

Final Abstract

Final Report Approved on November 12, 2025

M.L. 2023 Project Abstract

For the Period Ending June 30, 2025

Project Title: Teaching Students about Watersheds through Outdoor Science

Project Manager: John Lenczewski

Affiliation: Minnesota Trout Unlimited

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Website: <http://mntu.org/>

Funding Source:

Fiscal Year:

Legal Citation: M.L. 2023, Chp. 60, Art. 2, Sec. 2, Subd. 05g

Appropriation Amount: \$290,000

Amount Spent: \$260,297

Amount Remaining: \$29,703

Sound bite of Project Outcomes and Results

This project provided opportunities for youth across the state to connect with their local waterways through consistent outdoor and indoor hands on learning experiences. These connections allowed students to gain a sense of stewardship for the environment, ensuring the ongoing conservation and protection of Minnesota's natural resources by future generations.

Overall Project Outcome and Results

Youth are increasingly disconnected from the natural environment. This lack of connection follows students into adulthood, impacting their ability to make well-informed decisions about the environment and local waters. During this project, our team worked with thousands of Trout in the Classroom (TIC) students from schools across the state, leading programs full of hands-on learning experiences that connected them to local aquatic ecosystems. We utilized TIC, a program in which students raise trout from eggs to fingerlings, as a platform for field studies along streams and lakes throughout Minnesota and as a classroom focal point to reinforce what they learned in the field. In addition to leading programs, our team provided support, training, and busing reimbursements to make TIC more sustainable and effective for teachers. By the end of this project, there were 78 tanks in 67 schools around the state. TIC created ongoing, placed

based learning opportunities both in and outside the classroom for students to increase their science skills and knowledge about water quality, watersheds, and healthy aquatic habitats through outdoor programs, classroom lessons, and caring for their trout. 10,397 students engaged in 47 fall field days, 58 winter programs, and 50 spring trout release days over the two year project. In addition, we provided outdoor recreation experiences through 28 fishing skills programs where 515 people of all ages learned about spin and fly fishing at lakes, rivers, and creeks around the Twin Cities and SE Minnesota. Volunteers donated a total of 753 hours of support. This project allowed us to connect over 10,500 youth and their families to the natural environment and their local watersheds, providing multiple opportunities throughout the year for them to use critical thinking skills to foster deeper connections to the environment and establish a life-long sense of environmental stewardship.

Project Results Use and Dissemination

There were over 20 articles done about the TIC program and our social media followers continued to grow. There were 6 education updates and 6 youth series articles written by our education team published in MNTU's newsletters between November 2023 and June 2025. Each edition of these newsletters is received by all several thousand MNTU members. In addition, many copies are sent to MNTU chapters for dissemination throughout their communities and distributed to various fly shops and other sporting goods stores throughout the state. Information was also disseminated from our website. Links and a full project report in attachments tab.



Environment and Natural Resources Trust Fund

M.L. 2023 Approved Final Report

General Information

Date: November 12, 2025

ID Number: 2023-223

Staff Lead: Tom Dietrich

Project Title: Teaching Students about Watersheds through Outdoor Science

Project Budget: \$290,000

Project Manager Information

Name: John Lenczewski

Organization: Minnesota Trout Unlimited

Office Telephone: (612) 670-1629

Email: john.lenczewski@mntu.org

Web Address: <http://mntu.org/>

Project Reporting

Final Report Approved: November 12, 2025

Reporting Status: Project Completed

Date of Last Action: November 12, 2025

Project Completion: June 30, 2025

Legal Information

Legal Citation: M.L. 2023, Chp. 60, Art. 2, Sec. 2, Subd. 05g

Appropriation Language: \$290,000 the first year is from the trust fund to the commissioner of natural resources for an agreement with Minnesota Trout Unlimited to engage students in classroom and outdoor hands-on learning focused on water quality, groundwater, aquatic life, and watershed stewardship and provide youth and their families with fishing experiences to further foster a conservation ethic.

Appropriation End Date: June 30, 2026

Narrative

Project Summary: Hands-on learning outdoors will focus on water quality, groundwater, aquatic life and students' role as watershed stewards. Angling and volunteer opportunities for students and families will foster a conservation ethic.

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

Youth are increasingly disconnected from the natural environment, and water resources in particular. This lack of connection follows students into adulthood and impacts their ability to make well-informed decisions about their environment and local waters. Underserved communities have even greater challenges connecting students with the outdoors, even in cities with many lakes, rivers, and streams.

