## **Final Abstract**

Final Report Approved on October 2, 2024

## M.L. 2021 Project Abstract

For the Period Ending June 30, 2024

Project Title: Minnesota Freshwater Quest: Environmental Education for Youth Project Manager: Meg Krueger Affiliation: Wilderness Inquiry Mailing Address: 1611 County Road B West, Ste 315 City/State/Zip: Saint Paul, MN 55113 Phone: (612) 676-9400 E-mail: development@wildernessinquiry.org Website: https://www.wildernessinquiry.org/ Funding Source: Fiscal Year: Legal Citation: M.L. 2021, First Special Session, Chp. 6, Art. 6, Sec. 2, Subd. 05c

Appropriation Amount: \$699,000

Amount Spent: \$699,000

Amount Remaining: -

#### Sound bite of Project Outcomes and Results

The Minnesota Freshwater Quest engaged more than 15,000 Minnesota youth through in-person and virtual environmental education, meeting a critical need for interactive online learning during the COVID-19 pandemic. Throughout the state students explored public lands and waterways, and learned to preserve ecosystems close to where they call home.

#### **Overall Project Outcome and Results**

Since the start of the project in November 2022 through its completion in June 2024, Wilderness Inquiry's Minnesota Freshwater Quest connected 15,432 Minnesota youth to place-based, STEM environmental education and created opportunities for students to explore and preserve local ecosystems and waterways through online and in-person programming.

The 15,432 Minnesota youth who participated in the Freshwater Quest project engaged with learning material in a variety of ways including in-person daylong paddling events, remote learning modules, and overnight camping adventures in Minnesota's state parks and federal lands such as the Superior National Forest and Voyageurs National

Park. There were 3,217 who engaged in virtual programming in their classrooms; these students learned about the Mississippi River watershed and ecosystem led by Wilderness Inquiry Outdoor Educators and National Park Service Rangers. Classrooms received a package of learning materials so students could follow along during the lesson and continue with a stewardship project focused on a threatened riparian plant or animal species. 11,965 Minnesota youth engaged in hands-on exploration, recreation, and assessment of waterways and public lands throughout the state collecting water quality data to be distributed through citizen science platform, Global Learning and Observations to Benefit the Environment (GLOBE). 250 Minnesota youth joined Wilderness Inquiry on overnight camping adventures to deepen their connection to the outdoors, acquire new skills, and discover pathways into outdoor-related employment.

Freshwater Quest programming aligns with Minnesota's science curriculum standards and Wilderness Inquiry engaged with 192 teachers through professional development. The training focused on using outdoor, place-based learning techniques to enrich classroom content and create opportunities to help students to connect with educational material.

#### **Project Results Use and Dissemination**

While participating in Freshwater Quest activities, students collected water quality data and this data was reported back and disseminated through the citizen science online platform, GLOBE.

Wilderness Inquiry worked with Wilder Foundation and HelloInsight to evaluate the project and produce reports which were shared directly with partners and stakeholders, presented at conferences, and can be found on the Wilderness Inquiry website here and included in the final report attachments: https://www.wildernessinquiry.org/uwca-evaluations/

Many local media outlets covered Freshwater Quest throughout the state and shared Wilderness Inquiry social media postings. These articles are linked in the final report attachments.



## **Environment and Natural Resources Trust Fund**

## M.L. 2021 Approved Final Report

#### **General Information**

Date: November 18, 2024

ID Number: 2021-132

Staff Lead: Noah Fribley

Project Title: Minnesota Freshwater Quest: Environmental Education for Youth

Project Budget: \$699,000

## **Project Manager Information**

Name: Meg Krueger Organization: Wilderness Inquiry Office Telephone: (612) 676-9400 Email: development@wildernessinquiry.org Web Address: https://www.wildernessinquiry.org/

