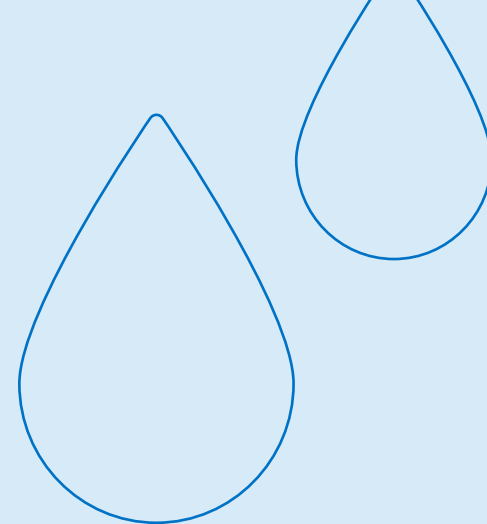


# The Hard Water Solutions Handbook



*Culligan Water*<sup>®</sup>



## Table of Contents

- 1 Introduction
- 2 What Is Hard Water?
- 3 Is Hard Water Safe to Drink?
- 4 Effects of Hard Water
- 5 How to Fix Hard Water
- 6 Choosing Your Water Softener



## Introduction

You're the protector of your home and everyone who lives in it — but how can you defend against your own tap water?

The unfortunate truth is that tap water could be causing damage to your home, your appliances and even your skin and hair. This happens when your water is hard — a common occurrence across North America. In the U.S., [80% of water is hard](#) and in Canada, [20% of municipalities have very hard water](#).

There's a lot to know about hard water. With this handbook by your side, you'll be able to identify hard water problems, choose the best solutions and start trusting your tap water again.

Let's dive in.



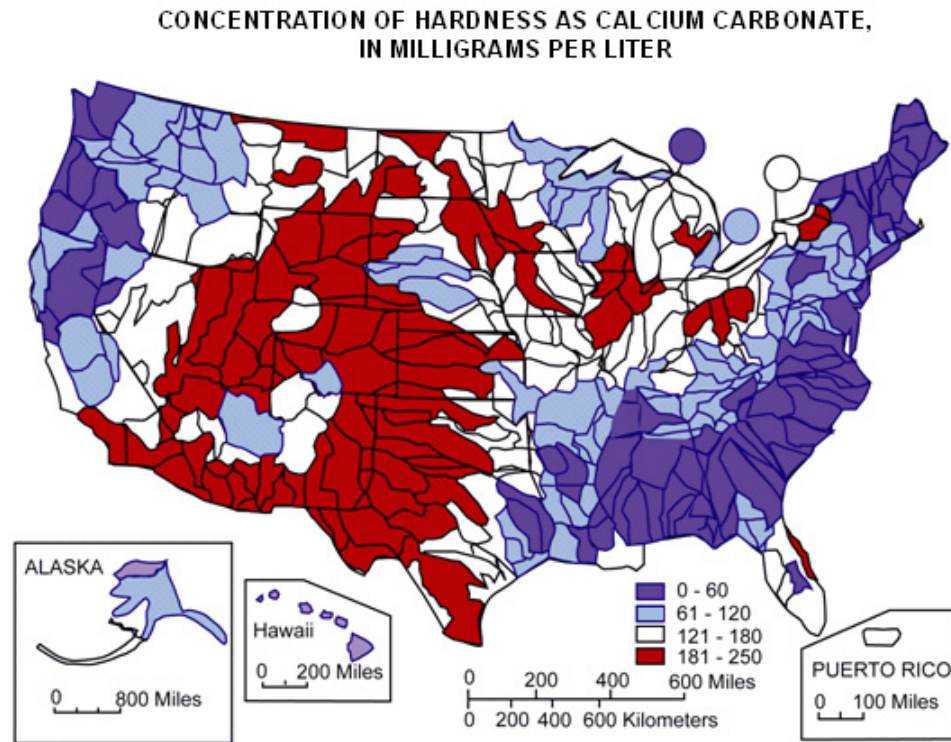
In the U.S., 80% of water is hard

and in Canada, 20% of municipalities

have very hard water.

