

Understanding Water Quality

Water quality emerged as **the most important issue** identified during the recent community outreach and engagement process. Many customers specifically mentioned taste, hardness, purity, and impacts on plumbing and appliances. One of the most important distinctions to understand is the difference between safe water and customer preferences regarding water quality.

Questions We Heard

- **What is the difference between safe water and high-quality water?**

Safe drinking water: Camrosa's potable water must comply with stringent federal and state drinking water regulations. These regulations establish Maximum Contaminant Levels (MCLs) for substances that could affect human health.

When water meets all applicable drinking water standards, it is considered safe to drink.



Camrosa's Water Quality Laboratory

High-quality water: While the water may be considered safe, **simply meeting these health-based standards may not result in what a customer perceives as high-quality water.** Water quality can also be evaluated based on factors such as taste, odor, color, hardness, mineral content, and other aesthetic characteristics. These characteristics may affect how customers perceive and use their water, but do not necessarily indicate a health risk.

In other words, water can be safe to drink while still having characteristics that some customers may consider undesirable. Camrosa's goal is to provide water that not only meets all applicable health and safety standards but also maintains the highest **practical** level of quality given Camrosa's available water supplies, treatment processes, infrastructure, and regulatory requirements.

- **Why does water sometimes taste or look different?**

Customers often evaluate water quality based on characteristics such as taste, odor, color, hardness, mineral content, or its effects on appliances and plumbing.

These characteristics are important to customers but are often regulated differently than health-based standards. Water is a natural resource, and its characteristics can vary depending on where it comes from and what it naturally encounters as it moves through the environment. Seasonal changes, temperature, and changes in the water source or the blending of different supplies can also influence these characteristics.

Imported water can have a different mineral profile than local groundwater, so customers may notice a change in taste or other characteristics when Camrosa changes the proportion of water from different sources. These differences do not necessarily indicate a health concern. Water can have noticeable differences in taste, hardness, or mineral content while still meeting all applicable drinking water standards.

Camrosa routinely monitors its water supplies and conducts testing required by state and federal regulations to ensure the water meets applicable health-based standards. When customers notice a significant or persistent change in taste, odor, or appearance, they are encouraged to contact Camrosa, so staff can evaluate the concern.

- **What causes water hardness?**

Groundwater can naturally pick up minerals and salts as it moves through different rock and soil formations. Water hardness is primarily caused by dissolved calcium and magnesium, which are **naturally occurring minerals** found in many groundwater sources. The amount of these minerals can vary depending on the geology of the area and the source of the water.

Hard water is not generally considered a health concern, but it can affect how water behaves in homes and businesses. Higher hardness can reduce soap lather, leave mineral deposits or scale on fixtures, and contribute to build up in water heaters, appliances, and plumbing. The hardness of Camrosa's water can vary as Camrosa uses different combinations of groundwater and imported water supplies.

- **Why do some customers use water softeners?**

Several customers have asked why they need a home water softener if Camrosa uses advanced treatment technologies such as reverse osmosis. The answer is that not all water delivered throughout the system receives the same treatment, and water from **different sources** is blended to maintain reliability and operational flexibility. Water quality characteristics may therefore vary throughout the service area.

Reverse osmosis (RO) is a water treatment process that uses pressure to push water through a specialized semi-permeable membrane. The membrane allows water molecules to pass through while removing a significant portion of dissolved salts, minerals, and other constituents from the water.

- **How does reverse osmosis (RO) treatment improve water quality?**

For Camrosa, RO can be particularly beneficial for treating groundwater that contains elevated concentrations of naturally occurring salts and minerals. RO treatment can reduce total dissolved solids (TDS), salinity, hardness, and specific constituents such as nitrates and other contaminants, depending on the treatment system and membrane design. This can improve the overall chemical quality of the water and reduce issues such as mineral buildup and scaling.

RO also provides an important tool for developing and maximizing local water supplies. By treating groundwater that may otherwise be limited by its water quality, Camrosa can make greater use of local supplies while reducing reliance on imported water. The treated water is then blended or otherwise managed to produce a finished water supply that meets applicable drinking water standards and Camrosa's water quality objectives.



Round Mountain Reverse Osmosis (RO) Water Treatment Plant