

Minnesota LTAP



Providing Resources, training and funding opportunities



Snow & Ice Control Resources

Videos

<u>Deicing Study: Putting the Products to the</u> Test

- How to Operate
- Operation Review
- How to Calibrate
- Software Update
- Anatomy of a Winter Storm
- Winter Maintenance for Small Sites
- Field Guide to Testing Deicing Materials
- Sander/Salt Spreader calibration video
- Sander/Salt Spreader Calibration
 - •Full Length
 - •Summary
- •A Snowplow—Cool! Video

Guides & Charts

Salt Handling Tip Sheet

Minnesota Snow and Ice Control:

Field Handbook for Snowplow

Operators

Local Government Snowplow Sal

and Sander Controller Calibration

Guide

Manual Calibration Calculation

Worksheet

Winter Parking Lot and Sidewalk

Maintenance Manual

MN Deicing Application Rate

Guidelines for Parking Lots and

Sidewalks

MN Deicing Application Rate

Guidelines for Roads

Training Opportunities Snow & Ice

- Snow & Ice Control Material Application-CTAP
- Snowplow Salt & Sander Calibration Hands-on Workshop-CTAP
- Mobile Snowplow Simulator Training-MnDOT
- Smart Salting Certification Classes-MPCA





OPERA Funding Opportunities

- Have an idea to improve a job, a piece of equipment or a process?
- Have you created a new tool or designed a new product or procedure?
- Funds available for counties, cities and townships
- Minnesota-sharing best practices between agencies

Completed OPERA Projects Snow & Ice

- Improved Effectiveness of Salt Brine as an Antiicing & Pre-wetting Agent-2005, City of Mankato
- Snowplow Windshield Wiper Deicer-2006, City of Hutchinson
- Evaluation of Hot Beam Wiper Blades-2008, Big Stone County
- Blind Lake Chloride Research Project-2009, City of Prior Lake
- Evaluation of Rear-Vision Systems for Snowplows-2009, McLeod County

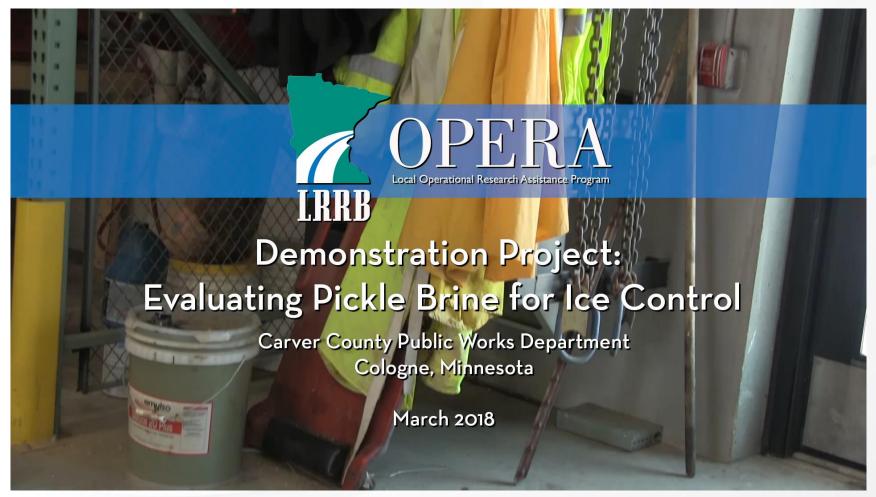
Completed OPERA Projects Snow & Ice

- Cush Release Push Frame for Snow Blowing-2009, City of Glenwood
- CAD Drawing of Simple Salt/Sand Chute-2011, Washington Co
- "Winter Green" Initiative-2011, City of Minnetonka
- Advanced Deicing Product Testing-2011, McLeod Co
- Evaluation of Deicing & Anti-Icing Technologies-2012, City of Grand Rapids
- Snow & Ice Products for Rec Trails-2012, City of Waconia

Completed OPERA Projects Snow & Ice

- Implementation of an Anti-Icing Calibration Unit-2012, City of Golden Valley
- Nonintrusive RWIS-2013 City of Eden Prairie
- Backup Sensor Technology for Snowplows-2014, Stearns Co
- Trail/Road Coating for Snowmobile Crossing-2015
 Scott Co
- Urban Snow Support Vehichle-2016, City of Golden Valley
- Otter Plow Cushion-2018, Otter Tail Co
- Evaluating Pickle Brine for Ice Control-2018, Carver Co

Pickle Brine for De-icing & Anti-icing Methods





Minnesota's

Build a Better Mousetrap Program

- Statewide competition
- Submit an entry (Maintenance, transportation facility improvement, inspection & data collection, asset management techniques)
- Consider
- 2 Winners!
- National competition



Otter Tail County-WINNER 2018



All of these resources, training opportunities and OPERA projects, are available on our website

www.mnltap.umn.edu

THANK YOU!