This presents an opportunity to expand our hands-on learning program and help reverse these trends. We accomplish this by using tangible education tools and taking students outdoors for hands-on learning activities that connect them to aquatic ecosystems. Our current students learn their role in healthy, sustainable, aquatic systems and develop a sense of stewardship they carry forward into adulthood. We reach students in classrooms, during field days and via outdoor recreation that encourages lifelong, tangible connections to Minnesota's outdoors. We have the opportunity to expand the number of students and communities served, especially underserved communities, and provide the means for youth to learn about their local watersheds. Everyone lives near a waterbody worth protecting. Every student deserves to learn how they can help improve their local waters.

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.

We take students outdoors for hands-on learning activities that connect them to aquatic ecosystems first-hand. We utilize our existing Minnesota-specific program that places aquariums in classrooms so students can follow the development of trout from egg to juvenile. This serves as a springboard for field studies along streams and lakes and as a focal point for reinforcing learning about water, watersheds and ecology. Lessons on groundwater, climate change and invasive species are included. Minnesota-specific adaptations to existing curriculum include grade level standards and STEM initiatives. Students will use technology and applied sciences outside as they gather first-hand knowledge of healthy ecosystems. Students will increase their science skills and knowledge concerning water quality, groundwater, watersheds, climate change, invasive species and healthy aquatic habitats. Classroom aquariums and outdoor lessons encourage students to use critical thinking skills and foster deeper knowledge in multiple areas, including science, math, language arts and art. Youth-oriented videos reinforce learning and facilitate distance learning. To strengthen connections to aquatic systems we will offer expanded fishing skills clinics for students and families, after school fishing clubs, and outdoor events. Opportunities for age-appropriate volunteer work on conservation projects will be offered to foster a sense of action-based stewardship.

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?

Instilling students and their families with knowledge of how their actions impact water quality and aquatic life, and providing them with tangible connections to aquatic resources helps ensure the ongoing preservation and protection of Minnesota resources. The program will impart this knowledge, and generate interest in healthy watersheds, the outdoors and outdoor recreation. Those who participate in fishing clinics or try hands-on volunteer work are likely to develop a strong conservation ethic and act to protect, conserve and enhance our environment. This program will reach more than 5,000 students and their families each year.

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: Watershed Field Days & Classroom Activities: Field Days, Trout in the Classroom and Classroom Visits

Activity Budget: \$260,000

Activity Description:

Lead fall and spring field days where students connect with the natural world through hands-on studies and activities along local streams and lakes. Train teachers and provide classroom lessons which complement the field days. Manage set up and operation of 50+ classroom aquariums where students in grades 4 to 12 raise trout from eggs to fingerlings. In year two add 15 additional classrooms, focusing on underserved students and schools. Increase teacher support using MNTU educators and volunteers so teachers can consistently engage students in a variety of learning opportunities. Watershed curricula endorsed by the National Science Teachers Association, such as Project WET and Project WILD Aquatic, will be used. Minnesota adaptations address state grade level standards and include STEM initiatives. Provide students with opportunities to develop outdoor skills and learn about water resources careers. Engage students in age-appropriate habitat enhancement opportunities on local conservation projects addressing climate change and invasive species, and spark a sense of stewardship in them.

Videos and other distance learning tools will be created for students and public use. Video goals include enhancing students' science skills and knowledge concerning water quality, groundwater, watersheds, aquatic life, invasive species, climate change impacts and healthy aquatic ecosystems.

Activity Milestones:

Description	Approximate Completion Date
Coordinate with schools, prepare lessons, conduct teacher trainings (July to September 2023; and annually)	September 30, 2023
Fall field studies along streams and lakes; groundwater lessons (September to November 2023; and annually)	November 30, 2024
Trout eggs to classroom aquariums for students to raise (December 2023; and annually)	December 31, 2024
Spring trout releases and aquatic field studies (March to June 2024; and annually)	May 31, 2025

Activity 2: Provide Outdoor Recreation Education, Creating Lifelong Interest in Students & Families in Outdoor Activities and Protecting Water and the Environment

Activity Budget: \$30,000

Activity Description:

This program component will create lifelong interest in outdoor activities by engaging youth and their families through a series of fishing clinics, outings, and opportunities to participate in hands-on conservation projects. These will occur outside normal school day to encourage parent/family participation. Developing tangible connections to aquatic resources in this way fosters a deeper appreciation for the health of our waters and motivates people to become active stewards of them. We will conduct evening, weekend and summer events, including targeting students involved in the larger school-based program. We will utilize the methodologies identified in Minnesota's Angler Recruitment, Retention and Reactivation (R3) Initiative. Clinics and outings will teach diverse fishing methods, for whatever species inhabit local lakes and streams, in all settings - urban, suburban, and rural. We will partner with schools, parks systems, youth organizations and the MNDNR to reduce barriers to participation. On-line print and video resources will allow for distance learning for those who cannot attend specific events. Fishing clubs will allow students interested in fish, fishing,

natural resources, and conservation to gain more in-depth and hands-on experiences. Much of the fishing clinic costs will be covered by non-ENRTF funding sources.

