

Environment and Natural Resources Trust Fund

M.L. 2025 Approved Work Plan

General Information

ID Number: 2025-010

Staff Lead: Lisa Bigaouette

Date this document submitted to LCCMR: June 11, 2025

Project Title: Enhancing Our Resources-Rural Health and Drinking Water

Project Budget: \$994,000

Project Manager Information

Name: Chyann Mosey Organization: Freshwater Society Office Telephone: (651) 313-5808 Email: cmosey@freshwater.org Web Address: https://freshwater.org/

Project Reporting

Date Work Plan Approved by LCCMR: June 24, 2025

Reporting Schedule: March 1 / September 1 of each year.

Project Completion: June 30, 2028

Final Report Due Date: August 14, 2028

Legal Information

Legal Citation: M.L. 2025, First Special Session, Chp. 1, Art. 2, Sec. 2, Subd. 04a

Appropriation Language: \$994,000 the first year is from the trust fund to the commissioner of natural resources for an agreement with Freshwater Society to partner with the Mayo Clinic to educate well owners and family health providers about the geologic occurrence and risk of arsenic in drinking water. This appropriation is also to provide free arsenic testing to well owners in southeast Minnesota.

Appropriation End Date: June 30, 2028

Narrative

Project Summary: Arsenic in Southern Minnesota drinking water: Linking health risk reduction (education) with well water testing, geology, and arsenic health risks to private well owners through family medicine and hydrology

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

This eight-county pilot project is a novel opportunity to use glacial history and geologic information to identify the health risks of Minnesota's arsenic-containing aquifers. Of the 1,069 new wells drilled since 2008, 16% to 25% exceed the 10 ug/L Health Risk Limit for arsenic, and up to 65% exceed 2 ug/L arsenic, where water treatment is recommended to protect family health. Although there are 12,002 registered wells in the pilot area, we estimate 34,000 private wells are actually in use.

We plan to educate private well users (PWUs) and Mayo Clinic healthcare providers who frequently diagnose and treat preventable diseases from chronic arsenic exposure. This pilot will advance natural resources and drinking water education to protect family health and avoid preventable diseases.

For 8,000 households we propose free arsenic testing combined with practical information about how well construction and glacial geology influence arsenic risk in drinking water. PWUs with certified lab results of their drinking water that links to geologists, water well exerts, and healthcare providers will raise awareness of local geology and how natural resource knowledge can protect family health.

Understanding how geology relates to arsenic risk would benefit all well owners.

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.

This pilot project would increase drinking water geologic knowledge in southern Minnesota while addressing arsenic health concerns of both well owners and Mayo family health practitioners.

The pilot delivers multi-media geologic education targeted for well owners and Mayo family physicians and would offer 8,000 free arsenic tests for high-risk private well owners in eight southern Minnesota counties where Mayo has patients (Rice, Steele, Freeborn, Waseca, Faribault, Blue Earth, Watonwan, and Martin Counties.)

Unfortunately, many well owners ignore arsenic health risks in water due to perceived barriers. Dr Jegen's 2023 survey of 280,000 Midwest patients confirmed that patients and healthcare providers worry about arsenic exposure and report feeling uninformed about testing or preventing chronic health consequences.

We propose that our group implement these components for this pilot program:

-Education programs and multi-media outreach to well owners and to family health providers about the geologic occurrence and arsenic risks in counties where Mayo operates clinics.

-Offer two types of free arsenic testing programs. Mayo Clinic patients can register online for free arsenic test kits. MNWOO and Freshwater will hold twelve free water testing clinics, offering drinking water stewardship advice to all participating well owners.

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 pilot is designed to address arsenic in drinking water. It will work with geologists, water well/drinking water experts, and Mayo Clinic physicians to educate private well owners on how to use geologic information, well testing, and water treatment to reduce preventable arsenic-related diseases.

Two years of consistent messaging, 8,000 free arsenic tests distributed at twelve free water clinics and from Mayo referrals will link local glacial geology to private wells and health risk management advice to thousands of households.

Combining local geology with health risk prevention and water treatment education can help reduce preventable diseases in Minnesota.

Project Location

What is the best scale for describing where your work will take place? Region(s): SW, SE,

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: Planning and Implementation: Define Project Scope, Scale, Partners, Communications, and Schedule.

