



Environment and Natural Resources Trust Fund

2023 Request for Proposal

General Information

Proposal ID: 2023-082

Proposal Title: Turn Down the Mercury: Outreach and Capture Campaign

Project Manager Information

Name: John Gilkeson

Organization: Minnesota Pollution Control Agency

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Project Basic Information

Project Summary: MPCA proposes an innovative mercury outreach, incentive, and collection campaign to prevent mercury releases, eliminate mercury, and meet statewide water quality goals so that all fish are safe to eat.

Funds Requested: \$1,223,000

Proposed Project Completion: June 30, 2026

LCCMR Funding Category: Water Resources (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.

MPCA forecasts show that Statewide Mercury Total Maximum Daily Load (TMDL) air emissions, water quality, and fish consumption advisory goals are not likely to be met in 2025 or beyond. An important factor, improper disposal of bulk mercury and devices by households and businesses into solid waste and wastewater, will continue unchanged without active measures to collect the mercury. Mercury emissions from fossil fuel combustion and taconite processing are point sources that can be measured and controlled, versus the myriad of small devices in homes and businesses statewide that are difficult to control. This campaign would support the Statewide Mercury TMDL goals of reducing mercury emissions and deposition to lakes and rivers so fish are safe to eat for everyone, including sensitive and subsistence populations. The campaign's outreach and financial tools are active measures to drive recovery of bulk mercury and devices. This project has time urgency. Incinerator ash testing shows that mercury is still being discarded into waste. There is limited time to capture it rather than allow continued waste discards and releases. The national vehicle mercury switch collection program may end in December 2026 so this project can take advantage of its remaining years.

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 campaign will combine outreach and financial tools to raise awareness of mercury's dangers, help residents and businesses identify mercury devices, publicize four major statewide collection programs, and pay an innovative statewide incentive for recovered mercury, which serves as a marketing tool and motivator to turn in mercury. The campaign goal is virtual elimination of expensive and dangerous spills and environmental releases that affect water quality and fish tissue levels of mercury by eliminating inventories of unwanted mercury, since most products and bulk mercury may no longer be legally sold in Minnesota. There are four major collection programs for mercury products in Minnesota and these programs will partner with the MPCA for outreach and use of financial incentives to build interest and participation.

All devices and bulk mercury:

Regional Household Hazardous Waste Programs (HHW)

Very Small Quantity Generator Programs (VSQG)

Specific devices:

Vehicle Mercury Switches through ELVS collection/recycling program

Thermostat Recycling Corporation Program (TRC)

Examples of devices:

Households: Barometers, manometers, thermometers, silent wall switches and other household switches, heating/cooling thermostats and equipment, devices in household appliances, sporting goods, antiques.

Businesses: Barometers, manometers, thermometers, thermostats, switches, relays, measurement and control devices, boiler and industrial controls, vehicle switches, medical devices.

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?

The campaign will raise Minnesotans' awareness of mercury, including the need for and methods to manage it properly to protect and enhance water quality and the safety and health of fish consumption from Minnesota waters. The campaign will publicize four major programs that collect and retire mercury from commerce and will provide a financial incentive as further publicity to raise awareness and encourage Minnesotans to turn in their mercury and protect Minnesota's air, water, and fish resources. Recovered mercury will be permanently retired pursuant to the federal Mercury Export Ban Act of 2008, as amended.

Activities and Milestones

Activity 1: Create and market campaign with partners, communications consultants, and internal communications staff

Activity Budget: \$291,500

Activity Description:

Create and market campaign with partners and communications consultant. Educate residents and businesses about the dangers of mercury, identification of mercury devices, and where to take them for proper management and incentive payment. Outcome: Minnesotans have high awareness of mercury dangers and devices that contain mercury and bring those mercury items to the appropriate collection program and receive payment. Collection programs recover significantly more mercury. Improper disposal, mercury spills and other releases to waste, wastewater, and air are greatly reduced or eliminated. Recovered mercury is retired from the economy pursuant to the federal Mercury Export Ban Act of 2008, as amended.

Activity Milestones:

Description	Completion Date
Outreach materials and campaign developed with partners, communications consultant, internal communications staff.	December 31, 2023
Outreach/publicity materials distributed to general public and targeted participants.	December 31, 2023
Ongoing updates of outreach materials and messaging based on campaign results, outreach with partners.	June 30, 2026

Activity 2: Pay incentives to campaign participants tracked through partner programs

Activity Budget: \$732,000

Activity Description:

Develop participant tracking systems with partners and pay incentive to participants. Participants identify and bring significant new mercury to collection programs and are provided financial compensation for their efforts in a timely manner. Collection programs are compensated for additional mercury recycling/retirement costs as needed. See attached Table for Activity 2 showing estimated mercury recovery and associated costs.

