



Environment and Natural Resources Trust Fund

2027 Request for Proposal

General Information

Proposal ID: 2027-251

Proposal Title: Determining Ambient Background PFAS Concentrations in Minnesota Groundwater

Project Manager Information

Name: Michael Ginsbach

Organization: Minnesota Pollution Control Agency

Office Telephone: (651) 757-2329

Email: michael.ginsbach@state.mn.us

Project Basic Information

Project Summary: This project determines ambient background per- and polyfluoroalkyl substance (PFAS) levels in groundwater. This information will help Minnesota determine the occurrence and movement of PFAS across the state.

ENRTF Funds Requested: \$500,000

Proposed Project Completion: June 30, 2030

LCCMR Funding Category: Water (B)

Project Location

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

Statewide

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

Statewide

When will the work impact occur?

During the Project and In the Future

Narrative

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

This project would aid in providing a more comprehensive and updated dataset for ambient concentrations of per- and polyfluoroalkyl substances (PFAS) in groundwater across Minnesota. While MPCA has monitored for PFAS in groundwater through the statewide Ambient Groundwater Monitoring Network (AGWN) and as part of investigations for permitted facilities and remediation sites for over twenty years, sampling has been focused in specific areas near known sources and there are areas of the state where little to no groundwater PFAS sampling has occurred.

As PFAS generally do not break down, ongoing releases result in a growing reservoir of PFAS in the environment worldwide. Understanding the fate and transport of PFAS through various environmental media and through the food chain is key to understanding the risk to human health and the environment from these compounds.

A more comprehensive understanding of PFAS concentrations in groundwater in Minnesota will help us determine which PFAS and what levels of PFAS found in groundwater could be expected from non-point sources and how PFAS are moving through groundwater in the state. This information on ambient conditions will allow the MPCA, other state and federal agencies, and private entities to make better decisions about managing PFAS.

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.

The goal of this study is to measure concentrations of PFAS in groundwater across the entire state. This baseline survey of ambient background PFAS concentrations in groundwater will support the State's efforts to implement Minnesota's PFAS Blueprint, which is a strategic approach to prevent, manage, and clean up PFAS pollution and advance MPCA's goal of protecting human health and the environment.

Monitoring of PFAS in groundwater by the MPCA and other state agencies is done in limited areas, leaving large portions of the state having no or limited PFAS groundwater sampling data. Understanding the distribution of PFAS in groundwater is critical to our understanding of PFAS fate, transport, and exposure especially as approximately 70% of Minnesotans rely on groundwater as their primary drinking water source.

Groundwater samples will be collected from approximately 200-300 wells across the state. The study will be designed to examine if there are different patterns in groundwater PFAS concentrations based on nearby land use and proximity to known and potential sources of PFAS to the environment.

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 study will provide the state with a large amount of PFAS groundwater data and increase our coverage of PFAS data in groundwater statewide. This data will be used to assess current ambient background concentrations of PFAS in groundwater and allow public and private entities to further analyze how land use impacts the distribution of PFAS in groundwater, or identify areas potentially associated with previously unknown releases. The study will also inform PFAS source-investigation work by providing an understanding of what ambient background concentrations are expected in the state versus concentrations due to a direct PFAS release.

Activities and Milestones

Activity 1: Develop Sampling and Analysis Plan and Quality Assurance Project Plan

Activity Budget: \$30,000

Activity Description:

The MPCA will develop a Sampling and Analysis Plan (SAP) in accordance with Agency SAP guidance to document the proposed sampling and analysis design for the work including selection of locations where groundwater samples will be collected. Existing wells will be evaluated and identified to find approximately 200-300 locations that provide broad coverage of the state and are representative of multiple aquifers.

A Quality Assurance Project Plan (QAPP) will be developed by the MPCA or the MPCA's contractors in accordance with Agency QAPP guidance to document what work will be performed, how it will be performed, why the work is being performed, the analytical methods used, and the quality assurance/quality control that must be met for the project.

