



WATER  **TECH**

HARD WATER GUIDE



UNDERSTANDING HARD WATER

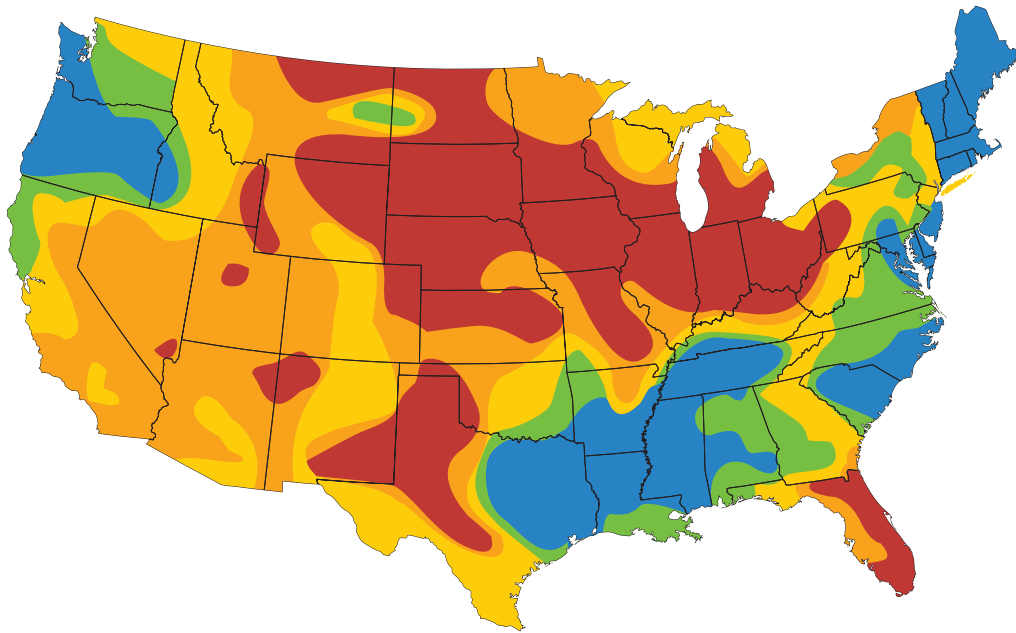
WHAT IS “HARD WATER”?

As rainwater falls, it is naturally soft and mostly free of minerals. However, as water makes its way over weathering rocks, through the ground, and into our waterways, it picks up minerals that make the water “hard”. Water described as “hard” contains a high amount of dissolved minerals—generally calcium and magnesium.

Though other minerals exist in hard water, calcium and magnesium often create the most problems. These minerals can precipitate out of water and coat objects as “scale” or mineral deposits. While these minerals are not harmful to the human body, they can create plenty of trouble in the home, such as:

- » **Mineral scale build up can clog pipes and reduce water flow.**
- » Minerals left on skin and hair after showering can leave skin feeling itchy and hair brittle and dull.
- » **A white film or scale may accumulate on fixtures, showerheads and tile.**
- » Hard water can affect the flavor of tea, coffee and other beverages.
- » **Harsh minerals can make clothes stiff and colors dull.**
- » Scale buildup from hard water can make water-using appliances less efficient and shorten their life span.
- » **Dishes, glass, counters, and floors may have spotting even after cleaning.**
- » Staining on clothing is tougher to remove when laundered with hard water.
- » **Hard water reduces sudsing action.**

HOW DO I KNOW IF I HAVE HARD WATER?



U.S. WATER HARDNESS MAP

CLASSIFICATION	GRAINS/GAL	PPM OR MG/L
SLIGHTLY HARD	Less than 3	Less than 50
MODERATELY HARD	3 – 7.0	51-120
HARD	7.0 – 10	121-170
VERY HARD	10-14	171-240
EXTREMELY HARD	Over 14	241+

THIS MAP REPRESENTS AVERAGE HARDNESS OF AN AREA. YOUR WATER QUALITY MAY DIFFER.