Activity Budget: \$180,000

Activity Description:

A comprehensive project plan will outline the delivery of our 30-month, eight-county pilot project, which is designed to educate private well owners about glacial geology, arsenic risks, and health hazards.

The pilot area has high drinking water arsenic levels, and Mayo has Family Medicine patients.

This unique drinking water pilot will provide 8,000 free arsenic tests linked to the glacial history and the localized arsenic mineral contamination in local aquifers. Arsenic is a "geogenic contaminant" linked to preventable disease if found in drinking at more than 10 micrograms per liter (ug/L, or parts per billion, ppb).

Geologists and health care professionals will work together to advise private well owners of regional arsenic risks.

A coordinated focus will educate every local well owner and Mayo Family Physician with a unified message that private wells in the Des Moines lobe may have high arsenic risks.

Using a consistent geologic and health-risk message, the goal is to create arsenic risk awareness among geologists, well owners, well and service providers, and healthcare providers. The plan will guide the development of tools and guidance to promote awareness of geologic arsenic risks and health hazards from drinking water anywhere.

Activity Milestones:

Description	Approximate Completion Date
Define arsenic and drinking water risk assessment outreach tools, programs and deliverables for Health Care	December 31, 2025
Define and schedule arsenic testing clinic programs for MNWOO partners and general public	December 31, 2025
Develop project scope, structure, project controls and schedule with collaborators, staff and contractors.	December 31, 2025
Develop and execute detailed multi-media project communication plans	December 31, 2025
Produce and publish outreach materials targeted for well owners and health care professionals	April 30, 2026
Mid-project report and assessment on accomplishments and needs	April 30, 2026
Compile final report and documents for public use	December 31, 2027

Activity 2: Free Arsenic Testing and Geologic Risk of Personal Drinking Water for 25-30% of Households in the Eight Target Counties.

Activity Budget: \$608,000

Activity Description:

8,000 residents in eight southern Minnesota counties will receive free arsenic water tests from a certified laboratory. Mayo patients will receive 5,000 and clinic attendees will receive 3,000 free tests. The goal is for well owners to share the tests with their family physicians and employ water treatment if arsenic levels exceed 2.0 ppb. Of course, testing is optional and confidential.

At Mayo Clinic, patients will be given one of 5,000 vouchers for free water tests that are ordered online with return

mailers, confidential follow-up test results, and encouragement to discuss the results with primary care providers. At each of the twelve water testing clinics, 3,000 well owners can submit drinking water samples that will be analyzed for free at a certified laboratory. Well owners can consult with project partners and water experts at the clinics and, PWUs can take home a well portfolio with information about assessing and understanding their wells and drinking water risks.

All private well tests will be kept confidential. PWUS will be encouraged to share their test results with their family doctors and to employ one of the available effective arsenic water treatment options.

Activity Milestones:

Description	Approximate Completion Date
Communication and messaging for geology, arsenic risks, water treatment to well owners and Mayo Physicians	December 31, 2025
1,500 arsenic laboratory analyses for the public in 2026 through eight MNWOO-Freshwater clinics.	October 31, 2026
2,500 arsenic test kits for 2026 Mayo patients with testing vouchers in year one.	December 31, 2026
1,500 arsenic lab analysis in 2027 at MNWOO-Freshwater clinics in year two.	October 31, 2027
Prepare project summaries, publications, final toolkit, guidance and conference materials for project and future use	December 31, 2027
Four conference presentations	December 31, 2027
2,500 arsenic test for 2027 Mayo patients with testing vouchers in year two	December 31, 2027

Activity 3: Linking local geology, well testing, well construction and water treatment options with regional arsenic risks and family health care.

Activity Budget: \$206,000

Activity Description:

This activity's goals are to make every well owner and physician in the pilot area aware of the glacial geology and arsenic risks of their aquifers, to increase local arsenic well testing greatly, and to encourage all well owners with high arsenic to consult with their family physicians and treat their water.

The project's multi-media links will use technical USGS Publications, the County Geologic Atlases from the Minnesota Geological Survey and MNDNR, the Minnesota Health Department well, water testing and survey data, and arsenic information from the Centers for Disease Control.

