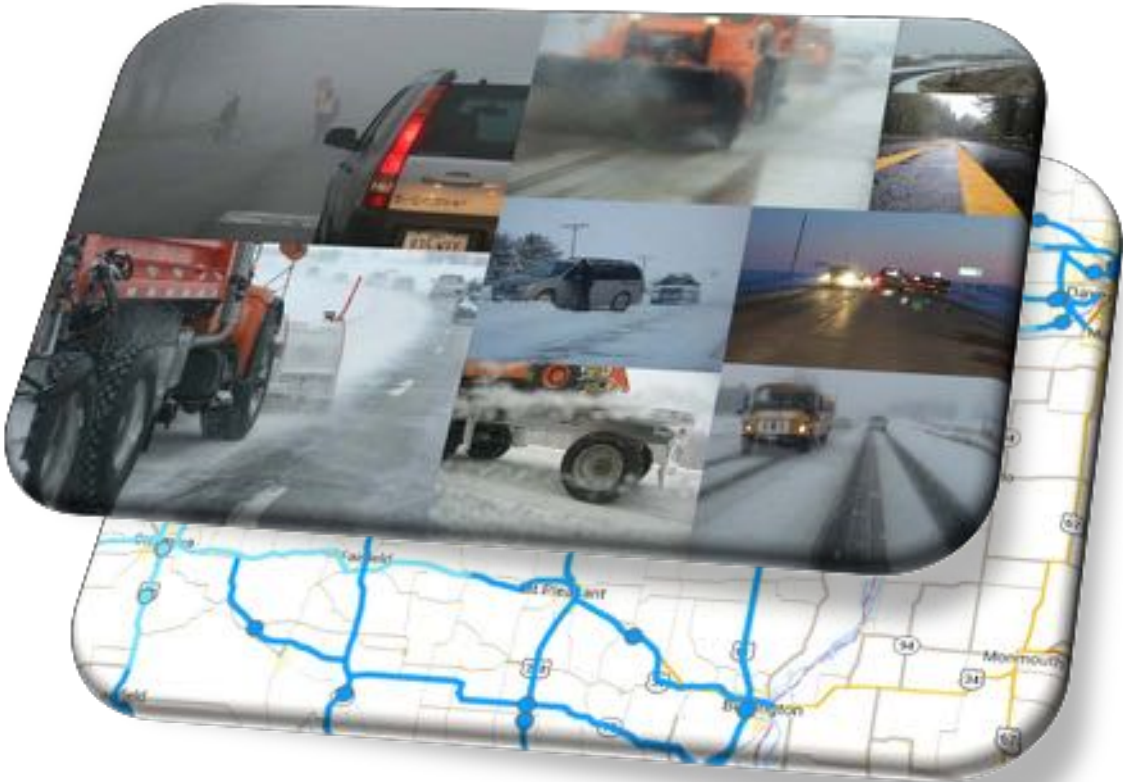
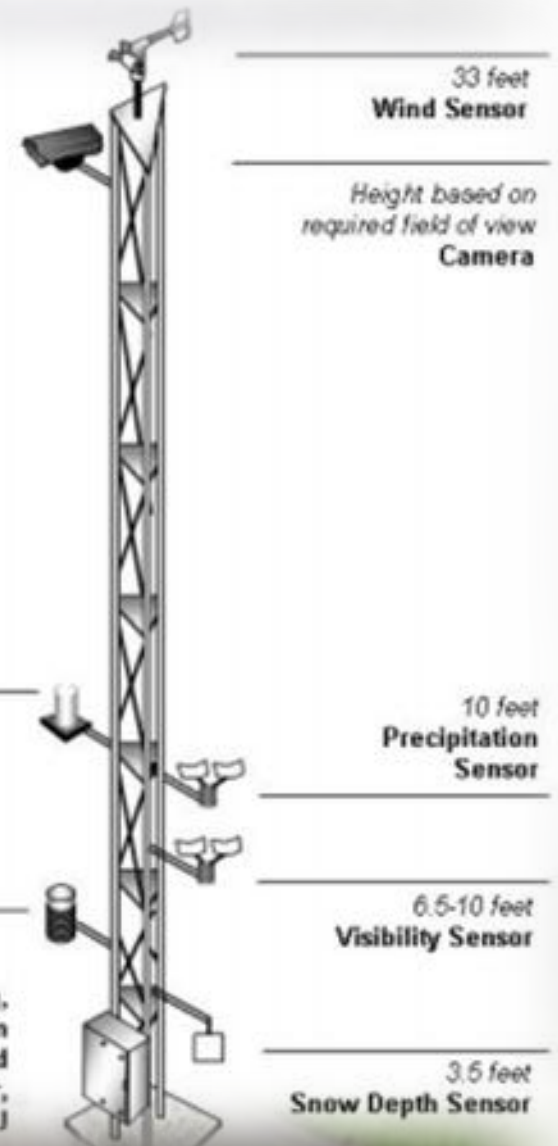