Activity Milestones:

Description	Completion Date
Participant tracking systems are in place for all collection programs	December 31, 2023
Incentive payments provided to participants	June 30, 2026
Collection programs are compensated for additional mercury recycling/retirement costs as needed	June 30, 2026
Final audit of campaign and incentive payment system	June 30, 2026

Activity 3: Monitor campaign performance and citizen awareness, assess ongoing needs

Activity Budget: \$199,500

Activity Description:

Monitor campaign performance and awareness through surveys of participants and the general public. Track recovered materials and evaluate recovery relative to benchmarks. The campaign may bring in bulk mercury and devices from sources and sectors not previously known to the MPCA. Use results throughout the campaign to identify existing and new sources and sectors where remaining bulk mercury and devices are still present and develop additional outreach

strategies to collect the items and eliminate mercury throughout the state. Complete interim and final reports. Campaign, results, and effectiveness are documented in a timely manner and publicly available for others to use.

Activity Milestones:

Description	Completion Date
Track mercury device recovery and compare to benchmarks	December 31, 2023
Survey general public/participant awareness and adjust campaign as needed	December 31, 2023

Project Partners and Collaborators

Name	Organization	Role	Receiving Funds
Danielle Myers	Thermostat Recycling Corporation	Partner for tracking recovery of mercury thermostats in Minnesota.	No
Casimer Andary	End of Life Vehicle Solutions (ELVS)	Partner for tracking recovery of vehicle mercury switches in Minnesota. ELVS is the lead organization for operation and funding of the collection and recycling infrastructure for the National Vehicle Mercury Switch Recovery Program, in collaboration with the Steel Manufacturers Association and the American Iron and Steel Institute.	No
Adam Frederick	Household Hazardous Waste Regional Program Managers	Partner for tracking recovery of bulk mercury and devices in Minnesota through household hazardous waste and small business hazardous waste collection programs. This proposal includes funding to cover additional recycling and retirement costs of mercury collected through this proposal.	Yes
Eric Stuart	Steel Manufacturers Association	Partner with ELVS in operating the collection and recycling infrastructure for the National Vehicle Mercury Switch Recovery Program, which tracks recovery of mercury vehicle switches in Minnesota.	No

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 campaign will track participation and results so the MPCA and partners may target future outreach to sources and sectors where mercury may remain. The MPCA will seek continuing funding for the campaign from the Legislature, USEPA, and other sources.

Other ENRTF Appropriations Awarded in the Last Six Years

Name	Appropriation	Amount Awarded
Groundwater Contamination Mapping	M.L. 2017, Chp. 96, Sec. 2, Subd. 03h	\$400,000
Assessment of Urban Air Pollution	M.L. 2017, Chp. 96, Sec. 2, Subd. 07b	\$700,000
Pilot Program to Optimize Local Mechanical and Pond Wastewater-Treatment Plants	M.L. 2018, Chp. 214, Art. 4, Sec. 2, Subd. 04a	\$700,000
Reducing Municipal Wastewater Mercury Pollution to Lake Superior	M.L. 2019, First Special Session, Chp. 4, Art. 2, Sec. 2, Subd. 04h	\$250,000
Optimizing Local Mechanical and Pond Wastewater-Treatment Plants	M.L. 2019, First Special Session, Chp. 4, Art. 2, Sec. 2, Subd. 11b	\$500,000
Groundwater Contamination Mapping Project - Phase II	M.L. 2021, First Special Session, Chp. 6, Art. 6, Sec. 2, Subd. 03f	\$800,000
Developing Strategies To Manage PFAS In Land-Applied Biosolids	M.L. 2021, First Special Session, Chp. 6, Art. 5, Sec. 2, Subd. 04d	\$1,404,000
Wastewater Pond Optimization Implementation	M.L. 2021, First Special Session, Chp. 6, Art. 5, Sec. 2, Subd. 20a2	\$700,000
Chloride Pollution Reduction	M.L. 2021, First Special Session, Chp. 6, Art. 5, Sec. 2, Subd. 20a4	\$500,000

Project Manager and Organization Qualifications

Project Manager Name: John Gilkeson

Job Title: Planner Principal-Toxics Reduction

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

This position exists to develop statewide policy and programs for identification, prevention, and management of toxic products in accordance with state laws and rules; lead staff for mercury product reduction activities for the Statewide Mercury TMDL Implementation Plan; serves as liaison with other states in the Toxics in Packaging Clearinghouse and Interstate Mercury Education and Reduction Clearinghouse; and coordinates mercury, lead, and toxics reduction activities with other states as appropriate.

