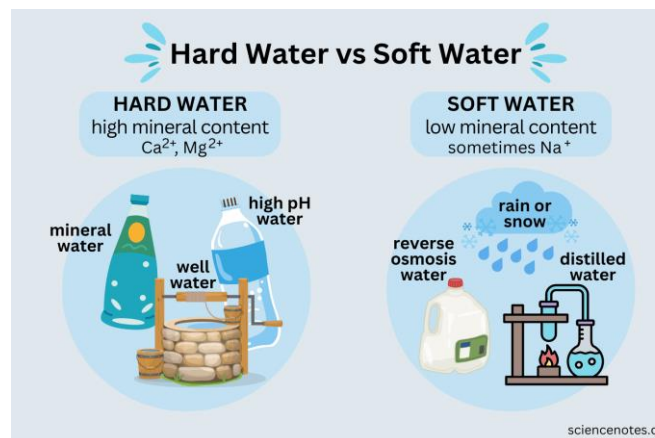




## HAZARDVILLE WATER COMPANY

### CONTROLLING WATER HARDNESS

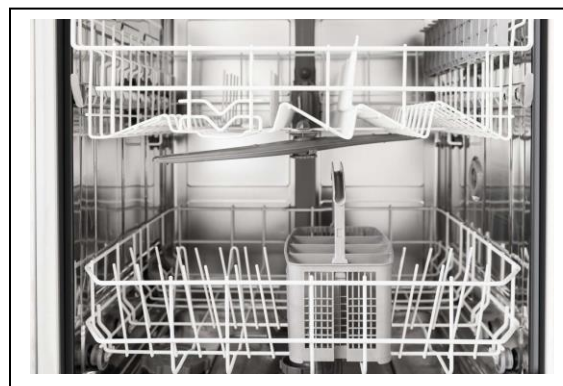
Customers of the Hazardville Water Company receive their drinking water from eleven (11) underground wells, which are located throughout the Enfield area. When water infiltrates through the ground to recharge the aquifers from which the wells are drawn upon, minerals may naturally become dissolved in the water. Two minerals, calcium and magnesium, are easily dissolved and are the main cause of water hardness. Although harmless, hardness can be aesthetically unpleasing when it later comes out of solution and forms white scale on dishes, dishwashers and plumbing fixtures. The hardness found in the Hazardville Water Company's distribution system ranges from 5.5 grains per gallon to 17 grains per gallon. Water at these levels of hardness can be considered moderately hard to hard.



In order to control the effects of hardness in the distribution system, the Hazardville Water Company adds a food grade sequestrant to the water. This sequestrant helps keep the hardness in solution with the water, preventing it from precipitating out of the water and forming scale. This process only works if the sequestered water is not subjected to extremely high temperatures, such as those found in many hot water heaters. Additionally, when the sequestered water is allowed to evaporate, white deposits may still form on plumbing fixtures.

In order to reduce the effects of hardness from your water and increase the life expectancy of your plumbing system, the following are recommended:

- Lower the temperature of your hot water heater to below 135 degrees F. Temperatures of 120°F - 125°F will not only help prevent scale formation, but will also save in energy costs.
- Flush your hot water tank at least once per year to remove sediment. Consult the owner's manual for other preventative maintenance measures.
- If your dishwasher contains an additional heating element to further heat the water, turn it off. Most dishwashers with this option have a button or dial that can activate or deactivate the element.
- Do not use the heated dry cycle in the dishwasher; let the dishes air dry.
- If using powdered dish detergent, always use a rinse aid such as Finish Jet-Dry or Cascade Rinse Aid in the





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dishwasher. This will prevent hardness deposits from forming on dishes and the dishwasher itself. If using dishwasher pods, there is no need to add a rinse aid since the pods already contain a rinse aid.

- If hardness deposits do form on the interior of the dishwasher, a dishwasher cleaner from Finish, Cascade, Glisten, Affresh or others can be used to remove the deposits. Also, unsweetened lemonade Kool-aid can be used to remove hardness deposits in the dishwasher as well as on the dishes themselves (the high concentration of citric acid dissolves the deposits). It is also good preventative maintenance to use a dishwasher cleaner monthly in order to keep the drain screens in the dishwasher clean.

If total removal of the hardness from the water is desired, a residential water softener can be installed at the customer's expense. These units can be purchased from local home supply stores or from water conditioning companies. Water softeners can remove up to 100% of the hardness in the drinking water. Since these systems add salt to the water in the form of sodium or potassium, a health care professional may need to be consulted for those who are on restricted diets. Another option is to install a water softener so that it only softens water delivered to the hot water heater and home heating units. Water softeners installed this way will remove all the hardness in the hot water, including water used for the dishwasher, while maintaining lower sodium water at the cold-water faucets used for drinking and cooking. This option also considerably reduces the expense of operating the water softener.

In conclusion, water hardness is commonly found in varying concentrations in groundwater sources throughout Connecticut. It is natural and harmless. There is no state limit for hardness in drinking water. Hardness is easily controlled through centralized sequestration of the drinking water and proper operations and maintenance of customer hot water systems. If a customer wishes to further remove all the hardness from their drinking water, the only effective method is to install a residential water softener. If customers have any questions regarding the hardness of their drinking, they can call the Hazardville Water Company at (860) 749-0779.