Activity Milestones:

Description	Approximate Completion Date
Organize/support after school fishing clubs (September 2023 to May 2024; and annually)	May 31, 2025
Conduct youth and family fishing clinics, advancing R3 Initiative; offer conservation opportunities (throughout year).	June 30, 2025
Train volunteer instructors and mentors; distribute calendar (February 2023 to September 2023; and annually)	June 30, 2025

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.

Website, social media posts/events, MNTU newsletter, and television coverage of field day events. The Environment and Natural Resources Trust Fund will be acknowledged through use of the trust fund logo or attribution language on the website, project print and electronic media, publications, signage, and other communications per the ENTRF Acknowledgment Guidelines.

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 program as described will be fully implemented within the two year grant period. The resources and materials from the grant, including aquarium supplies and teacher materials, will continue to be used by MNTU and its partners in education programming after the end of the grant period to reach more students and families. MNTU has secured some non-state education funding and continues to actively seek additional funding to expand and sustain this environmental education. Many teachers will likely use the training and knowledge we provide them to continue similar environmental education programs in their schools for years afterwards.

Other ENRTF Appropriations Awarded in the Last Six Years

Name	Appropriation	Amount Awarded
Connecting Students with Watersheds through Hands-On Learning	M.L. 2015, Chp. 76, Sec. 2, Subd. 05b	\$400,000
Connecting Students with Water Stewardship through Hands-on Learning	M.L. 2018, Chp. 214, Art. 4, Sec. 2, Subd. 05d	\$400,000

Budget Summary

Category / Name	Subcategory or Type	Description	Purpose	Gen. Ineligible	% Benefits	# FTE	Classified Staff?	\$ Amount	\$ Amount Spent	\$ Amount Remaining
Personnel										
MNTU Program Manager		Manage Program and Reporting			32%	0.12		\$15,000	-	-
TU National Director of Youth Education		Oversee budget, invoicing and reimbursement processes			32%	0.06		\$7,000	-	-
Education Supervisor		Supervise and train educators and teachers. Plan and supervise field days and other aspects of the program. Work with DNR on fish release sites, acceptable egg sources, disease testing, etc. Purchase and manage distribution of equipment and supplies to classrooms. Hired on a contract basis.			0%	1.84		\$123,000	-	-
Environmental Education Specialist		Work with students and teachers to conduct hands on field days, classroom lessons and outdoor experiences (including fishing skills). Hired on a contract basis.			0%	1.7		\$68,000	-	-
Environmental Educator		Assist with programming implementation, especially during field days and other outdoor events. Hired on a contract basis.			0%	0.66		\$20,000	-	-
							Sub Total	\$233,000	\$223,000	\$10,000
Contracts and Services										
DNR Fish Lab	Service Contract	Conduct required fish disease testing before students can release classroom's fish into streams or lakes. Includes cost of shipping to lab.				0		-	-	-
							Sub Total	-	-	-

Equipment, Tools, and Supplies										
	Tools and Supplies	Aquarium related supplies needed each year. Includes "consumables" and periodic replacement of equipment in existing classroom sets. (\$90 per classroom X 130 classrooms over 2 years).	Maintain operating condition of existing classroom aquarium setups.					\$10,700	\$2,000	\$8,700
	Equipment	Replacement chillers and filters; new aquarium sets (up to \$1200 per set)	Chillers and filters are vital pieces of the aquarium sets and periodically need replacement. Some schools may not be able to afford this cost to remain in the program. Assumes a total of 4 chillers and filters (\$710 for both) will need replacement over 2 year period. Some new aquarium sets for new classrooms (up to \$9,000)					\$11,390	\$4,098	\$7,292
	Tools and Supplies	Materials and supplies for conducting field days, outdoor activities, teacher trainings, classroom lessons, and programs.	Essential items to effectively implement and enhance the impact of outdoor lessons and activities.					\$2,360	\$1,000	\$1,360
							Sub Total	\$24,450	\$7,098	\$17,352
Capital Expenditures										
							Sub Total	-	-	-
Acquisitions and Stewardship										
							Sub Total	-	-	-
Travel In Minnesota										
	Miles/ Meals/ Lodging	Mileage reimbursement for travel by education team staff. Assumes the educators conducting field days and	Essential travel to the sites of field days, outdoor activities, schools and trainings.					\$20,300	\$20,300	-

