

Aurora Program

minutes

Aurora Board Meeting June 27, 2013 – Conference Call/Web Meeting

Individuals Participating:

Travis Lutman, North Dakota DOT
Dawn Gustafson, Michigan DOT
Max Perchanok, Ontario MOT
Mike Adams, Wisconsin DOT
Abner Johnson, Ohio DOT
Joe Doherty, New York State DOT
Tim Peters, Illinois DOT
Ron Hall, Kansas DOT
Jeff Williams, Utah DOT
Jimmy White, Virginia DOT
Tina Greenfield, Iowa DOT
Curt Pape, Minnesota DOT
Linda Narigon, Iowa DOT
Mike Kisse, North Dakota DOT
Jack Stickel, Alaska DOT&PF
Roemer Alfelor, FHWA
Lee Smithson, AASHTO
Mike Chapman, NCAR
Chris Albrecht, Iowa State University
Tom Lindsley, Iowa State University
Silvana Croope, Delaware DOT (guest)

Meeting Agenda:

- 1) Call to Order (Jason Norville)
- 2) Approval of May 15 Meeting Minutes (Chris Albrecht)
- 3) Program Administration and Management (Linda Narigon and Chris Albrecht)
- 4) Fall On-Site Board Meeting in Vancouver (Lee Smithson and Chris Albrecht)
- 5) Work Plan (Chris Albrecht)
- 6) Ongoing Project Progress (Project Champions)
- 7) Other Business (All)

1. Call to Order

Travis Lutman called the meeting to order.

2. Approval of May Minutes

After a short discussion, the board voted to approve the minutes from the May 15 board web meeting. Chris noted that he would post the minutes on the website as soon as possible.

3. Program Administration and Management

Chris Albrecht then briefly reviewed the latest management contract expenditures, noting that the figures were current as of June 26. Specifically, ISU costs were \$37,211 and board meeting costs were \$11,745. Both of these numbers were in line with expectations, Chris added. He also briefly reviewed the contract reporting requirements spreadsheet, noting dates of required quarterly reports. Next, Linda Narigon briefly discussed the pooled fund project rollover that will impact the Aurora group. She noted that the idea of the rollover process is to be able to close out past projects and expense reporting in order to simplify accounting moving forward. After a short discussion, the group agreed that they would work through Chris to make the process work.

4. Fall Meeting in Vancouver

Chris Albrecht then reviewed plans for the on-site meeting to be held in September along with the peer exchange. He reminded the group that all meetings would be held at the Red Lion Hotel in Vancouver, Washington. The board also discussed the scheduling of the board meeting for this same week, deciding to meet on September 9 to review projects and administrative issues and September 12 to discuss the FY2014 program and to jointly review the peer exchange with the Clear Roads board.

5. Work Plan

Next, Chris Albrecht reviewed the revised draft of the annual program work plan, noting that a few changes had been made from board input. After a short discussion, the board voted to accept the plan as the official FY2013 work plan.

6. Ongoing Project Progress

Project champions then gave updates on the status of ongoing research. Details are as follows:

Project 2007-05 – Multiple-Use ITS Data Collection Sites: Chris Albrecht briefly reviewed this project, noting that the survey had been distributed and is seeing responses. He also noted that the project is scheduled to be complete by September 30.

Project 2009-01 – Summary and Comparison of Agency Experiences with Sensors: Dawn Gustafson noted that she and Chris had discussed revisions of the spreadsheet and will be sending it out again in the near future. It was also noted that this effort should be complete by September 30 as well.

Project 2010-02 – Mobile-Weather Data Collection Guidelines: A lengthy discussion resulted, wherein the team decided that the draft paper should be shared with the attendees of the peer exchange in September. It was also agreed that this effort would be closed out by the end of 2013.

Project 2010-03 – Results-Based Winter Road Research: Max Perchanok reviewed this project, noting that the University of Waterloo researchers were making very good progress to date. He also noted that this effort should be closed out by the end of 2013.

Project 2010-04 – RWIS Sensor Density: Max Perchanok noted that the effort was also moving ahead steadily, with an expected completion in late 2014.

Project 2010-05 – Determining RPU and Sensor Failure: Jack Stickel and Chris Albrecht both reviewed this effort. After a short discussion, it was agreed that the goals of this project could be rolled into Project 2009-01. Therefore, it was agreed that Chris would schedule a conference call with the teams from both projects to discuss how to integrate them.

Project 2011-02 – RWIS Training Tool: Tina Greenfield noted that this effort was now under contract, with an estimated completion in 2015.

