

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:

Oct. 1, 2018– December 31, 2018

PARTICIPATING AGENCIES:

Washington State University – Prime
Monte Vista Associates LLC - Consultant

PROJECT MANAGER: Tom Peters

SP&R PROJECT NO:

PROJECT IS:

LEAD AGENCY: Mn/DOT

MnDOT Contract No.

Planning

1001326

Research & Development

PRINCIPAL INVESTIGATOR:

Federal Project ID:

Xianming Shi, Ph.D., P.E.

TPF-5(218)

ANNUAL BUDGET:

PROJECT EXPENDITURES TO DATE:

\$117,658

\$117,658

WORK COMPLETED:

Project Management

This includes the submission of quarterly progress report by the project PI to the Clear Roads program in Oct. 2018 and some communications between the PI and the Clear Roads coordinator, as well as between the PI and the consultant. The updated 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 (98% 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 revised draft Guidebook was submitted around October 31, 2018 and the panel review comments on this new revision was received by the last week of December 2018. Due to the delay in getting the panel review comments and medical leave of researchers, there is one-month delay in submitting the final revision of this Guidebook.

Task 5. Final report (98% completed)

The revised draft Final Report was due December 31, 2018 and the research team is two weeks behind schedule for delivering it. 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 submitted and approved, 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 01/31/2019
5	04/01/2017	07/31/2018	04/01/2017	12/31/2018 01/11/2019	2/28/2019
6	07/01/2017	09/30/2018	07/01/2017	12/31/2018 01/31/2019	2/28/2019