

LEADERSHIP AWARDS | 2019 ROAD SALT SYMPOSIUM

Nine Mile Creek Watershed District

Randy Anhorn | Robert Cutshall | Erica Sniegowski | Erin Hunker | Gael Zembal | Steve Kloiber | Lauren Foley | Jodi Peterson | Grace Sheely

Nine Mile Creek Watershed District (WD) passed a resolution of support for limited liability protection for private applicators and recommended it to the Minnesota Association of Watershed Districts (MAWD), whose board adopted it unanimously. Nine Mile Creek WD worked with members of StopOverSalting, who lobbied for limited liability legislation and participated in the Edina Winter Maintenance Model Contract advisory committee last fall.

Nine Mile Creek WD is the first watershed to require a chloride management plan as a part of their permit process. Education is key to their work. They host Smart Salting Level 1 and Level 2 trainings annually. They also work with Riley Purgatory Bluff Creek and Minnehaha Creek watershed districts, Bassett Creek Watershed Management Commission, the City of Minnetonka, and Growing Green Hearts to put on two-hour Salt Solution workshops that focus on winter maintenance for nonprofits and places of worship. They have offered national, state, and local presentations on TMDL implementation.

Nine Mile Creek WD offers cost-sharing grants to help organizations implement winter maintenance best management practices and is committed to helping those who operate and live in the watershed to reduce salt use.

Edina Public Schools

Brent Kaley | Curt Johanson | Ron Michaletz | Timothy Myre | Eric Hamilton | David White | Greg Pafko | Kai Hauglid | Bryan Horn | Shawn Draves | Kory Smith | Corey Montgomery | Keith Wolfe | TJ Lyman | Norman Vanderlinde | Matt Mosby | Mike Kilanowski

Edina Public Schools estimates they have reduced their salt use by 88% since 2014 in a districtwide effort to minimize the harmful effects salt has on our groundwater and the environment. The District has changed its snow and ice practices by purchasing less product, educating staff, researching and purchasing more efficient equipment, and being more conscious of the weather.

In 2014 the District began to purchase snow removal equipment such as brooms and drop spreaders that could clean more efficiently and better control salt distribution. Prior to that time, the District was purchasing and utilizing 45 pallets of salt, which it applied freely throughout the winter with little regard to weather or condition of the walkways and parking lots. This winter, the District purchased 16 pallets of salt and has used only a small portion of it. Staff has monitored the weather and responded quickly to prepare walkways and parking lots prior to inclement weather. The crew created their own salt-brining system that is used throughout the District, especially on high-traffic walkways.

Edina Public School District hopes to continue minimizing the negative effects their district has on groundwater and on the environment as a whole.

MnDOT District 1, Duluth Subarea KAc Project

Steve Baublitz | Chris Cheney | Dennis DeFoe | Jim Cameron | Josiah Davey | Tyson Jackson | Jason McPherson | Shawn Meyer | Ken Kelly | Bob Cheetham | Ron Mattson | Heather Davis | Aaron Benson | John Benson | Kevin Anderson

MnDOT District 1 implemented two potassium acetate routes in the Duluth area in the 2017-2018 winter season. Potassium acetate has been used on automated bridge systems and by airports for years but is not commonly used to treat roads. The preliminary results from last season are promising with comparable bare-lane regain time and a lower amount of salt. Last season they saw a 70% reduction in salt use compared to similar lanes without the acetate treatment. In the past they had used magnesium chloride because it is 3.5 times less expensive but they found that using potassium acetate requires only a quarter of the material so the cost was about the same.

Last season District 1 found that during the very cold months of January and February potassium acetate was most effective in compacted and icy areas. They have not heard any public complaints. Last season's potassium acetate routes did see some chloride but this season they are setting up four experimental routes that will not use any chloride. These routes will study exactly how much acetate they are using and what the cost will be.

If these preliminary routes go well, they hope in the future potassium acetate is used statewide – and even nationwide – as a way to address the chloride problem.

Precision Landscaping & Construction Inc.

Joby Nolan | Scott Zuzek | Josh Fox | Bryan Rubin | Aaron Masloski

Precision Landscaping is making a move into using liquids. They began with one truck at one site earlier this season and will be adding two more because of the success they have had with reducing the amount of product needed. They are also adding off-site reloading locations to increase the number of properties where liquids can be used and educating their clients about the effects of salt as they push to implement liquids across their sites.

In September of 2018 they held a Smart Salting training at their office for their entire staff, which has led to a team effort on salt awareness and reduction. They involved all staff in calibration this year, instead of only a few people, so that everyone was aware of the process and how the equipment works. They also had staff representation on the Edina Winter Maintenance Model Contract advisory committee.

Precision Landscaping bought fewer pallets of salt at the beginning of this season to meet site safety needs while reducing amount used. Having a smaller supply has made staff more conscious about how they use it. From these changes, Precision has cut use by 35% per event from last season. On one 14-acre site in particular their salt usage is down by about 60%.

Precision Landscaping will continue to look for ways to offer great service to its customers and reduce its salt use.

StopOverSalting (SOS)

Sue Nissen | Randy Holst | Joe Knaeble | Walter Levesque | Barb Thoman | Louann Waddick.

The citizens in StopOverSalting (SOS) are volunteers and Master Water Stewards who were drawn together over concerns about the irreversible damage deicers cause to Minnesota's waters and the over salting they saw at properties in their communities. These active citizens show us how everyone can get involved and make a difference.

Initially members focused on community education with businesses and nonprofits in Edina, Minneapolis, and St. Paul. They spoke to more than 250 property owners and applicators about the costs of chloride to businesses and the environment. They encouraged attendance at Smart Salting trainings, swept up over one ton of excess salt from properties, and worked with their cities and watersheds. From this they learned that property owners and applicators are concerned about the damage chlorides cause, but also believe that more salt is safer and provides protection from lawsuits, creating a barrier to reducing over-application. SOS began looking beyond education for solutions to the problem.

In 2017, SOS focused on passing statewide limited liability legislation for commercial applicators. They learned about the legislative process and worked with cities and watersheds to secure resolutions of support, creating new allies and momentum for the legislation and creating a broad coalition of support. Although the legislation was not enacted in 2018, the forward progress was a success and laid the groundwork for 2019.

Dr. Stephen Druschel

Dr. Stephen Druschel, Professor of Civil Engineering at Minnesota State University, Mankato, has been studying ways to improve winter maintenance for the past 10 years. He designs his experiments by first listening to strategies of operators and then formulating his investigations. His goal is to offer language and numbers to justify and better communicate the strategies that can help save lives and reduce salt use.

Dr. Druschel's work includes testing deicer performance and plow strategies. He started in 2010 by testing deicing product blends to assess their ice melt capacity and speed. Another notable study demonstrated the effects of running a truck behind a plow. He found that the truck traffic was able to push chloride into the lattice structure of the ice to greatly increase the effectiveness of salt. This study showed potential for a 2/3 decrease in salt use and was adopted by many people in the industry within six months of its publication.

As more people recognize lower salt application and chloride pollution as an important goal in winter maintenance, Dr. Druschel wants to focus on areas where meeting those reduction goals may be difficult. His new work will look at areas that require lots of salt to remain safe, such as bridge decks, to test if capturing chloride runoff is feasible. This work will play an important role in developing a long-term plan to address the chloride pollution problem.

To see a list of previous award winners, visit freshwater.org/road-salt-leadership-awards.