

# 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 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:** September through December 2013

**PARTICIPATING AGENCIES:** Minnesota Department of Transportation

**PROJECT MANAGER:** Debra Fick

**SP&R PROJECT NO:**  
02337

**PROJECT IS:**

**LEAD AGENCY:** Mn/DOT

Planning  
 Research & Development

**PRINCIPAL INVESTIGATOR:**  
CTC & Associates LLC

**ANNUAL BUDGET:**  
\$224,900

**PROJECT EXPENDITURES TO DATE:** \$69,395.40

## WORK COMPLETED:

### TAC Meetings

- Continued planning for a face-to-face meeting of the Clear Roads Technical Advisory Committee on March 25-27, 2014 in Portland, Maine. Planning includes all preparations for the meeting such as communication with TAC members, meeting logistics, guest invitation letters, agenda and meeting materials.
- Coordinated with members of AASHTO, Aurora and PNS to follow up on the results of the 2013 Winter Maintenance Peer Exchange.

### Administration and Marketing

- Updated the Clear Roads Web site with current TAC members, project status and meeting information. Began planning a redesign for the site.
- Maintained and updated commitment, obligation, and overall budget information for the pooled fund in coordination with MnDOT.
- Supported efforts of TAC members in recruiting new members and talking about Clear Roads at conferences.

### Information Services

- Researched and wrote content for the winter maintenance news published in November.
- Solicited ideas for the 2013-2014 Product Experience Survey.
- Distributed Clear Roads updates (final reports, RFPs, newsletters, etc.) to the Clear Roads distribution list using Constant Contact.
- Recorded and posted final presentation webinars for the following projects:
  - True Costs of Snow and Ice Control
  - Determining the Toxicity of Deicing Materials
- Created a YouTube channel for displaying and sharing Clear Roads videos.
- Drafted two-page briefs for the research projects on the Cost-Benefit Analysis Toolkit: Phase II, Determining the Toxicity of Deicing Chemicals and the True Costs of Winter Maintenance.

## Research Support

### *New projects*

- Supported the TAC and MnDOT in evaluating proposals and contracting with selected vendors for the following research projects selected by the TAC for funding at the Spring 2013 meeting.
  - Best Practices for the Prevention of Corrosion to DOT Equipment: A User's Manual
  - Snow and Ice Control Environmental Best Management Practices Manual
  - Understanding the Effectiveness of Non-Chlorine Liquid Agricultural By-Products and Solid Complex Chloride/Mineral Products Used in Snow and Ice Control Operations
  - Cost Benefit Analysis of Various Winter Maintenance Strategies
- Worked with the subcommittees to develop the scopes of work and formal RFPs for the following 2 research projects, which were previously selected by the TAC for funding:
  - Developing Test Bed Software to Qualify Plug and Play Technology
  - Training for Supervisors and Operators

### *Research in progress*

- Continued coordination with the PI and subcommittee to schedule check-in teleconferences and facilitate the review of interim and final deliverables for:
  - True Costs of Snow and Ice Control
  - Environmental Factors Causing Fatigue in Snowplow Operators
  - Determining the Toxicity of Deicing Materials
  - Development of a Totally Automated Spreading System
  - Establishing Effective Salt and Anti-icing Application Rates
  - Understanding the Chemical and Mechanical Performance of Snow and Ice Control Agents on Porous or Permeable Pavements
  - Comparison of Materials Distribution Systems
- Plug and Play Initiative: Coordinated with the project subcommittee and other stakeholders on the Technical Architecture Committee to continue refining a Plug and Play specification.
- Winter Maintenance Knowledge Base: Gathered Clear Roads discussion threads to have posted as a resource for others.

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

- Research, write and publish the February Winter Maintenance E-News.
- Coordinate the submission of research projects to consider for funding in 2014.
- Finish developing and post the 2013-2014 Product Experience Survey.
- Continue planning for a face-to-face meeting of the Clear Roads Technical Advisory Committee on March 25-27, 2014 in Portland, Maine: travel logistics, agenda, etc.
- Facilitate the public comment request for the specification that will enable "plug & play" technology for winter maintenance equipment.
- Continue to support the RFP and contracting process for Developing Test Bed Software to Qualify Plug and Play Technology and Training for Supervisors and Operators
- Continue to coordinate with investigators and the Clear Roads subcommittees on projects in progress. Distribute interim and final deliverables.
- Begin planning for the Fall 2014 Clear Roads TAC meeting (conference facilities, travel arrangements, vendor selection, etc.).
- Redesign the Clear Roads Web site using a content management system.
- Maintain the Clear Roads budget.

## **STATUS AND COMPLETION DATE:**

Work is progressing according to the contract, which is scheduled to end August 31, 2015.