

**State Planning and Research Program  
Quarterly Report**

**PROJECT TITLE:** *Using GIS to Highlight Highway Segments Sensitive to Deicing Materials*

**OBJECTIVES:** Develop a geospatial tool that incorporates data about roadways, topography, hydrology, and ecology to model the impact of de-icing chemical application on the local environment.

**PERIOD COVERED:** January 1, 2022, to March 31, 2022

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

**PROJECT MANAGER:**  
Hafiz Munir / Tom Peters

**SP&R PROJECT NO:**  
MnDOT Contract No.  
1044529  
Federal Project Number:  
TPF-5(353)

**PROJECT IS:**

Planning  
 Research & Development

**LEAD AGENCY:** MnDOT

**PRINCIPAL INVESTIGATOR:**  
Mark Gallagher, SRF Consulting

**ANNUAL BUDGET:** \$ 49,279

**PROJECT EXPENDITURES TO DATE:** \$ 72,083.52

**WORK COMPLETED:**

- Met with committee to review prioritization matrix
- Finalized prioritization matrix and “Compile and Analyze Results” memorandum
- Collected data for model
- Designed model logic
- Created initial versions of geospatial tool
- Began testing tool for functionality and scalability.

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

- Meet with committee to review initial tool version
- Received feedback on tool
- Develop “beta” version of tool
- Devise testing method for select committee members to test tool
- Engage with committee to determine post-project tool hosting and maintenance responsibilities

**STATUS AND COMPLETION DATE:**

Project start was delayed due to committee availability for kickoff. Final completion is not expected to be affected. Contract expiration date is 7/31/2022.