## What Is Hard Water?

Hardness in water is caused by dissolved calcium and magnesium. These minerals are part of the natural environment and can be found in varying amounts across North America. This can cause water hardness levels to differ, as shown in this illustration from the United States Geological Survey:



Both city and well water users can have problems with hard water. That's because calcium and magnesium are naturally accumulated throughout the water cycle, which means they can easily end up in your tap no matter its source.



## Is Hard Water Safe to Drink?

It may be alarming to hear that there could be a mineral buildup in your water supply, but don't worry. Hard water isn't a health concern.

Instead, water hardness causes certain issues that can impact your comfort, including:



Dry, itchy or cracking skin



Brittle hair



Itchy scalp

While your body may see hard water as a mild irritant, your home may feel more significant impacts.



## Effects of Hard Water

Hard water can have many significant effects on your home overall, making it harder to clean, less comfortable to live in and even more expensive to maintain. Here's what hard water can cause:

- Spotty dishes
- Reduced efficiency and longevity in water-using appliances
- Filmy shower doors
- Hard water stains and buildup on fixtures, ceramic tile and more
- Mineral buildup in plumbing
- Dingy, stiff or scratchy laundry
- Premature failure of water heaters and reduced efficiency

These hard water problems can lead to even more frustration when you realize you're spending more on soaps, detergents and chemical cleaners because hard water lowers the efficacy and efficiency of cleaning supplies and appliances.

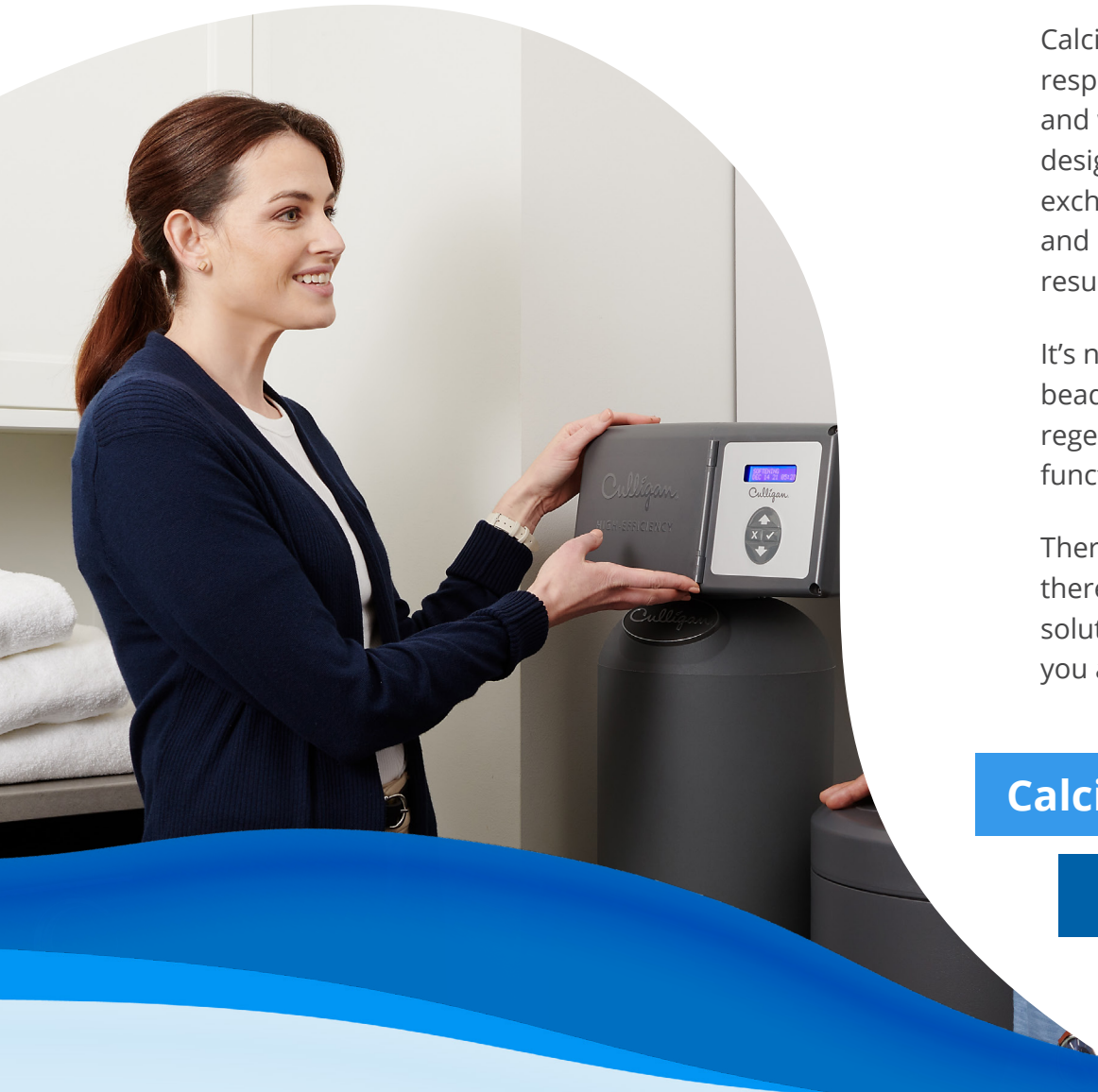
The truth is that using softened water could result in up to **50% lower detergent costs**; it can also lead to **24% energy savings** when using cool, softened water to wash clothes. That's why it's important to know how to fix hard water.

