



Water Hardness Introduction ▶ Geography

Climate and Weather

Conductivity Suspended Sediment

Salinity

Nutrients Metals Biological Water Quality Parameters

Principles of Water Quality

Total Dissolved Solids and

Spiritual Meaning of Water Human Impacts to Water

Water Temperature Dissolved Oxygen

▶ Hydrology

Water hardness is defined as the concentration of ions of alkaline earth metals (mainly calcium and magnesium, sometimes also strontium and barium) in the water. There are, internationally, different methods to measure the hardness of water. Very common, but scientifically not totally correct, is the measurement in milligram of calcium per litre of water.

Water that is considered hard (150-300) generally has lower toxicity than water that is soft (0-75) and breaks down soap more easily. The downside is that hard water can cause problems in the water treatment process and industrial use.

Hardness in water is a common problem in the Orange-Senqu River basin, especially in supplies from groundwater sources. Water hardness can cause scaling in water pumps and damage valves, pipe fittings and other infrastructure, especially in rural systems that use very hard.



Hardness can damage valves and cause leaking on pipes and other infrastructure. Source:DRFN 2004

(click to enlarge)

Next: Nutrients

