2015 National Winter Maintenance Peer Exchange

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33 feet
Wind Sensor

*Height based on
required field of view*
Camera

10 feet
**Radiation
Sensor**

5-6.5 feet
**Temperature Dewpoint
Sensor**

10 feet
**Precipitation
Sensor**

6.5-10 feet
Visibility Sensor

**Road Surface, Subsurface, Flooding,
Water Level, and Precipitation
Accumulation Sensors Located
Away from the Tower,
Pressure Sensor in RPU**

3.5 feet
Snow Depth Sensor

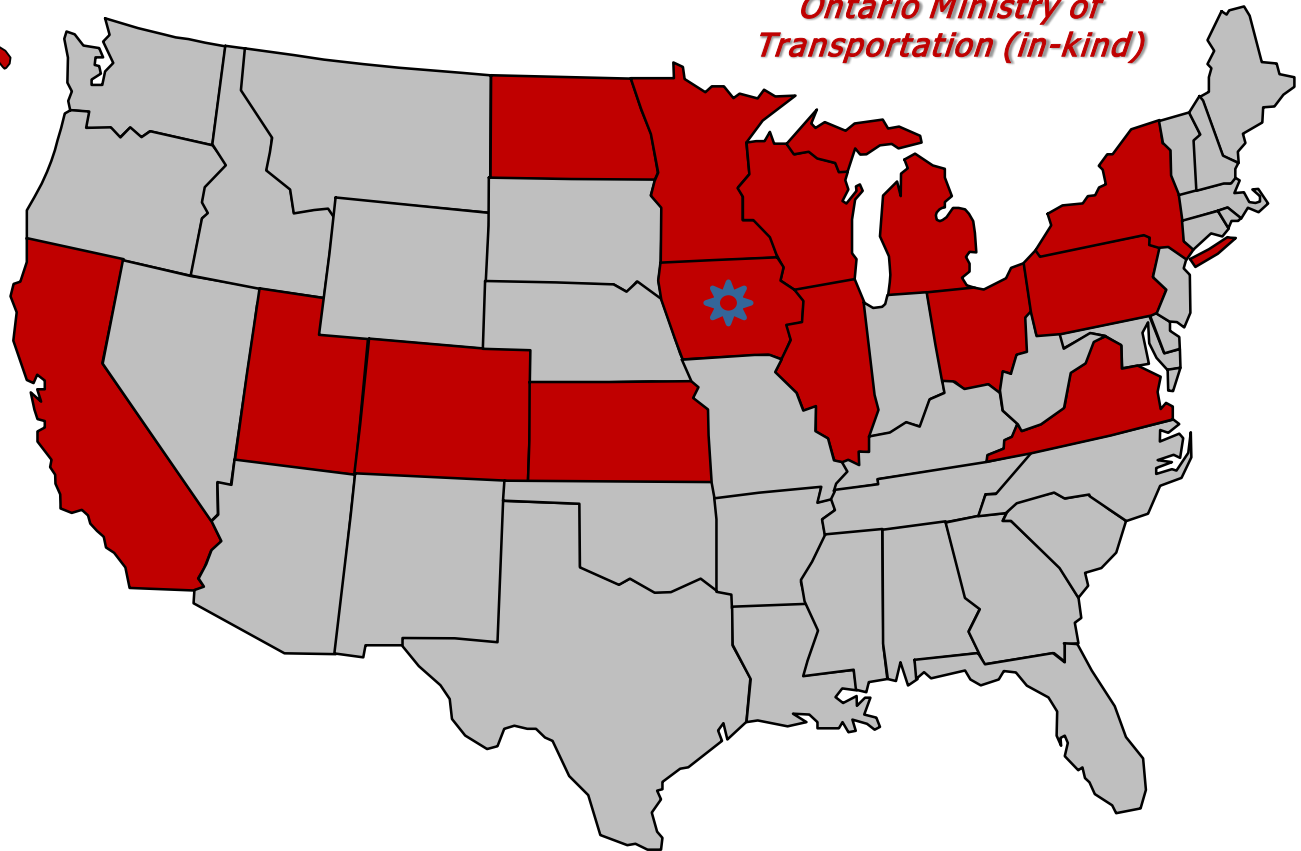
Image Source:
<http://ntl.bts.gov/lib/30000/30700/30705/14447.pdf>



Aurora is an international program of collaborative research, development, and deployment in the field of road weather information systems (**RWIS**).

