

Water is an abundant element here on Earth and makes up about 71 percent of the Earth's surface. Water exists in such forms as water vapor, rivers, lakes, oceans, icecaps, glaciers, in the ground as soil, and aquifers (United States Geological Survey). Water can further be classified into two category forms that we use here in Bryan County: Water Wells and Surface Water. Water wells can be defined as, "a deep hole or shaft sunk into the earth to obtain water" (Water well). Water from a well or well water can also be referred to as ground water. Surface Water can be defined as, "any body of water found on the Earth's surface, including both the saltwater in the ocean and the freshwater in rivers, streams, and lakes" (Surface Water). It is important for everyone, especially Bryan County residents to be informed of the safety, treatment, and financial benefits of using surface water compared to well water.

Water is a vital resource as it is used in everyday life. It is important for water to be in its purest and cleanest form. Both well water and surface water are not considered to be safe left untreated. Surface water is more impacted by pollutants in the surrounding atmosphere, while well water is more impacted by the minerals in Earth's core. According to Goulds Water Technology, "Surface water is exposed to many different contaminants, such as animal wastes, pesticides, insecticides, industrial wastes, algae and many other organic materials." Groundwater or well water on the other hand "may contain any or all of the contaminants found in surface water as well as the dissolved minerals it picks up underground. Groundwater commonly

contains less contamination than surface water because the rock tends to act as a filter to remove some contaminants" (Goulds Water Technology). Even if water looks very clean and pure, it does not mean it is safe. Water must first be treated to ensure its safety.

It is of utmost importance to keep people who are drinking and using the water safe. For water to be in its finest form it must go under treatment. Both well water and surface water must be treated as they are impacted by the world around them. According to the New York State Department of Health (and other states), "Public water systems are required to treat, disinfect and monitor water quality for their customers. A public water treatment system is well designed and employs trained technicians to test and maintain water quality." There are two processes of treatment that are used on surface water. These treatments are "conventional treatment including clarification (coagulation/flocculation, sedimentation or dissolved air flotation), sand filtration, activated carbon adsorption and disinfection and advanced treatment based on ultrafiltration technology" (Lenntech). When you own a home with a private well, the safety and quality of the water is your responsibility. According to the Water Right Group, "Well water almost always requires some softening and filtration to make it ideal for drinking, cooking, and cleaning." For proper treatment, well water must have a water filter and be tested at least once a year to ensure your safety. Although water treatments are important and needed, they come at a cost.

Like everything else in life, even water is not free. To keep water treated and safe comes at a price. Surface Water and Well Water both have their pros and cons. Surface Water's only con is that you must pay a monthly bill. However, "Receiving your water through the city means you won't have to worry about any maintenance costs, as that falls on the city. You also most likely won't have to deal with the possibility of running out of water if there is any sort of

drought” (Dwyer Water Wells). On the other hand, the Article, *Advantages of Having a Water Well* says, “You can considerably cut down your water bills if you have access to your own water supply through water well.”

In the end, Surface Water and Well water both have positive and negative factors when it comes to safety, treatment, and financial benefits. Choosing between Surface Water or Well Water may be a hard choice, but it ultimately depends on what you have access to and what is going to be the most effective and beneficial to you and your family. The Bryan County Rural Water District #2 prides itself in taking care of and protecting the residents and their family in regard to using safe water. The safety, treatment, and financial benefits is all about putting the needs of the community first, and Bryan County successfully does that.

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