



# WATER SOFTENING

## How Hard Is Too Hard

### Soap Scum Saga

If you have a well that provides very hard water, softeners can provide relief from "soap scum" in the tub and scaling of water pipes and hot water heaters. Calcium and magnesium react with the detergents found in soap, shampoo, clothing detergents, and dishwasher detergents. That means that some of the soap you use binds with the hardness minerals. When hardness minerals bind with soap they form a solid called a precipitate. The solid can be seen as a bath tub ring or "soap scum". The harder the water is (the more calcium and magnesium in the water) the worse this problem can be. Manufacturers of detergents and soaps often alleviate this problem by adding compounds that bind with the hardness before the detergent itself does.

### Out with the Old

If you no longer use your water softener, it should be disconnected from your water system. If the softener can not be removed, it may be bypassed by pushing the bypass valve usually supplied by the softener manufacturer.










### Do You Still Need a Water Softener on Lake Michigan Water?

Water softeners remove hardness minerals from water. Hardness minerals, including calcium and magnesium, are found in varying concentration in most water supplies. Calcium and magnesium are not dangerous to consume; they are actually necessary minerals in our diet.

According to Industry standards, Lake Michigan water is classified as moderately hard because it has a hardness concentration of about 130 milligrams per liter (mg/l). Compare this value to the hardness observed in many Lake County wells of more than 300 mg/l hardness and Lake Michigan water is relatively soft. Many residents previously served with well water have discontinued use of their softeners since receiving Lake Michigan water. If they haven't, they have noticed a marked increase in how long their softener can run before recharging with salt. This saves them money and decreases their softener's environmental impact since they use less salt and water for recharging.

### What Water Softeners Can and Can't Do For You

-  Softeners do not remove or reduce bacteria, cryptosporidium, giardia, or any other microbiological contaminant. Softeners will not improve the safety of your water. Softeners actually provide an environment conducive to growth of bacteria, though these bacteria are rarely dangerous.
-  Softeners do not remove unpleasant tastes or odors found in some waters.
-  Water softeners increase the total amount of water that you use. Extra water is used to dissolve salt, draw the salt water into the softener, and then rinse the salt water out of the softener after the softener has been regenerated.
-  Softeners add some amount of sodium to the water. The amount of sodium added depends on the hardness of the water, as two sodiums displace every single calcium or magnesium.
-  Softeners can improve the aesthetics of your water so that soap lathers better with less film and residue left behind.
-  Softeners may reduce soap scum build up so that cleaning fixtures is easier
-  Softened water will heat up more quickly than hard water so that household appliances may operate more efficiently.

