

USGS Study on uranium and other trace metals in bedrock wells in south-east New Hampshire

Dear Resident Well User:

We really need your help! The U.S. Geological Survey is conducting research to assess uranium and other trace-metal (arsenic, lead, iron, and manganese) concentrations in privately owned wells in south-east New Hampshire.

How did we pick you to participate in this study? Your name and address were selected at random from a database of private well owners maintained by the New Hampshire Department of Environmental Services (NHDES). Your participation in this survey is completely voluntary and results from your well will only be used for the purpose of this study. If you are not able or willing to participate in this study, please contact Project Leader Sarah Flanagan, by email: (sflanaga@usgs.gov), mail: New Hampshire - Vermont Water Science Center, U.S. Geological Survey, 331 Commerce Way, Pembroke, New Hampshire 03275, or by telephone at: (603) 226-7811.

We will report results to you with information about health effects of drinking water greater than drinking-water standards and ways to decrease concentrations of these metals. If you have any questions, please do not hesitate to contact the project leader using the information provided above.

In Parts 1 and 3 of the survey we want to know a little about your water and where it comes from. In Part 2, there are instructions about how to collect a water sample. When you are done, please use the enclosed business reply envelope to mail your survey and water sample back to the USGS. **Please mail in the bottle and survey soon, if possible within 2 weeks. If it goes longer, however, we are still interested.**

PART 1 - Water Sources and Supplies

The majority of residential water supply wells in south-eastern New Hampshire are private wells that tap ground water aquifers in fractured bedrock formations. In the first part of this study, we would like to ask you a few questions about your water source and supply.

1. Is your home supplied with water from a private (bedrock) well?
 Yes (go to question 2)
 No. My house supply is town water or another source other than bedrock well. Please **STOP** here. You do not need to mail back the bottle, but we still request that you send back this survey.

2. Is your well water treated?
 Yes
What is the treatment? _____
 No

3. How many people are in your household? (*This question is to determine the amount of water use in your household*).
_____ People live in this household.

4. Do you use your well water for drinking water and/or cooking?
 Yes

No, because of water quality issues (Select all that apply):

Arsenic

Uranium

Iron

Sediment

Manganese

Taste

Other _____

Part 2 - Water Sampling Instructions

Although collecting a water sample is a relatively simple task, there are several steps that must be taken to ensure accurate results. Please follow the instructions in steps 1 – 6 below to complete the next section of the survey.

Sampling Objective

The objective is to get a water sample that represents the water in the bedrock aquifer as closely as possible, so please select a tap that does not have treatment. The bottle should be filled from the same faucet, one that does not have a water treatment system. Sample bottle screw threads and cap should not be contaminated with dirt from hands or the tap.

Once the bottle is filled, please mail the sample and questionnaire in the enclosed, prepaid business reply envelope.

Instructions

1. Collect your water sample **in the sample container provided by the USGS**. A sample collected in any other container will not meet lab standards and cannot be processed.
2. **Choose a location to sample your water.** If you **do not** have any water treatment devices, such as a water softener or a reverse osmosis filter, take the sample from a cold water tap where you get your drinking water. If you **do** have treatment devices on your water system, (other than a whole-house filter for sediment) please locate a faucet which is attached to the water line before the treatment system.
3. Please avoid contamination of your sample, and do not touch the inside of the bottle or cap.
4. **Turn on the cold water and let it run for 1 minute** to flush the water out of the pipes. Turn the faucet down to a pencil size stream of water, **rinse the bottle 1 time**, and then fill the sample bottle.
5. Place the bottle and your completed survey in the enclosed postage-paid, business-reply envelope.
6. Mail the pre-addressed envelope to the USGS.

PART 3 - Location and Time of Water Sample

Please tell us where and when you collected the water for this sample.

- Basement Faucet
- Outside Spigot
- Bathroom Faucet
- Kitchen Faucet
- Other _____

Date and time of sampling _____

We would like to follow-up sampling with a visit to a small number of participants. Would you be willing to participate in the follow-up visit?

Yes, I would like to participate in a follow-up visit.

Please contact me by phone: _____

Or by e-mail: _____

No, I would not like to participate in a follow-up visit.

We would like to thank you for taking the time to participate in this important study.

PAPERWORK REDUCTION ACT STATEMENT: The Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et. seq.) requires us to inform you that this information is being collected to inform a study on uranium and other trace metals in bedrock wells of south-eastern New Hampshire. The burden for this collection of information is estimated to average 20 minutes per response, including the time for reviewing instructions, answering questions, and collecting the water sample. The response to this request is voluntary. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB Control Number. Direct comments regarding the burden estimate or any other aspect of this collection of information to: Sarah Flanagan, 603-226-7811.