

## TOWN OF BROOKFIELD

### PUBLIC HEARING

The legal voters and residents of the Town of Brookfield are hereby notified that the Board of Selectmen will conduct a Public Hearing at the Brookfield Town Hall in Meeting Room 135, at 100 Pocono Road, Brookfield, CT, on **November 20, 2013, at 7:30 p.m.**, for the purpose of receiving public comment and opinion concerning proposed ordinance governing the testing of private water supply wells [Uranium and Arsenic] in the Town of Brookfield.

Copies of said proposed Ordinance are on file and available for public inspection in the office of the Town Clerk and the Town's Web Site [www.brookfieldct.gov](http://www.brookfieldct.gov).

Dated at Brookfield, CT, this 4th day of November, 2013.

William R. Davidson, First Selectman  
Howard Lasser, Selectman  
George Walker, Selectman



**TOWN OF BROOKFIELD**  
**Health Department**

**Brookfield, CT 06804**

*Item 2D*

TO: Board of Selectmen  
FROM: Raymond E Sullivan, MD, Director of Health  
Subject: Proposed Ordinance  
Date: Sept. 25, 2013

Enclosed please find a proposed ordinance governing Uranium and Arsenic testing of private well water, commensurate with a recommendation by the State of Connecticut, Department of Public Health. (attached)

Thank you for your consideration.

Raymond E Sullivan, MD  
Director of Health

*on website 10/9/13*

**Proposed Ordinance Governing  
the Testing of Private Water Supply Wells in  
the Town of Brookfield, Connecticut**

**Pursuant to Chapter 368e §19a-207 of the general Statutes of  
the State of Connecticut, as amended,  
be it ordained by the Town of Brookfield, Connecticut  
that the following ordinance be created:**

**Section 1: Definitions**

“Arsenic” – means the chemical element with an atomic symbol of As, which has been determined to be poisonous to multicellular life in certain levels and is classified as a human cancer-causing agent.

“Bedrock” – means the solid rock underlying unconsolidated surface materials, i.e. soil.

“CFR” – means the Code of Federal Regulations.

“CGS” – means the Connecticut General Statutes.

“Contaminant” – means any physical, chemical, biological or radiological substance or matter in water, as described in section 1401, Title XIV of the Federal Public Health Service Act.

“EPA” – means the federal Environmental Protective Agency.

“Maximum Contaminant Level (MCL)” – means the maximum permissible level of a contaminant in water that is delivered to any consumer of a public water system.

“Source Water” – means raw water before any kind or type of treatment at the source of supply.

“Radioactivity” – means the property possessed by some elements such as uranium, radium or an isotope spontaneously emitting energetic particles called electrons or alpha particles, which are produced by the disintegration of their atomic nuclei (cores).

“Radium” – means an intensely radioactive element occurring in combination in minute quantities, in naturally occurring minerals such as pitchblende or carnotite, which emits alpha particles and gamma rays to form radon.

“Radon” – means a gaseous breakdown product of radium, which retains some of its radioactivity.

“Toxicity” – means a feature of some substances, organisms, etc. which render them harmful to the body. Such toxicity may occur rapidly or over a long period of time.

“Uranium” – means a radioactive element found in nature, present in soil, air, water, rocks, plants and food, which breaks down very slowly into other elements including radium and radon gas.

“USC” – means the United States Code.

**Section 2: Authority**

This ordinance is established under the authority of the following federal and state codes and statutes:

40 CFR Ch1 § 141.15 Protection of the Environment

Public Law 104-182; The Safe Drinking Water Act of 1996  
42 USC § 300f et seq. Requirements under the Safe Drinking Water Act  
CGS:§ 19-13-B80. Chemical Substances in Public Water Supplies.  
CGS:§ 19-13-B39 Quality of Water Supplies Made Available for the Public and  
for Employees  
CGS: § 19-13-B50 and B51 et seq. Water Supply Wells and  
Springs

### **Section 3: Purpose**

**Whereas:**

The State of Connecticut Department of Public Health requires regular, periodic testing of public drinking water systems, (PWS) including those in the Town of Brookfield, while the testing of private water supplies (private groundwater wells) is required only at the time of construction;

**and whereas:** Prior to the institution of this ordinance, only defined potability parameters have been examined, exclusive of testing for the presence of uranium or other harmful substances;

**and whereas:**

State-required testing of several public water systems in Brookfield, and many instances of private well testing in recent years, has revealed higher levels of uranium than are acceptable by the U.S. Environmental Protection Agency standard;

**and whereas;**

It appears that the underlying bedrock in Connecticut, and Brookfield in particular, may have a higher than average potential for containing naturally occurring uranium and other associated radioactive elements and uranium decays into isotopes of radium and radium degrades to radon, these elements may also be more prevalent in Brookfield's ground water;

**and whereas:** the State of Connecticut has recommended testing for Arsenic in Private Wells;

**and whereas:**

Uranium is known to be toxic to the kidneys when ingested over a long period or in higher concentrations, elevated levels of this element in drinking water pose a long-term potential threat to the public health. In addition, the presence of its breakdown products – isotopes of radium – may be carcinogenic, i.e. cancer causing. Radium has been associated with leukemias, while Radon is the second leading cause of Lung Cancer. In addition, other harmful substances such as Arsenic are classified as a human cancer-causing agent.

