



## Environment and Natural Resources Trust Fund

M.L. 2021 Approved Work Plan

### General Information

**ID Number:** 2021-132

**Staff Lead:** Rory Anderson

**Date this document submitted to LCCMR:** July 21, 2021

**Project Title:** Minnesota Freshwater Quest: Environmental Education For 15000 Youth

**Project Budget:** \$699,000

### Project Manager Information

**Name:** Julie Edmiston

**Organization:** Wilderness Inquiry

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### Project Reporting

**Date Work Plan Approved by LCCMR:** July 20, 2021

**Reporting Schedule:** December 1 / June 1 of each year.

**Project Completion:** June 30, 2024

**Final Report Due Date:** August 14, 2024

### Legal Information

**Legal Citation:** M.L. 2021, First Special Session, Chp. 6, Art. 6, Sec. 2, Subd. 05c

**Appropriation Language:** \$699,000 the first year is from the trust fund to the commissioner of natural resources for an agreement with Wilderness Inquiry to provide place-based STEM environmental education to approximately 15,000 diverse and underserved Minnesota youth through exploration of local ecosystems and waterways in the Minnesota Freshwater Quest program.

**Appropriation End Date:** June 30, 2024



## Narrative

**Project Summary:** 15,000 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.

**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 15,000 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.

In 2020, WI applied to the ENRTF for a 3-year project to connect 30,000 Minnesota youth to environmental education using the Freshwater Quest. Our project budget was reduced by approximately two-thirds, limiting the impact to select communities and reducing the number of youth served statewide to 10,000.

Funding for years 2 and 3 of our project is needed to engage an additional 15,000 youth from diverse backgrounds statewide in outdoor experiences that build a conservation ethic. This project will serve communities in every region of Minnesota, develop a statewide network of broad-based partnerships, and implement the Freshwater Quest for a total of 25,000 youth to develop as future stewards of Minnesota's natural resources across 3 years.

**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 15,000 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.

## 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

## Activities and Milestones

### Activity 1: 15,000 Minnesota Youth Experience Place-based Environmental Education on Minnesota Waterways

**Activity Budget:** \$699,000

#### 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.	December 31, 2023
50 classrooms/educators register for the Freshwater Quest.	March 31, 2024
50 educators participate in a training workshop on the Freshwater Quest and STEM curriculum integration.	March 31, 2024
Water quality data is entered through the Freshwater Quest and disseminated through GLOBE.	June 30, 2024
15,000 diverse youth participate in environmental education programming on a local waterway.	June 30, 2024

## Project Partners and Collaborators

Name	Organization	Role	Receiving Funds
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
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
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

## Dissemination

**Describe your plans for dissemination, presentation, documentation, or sharing of data, results, samples, physical collections, and other products and how they will follow ENRTF Acknowledgement Requirements and Guidelines.**

Through the hands-on learning experiences of the Minnesota Freshwater Quest, we are equipping the next generation with the tools, information, and opportunities for lifelong understanding, engagement, and action on behalf of Minnesota's environment and natural resources.

Our success is defined by increasing participant confidence, providing inclusive and accessible experiences that promote contributions from all group members, and making the outdoors accessible to non-traditional users. Program results are evaluated as follows. Following a Canoemobile experience, students complete a pre-post survey, measuring changes in persistence, environmental stewardship, and interest in science and careers. Since 2010, WI has worked with the University of Minnesota's Center for Applied Research and Educational Improvement to analyze these surveys and evaluate the success of the program. Data collected shows a statistically significant increase in all metrics following a Canoemobile experience, including:

87% of youth report that they are likely to try new things.

88% of youth are interested in helping the environment.

84% of youth report an interest in science following their experience.

72% of youth report an interest in jobs that work with science following their experience.

In addition, WI collects qualitative feedback from youth and teachers. One teacher reported, "I was shocked by all the great questions that students had and how much fun they had actually learning. It was great to see so many kids actively engaged who are not engaged in the classroom. I have a couple of students who really struggle with being in class day to day. They have a hard time sitting down and concentrating. It was great to see them really flourishing by being able to move and explore."