Project 2011-04 – Study of MDSS Costs: Mike Adams reviewed this project, noting that he had been writing the report based on Wisconsin DOT's experiences and costs with information from other agencies mixed in where available. The report was being reviewed internally by Wisconsin DOT, he added, and would be sent to the Aurora team once that review is complete. He also noted that the project should be complete by the end of 2013.

Project 2011-05 – Funding Source Identification: Jack Stickel noted that this project would be done through the knowledge base by the end of 2013.

Project 2012-01 – Validate the Accuracy of Pavement Condition Predictions from Various Sources: Max Perchanok reviewed the background to this effort, noting that he was still working on an RFP. After a lengthy discussion, it was noted that this project could extend into 2015, but could also be phased to fit the rollover process discussed earlier.

Project 2012-02 – Winter Severity Index, Phase 2: Tina Greenfield noted that she had circulated a draft guide to the entire board for review. She asked that the team get any final comments on the guide to her as soon as possible. She also noted that the project should be completed by the end of 2013.

Project 2012-03 – Cameras and Operational Impacts of Remote Road Conditions: Travis Lutman noted that the project team had conducted a meeting recently with researchers from BYU. Chris Albrecht also noted that a literature search had been done, plus Utah DOT had recently helped the researchers choose interview locations around their state. It was also noted that this effort was scheduled to be complete by June 30, 2014.

Project 2012-04 – Communicating and Publicizing Road Weather and Operations Information: After a lengthy discussion on the direction of this effort, Joe Doherty and Chris Albrecht noted that they would get together via conference call soon to further discuss the scope. Most likely, it was decided, it would entail a state of the practice review.

Project 2012-05 – Seasonal Weight Restrictions Demonstration: Max Perchanok reviewed the background on this project, noting that the RFP was ready for advertisement with Iowa DOT. During further discussion, it was also noted that this project could be divided into two phases, with the first completed in 2014, with the second lasting two years beyond.

Project 2013-01 – Fourth Peer Exchange: Chris Albrecht noted that plans for the next peer exchange were discussed earlier in the meeting.

Project 2013-02 – Transition of Clarus to MADIS: Jack Stickel noted that the transition has gone very smoothly with good cooperation amongst the entities involved. He also noted that the transition should be complete by the end of 2015, but that this Aurora project number could be closed out by the end of 2013.

Project 2013-03 – Improving Real-Time Traffic Speeds for Performance Measurement: Tina Greenfield briefly reviewed the scope of this effort. She noted that her preferred plan was to source this effort to Iowa State University’s Statistics Department, although there has been a delay in finding a starting time for the research until fall 2013. She also noted that the work should be completed in 2014.

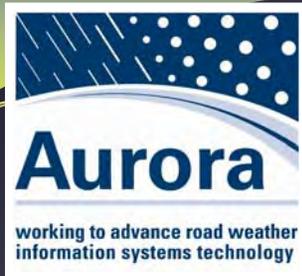
Project 2013-04 – Quantifying Salt Concentration on Pavement: Max Perchanok briefly reviewed the rough scope of this effort, noting that he would plan to have the RFP ready by the end of 2013.

Project 2013-05 – Knowledge Base Content Management: Tina Greenfield noted that this project is being undertaken by InTrans as a way to update and market the knowledge base. Chris Albrecht noted that he and Neal Hawkins had been working with Tom Lindsley on a new site format and content management system. Next, Tom reviewed a few of the issues and ideas he had been working on in the last few weeks. After a lengthy discussion, the group agreed that the new format and system would be a good change to the Knowledge Base.

Project 2013-06 – Make Aurora Severity Index Available to Other Agencies: Tina Greenfield noted that this effort is still in the process of contracting between Iowa DOT and AccuWeather.

7. Other Business

Chris Albrecht introduced Silvana Croope from the Delaware DOT as a guest, then asked her to provide some brief background on activities related to RWIS and environmental sensing being done in Delaware. Silvana then reviewed her state’s RWIS and flood monitoring activities as they relate to Aurora interests.



