

**State Planning and Research Program  
Quarterly Report**

**PROJECT TITLE:** *Efficacy, Cost, and Impacts of Non-Chloride Deicers: An Educational Primer and Product Information Sheets*

**OBJECTIVES:** The goal of this project is to synthesize available information on non-chloride deicers to allow for a more comprehensive understanding by winter maintenance professionals and allow for easy comparison between products and with sodium chloride (salt brine, rock salt). This will be accomplished through a literature search, survey, and evaluation of currently used standards and tests. Laboratory testing may be used to provide supplemental information. The outcomes will include a comprehensive literature review document, one to two-page product summaries and product information sheets for key non-chloride deicers.

**PERIOD COVERED:** January 1, 2023 – March 31, 2023

**PARTICIPATING AGENCIES:** Minnesota Department of Transportation and the Clear Roads Technical Advisory Committee

**PROJECT MANAGER:**  
Hafiz Munir / Tom Peters

**LEAD AGENCY:** MnDOT

**PRINCIPAL INVESTIGATOR:**  
Laura Fay, WTI, Montana State University

**SP&R PROJECT NO:**  
MnDOT Contract No.  
1048127

Federal Project Number:  
TPF-5(353)

**PROJECT IS:**

Planning  
 Research & Development

**ANNUAL BUDGET:** \$114,946

**PROJECT EXPENDITURES TO DATE:** \$56,115

**WORK COMPLETED:**

- The kickoff meeting was held April 29, 2022. The kickoff meeting presentation and notes were submitted May 11, 2022.
- The Task 1 Literature Review was submitted August 25, 2022. A meeting was held September 12, 2022 to discuss the deliverable and next steps. The meeting slides, notes, and draft Task 2 surveys were submitted September 13, 2022. The revised Task 1 Literature Review was submitted for approval September 29, 2022.
- Task 2 Surveys were submitted to MSU IRB and approved October 11, 2022. Task 2 Surveys were disseminated October 25, 2022. The online survey tool was closed November 28, 2022. The Task 2 Survey Results were submitted for review December 12, 2022. A meeting was held January 4, 2023 to review and receive feedback on the task deliverable. The meeting notes, slide deck, and revised Task 2 Survey Summary were submitted January 4, 2023.
- Task 3 QPL Evaluation & Lab Testing Recommendations – work on this task continued.
- Task 4 Educational Primers – work has begun on this task.

**SUMMARY OF ACTIVITIES EXPECTED TO BE PERFORMED NEXT QUARTER:**

- Develop the Task 3 QPL Evaluation & Lab Testing Recommendations document and submit for review.
- Schedule a meeting to review the Task 3 deliverable.
- Continue work on the Task 4 Educational Primers.

**STATUS AND COMPLETION DATE:**

- The Task 3 QPL Evaluation has taken longer to develop than anticipated and will be submitted in the next quarter. The research team does not see the timing of this impacting future task or the overall project timeline or budget.