		activities around the state will travel a combined 15,000 miles/year.								
							Sub Total	\$20,300	\$20,300	-
Travel Outside Minnesota										
							Sub Total	-	-	-
Printing and Publication										
	Printing	Copying, printing and laminating (\$800/year)	For teacher manuals, handouts, training materials, lesson/activity materials.					\$1,600	\$1,599	\$1
							Sub Total	\$1,600	\$1,599	\$1
Other Expenses										
		Trout eggs and delivery related supplies, including shipping of food.	Supply and distribute eggs for classroom aquariums around the state. Shipping food to schools.					\$1,050	\$400	\$650
		Event expenses, including rental of park pavilions, porta potties for remote sites, etc.	Facilitate getting students in natural settings where restroom and eating facilities must be rented and brought in.					-	-	-
		Bus transportation costs (Assumes schools will request 24 trips over 2 years at \$400/trip)	Reimburse schools that educate underserved students for travel to locations where field days are held.					\$9,600	\$7,900	\$1,700
							Sub Total	\$10,650	\$8,300	\$2,350
							Grand Total	\$290,000	\$260,297	\$29,703

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	\$ Amount Spent	\$ Amount Remaining
State						
			State Sub Total	-	-	-
Non-State						
In-Kind	Volunteers	Volunteers will contribute approximately 300 hours per year to help implement the program.	Potential	\$7,200	\$7,200	-
Cash	Donations by private individuals	For additional staffing, travel or other program costs for which we are not seeking ENRTF funds.	Secured	\$2,000	\$2,000	-
In-Kind	MNTU unrestricted funds	Printing and wide distribution of periodic newspapers with significant space dedicated to ongoing lessons targeting youth.	Secured	\$4,800	\$4,000	\$800
Cash	Private foundation funding	For additional staffing, travel or other program costs for which we are not seeking ENRTF funds.	Potential	\$60,000	\$50,000	\$10,000
			Non State Sub Total	\$74,000	\$63,200	\$10,800
			Funds Total	\$74,000	\$63,200	\$10,800

Attachments

Required Attachments

Visual Component

File: [bacbe1fa-e36.pdf](#)

Alternate Text for Visual Component

This collection highlights the activities that students around the state participate in during Minnesota Trout Unlimited education programs. From discovering macro-invertebrates to wading in waters to fishing adventures, students from all walks of life have the chance to experience Minnesota's natural world while learning how to be better stewards...

Financial Capacity

File: [70298883-795.pdf](#)

Board Resolution or Letter

Title	File
Letter regarding approval to submit proposal	fc2fcaeb-ec3.pdf

Supplemental Attachments

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

Title	File
Background Check Certification Form	2c7c7820-fe7.pdf
Teaching Students about Watersheds through Outdoor Science M.L. 2023, Chp. 60, Art. 2, Sec. 2, Subd. 05g	f5c4476d-beb.pdf
Dissemination links	04aaeba1-9fb.pdf

Media Links

Title	Link
Minnesota Trout in the Classroom	https://mntu.org/trout-in-the-classroom/

Difference between Proposal and Work Plan

Describe changes from Proposal to Work Plan Stage

Reduced staffing costs.

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 understand that travel expenses are only approved if they 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

Do you understand that a named service contract does not constitute a funder-designated subrecipient or approval of a sole-source contract? In other words, a service contract entity is only approved if it has been selected according to the contracting rules identified in state law and policy for organizations that receive ENRTF funds through direct appropriations, or in the DNR's reimbursement manual for non-state organizations. These rules may include competitive bidding and prevailing wage requirements

Not acknowledged

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 style="list-style-type: none"> • Budget • Other • Budget - Personnel • Budget - Professional / Technical Contracts • Budget - Capital, Equipment, Tools, and Supplies • Budget - Travel and Conferences • Budget - Printing and Publication • Budget - Other • Budget - Non-ENRTF Funds Contributed 	We are able to cover the lab fees with other funds or get them reduced or waived. We wish to reallocate that \$18,000 of budget to cover increased staffing costs (\$9,000) and costs of additional classroom equipment (full aquarium set ups to add more schools or replacement of key items)(\$9,000).	May 1, 2024	Yes	May 1, 2024
2	Amendment Request	<ul style="list-style-type: none"> • Other • Budget - Capital, Equipment, Tools, and Supplies • Budget - Travel and Conferences • Budget - Other 	Event expenses were not needed because schools paid for these directly. Dollars budgeted for egg delivery were not needed because the supplier, unlike past years, decided not to charge for delivery. Expenses for tools, supplies and equipment were lower because individual schools purchased them directly and we had less breakage and mechanical breakdowns than expected. We have higher travel expenses because we served more schools and more out-state schools, requiring longer drives and more trips.	March 27, 2025	Yes	April 1, 2025