Aurora Program Board Web Meeting

June 27, 2013

Today's Agenda:

- 1) Call to Order
- 2) Approval of May 15 Meeting Minutes
- 3) Program Administration and Management
- 4) Fall On-Site Board Meeting in Vancouver
- 5) Work Plan
- 6) Ongoing Project Progress
- 7) Other Business *

* Silvana Croope, Delaware DOT



1) Call to Order

Jason Norville

Aurora Program Chair

Pennsylvania Department of Transportation

janorville@state.pa.us

Travis Lutman

Aurora Program Vice Chair

North Dakota Department of Transportation

tlutman@nd.gov

Dawn Gustafson

Aurora Program Past Chair

Michigan Department of Transportation

gustafsond@michigan.gov



2) Approval of Minutes

Aurora Program

minutes

Aurora Board Meeting
May 15, 2013 – Conference Call/Web Meeting

DRAFT #3

Individuals Participating:

Jason Norville, Pennsylvania DOT
Dawn Gustafson, Michigan DOT
Max Perchanok, Ontario MOT
Travis Lutman, North Dakota DOT
Mike Adams, Wisconsin DOT
Joe Doherty, New York State DOT
Tim Peters, Illinois DOT
Ron Hall, Kansas DOT
Jeff Williams, Utah DOT
Jimmy White, Virginia DOT
Tina Greenfield, Iowa DOT
Linda Narigon, Iowa DOT
Roemer Alfelor, FHWA

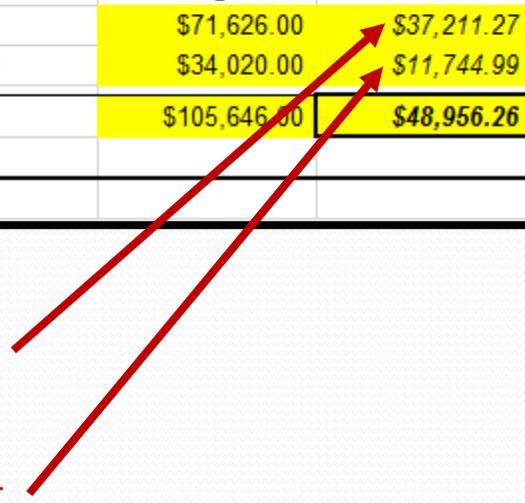
Any further comments?

3) Program Administration

Year 10	474-77-41	January 1, 2013 - December 31, 2013		
		Total		
		ISU Labor	\$21,789.55	
		ISU Travel	\$2,161.37	
		ISU Other	\$13,260.35	
		Board Meetings	\$6,630.52	
		Board Travel	\$5,114.47	
		Total	\$48,956.26	
Brief Summary of Year 10 (through 6/26/2013)				
			Budget	Actual
		CTRE	\$71,626.00	\$37,211.27
		Board Meetings/Travel	\$34,020.00	\$11,744.99
			\$105,646.00	\$48,956.26

52% of budget

35% of budget



3) Program Administration

Aurora Contract Reporting Requirements							
Quarterly Reports	2013 Q1	2013 Q2	2013 Q3	2013 Q4	2014 Q1	2014 Q2	2014 Q3
Project 2007-05	5/1/2013						
Project 2008-01	5/1/2013						
Project 2009-01	5/1/2013						
Project 2009-05	5/1/2013						
Project 2010-02	5/1/2013						
Project 2010-03	5/1/2013						
Project 2010-04	5/1/2013						
Project 2010-05	5/1/2013						
Project 2011-02	5/1/2013						
Project 2011-03	5/1/2013						
Project 2011-04	5/1/2013						
Project 2011-05	5/1/2013						
Project 2012-01	5/1/2013						
Project 2012-02	5/1/2013						
Project 2012-03	5/1/2013						
Project 2012-04	5/1/2013						
Project 2012-05	5/1/2013						
Project 2013-01	5/1/2013						
Project 2013-02	5/1/2013						
Project 2013-03	5/1/2013						
Project 2013-04	5/1/2013						
Project 2013-05	5/1/2013						
Project 2013-06	5/1/2013						
Meetings / Minutes	Materials Out	Minutes - Sent	- Approved	- Posted			
November 14, 2012 Board Meeting	11/1/2012	11/29/2012	12/6/2012	12/10/2012			
December 6, 2012 Board Meeting	11/29/2012	2/3/2013	4/3/2013	4/19/2013			
February 19, 2013 Administrative Meeting	2/5/2013	3/6/2013	3/13/2013	3/22/2013			
April 2, 2013 Board Meeting	3/12/2013	4/24/2013	5/15/2013	5/24/2013			
May 15, 2013 Board Meeting	5/1/2013	5/28/2013					
June 20, 2013 Administrative Meeting	6/13/2013						
June 27, 2013 Board Meeting	6/13/2013						
August 1, 2013 Administrative Meeting							
August 8, 2013 Board Meeting							
September 9, 2013 Board Meeting							