## **Project Reporting**

Final Report Approved: October 2, 2024

Reporting Status: Project Completed

Date of Last Action: October 2, 2024

Project Completion: June 30, 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? Introduce us to the work you are seeking funding to do. You will be asked to expand on this proposed solution in Activities & 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	Approximate 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	NPS provides in-kind support of staff time and materials for program	No
New Contact	Service (NPS) Minnesota Department of Natural Resources (DNR)	implementation along the Mississippi National River and Recreation Area. The Minnesota DNR is a key partner in program implementation as Wilderness Inquiry programs utilize public lands such as state parks, waterways, and trails. Erika Rivers was the former person in this position who left the position to be our ED. The MN DNR is still a key partner.	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 work 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. Ineli gible	% Bene fits	# FTE	Class ified Staff?	\$ Amount	\$ Amount Spent	\$ Amount Remaining
Personnel										
Outdoor		Trail Staff and leaders of on-the-ground			0%	12		\$233 <i>,</i> 395	-	-
Leaders		programming and work with youth.								
(multiple										
personnel)										
Part-time		Warehouse and logistical support,			0%	1		\$30,000	-	-
warehouse		canoe and inventory maintenance and								
staff (multiple		repairs.								
personnel)										
Finance and		Coordinates project administration			0%	1		\$35 <i>,</i> 000	-	-
Administration		including payroll, finances and staff								
Coordinator		reimbursements.								
Marketing		Leads outreach to schools/districts for			0%	1		\$60,000	-	-
Manager		student recruitment; communicates								
		program impact to partners/funders.								
Program		Oversees teacher training, curriculum			0%	0.5		\$20,000	-	-
Coordinator		support and program coordination.								
Program		Manages implementation of the			0%	1.5		\$75 <i>,</i> 000	-	-
Manager		Freshwater Quest, program								
		development and design, and outreach								
-		to educators.								
Operations		Oversees operational elements of the			0%	1.3		\$104,000	-	-
Director		project, including logistics, gear,								
		equipment, staffing, etc.								
							Sub Total	\$557,395	\$557 <i>,</i> 395	-
Contracts and Services										
The Wilder	Professional	Contract for project evaluation to				0.4		\$27,000	\$27,000	-
Foundation	or Technical	demonstrate success of implementation								
Research	Service	of the Freshwater Quest throughout the								
	Contract	state. Contracts selected through a								
		competitive bidding process.								
Luminfire	Professional	Technology modernization for online				0.3		\$20,000	\$20,000	-
	or Technical	youth participant and classroom								
	Service	registration processes.								
	Contract									

					Sub Total	\$47,000	\$47,000	-
Equipment, Tools, and Supplies								
	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.			\$13,600	\$13,600	-
	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.		Sub	\$46,300 \$ <b>59,900</b>	\$46,300 \$ <b>59,900</b>	-
					Total	<i>çus,suu</i>	<i><b>400</b></i> , <b>500</b>	
Capital Expenditures								
					Sub Total	-	-	-
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 50 events = \$15,000).			\$15,000	\$15,000	-
	Miles/	Transportation for Wilderness Inquiry	In order to deliver			\$19,705	\$19,705	-
	Meals/ Lodging	staff to deliver environmental education events across the state via van with	environmental education programming, Wilderness					

	trailer and boats (150 events x avg. 200 miles round trip x .58 = \$17,400).	Inquiry staff must travel across the state (with boats and equiment) in order to reach students in the communities where they live.					
				Sub Total	\$34,705	\$34,705	-
Travel Outside Minnesota							
				Sub Total	-	-	-
Printing and Publication							
				Sub Total	-	-	-
Other Expenses							
				Sub Total	-	-	-
				Grand Total	\$699,000	\$699,000	-

## Classified Staff or Generally Ineligible Expenses

Category/Na	me Subcategory or Type	Description	Justification Ineligible Expense or Classified Staff Request
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## Non ENRTF Funds

Category	Specific Source	Use	Status	\$ Amount	\$ Amount Spent	\$ Amount Remaining
State					•	
			State Sub Total	-	-	-
Non- State						
Cash	Minneapolis Foundation	Funds for curriculum/resource development that supports this project.	Secured	\$16,000	\$16,000	-
Cash	REI Foundation	Funds for curriculum/resource development that supports this project.	Secured	\$13,500	\$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	-	\$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	\$20,000	\$40,000
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	\$6,000	\$11,667
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	\$65,000	\$71,000
Cash	Minnesota Public School Districts	<ul> <li>When able, school districts and schools contribute a small amount of fee for service funding to support Canoemobile programs in their community.</li> <li>Additionally, school districts and teachers contribute valuable time and resources to this project through staffing field trips/place-based programming, providing substitute</li> </ul>	Pending	\$115,000	\$64,650	\$50,350
		teachers, recruiting and contacting students, guiding students through the Freshwater Quest, and planning and prep time.				