Status Update Reporting

Final Status Update August 14, 2025

Date Submitted: September 25, 2025

Date Approved: October 1, 2025

Overall Update

This project instills students, teachers, staff, and their families with a sense of environmental stewardship using the connection between the trout growing in their classrooms and the importance of caring for Minnesota's natural resources. Students engage in a variety of hands-on lessons both in and outside the classroom from September through May, with the trout they're caring for each day utilized by teachers as the platform upon which a vast amount of learning and experiences are shaped. Teachers invite volunteers and families to engage with TIC at outdoor field days, spring releases, and ice fishing excursions, as well as fly tying biomimicry programs in their classrooms during the winters. A full report of this project with pictures, program numbers, and more detailed information can be found on the Tab-7 attachments. We were able to achieve cost savings during this project in personnel and equipment. Some personnel funds went unused due to efficiency of work needed to coordinate and implement the program. We were able to use stored equipment from previous years and equipment from schools leaving the program to provide full sets to some of the new schools joining so did not need to use all of the equipment funds.

Activity 1

Since April, 1,774 students had fun at 27 programs releasing trout with our team into DNR approved bodies of water. 157 hours of volunteer time was donated supporting these releases. A few high schools partnered with DNR fisheries and soil and water conservation district staff to assist with their release. Students learned about natural resource careers, habitat restoration, and observed electroshocking demos. Students at all releases engaged nature hikes, watershed studies, aquatic insect studies, fishing, stewardship, and canoeing. Over the 2-year project, we added 28 tanks to the 50+ existing tanks were set up in schools around Minnesota. By the end of the 2024-2025 school year, there were 78 tanks in 67 schools. In addition, 50 teachers attended 4 in person trainings and supplementary support was provided through virtual trainings, programming, monthly emails, a TIC google group, YouTube, and access to resources. 3,119 students engaged with our education team at 47 field days learning about aquatic macroinvertebrates and water quality. 3,897 students at 58 winter programs learned about ice fishing and biomimicry through fly tying from our team. 3,381 students at 50 programs released their trout with us and engaged in a variety of other activities.

(This activity marked as complete as of this status update)

Activity 2

During the summers of 2023 and 2024, we implemented 28 fishing skills programs with the help of 145 volunteer hours. 515 people of all ages learned about spin and fly fishing at lakes, rivers, and creeks around the Twin Cities and SE Minnesota. In 2023, we partnered with city and county parks and recreation departments to conduct 21, 2-hour family spin fishing programs. They learned how to set up a rod, cast, tie knots, and bait the hook, in addition to lake structure and fish habitat. In 2024, MNTU conducted 3, 4-hour Meet a Stream days at which attendees took a tour of the habitat work conducted by MNTU, found and learned about aquatic macroinvertebrates, and had plenty of time to try catching their first trout on a fly rod. The goal of these more in-depth fishing experiences was to generate a deeper interest in healthy watersheds, the outdoors and outdoor recreation. In addition to Meet a Stream days, we conducted 4 fishing skills programs with partner organizations around the metro.

(This activity marked as complete as of this status update)

Dissemination

There were 3 additional news stories about Trout in the Classroom published this spring. Reporters joined schools in their classrooms and at releases to learn about the program. During the 2 years of this project, there were over 20

articles done about the TIC program and our social media followers continued to grow. There were 6 education updates written by our education supervisor and 6 youth series articles written by our education team published in MNTU's newsletters between November 2023 and June 2025. Each edition of these newsletters is received by all several thousand MNTU members. In addition, many bundles of copies are sent to MNTU chapters for dissemination throughout their communities and bundles are distributed to various fly shops and other sporting goods stores throughout the state for the general public. Information is also disseminated from our website which includes digital copies of the newsletter, links to all education update emails, and general information about Trout in the Classroom in Minnesota.

Additional Status Update Reporting

Additional Status Update March 20, 2025

Date Submitted: March 26, 2025

Date Approved: April 1, 2025

Overall Update

Almost 25,000 trout eggs were distributed to 68 schools and 2 nature centers in all corners of Minnesota on December 11th, 2024 with a team of over 40 volunteers, teachers, and MNTU staff. Between December 2024 and March 2025, our education team conducted 36 programs with 2403 TIC students. Volunteers dedicated 196 hours assisting with these programs. This spring, from April through early June, MNTU educators and volunteers will be working with hundreds of TIC students at over 20 spring releases from Grand Meadow to Bemidji. MNTU has provided busing reimbursements for 9 schools so far to support their fall field days and ice fishing excursions. This spring we anticipate additional schools requesting busing reimbursements to cover their spring release field trips. Teachers receive ongoing support, communications, and instruction during the year.

