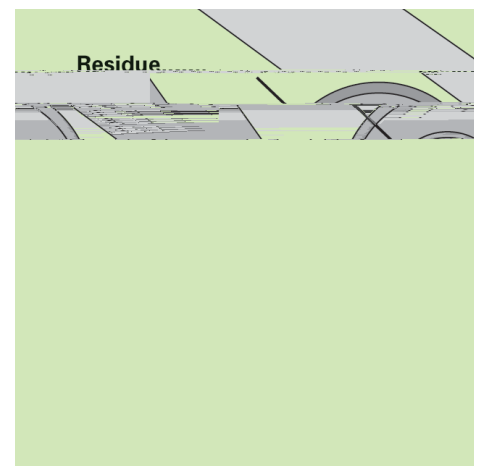
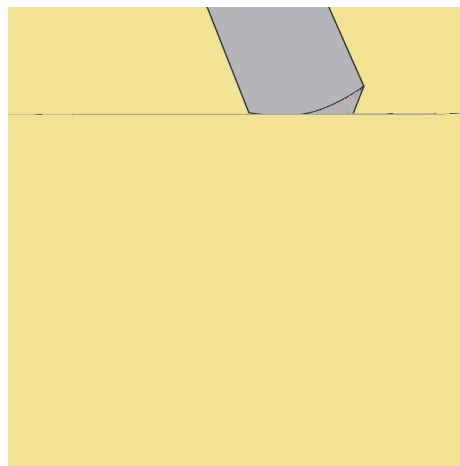


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# YOUR HOUSEHOLD WATER QUALITY: CORROSIVE OR SCALING WATER

## WHAT ARE CORROSION AND SCALING?

Corrosiveness or scaling is an inherent property of some groundwater and is related to the type of rocks or sediments in contact with the groundwater.



Corrosion is caused when water reacts with or dissolves metal plumbing. This can add toxic levels of metals like copper and lead to your water. Other problems associated with corrosive water include:

- Deterioration and damage to the plumbing.
- Water damage caused by leaks.
- Staining of laundry.
- Bitter taste.
- Staining of plumbing fixtures.

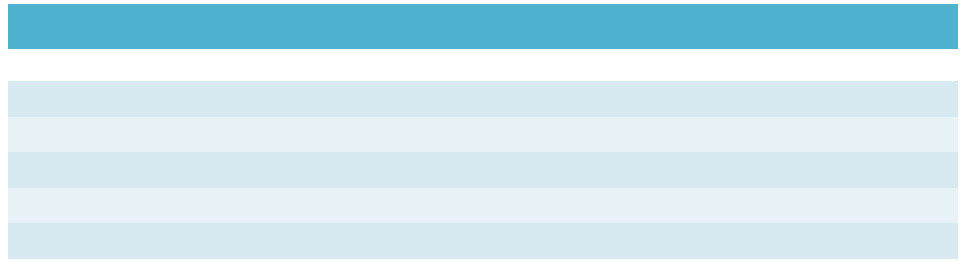
Scaling occurs when water has high levels of minerals like calcium carbonate, which can build-up on surfaces. Slight scaling can be considered beneficial in that the inside surfaces of metal pipes become coated with harmless minerals that act as a barrier to corrosion. Increased levels of scaling, however, can be harmful. Hot-water heaters are the most common place for scale formation in a home water system. Problems caused by scaling include:

- Reduced efficiency of your hot-water heater.
- Reduced or blocked flow to fixtures or appliances.
- Leaky valves.

The degree of either corrosiveness or scaling can be predicted using a Saturation Index (SI). The following information contains a description of the SI, strategies for reducing problems, and treatment methods to reduce the corrosion or scale caused by your water.

## WHAT IS A SATURATION INDEX (SI)?

The SI is a calculation that compares the actual pH to a theoretical pH based on physical and chemical properties of your water. The values range from negative to positive. Negative numbers indicate a potential for corrosion and positive numbers predict scale formation. Values close to zero indicate that the water is balanced and there



**Source:** (the saturation index table was adapted from the following publication)  
*Corrosive Waters*, Wilkes University Center for Environmental Quality, GeoEnvironmental Science and Engineering Department. Internet publication @ <http://wilkes.edu/~eqc/corrosion.htm>.  
**Reviewers:** Julia Gaskin, David Kissel, Mark Risse, Penny Thompson, Carl Varnadoe, The University of