

## State Planning and Research Program Quarterly Report

**PROJECT TITLE:** *Understanding the Salt Phase Diagram*

**OBJECTIVES:** The goal of this project is to develop materials to aid winter maintenance practitioners in making informed decisions on the use of road salts, specifically sodium chloride (aka rock salt, solar salt, salt brine, etc.), at varying temperatures and concentration. The end products developed to support winter maintenance practitioners will be a one-page fact sheet and educational video based on information captured in the literature review, lab testing, and the developed salt phase diagram.

**PERIOD COVERED:** January 2021 – March 31, 2021

**PARTICIPATING AGENCIES:** Minnesota Department of Transportation and the Clear Roads Technical Advisory Committee

**PROJECT MANAGER:**  
Debbie Sinclair / Tom Peters

**SP&R PROJECT NO:**  
MnDOT Contract No.  
1044527

**PROJECT IS:**

Planning  
 Research & Development

**LEAD AGENCY:** MnDOT

Federal Project Number:  
TPF-5(353)

**PRINCIPAL INVESTIGATOR:**  
Laura Fay, WTI/MSU

**ANNUAL BUDGET:** \$100,000

**PROJECT EXPENDITURES TO DATE:** \$ 1,497

**WORK COMPLETED:**

- Kick off Meeting – the project kick-off meeting was held Jan. 26, 2020. The meeting notes, slides, and meeting follow up items were provided to the TAC Jan. 27, 2020.
- Task 1 Literature Review – The literature search and review of document is currently being completed and will be submitted next quarter.
- Task 2 Lab Demonstration – planning for lab testing has begun and is scheduled to occur next quarter.
- Task 3 One Page Fact Sheet
- Task 4 Develop Educational Video – planning for photos and video of the lab testing is underway.
- Task 5 Final Report and Webinar

**SUMMARY OF ACTIVITIES EXPECTED TO BE PERFORMED NEXT QUARTER:**

- Submit Task 1 Literature Review to TAC.
- Conduct Task 2 Lab Testing

**STATUS AND COMPLETION DATE:**

The project is currently on time and on budget.