Missouri Department of Health and Senior Services

Missouri Bureau of Environmental Epidemiology

P.O. Box 570, Jefferson City, MO 65102

https://heaith.mo.qov/livinq/environment/privatedrinkingwater"ndex.php

**Explanation of Private Drinking Water Test Results**

The explanations below describe each of the possible results for your chinking water test and provide an interpretation with regards to the suitability for drinking water purposes:

Total Coliform and E. coli Absent, Bacterially Safe: Coliform and E. coli bacteria were not detected in the sample tested. Sample is considered SATISFACTORY for drinking water purposes.

Total Coliform Present, Bacterially Unsafe: Coliform bacteria were detected in the sample tested. Sample is considered UNSATSIFACTORY for drinking water purposes. The presence of coliform bacteria in your drinking water indicates your risk of contracting water-borne illness is increased Although total coliforms can come from sources other than fecal matter, a positive total coliform sample should be considered an indication of pollution in your well

E coli Present, Bacterially Unsafe: E. coli bacteria were detected in the sample tested. Sample is considered UNSATISFACTORY for drinking water purposes. The presence of E coli bacteria indicates fecal contamination of the water supply has occurred. An increased risk to the health of those consuming the water may exist, as other disease causing bacteria from feces may have entered the water supply.

UNSATISFACTORY FOR TESTNG: Examples of samples that have to be rejected for analysis include samples that have been collected in improper containers, samples that are received in the laboratory more than 48 hours after collection, samples that have detectable chlorine present, samples with insufficient quantity (must be 100 ml), inaccurate or incomplete information on the accompanying sample information form, or a sample collected from a source other than a drinking water supply.

If Your Water Sample is Reported "Unsatisfactory for Drinking Water Purposes"

Until your well is properly disinfected, discontinue use of the water supply for chinking and culinary purposes. Discard any ice prepared with the water. Although unsatisfactory results do not conclusively confirm the presence of pathogenic (disease-causing) organisms in the water, these results should allude one to such a possibility.

Provide emergency disinfection. Disinfect all water used for drinking or culinary purposes by:

l. Boiling vigorously for one (l) full minute before use; or

2. Chemical disinfection: add two (2) drops (double the amount for cloudy or colored water) of regular household chlorine bleach (5,25 percent or higher chlorine) to each quart of water used. Mix thoroughly and allow to stand for 30 minutes before use.

Check for and correct any above-ground structural defects of the water supply that would allow surface water to enter the supply, such as defective seals or covers, surface drainage toward the well, etc.

Total Coliform Bacteria

Colifoms are a group of bacteria found in the intestines of humans and other animals. Coliforms also occur naturally in the environment; including in soil, on vegetation and in surface waters such as lakes, rivers, and streams. Most members of the coliform group do not cause disease. When found in drinking water, coliform bacteria indicate that contamination of the drinking water supply has occurred and that ocher disease-causing bacteria could also get into the water supply.

E. coli

*Escherichia* coli (E. coli) is a member of the coliform group of bacteria and is found only in the intestines of warm-blooded animals, including humans. When found in drinking water, E. coli indicates the water has been contaminated with human or animal wastes (feces). Possible sources of contamination include leaking septic systems, surface water leaking into structural defects (cracks) in the well's casing or pipes to the structural runoff from agricultural lots.

Your Department of Health and Senior Services Can Help

Instructions for the proper disinfection of wells are available on the Department of Health and Senior Services Private Drinking Water web page:

Construction and registration of new wells is regulated by the Department of Natural Resources,

Missouri Geological Survey, per the Water Well Drillers' Act. They can be contacted at 573-368-2100 or hi-line at: https://dnr.mo.gov/geology/geosrv/wellhd/wellsancldri.llinghtm

Missouri Department of Health and Senior Services Contacts:

Request sample collection kit, contact your Local Public Health Agencies (LPHA) or the Bureau of

Environmental Epidemiology. For questions regarding the status of your water test or assistance

understanding your private drinking water laboratory test report, please contact the agency from which you received your private drinking water sample collection kit.

A listing of Missouri's LPHAs may be found on-line at: 

For assistance/questions regarding well construction, possible defects, or private water supplies of lodging and childcare establishments, contact:

The Bureau of Environmental Health Services (BEHS) 573051-6095

Ta request a bacteria sample collection kit, contact:

State Public Health Laboratory (SPHL) 573-751-4830 https://health.mo.gov/lab/

For additional private drinking water assistance, contact:

The Bureau of Environmental Epidemiology 573-751-6102 https:/[health.mo.gov/li ving/environment/plivatedrinkingwater/index.php

# DISINFECTING YOUR PRIVATE WATER WELL

Please read full instructions before beginning the disinfection process.