HOW HARD WATER IS MEASURED

The amount of hardness in water is measured in milligrams per liter (mg/L) or in “grains” of hardness. Both are measures of weight and describe how much calcium or magnesium is in the water. Whether you know the exact hardness level of your water or not, chances are you’ve seen or experienced some of the symptoms of hard water. Here is a general guideline explaining how your home will be affected at varying degrees of hardness:

SLIGHTLY HARD

With slightly hard water you may notice mineral deposits or spots on dishes, clear glassware and fixtures. Hair can be dull and laundry may look dingy.

MODERATELY HARD

Moderately hard water can affect flavors of tea, coffee and other beverages. You may notice that soap doesn’t lather well, and hair and skin doesn’t feel as clean. Dishes may have spots or white film on them and scale may form in sinks, tubs, shower heads, and faucets.

HARD

With hard water you’ll notice that more shampoo is required, homeowners report experiencing skin problems or are frustrated that laundry is stiff and won’t get clean. You may see a water ring (soap scum) left in tub or you may have a cloudy shower door. Showerheads become corroded and appliances may begin to show signs of clogging in parts that contact water.

VERY HARD

Very hard water can cause dry, itchy skin and scalp, as well as more brittle hair. Scale from very hard water can coat the inside of your water heater and drastically reduce its heating efficiency. This same scale can collect inside pipes and on the internal parts of water-using appliances requiring service calls to plumbers and repairpersons as water pressure drops and mechanical parts stop working.

EXTREMELY HARD

With extremely hard water, you may have an insoluble, sticky residue that’s difficult to rinse from bathtubs, sinks, faucets, and fixtures. Appliances may wear out more quickly. Scale buildup in water heaters may result in greater fuel consumption and higher utility bills because the appliance has to heat water through a layer of scale. Pipes can become clogged with scale that reduces water flow and ultimately require pipe replacement.

HOW DO I FIND OUT HOW HARD MY WATER IS?

CLICK HERE TO FIND A DEALER IN YOUR AREA WHO CAN TEST YOUR WATER.

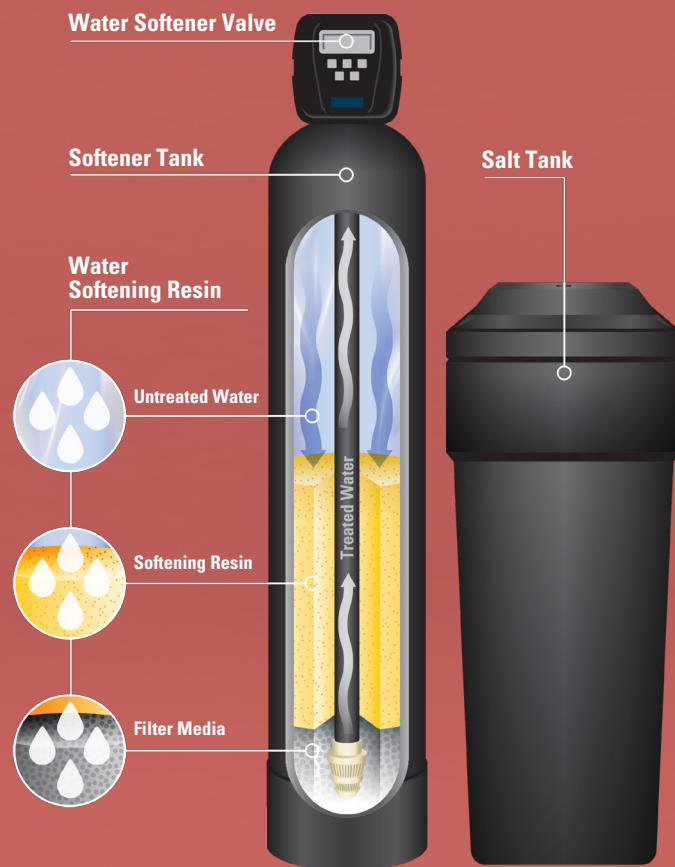
WHAT IS WATER SOFTENING?