	Non	\$383,167	\$185,150	\$198,017
	State			
	Sub			
	Total			
	Funds	\$383,167	\$185,150	\$198,017
	Total			

## Attachments

## **Required Attachments**

*Visual Component* File: <u>e0cf3397-062.pdf</u>

#### 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	f6ceb517-433.pdf

#### Supplemental Attachments

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

Title	File
WI LCCMR Letter of Support - National Park Service	d0a0bf5b-5db.pdf
WI - Background Check Cert Form	<u>6819b2ce-cf7.pdf</u>
Freshwater Quest Flyer for Teachers	<u>0c5251d9-9e8.pdf</u>
Citizen Science Water Quality Monitoring Data Map	f0179fa8-f91.png
Ripple Effect Mapping Evaluation Report	<u>36c64779-d0c.docx</u>
MN Freshwater Quest Final Report 1-pager	<u>412f834f-b1d.pdf</u>

#### Media Links

Title	Link
Minnesota	https://herofortheplanet.org/mnquest/
Freshwate	
r Quest	
Dec 1	(https://www.austindailyherald.com/2023/05/photos-area-elementary-students-take-up-paddles-on-the-cedar/)
Status	
media	
highlight -	
Austin	
Daily	
Herald	
Dec 1	(https://www.kimt.com/news/canoemobile-helps-mower-county-students-explore-the-great-
Status	outdoors/article_46d25fc0-ee75-11ed-bb0e-
media	dbce91e77950.html?fbclid=IwAR3PcRyIHtnkHyqocljLTdFJ7lOdvsCEg0IWePGdCYbfYiq jSJ5cTCn8z0).
highlight -	
KIMT3 TV	
in Austin,	
MN	
Dec 1	(https://www.grandforksherald.com/sports/northland-outdoors/wilderness-inquiry-hosts-area-students-on-red-
Status	and-red-lake-rivers).
media	
highlight -	
Grand	

Forks	
Herald	
June 1	https://www.kaaltv.com/news/canoemobile-program-takes-kids-out-of-the-classroom-and-onto-the-water/
status	https://www.kaalty.com/news/candemobile-program-takes-klus-dut-di-the-classroom-and-dittd-the-water/
update -	
KAAL TV	
spotlight	
on Canada and b	
Canoemob	
ile in	
Austin MN	
June 1	https://www.kimt.com/news/floating-classroom-teaching-young-students-life-lessons/article_fc6abc62-0da3-11ef-
status	<u>a9f4-674a51d3fa23.html</u>
update -	
KIMT	
spotlight	
on Canada and b	
Canoemob	
ile in	
Austin MN	
Canoemob	https://www.timberjay.com/stories/canoemobile-brings-outdoor-classroom-to-town,19480
ile brings	
outdoor	
classroom	
to town	
Wildernes	https://www.wildernessinguiry.org/current-news/news-notes/wilderness-inguirys-first-deaf-deafblind-and-hard-of-
s Inquiry's	hearing-day-camp/
First Deaf,	
DeafBlind,	
and Hard	
of Hearing	
Day Camp	
Facebook	https://www.facebook.com/WildernessInguiry/posts/pfbid0kyzePMdsQe3PRNg7XqgQx2TjYj4gQTFhh6DbfJxxzd3BZ
Post -	ohfWc531XYYwhPjmxPZI
Canoemob	
ile in	
Cloquet	
with	
LCCMR	
Members	
X Post -	https://x.com/WildernessINQ/status/1704938936538144813
Canoemob	
ile in	
Cloquet	
with	
LCCMR	
Members	
Minnesota	https://www.mnsenaterepublicans.com/nelson-safety-disaster-relief-hwy57-construction-and-ems-recap-funding/
Senate	
Republica	
n Caucas	
Newslette	
r	

## 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? N/A

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 understand the Commissioner's Plan applies.