Activity Milestones:

Description	Approximate Completion Date
Initiate site selection	August 31, 2027
Finalize site selection	October 31, 2027
Initiate SAP and QAPP development	December 31, 2027
Finalize SAP and QAPP	April 30, 2028

Activity 2: Collect and analyze groundwater samples

Activity Budget: \$450,000

Activity Description:

Groundwater samples will be collected from the 200-300 wells identified in the previous activity by MPCA staff and MPCA's contractors. The samples will be analyzed either at the Minnesota Department of Health (MDH) Environmental Lab using the MDH Environmental Lab Interagency Agreement or at an accredited environmental laboratory using either the state Sampling and Laboratory Analysis Services - Environmental or Laboratory Analysis: Contaminants of Emerging Concern (CECs)(CECs) contracts. The samples will be analyzed using targeted PFAS methods (such as EPA 533, EPA 537.1, EPA 537 modified, or EPA Method 1633A or updated or modified equivalents of these methods) for a minimum of 40 PFAS.

Activity Milestones:

Description	Approximate Completion Date
Initialize sample collection	May 31, 2028
Complete sample collection	May 31, 2029
Complete analysis of samples	July 31, 2029

Activity 3: Perform quality assurance, analyze data, and disseminate information

Activity Budget: \$20,000

Activity Description:

Upon receipt of the results from the analytical laboratory, project staff in coordination with MPCA environmental data quality unit staff will evaluate the data to ensure it meets the data quality objectives outlined in the QAPP. The analytical

data, along with associated field data from sample collection, will be stored in the MPCA's Environmental Quality Information System (EQulS) database. Data stored in EQulS is publicly accessible and the datasets will be offered for download and used to create maps of the data.

Summary statistics of both individual PFAS and total PFAS will be calculated. These statistics will be compared to a number of other factors, such as land use, proximity to known releases, sample depth, stratigraphy, and other spatial and geologic considerations. The results will be made available through both the MPCA's website and reports.

Activity Milestones:

Description	Approximate Completion Date
Initiate data quality assurance	June 30, 2028
Initiate statistical and spatial analyses	September 30, 2029
Make findings available	June 30, 2030

Project Partners and Collaborators

Name	Organization	Role	Receiving Funds
Sharon Kroening	Minnesota Pollution Control Agency	Collaborator	No
Megan Wedal	Minnesota Pollution Control Agency	Collaborator	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.

Analytical data from the project will be stored in the MPCA's EQulS database, which feeds many of MPCA's publicly-accessible data products such as the Minnesota Groundwater Contamination Atlas. The results from this project will be disseminated using online tools that already exist for sharing EQulS information, interactive map, and on MPCA's website.

The Minnesota Environment and Natural Resources Trust Fund (ENRTF) will be acknowledged through use of the trust fund logo or attribution language on presentations, publications, and other communications (electronic and print) according to the ENRTF Acknowledgement 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?

This effort supports Minnesota's PFAS Blueprint and Monitoring Plan . The goals of the monitoring plan are to:

1. Gather Minnesota-specific information in order to craft effective policies around PFAS and their incorporation into MPCA programs;
2. Identify areas of particular concern (due to PFAS concentrations or routes of exposure) that need quick action; and
3. Gather data that galvanizes support for PFAS source reduction and pollution prevention.

Public and private entities will use this data to add their future studies, evaluate exposure risks, and better understand how PFAS move throughout the environment.

Other ENRTF Appropriations Awarded in the Last Six Years

Name	Appropriation	Amount Awarded
Groundwater Contamination Mapping Project - Phase II	M.L. 2021, First Special Session, Chp. 6, Art. 6, Sec. 2, Subd. 03f	\$800,000
Replacing Failing Septic Systems to Protect Groundwater	M.L. 2022, , Chp. 94, Art. , Sec. 2, Subd. 10h	\$2,000,000
Pig's Eye Landfill Task Force	M.L. 2022, , Chp. 94, Art. , Sec. 2, Subd. 10j	\$800,000
Economic Analysis Guide for Minnesota Climate Investments	M.L. 2023, , Chp. 60, Art. 2, Sec. 2, Subd. 07f	\$54,000

