

## **Use of Mobile Sensors and Maintenance Decision Support for Automated Road Condition Reporting**

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The concept of mobile sensors reporting weather and driving conditions from moving snowplows in real time has been developed and tested by multiple State DOTs in recent years. Several approaches for mobile sensors have been deployed and tested in operational environments. Also, States have deployed mature MDSS systems that are capable of predicting road conditions that will result from adverse weather and application of maintenance treatments. Currently, most states rely on manual reporting of road conditions into some form of a Condition Reporting System to populate the databases that drive 511 phone and web-based traveler information systems. This North/West Passage Pooled Fund project is exploring best practices and current state of the art to research the capabilities of mobile sensors and MDSS to supplement or replace manual reporting that is now required. The presentation for this project will summarize the best practices of deploying and using mobile sensors, including successful deployments that are in operation today, and what can be learned by approaches that did not succeed. The presentation will also summarize information gathered including documentation, capabilities, options and features available from private contractors and vendors of mobile sensor and MDSS. It will also summarize emerging technology and trends in reporting and forecasting road conditions from the national weather programs (e.g. Clarus, NOAA). The final result of the presentation will identify how mobile data collection and MDSS can be used effectively to improve traveler information.