Organization: Minnesota Pollution Control Agency

Organization Description:

The MPCA is the state's environmental regulatory and assistance agency for air, water, waste, and land, including waste and toxics reduction, pollution prevention, sustainable materials, safer alternatives, and technical and financial assistance.

Budget Summary

Category / Name	Subcategory or Type	Description	Purpose	Gen. Ineligible	% Benefits	# FTE	Classified Staff?	\$ Amount
Personnel								
Environmental Specialist 2		Temporary Unclassified Mercury Campaign Staff. Administer approved project. Participate in outreach campaign, partner relations and activities, develop and implement incentive payment system with MPCA's fiscal department. Maintain project records for internal and external reporting using the MPCA's environmental database.			34%	3		\$399,000
							Sub Total	\$399,000
Contracts and Services								
TBD	Professional or Technical Service Contract	Communications Consultant for statewide outreach campaign				-		\$8,000
TBD	Professional or Technical Service Contract	Statewide Advertising and Communications				-		\$84,000
							Sub Total	\$92,000
Equipment, Tools, and Supplies								
							Sub Total	-
Capital Expenditures								
							Sub Total	-
Acquisitions and Stewardship								
							Sub Total	-

Travel In Minnesota								
							Sub Total	-
Travel Outside Minnesota								
							Sub Total	-
Printing and Publication								
							Sub Total	-
Other Expenses								
		Incentive payment for recovered bulk mercury and devices from Minnesota households and businesses. Estimated annually at \$5 per device for 46,000 devices and \$8/lb for 375 lbs. bulk mercury. See Activity 2 Attachment for details of cost and estimated recovery.	Incentive payments to households and businesses for recovered bulk mercury and devices as described.					\$699,000
		Recycling and retirement costs for bulk mercury and devices collected through Minnesota programs. Estimated at \$20/lb of mercury for estimated recovery of 550 lbs of mercury annually for three years. See Activity 2 Attachment.	Payments to collection programs for recycling and retirement costs for mercury turned in through this program, as needed. Ensure that mercury is handled in accordance with hazardous waste rules and federal Mercury Export Ban Act of 2008, as amended.					\$33,000
							Sub Total	\$732,000
							Grand Total	\$1,223,000

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	Inkind MPCA staff contributions in support of the mercury outreach, incentive, and capture campaign.	Inkind MPCA staff contributions: 0.1 FTE staff from each of three Divisions: Resource Management and Assistance, Environmental Assessment and Outcomes, Municipal; 0.25 FTE Communications staff (total 0.55 FTE x \$133k per year x 3 years)	Secured	\$219,450
			State Sub Total	\$219,450
Non-State				
			Non State Sub Total	-
			Funds Total	\$219,450

Attachments

Required Attachments

Visual Component

File: [867fe1a8-314.docx](#)

Alternate Text for Visual Component

Chart: Forecast of Minnesota Mercury Emissions from major source categories relative to the 2025 Emissions Goal for the Minnesota Statewide Mercury Total Maximum Daily Load (TMDL); Photographs of common household and business mercury devices....

Optional Attachments

Support Letter or Other

Title	File
Partner letter from Thermostat Recycling Corporation	705625c8-860.pdf
Partner letter from ELVS on behalf of the organizations supporting the vehicle mercury switch collection program	c8d2dfc3-887.pdf
MPCA LCCMR Proposal Turn Down the Mercury Attachment for Activity 2	3efd8b64-7f7.docx

Administrative Use

Does your project include restoration or acquisition of land rights?

No

Does your project have potential for royalties, copyrights, patents, or sale of products and assets?

No

Do you understand and acknowledge IP and revenue-return and sharing requirements in 116P.10?

N/A

Do you wish to request reinvestment of any revenues into your project instead of returning revenue to the ENRTF?

N/A

Does your project include original, hypothesis-driven research?

No

Does the organization have a fiscal agent for this project?

