Metropolitan Water Reclamation District *of* Greater Chicago

Press Release

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Best management practices for applying road salt discussed at chlorides workshop

Wilf Nixon of the Salt Institute addresses the audience.

MWRD Maintenance Laborer Brian Moritz (in the brown shirt) gives a brine application demonstration.

More than 90 representatives from municipalities, the Illinois Department of Transportation (IDOT), Metropolitan Water Reclamation District of Greater Chicago (MWRD), and the private sector gathered at the MWRD's Egan Water Reclamation Plant in Schaumburg, IL on May 1 to share best management practices for preparing and applying road salt (sodium chloride) during winter months.

Each winter, road salt winds up in storm runoff from rain, snowmelt and ice, and it is released into local environments by the splash and spray of vehicles. Road salt travels onto vegetation, into the soil and groundwater, through storm drains and into the surface waters that the MWRD aims to protect.

Chlorides can be toxic to wildlife and aquatic life, including fish, insects, amphibians and macroinvertebrates, which live in water for all or part of their lives and are a significant part of the food chain for fish and birds. Studies show that chlorides in urban streams have increased substantially over the last 50 years, especially in northern metropolitan areas.

The MWRD, in conjunction with the Illinois Environmental Protection Agency, coordinates stakeholders *(continued)*

Best management practices for applying road salt discussed *continued*

to address chloride levels in area waterways as part of the Chicago Area Waterways Chlorides Initiative Work Group.

Brad Sims, State Regulatory Advisor at ExxonMobil, and Bryan Beitzel, Public Works Maintenance Superintendent from the village of Buffalo Grove, discussed their methods of planning, weighing and distributing salt on their pavements and sidewalks. Sims stated that salt users should avoid overapplying and recognize that more is not always better. Beitzel implemented a tracking system to measure chlorides application rates. The village also hired a professional weather forecasting company that provides road temperature information which they deem vital to efficient operations. Buffalo Grove received the American Public Works Association's 2016 Excellence in Snow Ice Control Award resulting from Beitzel's work.

Featured speaker Wilfrid Nixon, Ph.D., P.E., of the Naples, FL-based Salt Institute, presented an overview of practices used nationally. He pointed out that the amount of salt needed depends on three major factors: pavement temperature, amount of moisture in the storm and the cycle of distribution.

MWRD Principal Civil Engineer Jim Yurik gave participants a tour of the Egan WRP's new permeable pavement parking lot that helps to reduce stormwater flooding in addition to preventing road salt from migrating to the waterways.

"We all know that every storm is different, so why would we think that we should do the same thing with regard to quantity of materials for every storm?", Nixon asked.

He pointed out that the best spreaders are those that can vary their application rate as this can reduce total usage over the winter season by up to 50 percent. MWRD staff demonstrated the use of a liquid/salt "brine" used in a variable-rate spreader. Brine and salt should never be used when temperatures reach below 15 degrees Fahrenheit as they lose their effectiveness.

"We hope the discussions and lessons shared at the workshop are helpful to the government agencies and organizations that are responsible for protecting the streets and waterways," said MWRD President Mariyana Spyropoulos.

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