

Save money, cut salt at the source

Reducing salt use minimizes pollution and cuts business costs.
Madison Metropolitan Sewerage District has grants and technical expertise to help.

Learn more and apply for funds at: www.madsewer.org/smartsaltuse. Most wastewater treatment plants are not designed to remove salt. Each day 100 tons of salt from water softeners and other sources pass through the district's plant and enter area surface waters. It's far cheaper to reduce salt at the source than build and power costly new treatment infrastructure. The district funds projects to reduce water softener and road salt, which keeps sewer bills low for everyone. The following examples highlight business leadership in these efforts.



Ian Henderson, engineer,
Hydrite Chemical

Hydrite Chemical

- Salt savings: 3,843 pounds per month from two brine reclamation projects (3,250 pounds per month) and replacement of a water-cooled boiler pump with an air cooled system (593 pounds per month).

Hydrite Chemical Co. produces and distributes chemicals for agriculture, industry, food production and more. The company's continuous improvement team focuses on projects that increase process efficiency and cut costs.

A team member learned about technology to recycle still-usable brine in water softeners at a district salt reduction workshop. With funding from district rebates, Hydrite implemented brine reclamation systems on two softeners at the Cottage Grove facility and saved about 39,000 pounds of salt per year. The company was so pleased it implemented brine reclamation in Oshkosh; Terre Haute, Ind.; Waterloo, Iowa; and Lubbock, Texas, with payback periods of less than three years without rebates.

Hydrite also reduced its use of softened water. In Cottage Grove, a system that used soft water to cool a boiler pump was replaced with a system that uses air to cool the pump. The move cut Hydrite's soft water use by about 900,000 gallons per year, which also reduced the company's water bill.

Clean Water Act permit limits require a 30,000 pound per day reduction in salt use by area homes and businesses over the next five years. Rather than build expensive new infrastructure, the most cost effective solution for ratepayers is to reduce local salt use at the source.

Best Western PLUS InnTowner

- Salt savings: At least 557 pounds per month by replacing old, malfunctioning water softeners with new high-efficiency softeners with brine reclamation.

After a multi-million dollar renovation of its rooms, the Best Western PLUS InnTowner hotel in Madison upgraded its mechanical systems. The resin in the old water softener had deteriorated with age and the unit was inefficient and leaking.

Spurred by a rebate from the district, the hotel installed new, efficient softeners with brine reclamation. The \$1,000 rebate covered about 10 percent of the total cost. Since installation, the hotel's issues with hard water have ceased and hotel staff and management have noted the reduction in salt.



Joe Baldwin, general manager,
Best Western PLUS InnTowner

“Most of the brine reclaim jobs I’ve done have a payback of around three years. This payback time can be reduced by using the district’s grant funds.”

– **Regi Licht**, Commercial Sales Engineer,
Total Water Treatment Systems



Steve Kamps, plowing and landscaping, Barnes Inc.

Barnes Inc.

•**Salt savings: 3.2 tons per snow event in winter 2017-18 after incorporating brushes and brooms into snow removal and teaching applicators about using the right amount of salt.**

Barnes Inc., a landscaping and snow removal company, provides winter maintenance services to more than 150 commercial buildings and 300 residential customers throughout Dane County. Barnes took action to reduce salt use through changes in equipment and company practices.

Several employees were trained and certified through the City of Madison’s winter salt certification program, which recognizes salt applicators that have taken a course on proper salt application rates. Barnes also applied for a road salt reduction grant from the district to purchase brushes and brooms for snow removal trucks that increase the effectiveness of removing snow and ice without salt.

Barnes also has worked to instill a company culture of proper salt application. Managers educated employees about proper salt use and discouraged over-application of salt. When quality control staff spot-checked sidewalk routes, they began evaluating sites for proper salt use as well as snow removal. Through these practices, Barnes has significantly reduced salt use during winter weather events.

UnityPoint Health – Meriter

•**Salt savings: 4,261 pounds per month through new conditioning processes.**

UnityPoint Health-Meriter Hospital in Madison has implemented several projects to reduce salt use including different methods to condition water for heating and cooling systems.

First, Meriter installed several “Green Machines” that use electricity rather than salt to condition makeup water for cooling towers. Since installing the devices, the hospital has prevented 140 tons of softener salt from entering the sewer.

Meriter also has replaced water softening with other processes for a salt savings of 51,135 pounds per year. The hospital achieved this salt reduction total – 4,261 pounds per month – by switching from a water softener to chemical treatment prior to the reverse osmosis system.

To learn more about how your business can save money by reducing salt use, contact Emily Jones, pollution prevention specialist, EmilyJ@madsewer.org, (608) 222-1201.



Ryan Unzicker, facilities manager, UnityPoint Health Meriter