

State Planning and Research Program Quarterly Report

PROJECT TITLE: Updating the Impact of Capital Projects Decision Support Tool

OBJECTIVES:

- (1) Update the default values in the existing tool and expand the types of projects included in the tool.
- (2) Upgrade the tool to an interactive, web-based, dashboard-style application.

PERIOD COVERED: July 1 – September 30, 2025

PARTICIPATING AGENCIES: Minnesota Department of Transportation, Clear Roads Technical Advisory Committee, and the University of Vermont

PROJECT MANAGER:

Hafiz Munir / Sheila Johnson

LEAD AGENCY: MnDOT

PRINCIPAL INVESTIGATOR:

Clare Nelson, UVM Transportation Research Center

SP&R PROJECT NO:

MnDOT Contract No.
1054112

Federal Project Number:
TPF-5(479)

PROJECT IS:

____ Planning

 X Research & Development

ANNUAL BUDGET: \$148,018 (Yrs 1 & 2)

PROJECT EXPENDITURES TO DATE: \$137,311

WORK COMPLETED LAST QUARTER:

- Continued Task 2: Acquired access to additional state's snowplow AVL dashboards, collected roadway projects completed during the AVL data collection, and wrote R-scripts to calculate increases in vehicle-hours of travel per pass, service time, and salt use, as well as the potential need for additional trucks or different types of equipment from the new capital projects.
- Continued Task 3: Completed development of the final decision-support tool, pending finalized data inputs (multipliers for vehicle-hour, service time, and salt use increases) from Task 2. The current values in the tool will be updated once Task 2 is complete.

SUMMARY OF ACTIVITIES EXPECTED TO BE PERFORMED NEXT QUARTER:

- Continue Task 2: Finish acquiring access to additional state's snowplow AVL dashboards, finalize list of project types completed during the AVL data collection, and finalize R-scripts to calculate increases in vehicle-hours of travel per pass, service time, and salt use, as well as the potential need for additional trucks or different types of equipment from the new capital projects.
- Continue Task 3: Share the final decision-support tool with stakeholders for review and approval
- Begin Task 4: Begin writing the final report for the project

STATUS AND COMPLETION DATE: Project is requesting a no-cost extension until June 30th, 2026 to acquire snowplow data for the 2025-2026 winter season.