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

## Work Plan Amendments

Amendment ID	Request Type	Changes made on the following pages	Explanation & justification for Amendment Request (word limit 75)	Date Submitted	Approved	Date of LCCMR Action
1	Amendment Request	<ul> <li>Budget</li> <li>Project Collaborators - Project Manager Info</li> <li>Budget - Capital, Equipment, Tools, and Supplies</li> <li>Project Collaborators - Project Partner Info</li> <li>Budget - Professional / Technical Contracts</li> <li>Budget - Travel and Conferences</li> <li>Budget - Non-ENRTF Funds Contributed</li> </ul>	We have made slight adjustments to our budget. We are unable to secure a dual- axel trailer and thus will be using those funds to repair and maintain existing equipment. We have found less need than anticipated to compensate teachers for training and professional development, however our travel costs have increased with inflation. Our subcontractors have been selected and named in this amendment.	June 1, 2023	Yes	June 9, 2023
2	Project Manager	Previous Manager: Julie Edmiston (development@wildernessinquiry.org) New Manager: Meg Krueger (development@wildernessinquiry.org)	After some parental leave time and organizational restructuring, Meg Krueger is the effective project manager for this project.	May 31, 2023	Yes	June 1, 2023
3	Amendment Request	<ul> <li>Budget</li> <li>Budget - Professional / Technical Contracts</li> <li>Budget - Capital, Equipment, Tools, and Supplies</li> <li>Budget - Travel and Conferences</li> </ul>	We anticipate a need in Program Supplies and Equipment to finish the final stretch of the project with adequate and updated programming gear, especially winter programming materials. We have met our objectives in engaging teachers in professional development opportunities without spending down the allocated funding on teacher subcontracts and teacher training supplies. No changes were made to travel and conferences.	October 20, 2023	Yes	November 9, 2023
4	Amendment Request	<ul> <li>Budget - Personnel</li> <li>Budget - Professional / Technical Contracts</li> <li>Budget - Capital, Equipment, Tools, and Supplies</li> <li>Budget - Travel and Conferences</li> </ul>	As we reach the end of the project, we are wanting to reallocate funds to Outdoor Leader wages to support the remainder of program delivery. We increased Outdoor Leader wages in 2024 by 8-9% and this reallocation tracks with that increase. We have purchased all the	April 23, 2024	Yes	April 26, 2024

	supplies we will need for the project and		
	are anticipating fewer transportation		
	and evaluation expenses than originally		
	planned.		

## Final Status Update August 14, 2024

Date Submitted: August 13, 2024

#### Date Approved: September 24, 2024

#### **Overall Update**

Since our last status update, Wilderness Inquiry finished the Minnesota Freshwater Quest project, connecting a total of 15,432 Minnesotans to in-person and virtual learning throughout the state. Minnesota youth participated in activities including canoeing in 24' 10-person North canoes, water quality data collection, macroinvertebrate indicator species analysis, and service projects to explore their local watersheds and ecosystems.

A highlight of this performance period was a successful week of Outdoor Credit Recovery with Saint Paul Public Schools. In June, more than 60 high school students earned recovery credit in Human Geography, with a curricular focus on the connection to land and water through climate change. Students began the week by testing water quality at their school site and canoeing through the National Park Service Mississippi National River and Recreation Area, testing water quality along the way. The week also included a visit to Coldwater Spring for a pollinator survey and to Spring Lake Park where bison have been reintroduced to the land. This place-based approach to education encourages students to make observations of how the ecosystem is impacted by humans and animals.

#### Activity 1

Milestone 1: Water quality data has been collected by students on Wilderness Inquiry programs, and entered and shared through the GLOBE citizen science platform. GLOBE's platform maps all Wilderness Inquiry's water quality data points across the state demonstrating the widespread impact young people have had to learning and contributing to citizen science efforts in MN. Citizen science maps have been added to the Attachments tab.

Milestone 2: 15,432 Minnesota youth participated in environmental education programming with Wilderness Inquiry. Learning occurred while paddling waterways close to where participants live, while they camped in the Boundary Waters and Minnesota State Parks, and virtually from their school classrooms.

Milestone 3: 58 educators registered for and attended Freshwater Quest Virtual programming since the start of the project. Educators represented more than 50 schools across the state of Minnesota.