For every 200 feet of depth, you will want to add half of a gallon of UNSCENTED HOUSEHOLD BLEACH. DO NOT ADD UNTIL THIS PROCEDURE SAYS TO.

If you do not know the depth of your well, contact the Missouri Department of Natural Resources (DNR) Geological Survey Program at 573-368-2100 and request a well information report for a fee or visit -the DNR Well Information Management System (WWIS) at www.dm.mo.gov/mowells where this information is available to the public. Keep in mind that the owner’s name would be the individual that had the well drilled. Using the latitude/longitude search, all you need are your GPS coordinates and you can do a several mile radius search. If your well was installed before 1986, there may not be information available on your well; however, an estimate of the depth of your well can be determined by comparing the average depth of documented wells in your area.

If you do not feel comfortable disinfecting your well on your own, contact a licensed well driller for assistance. Visit the DNR Well Installation Contractors database at www.dnr.mo.gov/mowells and search by county to find one near you.

NOTE: Before doing this procedure be sure to bypass the water softening unit and remove any in-line filters. Once the procedure is completed (bleach is flushed from system) you can reinstall or change out (get a new filter) the in-line filter, and turn the water softener back on.

SHOCKING AND HOLDING THE BLEACH SOLUTION IN THE SYSTEM

1. Remove as much water (at your kitchen sink) as necessary for general use (cooking, coffee) because you will need to hold the bleach solution in the system either overnight, or for at least six to eight hours during the daytime. You will also want to remove any filters (paper type, activated carbon, etc.) that are in the system's main water line before starting this procedure and bypass any softening or reverse osmosis (RO) units. Refer to your owner's manual to perform bypassing of a particular system.
2. Fill a five gallon bucket about three-fourths full with water and add the appropriate amount of unscented household bleach. Diluting the bleach will help avoid the corrosion of well components.
3. TURN OFF THE ELECTRICAL POWER TO THE WELL PUMP. once you have turned the power off, go to the well head and remove the casing cap. Doing this will allow you to look down into the well's casing. This is a great opportunity to inspect your wellhead for any damage like cracks, damage to wires, missing vent screens, or a loose well cap.
4. With a garden hose close by (for recirculation purposes) you should pour the bleach solution into the well. Avoid getting any bleach solution on the well cap components and wires.

5) TURN THE ELECTRICAL POWER TO THE WELL PUMP ON. Be careful, the wires in the casing are now live. Turn on the water hose and rinse down the interior side of the casing with the water from the hose really well, allowing the water to run down the well's casing and back into the well.

1. Turn the water off and at the hose and TURN OFF THE ELECTRICAL POWER TO THE WELL PUMP. It is now safe to replace the well casing cap and turn the electrical power to the well pump back on.
2. Go into the house and at each individual sink turn the cold water tap on (one sink at a time) until you smell bleach and then turn it off. You can flush the toilet until you smell bleach. You should also run some cold water into the washing machine until you smell bleach. If you have any garden hose hydrants that come off of the house you will want to turn them on until you smell bleach and then shut them off. AFTER DOING THIS, DO NOT RUN WATER FROM ANY OF THESE SOURCES FOR SIX TO EIGHT HOURS. THIS LOCKS THE BLEACH SOLUTION UP IN THE SYSTEM SO IT CAN PROPERLY DISINFECT!

OPENING THE SYSTEM AFTER SHOCKING THE WELL

l) After waiting at least six to eight hours, go to the well and turn on the garden hose until you do not smell any bleach and then shut off the hose. Keep in mind this bleach water can kill vegetation.

1. Go into the house and open the cold water taps until you do not smell any bleach. Flush the toilets. Fill the washing machine with cold water until you no longer smell bleach in the water and then dump the water. The first laundry load should probably be whites, just in case any bleach trapped in the cold water fed to the water heater would be eliminated from the system. Open any hose bib(s) on the outside of the house until you no longer smell bleach. Once all this is done you should have good smelling and tasting water,
2. You can repeat this procedure as often as you feel it is needed; however, if the problem persists then you might decide to contact a well driller and discuss your problem with theme Most people perform this bleach shocking procedure when they change the clocks for daylight savings. Some people annually shock their well as close to the middle of the year as possible. You can choose what works best for you. If you have any questions, please call the Missouri Department of Health and Senior Services at 573-751-6102 or toll free at 866-628-9891.

Do not dump bleach water into your septic system. Bleach water can sometimes kill the bacterial action found in your septic tank, so flushing as much of the bleach water as possible onto the ground (surface area) helps to limit this upset if any.