Active Participants

Ontario Ministry of Transportation (in-kind)



 *Iowa DOT serves as administrative lead state
Iowa State University serves as the project manager*





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information systems technology

Affiliates / Partners

- National Center for Atmospheric Research (NCAR)
- Meteorological Service of Canada
- Montana State University
- Swedish Meteorological and Hydrological Institute
- Penn State University
- University of North Dakota
- University of Minnesota
- University of Wisconsin – Madison
- University of Wisconsin – Milwaukee
- Purdue University
- Massachusetts Institute of Technology
- Iowa State University
- Ohio University
- University of Waterloo
- University of Utah



Ongoing Projects

- ~ 17 Ongoing Projects, covering areas of:
 - Equipment Evaluation
 - Standards / Architecture
 - Site Operations / Quality Assurance
 - Information Outreach
 - Decision Support / Modeling
 - Road Condition Monitoring

*Reviewed during "project updates" portion
of each board meeting*

Recent and Ongoing Projects

- Multiple-Use ITS Data Collection Sites
- Summary and Comparison of Sensors
- Mobile-Weather Data Collection Guidelines
- Results Based Winter Road Maintenance Standards
- RWIS Sensor Density and Location
- RWIS Training Tool
- Study of MDSS Costs
- Validate the Accuracy of Pavement Condition Predictions
- Winter Weather Severity Index, Phase 2
- Cameras and Operational Impact of Remote Condition

Recent and Ongoing Projects

- Communicating and Publicizing Information
- Seasonal Weight Restrictions Demonstration
- Fourth National Winter Maintenance Peer Exchange
- Transition of Clarus to MADIS
- Improving Estimations of Real-Time Traffic Speeds During Weather for Winter Performance Measurement
- Quantifying Salt Concentration on Pavement
- Knowledge Base Content Management and Marketing
- Make the Aurora Winter Severity Index Available to All
- Synthesis of Alternative Power Supplies
- Best Practice in Data Storage
- Non-Traditional RWIS

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[Knowledge Base](#)



Upcoming Events

Aurora Board Web Meeting - Thursday,
December 6, 2012 at 10:00am (CST)

Transportation Research Board Annual Meeting - January 13-17, 2013 in Washington, DC

Aurora Board On-Site Meeting - April 2-4, 2013 in Virginia (tentative)

Who We Are

Aurora is an international partnership of public road agencies working together to perform joint road weather-related research. This site is designed to introduce the program, its partners, and its research.

Why Join Aurora?

- to set the agenda for collaborative research, development, and deployment of road weather information systems (RWIS);
- to multiply your agency's financial resources to address its most pressing RWIS-related challenges;
- to develop relationships with national and international, public and private leaders in RWIS equipment, decision support systems, standards, and training.

Aurora Features



January 2013 eNews Available!
The latest eNews is available with future goals, new research, and a welcome to the Kansas DOT, Aurora's newest member.



Video Guide to Testing Deicing Chemicals
Clear Roads has released a field guide video on testing deicing chemicals.



Knowledge Base Boasts New Content
Knowledge Base continues to offer more content on road weather best practices.

Board Chair: Jason Norville - Pennsylvania DOT

Members: Alaska DOT&APF, Illinois DOT, Iowa DOT, Kansas DOT, Michigan DOT, Minnesota DOT, New York State DOT, North Dakota DOT, Ohio DOT, Ontario Ministry of Transportation, Pennsylvania DOT, Utah DOT, Virginia DOT, Wisconsin DOT



[Favorites](#) [Projects Completed](#)

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Projects completed by Aurora include