We will fully utilize Freshwater Society volunteer recruitment, communications, outreach experience, MNWOO clinics and publications, and Mayo Clinic health communications to engage and educate all local well owners and partners about their geology and arsenic drinking water risks.

The project will deploy direct mail, social media, and public messaging. Communications will focus on the local media outlets most used in the eight-county area and on engaging healthcare providers through consistent messaging and continuing education.

Our public engagement will be developed with County Environmental and Public Health Services, community groups, churches, and schools and coordinated with the new U of M Water Resource Center "Water Well Stewards Program."

Activity Milestones:

Description	Approximate Completion Date
Initial communications to target audiences in pilot counties about free well testing and arsenic risks.	April 30, 2026

Recruitment and coordination of community supporters to promote well testing and arsenic treatment.	May 31, 2026
Follow-up communications to all well owners.	May 31, 2027
Multi-media outreach materials for private well users	December 31, 2027
Educational materials and resources for physicians prompting water testing and arsenic risk	December 31, 2027
management	
Final reports, presentations and conferences.	December 31, 2027

Project Partners and Collaborators

Name	Organization	Role	Receiving Funds
Dr Brandon Hidaka MD PhD	Mayo Clinic Health System	PhD Family Physician and Professional Consultant with a special interest in rural health.	No
Chyann Mosey	Freshwater	Project Manager responsible for planning, organizing, and implementing the project goals, including coordinating steering committee, staff, and consultants focusing on sharing geology and drinking water arsenic risks with health care providers and well owners	Yes
Dr Melinda (Mindy) Erickson, PhD	USGS Upper Midwest Water Science Center - Minnesota office.	National expert with numerous publications on the occurrence of Arsenic in groundwater. Consulting Hydrologist/Geologist.	
Dr Dominika Jegen, MD MA CCFP(EM) DABFM			No
Paul Wotzka	I Wotzka MNWOO Paul is a hydrologist and MNWOO founding director who is the lead in coordinating the MNWOO/MGWA state-wide water testing clinics. Paul will participate in the steering committee and provide advice about water well hydrology, water quality, and technical communication for a non-technical audience.		Yes
Michelle Stockness	Freshwater	Project coordination, participation in the steering committee, communications on safe drinking water as a past AWWA Vice President.	Yes
Carrie Jennings, PhD	Freshwater	Geology and occurrence of arsenic in glacial aquifers, participation in Steering Committee, review of outreach and resources.	Yes
Chris O'Brien	Freshwater	Communications coordinator, leading development of marketing and messaging tools.	Yes
leff Stoner Education Geologist. Steering Committee for MGWA/MNWOO water clinics and private Committee - well owner outreach. Minnesota Groundwater Association (MGWA)		Yes	
Bruce Olsen	Education Committee - Minnesota Groundwater Association (MGWA)	Geologist Bruce retired from the Health Department, where he developed source water protection programs and aquifer assessments. He now serves on the MGWA Education Committee and the MGWA/MNWOO Water Clinic Steering Committee and helped develop Private Well Owners Portfolio and water clinic guidance.	Yes
Cathy Rucci	Freshwater	Project coordination and financial management and reimbursement for clinics, testing and outreach.	Yes

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. To provide arsenic risk awareness and promote water testing and family health protection for the pilot-area communities this project has three groups who require appropriate data, targeted messaging, and communication tools. Two groups of professionals will be recruited and trained to share information and resources in a manner that can be used for outreach to the pilot area PWUS.

• Family physicians and health care providers at Mayo Clinic in thirteen community clinics

• The state's water quality, hydrologists, geologists, and conservation leaders connected through Freshwater, MNWOO, the USGS, MGWA, the MGS, and multiple local and state public health and resource conservation agencies. An estimated 34,000 households who rely on private wells are the principal audience. In the pilot area, an estimated 65% of private wells have detectable arsenic in drinking water while we believe that fewer than 10% of PWUS test or treat their water for arsenic. Awareness through Arsenic testing and treatment is an easy way to protect family health.