Pollinator Habitat Creation at Minnesota Closed Landfills	M.L. 2023, , Chp. 60, Art. 2, Sec. 2, Subd. 08o	\$1,508,000
Determining Ambient Background PFAS Concentrations in Minnesota Soils	M.L. 2024, , Chp. 83, Art. , Sec. 2, Subd. 03g	\$621,000
Get the Lead Out: Lead-Free Fishing Tackle Education	M.L. 2024, , Chp. 83, Art. , Sec. 2, Subd. 05e	\$254,000
Pine Needles Reveal Past and Present Airborne PFAS	M.L. 2025, First Special Session, Chp. 1, Art. 2, Sec. 2, Subd. 07c	\$550,000

Project Manager and Organization Qualifications

Project Manager Name: Michael Ginsbach

Job Title: Hydrogeologist

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

Michael Ginsbach is a hydrogeologist in the Superfund Remedial section of the MPCA and has been working on groundwater investigations for 15 years and PFAS investigations in groundwater and other environmental media for over 7 years. He is involved with many of the MPCA's PFAS projects and guidance including sampling and analytical plans, the MPCA's PFAS Blueprint, PFAS-specific remediation guidance, the MERLA Groundwater and Soil Investigation Guidance, and management of PFAS analytical data.

Organization: Minnesota Pollution Control Agency

Organization Description:

The Minnesota Pollution Control Agency is a state agency committed to ensuring that every Minnesotan has healthy air, sustainable lands, clean water, and a better climate. Through the authority of state and federal statutes and guidelines, the Agency focuses on preventing and reducing the pollution of air, land, and water, and leads Minnesota's efforts to protect against the devastating effects of climate change. We work with regulated parties, businesses, governments, organizations, and Minnesota's 11 tribal nations to develop innovative, community-centered approaches that protect our natural resources, improve human health, and foster strong economic growth.

Budget Summary

Category / Name	Subcategory or Type	Description	Purpose	Gen. Ineligible	% Benefits	# FTE	Classified Staff?	\$ Amount
Personnel								
							Sub Total	-
Contracts and Services								
MDH Environmental Laboratory or Accredited Environmental Laboratory	Service Contract	PFAS analysis under state interagency agreement or state contract				0		\$350,000
Third party environmental consulting firm	Service Contract	Development of QAPP, access agreement drafting, collection of samples				-		\$150,000
							Sub Total	\$500,000
Equipment, Tools, and Supplies								
							Sub Total	-
Capital Equipment								
							Sub Total	-
Acquisitions and Stewardship								
							Sub Total	-
Travel In Minnesota								
							Sub Total	-

Travel Outside Minnesota								
							Sub Total	-
Printing and Publication								
							Sub Total	-
Other Expenses								
							Sub Total	-
							Grand Total	\$500,000

Classified Staff or Generally Ineligible Expenses

Category/Name	Subcategory or Type	Description	Justification Ineligible Expense or Classified Staff Request
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Non ENRTF Funds

Category	Specific Source	Use	Status	Amount
State				
In-Kind	Minnesota Pollution Control Agency (0.1 FTE per study year)	MPCA staff time	Potential	\$150,000
In-Kind	MNIT, MDH, DNR, MDA (0.1 FTE per study year)	Staff time from cooperating state agencies	Potential	\$40,000
			State Sub Total	\$190,000
Non-State				
			Non State Sub Total	-
			Funds Total	\$190,000

Total Project Cost: \$690,000

This amount accurately reflects total project cost?

Yes

Attachments

Required Attachments

Visual Component

File: [3c565a89-68f.pdf](#)

Alternate Text for Visual Component

PFAS is highly mobile in the environment and readily moves through various media. Groundwater is a key cog in that movement and receives, stores, and discharges PFAS to and from other sources and media....

Administrative Use

Does your project include restoration or acquisition of land rights?

No

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?

N/A

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?

No

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 proposal:

Pam Anderson, Minnesota Pollution Control Agency

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