With the challenges of hard water mentioned, we now turn to the solution – softened water.

HOW IT WORKS

Through a simple molecular exchange process, hard water minerals can be removed from water easily and efficiently with a water softener. A water softener is designed to pass hard water through a bed of softening material called resin. As the hardness minerals in water come in contact with the resin, the resin is attracted to the hardness minerals and holds onto them.

With the hardness minerals trapped in the resin and removed from the water, the water by definition, is considered soft. Over time, the resin in the water softener gets completely covered with hardness minerals and needs to be cleaned. At that point, the water softener floods the resin with brine water, thereby cleaning the hardness minerals off the resin and sending them down the drain. The softening resin in the water softener is then clean and ready to soften water again. This cycle is repeated approximately weekly, depending on water usage, allowing your home to have consistently soft water.



- 1 Untreated water flows through water softening resins
- 2 Resins soften water by reducing calcium and magnesium in water
- 3 Soft water enters our home providing cleaner laundry, softer skin, easier cleaning, as well as soap, energy, and appliance savings
- 4 The system uses a brine (salt or potassium) solution to clean and recharge the resin while releasing hardness down the drain.



SOFT WATER HAS THE ABILITY TO REMEDY HARD WATER PROBLEMS.

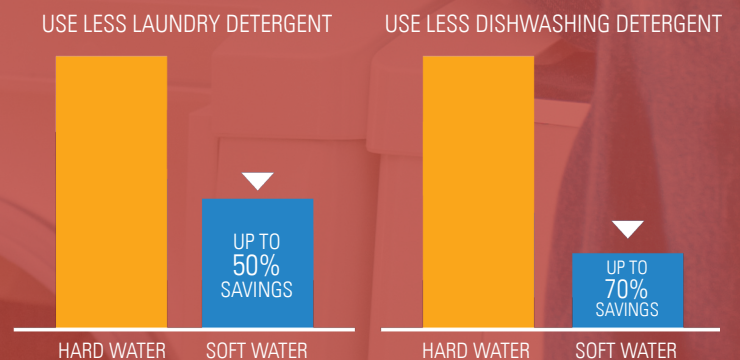
There are many benefits of soft water – from spot-free dishes to brighter laundry. But a recent study funded by the Water Quality Research Council found that the benefits of soft water go way beyond aesthetics. Soft water can actually save you money.

The study revealed that consumers can cut back on laundry detergents by 50 percent when using soft water, and that water temperatures can be reduced. In testing laundry stain removal, researchers found that the most important factor in removing stains was water softness. Reduction of water hardness was up to 100 times more effective at stain removal than increasing the detergent dose or washing with hotter water.

The study also tested the impact of water hardness on automatic dishwashers and found that when washing with soft water, dishwashing soap could be reduced by 70 percent. Soft water was up to 12 times more effective at cleaning dishes than increasing the amount of detergent used.

Research also revealed that with hard water, showerheads lost 75 percent of their flow rate in less than 18 simulated months and could not maintain the required flow rate because of scaling.