WI utilizes both internal and external evaluation methods to measure our success and program impact. In addition to our internal staff, we work with teams mentioned above including the University of Minnesota's Center for Applied Research and Educational Improvement (CAREI) and the University of Minnesota Center for Community Vitality. We involve our board, staff, community members, and consultants in designing, implementing, and analyzing evaluations

and research.

We publish evaluations and results on our website, through print and social media (including Annual Reports, direct communications with educators, and others), conduct briefings, present at conferences, and disseminate results in other manners. In addition, we share evaluations and quantitative results with our funders, board of directors, staff, and community members. Ongoing impact stories and news articles are posted and shared on our website. The Environment and Natural Resources Trust Fund will be acknowledged through use of the Trust Fund logo or attribution language on project print and electronic media, publications, signage, and other communications.

## 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 15,000 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
Urban Environmental Education Engaging Students in Local Resources	M.L. 2014, Chp. 226, Sec. 2, Subd. 09c	\$1,093,000
Connecting Youth to Minnesota Waterways through Outdoor Classrooms	M.L. 2017, Chp. 96, Sec. 2, Subd. 05a	\$1,200,000

## Budget Summary

Category / Name	Subcategory or Type	Description	Purpose	Gen. Ineligible	% Benefits	# FTE	Classified Staff?	\$ Amount
<b>Personnel</b>								
Outdoor Leaders (multiple personnel)		Trail Staff and leaders of on-the-ground programming and work with youth.			0%	12		\$214,200
Part-time warehouse staff (multiple personnel)		Warehouse and logistical support, canoe and inventory maintenance and repairs.			0%	1		\$30,000
Finance and Administration Coordinator		Coordinates project administration including payroll, finances and staff reimbursements.			0%	1		\$35,000
Marketing Manager		Leads outreach to schools/districts for student recruitment; communicates program impact to partners/funders.			0%	1		\$60,000
Program Coordinator		Oversees teacher training, curriculum support and program coordination.			0%	0.5		\$20,000
Program Manager		Manages implementation of the Freshwater Quest, program development and design, and outreach to educators.			0%	1.5		\$75,000
Operations Director		Oversees operational elements of the project, including logistics, gear, equipment, staffing, etc.			0%	1.3		\$104,000
							<b>Sub Total</b>	<b>\$538,200</b>
<b>Contracts and Services</b>								
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.				0.4		\$30,000
Teachers (multiple)	Sub award	Sub-award stipends to teachers to support training, supplies, and materials for youth-led environmental education projects. 50 teacher grants x \$200/grant = \$10,000.				0		\$10,000
TBD	Professional or Technical	Technology modernization for online youth participant and classroom registration processes.				0.3		\$20,000



	Service Contract							
							<b>Sub Total</b>	<b>\$60,000</b>
<b>Equipment, Tools, and Supplies</b>								
	Tools and Supplies	Teacher training materials	Materials and supplies to conduct teacher training on project implementation and the Minnesota Freshwater Quest.					\$5,000
	Tools and Supplies	EcoSTEM water quality testing kits and species identification materials (38 kits x \$700 = \$26,600).	Environmental education supplies needed to conduct direct programming with youth.					\$26,600
	Equipment	Equipment maintenance, repair and replacement if needed (PFDs, etc) - 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 (\$10,000 year x 2 years =\$20,000).	Maintenance needed to keep equipment safe for direct environmental education programming with youth.					\$20,000
							<b>Sub Total</b>	<b>\$51,600</b>
<b>Capital Expenditures</b>								
		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
							<b>Sub Total</b>	<b>\$16,800</b>
<b>Acquisitions and Stewardship</b>								
							<b>Sub Total</b>	<b>-</b>
<b>Travel In Minnesota</b>								

	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 50 events = \$15,000).					\$15,000
	Miles/ Meals/ Lodging	Transportation for Wilderness Inquiry staff to deliver environmental education events across the state via van with trailer and boats (150 events x avg. 200 miles round trip x .58 = \$17,400).	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.					\$17,400
							<b>Sub Total</b>	<b>\$32,400</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>\$699,000</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>				
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. These will be partially distributed in 2020-2021; a portion will be available from 2021-2023.	Secured	\$25,000
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	\$60,000
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	\$17,667
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	\$136,000
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	\$115,000
			<b>Non State Sub Total</b>	<b>\$383,167</b>
			<b>Funds Total</b>	<b>\$383,167</b>

## Attachments

### Required Attachments

#### *Visual Component*

File: [e0cf3397-062.pdf](#)

#### *Alternate Text for Visual Component*

A visual representation of Canoemobile in action and a quick overview of the Minnesota Freshwater Quest, with photos, stats and quotes....

