



PRIVATE WELL TESTING FOR ARSENIC AND URANIUM NAUGATUCK VALLEY HEALTH DISTRICT

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BACKGROUND

In the spring of 2015, the Naugatuck Valley Health District (NVHD) joined with the Connecticut Department of Public Health (DPH) in a program to sample private drinking water wells for the presence of arsenic and uranium. In this program, DPH works with local health departments to gather information on the prevalence of arsenic and/or uranium in groundwater in various locations throughout the state as information is quite limited.

SAMPLING

Sample bottles were obtained from the DPH Laboratory and the program was advertised in local print, electronic and social media as well as the NVHD website. Samples were collected by property owners in the six member towns of Ansonia, Beacon Falls, Derby, Naugatuck, Seymour and Shelton. Samples were returned to NVHD for delivery to the DPH lab for analysis. Testing was conducted at no charge to the property owners. Participation was voluntary on the part of the homeowner. A total of 39 samples were collected and analyzed, the majority of which (22) were from Shelton. Results of all the sample tests were sent by NVHD to DPH.

RESULTS

Only two samples, both from Seymour, were found to have arsenic levels above the state action level of 0.01 mg/L. All participants were provided with a copy of their test results, and homeowners with elevated arsenic levels were given a fact sheet from DPH on arsenic in water and encouraged to contact a water treatment professional. There were no findings of uranium above the action level of 30 ug/L. The program was concluded by July 1, 2015.

ARSENIC

Arsenic is not noticeable in water because it has no taste or odor. It is naturally occurring in bedrock, therefore, wells drilled into bedrock may contain arsenic. Depending on local conditions it can leach from mineral deposits into groundwater. Arsenic can also contaminate groundwater from past or present industrial waste or agricultural pollution (i.e. fertilizers, herbicides, etc.). The only way to find out if a well has high arsenic is to have the well water tested. Homeowners should test their private well at least once for arsenic.

The U.S. Environmental Protection Agency (EPA) and expert scientific committees have classified arsenic as a human cancer-causing chemical. Research indicates that people living in areas where arsenic concentrations in water are very high are more likely to have bladder, lung, liver or skin cancer. Long

term exposure to high levels of arsenic in drinking water can also cause skin, cardiovascular, immune and neurological system problems.

Removal of arsenic from well water can be a complicated process. There are several treatment technologies that can remove arsenic from well water. Homeowners with elevated levels of arsenic should consult a knowledgeable water treatment professional.

URANIUM

Uranium is a metal that has no smell or taste. Uranium is naturally present in some CT bedrock ground water, therefore deeper, bedrock wells are susceptible to contamination. The amount of uranium in bedrock and well water will vary greatly from place to place. The only way to find out if a well has high uranium is to test. It is a good idea to test for uranium every 5 years. Those with a water treatment system to remove uranium from the water should test every year to be sure the system is working properly.

While most ingested uranium is eliminated from the body, a small amount is absorbed and carried through the blood stream. Studies show that drinking water with elevated levels of uranium can affect the kidneys over time. Unless uranium levels are extremely high, bathing and showering with water that contains uranium is not a health concern.

FOR MORE INFORMATION

For information about the local study or local health department private well water requirements, please contact:

Naugatuck Valley Health District, Environmental Health Division, 203-881-3255

For health questions regarding arsenic in your private well water please contact:

CT DPH, Environmental & Occupational Health Assessment Program, 860-509-7740

For all other questions (i.e., treatment, testing, etc.) please contact:

CT DPH, Private Well Program, 860-509-7296

REFERENCES

Information on uranium and arsenic and their health effects were provided by the CT Department of Public Health in the following publications:

Publication #3: Arsenic in Private Well Water, Private Well Water in Connecticut, Ct Department of Public Health, Environmental Health Section, Private Well Program, October 2015

What You Need to Know About Uranium in Private Well Water, Fact Sheet, Ct Department of Public Health, Environmental Health Section, August 2014