No



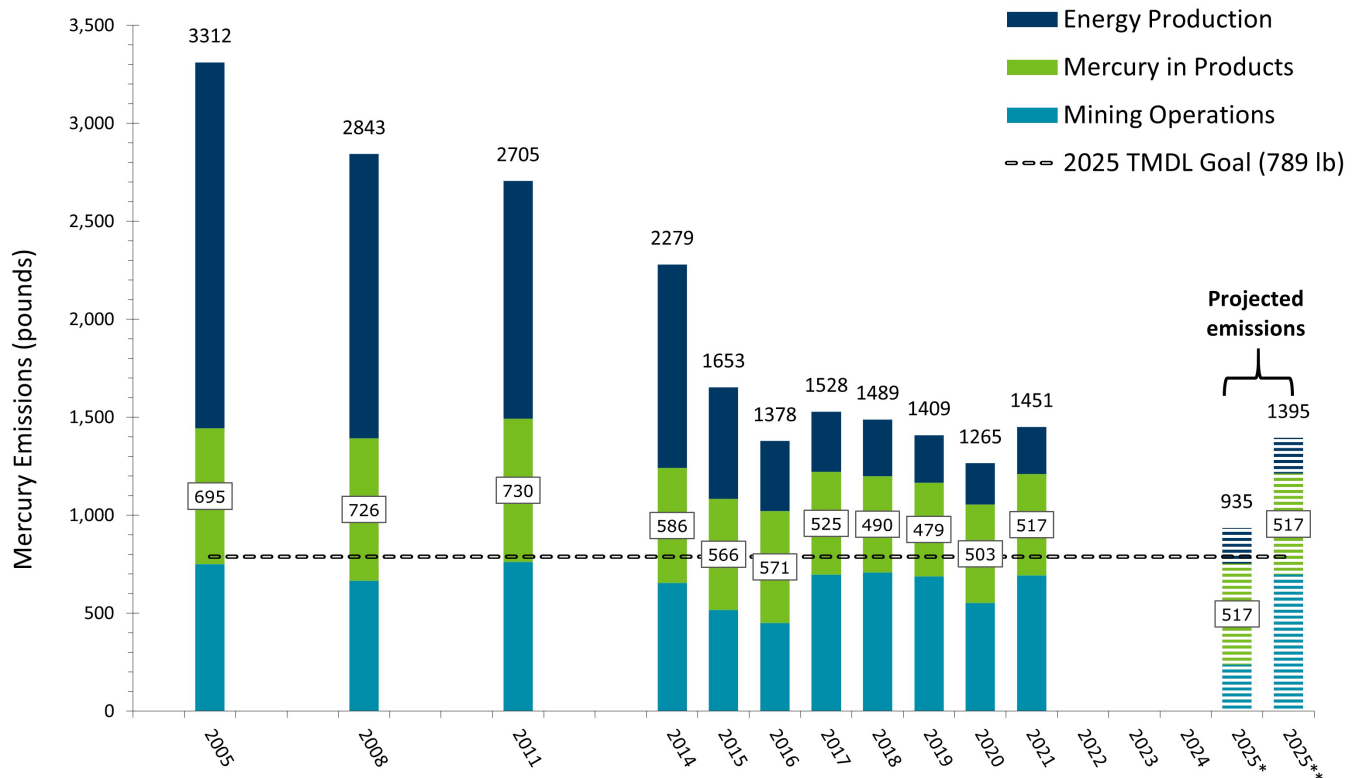
Environment and Natural Resources Trust Fund (ENRTF)

2023 Main Proposal

Project Title: Turn Down the Mercury: Outreach and Capture Campaign

Supporting Graphics for Project Proposal submitted by the Minnesota Pollution Control Agency 2023-082





Forecast of Minnesota Mercury Emissions from major source categories relative to the 2025 Emissions Goal for the Minnesota Statewide Mercury Total Maximum Daily Load (TMDL):



* This projection is based on the ferrous mining/processing industry in northern MN meeting the required 72% reduction specified in Minn. R. 7007.0502.

** This projection is based on the ferrous mining/processing industry's proposed reductions in each mercury reduction plan applied to the baseline emissions as calculated by MPCA.

Examples of Household Mercury Devices

Oven Thermometer	Silent Wall Switch	Home Boiler Control (AquaStat)	HVAC Thermostat
			

Examples of Business Mercury Devices

Displacement Relays	Tilt Switches used in Industrial Controls	Gas Burner Valve Mercury Flame Sensor tube	Vehicle Switches
