

## State Planning and Research Program Quarterly Report

**PROJECT TITLE:** Determining the Migration of Chloride-Based Deicers through Different Soil Types

**OBJECTIVES:** This project aims to achieve a clear, quantitative picture of the physicochemical properties of various types of soils (texture-based, commonly used in the areas of interest) and migration behavior of selected deicers through these soil types.

**PERIOD COVERED:** October 1 – December 31, 2025

**PARTICIPATING AGENCIES:** Minnesota Department of Transportation, Clear Roads Pooled Fund, Washington State University, and Roadtech, Inc.

**PROJECT MANAGER:**  
Hafiz Munir / Adam Wellner

**SP&R PROJECT NO:**  
MnDOT No. 1047792

**PROJECT IS:**

**LEAD AGENCY:** MnDOT

Federal Project No.  
TPF-5(353)

       Planning  
  X   Research & Development

**PRINCIPAL INVESTIGATOR:**  
Xianming Shi, Ph.D., P.E., WSU

**ANNUAL BUDGET:**  
\$99,980

**PROJECT EXPENDITURES TO DATE:**  
\$97,080

### WORK COMPLETED:

*Project Management:* The PI submitted quarterly progress report in Oct. 2025. With the permission of the Project Champion, the PI prepared a six-month no-cost time extension, which was submitted by the WSU Office to MnDOT in September 2025. Since the current contract expired on October 31, 2025, the team received a stop-work order in early November 2025. Near the end of the last quarter, the contract amendment (no-cost time extension) was approved, this extended the project end date to April 30, 2026. Note that a project meeting was held in early Dec. 2025 for the team to present the draft Task 3/Task 4/Task 5 deliverables to the project TAC and to receive panel feedback.

**Task 1.** Literature Review and Survey (100% complete).

**Task 2.** Developing the Testing Plan (100% complete).

**Task 3:** Execution of the Testing Plan (100% complete).

**Task 4.** Additional Lab Testing (100% complete).

**Task 5. Preparing one-page fact sheet:** 40% complete. The draft one-pager was submitted to MnDOT on Nov. 30, 2025 and a meeting was held in early Dec. 2025 for the team to receive the feedback.

**Task 6. Final Report:** 20% complete.

### 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 Tasks 5 and 6.

### STATUS AND COMPLETION DATE:

The updated project timeline is as follows. Contract expiration date is 4/30/2026.

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	06/01/2022	03/31/2023	No Change	No Change	No Change
2	12/01/2022	03/31/2023	No Change	No Change	No Change
3	04/01/2023	6/30/2025	No Change	10/30/2025	11/30/2025
4	08/01/2024	6/30/2025	No Change	10/31/2025	11/30/2025
5	09/01/2024	8/31/2025	12/01/2024	11/31/2025	12/31/2026
6	11/01/2024	09/30/2025	07/01/2025	01/31/2026	03/31/2026