



TOWN OF  
**BEEKMAN**  
*New York*

4 Main Street  
Poughquag, NY 12570  
[www.townofbeekman.com](http://www.townofbeekman.com)  
(845) 724-5300

Dover Ridge Residents,

I would like to start by apologizing for the manner in which you were informed about the issue of Radium levels in your water. It is understandable that it was extremely concerning to receive a notice indicating that there are issues with the water your family is using without further information explaining the situation fully.

I have spoken to VRI and future notifications will be handled differently. Notices will be delivered to all residents on the same day. We have double-checked to make sure that VRI has a complete list of addresses that need to be given notices. I understand that your water samples are done on a quarterly basis with the results being sent to Dover Ridge residents quarterly. Please review them and reach out to VRI at 845-677-3839 if you have any questions concerning the levels of the tested water samples.

Yesterday, I attended a meeting with the Dutchess County Department of Behavioral & Community Health. Joining me were representatives from VRI as well as the town engineer and Deputy Town Supervisor Wohrman. The purpose of the meeting was twofold. First, we discussed the procedure for informing the residents of issues with the water system. We all agreed that improvements to the delivery of such information was needed. As a result of our conversation, the Department of Health provided us with the enclosed FAQs sheet regarding Radium. It addresses the majority of the questions many of you had due to the initial notification. If you have any further questions please reach out to Dan Keeler at 845-486-3404. He will be happy to answer your questions.

Future notifications, depending on what the issue is, will result in a letter from the town informing you of the issues and including helpful information about the issue. Additionally, the information will be posted on the front page of the town website [www.townofbeekman.com](http://www.townofbeekman.com).

The town engineer is working with the Department of Health on plans to address the issue of Radium. Presently, the plan is to provide a new treatment component, likely via softening within the pump house. Water samples containing several parameters needed to properly design the water softener have been pulled and sent to the lab for analysis. The final design cannot be completed until those water quality parameters are known, as it will affect the units and the amount of backwash that is required. Once the final design is prepared, application to the Dutchess County Department of Behavioral and Community Health is required. We have assurances that they will turn the review around expeditiously. The softener units are intended be installed concurrent with the new atmospheric storage tank and variable frequency pumps as an add to the existing contract work. If at all possible, we will seek to install the units at any early stage of the overall improvement project so that the treated water will be delivered while the other work is ongoing.

The second purpose for our meeting yesterday was to discuss a new agreement for the previously mandated updates to the system by the Department of Health. Our new agreement includes the method, to be determined, to treat the elevated Radium levels as well as the ongoing upgrades previously required by the Department of Health.

I have also alerted our County Legislator Faye Garito to the issues concerning Dover Ridge. She is working with the County to see if there are any opportunities for assistance from them.

The town website had been updated on the front page and calendar regarding the dates and times of 2020 Town Board meetings. Unfortunately, it was not updated on all sections of the website. We were unaware of this and have since corrected it. We sincerely apologize for the inconvenience this caused for any residents who wanted to attend the last Town Board meeting.

Additionally, we are planning a meeting sometime in March for the Dover Ridge residents. The goal of this meeting will be to provide an update concerning the mandated improvements to the system as well as future plans for the system. A letter will go out to inform every one of the date, time and location of the meeting. It will also be posted on the town website.

Please feel free to reach out to me if you have any further questions about this issue. My town hall office number is 845-724-5300 ext. 225 or cell # 914-475-2627

Sincerely,



Mary B. Covucci

Town of Beekman Supervisor



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Environmental Health Services  
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## **Frequently Asked Questions about RADIUM**

Updated January 21, 2020

### **What is radium?**

Radium is a radioactive metal occurring naturally in trace (small) amounts in rocks, soils, and ground water. As radium decays, it continually releases energy into the environment and transforms until a stable, nonradioactive substance is formed. This energy is part of the natural radiation to which all living creatures are exposed. Radium dissolves in groundwater where acid conditions (low pH levels) are found. The naturally occurring radium isotopes most commonly found in groundwater are radium 226 and 228.

### **What is radioactivity and how is it measured?**

Radioactive substances are unstable in nature and release energy in a process called radioactive decay. The energy can be in the form of a wave such as gamma rays; or a particle such as alpha or beta particles; or both. Scientists can identify the different types of radioactive elements by measuring the characteristics of this energy.

In the U.S., radioactivity is usually measured in units called "curies." The level of radioactivity in water is very low and is measured in picocuries (one picocurie equals one-trillionth of a curie) per liter, written pCi/l.