Activity 1

Over 30 teachers attended the in-person teacher trainings we conducted to kick off the 2024-2025 school year. This fall, almost 1400 students learned about watersheds and water quality through hands on, outdoor, experiential learning during their fall field days. They put on waders and stepped into local rivers, lakes, ponds, and creeks in search of aquatic insects, identifying them using a dichotomous key and evaluating water quality using a biotic index. Between January and March, over 2400 students will have engaged in TIC related lessons led by our team to include fly tying, habitat conservation and design, as well as fish identification and adaptations. Our three person education team engages with thousands of students each year, assisted by a growing list of volunteers. We currently work with 68 schools and 2 nature centers participating in TIC through program coordination, monthly virtual trainings, resource development, leading activities, maintaining ongoing communications and support. Some schools meet DNR fisheries staff at their field days, helping to stock trout, observing shocking demos and touring the fish pathology lab.

Activity 2

We were able to get out on the ice this winter. Our team led 10 ice fishing and winter lake ecology programs with 307 students and the support of 20 volunteer hours. While these programs were held during the school day, many parents were still able to participate and enjoy time on the ice with the students. We did not conduct any general public fishing programs this winter. Educator and funding availability was limited for any additional fishing focused programming outside of working with our Trout in the Classroom schools leading ice fishing, fly tying, fish ID, habitat design and other lessons with students. Most all of activity 2 work was done during summer/early fall of 2023 and 2024. We will not be leading any additional general public fishing education programs this year. Fishing clubs have been difficult to establish in any of our TIC schools. Even with MNTU support it is ultimately "one more thing" for teachers and they don't follow through with getting one implemented with their TIC students. Our team will be fishing with TIC students at their releases this spring in April and May.

Dissemination

Teachers receive regular communications from MNTU about TIC, other education opportunities, habitat projects, events, and more through MNTU's Monthly Cast enews, monthly education updates, MNTU's hard copy (and electronic) newsletter (November, March, July), and monthly virtual training opportunities. Information about our education programs, including Trout in the Classroom, fishing skills programs, and Trout Clubs are disseminated through a variety of means. These include our website, the MNTU newsletter, monthly chapter emails, and social media. MNTU also maintains a YouTube channel with videos for use by both the public and TIC schools relating to habitat work, fishing, fishing skills, aquatic insects, fly tying, and more. There is a 1 hour virtual training conducted each month starting in

September for teachers to attend as they are able and a monthly email sent to all teachers with program information, resources, and updates. The trainings are recorded and shared in the MNTIC teacher resource folder. This folder contains lessons, resources, and important program documents and is available to all TIC teachers. Each edition of the MNTU newsletter contains an article about education with teacher testimonials and program updates, as well as a youth series article written by our team.

Status Update Reporting

Status Update April 1, 2025

Date Submitted: March 26, 2025

Date Approved: April 1, 2025

Overall Update

Almost 25,000 trout eggs were distributed to 68 schools and 2 nature centers in all corners of Minnesota on December 11th, 2024 with a team of over 40 volunteers, teachers, and MNTU staff. Between December 2024 and March 2025, our education team conducted 36 programs with 2403 TIC students. Volunteers dedicated 196 hours assisting with these programs. This spring, from April through early June, MNTU educators and volunteers will be working with hundreds of TIC students at over 20 spring releases from Grand Meadow to Bemidji. MNTU has provided busing reimbursements for 9 schools so far to support their fall field days and ice fishing excursions. This spring we anticipate additional schools requesting busing reimbursements to cover their spring release field trips. Teachers receive ongoing support, communications, and instruction during the year.

Activity 1

Over 30 teachers attended the in-person teacher trainings we conducted to kick off the 2024-2025 school year. This fall, almost 1400 students learned about watersheds and water quality through hands on, outdoor, experiential learning during their fall field days. They put on waders and stepped into local rivers, lakes, ponds, and creeks in search of aquatic insects, identifying them using a dichotomous key and evaluating water quality using a biotic index. Between January and March, over 2400 students will have engaged in TIC related lessons led by our team to include fly tying, habitat conservation and design, as well as fish identification and adaptations. Our three person education team engages with thousands of students each year, assisted by a growing list of volunteers. We currently work with 68 schools and 2 nature centers participating in TIC through program coordination, monthly virtual trainings, resource development, leading activities, maintaining ongoing communications and support. Some schools meet DNR fisheries staff at their field days, helping to stock trout, observing shocking demos and touring the fish pathology lab.

