

## pH Issues with your Water

pH (denotes 'potential of hydrogen' or 'power of hydrogen') is measured on a scale of 0 to 14. Water with a pH of 7 is considered neutral, below 7 is acidic and above 7 is alkaline. Our service area is located in south-central Pennsylvania. Generally speaking, the pH in this area can range from 4.5 to 8.5. Rain can be a big contributor to low pH as it picks up elements, such as pollutants from the air with low pH and in turn causes the water to turn low pH. As water penetrates the ground, it will go through different grades of rock and effect the pH. Granite is a very hard rock and therefore pH usually remains low as not much is added to the water. Conversely, Limestone will increase pH as well as the water hardness. In our service area places such as, Lititz, Ephrata, Manheim, and Mt. Joy have lots of Limestone rock so it is not uncommon to see a pH of 7 but very hard water, 20 GPG or more.

Keep in mind we do not always know what is going on underground with rock formations and water flows. If you are on a well, your water could test one way and your neighbor 100 feet away could test completely different. Keep in mind with all this variability, you may need different types of water treatment equipment installed to address your particular issue.

Here are a few suggested ways to address your water at different pH levels:

pH 8.5 – 14: Not really that common in our area but would need to be treated with an acid solution via chemical feed pump in a controlled environment.

pH 7.0 – 8.5: In most cases this is acceptable water and no treatment is needed.

pH 6.0 – 6.9: This water is slightly acidic and pH should be adjusted. In most cases we would address this with a acid neutralizer using a mineral called Calcite (small chips of limestone and marble used in a pressure tank). The water would run through this mineral bed thereby raising the pH. This method can also raise the hardness of your water and may require a water softener to follow your acid neutralizer system.

pH 5.5 – 6.0: This water is more acidic and may need more aggressive treatment to raise the pH. Typically we would address this with a mineral mixture of Calcite and Corasex (Magnesium Oxide). The ratio of mineral is usually 5 parts of Calcite to 1 part of Corasex (5/1). While this will raise the pH it will also add hardness to the water so a water softener would be suggested.

pH 4.5 – 5.5: This level of pH requires a stronger chemical to bring up the pH. This is typically done by injecting Sodium Sesquecarbonate (Soda Snow) via a chemical feed pump. The will sit in a retention tank to gain maximum contact time with the chemical. The Soda Snow application will not increase your water hardness. In some cases, depending on the water chemistry, a plumber/water professional is able to use finely granulated Marble together with Corasex (Magnesium Oxide) in a pressure tank to bring up a pH of 5.5 or higher to acceptable levels

*"Our Thoughts on Water" 7/2021*