

Data to Action

A secondary school-based citizen science project to address arsenic contamination of well water

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: 46%). 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, teachers, and their communities 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?

You will receive a sampling packet which includes:

- A pre-labeled 50 mL tube with your sample number. You may also receive a 120 mL pre-labeled vessel for an additional study.
- Parafilm to seal the tube (wrap around the lid after you've capped the tube).
- A pre-labeled refrigerator magnet with your sample number.

Collect your water sample(s) and register your sample number on www.allaboutarsenic.org. Send your sample back to your project leader/school. Your sample will be analyzed for 13 contaminants at the Dartmouth Trace Element Analysis Core, including arsenic. After a few weeks, results will be uploaded to the [All About Arsenic project](#) 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



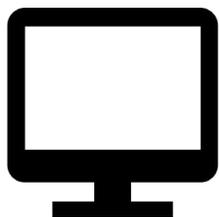
Remove any aerator or strainer attached to your faucet. Turn the cold water on so the stream is the thickness of your finger.



Let the water run gently for a few minutes to flush the pipes.



After about five minutes, fill your tube(s) to the 45 (or 100) 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.



Register your sample by visiting the All About Arsenic website **OR** complete the paper datasheet. Click “Enter Well Water Information Here” on the right hand side. Click “Add Observation” and fill in your well water information.



Send your sample(s) back to the project lead. Your well water will be analyzed at the Dartmouth Trace Element Analysis Core.

Results

Access your well water test results by looking up your sample number on the All About Arsenic website. Use the refrigerator magnet included in your packet 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.