Milestone 4: 192 teachers from schools in the Saint Paul Public Schools district and Osseo Public Schools district received professional development experiences through this project to support outdoor learning pedagogy and connected learning to academic standards.

Milestone 5: Wilderness Inquiry distributed information about Freshwater Quest to school superintendents, principals, and science curriculum specialists in all 336 Minnesota school districts and through two virtual teacher webinars. (This activity marked as complete as of this status update)

#### Dissemination

Wilderness Inquiry continues to share project updates on Canoemobile and the Minnesota Freshwater Quest to partners, stakeholders, and media outlets throughout the state. No new media was produced since the last update, but all associated media articles, blog posts, and social media from the project are linked in the Attachments tab.

We received the final report from our Ripple Effect Mapping (REM) evaluation work with Wilder Foundation. REM is the

method of evaluation that consists of individual reflection, paired reflection, and group discussion. The report highlights outcomes for students who participate in Wilderness Inquiry programming including 1) engaging in environmental learning and stewardship 2) building relationships with adults and peers and 3) broadening perspectives. Quotes from educators and students help illuminate the impact of Wilderness Inquiry programming. One educator wrote, "There were many times where we took a city bus or short bus ride to nature. Initially the feeling that you can't do that ...nature is somewhere else. Helping break down for students that nature is here and nature exists in Saint Paul is the main thing that we want students to realize. And that it is worth protecting here." The final evaluation report is included in the Attachments tab.

## Status Update June 1, 2024

#### Date Submitted: August 13, 2024

#### Date Approved: September 24, 2024

#### **Overall Update**

As of April 30, 2024, Wilderness Inquiry has connected 10,327 Minnesotans to in-person and virtual educational outdoor experiences through this project. These statewide experiences offered learning opportunities for students to engage with the ecosystems in their backyards, public lands, and Minnesota state parks through hands-on science and environmental education activities.

During this monitoring period of December 1, 2023 to May 31, 2024, on-water Canoemobile programming engaged 41 schools, representing 13 districts across the state including Austin, Bloomington, Brooklyn Park, Duluth, Grand Rapids, North St. Paul-Oakdale-Maplewood, Minneapolis, Osseo, Richfield, Red Lake, Saint Cloud, Saint Paul, and Stewartville. Students participated in activities including canoeing in 24' 10-person North canoes, water quality data collection, macroinvertebrate indicator species analysis, and service projects to explore their local watersheds and ecosystems. Virtual programming transported students in their classrooms to the banks of the Mississippi River to learn about ecology and quality of our state's water resources.

We have not fully tabulated participation numbers for May 2024 programming, but we are on track to reach the 15,000 total Minnesotans we projected to serve with these funds. Total participant numbers and demographics will be reflected in the final report in August 2024.

#### Activity 1

Milestone 1: Water quality data continues to be collected by students on Wilderness Inquiry programs, and entered and shared through the GLOBE citizen science platform. GLOBE's platform maps all Wilderness Inquiry's water quality data points across the state demonstrating the widespread impact young people have had to learning and contributing to citizen science efforts in MN.

Milestone 2: 10,135 youth have participated in programming as of April 30, 2024. We will continue to provide in-person and virtual learning opportunities for youth through June 30, 2024.

Milestone 3: In March and April 2024, 16 new educators registered for Freshwater Quest to provide their classrooms with virtual learning experiences. This is in addition to the 42 educators who participated last spring, for a total of 58 educators since the start of the project. This milestone is complete.

Milestone 4: 192 teachers from 4 schools from Saint Paul Public Schools and Osseo Public Schools received professional development experiences through this project to support outdoor learning pedagogy. This milestone is complete.

Milestone 5: In January 2024, Wilderness Inquiry sent information about Freshwater Quest to school superintendents, principals, and science curriculum specialists in all 336 Minnesota school districts. This milestone is complete.

#### Dissemination

Wilderness Inquiry continues to share project updates on Canoemobile and the Minnesota Freshwater Quest to partners, stakeholders, and media outlets throughout the state. Wilderness Inquiry programming on the Cedar River in Austin, Minnesota was featured on two local stations, ABC6 and KIMT3. Media articles are linked in the Attachments

tab.