Using softened water

could result in up to 50%

lower detergent costs.

## How to Fix Hard Water



The best way to fix hard water is to have a water softener installed in your home. Let's take a closer look at how these systems work.

Calcium and magnesium are the dissolved minerals responsible for hard water. These are positively charged ions, and water softeners contain negatively charged resin beads designed to attract them. Through a process known as ion exchange, the hardness ions are attracted to the resin beads and replaced by more desirable sodium or potassium ions, resulting in softened water.

It's normal for calcium and magnesium to build up on the beads as part of this process, so the beads are typically regenerated (essentially, rinsed) with salt to keep them functional (although [salt-free alternatives](#) are available).

There are many water softener options on the market, but there are some important criteria to look for to ensure your solution can take an active, effective role in helping protect you and your home from hard water.

**Calcium and magnesium are the dissolved minerals responsible for hard water.**



## Choosing Your Water Softener

You need a water softener you can rely on. But what does that look like?

### High-quality water softeners have some or all of the following features:

- Efficient operations to save water, energy and salt
- Customizable settings that allow you to set your water softness levels to your preference
- Available salt delivery programs to make maintenance simple
- Durable, reliable design
- Remote monitoring and control with a smartphone app
- Notifications to alert you when maintenance is necessary or an issue occurs
- Transparent water usage to help you set and track water conservation goals
- 30-day 100% satisfaction guarantees
- Certification to NSF-ANSI quality standards through third-party organizations such as the Water Quality Association and IAPMO
- Network of local service technicians

As the world's most efficient water softeners, Culligan's HE water softening systems check all these boxes and more.\*

Before choosing your system, though, you need to take the first step to identify your water hardness levels. Start today by [scheduling a free, in-home water test and consultation](#) with your local Culligan Water® experts. With more than 85 years of expertise serving local communities, Culligan makes it easy to solve your hard water problems, with custom system recommendations, expert installation and white-glove service.

### Schedule your free, in-home water test and consultation.

\*HE Softener when configured with proportional up flow brining with Aqua-Sensor®





The logo for Culligan Water, featuring the brand name in a white, elegant cursive script. A registered trademark symbol (®) is positioned at the end of the word "Water".

Culligan Water®

[www.culligan.com](http://www.culligan.com)