Activity 2

We were able to get out on the ice this winter! Our team led 10 ice fishing and winter lake ecology programs with 307 students and the support of 20 volunteer hours. We led youth and family fishing skills programs as well, including Meet-a-Stream (MAS) days from May through September of 2024. The fishing skills programs were held with community partners at local lakes where participants learned the basics of spin fishing, including rod set up, baiting a hook, casting practice, and fishing. Participants left with a fishing regulations book and a fishes of MN poster, both provided by the DNR. The MAS days were held on Saturdays in May, June, August, and September at creeks and rivers around Minnesota where MNTU has conducted habitat restoration projects. Events were free to the public. Participants toured the project site to learn how habitat work benefits the stream, learn about stream ecology by sampling macroinvertebrates to determine water quality and see what the trout are eating, practiced fly casting and knot tying, and then went fishing.

Dissemination

Teachers receive regular communications from MNTU about TIC, other education opportunities, habitat projects, events, and more through MNTU's Monthly Cast enews, monthly education updates, MNTU's hard copy (and electronic) newsletter (November, March, July), and monthly virtual training opportunities. Information about our education programs, including Trout in the Classroom, fishing skills programs, and Trout Clubs are disseminated through a variety of means. These include our website, the MNTU newsletter, monthly chapter emails, and social media. MNTU also maintains a YouTube channel with videos for use by both the public and TIC schools relating to habitat work, fishing, fishing skills, aquatic insects, fly tying, and more. There is a 1 hour virtual training conducted each month starting in September for teachers to attend as they are able and a monthly email sent to all teachers with program information,

resources, and updates. The trainings are recorded and shared in the MNTIC teacher resource folder. This folder contains lessons, resources, and important program documents and is available to all TIC teachers. Each edition of the MNTU newsletter contains an article about education with teacher testimonials and program updates, as well as a youth series article written by our team.

Status Update Reporting

Status Update October 1, 2024

Date Submitted: October 17, 2024

Date Approved: November 14, 2024

Overall Update

In spring of 2024 our education team implemented 23 spring releases with 1600 Trout in the Classroom (TIC) students. MNTU chapter volunteers donated 95 hours to assisting our team with these events. From May-September we conducted 7 fishing skills programs with 60 participants. 2, full day TIC trainings were held with new and returning teachers attending from all over the state. This 2024-2025 school year is kicking off with 71 schools and 2 nature centers participating in the TIC program. Our team is leading over 20 field days with over 1,000 students this fall. We continue to adapt, improve, and expand our list of lessons, including STEM topics and aligning them with MN state science standards to further support teachers.

Activity 1

Our team led TIC spring releases throughout the state from April through May. At these events students released the trout they learned from and worked hard to raise all year. In addition to releasing their trout, students engaged in hands-on activities and lessons to include watershed studies, nature hikes, trash pick ups, aquatic macroinvertebrate studies, fishing, casting, fish ID, and more. At fall field days, students put on waders and step into creeks, streams, rivers, and ponds to catch aquatic macroinvertebrates, identifying them, studying their physical characteristics and how they get oxygen, using what they find to determine the water quality and health of that body of water. Fall field days and spring releases have anywhere from 20-250 students attending. From April to May and September to October 2024 alone, our small team of 3 will have led programs with 2,425 students. This school year, our team is working with 71 schools participating in TIC through program coordination, monthly virtual trainings, resource development, leading activities, maintaining ongoing communications and support. There are currently 25 schools interested in joining TIC for the 2025-2026 school year.

Activity 2

This spring, summer, and fall, MNTU led youth and family fishing skills programs as well as new events we called Meet-a-Stream (MAS) days. The fishing skills programs were held with community partners at local lakes where participants learned the basics of spin fishing, including rod set up, baiting a hook, casting practice, and fishing. Participants that wanted one each left with a fishing regulations book and a fishes of MN poster, both provided by the DNR. The MAS days were held on Saturdays in May, June, August, and September at creeks and rivers around Minnesota where MNTU has conducted habitat restoration projects. Events were free to the public. Participants toured the project site to see how habitat work benefits the stream, learned about stream ecology by sampling macroinvertebrates to determine water quality and see what the trout are eating before practicing their fly fishing skills, like casting and knot tying, and heading out to try and catch some trout. We hope to get students out ice fishing this winter.