### **What are the standards for radium in drinking water?**

The U.S. Environmental Protection Agency has established a maximum contaminant level (MCL) for combined radium 226 and 228 in drinking water. The MCL is a maximum permissible level of a contaminant that ensures the safety of the water over a lifetime of consumption and also takes into consideration feasible treatment technologies and monitoring capabilities. The MCL for combined radium 226 and 228 is 5 pCi/l. However, the MCL for combined radium is based on a running annual average of samples. If a single sample exceeds the MCL, the monitoring frequency is changed to quarterly. A water system is considered out of compliance if the average of four (4) quarterly samples exceeds the MCL.

### **What happens if a Public Water System exceeds the standard for radium?**

By law NYS Sanitary Code Part 5-1, community public water systems must be monitored for radioactivity. If a public water system exceeds the standard for radium, it must take corrective actions, which include notifying those who get their water from this public water system of the possible health effects from drinking this water. The notification includes information on what the system operator is doing to remedy the situation and what precautions, if any, the people may wish to take. <http://www.health.ny.gov/environmental/water/drinking/regulations>

### **What are the health risks from radium ingestion?**

Radium in water does not represent a health emergency as the only health effect expected is a small increase in the risk of developing cancer with long term consumption. Radium at commonly found levels in drinking water will not cause any immediate health effects. Acute health effects are not possible until you reach levels more than 1,000 times the MCL.

Radium, like other natural elements of the earth's crust, enters the body through drinking water and food. In the body, radium acts much like calcium. When swallowed, a small amount of radium attaches to bones, but most of the radium will leave the body naturally in feces or urine. The radioactive particles emitted by radium can damage parts of living tissue, which may lead to the unnatural reproduction of a cell and an increased risk of cancer.

For radium 226 and 228, the U.S. EPA estimates the additional lifetime risks associated with drinking water containing 5pCi/l is about 1 in 10,000. This means if 10,000 people were to consume two liters of this water per day for 70 years, one additional fatal cancer would be estimated among the 10,000 exposed individuals. According to the EPA model, as the level of radium increases, so does the risk. For example, increasing the concentration of radium from 5 to 10 pCi/l would increase the lifetime risk from approximately one to two additional deaths per 10,000 individuals.

The amount of radiation associated with consuming water containing 5 pCi/l of radium for one year is comparable to one chest X-ray or the cosmic radiation received during one round trip flight from New York to California.

Like any other metal, such as lead, copper, etc., radium does not pose any health risk by inhalation or skin contact. It does not vaporize nor is it absorbed through the skin. Radium-226 emits alpha particle radiation. Alpha particles are very reactive so they can be stopped by pretty much anything including air, water, and skin, etc., and cannot travel far. In addition, there are no health risks associated with bathing, washing dishes or doing laundry with water containing radium.

### **How can Community Public Water Systems correct the problem?**

Sometimes a system can find a new water source. It may also blend water from more than one source to the point that the blended water does not have unacceptable levels of radium. Another option is to install a treatment process to reduce the radium levels. Treatment options include cation exchange (which is similar to home water softening), reverse-osmosis, lime softening, and electro dialysis. In addition, studies have shown filtering water through greensand or anthracite may be effective. A water system operator will consider many factors, including cost, in deciding on an option.

### **Can I drink the water?**

Yes. As stated above, drinking water contaminated with radium does not pose an immediate health risk. Long term exposure may result in a small increased risk of developing cancer. Persons who are concerned may consider using bottled water.

**I have a serious health condition, should I be concerned?**

Some individuals may be more vulnerable to contaminants in drinking water. If you have special health care needs, consider taking additional precautions with your drinking water and seek advice from your healthcare provider.

**Can I use ice from my ice maker?**

Yes. The ice cubes would contain radium and the risks would be the same as for drinking the water. You may wish to use bottled water for making ice if there is a concern.

**Does my house filter (such as a Brita water filter) treat this issue?**

Most house filters do not treat radium. Contact the manufacturer to be sure.

**Will the water in my hot water heater be affected? Should I flush it out?**

Yes. The hot water would contain radium and risks from ingesting it would be the same as drinking cold water. Radium will not impact the heater unit.

**I have washed my infant's clothing, is this safe?**

There is no risk of exposure to radium through washing.

**How will I know when the water system is back in compliance?**

The public postings will be updated when the running annual average drops below the MCL.

**Can I cook with this water?**

Yes. You may wish to use bottled water if there is a concern.

**Can I wash my hands, shower or bathe, or brush my teeth?**

Yes, you can wash your hands, take a shower or bathe as skin contact is not a concern. Bottled water may be used to brush your teeth if there is a concern.

**Can I wash my dishes with this water?**

Yes, just be sure to dry them before using.

**Can I do my laundry?**

Yes, you can wash your clothes as you normally would.

**Will my pet(s) be affected?**

We encourage you to either check with your veterinarian or provide bottled water as a precaution.