

## What is Clear Roads?

- Pooled fund project #TPF-5(092)
- Began in 2004 with Iowa, Minnesota and Wisconsin as lead agency
- 14 current members:  
CO, IA, IL, IN, MA, MI, MO  
MN, NY, OH, UT, VA, WI, WY
- Focus on winter operations research with practical applications, field testing and usable results
- New projects funded every year. Members contribute \$25K annually. 100% SPR funds can be used



## Completed Research



### Calibration Accuracy of Manual and Ground-Speed-Control Spreaders

#### Problem:

Ground speed control systems used on deicing material spreading trucks have not been tested for accuracy, benefits and savings.



#### Research:

Investigators are comparing actual salt and prewet usage with expected usage based on the controller settings. .

#### Results:

The final report includes guidelines for maintaining accurate calibration of ground speed controllers with the goal of reduced salt usage and improved efficiency.

## Completed Research



### Synthesis of Best Practices for Eliminating Fogging and Icing on Winter Maintenance Vehicles

#### Problem:

Windows and mirrors on snowplow trucks often become covered with snow, ice, frost and other precipitation during winter storms, raising visibility and safety concerns for the operators.



#### Research:

Investigators conducted a comprehensive survey to identify effective methods for combating or preventing moisture on windows and mirrors while maintaining the comfort and safety of the plow operator.

#### Results:

The final report compiles a range of solutions, both long-term and short-term, for keeping snow plow glass and mirror surfaces clean of winter precipitation inside and out.

## Research in Progress



### Determining Effectiveness of Deicing Materials and Procedures

Develop testing guidelines for evaluating the performance of various winter road chemicals. These guidelines will specify the minimum equipment and data required to effectively evaluate winter chemical performance and will describe the ideal test location.

*Expected results:* A portable test method for determining the effectiveness of deicers that could be used by any interested state in a variety of locations under a variety of winter conditions.

### Development of Standardized Test Procedures for Carbide Insert Snowplow Blade Wear



Research to develop standardized testing procedures for evaluating how well carbide insert snowplow blades stand up to wear and fracturing.

*Expected results:* Testing procedures that could be used by an independent testing laboratory to determine life expectancy of any carbide insert snowplow blade.



## Research in Progress (continued)



### Development of Standardized Test Procedures for Evaluating Deicing Chemicals

Research to develop and/or identify existing standardized testing procedures for evaluating deicer performance. The goal is to provide standard testing procedures and ranges for evaluating any deicing chemicals, additives and mixtures used on roadways and other transportation facilities.

*Expected results:* Standard tests that will help simplify the deicer evaluation process for state DOTs.



## Research Starting This Fall



### Development of Interface Specifications for Mobile Data Platforms on DOT

Research to develop interface specifications for a mobile data platform, including data format, architecture, and communications protocols to support roadway maintenance operations. In addition, the results of the project will include recommendations for how to implement the specifications as a national standard.

*Expected results:* To establish a set of standard specifications that would support a “plug and play” approach to integrating sensors and other devices.



### Cost-benefit Analysis Toolkit

Research to develop a standard tool for cost/benefit analysis (such as a spreadsheet or computer program), including a manual, and training delivered to Clear Roads and available to other states. The toolkit should include the methodology and assumptions such as performance standards as well as expected service life and lifecycle costs

*Expected results:* A practical tool that can be used by Clear Roads states and other agencies to calculate the cost/benefits and more easily justify to those not familiar with our industry why expenditures need to be made and the benefit they would produce, such as cost savings in materials, time or equipment repair, level of service, etc.





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## Research Starting This Fall (continued)



### Development of Interface Specifications for Mobile Data Platforms on DOT

Research to identify high-risk drivers and the best message format to reach that audience. The project will also study the effectiveness of the messages on changing the target group's perception and winter driving behavior.

*Expected results:* To produce, distribute and evaluate winter driving safety messages aimed at high-risk drivers.



## Partnership Projects



### National Winter Maintenance Peer Exchange

Clear Roads helped to plan this great event in collaboration with the Aurora pooled fund, Snow and Ice Pooled Fund Cooperative Program, FHWA, and the Pacific Northwest Snowfighters.

### National Winter Safety Campaign

With the help of volunteer public information officers and winter maintenance professionals around the country, Clear Roads is coordinating a national multimedia campaign designed to educate drivers about the importance of driving safely in winter conditions.

### Computer-Based Training

Clear Roads supports the efforts of the Snow and Ice Pooled Fund Cooperative Program in developing computer-based training modules that help train snow plow drivers, maintenance crews and others.

### Snowplow Design

Clear Roads is working with the Winter Concept Vehicle Pooled Fund to conduct research on optimum snowplow design.



## Technology Transfer Leadership



### Winter Maintenance E-Newsletter

Clear Roads develops and publishes a bi-monthly e-newsletter that highlights applications of winter maintenance research and technology and the latest transportation research reports by state DOTs, universities, TRB and FHWA.

### Product Evaluation Survey

In an effort to encourage the informal evaluation of products related to winter maintenance, Clear Roads created a Product Evaluation Survey for use by any interested organization. Available on the Clear Roads Web site, the survey allows states to share experiences with new or existing products.





## For more information



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