The evaluation work with Wilder Foundation has continued and is coming to a close with the final research sessions happening in May and June. Ripple Effect Mapping (REM) is the method of evaluation that consists of individual reflection, paired reflection, and group discussion. These discussions culminate in a "map" illustrating the impact of programming on youth participants over time. We will receive a full report from Wilder to include it in our final project report in August.

A few favorite quotes from the REM research sessions include:

"Wilderness Inquiry helped me appreciate silence, hearing nature – seeing, living in the moment." [Nods from around the room]

"Vitamin D feels good. When I come to school, it's dark; when I leave school, it's dark. Being outside helps open me up, I feel like I belong."

## Status Update December 1, 2023

#### Date Submitted: December 4, 2023

#### Date Approved: December 18, 2023

#### **Overall Update**

Minnesota Freshwater Quest Environmental Education for 15,000 Youth officially began programming in January 2023. To date, with support from LCCMR, Wilderness Inquiry has connected 8,320 diverse learners to in-person and virtual educational outdoor experiences through this project. These statewide experiences offered learning opportunities for students to engage with the ecosystems in their backyards, public lands, and Minnesota state parks through hands-on science and environmental education activities.

During this monitoring period of June 1 to November 30, 2023, on-water Canoemobile programming engaged 56 schools, representing 19 districts across the state including Cloquet, North St. Paul-Oakdale-Maplewood, Burnsville, Rosemont, Osseo, Bloomington, Lake Superior, International Falls, East Grand Forks, Thief River Falls, Tower, Sudan, Win-E-Mac, Marshall County, Murray County, Westbrook Walnut Grove, Minnetonka, Minneapolis, and Saint Paul. Students participated in activities including canoeing in 24', 10-person North canoes, water quality data collection, macroinvertebrate indicator species analysis, and service projects to explore their local watersheds and ecosystems.

#### Activity 1

Milestone 1: Water quality data continues to be collected by students on Wilderness Inquiry programs, and entered and shared through the GLOBE citizen science platform. GLOBE's platform maps all Wilderness Inquiry's water quality data points across the state demonstrating the widespread impact young people have had to learning and contributing to citizen science efforts in MN.

Milestone 2: 8,128 youth have participated in programming to date. Wilderness Inquiry will continue to provide inperson and virtual learning opportunities for classrooms through the remainder of the 2023-24 school year.

Milestone 3: 42 educators registered for Freshwater Quest to provide their classrooms with virtual learning experiences last spring. We anticipate a similar number of classrooms engaging in Freshwater Quest virtual learning in March and April 2024.

Milestone 4: 192 teachers from 4 schools from Saint Paul Public Schools and Osseo Public Schools received professional development experiences through this project to support outdoor learning pedagogy.

Milestone 5: Within the last reporting period, the Freshwater Quest has been directly shared with 56 districts. By the end of the year, Wilderness Inquiry will send two more email communications that highlight the Quest platform to all remaining districts in the state.

#### Dissemination

Wilderness Inquiry continues to share project updates on Canoemobile and the Minnesota Freshwater Quest to partners, stakeholders, and media outlets throughout the state. Wilderness Inquiry programming on the Cedar River was featured in the Austin Daily Herald as well as a TV spot on local station KIMT3. In September Wilderness Inquiry delivered a week of Canoemobile programming in the Red River Basin area. All media articles are linked in the Attachments tab.

Results from Hello Insight survey data show young people on WI trips gain 21st-century skills and develop social and emotional capacities that correlate with long-term gains in high school completion, college/career readiness, and increased life-long thriving. Wilder Foundation has begun implementation of ripple effect mapping evaluation which includes individual reflection, paired reflection, and group discussion. These discussions culminate in a "map" illustrating the impact of programming on youth participants over time. Researchers conducted the first session with students in November. Three main themes came through 1) finding peace and calm 2) outdoor skills and activities 3) relationships and meeting people. Students told poignant stories about why these themes are important.

## Status Update June 1, 2023

Date Submitted: June 1, 2023

#### Date Approved: June 9, 2023

#### **Overall Update**

Minnesota Freshwater Quest Environmental Education for 15,000 Youth officially started in August 2022, however because this project is a continuation of a previous program, we did not start spending project funding until November 2022. 1,324 learners have participated in Wilderness Inquiry programming through in-person and virtual educational outdoor experiences from January 1 to April 30, 2023. These experiences offered learning opportunities for students to engage with the ecosystems in their backyards through hands-on science and environmental education activities.