Complete in next 2 weeks

Would like to schedule an administrative call



3) Program Administration

- Active Pooled Fund Project Roll-over
 - Linda Narigon, Iowa DOT

4) Fall Meeting

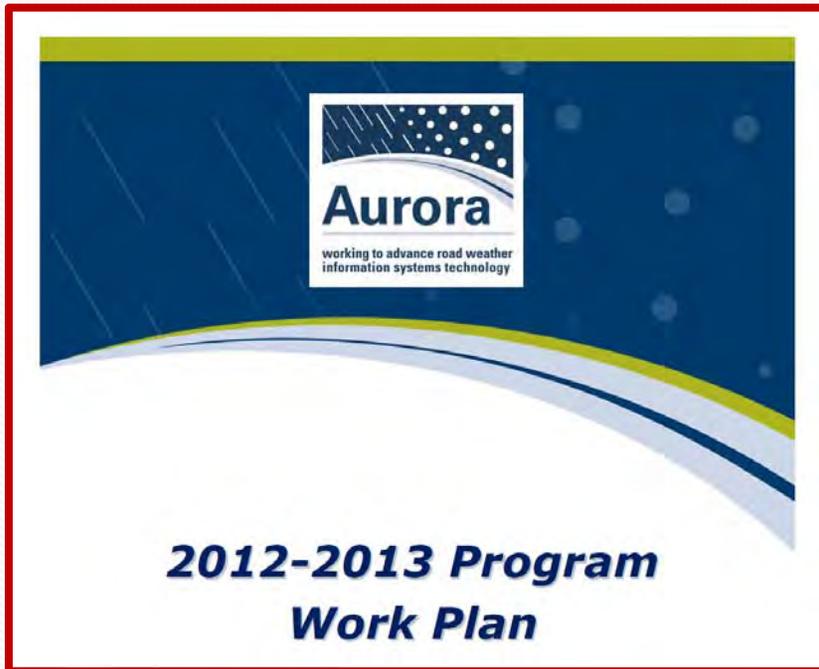
- Fourth National Winter Maintenance Peer Exchange
- September 9-13, 2013
- Vancouver, Washington
- Red Lion Hotel Vancouver at the Quay →
- ***Aurora meeting on Monday pm and Thursday am***



4) Fall Meeting

- **Monday, September 9**
 - 1:00pm – Open and Projects
 - 3:30pm – Program Administration
 - 4:00pm – Future Meetings/Calls
- Tuesday, September 10 (Peer Exchange)
- Wednesday, September 11 (Peer Exchange)
- **Thursday, September 12**
 - 8:00am – Joint Meeting with Clear Roads
 - 11:00am – FY2014 Program

5) Work Plan



7. ONGOING AURORA PROJECTS

This section provides overviews of the research projects funded prior to FY2013 that remain underway at the time this work plan was produced.

7.1 Multiple-Use ITS Data Collection Practices (2007-05)

Champion: Alaska Department of Transportation and Public Facilities

Background: There are a number of factors that contribute to trip safety: road surface condition, weather, sub-surface temperatures, traffic volume and speed, vehicle classification and weight. State DOTs use a variety of sensors to measure these parameters. Sensor station location depends on how representative the site data is, how the site fits into the agency's traffic data plan, ease and safety of sensor installation, site environment, and availability of power and communication. Deploying sensors for multiple intelligent transportation system (ITS) application at a single site can maximize funding, and reduce maintenance risks.



ive of this effort is to document existing state/provincial or
ions of atmospheric and traffic data collection. This
include Aurora Program member states and other agencies
ns identified through surveying the AASHTO SICOP Snow-
rship.

first phase, researchers will document existing applications
le data collection practices using various advanced
l under the umbrella often referred to as intelligent
(ITS). These data collection practices would include road
nitation, wind speed, air temperature, humidity, sub-surface

5) Ongoing Projects

20 ongoing projects

Aurora Program - Ongoing Project Status

June 25, 2013

FY 2007 through FY2009

- 2007-05: Multiple-Use ITS Data Collection Practices (\$15,000) = 40% complete
- 2009-01: Summary and Comparison of Agency Experience w/ Sensors (\$5,000) = 85% complete

FY 2010

- 2010-02: Mobile Weather Data Collection Guidelines (\$5,000) = 80% complete
- 2010-03: Results-Based Winter Road Maintenance Standards (\$155,000) = 85% complete
- 2010-04: RWIS Sensor Density and Location (\$100,000) = 50% complete
- 2010-05: Determining RPU and Sensor Failure (\$5,000) = 20% complete

FY 2011

- 2011-02: RWIS Training Tool (\$265,000) = 10% complete
- 2011-04: Study of MDSS Costs (\$5,000) = 75% complete
- 2011-05: Funding Sources Identification (\$5,000) = 10% complete

