



Environment and Natural Resources Trust Fund

M.L. 2020 Approved Work Plan

General Information

ID Number: 2020-086

Staff Lead: Corrie Layfield

Date this document submitted to LCCMR: August 27, 2021

Project Title: Chloride Pollution Reduction

Project Budget: \$500,000

Project Manager Information

Name: Brooke Asleson

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Project Reporting

Date Work Plan Approved by LCCMR: August 26, 2021

Reporting Schedule: April 1 / October 1 of each year.

Project Completion: June 30, 2023

Final Report Due Date: August 14, 2023

Legal Information

Legal Citation: M.L. 2021, First Special Session, Chp. 6, Art. 5, Sec. 2, Subd. 20a4

Appropriation Language: The appropriation in Laws 2019, First Special Session chapter 4, article 2, section 2, subdivision 8, paragraph (c), Sauk River Dam Removal and Rock Rapids Replacement, in the amount of \$2,768,000, no longer needed for its original purpose is transferred as follows:

(4) \$500,000 is transferred to the commissioner of the Pollution Control Agency for activities, training, and grants that reduce chloride pollution. Of this amount, \$250,000 is for grants for upgrading, optimizing, or replacing water softener

units. Priority for grants must be given to facilities needing improvements to comply with chloride water quality standards;

(d) Transfers and Availability

The transfers under this subdivision are effective June 30, 2021, and the transferred amounts are available until June 30, 2023.

Appropriation End Date: June 30, 2023

Narrative

Project Summary: This project will provide support to the MPCA's Chloride Reduction Program that offers training, resources, assistance, and tools to organizations and communities in reducing salt use and protecting water resources.

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

Chloride is a permanent pollutant and does not break down or change over time. It is toxic to aquatic life. The primary sources of chloride causing water quality problems are de-icing salt, salt used for water softening systems, fertilizer, and dust control practices. The chloride water quality standard to protect aquatic life is 230 mg/liter (equivalent to 1 teaspoon in 5 gallons of water). Once chloride enters our lakes, streams, wetlands and groundwater, it is extremely expensive and not feasible to remove it. Recent monitoring of shallow groundwater and surface water shows increasing chloride concentrations across Minnesota. Therefore reducing chloride at the source and preventing it from entering our surface and groundwater is critical.

What is your proposed solution to the problem or opportunity discussed above? i.e. What are you seeking funding to do? You will be asked to expand on this in Activities and Milestones.

The MPCA's existing Chloride Reduction Program which is funded by the Clean Water Fund, provides a wide range of audiences with training, assistance including chloride reduction grants and additional resources to effectively reduce chloride in their organization or community. This project will provide funding to support these specific areas of the program: Chloride Reduction Grants program, Smart Salting Training program, and the Smart Salting tool. The MPCA offered its first competitive chloride reduction grant in May of 2021 with Clean Water Funds. Through this project we will offer an additional competitive grant in the Fall of 2021 to reduce chloride pollution coming from water softening units in communities with elevated chloride in their wastewater discharge or surface waters. As with the previous Chloride Reduction grant, this grant will follow the state's competitive grant process. This project will also provide financial support to the Smart Salting training program through a combination of offering classes to audience across the state and creating additional training program material's. The Smart Salting tool, which is a web-based program originally designed for winter maintenance professionals, will be expanded by incorporating additional guidance for reducing chloride from additional sources, such as water softening through this project.

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 goal of the MPCA's Chloride Reduction Program is to reduce chloride (salt) entering Minnesota's surface waters and groundwater. This project will allow the MPCA to leverage existing resources and provide additional resources and support to our partners, permittees, businesses, and residents. Those who attend the MPCA Smart Salting training program and utilize the Smart Salting tool and implement the recommendations have been able to achieve an over salt reduction of 30-60%. By offering up to 50 classes we expect to train up to 1,000 individuals with these funds.

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: Water Softening grant

Activity Budget: \$250,000

Activity Description:

The MPCA will provide \$250,000 in grant funds to eligible organizations for upgrading, optimizing, or replacing water softener units to reduce chloride pollution in targeted communities using the state's competitive grant process. This includes MPCA staff creating a Request For Proposals (RFP), posting it in the state's system, promoting the RFP, reviewing applications through a review team, selecting a recipient(s) based on criteria that will be developed by contracts staff and the MPCA project manager during RFP development and will be designed to meet the requirements of the appropriation language as well as the MPCA criteria to ensure a fair process, and then writing a contract to award the funds to the recipient(s). The grantee will be required to use the funds to develop and administer a project that will upgrade, optimize, or replace water softener units in communities with elevated chloride. The goal for this grant will be to reduce chloride pollution and the grantee will be required to estimate the achieved chloride reductions.

