

Data to Action

A rural-based citizen science project to increase data literacy and eliminate arsenic from drinking water in Maine and New Hampshire

What is the project?

Maine and New Hampshire have among the highest per capita reliance on private wells for drinking water in the United States (ME: 56% and NH: 40%). Approximately 10% of Maine wells and 20% of New Hampshire wells have elevated levels of arsenic, yet well water testing rates are low in both states. As part of an NIH-Science Education Partnership Award (SEPA), the MDI Biological Laboratory is engaging students and teachers in Maine and New Hampshire in well water testing. Data collected from the project will be analyzed by students and teachers and used in two ways:

- 1) To cultivate **data literacy** by teaching students how to understand, create, and communicate scientific data.
- 2) To identify well water contamination solutions that communities can translate into **action**, particularly arsenic mitigation strategies.

What do I need to do?

Your child's teacher will send a Parent Packet home, which includes:

- A pre-labeled 50 mL tube with your sample number.
- Parafilm to seal the tube.
- A pre-labeled refrigerator magnet with your sample number.

Collect a water sample and enter information about your well onto Anecdata.org (more information on the reverse). Send your sample back to school with your child. Your sample will be shipped to the Dartmouth Trace Element Analysis Core and analyzed for 13 contaminants, including arsenic. After a few weeks, results will be uploaded by project coordinators to the [All About Arsenic project](#) on Anecdata and you will be able to check them whenever you want. Use the refrigerator magnet to keep track of your sample number. If you have any questions about your results, you can:

- Visit the resources page on All About Arsenic.
- Maine: Call the Environmental and Occupational Health Program's well water safety line at 866-292-3474.
- New Hampshire: Enter your test results into the NHDES [Be Well Informed](#) guide.



Collecting Your Sample



Remove any aerator or strainer attached to your faucet. Turn the cold water on so the stream is the thickness of your finger.



Let the water run gently for five minutes to flush the pipes.



After five minutes, fill your tube to the 45 mL line without changing the flow of the water. Try not to let the tube overflow. Cap your tube and wrap parafilm around the lid.



There are two ways of entering data:

- 1) Download the Anecdata.org app. Navigate to the All About Arsenic project. Tap “Add Observation”. Scan the QR code to enter your sample number, and add your well information.
- 2) Visit the All About Arsenic website. Click “Enter Well Water Information Here” on the right hand side. Click “Add Observation”.



Send your sample back to school with your child. Your well water will be analyzed at the Dartmouth Trace Element Analysis Core.

Results

Well water test results will be uploaded to your profile on the All About Arsenic project on Anecdata.org, and it is up to you to check them. Use the refrigerator magnet sent home with your child to keep track of your sample number. Additional resources are available on the All About Arsenic website.

Privacy

Anecdata.org, which houses the All About Arsenic project, helps individuals and organizations collect, manage, analyze, and share scientific data. Your data are part of a larger dataset that students and teachers will analyze to come up with community-oriented solutions to well water contamination. Your name(s), exact geographic location, and any other identifying information are all PRIVATE.