



## Water Hardness

The major source of drinking water for Highlands Ranch is the South Platte River. This water source has levels of naturally occurring calcium and magnesium, minerals present in hard water. The amount of minerals in water determines how soft or hard your water is. Centennial Water's water levels usually range between 11 to 13 grains per gallon (188 – 222 milligrams per liter).

The range of water hardness can be described as:

- Soft water = 0 – 4 grains per gallon
- Moderately hard water = 4 – 9 grains per gallon
- Hard water = 9 – 18 grains per gallon
- Very hard water = greater than 18 grains per gallon

Hard water can be identified by the presence of scale, or mineral buildup, in hot-water pipes, heaters, boilers and other units in which the water temperature is increased materially. Another indicator of hard water is when you have to use more soap to create suds or a lather.

### Is it safe?

Water supplied by Centennial Water is safe to drink. It meets or exceeds all state and federal drinking water regulations. Centennial Water does not remove water hardness during its water treatment process because water hardness is not a health hazard.

### Tips for addressing hard water concerns

#### Dishwasher operation and spots/white film on dishes

Some dishwasher detergents perform better than others when used with hard water. The total amount of detergent depends on the hardness of the water. Softer water requires less detergent than harder water. Many detergents come packaged in premeasured pods, not giving you the flexibility of adding more soap if needed. Rinse agents may also be recommended by the dishwasher manufacturer to reduce the spotting from hard water. Refer to your dishwasher owner's manual for more details.



The water used in your dishwasher should be set at a temperature near 130 degrees. Run the hot water faucet closest to your dishwasher prior to washing your dishes to ensure hot water is used in your dishwasher. To remove existing films and spots on dishes and to prevent them from occurring

again, add a half cup or more of white vinegar to the bottom of the dishwasher before starting the wash and/or rinse cycle. The vinegar acts as a natural dissolving agent to the hard water deposits on the dishes.

Silver and fine glassware should be hand washed as some of these products could cause damage and etching of glassware.

### **Hard water deposits on faucets, sinks, tubs and showers**

Products that may remove hard water deposits include vinegar, baking soda or cornstarch mixed with water. There are also commercial cleaning products on the market to remove these deposits and they may be obtained from most hardware, home improvement or grocery stores. These products should be used according to manufacturer's directions.

### **Water softeners**

Some residents in Highlands Ranch choose to purchase or rent a home water softener to reduce hardness levels. The most effective water softener has an ion exchange process where calcium and magnesium are removed from the water in exchange for either sodium or potassium. These units require the use of sodium chloride (NaCl) or potassium chloride (KCl) to regenerate the softener resin. Water softeners will reduce the levels of hardness to more manageable levels and will reduce hard water deposits and films.

There are various ways to install a water softener and there are usually piping options to consider. A reputable water softener dealer will provide assistance with the sizing and plumbing questions. If you choose to install a water softener, please note water high in sodium can be detrimental to vegetation, particularly trees, shrubs and grass. For this reason, soft water should not be used for outdoor irrigation.

### **Chloride in water**

Centennial Water has chloride limits on treated wastewater discharged into the South Platte River. One of the major sources of chloride in our residential wastewater is from water softener tank recharges that are discharged into the sewer system. Currently, our discharge meets the chloride limits imposed by the state. If higher levels of chloride are received at our treatment plant, we may need to reduce or restrict chloride discharges in the future.

### **For more information**

If you have further questions, please contact the Centennial Water & Sanitation District water quality laboratory at 303-791-2185, extension 3523.

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