

State Planning and Research Program Quarterly Report

PROJECT TITLE: *Evaluation of Direct Liquid Application of Salt Brine vs Granular Salt as Measured through Various Performance and Safety Metrics*

OBJECTIVES: To collect and synthesize available information about the differences between the Direct Liquid Application (DLA) of salt brine (mixed with any one of up to three different additives applied as recommended depending on the situation) and the application of granular salt as reflected in various performance and safety metrics.

PERIOD COVERED: July 1 to September 30, 2023

PARTICIPATING AGENCIES: Minnesota Department of Transportation, the Clear Roads Pooled Fund, and the Board of Regents of the University of Wisconsin System on behalf of the University of Wisconsin – Madison.

PROJECT MANAGER:
Hafiz Munir / Tom Peters

SP&R PROJECT NO:
MnDOT Contract No.
1036345 wo3

PROJECT IS:

Planning
 Research & Development

LEAD AGENCY: MnDOT

Federal Project Number:
TPF-5(479)

PRINCIPAL INVESTIGATOR:
David A. Noyce, UW-Madison

PROJECT BUDGET:
\$125,000

PROJECT EXPENDITURES TO DATE:
\$ 0

WORK COMPLETED:

Part 1

- **Task 0: Project Management**

- Project administration, coordination, management, progress reports, and invoicing.
- Kick off meeting on July 13, 2023.

- **Task 1: Literature Review**

- Review of relevant literature on performance measures in winter maintenance and the observed effects of winter weather on traveling speed, recovery time, delay, volume, capacity, friction, and crashes.
- Draft literature review submitted on July 31, 2023.
- Addressed TAC comments and submitted revised literature review for final approval on September 29, 2023.

- **Task 2: Agency Survey**

- For this task, information gathered from the literature review was considered to prepare the questions for the survey.
- Draft survey questions were submitted on August 30, 2023.
- The research team met with the Clear Roads project committee on September 9, 2023, to go over the proposed survey questions.
- The research team addressed feedback provided and prepared the online version of the survey which was submitted to the Clear Roads project committee on September 27, 2023 for final review.

SUMMARY OF ACTIVITIES EXPECTED TO BE PERFORMED NEXT QUARTER:

- **Task 2: Agency Survey**

- Clear Roads project committee will provide feedback on the online survey by October 6, 2023.
- The survey will be distributed after addressing comments and obtaining approval from the Clear Roads project committee.

Part 2

The following scope of work will be completed following Part 1, if needed, only at the request of MnDOT.

STATUS AND COMPLETION DATE:

On schedule and project to be completed by December 31, 2024.