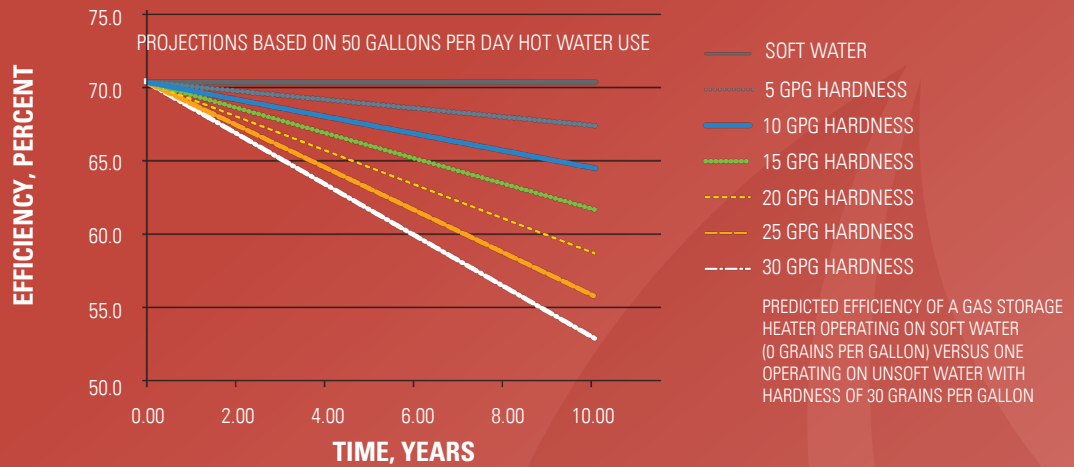
SOFT WATER MAKES SMART FINANCIAL SENSE



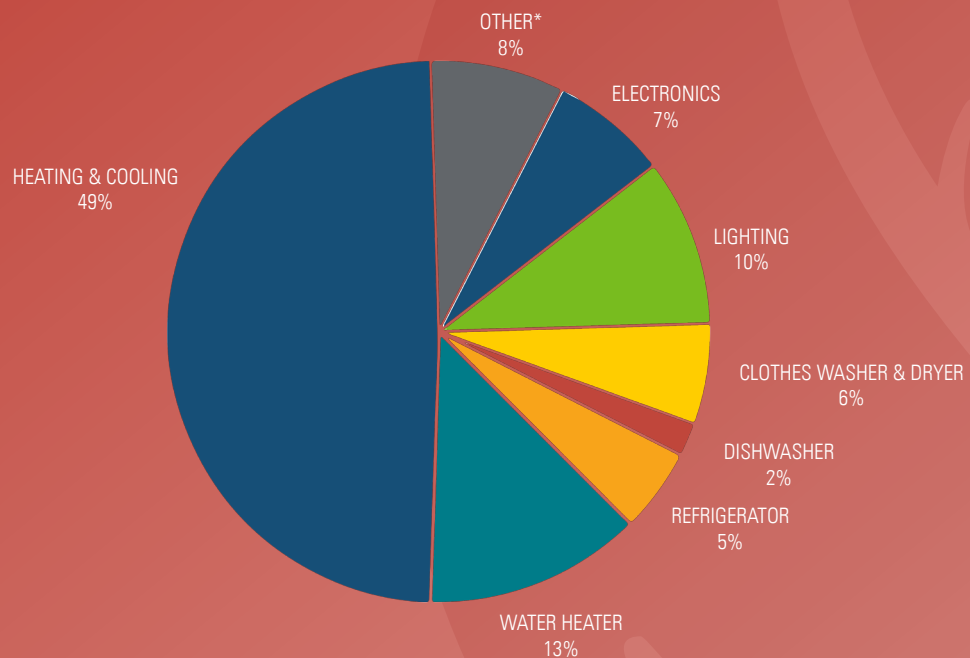
SOFT WATER EXTENDS THE LIFE OF APPLIANCES AND REDUCES ENERGY COSTS.

Battelle Institute research found that when gas water heaters (the second highest energy-using appliance in most households) were operated with soft water, they managed to maintain 100 percent efficiency over their simulated 15-year lifespan. On the other hand, water heaters operating with hard water saw a 25-48 percent loss of efficiency- an incredible loss in energy, resulting in significantly higher costs. In the case of instant tankless water heaters, hard water caused them to entirely fail to function because of scale or mineral build-up associated with hard water after only 1.6 years of simulated use (about a tenth the normal life of the appliance).

PREDICTED EFFICIENCY



US HOUSEHOLD ENERGY USAGE



The Energy Savings Study was conducted in 2009 in conjunction with the Battelle Memorial Institute and funded by the Water Quality Research Foundation. The Detergent Savings Study was conducted in 2010 in conjunction with Scientific Services S/D, Inc. and funded by the Water Quality Research Foundation.