Activity Milestones:

Description	Completion Date
publish water softening grant RFP	November 30, 2021
review proposals	December 31, 2021
award grant	January 31, 2022
Grantee to submit final report	June 30, 2023

Activity 2: Smart Salting training program support

Activity Budget: \$165,300

Activity Description:

This objective will support the existing MPCA Smart Salting training program. There are 4 Smart Salting classes offered that includes 2 classes designed specifically for winter maintenance professionals, Roads and Parking Lot's and Sidewalks which teaches practical practices for efficient and effective winter maintenance that provides a high level of winter safety while minimizing environmental impacts. The Level 2 class makes use of the Smart Salting tool and provides organizations the opportunity to evaluate their entire operations and find area for improvement and cost savings. The 4th class offered is intended for a wider audience including those who manage properties, to learn about the impacts salt has on the environment and steps they can take to minimize salt. This includes offering and supporting up to 50 Smart Salting training classes, creating new training content, and support training materials and resources. MPCA staff and Smart Salting program contractor will work together to schedule and host classes for a variety of audiences. New training content to improve the existing program will be developed such as new refresher courses, an updated manual for the Smart Salting for Roads class, as well as minor updates to existing training content and materials as budget.

Activity Milestones:

Description	Completion Date
Offer and teach up to 50 Smart Salting training classes	June 30, 2023
Create new Smart Salting training materials and content	June 30, 2023
Print manuals and class materials	June 30, 2023

Activity 3: Update and expand the Smart Salting tool

Activity Budget: \$84,700

Activity Description:

The current Smart Salting tool is a valuable web-based Smart Salting training program resource in evaluating an organizations current practices and providing guidance for improving practices to reduce salt use. This online tool will allow organizations to create a customized local de-icing and dust suppressant salt reduction strategy by evaluating their current winter maintenance practices to determine if they are considered to be "poor" "acceptable" or "advanced" practices. The tool generates reports they provide specific changes that can be made to each individual practice to improve effectiveness and reduce salt use. These reports can also be used to document and track the progress a city/county/DOT or private organizations has

made to reduce de-icing salt use. The MPCA recently hired contractors to develop the framework and guidance to expand the current tool to include additional sources of chloride such as water softening and fertilizer and audiences such as communities.

This project will fund a portion of the implementation of the recent enhancement recommendations. The full implementation of the updates and enhancements to the existing Smart Salting tool will be funded through a separate project that does have funding support to move forward at the same time as this project.

Activity Milestones:

Description	Completion Date
Establish expert advisory teams to advise updates of the Smart Salting tool	December 31, 2021
Test and refine implementation of tool updates	January 31, 2023
Develop document with new features and updates for tool contractor to implement	June 30, 2023

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.

The MPCA Smart Salting program has a program website, newsletter, and training classes where information about the available products, classes and other resources will be shared widely and will follow the ENRTF acknowledgement requirements and 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 be funded?

The MPCA has a recently established Chloride Reduction Program that provides communities, businesses, and professionals with training, resources, assistance and tools to reduce chloride pollution and protect water resources. These funds will allow the program to provide additional assistance directly to communities through a water softening grant as stated in the appropriation language, increase the number of Smart Salting training classes offered, and make improvements to the Smart Salting tool.

Budget Summary

Category / Name	Subcategory or Type	Description	Purpose	Gen. Ineligible	% Benefits	# FTE	Classified Staff?	\$ Amount
Personnel								
							Sub Total	-
Contracts and Services								
TBD	Sub award	Water softening grant awarded to eligible organization(s) to reduce chloride pollution from water softening units in targeted communities.				-		\$250,000
Fortin Consulting	Professional or Technical Service Contract	The existing contract with the MPCA's Smart Salting program hired contractor will be utilized for this project. The MPCA followed the Professional/Technical contract single source request process and received approval from the Department of Administration to contract with Fortin Consulting for Smart Salting Program support.				1.13		\$230,000
							Sub Total	\$480,000
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								
	Printing	Smart Salting training manuals and materials	Training manuals and materials are provided to training participants to use during and after attending class.					\$20,000
							Sub Total	\$20,000
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				
Cash	Clean Water Fund FY22-23: Chapter 1 - H.F. No. 13	The MPCA received FY22-23 Clean Water Funds to support the Chloride Reduction Program.	Secured	\$520,000
			State Sub Total	\$520,000
Non-State				
			Non State Sub Total	-
			Funds Total	\$520,000

Attachments

Required Attachments

Visual Component

File: [7226e4ec-a23.pdf](#)

Alternate Text for Visual Component

Chloride enters Minnesota's surface and groundwater from a variety of sources. The primary sources are de-icers use for winter maintenance, water softening salt, fertilizer, and dust control practices....

