

Sherborn Groundwater Protection Committee - Press Release – For Immediate Distribution, Jan 3, 2023

“Sampling of Sherborn Residential Wells Finds High Frequency of Coliform Bacteria”

The Sherborn Groundwater Protection Committee (GPC) provided an opportunity this past summer for Sherborn residents to have their home well water sampled and tested for the most common contaminants of concern in our area. Homes were selected on a first come, first served basis following an announcement of the free program on the Town website and a call to enroll. The water from 41 Sherborn residential wells was tested at no-cost to the residents. The testing included the following water quality parameters: the presence of coliform bacteria; and the concentrations of: Nitrate and Nitrite, Uranium, Radon, Arsenic, Chloride, Copper, Fluoride, Iron, Lead, Manganese, and Sodium; plus, water Hardness and pH levels.

What was found in the water:

The GPC partnered with RCAP Solutions, a non-profit agency in Worcester that provides support services to rural communities, to sample the well water. RCAP assisted the residents in the sampling and delivered the samples to a MassDEP-certified laboratory for testing. RCAP also maintained all records associated with the project, keeping the addresses and homeowners' names unknown to the GPC and Town. The key finding of this small sampling set was that 42% of the well tests revealed one or more contaminants that exceeded MA Maximum Contaminant Levels (MCL), which MassDEP regularly enforces for public drinking water supplies. These included 15 instances of the presence of Coliform bacteria, 2 instances of Radon, and 1 instance of Uranium above recommended levels. Potential health problems may occur if drinking water contains these substances at levels higher than drinking water standards. Coliform bacteria exist naturally in the environment, but exposure from contaminated water may lead to gastrointestinal illness. Radon inhalation and uranium ingestion may lead to elevated risks of some cancers.

How does this Sherborn study compare to other Massachusetts communities that depend on private wells?

During 2020-2022 RCAP Solutions, with funding from the US EPA, MassDEP, and Massachusetts Environmental Health Association, conducted 502 well assessments and water tests across 24 Massachusetts towns, which like Sherborn are primarily dependent on drinking water from private wells. About 32% of these wells had levels of contaminants exceeding MassDEP health standards. In comparison, data from MassDEP for community public water supply systems throughout the state showed that only about 4.5% had reported instances of contaminants exceeding MassDEP health standards over this same period.

A closer look at coliform bacteria and What to do if testing reveals coliform bacteria in your well water:

The 17 Sherborn wells that tested positive initially for total coliform bacteria were also analyzed at the same time for the more specific *E. coli*. *E. coli* is a sub-set of coliform bacteria that is associated with the potential presence of fecal contamination. All 17 wells were negative for *E. coli*.

Given the high number of wells showing the presence of coliform bacteria, Sherborn homeowners are reminded to have their well water tested on a regular basis. Our Sherborn Board of Health recommends that if you do find coliform bacteria in your homes' well water, that you immediately contract with a qualified well company to have the well and entire home water supply system disinfected, along with an effort to determine and eliminate the source of the bacteria contamination. The BOH does not advise residents to carry out the disinfection steps themselves. Common sources of coliform bacteria include water or air leaks anywhere in the plumbing lines, malfunctioning septic systems, and contaminated runoff on the property from animal wastes.

How you can get your well water tested:

The full battery of tests conducted in this study can be performed by MassDEP certified labs in this area for less than about \$300, and less than about \$75 for just the coliform/E. coli tests. The UMASS-Amherst Extension Service has a very informative website with homeowner resources on drinking water wells in Massachusetts (please see:

<https://ag.umass.edu/cafe/fact-sheets/well-water>), and specific to the coliform bacteria screening test they state:

“Maximum Contaminant Level (MCL) for bacteria in drinking water is zero total coliform colonies per 100 milliliters of water as established by the EPA. The total coliform test is the basic yardstick for determining the biological quality in a water supply. The test is easy to perform, inexpensive, and errs on the side of caution. The organisms in the total coliform group are called indicator organisms. The presence of coliform bacteria in drinking water indicates that a pathway for disease producing (pathogenic) organisms exists. There may or may not be pathogenic organisms in the drinking water, but you should eliminate the potential pathway to prevent them from entering the well.”

A note about PFAS in local drinking water wells:

There is a new and emerging set of groundwater contaminants of concern in Massachusetts and world-wide, known as Per- and Polyfluoroalkyl Substances (PFAS) (see: <https://www.mass.gov/info-details/per-and-polyfluoroalkyl-substances-pfas-in-private-well-drinking-water-supplies-faq>). The GPC is currently monitoring the progress of a recently completed state-wide PFAS study on residential wells and will share the results as soon as the final MassDEP project report is issued.

For further information and any questions that you may have on maintaining your homes well, please contact:

Sherborn Groundwater Protection Committee: Email to gpc@sherbornma.org, consult webpage:

<https://www.sherbornma.org/groundwater-protection-committee>

Sherborn Board of Health: Phone: (508) 651-7852, Email to health@sherbornma.org. consult webpage:

<https://www.sherbornma.org/board-health>