- 2007 National Winter Maintenance Peer Exchange
- 2009 National Winter Maintenance Peer Exchange
- Adaptation of the Local Climatological Model
- Compilation of RWIS Specifications
- Computer-Based Training Development
- Evaluation of Utah DOT Weather Operations Program
- Evaluation of Vaisala Spectro Pavement Sensor
- Expert System for Maintenance Decision Support
- Guidelines for Pavement Sensors
- Hot Plate Snow Gauge Demonstration
- Improved Frost Forecast Model, Phase 1
- Improved Frost Forecast Model, Phase 2
- Integration of Road Weather Information with Traffic
- Intelligent Image-Based Winter Road Condition
- Intelligent Image-Based Winter Road Condition
- Intelligent Image-Based Winter Road Condition
- Interjurisdictional Traveler Information Exchange
- Investigation of the Variability of Snow Cover
- Knowledge Base for Road Weather and Winter Operations
- Laser Road Surface Sensor
- Low Cost Mobile RWIS
- Mobile Weather and Road Condition Reporting
- New Road Surface Condition Sensor
- **Off-the-Shelf Component RWIS**
- Pavement Temperature Sensor Accuracy
- Road Weather Roadshow
- Road Weather Training for Improved Winter Response
- RWIS Communications Standards
- RWIS Data Integration and Sharing Guidelines
- RWIS Equipment Monitoring System, Phase 1
- RWIS Institutional Issues
- RWIS Telecommunication Issues and Outlook

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Off-the-Shelf Component RWIS

Final Report


Project Overview

This project involved building an RWIS station with test the performance of different sensors

Project Status

Completed

Last updated 12/21/2007

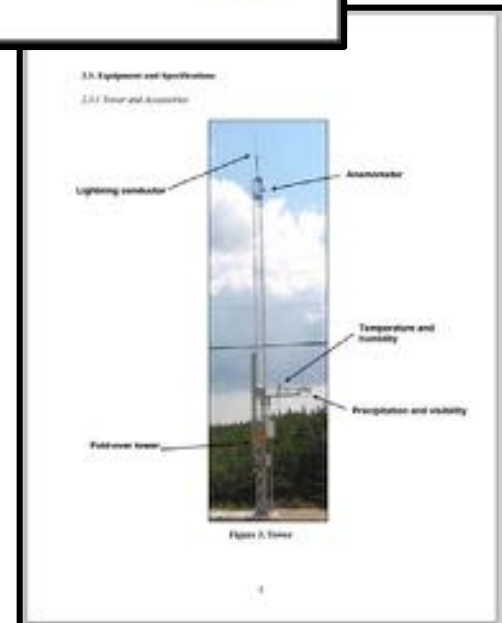


 working to advance road weather information systems technology

Off-the-Shelf Component RWIS

<http://aurora-program.org>
 Aurora Project 2000-02

Final Report
May 2008



KNOWLEDGE BASE

for road weather and winter maintenance

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Other

LATEST ADDITIONS

Aurora Project 2000-01 – Benchmarking the Performance of RWIS Forecasts

Aurora Project 1999-02 – Road Weather Roadshow

Aurora Project 1999-01 – Compilation of RWIS Specifications

Aurora Project 1998-02 – Standardized Testing Methodologies for Pavement Sensors

Aurora Project 1997-05 – Standardized Weather and Road Condition Information

CATEGORIES

Recent Contributions



Aurora Project 2000-01 – Benchmarking the Performance of RWIS Forecasts

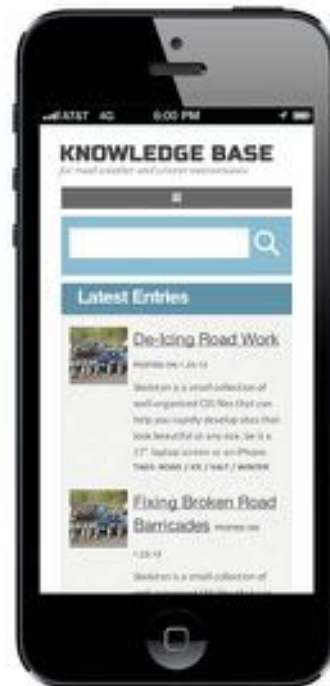
POSTED ON AUGUST 1, 2013 | BY LINDSEY

This effort reviewed the state-of-the-art within the meteorological community in regards to measuring the performance of weather forecasting information, reviewed the current status of RWIS... Road (2000)



Aurora Project 1999-02 – Road Weather Roadshow

POSTED ON AUGUST 1, 2013 | BY LINDSEY





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www.aurora-program.org

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