During this monitoring period, Minnesota Freshwater Quest virtual programming was introduced to 12 schools, representing 9 districts across the state. Students learned about pressures on local waterways and the species affected, and students then used their knowledge to design a service project that improves habitat for species to be completed later in the school year. These classrooms receive an invitation to join in-person, on-water Canoemobile programming in the spring and fall seasons. Canoemobile activities include canoeing in 24', 10-person North canoes, water quality data collection, and exploration of the areas students studied during their virtual learning experience.

#### Activity 1

Milestone 1: Wilderness Inquiry paused collecting water quality data through the frozen season, but as in-person programming begins again data will be disseminated through GLOBE in the spring, summer, and fall 2023.

Milestone 2: 1,324 youth participated in programming through April and thousands more are signed up for the coming spring and summer months.

Milestone 3: 42 educators registered for Freshwater Quest and provided their classrooms with virtual learning experiences from January through April 2023.

Milestone 4: An educator training workshop was planned with a new district for January 2023, but it was canceled by the district due to limited staff resources for Teacher Professional Development days. In August 2023, a teacher training is scheduled with a Saint Paul Middle School. More districts will have the opportunity to engage with the Freshwater Quest as teacher professional development during MEA weekend in October 2023.

Milestone 5: The Freshwater Quest has been shared with over 40 school districts through targeted email communications, outreaches, and virtual planning meetings. Going into the new school year in August 2023, Wilderness Inquiry will continue outreach to the remaining school districts across the state.

#### Dissemination

With the previous Minnesota Freshwater Quest Environmental Education On State Waterways project funding, Wilderness Inquiry piloted a survey tool in partnership with Hello Insight to evaluate youth program efficacy in 2022. Across Wilderness Inquiry's youth program offerings, young people showed meaningful gains in one or more socialemotional learning (SEL) outcomes. Youth who engage with Wilderness Inquiry programming through single-day experiences see the following measurable gains:

81% of young people surveyed agreed that they enjoyed the outdoor experience.

76% of young people reported the experience positively challenged growth, a reflection of Wilderness Inquiry staff

giving frequent reminders that they believe in youth and their ability to succeed when they take risks and try their best.

The full 2022 evaluation report can be found on the Wilderness Inquiry website: https://www.wildernessinquiry.org/uwca-evaluations/

Moving forward the Wilder Foundation Research has been contracted to implement a ripple effect mapping evaluation (REM). REM includes individual reflection, paired reflection, and group discussion around reflections; these discussion culminate in a "map" illustrating the impact of Wilderness Inquiry's programming on youth participants over time.

## Status Update December 1, 2022

#### Date Submitted: December 1, 2022

#### Date Approved: December 14, 2022

#### **Overall Update**

This project is part of a continuation of a previous program and, as such, no spending has been done on this allocation. Progress has been made on the overall project, as reported for allocation 2020-041-2020-05b on September 29, 2022. To date, with support from LCCMR, Wilderness Inquiry has connected 8,443 diverse and underserved learners to inperson and virtual educational outdoor experiences through our Canoemobile and Minnesota Freshwater Quest: Environmental Education On State Waterways project. Within these outdoor experiences, learners gained knowledge and contributed to real-world projects that benefit local ecosystems in their own communities and beyond.

The summer and fall of 2022 saw an earnest return to in-person experiences across the state, engaging Minnesota learners in community school districts that included Austin, Albert Lea, International Falls, East Grand Forks, Thief River Falls, Moorhead, Tower, Sudan, Lax Lake, Crosby, Minneapolis, and Saint Paul, MN, among others. Learners in these communities gained hands-on experiential education around water quality science and place-based recreation, helping them to develop into Minnesota's next generation of environmental stewards.

#### Activity 1

Milestone 1: Water quality data continues to be collected by students on Wilderness Inquiry Freshwater Quest programs, it is then entered and shared through the GLOBE citizen science platform. Data will continue to be entered that was collected from fall 2022 programming.

