
[Wednesday, September 17] – *Joint Meeting!*

8:00 AM – 8:30 AM

Welcome & Opening Remarks

- ✚ **Welcome** [Jed Falgren, Minnesota, AASHTO Winter Weather]
Jed will welcome participants, provide an overview of the agenda, and set expectations for collaboration.
 - ✚ **Consortia Introduction**
Rick Nelson, Brad Darr, James Roath, Todd Law (representatives from each of the three groups) will provide a two-minute intro about the pooled fund.
-

8:30 AM – 9:30 AM | Session 1

Weather Data and Winter Operations

This session is **focused** on framing the value of integrating weather data with winter maintenance operations. **It is relevant** given that all 3 groups benefit from stronger coordination between data systems, forecasts, and operations, so the hope for this session is to directly support that. Moderator to note any relevant Pooled Fund Projects.

- ✚ **Moderator** [Mike Mattison, Nebraska, Clear Roads] (5 min)
- ✚ **Best Practice** [Tom Aguilar, Colorado, Aurora] (5 min)
- ✚ **Group Discussion** (40 min): Potential moderator and/or poll questions follow.

- 🗣️ **Forecast Adaptation**
How does your agency adapt to wrong forecasts, changing weather patterns, and changing weather intensities?
- 🔧 **Integration**
How are you integrating weather data into snow and ice operations planning and execution?
- 📊 **Key Variables**
What weather variables most influence your plow deployment and treatment decisions?
- 📡 **Data Alignment**
How do weather systems and forecasts support or conflict with real-time AVL and MDSS data in your workflows?
- 📖 **Training & Understanding**

What training practices help ensure winter operations staff understand and apply weather data?



Bridging the Gap

What strategies have helped bridge the gap between forecast data and in-field operational decisions?

 Moderator Session Wrap-Up (5 min)

9:30 AM – 10:00 AM | Networking & Coffee Break

10:00 AM – 11:00 AM | Session 2

The Connected Fleet: Turning Data into Winter Strategies

This session is **focused** on exploring sensor system performance and evolving mobile data sources. **It is relevant** towards connecting AASHTO, Clear Roads and Aurora goals through exploring how fleet-based data improves winter maintenance decisions, enhances forecasting, and supports integration across systems. Moderator to note any relevant Pooled Fund Projects.

 Moderator [Mark Goldstein, Massachusetts, Clear Roads] (5 min)

 Best Practice [Gabe Alvarado, Arizona, Clear Roads] (5 min)

 Group Discussion (40 min): Potential moderator and/or poll questions follow.



AVL and Sensor Placement Strategy

How do you determine AVL system capabilities and sensor/camera placements to support both forecasting and operations?



Plow-Based Mobile Sensor Use

Are you leveraging mobile sensors on plow trucks (e.g., blade sensors, friction, road temperature, cameras)?



Sensor Maintenance in Harsh Conditions

What's your experience with sensor maintenance and calibration during extreme winter conditions?



Snowplows as Weather Data Sources

Have you used snowplow-generated data to complement or replace weather sensors in key corridors?



Integrating Diverse Data Streams

What challenges exist in integrating static RWIS, mobile data, and operator reports into decision support?

 Moderator Session Wrap-Up (5 min)

11:00 AM – 12:00 PM | Session 3

Using External Data and Partnerships to Boost Performance

This session is **focused** on exploring strategies to enhance winter operations using supplemental 3rd party data sources. **It is relevant** in considering how external data and partnerships might help all participants to improve storm response, optimize operations, and enhance data-driven decision-making. Moderator to note any relevant Pooled Fund Projects.

✚ **Moderator** [Tina Greenfield, Iowa, Aurora] (5 min)

✚ **Best Practice** [Neal Hawkins, ISU, Aurora] (5 min)

✚ **Group Discussion** (40 min): Potential moderator and/or poll questions follow.

🌐 3rd Party Data for Pretreatment

How are you using 3rd party data or data services (e.g., weather, traffic, vehicle telemetry) to inform pretreatment decisions in complex storms?

📊 Predictive Tools for Winter Operations

Have you integrated predictive analytics or vendor-provided tools to optimize winter operations (de-icing, sanding, plowing, timing, staffing, etc.)?

🤝 Partnering for Better Data Use

Are there external partnerships (e.g., with private fleets, vendors, or research organizations) that strengthen your data-driven winter operations?

