

Session 3.4.2 A Rural Roadway Vegetation and Blowing Snow Susceptibility Index

Presenter

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The University of North Dakota has been a national leader in the innovation of traveler information decision support systems and its location within the upper Midwest offers an excellent opportunity to assist rural America with improving method of increased traveler safety through the study of blowing snow. Blowing snow models are currently being developed that would benefit greatly if detailed information on surface roughness and/or obstructions could be incorporated into the model initialization.

The Surface Weather Research Center at the University of North Dakota is studying the effects of roadside vegetation on blowing and drifting snow in rural areas by utilizing a video mapping technique that allows for the link between video data and GPS data within a GIS. Results from this study will be folded into a maintenance decision support system developed at STWRC and Meridian Environmental, Inc currently being used by a number of states including North Dakota DOT, South Dakota DOT.

This presentation will describe results from a roadway vegetation study and a blowing and drifting snow study done at the University of North Dakota. These studies lead to the development of a blowing snow susceptibility index. The presentation will highlight the need for both the blowing snow susceptibility index, mapping of roadway vegetation, and show examples of the updated categories within surface transportation weather research.