#### *Financial Capacity*

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

#### *Board Resolution or Letter*

Title	File
Wilderness Inquiry LCCMR Board Resolution - 2021	<a href="#">f6ceb517-433.pdf</a>

### Optional Attachments

#### *Support Letter or Other*

Title	File
WI LCCMR Letter of Support - National Park Service	<a href="#">d0a0bf5b-5db.pdf</a>
WI - Background Check Cert Form	<a href="#">6819b2ce-cf7.pdf</a>

#### *Media Links*

Title	Link
Minnesota Freshwater Quest	<a href="https://herofortheplanet.org/mnquest/">https://herofortheplanet.org/mnquest/</a>

## Difference between Proposal and Work Plan

#### *Describe changes from Proposal to Work Plan Stage*

Through the workplan process, we updated our budget to account for changes in the recommended dollar amount versus that originally submitted in our proposal (originally proposed for \$932,000, recommended at \$699,000). Budget updates include adjustments to staffing, equipment/supplies and capital expenditures, and professional/technical services.

In addition, due to the adjustment in recommended funding, we updated the number of youth who will be served through the project (originally proposed at 20,000 youth, adjusted to 15,000 youth). Program updates include adjustments to the number of teachers and classrooms that will be engaged through the project. Our plan to do outreach to every school district in the state remains a core activity milestone of the project.

As we have implemented the Freshwater Quest as a distanced learning tool through COVID-19, we have already had a number of teachers/classrooms register that will subsequently participate in Quest programming through this project. Additionally, we have seen other positive avenues to implementation, including working directly with families and other groups to implement the Quest with students.

Under the budget, we changed one staff position from a Program Coordinator role to a Marketing Manager role. The

Marketing Manager will assist in outreach to districts, educators, and families to recruit participants, as well as help share the impact of the program with partners, funders and the community.

## Additional Acknowledgements and Conditions:

The following are acknowledgements and conditions beyond those already included in the above workplan:

**Do you understand and acknowledge the ENRTF repayment requirements if the use of capital equipment changes?**

Yes

**Do you agree travel expenses must follow the "Commissioner's Plan" promulgated by the Commissioner of Management of Budget or, for University of Minnesota projects, the University of Minnesota plan?**

Yes, I agree to the Commissioner's Plan.

**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



# MINNESOTA FRESHWATER QUEST

## ENVIRONMENTAL EDUCATION FOR 20,000 DIVERSE YOUTH



Wilderness  
Inquiry



Connect 20,000 diverse and underserved students to educational outdoor experiences.



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

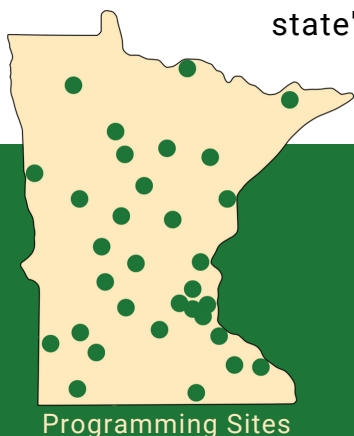


Improve water quality in lakes, rivers, and streams through education, data collection, and real-world projects implemented by youth.

## INVESTING IN THE NEXT GENERATION OF OUTDOOR STEWARDS

With support from the ENRTF, Wilderness Inquiry will connect **20,000** diverse and underserved Minnesota youth to place-based, STEM environmental education programming on Minnesota waterways.

Through the **Minnesota Freshwater Quest**, whole classrooms learn about our state's rich natural resources while exploring diverse habitats close to home. The Freshwater Quest increases the ability of Minnesota students to access and participate in engaged learning both in and outside of the classroom, investing in the future champions of our state's public lands and wild spaces.



Programming Sites

"Following the trip, students who were not interested in the sciences completely changed their minds. Grades and participation in class have increased. This trip makes it easy as a teacher to get students excited about science."