The project will start with a steering community of partners including the project team, and recruited public health and resource administrators and community groups who have an interest in helping to ensure safe drinking water at the kitchen sink. In the first three to six months the Steering will develop plans for partner recruitment and engagement, and hiring of project coordinator, program directors, and interns, a detailed communication plan includes internal technical data and communication guidance and materials for the two professional cohorts who will coordinate messaging and resources for the community of PWUS.

During the project, we want to have every family physician in the Mayo network, and every public health official in the pilot area to be capable of assessing and communicating arsenic occurrence and health risks from Arsenic in drinking water. Health professionals armed with the knowledge of both arsenic occurrence from Des Moines Lobe glacial aquifers and providing free arsenic water testing, advice on appropriate water treatment if necessary, and promoting the goal of avoiding preventable illness and disease to Mayo patients.

The second professional cohort including water professionals, hydrologists, and geologists will be recruited to educate and inform both the Mayo medical/local public health professional and the PWUS. Data and information will be designed and targeted for each audience. The twelve MNWOO/Freshwater/MGWA free testing clinics are designed to have volunteer water professionals consult with PWUS about their water tests, arsenic occurrence, e and water treatment options.

The 34,000 households with private wells will benefit from 8,000 free and convenient arsenic tests and every household has the opportunity to have a personal consultation with both healthcare providers and water professionals. The multimedia resource materials developed by the project staff, interns, and volunteers will be designed for each cohort creating durable materials including online messaging, direct mailing, announcements and promotion of community drinking water events, 8,000 Private Well Portfolios, and PWU interaction at twelve testing clinics.

This project is designed to create behavior change by promoting water testing for each cohort. The work will provide the resource for health professionals to understand the geogenic occurrence of arsenic and can develop effective health messaging about drinking water risk. Health professionals will communicate with well-owning patients and water professionals. We hope to saturate the entire pilot area with information about the Arsenic occurrence and health risks with effective risk communication. The goal is that the existing generation of PWUS in the pilot area will embrace routine water testing, appropriate water treatment, and avoidance of preventable disease. Our challenge is to break down the existing barriers to well testing by providing both free water tests and professional advice about the drinking water health risks from private wells.

As an ENTF-funded project, our outreach beyond the eight-county pilot area will be through the communication networks of the project collaborators and other partners. This effort will be expanded with outreach through local and regional earned media, press releases, social media, programs involving volunteers and community action, and presentations at medical, public health, and natural resource conferences.

This project is designed to increase accessibility of water testing, health and safety advice, and drinking water safety to rural Minnesotans who do not benefit from the protections in place for community water supplies. Free water tests through Mayo health care providers and community water testing clinics will create some of the incentives needed to supplement Arsenic health risk reduction efforts.

All PWU and professional communication packages will be designed for broad general circulation and will be branded with the ENTF Logo and Logos of project partners. The goal is for this project to create a Minnesota-based Arsenic toolkit of multimedia resources that is available for any community faced with arsenic contamination in drinking water. Because half of Minnesota's counties have an arsenic risk for drinking water, we hope this pilot can trigger a new narrative and outreach model across public health, family medicine, and water professional networks to serve PWUS. The Environment and Natural Resources Trust Fund will be acknowledged through use of the trust fund logo or attribution language on all project print and electronic media, publications, signage, and other communications developed throughout the duration of the project.

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?

MNWOO continues to host twelve free arsenic water clinics across Minnesota.

USGS provides ongoing geologic outreach about the geology of arsenic.

Freshwater joins the clinics, providing targeted communication and fiscal oversight.

Mayo Clinic provides research time, overhead support, and patient outreach.

This pilot could be adapted to be used anywhere arsenic is in drinking water.

We have two sustainability goals:

• Develop local awareness of local aquifers' geologic origins and arsenic levels, the related health risks, and the effective water treatment options.

• Develop durable multi-media resources for primary care providers and well owners in any areas with arsenic health risks.

