



“Funny Water”

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One of the most common questions and issues that come through the Extension office is due to homeowner concerns over well-water quality. The odd thing though is that most often, clients will describe their water as “funny”. Either the water smells “funny,” or maybe it has a “funny” color, or it might even be that there is something “funny” floating in the water. If you ask the folks at Miriam-Webster Dictionary, they’ll tell you that “funny” could be defined as “suspicious, perplexing, or peculiar.” Given that definition, I can understand why “funny” water might have some people “perplexed”. The good news is we can help provide information and testing to help take away the suspicion and make your water un-“funny”.

The most common issues we see are related to 1) high mineral content, 2) bacteria contamination, and 3) “rotten egg” smells or other issues. We’ll go through each of these and give you some basic background and how to test for or resolve the issues.

- High mineral content – It’s a weekly, if not daily, concern we hear related to private wells. Clients typically have bathroom fixtures that are stained (orange, green, red, grey, and even black), or notice a metallic taste or smell in their water. The minerals that we typically see high concentrations of are iron, manganese, and magnesium. This is a common issue for several reasons, especially in our deeper drilled wells. Madison County sits on top of bedrock that is composed of many of these minerals and our groundwater is often acidic, dissolving these minerals from the surrounding bedrock. Shallow, bored wells (less than 50-60 feet deep) typically do not have these issues because they are not accessing water in the deeper bedrock where water has dissolved these minerals. Several options are available for treatment – water softeners, oxidation/aeration pumps, chlorinators, and green sand filters could be effective, depending on the mineral levels in your water.
- Bacteria Contamination – Bacteria is common in nature, but unfortunately it is also fairly common in our groundwater. Most bacteria are harmless to human health, but some are capable of causing human disease. Because it is impractical and expensive to test for all of the potential bacteria that could be in groundwater, the UGA lab tests for two indicator bacteria – Total Coliform and *E. coli*. The most common bacteria contamination we see in wells is total coliform. The presence of coliform bacteria most likely indicates intrusion of surface water, organic material from the surface, cracks or failures in wellhead protection, or failures in the well-casing that allows for surface water intrusion. Coliform bacteria contamination is a common issue in shallow, bored wells. This is a result of the nature of these wells sometimes having access to shallow groundwater. Presence of *E. coli* indicates contamination from human or animal feces from sewer/septic systems, wildlife, or livestock. The risk of human illness is much greater with *E. coli* contamination than if only total coliform is present. Maintaining good surface well-head protection and good structural integrity of well casings are important to preserve water quality. Also, ensuring wells are not located in close proximity to septic drainfields or animal manure will help reduce the risk of contamination. If bacteria are present, disinfection through shock chlorination is recommended, as well as boiling for a minimum of five minutes before use for drinking or food preparation.

- “Rotten egg” smells and other issues – Sometimes, other issues are of concern. A “rotten egg” smell could be the result of hydrogen sulfide gas in your well and could indicate bacteria contamination or organic matter in your well, or if the smell is only present in hot water, it could be the result of the magnesium corrosion rod in your hot water heater converting naturally occurring sulfates into hydrogen sulfide. It is difficult to do a lab test for hydrogen sulfide, but treatment options include a shock chlorination to help disinfect the well, replacing the hot water heater magnesium rod with an aluminum or zinc rod, or installing an appropriate water treatment system.
- Other issues could be high levels of nitrates from failed septic systems or nutrient runoff, lead and copper contamination as a result of metal pipes in older homes, or even pesticide contamination, but each of these are rare, and very specific situations that result in these issues. We offer testing services for all of these issues at different prices depending on the issues you’re concerned with. You can find out more information by calling our office at 706-795-2281 or www.ugaextension.com/madison.

And that’s no joke.