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## Smelly Water From Your Faucet

Smelly water running out of the kitchen or bathroom faucet is very annoying, but is it safe? Odors compared to rotten eggs are not ideal in a family's home water faucets. Sulfates, which are a combination of sulfur and oxygen, are naturally occurring minerals. We find sulfates in some soil and rock formations underground with our groundwater. Bacteria that feed on sulfur can produce hydrogen sulfide gas, which is the primary offender when it comes to this odor.

According to Kathy Burr, Nebraska Extension 4-H Educator, we generally consider sulfates and hydrogen sulfide gas in drinking water "nuisances", meaning they do not pose serious risks to human health. Elevated concentrations of sulfates can cause dehydration in small children or serve as a mild laxative for adults. However, people most often become acclimated to those levels, minimizing any issues.

Hydrogen sulfide emits the rotten egg odor, and at extremely high concentrations, can cause people to become light-headed if exposed to the gas for extended time in a small confined area like a shower. However, those instances are extremely rare. Occasionally the odor can come from a hot water heater if the corrosion control rod present in many hot water heaters interacts with sulfates in the water to form hydrogen sulfide gas.

Perhaps the largest challenge with these nuisance elements for the majority of people is that they can cause black sludge to form in pipes, water softeners, and water fixtures in the home. This can also result in stains on clothes or other light colored linens in the home.

If you suspect you may have sulfates or hydrogen sulfide in your private water, the first step is to have the water tested to determine the concentration of both elements in your water supply. There are several treatment options available for the sulfate or hydrogen sulfide problem. Treatments include distillation, reverse osmosis, activated carbon filtration, oxidizing filters, and deaeration. More information about each treatment option, as well as sulfate and hydrogen sulfide information, can be found on the University of Nebraska-Lincoln website at: [water.unl.edu/category/drinking-water](http://water.unl.edu/category/drinking-water) or contact your local Nebraska Extension Office.