Budget Summary

Category / Name	Subcategory or Type	Description	Purpose	Gen. Ineli gible	% Bene fits	# FTE	Class ified Staff?	\$ Amount
Personnel								
Program coordinator: Freshwater Society		Coordinate and report on project targets, schedules and budgets and compile reimbursement requests and annual project reports.		x	25%	0.9		\$89,000
Communication and Outreach Coordinator: Freshwater Society		Design and develop multi-media outreach targeted to the project area			25%	0.95		\$94,000
							Sub Total	\$183,000
Contracts and Services								
MNWOO	WOOSubawardProgram coordinator & assistant; two interns (\$169,000). Hosting twelve water testing clinics includes facilities rental and transportation reimbursement, \$3,000/clinic (\$36,000). Well testing promotion and conferences (\$12,000). 3,000 certified well water tests arsenic via MVTL, \$23/test (\$69,000)					3.9		\$286,000
USGS Subaward Mindy Erickson, USGS Hydrology Consultant. She is well-versed in Minnesota water testing and contamination and she will indicate where citizens are at the highest risk of high arsenic exposure from their well water. Participation in steering committee, geologic education, sampling. Conference attendance for promotion (\$2,000).					0.25		\$42,000	
TBD	Service Contract	Web and social media consultant to develop and maintain project web page and social media posts on program dates/goals/availability				0		\$27,000
							Sub Total	\$355,000
Equipment, Tools, and Supplies								

	Tools and Supplies	5,000 certified laboratory arsenic tests	5,000 test kits for detecting arsenic in well water for Mayo Clinic patients with 2 ug/L detection limit; \$54/test kit includes full cost of sample evaluation via SimpleLab			\$270,000
					Sub Total	\$270,000
Capital Expenditures						
					Sub Total	-
Acquisitions and Stewardship						
					Sub Total	-
Travel In Minnesota						
	Conference Registration Miles/ Meals/ Lodging	Cost for two health and two geology/groundwater conferences for two Freshwater staff	Public awareness and engagement, earned media exposure	X		\$2,000
	Miles/ Meals/ Lodging	Reimbursement to volunteers at twelve water clinics. A typical clinic engages 12 to 15 volunteers of whom half are local and the others travel from more than 100 miles. Reimbursements are based on required standards and are expected to range from \$300 to \$600/clinic.	Reimbursement of expenses for volunteers in compliance with current applicable rates.			\$8,000
					Sub Total	\$10,000
Travel Outside Minnesota						
					Sub Total	-
Printing and Publication						
	Printing	Public multi-media outreach in eight-county area targeting all well owners for distribution in public spaces and healthcare clinics (\$0.50/brochure, 24,500 brochures)	Arsenic risk awareness and well testing for all private well owners			\$49,000
	Publication	Postage for direct mailing to 33,000 rural households in 8 county project area, twice per year	Arsenic health impact awareness and well testing availability for rural	Х		\$93,720

		throughout duration of the project (\$0.71/mailing,	households throughout the eight-		
		132,000 mailings)	county project area throughout the		
			duration of the project		
	Printing	Printing brochures for direct mailing to 33,000 rural	Outreach to residents in project area:		\$33,280
		households in 8 county project area, twice per year	arsenic health impact awareness and		
		throughout duration of the project (\$0.25/brochure,	well testing availability		
		132,000 brochures)			
				Sub	\$176,000
				Total	
Other					
Expenses					
				Sub	-
				Total	
				Grand	\$994,000
				Total	

Classified Staff or Generally Ineligible Expenses

Category/Name	Subcategory or Type	Description	Justification Ineligible Expense or Classified Staff Request
Personnel -		Coordinate and report on project	The project coordination, reimbursement, and reporting by these nonprofit
Program		targets, schedules and budgets and	organizations require experience and support in grant administration.
coordinator:		compile reimbursement requests	
Freshwater Society		and annual project reports.	
Travel In	Conference	Cost for two health and two	Professional outreach at Minnesota Conferences, including the Minnesota Water
Minnesota	Registration	geology/groundwater conferences	Conference, Minnesota Groundwater Association, Family Medicine, and Public Health
	Miles/Meals/Lodging	for two Freshwater staff	conference, is essential to spreading the word beyond the pilot area.
Printing and	Publication	Postage for direct mailing to 33,000	In rural communities, mail is a critical method of reliable communication. Utilizing direct
Publication		rural households in 8 county project area, twice per year throughout duration of the project (\$0.71/mailing, 132,000 mailings)	mail via USPS is an essential use of project budget because it will allow all households the opportunity to learn about the health impacts of arsenic in their well water and pursue testing. Without support for postage, reaching these residents will be significantly less impactful in terms of delivering public health information given the large geographic area and spread of the population.

