

State Planning and Research Program Quarterly Report

PROJECT TITLE: Synthesis of Material Application Methodologies for Winter Operations

OBJECTIVES: The goal of this research is to “create a synthesis of best management practices for application rates, material application methodologies and material usage, including chloride brines applied directly or as additives to abrasives and rock salts”.

PERIOD COVERED:

July 1, 2018– September 30, 2018

PARTICIPATING AGENCIES:

Washington State University – Prime
Monte Vista Associates LLC - Consultant

PROJECT MANAGER:

Deb Fick/Tom Peters

SP&R PROJECT NO:

MnDOT No. 1001326

PROJECT IS:

Planning
 Research & Development

LEAD AGENCY: Mn/DOT

Federal Project ID:
TFP-5(218)

PRINCIPAL INVESTIGATOR:

Xianming Shi, Washington State
University, Ph.D., P.E.

ANNUAL BUDGET:

\$117,658

PROJECT EXPENDITURES TO DATE:

\$117,658

WORK COMPLETED:

Project Management

This includes the submission of quarterly progress report by the project PI to the Clear Roads program in July 2018 and some communications between the PI and the Clear Roads coordinator, as well as between the PI and the consultant. Another no-cost time extension was requested and approved, which extended the project end date to April 30, 2019.

Task 1. Literature review (100% completed)

A revised literature review was submitted for panel review again in December 2016. It highlights current practices, innovative practices, and trends related to materials used, their application rates, and the application methodologies and equipment under various road weather scenarios (temperature ranges, storm conditions, and other climate and operating conditions).

Task 2. Interview Plan (100% completed)

In December 2016, an updated interview plan was submitted to the panel for review.

Task 3. Interviews (100% completed)

The interviews were conducted with more than 35 agencies and an interview memo was submitted in Sept. 2017. The detailed notes of the interviews are also available upon request by the panel.

Task 4. Guidebook (96% completed)

In response to the review comments received from the project panel, the research team updated the Guidebook to improve both in terms of contents and graphics/look-and-feel. The research team was given a new task deadline of December 30, 2018 (with the revised draft Guidebook due before October 31, 2018).

Task 5. Final report (96% completed)

A draft final report was submitted to the project panel for review and the research team was given a new task deadline of February 28, 2019 (with the revised draft Final Report due December 31, 2018). The report will summarize all the methodology and findings from tasks 1 to 4.

Task 6. Final presentation (0% completed)

SUMMARY OF ACTIVITIES EXPECTED TO BE PERFORMED NEXT QUARTER:

Work in the coming quarter will consist of project management as well as the completion of Task 4 and significant progress on Tasks 5 to 6.

STATUS AND COMPLETION DATE:

Another no-cost time extension was recommended for approval by the TAC and submitted to MnDOT in order to produce a usable product approved by the project panel. The new project timeline (in light of the delay in receiving the panel reviews) is shown as follows.

Task	Current Task Start Date	Current End Date for Task Approval	Revised Task Start Date	Revised Due Date to Submit Draft Deliverables	Revised End Date for Task Approval
1	05/25/2016	12/15/2016	05/25/2016	10/15/2016	12/15/2016
2	05/25/2016	07/30/2016	05/25/2016	Not Applicable	07/30/2016
3	07/15/2016	09/15/2017	07/15/2016	07/15/2017	09/15/2017
4	12/01/2016	7/31/2018	12/15/2016	10/31/2018	12/30/2018
5	04/01/2017	07/31/2018	04/01/2017	12/31/2018	2/28/2019
6	07/01/2017	09/30/2018	07/01/2017	12/31/2018	2/28/2019