



THE HOMEOWNER'S GUIDE TO WATER QUALITY & HARD WATER

How to identify mineral buildup, protect appliances, and choose the right treatment system for your home.

The Silent Problem Lurking in Your Pipes

When you turn on a faucet, the water coming out may look clear. However, water that meets baseline municipal standards is rarely optimized to protect your plumbing, safeguard your appliances, or provide the highest quality for your family.

Across our region, water travels through mineral-dense earth, picking up high concentrations of dissolved calcium, magnesium, and other elements. While not an immediate health hazard, untreated water exacts a heavy, compounding financial toll on your home.

The Three Hidden Costs of Poor Water Quality:

- **Accelerated Appliance Failure:** Water heaters, dishwashers, and washing machines battle continuous mineral scaling. A standard water heater can lose up to 30% of its heating

efficiency in just two years of hard water use, often failing 4 to 6 years prematurely due to sediment burnout.

- **Plumbing System Restriction:** Limescale doesn't just stay on your fixtures; it coats the interior walls of your copper and PEX lines, narrowing the pipe diameter and steadily degrading your water pressure over time.
- **Daily Wear on Skin, Hair, and** Hard water breaks down soap efficiency. You end up using up to 50% more detergent, dealing with persistent mineral film on glassware, and experiencing chronic dry skin and brittle hair after showers.

Turn to the next page to perform a rapid 5-minute self-audit of your home's water.



THE 5-MINUTE HOME WATER SELF-AUDIT

*Take five minutes to inspect your fixtures, appliances, and daily water performance.
Check each box that applies to your home.*

Check	Area	Observable Symptom	Severity Indicator
[]	Fixtures	Chalky, white crust or greenish deposits around faucet aerators and showerheads.	Moderate Mineral Load
[]	Dishes	Glassware emerges from the dishwasher with cloudy, milky haze or spotted film.	Active Hard Water Scaling
[]	Water Heater	Popping, rumbling, or kettle-like boiling noises coming from the tank during a cycle.	Severe Sediment Accumulation
[]	Skin & Hair	Soaps and shampoos resist lathering; skin feels itchy, tight, or dry immediately post-shower.	High Hardness / High Chlorine
[]	Laundry	White fabrics look dull or gray, and towels feel stiff and scratchy out of the dryer.	Detergent-Mineral Binding
[]	Taste & Smell	Water carries a strong bleach/chlorine odor, metallic tang, or faint earthy smell.	Chemical Disinfectant / Iron

[]	Flow Rate	Noticeable drop in hot water flow compared to cold water throughout the house.	Pipe Interior Scale Buildup
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Scoring Your Home's Water:

- **0 Checks:** Your water is well-balanced. Standard annual plumbing maintenance will keep your systems running smoothly.
- **1–2 Checks (Moderate Hardness):** Minerals are actively placing unnecessary stress on heating elements and fixtures. Preventive conditioning will significantly extend appliance lifespans.
- **3–4 Checks (Severe Hardness & Mineral Load):** Scale accumulation is currently damaging your water heater, fixtures, and internal piping. A dedicated treatment solution is needed to prevent premature system replacement.
- **5+ Checks (Critical Water Quality Alert):** Your home is operating under severe mineral stress and chemical exposure. Equipment failure is a matter of *when*, not *if*. Immediate system design and water conditioning are strongly recommended.



HARD WATER VS. CONTAMINANTS

Homeowners frequently make the expensive mistake of buying the wrong equipment because they confuse hard water with water contamination. They require two completely different treatment methods.

UNDERSTANDING THE DIFFERENCE



HARD WATER MINERALS:	IMPURITIES & CHEMICALS:
(Calcium & Magnesium)	(Chlorine, Metals, Sediments)

WHAT IT IS:

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Naturally occurring rock minerals dissolved into groundwater.	Municipal chemical disinfectants, pipe corrosion byproduct, micro-solids.
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WHAT IT DAMAGES:

WHAT IT DAMAGES:

- Water heater heating elements
- Pipe interior diameters
- Valves, seals, and aerators

- Taste, smell, and drinking purity
- Skin barrier health & lung comfort
- Gasket integrity in appliances

THE PROVEN SOLUTION:

-Ion-Exchange Water Softeners,
or Dedicated Descalers

THE PROVEN SOLUTION:

-Whole-Home Carbon Filtration &
- Reverse Osmosis Drinking
Systems

Key Takeaway: A water filter alone will not remove hardness minerals or protect your water heater from scale. Conversely, a water softener alone will not remove chlorine taste or chemical disinfectants. For total home protection, many homeowners pair both systems together.



SYSTEM COMPARISON MATRIX

Selecting the right equipment comes down to matching your specific water profile with the correct treatment technology.

System Type	Primary Target	Best Suited For	Expected Lifespan	Typical Maintenance
Ion-Exchange Water Softener	Hardness minerals (Calcium & Magnesium)	Homes with scale buildup, noisy water heaters, or spotted glass.	12–15+ Years	Periodic salt replenishment; annual valve check.
Whole-Home Carbon Filtration	Chlorine, chloramines, volatile organics, odors	Whole-house chlorine reduction; cleaner shower & bath water.	5–10 Years	Media bed change or cartridge replacement.
Point-of-Use Reverse Osmosis (RO)	Total Dissolved Solids (TDS), heavy metals, micro-contaminants	Dedicated pure drinking and cooking water at the kitchen sink.	10–15 Years	Annual stage filter change; membrane every 3–5 yrs.
Hybrid Dual-Stage Treatment	Full spectrum: Hardness + Chemicals + Sediments	Complete, zero-compromise protection for appliances, pipes, and drinking.	12–15+ Years	Salt top-offs and routine filter stage maintenance.

Sizing Matters: Generic, big-box store systems are often undersized for peak flow demands. When a water system is improperly sized, you experience noticeable pressure drops when two showers run simultaneously, and the system wears out prematurely. A professional installation sizes the media tank specifically to your home's peak Gallons Per Minute (GPM) and total grain capacity.



YOUR PATH TO CLEAN, PROTECTED WATER

Test strips provide a basic baseline, but they fail to account for total dissolved solids (TDS), water pressure dynamics, flow rate requirements, and existing pipe integrity.

A high-performance water system is not a one-size-fits-all purchase—it is a custom engineered solution designed to protect your largest investment: your home.

The 3-Step Clear Water Protocol:

- **Step 1:** Comprehensive On-Site Water Evaluation
- We perform a precise physical water test measuring exact grains of hardness, total dissolved solids, and incoming water pressure to understand the exact chemistry entering your property.
- **Step 2:** Custom System Sizing & Layout Design

- We calculate your household's peak flow rate (GPM) and pipe diameter to design a treatment setup that delivers pristine water with zero pressure loss.
- **Step 3: Precision Professional Installation**
- Clean, code-compliant installation featuring full bypass valves, clean drain routing, and complete testing to ensure flawless operation from day one.

Ready for Real Protection and Pristine Water?

Take the guesswork out of your home's plumbing and water quality. Contact Battle Mountain Plumbing today to schedule your in-home water analysis and consultation.

- Call Today: **(775) 389-7651**
- Service Area: **Battle Mountain, Nevada**