Non ENRTF Funds

Category	Specific Source	Use	Status	\$ Amount
State				
			State Sub Total	-
Non-State				
In-Kind	Mayo Clinic has authorized a total of 0.2 FT's including: 0.1 FTE for Dr. Jegen, a Family Medicine Physician and researcher with experience with preventable disease from arsenic 0.1 FTE for Dr. Brandon Hidaka, MD, PhD. Family Medicine and Rural Medicine Physician and researcher with experience in educating health care professionals and patients	Mayo coordination for sampling and outreach with communication support	Pending	\$154,000
In-Kind	MNWOO and MGWA have an ongoing five-year partnership to organize and host free water testing clinics for private well owners who rely on volunteer cooperators. Each clinic requires weeks of planning and coordination, requires volunteer attendance at a training session, and volunteer participation at a five- hour clinic. The standard clinic operations rely on community volunteers for registration, hospitality, and sample registration. We assume a \$35/hour contribution for volunteer time. It also relies on water professionals at a rate of \$100/hr. The water professionals run analytical equipment, ensure quality control and chain of custody for samples, and individually consult with well owners. The sixteen clinics require a minimum of eight volunteers at each clinic, with a goal of engaging at least 12 volunteers per clinic.	MNWOO partner and volunteer time: Project coordination, organization, oversight and reporting	Pending	\$145,000
In-Kind	Freshwater Society	Steering committee participants and FWS volunteers at clinics	Pending	\$56,000
Cash	Funding source to be determined.	Funding to cover USGS overhead costs, which are not eligible for reimbursement.	Pending	\$35,000
			Non State Sub Total	\$390,000
			Funds Total	\$390,000

Total Project Cost: \$1,384,000

This amount accurately reflects total project cost?

Yes

Attachments

Required Attachments

Visual Component File: <u>a026177f-ac2.pdf</u>

Alternate Text for Visual Component

Minnesota's glacial history left arsenic minerals in our aquifers. Half of Minnesota has a high risk of arsenic in drinking water. Geologists, physicians, and well owners will deploy free arsenic testing and health risk assessments to use geology and family medicine to help address preventable diseases....

Financial Capacity

Title	File
Mayo Clinic Q3 2023 Consolidated Financial Report	<u>6b78ef8b-da6.pdf</u>
Freshwater Society 990 Public Disclosure Copy	ba8bfe8a-132.pdf
Freshwater Society FY2023 Audit	<u>9a0b603a-294.pdf</u>
Freshwater Society_Secretary of State business filing details	6fa4f2c9-a0d.pdf

Board Resolution or Letter

Title	File
LCCMR_fiscal-agent-resolution-letter_Enhancing Our	3534a86b-5c3.pdf
Resources-Rural Health and Drinking Water	
MNWOO Board Approval: Enhancing our resources-health and	56da6356-10a.pdf
drinking water.	
LCCMR_non-state_entity_signed	<u>739f7792-be1.pdf</u>
resolution_letter_Freshwater_Rural Health & Drinking	
Water_2025-010_Received 5-30-25	

Supplemental Attachments

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

Title	File
Certified Lab-Turnkey Cost Estimate for Testing Kits	<u>ba28229b-62d.pdf</u>
Journal Article Indicating Risk of Arsenic Toxicity in Minnesota	b761120b-9c4.pdf
and Citizen Concern	
USGS Letter of support	0505dba2-0e5.pdf
Pilot Area well demographics, data and estimates.	e311a3ea-ffc.pdf
Support Letter from MN Ground Water Association	<u>99be8729-292.docx</u>

Difference between Proposal and Work Plan

Describe changes from Proposal to Work Plan Stage

Budget was reduced by 6% in accordance with LCCMR Rendations

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? Yes

Does the organization have a fiscal agent for this project?

Yes, Freshwater Society

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

No

Do you propose using an appropriation from the Environment and Natural Resources Trust Fund to conduct a project that provides children's services (as defined in Minnesota Statutes section 299C.61 Subd.7 as "the provision of care, treatment, education, training, instruction, or recreation to children")?

No

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

N/A

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

Yes, I understand