

Amos is willing to be considered for the short format for 1 or 2 of his presentations

Utilizing the METRo Road Surface Model for High-impact, Low-accumulation Winter Events

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The Federal Highway Administration reports that, on average, winter weather is responsible for over 1,900 fatalities, 140,000 injuries, and 540,000 vehicle crashes each year. Furthermore, state and local transportation authorities spend more than \$2.3 billion annually on snow and ice control. The current winter headline paradigm of the National Weather Service (NWS) is still largely focused on objective criteria related to the meteorological strength of the storm (e.g., 6 inches of snow in 12 hours is classified as a “winter storm”). However, events with significantly less snow and ice accumulation can and do still produce large impacts. These impacts are often related to the pavement condition, which can be difficult to predict given current NWS tools and training.

METRo (Model for the Environment and Temperature of Roads) shows some potential for helping in this endeavor. METRo is an open source model developed by Environment Canada used to predict the temperature and condition of road surfaces. The Western Region of the NWS has been running METRo operationally since 2011 and is currently expanding coverage east of the Rockies. This tool was useful for a few of the 2014-2015 winter events across northern Indiana. It can be useful for both identifying high impact events and reducing false alarms. The goal of this presentation is to use case study examples to highlight the potential utility of the METRo pavement model in NWS operations. The strengths and weaknesses of the model will be presented along with instructions for NWS personnel to view the data.