SOLUTIONS FOR HARD WATER

REIONATOR®

WaterTech's Reionator® goes way beyond water softening. This proven multi-resin process also removes chlorine taste and odor while reducing that slippery feel often associated with softened water. It does all this without the need for costly filter changes, creating the ultimate quality water. It also comes standard with a strong limited lifetime warranty. And that's just the beginning of why the Reionator is so extraordinary. For more information on the Reionator, [click to see how it works](#), or [download the Reionator Brochure](#).

SOFTMAX®

The Softmax® water softener eliminates hardness and iron/manganese, while improving your home's water efficiency by up to 40%. Soft water means cleaner laundry, more cleaning power from household soaps, less cleaning and a cleaner conscience. For more information on SoftMAX, [click to see how it works](#).

SALTFREEMAX®

Looking for a way to eliminate scale in an environmentally-friendly way? The SaltfreeMAX Water Conditioner provides whole-house prevention of scale buildup and stops hard water scale from forming without salt, electricity or wasted water. It also protects your plumbing and household appliances from problematic scale build-up for a longer life span. Lessen the buildup and lessen your impact. For more information on SaltfreeMAX, [click to see how it works](#).

REIONATOR®
[CLICK TO VIEW](#)

SOFTMAX®
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SALTFREEMAX®
[CLICK TO VIEW](#)





OVER 25 YEARS IN BUSINESS AND TENS OF THOUSANDS OF HAPPY CUSTOMERS

WHAT THEY ARE SAYING

Since we started using this water conditioning system, the improvement in our skin condition has been unbelievable. The greatest difficulty we have faced in using the REIONATOR® is learning to use less - less laundry and dish soap, less cleaning supplies, less shampoo and less money at the supermarket.

Marry Ann - Meridian, ID

Your sales personnel were friendly, knowledgeable and courteous. They answered all our questions so that we knew exactly what to have installed and what would be superfluous. They didn't try to sell us anything we didn't require, which was a welcome change from other buying experiences.

Jimmy - Johnson City, TN

It tastes better, our skin feels better, we use less detergent and soaps and don't need bottled water.

Dermot - Boise, ID

Being a single person, I often need to make difficult decisions on my own. The REIONATOR® is very impressive and I feel comfortable knowing it is backed by an honest company that makes customer satisfaction its top priority.

Michelle - Tuscon, AZ

Prior to its installation (of the REIONATOR®) we were replacing shower heads and faucet screens every couple of months. Our water was so hard we were considering selling the mineral rights. Things are totally different now. Instead of bottled water, I can enjoy my own water at a fraction of the cost.

Barry and Gail - Evergreen, CO



PURE. RIGHT DOWN TO OUR INTENTIONS.

ABOUT US

We're a company of people with a purpose. Whether we are innovating the newest water treatment technologies or educating our dealer network about the latest water quality challenges, we operate our business with the clearest of intentions—to make life better for those who trust us with their water.

STAYING TRUE TO OUR ROOTS.

Over the last 25 years, our family-run business has made a commitment to our customers—to take the worry and frustration out of your water quality. So when we decided that our one and only mission was to improve your quality of life by improving water quality, it wasn't long before we were leading the way in product innovation and making a difference in the lives of those who trust us with their water.

A NETWORK OF RELATIONSHIPS.

Our dealers are the backbone of our business, which is why we deeply value each and every dealer relationship. Yet, we're a pretty demanding bunch when it comes to the dealers we invite into our network. Each must embrace the values we live by every day. Since the start, we've built WaterTech on integrity and relationships, not company growth or profits. Our dealers must mirror these same convictions.

One thing is for sure. If you decide to install a WaterTech treatment system, we are looking out for your water quality as if it were our own.

Looking for a WaterTech Dealer? [Click here.](#)