

State Planning and Research Program Quarterly Report

PROJECT TITLE: Mapping Weather Severity Zones

OBJECTIVES: To analyze weather severity in snow and ice states to develop a methodology to map weather severity, from a winter maintenance perspective, across the regions and states.

PERIOD COVERED: Q2 / April 1st – June 30th, 2012

PARTICIPATING AGENCIES:

Clear Roads Member Agencies

PROJECT MANAGER:

Tom Peters

SP&R PROJECT NO:

TPF-5(218)

PROJECT IS:

☐ Planning
☒ Research & Development

LEAD AGENCY:

Minnesota Department of Transportation

PRINCIPAL INVESTIGATOR:

John Mewes

Meridian Environmental Technology, Inc.

ANNUAL BUDGET:

\$49,725.18

PROJECT EXPENDITURES TO DATE:

\$39,483.94

WORK COMPLETED:

The development of national, gridded datasets of various measures of winter severity was the focus of the majority of the work effort during the quarter. This included the application of different techniques and datasets to independently develop datasets of average annual snowfall amount, average annual number of hours of snowfall and freezing rain, and the average annual number of hours of blowing/drifted snow. These core datasets were then used to create both individual maps, and as components in a fifth gridded dataset of overall winter severity. Sample maps of each of these measures were circulated to the technical panel for feedback and to focus discussion as to the format of the final product of the project. It was preliminarily decided that the deliverables should include high-quality map images, ESRI shapefiles for GIS applications of the data, and a simple comma-delimited format (organized by latitude/longitude blocks) that is amenable to application with the model coming out of Clear Roads' parallel True Costs of Winter Maintenance project. Work toward the development of an ability to generate these additional data formats was initiated but not completed.

SUMMARY OF ACTIVITIES EXPECTED TO BE PERFORMED NEXT QUARTER:

Development of the final publication-quality map images, the ESRI shapefiles, and the comma-delimited data format, as well as generate of a final report and presentation, will be the foci of the 3rd quarter 2012 work efforts.

STATUS AND COMPLETION DATE:

The project is proceeding on schedule and is expected to be completed by the July 31, 2012 expiration date of the contract.