improvement projects completed based on discovery during the Quest.	2024-06-30
Water quality data is entered through the Freshwater Quest and disseminated through GLOBE.	2024-06-30
30,000 diverse youth participate in environmental education programming on a local waterway.	2024-06-30

Project Partners and Collaborators

Name	Organization	Role	Receiving Funds
Leesa Carter-Jones	Captain Planet Foundation	With Wilderness Inquiry, Captain Planet Foundation tailored the Freshwater Quest to Minnesota waterways and is now committed to launching across the state. Captain Planet Foundation has pledged \$25,000 to fund watershed improvement projects in Minnesota through the Freshwater Quest.	No
Educators, teachers and principals	Minnesota School Districts	In addition to sharing the online Minnesota Freshwater Quest with all school districts throughout the state, this project directly engages schools and districts in hands-on outdoor learning.	No
Erika Rivers	Minnesota Department of Natural Resources (DNR)	The Minnesota DNR is a key partner in program implementation as Wilderness Inquiry programs utilize public lands such as state parks, waterways, and trails.	No
John Anfinson	National Park Service (NPS)	NPS provides in-kind support of staff time and materials for program implementation along the Mississippi National River and Recreation Area.	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 be funded?

The Minnesota Freshwater Quest is implemented in partnership with educators and parents as a place-based environmental education platform. ENRTF funds will provide for implementation to launch the Freshwater Quest statewide. With support from ENRTF, this project builds the network of partnerships for the Freshwater Quest to reach every Minnesota school district and provides environmental education and hands-on learning experiences for 30,000 Minnesota youth. Wilderness Inquiry is committed to enhancing and expanding the Freshwater Quest over time with public and private long-term funding sources, such as the Environmental Protection Agency, USDA Forest Service, Department of Education, foundations, corporations, and individuals.

Other ENRTF Appropriations Awarded in the Last Six Years

Name	Appropriation	Amount Awarded
Connecting Youth to Minnesota Waterways through Outdoor Classrooms	M.L. 2017, Chp. 96, Sec. 2, Subd. 05a	\$1,200,000
Urban Environmental Education Engaging Students in Local Resources	M.L. 2014, Chp. 226, Sec. 2, Subd. 09c	\$1,093,000

Project Manager and Organization Qualifications

Project Manager Name: Julie Edmiston

Job Title: Associate Executive Director

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

Julie Edmiston has managed Wilderness Inquiry's education programming and LCCMR projects since 2013. Currently the Associate Executive Director, Julie has a Masters of Education from the University of Minnesota, served as a deaf/hard of hearing teacher in the Saint Paul Public Schools, and has extensive experience in nonprofit development and program management.

As project manager, Julie will oversee the team that implements this project and ensure that stated outcomes are delivered within the budget. Julie helped to develop the Minnesota Freshwater Quest and she is adept at connecting with teachers and school district administrators. Prior to working full-time with Wilderness Inquiry, Julie worked as a trail guide. Her intimate knowledge of both the administrative and field work components make her the ideal project manager to implement the program in a safe, impactful, and cost-effective manner.

Organization: Wilderness Inquiry

Organization Description:

Wilderness Inquiry (WI) connects people of all ages, backgrounds, and abilities to the natural world through shared outdoor experiences. Founded in 1978, WI serves more than 40,000 people each year through programs that engage underserved youth, persons with disabilities, and many others who face barriers to participating in outdoor education and recreation. WI's education programs directly connect thousands of Minnesota students to place-based, outdoor experiences that serve to educate in STEM, history, language arts and other lessons. Students learn citizen science through hands-on methods while also building a lasting connection to the environment, inspiring them to protect and preserve our state's natural resources. Our partners include over 400 federal, state and local organizations, including many schools and school districts. These partners help us engage the next generation of campers, paddlers, hunters, anglers, scientists and users of Minnesota's public lands and waterways. Wilderness Inquiry is governed by a 16-member volunteer board of directors and has 19 full-time and 100+ part-time/seasonal staff.

Including our young citizens and the broader community in STEM discovery and education, Wilderness Inquiry equips the next generation of outdoor stewards with the resources needed to protect and participate in Minnesota's great outdoors.

Budget Summary

Category / Name	Subcategory or Type	Description	Purpose	Gen. Ineligible	% Benefits	# FTE	Classified Staff?	\$ Amount
Personnel								
Operations Director		Oversees operational elements of the project, including logistics, gear, equipment, staffing, etc.			0%	1.95		\$156,000
Program Coordinator		Oversees teacher training, curriculum support and program coordination.			0%	2.25		\$90,000
Program Coordinator		Oversees program coordination, staffing, project delivery.			0%	2.25		\$90,000
Part-time warehouse staff (multiple personnel)		Warehouse and logistical support, canoe and inventory maintenance and repairs.			0%	3		\$103,500
Finance and Administration Coordinator		Coordinates project administration including payroll, finances and staff reimbursements.			0%	1.5		\$52,500
Outdoor Leaders (multiple personnel)		Trail Staff and leaders of on-the-ground programming and work with youth.			0%	18		\$364,200
Program Manager		Manages implementation of the Freshwater Quest, program development and design, and outreach to educators.			0%	2.25		\$112,500
							Sub Total	\$968,700
Contracts and Services								
Teachers (multiple)	Sub award	Sub-award stipends to teachers to support training, supplies, and materials for youth-led environmental education projects. 200 teacher grants x \$200/grant = \$40,000.				0		\$40,000
TBD	Professional or Technical Service Contract	Contract for project evaluation to demonstrate success of implementation of the Freshwater Quest throughout the state. Contracts selected through a competitive bidding process.				0.6		\$60,000
							Sub Total	\$100,000

