

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 2019

PARTICIPATING AGENCIES: Minnesota Department of Transportation

PROJECT MANAGER: Tom Peters

SP&R PROJECT NO:
1030951

PROJECT IS:

LEAD AGENCY: MnDOT

Planning
 Research &
Development

PRINCIPAL INVESTIGATOR:
CTC & Associates LLC

PROJECT BUDGET:
\$365,487.00

PROJECT EXPENDITURES TO DATE:
\$147,229.62

WORK COMPLETED:

TAC Meetings

- Continued planning for the 2019 spring face-to-face meeting, which will be held in Indianapolis, IN on April 16-18. Worked with the hotel to ensure all rooms were booked and confirmed, meeting space and catering were in place. Prepared agenda and meeting materials and provided them to the TAC membership.
- Commenced planning for the logistical aspects of the 2019 fall face-to-face meeting, which will be held in Burlington, VT, September 24-26.
- Continued to participate as part of the planning committee for the 2020 International Road weather and Winter Maintenance Conference & Peer Exchange, which will be held in September 2020.

Administration and Marketing

- Presented a poster and handout at the 2019 TRB Annual Meeting in Washington, D.C.
- Shipped poster to Oslo Norway, where the chair and vice chair presented on Clear Roads at a conference of the Norwegian Public Road Administration in March.
- Communicated with the National Local Technical Assistance Program about Clear Roads presenting at the 2019 National LTAP-TTAP-NTTD Conference in partnership with the National Transportation Training Directors. This conference will take place in August in Stowe, VT.
- Updated the Clear Roads website with current project status, project deliverables, webinars, administrative documents, and modifications to the home 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 facilitate transfers for fiscal years 2018 and 2019.
- Supported efforts of TAC members, including changes in state representation. The total number of members remains at 36.

Information Services

- Researched and wrote content for the February Winter Maintenance E-Newsletter.
- Used Constant Contact to distribute the Winter Maintenance E-Newsletter, information about Clear Roads poster at TRB, and completed research.
- Began the transition from quarterly Winter Maintenance Newsletters to single story winter maintenance news posts.
- Completed and posted the compendium of papers on winter maintenance from the 2019 TRB Annual Meeting.
- Solicited equipment to be tested for the 2018-2019 Product Experience Survey.
- Commenced scoping on the 2018 synthesis project:
 - Synthesis of Practice: Mechanic/Operator Training and Training Needs for Winter Maintenance Equipment

- Continued work on the following synthesis projects:
 - Development of a Winter Preparedness Microsite, and
 - Subject-based Webpages, Phase 2
- Completed work on the following synthesis project:
 - Year 4 of the Annual Survey of State Winter Maintenance Data (2017-2018). The survey results and interactive map were posted on the Clear Roads website
- Recorded and posted closeout webinars for the following projects:
 - Synthesis of Material Application Methodologies for Winter Operations, and
 - AWSSI Enhancements in Support of Winter Road Maintenance

Research Support

New projects

- Coordinated with the project subcommittees and MnDOT to establish a contract with the selected vendors for the following FY2018 projects:
 - Defensive Driving for Snowplow Operators, and
 - Alternative Methods for Deicing
- Coordinated with MnDOT to use the Scope of Work to develop and post an RFP for the following project:
 - Standard Test Procedure for Ice Melting Capacity of Deicers

Research in progress

- Continued coordination with the PI and subcommittee to schedule check-in teleconferences and facilitate the review of deliverables for:
 - Developing a Test Bed Software to Qualify Plug and Play Technology
 - Synthesis of Material Application Methodologies for Winter Operations
 - Standards and Guidance for Using Mobile Sensor Technology to Assess Winter Roads Conditions
 - Weather Event Reconstruction and Analysis Tool
 - Integrating Advanced Technologies into Winter Operations Decisions
 - Standard Specifications for Plow Blades with Carbide Inserts
 - Aftermarket Cameras in Winter Maintenance Vehicles
 - Defensive Driving for Snowplow Operators
 - Alternative Methods for Deicing
- Worked with the PI and subcommittee to facilitate review of final deliverables and close out the following project:
 - AWSSI Enhancements in Support of Winter Road Maintenance

Implementation

- Developed a brief report requested by MnDOT that captures the implementation opportunities and impacts for each Clear Roads research project.
- Continued to monitor data regarding Clear Roads website traffic, YouTube hits, coordinate Project Closeout Forms and Research Use Surveys.

SUMMARY OF ACTIVITIES EXPECTED TO BE PERFORMED NEXT QUARTER:

- Attend and provide support for the spring face-to-face meeting in Phoenix, AZ. Draft meeting minutes and begin addressing action items.
- Continued to plan for the Clear Roads 2019 fall meeting and the 2020 International Road weather and Winter Maintenance Conference & Peer Exchange.
- Coordinate the scopes of work for 2019 projects selected as part of the 2019 spring meeting in Indianapolis. Send them to MnDOT to be processed into RFPs and posted for investigator response.
- Update the Clear Roads generic Power Point presentation for use by member states.
- Complete scoping and kickoff the synthesis project, Mechanic/Operator Training for Upkeep of Winter Maintenance Equipment.
- Complete the following synthesis projects:
 - Development of a Winter Preparedness Microsite
 - Subject-based Webpages, Phase 2
- Kick off the following Clear Roads projects:
 - Performance and Cost Effectiveness of High Performance Snowplow Blades
 - Evaluation of Storm Severity Indexes and Winter Severity Indexes and the Most Reliable Variables for Those Indexes
 - Review and Summary of Pre-Wet Methods and Procedures
- Coordinate with MnDOT, project subcommittee, and the awarded vendor to finalize the scope of work and budget for the following project so it will be ready for contracting:
 - Standard Test Procedure for Ice Melting Capacity of Deicers
- Complete the following Clear Roads projects:
 - Synthesis of Material Application Methodologies for Winter Operations
 - Standards and Guidance for Using Mobile Sensor Technology to Assess Winter Roads Conditions

- Continue to update the Clear Roads website with both project and administrative information.
- Assist with the coordinating and tracking funding transfers to the pooled fund TPF-5(353).
- Research, write, and publish single story winter maintenance news posts at a rate of about one every two weeks.
- Use Constant Contact to distribute the winter maintenance news posts, completed research results, and other information.
- Create and administer the 2018-2019 Product Experience Survey.
- Produce briefs of completed research projects.
- Continue to coordinate with investigators and the Clear Roads subcommittees on projects in progress.
- Continue to coordinate the completion of post project closeout forms and research use surveys.

STATUS AND COMPLETION DATE:

The contract tasks are progressing as planned. The current contract completion date is June 30, 2020.