

State Planning and Research Program Quarterly Report

PROJECT TITLE: *Expanding Application Rate Guidance for Salt Brine Blends for Direct Liquid Application and Anti-Icing*

OBJECTIVES:

- The objective of this project is to expand liquid application rates guidance for anti-icing and deicing.
- This project aims at identifying commonly used liquid blends and applications rates (from literature and survey of practice) to test them at five to seven states and develop guidance on blends and application rates.
- Field data will be used to evaluate performance measures and quantify the effectiveness of liquid applications at lower to moderate temperatures for diverse weather and pavement conditions.

PERIOD COVERED: July 1 – September 30, 2020

PARTICIPATING AGENCIES:

- Minnesota Department of Transportation and the Clear Roads Technical Advisory Committee
- The Board of Regents of the University of Wisconsin System on behalf of the University of Wisconsin - Madison

PROJECT MANAGER:

Debbie Sinclair / Tom Peters

SP&R PROJECT NO:

MnDOT Contract No.
1003328

PROJECT IS:

____ Planning
 X Research & Development

LEAD AGENCY:

MnDOT

Federal Project Number:
TPF-5(353)

PRINCIPAL INVESTIGATOR:

David A. Noyce, UW-Madison

PROJECT BUDGET:

\$150,000

PROJECT EXPENDITURES TO DATE:

\$26,054.01

WORK COMPLETED:

- Task 0: Project Management
 - Project administration, coordination, management, progress reports, and invoicing.
 - Kick off meeting (July 9, 2020).
- Task 1: Literature Review
 - Review of relevant literature on liquid applications, effectiveness, performance measures, and application rates for anti-icing, deicing, and pre-wet.
 - Draft literature review submitted July 31, 2020.
 - Addressed TAC comments and submitted revised literature review for final approval on September 30, 2020.
- Task 2: Survey of Practice
 - Draft of proposed questionnaire and list of contacts was submitted August 31, 2020.
 - Addressed comments and recommendations from TAC.
 - Sent out survey September 28, 2020.
- Task 3: Field Testing Protocol
 - Based on the information gathered from the literature review and survey of practice, the study design will consist of collecting data at study, test, and control routes.
 - Draft of field testing protocol was submitted September 30, 2020.

SUMMARY OF ACTIVITIES EXPECTED TO BE PERFORMED NEXT QUARTER:

- Task 2: Survey of Practice
 - Review responses and identify potential locations for data collection.
- Task 3: Field Testing Protocol
 - Coordinate data collection efforts with TAC.

STATUS AND COMPLETION DATE:

On schedule and project to be completed by December 31, 2021.