FY 2012

- 2012-01: Validate the Accuracy of Pavement Condition Predictions (\$100,000) = 5% complete
- 2012-02: Winter Weather Severity Index, Phase 2 (\$5,000) = 50% complete
- 2012-03: Cameras and Operational Impact of Remote ... Monitoring (\$20,000) = 20% complete
- 2012-04: Communicating and Publicizing Information (\$30,000) = 5% complete
- 2012-05: Seasonal Weight Restrictions Demonstration (\$250,000) = 5% complete

7) Other Business

working to advance road weather information systems technology **Aurora**

Home About **Projects** News Participate Resources For Members

Ongoing
Completed

Upcoming Events

- Thursday, May 19, 2011 at 12:00 pm (CDT) - **Aurora Board Web Meeting**
- Thursday, June 30, 2011 at 2:00 pm (CDT) - **Aurora Administrative Conference Call**
- Thursday, July 7, 2011 at 12:00 pm (CDT) - **Aurora Board Web Meeting**
- Monday, September 19, 2011 in Bozeman, Montana - **Aurora Board Meeting**
- Tuesday through Thursday, September 20-22, 2011 in Bozeman, Montana - **National Winter Maintenance Peer Exchange**

Who We Are

Aurora is an international partnership of public agencies who work together to perform joint research activities in the area of road weather information systems (RWIS). This website is designed to introduce the program, the partners, and our collaborative research projects.

Why Join Aurora?

- to help set the agenda for collaborative research, development, and deployment of road and 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.

Board Chair:
Joe Doherty, New York State DOT

Members
Indiana DOT

Ongoing Projects

- 2011 National Winter Maintenance Peer Exchange

Aurora membership

Full members program and into an effort for funding and support and also related activities. Membership is open to all public sector transportation-related agencies around the globe as of 2011.

Associate members provide additional data and other information. Members are generally state-level, though some are at national level and are represented by an active agency member. Contact us to join.

Members

- Alaska Department of Transportation & Public Facilities
- Arizona Department of Transportation
- California Department of Transportation
- Michigan Department of Transportation
- Minnesota Department of Transportation
- New York State Department of Transportation
- North Dakota Department of Transportation
- Ohio Department of Transportation
- Pennsylvania Department of Transportation
- South Dakota Department of Transportation
- Texas Department of Transportation
- Utah Department of Transportation
- Virginia Department of Transportation
- Wisconsin Department of Transportation

Associate members

- Federal Highway Administration - Road Weather Management Team
- National Oceanic and Atmospheric Administration - National Weather Service Forecast Systems Laboratory
- National Center for Atmospheric Research
- North Carolina State University
- University of Colorado
- University of Illinois at Urbana-Champaign
- University of Michigan
- University of Minnesota
- University of Wisconsin - Madison
- University of Wisconsin - Milwaukee
- Virginia Polytechnic Institute and State University

Aurora

working to advance road weather information systems technology

to the common goal of saving lives, reducing the economic burden of winter weather, and improving the safety and efficiency of our roads and transportation systems.

Join Aurora and . . .

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

www.aurora-program.org

When you face winter road maintenance challenges, who can you turn to?

Want to be better prepared when a holiday storm suddenly crosses roads with black ice?

How can your quality get new from operators to be ahead of the holiday?

Where can you get technical assistance and training about collaborative planning, equipment, and training to help you meet the challenges of winter road maintenance?

For help in these situations and more, turn to these programs:

Snow and Ice Cooperative Program (SICOP), Aurora, and Clear Roads!

How can these organizations help you? Many organizations have been involved in the program in solving your problems. The new online knowledge base sponsored by Aurora and Clear Roads is a resource that provides a wealth of information to help you manage the winter weather challenges on your roads. It includes information on how to use the program to help you manage your winter weather challenges, and it includes information on how to use the program to help you manage your winter weather challenges.

And you can help them.

- Help develop winter weather programs for your agency.
- Participate in the National Winter Maintenance Peer Exchange.
- Meet regularly via video conference and in person to exchange best practices, new ideas, program information, etc.
- Bring ideas to the table to help us solve your winter weather problems.
- Attend winter maintenance conferences and other support events.

Does one of these programs sound like a good fit for your agency? For more information, see the program websites or contact the program managers.

Members of the program are: Alaska Department of Transportation & Public Facilities, Arizona Department of Transportation, California Department of Transportation, Michigan Department of Transportation, Minnesota Department of Transportation, New York State Department of Transportation, North Dakota Department of Transportation, Ohio Department of Transportation, Pennsylvania Department of Transportation, South Dakota Department of Transportation, Texas Department of Transportation, Utah Department of Transportation, Virginia Department of Transportation, Wisconsin Department of Transportation.