✚ **Moderator Session Wrap-Up** (5 min)

12:00 PM – 1:00 PM | Lunch Break (networking opportunity)

1:00 PM – 2:00 PM | Session 4

Operator Safety and Motorist Messaging

This session is **focused** on framing the intersection of operator awareness, in-cab alerts, road closures, working with other agencies, and public information. **It is relevant** in supporting both each group through exploring strategies to improve operator safety and deliver timely, consistent hazard messaging to motorists and operators through integrated systems and partnerships. Moderator to note any relevant Pooled Fund Projects.

✚ **Moderator** [Jed Falgren, Minnesota, AASHTO Winter Weather] (5 min)

✚ **Best Practice** [Craig Bargfrede, Iowa, Clear Roads] (5 min)

✚ **Group Discussion** (40 min): Potential moderator and/or poll questions follow.

🚨 Real-Time Hazard Alerts to Motorists

What approaches do you use to alert motorists of winter hazards, especially via real-time, location-specific channels?

🔊 Integrating RWIS/AVL with Safety Systems

How do your RWIS or AVL platforms integrate with safety warning systems for maintenance vehicles or other partners like the State Patrol?

⚠️ Operator Alerts for Critical Road Hazards

What systems are in place to alert operators to road hazards, low visibility, or black ice?

🚗 Using Connected or Crowd-Sourced Data

Are you using connected vehicle or crowd-sourced data to enhance situational awareness or message timing?

🌀 Coordinating Navigation and Messaging

How do you coordinate motorist messaging and data feeds to navigation companies to ensure consistency and clarity before/during/after storm events?

✚ **Moderator Session Wrap-Up** (5 min)

2:00 PM – 3:00 PM | Session 5

Operational Decision Support with Dashboards and Tools

This session is **focused** on providing an overview of tools used by Clear Roads and Aurora to support real-time and proactive decisions. **It is relevant** as we will highlight how dashboards and decision tools help members improve forecasting, resource planning, and real-time winter operations through integrated data and performance tracking. Moderator to note any relevant Pooled Fund Projects.

 **Moderator** [Ty Winther, Idaho, Clear Roads] (5 min)

 **Best Practice** [Jeff Williams, Utah, Aurora] (5 min)

 **Group Discussion** (40 min): Potential moderator and/or poll questions follow.

 Dashboard Features for Field and Ops Centers

What dashboard features are most useful for operations centers and field supervisors?

 System Integration in Dashboards

Are your dashboards integrated with RWIS, MDSS, AVL, 3rd party services, and road condition reporting?

 Using Forecasts for Resource Staging

How do you use short- and long-range forecasts to stage materials or reposition plows in advance?

 Forecasting Road Surface vs. Weather

What challenges do you face in forecasting road surface conditions vs. general weather?

 Dashboards with Performance Metrics

How are performance metrics (e.g., material usage, storm response time, weather indices) incorporated into dashboards?

 **Moderator Session Wrap-Up** (5 min)

3:00 PM – 3:30 PM | Afternoon Break

3:30 PM – 4:30 PM | Session 6

Integrating Systems and Sharing Data

This session is **focused** on highlighting challenges and opportunities for multi-agency and multi-system data integration. **It is relevant** as the session addresses shared AASHTO, Clear Roads, and Aurora challenges by exploring how to integrate systems, align data standards, and improve collaboration across agencies and platforms. Moderator to note any relevant Pooled Fund Projects.

✚ **Moderator** [Joe Huneke, Minnesota, Aurora and Clear Roads] (5 min)

✚ **Best Practice** [Dan Varilek, South Dakota, Clear Roads] (5 min)

✚ **Group Discussion** (40 min): Potential moderator and/or poll questions follow.

🔗 Sharing Data with Partners

How do you share data (RWIS, AVL, weather, storm severity, Pathfinder) with local agencies or contractors?

🔗 Standards and Platforms for Integration

What platforms or data standards (e.g., APIs, WZDx) support this integration?

🔗 Collaboration to Enhance Data Sharing

Are you partnering with others (Universities, tech providers, etc.) to streamline, visualize, or share data across systems?

🔗 Pain Points in System Alignment

What are your biggest pain points in aligning multiple systems (forecasting, operations, messaging)?

🔗 Joint Tools and Templates for Collaboration

Are there areas where Clear Roads and Aurora can collaborate to create templates or tools for joint use?

✚ **Moderator Session Wrap-Up** (5 min)

4:30 PM – 5:00 PM

Closing Summary

✚ **Joint Meeting Wrap-up** [Jed Falgren with moderators sharing key insights]

✚ **Adjourn** for the day with dinner on your own or as a group (TBD)