

# State Planning and Research Program

## Quarterly Report

**PROJECT TITLE:** Clear Roads Administration, Research Support, and Information Services

**OBJECTIVES:** Clear Roads is a pooled fund research project aimed at rigorous testing of winter maintenance materials, equipment, and methods for use by highway maintenance crews. The Clear Roads Technical Advisory Committee (TAC) contracted with CTC & Associates LLC to perform the administrative functions associated with maintaining the pooled fund project as well as information services that support technology transfer. This report summarizes activities conducted under this contract over the last three months.

**PERIOD COVERED:** January through March 2025

**PARTICIPATING AGENCIES:** Minnesota Department of Transportation

**PROJECT MANAGER:** Tom Peters

**SP&R PROJECT NO:**  
1053038

**PROJECT IS:**

**LEAD AGENCY:** MnDOT

☐ Planning  
☒ Research &  
Development

**PRINCIPAL INVESTIGATOR:**  
CTC & Associates LLC

**PROJECT BUDGET:**  
\$1,130,075.18

**PROJECT EXPENDITURES TO DATE:**  
\$501,588.13

### WORK COMPLETED:

#### TAC Meetings

- Continued planning for the 2025 spring meeting in Richmond, VA on April 15-17.
- Signed amendment for admin contract, which allows CTC to contract with the Embassy Suites for the 2025 fall meeting in Bloomington, MN (MOU currently in place) and a hotel to be selected for the 2026 spring meeting in Lexington, KY.

#### Administration and Marketing

- Updated the Clear Roads website with current project status, project deliverables, webinars, administrative documents, and modifications to the home page.
- Continued to update the Webinars and Other Videos page.
- Maintained and updated commitments, transfers, and overall budget information for the pooled fund in coordination with MnDOT. Communicated with TAC members and their appropriate pooled fund personnel to continue to facilitate transfers for fiscal year 2025.
- Supported efforts of TAC members, including changes in state representation. The total number of members remains 39.

#### Information Services

- Used Constant Contact to distribute 6 Clear Roads news posts.
- Completed the following synthesis project.
  - Brine-making Practices
- Continued work on the following synthesis projects.
  - Management of Video Recordings and Images taken from Truck-mounted Cameras
  - UAV Uses for Winter Maintenance
- Completed work on research briefs for the following projects.
  - Best Management Practices for Liquid Chloride Storage and Pumping Systems
  - Use of Dashboards for Winter Operations
  - Effects of Additives in Deicing Salts at Lower Temperatures
- Continuing work on research briefs for the following project.
  - Salt Shed Design Template
- Conducted a final project webinar for the following project.
  - Effects of Additives in Deicing Salts at Lower Temperatures
- Posted results of the 2023-2024 Annual Survey of State Winter Maintenance Data.
- Coordinated with the Qualified Products List subcommittee and vendors to renew deicer products on the QPL.
- Using the APWA template, created a poster for our APWA liaison to present at the 2025 North American Snow Conference in Grand Rapids, MI.
- Compiled and posted on the website the winter maintenance-related technical sessions at the 2025 TRB Annual Meeting.

#### Research Support

*New projects*

- Continued to coordinate with MnDOT and Clear Roads project subcommittees on final contracting matters for the following 2024 research projects.
  - Toxicity Standards for the QPL
  - Effective Pretreatment Methods for Events Beginning as Rain
  - Salt Management Training for Non-DOT End Users

#### *Research in progress*

- Continued coordination with the PIs and subcommittees to schedule check-in teleconferences and facilitate the review of deliverables for:
  - Grip Sensor Technology and Salt Applications
  - Determining the Migration of Chloride-based Deicers through Different Soil Types
  - Evaluation of Direct Liquid Application of Salt Brine vs Granular Salt as Measured through Various Performance and Safety Metrics
  - Development of a Public Service Announcement Library
  - Quantifying the Economic Value of Snow and Ice Operations Success
  - Updating the Impact of Capital Projects Decision Support Tool
  - Using Vegetation Management Practices Near Roads to Leverage the Benefits of Solar Radiation
- Coordinated with the PI and subcommittee to facilitate the review of final deliverables and closeout projects:
  - Effects of Additives in Deicing Salts at Lower Temperatures
- Continued to coordinate with project subcommittees on resubmitting RFPs for the following cancelled projects.
  - Comprehensive Guide to Prewet
  - pH Waiver for Deicing Products on the QPL

#### *Implementation*

- Developed a brief report that captures the implementation opportunities and impacts for each research project.
- Continued to provide access (405 agencies / entities) to the training modules developed by the Clear Roads project, Snowplow Operator and Supervisor Training.
- Provided access (1,502 agencies / entities) to the training modules developed by the Clear Roads project, Entry-Level Driver Training (CDL) for Maintenance Equipment Operators.
- Coordinated the completion of project closeout forms for recently completed projects.
- Continued to facilitate implementation discussions (at the program and project level) during regular project and face-to-face meetings as appropriate.

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

- Attend and provide support for the 2025 spring meeting in Richmond, VA.
- Sign a contract with Embassy Suites to host the fall 2025 joint meeting in Bloomington, MN.
- Conduct project kickoff meetings for the 2025 projects.
- Complete and publish synthesis reports for the following projects.
  - Management of Video Recordings and Images taken from Truck-mounted Cameras
  - UAV Uses for Winter Maintenance
- Commence work on the 2024 synthesis projects.
- Work with PIs to finalize the following project including gaining approval of final deliverables, conducting a project closeout webinar and drafting the research brief.
  - Quantifying the Economic Value of Snow and Ice Operations Success
- Publish the research brief for the following project.
  - Salt Shed Design Template
- Draft, and submit to MnDOT, scopes of work / requisition forms for projects selected during the 2025 spring meeting.
- Update the Clear Roads generic presentation for 2025 and post on the website for use by members.
- Continue to update the Clear Roads website with both project and administrative information.
- Assist with coordinating and tracking funding transfers to TPF-5(479).
- Research, write, and publish winter maintenance news posts.
- Use Constant Contact to distribute the winter maintenance news posts, completed research results, and other information.
- Continue to coordinate with investigators and the Clear Roads subcommittees on projects in progress.
- Continue to coordinate the completion of project closeout forms.
- Continue to respond to requests for Clear Roads training materials.

### **STATUS AND COMPLETION DATE:**

The contract tasks are progressing as planned. The completion date is June 30, 2026.