Milestone 2: 8,443 diverse learners have participated in environmental education programming between August 13, 2021 and December 1, 2022. Learners participated across the state -- from the Twin Cities metro, to International Falls, to Austin, MN and more.

Milestone 3: 54 educators have participated in Freshwater Quest professional development workshops covering STEM curriculum integration, how to use the Quest online platform with students, and opportunities to take learning outside with Wilderness Inquiry's Canoemobile.

Milestone 4: The Freshwater Quest has been shared with over 40 school districts through targeted email communications, outreaches, and virtual planning meetings.

#### Dissemination

Wilderness Inquiry continues to share project updates on Canoemobile and the Minnesota Freshwater Quest to diverse partners, stakeholders and media outlets.

\*\*\*In September, we produced a media release regarding programming on Rainy Lake in Voyageurs National Park. The Minnesota Environment and Natural Resources Trust Fund was acknowledged in this media release as funding the programming.

\*\*\*39 K-12 teachers participated in a Teach Outdoors! MN virtual event to learn about this project and the MN Freshwater Quest tool and how to use it in their classroom.

\*\*\*In October, Wilderness Inquiry programming was featured in Northern St Louis County Local Newspaper the Timberjay: http://www.timberjay.com/stories/canoemobile-brings-outdoor-classroom-to-town,19480

## Status Update June 1, 2022

#### Date Submitted: July 11, 2022

#### Date Approved: July 11, 2022

#### **Overall Update**

This project is part of a continuation of a previous program and, as such, no spending has been done on this allocation. Progress has been made on the overall project, as reported for allocation 2020-041-2020-05b on May 2, 2022. To date, with support from LCCMR, Wilderness Inquiry has connected 1,686 diverse and underserved students to in-person educational outdoor experiences from August 13, 2021 to February 28, 2022 through our 2022 Minnesota Freshwater Quest: Environmental Education On State Waterways project. Within these outdoor experiences, students learned about and contributed to real-world projects that benefit local ecosystems in their own communities and beyond. Using The Freshwater Quest online platform, students engage in activities that align with educational content that meet state standards. So far, project partners — including Captain Planet Foundation, Mississippi Park Connection, National Park Service, YMCA, Minneapolis Public Schools, Lake Superior School District, Stewartville Public Schools, Saint Cloud Area School District, and more — have participated in helping develop Minnesota's next generation of environmental stewards.

#### Activity 1

#### Milestone 1:

As of February 28, Wilderness Inquiry has shared opportunities to participate in the Freshwater Quest through a variety of channels including email communications, social media, word of mouth, and distributing through existing partners. Continued broad dissemination of this learning tool to districts across the state will happen in 2022.

#### Milestone 2:

15 educators have participated in a workshop style training for Freshwater Quest and STEM curriculum integration thus far.

#### Milestone 3:

1,686 diverse youth have participated in environmental education programming between August 13, 2021 and February 28, 2022. Participants joined from across the state -- from the Twin Cities metro to Lake Superior School District to Saint Cloud and more.

#### Milestone 4:

Water quality data collected by students from August 13, 2021 to February 28, 2022 on Wilderness Inquiry Freshwater Quest programs has been tallied and will be shared through GLOBE at a later date in 2022.

#### Dissemination

To date, Wilderness Inquiry's Freshwater Quest program has been featured on our website, 2021 Annual report, blog posts, and through bulk communications to community members. At this time, we are currently reevaluating an adjusted approach to sharing the project with the broader audience across school districts throughout the state. A communication to Minnesota school superintendents and districts is planned for 2022. See links to some Freshwater Quest features online below:

Freshwater Quest Website: https://herofortheplanet.org/quests/minnesota-freshwater-quest/ Wilderness Inquiry Website: https://www.wildernessinquiry.org/mnfreshwaterquest/ Wilderness Inquiry 2021 Annual Report:

https://wi.cdn.brillianthosting.app/uploads/2022/07/WildernessInquiry\_AnnRpt\_Final\_SinglePages.pdf Wilderness Inquiry March Blog Post: https://www.wildernessinquiry.org/current-news/news-notes/90-days-at-thehelm-wilderness-inquiry/

Freshwater Quest Teacher Training Webinar: https://www.wildernessinquiry.org/mnfreshwaterquest-teachertraining/