**Therefore,**

This ordinance is established to protect the public health, by requiring an owner of a newly constructed source of a private water supply (private groundwater well) to specifically test for uranium and arsenic, in addition to normally required potability tests.

In addition, all real estate transactions involving homes and businesses supplied by private groundwater wells and springs within the Town of Brookfield must include

testing for uranium and arsenic, before such transactions are filed with the Town Clerk. The seller is obligated to provide such information to the purchaser, under the concept of full disclosure. Copies of such test results will be sent to the Director of Health by the seller or his/her agent, within thirty (30) days of closing.

#### **Section 4: Specifications**

1. Pursuant to a recommendation of the State of Connecticut Department of Public Health, any owner of a newly constructed source of private water supply (private groundwater well or spring) within the Town of Brookfield shall be required to quantitatively test said water for the presence of uranium and arsenic, in addition to normally required potability tests. Such testing shall be performed on Source Water only. Such uranium in drinking water (UDR) test results shall be submitted to the Brookfield Health Department, prior to the domestic use of such water supply.
2. Subject to paragraph 1 above, no water supply well permit shall be issued until it has been demonstrated to the satisfaction of the Director of Health or the Chief Sanitarian or both, that public sewers are available or a sub-surface sewage disposal system can be installed on the lot in compliance with Sections 19-13-B103a to 19-13-B104d inclusive, of the CGS.
3. Any owner of a home or commercial building within the Town of Brookfield, which is served by a private groundwater well or spring, shall be required to quantitatively test said water for the presence of uranium and arsenic, in addition to normally required potability tests, before the sale or transfer of said property to another party or parties.
4. All other sub-paragraphs of Section 19-13-B51(m), "Well Permits" apply.

#### **Section 5: Maximum Contaminant Levels**

The acceptable MCL for Uranium in the Town of Brookfield shall be that of the federal EPA, i.e., thirty micrograms per liter (30 µ/L)

The acceptable MCL for Arsenic in the Town of Brookfield shall be that of the federal EPA, i.e. 0.010 parts per million (PPM). k

#### **Section 6: Violations and Penalties**

If any newly constructed source of private water supply or existing source of private water supply transferred to a new owner is employed for drinking or cooking purposes prior to approval from the Brookfield Department of Health, said employment shall constitute a violation of this ordinance. Any person or business entity that violates any provision of this ordinance shall be fined not more than one hundred dollars (\$100.) for each offense. Each day such violation is committed or permitted to continue shall constitute a separate offense and shall be punishable as such hereunder.

Department of Public Health

**March 2013****DPH Recommends Arsenic and Uranium Testing for Private Wells***Testing is only way to know if well is contaminated***FOR IMMEDIATE RELEASE**  
March 18, 2013Connecticut Department of Public Health  
Contact: William Gerrish  
(860) 509-7270

**Hartford** - The Connecticut Department of Public Health (DPH) today announced it is recommending that private well owners in Connecticut should test their well for arsenic and uranium. These naturally occurring metals are found in groundwater in sporadic locations across the state and can lead to adverse health effects.

“Recent well testing in various towns around Connecticut has found arsenic and uranium,” said DPH Epidemiologist Brian Toal. “While the distribution of contaminated wells has been sporadic, there have been enough findings statewide to prompt recommended testing for both metals in all Connecticut towns.”

Wells should be tested at the time of sale of the home and also when a new well is drilled. Wells should be tested again every 5 years. If levels are found to be higher than state or federal criteria, homeowners have a number of effective treatment options to lower levels of the metals to less concerning levels. The cost for testing for both metals can range between \$65-\$100.

“The only way to know if these metals are present in your private well is to have your well tested,” Toal said. “Since tests for arsenic and uranium are not usually part of a standard well analysis, homeowners will need to specifically ask labs to analyze for these metals.”

Arsenic and uranium are metals that occur naturally in bedrock all over the world. When groundwater comes in contact with the bedrock, the metals may leach out and contaminate private wells. Both metals are considered toxic and can have a variety of adverse health effects if people are exposed at high enough levels and for a long period of time.

Arsenic is classified as a human cancer-causing agent, which has been associated with increased risk of lung, bladder and skin cancers. The type of uranium found in groundwater is not considered a radioactive risk and is therefore not a major cancer concern. However, the toxicity of the uranium metal has been associated with adverse effects on kidney function.

For more information, including specifics on testing and treatment recommendations, please see the fact sheets below:

[Arsenic in Private Drinking Water Wells](#)

[What You Need to Know About Uranium in Private Well Water](#)

[List of certified environmental laboratories](#)

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