

ICNet Members' New England Research & Project Survey



Research/Project Focus	Roadway Seasonal Load Restrictions During to Spring Thaw
Research/Project Description	The main objective of this research is to apply commercial remote sensing and spatial information (CRS&SI) technology integration and products to monitor the condition of roadways during the spring thaw and recovery period. This will provide critical quantitative data to eliminate or supplement components of current visual inspection procedures, and thus greatly assist transportation agencies in making seasonal load restrictions (SLR) placement and removal decisions.
Primary Category*	Roads Bridges Culverts
Geographic Location	Warren/Wentworth, NH; Madison, Maine, and Mariaville, Maine.
Funding	US DOT-research and innovative technology administration
Contact	Heather Miller UMass-D: hmillier@umassd.edu
Infrastructure sectors effected, subject area	Roads, both paved and unpaved
For modeled climate or sea level rise projections, AOGCM or other sources used	N/A

Other Information, data, models, used	Investigation of several models for SLR timing and for predicting the depths of frost and thaw penetration in soils beneath roadways. Historical data (2006-2012) from other areas in NH also being analyzed.
Time periods analyzed	2002-2012
Status /Date submitted to ICNet	In Progress. Submitted Oct, 2012
Brief key findings to date	N/A
Key publications/reports?	<p>Miller, H. J., Cabral, C., Kestler, M. A., Berg, R. L. and Eaton, R. A., <i>Comparative Analyses of Methods for Posting Spring Load Restrictions</i>. Proceedings of the 10th International Symposium on Cold Regions Development, Anchorage, Alaska June 2-5, 2013.</p> <p>O'Connor, S., Balasubramanian R., Zarrillo M., Miller H., Wang H., <i>Modeling and Decision Support System to Determine When to Impose Seasonal Load Restrictions (SLR)</i>. Proceedings of the International Workshop on Applied Modeling and Simulation, Rome, Italy, September 24-27, 2012.</p> <p>Miller, H. J., Cabral, C., Kestler, M. A., Berg, R. L. and Eaton, R. A., <i>Calibration of a Freeze-Thaw Prediction Model for Spring Load Restriction Timing in Northern New England</i>. Proceedings of the 15'th International Conference on Cold Regions Engineering, Quebec, Canada, August 19-22, 2012.</p> <p>More publications are available.</p>
Other information (e.g., web links to technical reports).	N/A

*** Categories: Roads, bridges, and culverts; Pavement and/or soils; Hydrology (study of data/floods); Environmental/water resources (stormwater, drinking water); Transportation assets (network); Climate model output**