

Our house has well water. What should we do to make sure that the water is safe to drink?

Many rural houses in Jefferson County have well-water. A rare few have water drawn from surface-water sources. Unlike those living in the city or villages who can count on their municipality to ensure the safety of the water coming into their home, it is up to individual homeowners to ensure the safety of the water pumped from their well or surface-water source. Contamination, whether chemical or biological, can result in water that is dangerous to drink. Prior to purchasing a home, rural buyers should ensure that the home's water is safe by having it sampled by a local laboratory for contaminants. This is typically included as a contingency in the purchase agreement.

One of the more common contaminants is fecal coliform bacteria. Septic tanks located too close to the well, runoff from barns, and ponds frequented by waterfowl can be sources of bacteria. Ingesting water with fecal coliform bacteria can cause serious illness. The presence of fecal coliform bacteria can also be an indicator that more dangerous bacteria are present. Testing through a licensed laboratory is the only way to reliably determine whether these bacteria are present. The New York State Department of Health (DOH) recommends that homeowners test their water for coliform bacteria annually. Detailed information on testing for fecal coliform bacteria and addressing sources of contamination can be found at the DOH's website.

(https://www.health.ny.gov/environmental/water/drinking/docs/coliform_bacteria.pdf)

If fecal coliform is identified by testing, homeowners must next identify and eliminate the source of bacteria. Disinfecting the plumbing system, while necessary, is often a temporary solution if the source of contamination is not removed. Removing the source can be as simple as altering drainage away from the home's well, pumping the septic tank (prolonging its life and preventing failure), or, in extreme cases, moving the septic tank or well. Residents who experience continued problems with fecal coliform bacteria can also install water treatment systems that use ultraviolet light to kill bacteria.

Chemical contamination is another concern. Fuel, oils, pesticides, fertilizers, and other chemicals from farm operations or garages can leach through soils down to groundwater. Homeowners must use great caution to prevent spilling chemicals, particularly when near their well. Chemical contamination in groundwater can be difficult and expensive to remove. Homeowners should never dump excess chemicals but instead take them to a household hazardous waste turn-in day. Homeowners concerned that their well has been contaminated can request tests for potential contaminants through local laboratories.

Nitrate contamination can occur due to a failing septic system, but also occur due to excessive fertilizer use near the well. Nitrates are particularly dangerous for infants. DOH recommends nitrate testing every three to five years.

One thing that both city residents on municipal water and rural residents on wells should pay attention to is the possibility that plumbing fixtures contain lead. Plumbing installed before

1986 may contain lead. Even low concentrations of lead in drinking water can damage the nervous system, particularly in children. Lead from these old fixtures and fittings can leach slowly into the home's drinking water. Individuals living in old homes whose plumbing systems have not been updated should have their water tested for lead. If present, the plumbing system should be retrofitted with modern materials. DOH recommends testing for lead every three to five years (as changes in source water chemistry can result in lead leaching into the home's water).

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