



GLSSWD CONTACT
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Chloride Discharge Awareness

THE PROBLEM:

Salts (including chlorides) dissolve easily in water, but don't break down or combine with other elements for easy removal. Therefore, it's easier to keep chlorides out of water and wastewater than it is to remove it.

THE COST:

It is estimated that residents spend \$0.20 per pound to add salt to soften water. While it costs over \$5.00 per pound to remove at wastewater treatment facilities (WWTF).

THE SOLUTION:

GLSSWD is encouraging each resident to **check the hardness setting on water softeners to match the hardness on the table below and adjust the number of occupants equal to the number of permanent residents.** If you are unaware of where this setting is, please contact Glacial Lakes Sanitary Sewer and Water District (GLSSWD), your local utility, and staff can assist. Since salt is relatively low cost, often softeners are set high with a safety factor. This wastes salt and contributes to the chloride problem.

TABLE 1 - WATER HARDNESS

Cities of Kandiyohi, New London, and Spicer

Parameter	City of Spicer, City of New London, and Green Lake Community	City of Kandiyohi	Other Lake Communities and Private Wells
Hardness (mg/L)	242	230	Test well water for hardness and adjust water softener accordingly
Hardness (grains)	14	13	

THE DETAILS:

Older style softeners that regenerate on a time basis should be reviewed to ensure the frequency of regeneration matches the water use of the household. As the number of people in the household changes, the water use will also change. Softeners originally set for a large family may likely be unchanged, even as the children have moved out. This is an opportunity to save money with less salt usage and help alleviate the chloride problem at the WWTF. Again, please contact district staff with questions.

Users with older softeners are urged to consider replacement of these with newer, more efficient models. Water softeners have made significant improvements in salt efficiency in recent years. Use of newer softeners will have a significant impact on the final chloride concentrations at the WWTF.

GLSSWD is strongly encouraging all members to make every effort to reduce salt usage in softeners as possible. This effort, if successful, will save the users and communities the cost of a major construction project to treat chlorides. Please call GLSSWD with any questions.

Softener Maintenance:

- Don't place items on top of timer case (may damage the timer).
- Inspect softener and salt tank annually for sediment build up.
- Have softener serviced as needed.
- Softeners have a typical lifespan of 15-20 years.
 - Proper maintenance can extend the life of the unit.
 - Excessively hard water may reduce the life span of the unit.

Softener Settings:

- Adjust settings based on water hardness (see table on opposite side) and the number of occupants.
- Set clock to correct time of day.

High Efficiency Softeners:

- There are many types of softeners available:
 - Time based models (older models, less efficient)
 - Demands based models (modern models, more efficient)
 - High-efficient models (most efficient)
- Demand based and high-efficient models use less water and less salt than time-based models, which results in money savings.
- Softeners sold as '#### Grain Softeners' refers to the capacity of the softener to remove hardness. Higher values have higher removal capacities. Removal capacity required depends on water hardness and residents per household.
- Salt-free conditioners use a salt-free process to change the molecular structure of the water, preventing them from being able to bind to surfaces in the form of limescale. These units do not perform well on extremely hard water, such as in Minnesota.