Dissemination

The in person TIC teacher trainings and monthly 1 hour virtual trainings continue to support new and returning teachers as they prepare for the school year and move through the various stages of the program. Teachers receive an education update email on the 1st of each month. This is also shared with education volunteers and committee members so everyone can keep up to date with what's happening with Trout in the Classroom. Updates contain important program information, training links, resources, and more. TIC teachers also receive MNTU's Monthly Cast enews, keeping them up to date on things happening in the organization. Other means of dissemination about MNTU education include our website, the MNTU newsletter, and social media. MNTU also maintains a youtube channel with videos relating to habitat work, fishing, fishing skills, aquatic insects, fly tying, and more. We continue to develop, adapt, and grow the

MNTIC teacher resource folder, which contains lessons, resources, important program documents, and is available to all TIC teachers. The MNTIC Teacher Resource Guide is a manual where teachers can find a program outline, equipment list, as well as instructions for tank set up and fish care.

Status Update Reporting

Status Update April 1, 2024

Date Submitted: March 24, 2024

Date Approved: May 1, 2024

Overall Update

In July and August 2023 our education team conducted 21 youth and family fishing skills programs with over 450 participants. Beginning in August 2023 we conducted 2 full day, in-person teacher trainings and 5 virtual trainings. From September 2023 through March 2024, we will have worked with over 3,100 students during 45 programs. We coordinated over 100 people to deliver almost 25,000 eggs to schools around the state, including teachers, volunteers, MNDNR staff, and our education team. Volunteers donated approximately 70 hours to make egg delivery a big success. Volunteers also donated more than 200 hours to assisting with summer fishing skills programs, field days, and winter activities. We continue to adapt, improve, and expand our lessons, including STEM topics, and ensuring alignment MN state science standards. We have also organized after-school Trout Clubs this year. These clubs not only enable students to pursue their interests in fish, fishing, fly tying, natural resources, and conservation, but create opportunities for volunteers to build relationships with schools in their community through ongoing connections with club participants and teachers.

Activity 1

Over 40 teachers attended the in-person teacher trainings we conducted to kick off the 2023-2024 outdoor education program. In Fall 2023 over 1,700 students learned about watersheds and water quality through hands-on, outdoor, experiential learning during their fall field days. They put on waders and stepped into local rivers, lakes, ponds, and creeks in search of aquatic insects. They identified the insects using a dichotomous key and evaluating water quality using a biotic index. Between January and March, almost 1,400 students will engage in lessons on fish identification, fish adaptations, habitat conservation, and recreational activities (fly tying) that reinforce lessons about macro invertebrates. Our three educators engage with thousands of students each year, and are assisted by a growing list of Trout Unlimited volunteers. We are already working with more than 60 schools, including program coordination, monthly virtual trainings, resource development, leading educational activities, regular communications, and other support. There are 22 additional teachers interested in joining the program for the 2024-2025 school year.

Activity 2

MNTU conducted 21 youth and family fishing skills programs in July and August 2023 with over 450 participants. These programs were a mix of fly and spin fishing, covering the basics of each, including rod set up, baiting a hook, types of flies, casting practice, and fishing. They were held on lakes and rivers both within and around the Twin Cities. Participants left with a fishing regulations book and a Fishes of MN poster provided by the DNR. In the fall 2023, we fished with Cloquet students in the St. Louis River. This spring we hope to fish with some students as part of their spring release days, although many release sites are not conducive to fishing with large groups. Due to the warm winter, we were unable to take any students ice fishing this year. Trout clubs from several schools will fish with us this spring, with the goal of those students fishing at least once per season starting next year. We will add more Trout clubs in the 2024-2025 school year and continue to recruit volunteers to assist with their implementation and development.

Dissemination

Information about our education programs, including Trout in the Classroom component, fishing skills programs, and Trout Clubs are disseminated through a variety of means. These include our website, the MNTU newsletter, monthly chapter emails, and social media. MNTU also maintains a YouTube channel with videos for use by both the public and participating schools relating to habitat work, fishing, fishing skills, aquatic insects, fly tying, and more. There is a 1-hour virtual training conducted each month starting in September for teachers and a monthly email sent to all teachers

containing program information, resources, and updates. Teacher trainings are recorded and shared in MNTU's teacher resource folder. This folder contains lessons, resources, and important program documents and is available to all teachers participating in the program. Each edition of the MNTU newsletter contains an article about education with teacher testimonials and program updates, as well as a youth series article written by our education team. The MNTIC Teacher Resource Guide is an on-line manual where teachers can find a program outline, equipment list, and instructions for aquarium set up and use. MNTU also showcased the program via a staffed booth at a 3 day Expo in March 2024 at Hamline University.