Update: Chloride Reduction Program
The district receives more salt than this pile each day.
Chloride sources to MMSD

- Water Supply: 57%
- Human contribution: 8%
- Road Deicing: 7%
- Industrial: 2%
- NSWTP chemicals, septage, hauled wastes: 18%
- Softening: 8%
No removal = water with the salt is returned to two fresh water streams
Chloride on the rise in area waters
Wisconsin Chloride Standard

- 395 mg/L on weekly average in surface water
- Wastewater plants required to meet this limit
Treatment options exist, but are costly
Potential costs of treatment

- $500,000,000
- $1,000,000,000
- $1,500,000,000
- $2,000,000,000
- $2,500,000,000
- $3,000,000,000

Net Present Value

Madison Metropolitan Sewerage District
MMSD Plant Upgrades and Replacement Value

Current: $371 Million
Costs of removing chloride would raise sewer bills by 55 to 500%
Chloride source reduction

- Chloride pollution can be prevented
- Reducing chloride is much less expensive than removing it
- Variance allows time
District chloride reduction strategy

- Policy Change
- Training
- Incentives
- General I&E
- Source Identification
- New Technology

District chloride reduction strategy
Source reduction results - Mass

MMSD Effluent Chloride Mass (million pounds annually)

Trend Line with Chloride Source Reduction Program

Trend Line before Chloride Source Reduction

Sept. 30, 2010, Chloride Source

Madison Metropolitan Sewerage District
Source reduction results - Concentration

MMSD Effluent Chloride Conc (annual average, mg/L)
Source reduction results – Weekly Averages

Number of weeks over 395 mg/l

- 2015: 29 weeks
- 2016: 20 weeks
- 2017: 6 weeks
- 2018: 7 weeks
- 2019: 2 weeks
A little salt goes a long way...

5 gallons

300 gallons

20,000 gallons

8,000,000 gallons

Madison Metropolitan Sewerage District
Improving softening efficiency

- Low hanging fruit: large softeners
- Replacing clunkers (47% reduction possible)
- Optimizing existing softeners (27% reduction possible)
- Softening less water
Salt Savers: Optimization App & Pilots

- Start with basics:
  - What is optimization
  - How to accomplish
- Training Providers:
  - Certification program
- Pilot testing:
  - Madison College
  - Project Home
  - PS 9 (McFarland/T. Dunn)

Learning & Expanding

Water Softener Salt Savers Program

Many water softeners in the district's service area use outdated or are not set up to run at their peak efficiency. That's a problem because all of the salt that goes into water softeners ends up at the wastewater treatment plant, and eventually local freshwater streams. Excessive chloride (a component of salt) can threaten freshwater wildlife.

The district's Salt Savers program aims to equip service providers with the knowledge and resources to increase the efficiency of home water softeners adn to identify softeners that are prime candidates for replacement. To encourage homeowners to participate, the district is funding discounts on services and equipment that will result in reduced salt to the sewer system.

**This program is currently in PILOT stage in the Town of Dunn’s Sanitary Districts (see map). Reimbursement of services is available only for jobs completed in homes connected to sanitary sewer service in the Town of Dunn. Check back for updates on the availability of this program in your municipality.**

If you live in the Town of Dunn, find more information about the program here.

Trained Softener Service Providers

The service providers listed below have completed training from MMSD about salt reduction, softener efficiency, and use of the MMSD reporting app. More providers will be added to this list as they complete training.

Different providers have different specialties, so use the information below to determine who to call for the appropriate service. For example, if you are having a new unit installed to replace a “clunker,” call a service provider who has indicated that they are willing to perform installations of new efficient units in the table below.
Reductions are possible
We rely on salt to keep our roads safe in the winter and to soften water in our homes year round but using more salt than is needed comes with a heavy price. In Wisconsin and much of the United states, chloride from salt is infiltrating into our lakes, streams and groundwater. These increased levels have impacts on our daily lives, including:

**Environmental**
Salt washes into our waters, putting aquatic life and freshwater resources at risk.

**Economic**
Once salt gets into the water it is very costly to remove.

**Infrastructure**
Salt weakens and damages the concrete, brick and stone that make up our homes, garages, bridges, and roads.

**Pets**
Oversalted sidewalks can irritate pet paws and cause health concerns if ingested.
Future Direction:

• Determine district’s interests relating to various water quality targets.
• Develop guidance for the use of policy and regulatory tools and assess their related timelines toward reaching our established targets.
Future Policy Direction

Target for Success (mg/l)

- **WQS**
- **Drinking Water Std**
- **EPA WQS**
- **Lake Waubesa**
Ways to individually support our program:

• Take a card – check your water softener
• Check your hose bibb
• Visit WiSaltWise.com or
• Visit the district’s chloride page
• Talk to your networks: colleagues, friends and neighbors