Optional Attachments

Support Letter or Other

Title	File
Background check	e8665afe-f13.pdf

Difference between Proposal and Work Plan

Describe changes from Proposal to Work Plan Stage

There was not a proposal submitted for this project.

Additional Acknowledgements and Conditions:

The following are acknowledgements and conditions beyond those already included in the above workplan:

Do you understand and acknowledge the ENRTF repayment requirements if the use of capital equipment changes?

N/A

Do you agree travel expenses must follow the "Commissioner's Plan" promulgated by the Commissioner of Management of Budget or, for University of Minnesota projects, the University of Minnesota plan?

N/A

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

Salt pollution comes from several sources



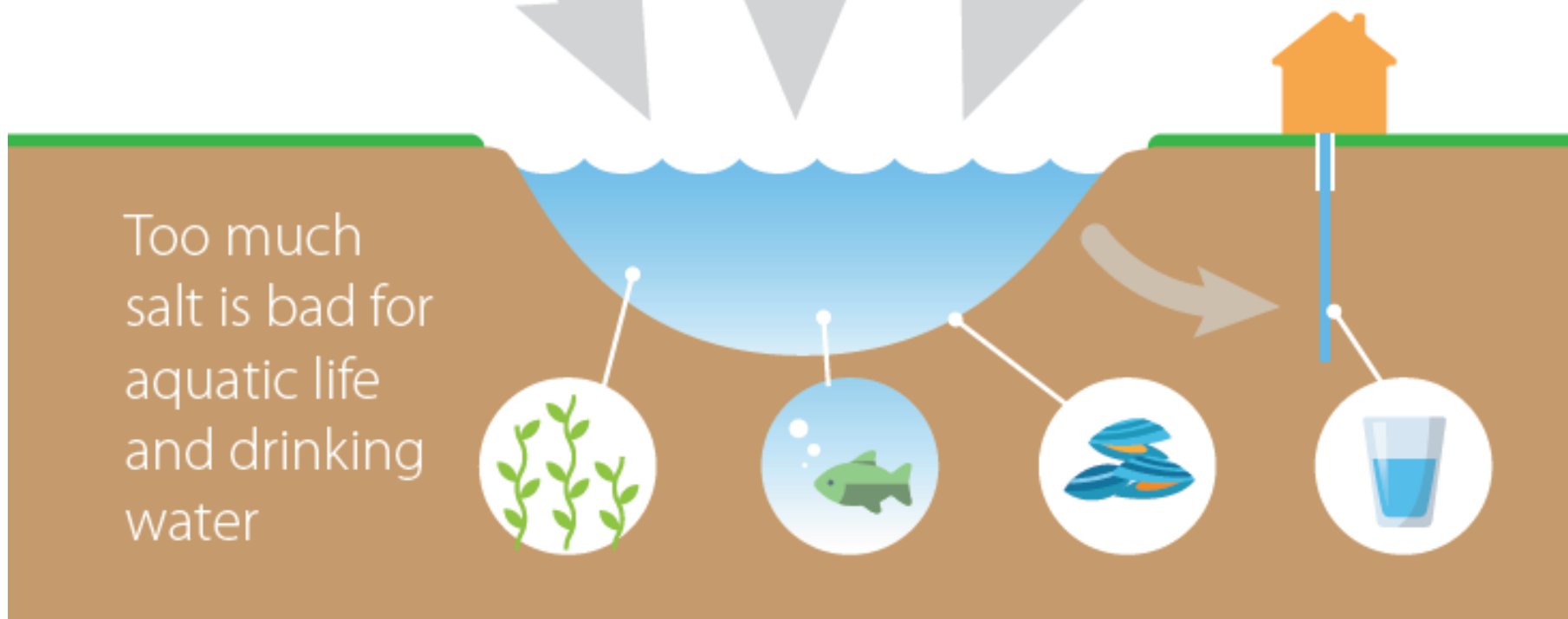
Road salt



Water softeners



Fertilizer
Manure
Dust suppressant



Too much salt is bad for aquatic life and drinking water