Equipment, Tools, and Supplies								
	Tools and Supplies	EcoSTEM water quality testing kits and species identification materials (60 kits x \$700 = \$42,000 + \$10,000 supplemental).	Environmental education supplies needed to conduct direct programming with youth.					\$52,000
	Tools and Supplies	Teacher training materials	Materials and supplies to conduct teacher training on project implementation and the Minnesota Freshwater Quest.					\$15,000
	Equipment	Environmental education program equipment for hands-on experiences (includes PFDs, paddles, first aid supplies, and other outdoor gear).	Equipment needed for direct environmental education programming with youth.					\$20,000
	Equipment	Equipment maintenance and repair - this program primarily utilizes existing equipment such as 24' foot Voyageur canoes, however these require annual maintenance and repair to use safely across the state (\$12,000 year x 3 years = \$36,000).	Maintenance needed to keep equipment safe for direct environmental education programming with youth.					\$36,000
							Sub Total	\$123,000
Capital Expenditures								
		Voyageur canoes (6 canoes x \$15,000 = \$90,000)	This project primarily leverages existing equipment and resources; however to scale appropriately additional boats are needed in order to conduct place-based educational programming with youth.					\$90,000
		Dual-axel Voyageur canoe trailer (1 trailer x \$16,800)	Remackel Trailers based in Minnesota has created a specialized trailer to safely haul six of our Voyageur canoes at a time. These allow us to transport our Voyageur canoes in order to conduct place-based educational programming with youth.					\$16,800
							Sub Total	\$106,800
Acquisitions and Stewardship								

							Sub Total	-
Travel In Minnesota								
	Other	Student transportation and busing	When needed, and in order to make programming accessible to youth from low-income backgrounds, Wilderness Inquiry assists with student buses to program locations near the school. (\$300/day x 300 events = \$90,000).					\$90,000
	Miles/ Meals/ Lodging	Transportation for Wilderness Inquiry staff to deliver environmental education events across the state via van with trailer and boats (375 events x avg. 200 miles round trip x .58 = \$43,500).	In order to deliver environmental education programming, Wilderness Inquiry staff must travel across the state (with boats and equipment) in order to reach students in the communities where they live.					\$43,500
							Sub Total	\$133,500
Travel Outside Minnesota								
							Sub Total	-
Printing and Publication								
							Sub Total	-
Other Expenses								
							Sub Total	-
							Grand Total	\$1,432,000

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				
Cash	Minneapolis Foundation	Funds for curriculum/resource development that supports this project.	Secured	\$16,000
Cash	REI Foundation	Funds for curriculum/resource development that supports this project.	Secured	\$13,500
Cash	Captain Planet Foundation	Mini-grants for Minnesota schools to participate - these funds go directly to teachers/students for use in implementing youth-led projects developed through the Freshwater Quest.	Secured	\$25,000
Cash	Minnesota Public School Districts	When able, school districts and schools contribute a small amount of fee for service funding to support Canoemobile programs in their community. Additionally, school districts and teachers contribute valuable time and resources to this project through staffing field trips/place-based programming, providing substitute teachers, recruiting and contacting students, guiding students through the Freshwater Quest, and planning and prep time.	Pending	\$200,000
In-Kind	National Park Service (NPS)	NPS provides program staff and Rangers in-kind to support programs, deliver educational materials, and guide students through place-based environmental education lessons.	Secured	\$100,000
In-Kind	Minnesota Department of Natural Resources (DNR)	The Minnesota DNR provides program staff and in-kind to support programs, deliver educational materials, and guide students through place-based environmental education lessons.	Secured	\$33,667
In-Kind	Wilderness Inquiry	Wilderness Inquiry will contribute the following in-kind support to this project: staff benefits; additional staff support including from the Executive Director and Program Director; equipment and facilities; staff food and lodging; insurance; additional teacher stipends.	Secured	\$266,000
			Non State Sub Total	\$654,167
			Funds Total	\$654,167

Attachments

Required Attachments

Visual Component

File: [b302c1cc-ced.pdf](#)

Alternate Text for Visual Component

A visual representation of Canoemobile in action and a quick overview of the Minnesota Freshwater Quest.

Financial Capacity

File: [8db19ab5-5a5.pdf](#)

Board Resolution or Letter

Title	File
WI Board Resolution for LCCMR - 2020	7074936e-d56.pdf

Optional Attachments

Support Letter or Other

Title	File
WI LCCMR Letter of Support - National Park Service	d0a0bf5b-5db.pdf

Administrative Use

Does your project include restoration or acquisition of land rights?

No

Does your project have patent, royalties, or revenue potential?

No

Does your project include research?

No

Does the organization have a fiscal agent for this project?

No



Wilderness Inquiry

Minnesota Freshwater Quest



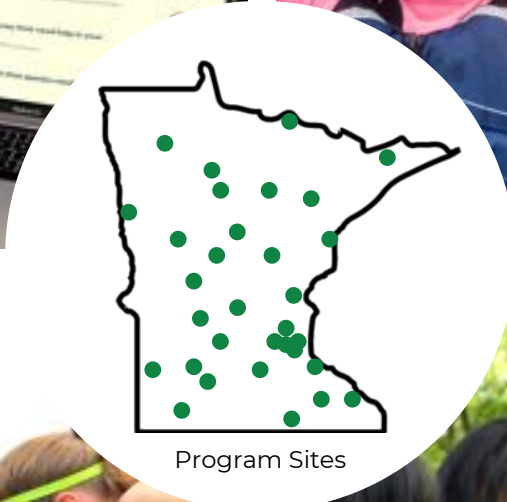
Connect 30,000 diverse MN students to outdoor experiences that increase environmental stewardship.



Improve water quality through education, data collection, and student-led projects.



Integrate hands-on science and environmental education into classroom learning.



Program Sites



