



WHY DO HOMEOWNERS SAMPLE THEIR WELL WATER?

A safe drinking water supply is a current concern for the public health, environmental and economic well-being of many homeowners. Taste or odor changes, arrival of a new infant and property transfers are some major reasons that local citizens have expressed for having their private well water tested. Annual well water testing for bacteria and nitrates is recommended for all private wells. In unique situations, sampling wells for other potential chemicals such as pesticides, solvents, lead, etc., may also be advised.

Large quantities of groundwater exist in our aquifer consisting of saturated sand and gravel deposits, and fractured limestone and sandstone bedrock. As groundwater slowly seeps through the geological material it is released into lakes and streams and recharged back into the aquifer by locally fallen rainwater. Our drinking water source is located in our community, not in some distant watershed. The depth to the surface of our groundwater falls during drought but recovers as normal rainfall returns.

While the rapid permeability of our soil and subsurface geology allows groundwater supplies to quickly respond to local rainfall, this phenomenon is the reason for our concern to protect this natural resource as our only source of drinking water. As rainwater percolates through the soil, it may pass through buried or spilled chemicals which are carried to the groundwater that we drink. Cracks in bedrock and very shallow groundwater allow entrance of bacteria and viruses, in addition to chemicals.

Well casings (the actual well pipe extending from the ground) fitted with overlapping well caps are the most common reason for failing the bacteria test. Insects and small rodents can enter the well casing dropping bacteria into the well water. Earwigs have infested the upper Midwest and can number in the hundreds inside a well casing.

Well pits were common components of private well systems until pitless adapters became available in the early 1950's. If a well pit was constructed properly and does not leak, they can be acceptable. However, with time, well pits deteriorate and fill with water during wet seasons and downpours. When this happens, contaminated runoff can enter the pit, pour down the well casing, and be pumped into the house.

There are steps homeowners can take to protect their drinking water supply.

- Installing a vermin proof well cap keeps out bacteria laden insects: our most common problem.
- Locate pollution sources, such as storage tanks, septic systems, feed lots, etc., away from your well.
- If you have a well pit, strong consideration should be given to abandoning the pit and installing a pitless adapter.
- If you are constructing a new well, extend your well casing as deep into the aquifer as practical to avoid potential contaminants such as nitrates in the shallow regions of the aquifer. Consult with your well driller for the most optimum well construction.
- Sample your well water annually for bacteria and nitrates.



Helping Rock County Reach Its Full Health Potential

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