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According to the Water Education Foundation website, surface water refers to the water that we collect from rivers, streams, creeks, lakes, and reservoirs. This is the type of water that we use to drink, farm with, and complete other everyday tasks. On the other hand, a water well is how people can access ground water contained in an aquifer, or underground rock particles that water is stored in. A well is a hole drilled into the Earth that uses a pipe and a pump to extract the water from the aquifer. They also normally have screens to filter out particles that could be harmful.

Surface water usually contains unwanted particles, such as bacteria, algae, or organic matter. Because of this, it needs to be treated before it can be used. According to the Municipal Water Treatment Process, this treatment can be done in 9 steps including collection, screening and straining, chemical addition, coagulation and flocculation, sedimentation and clarification, filtration, disinfection, storage, and distribution. At the end of this process, the water is about as clean as it can be and is ready to be used by sinks, hydrants, or any other type of distribution system. Well water, however, is not as strictly regulated when it comes to treatment and is more likely to carry bacteria or viruses. One company recommends that families using wells invest in a sediment filter, carbon filter, and reverse osmosis and ultraviolet treatment in order for the water to be safe to use. This is much riskier than relying on a regulated company to filter your water, and much more taxing on the individual responsible.

While having your own water well can seem convenient, it can actually be quite risky. Since this water is being pulled up from the ground, it normally contains minerals which can lead to bad smells or staining. Pesticides can also get into the water supply which can lead to a variety of health issues. While all of these can be avoided by treatment, the risk is high since well water is not regulated. Even though surface water can contain more particles, it is still considered by some to be safer when treated.

There seems to be some controversy as to which method is more cost efficient, as the cost is often dependent on factors such as availability, contamination, and demand. It seems that using water wells can rack up a larger bill over a long course of time though. While wells might initially seem cheaper, the cost can rise exponentially if the water supply goes down to a certain level beneath the surface as it requires more power to lift. There could also be the added expense of installing and maintaining a water well. Surface water prices seem to stay fairly consistent and are reliable.

Overall, the research that I have done would point me towards believing that surface water is better in regard to safety, treatment strategies, and cost. While there are benefits to using a water well, there are also great risks that come with it if not treated correctly.

Thank you for the opportunity to apply to this scholarship.