

Data to Action

Community presentations on arsenic and data

Talking about arsenic can be complicated. Some people are scared of arsenic, some people will not know what you are talking about, and some people will not be concerned at all. How can you create a presentation that educates the community on the seriousness of the topic while assuring them there are safe steps and community support that can help them reduce their exposure? Let's explore some common issues the Dartmouth Toxic Metals Superfund Research Program deals with. You can benefit from the lessons they have learned about arsenic risk communication while understanding that every community presentation has some elements that are beyond anyone's control, and trying your best is the best you can do! Use the included planning tables to help make your event a success.

Target Audience

Who are you targeting with your presentation? Identifying your target audience will help you complete all other aspects of planning. Let's explore a few potential groups who might be interested in your presentation and how their needs might differ:

Who is your target audience?	Local families who use private wells.	Local select board or town government.	School board.
Where does your target audience tend to congregate?	They attend a lot of school events already. They may also use the local recreation center.	They have meetings at the town hall a couple times a month.	They have meetings once a month and attend most major school events.
Why is this group important?	Arsenic can have a big impact on little kids and most parents work to protect their children's health.	They can help legislate local policy and network to spread information to other groups.	They're interested in STEM education and hearing about work done in the classroom.
Are there other groups in the area working on a similar issues?	Other citizen science groups, conservation commissions, nonprofits, etc. who have environmental ties.	Grassroots organizations, concern citizen groups, community health coalitions.	Other grades working on environmental projects or doing watershed work, school science fairs.

By identifying who you want to target with your presentation, you start to define what you will say. As seen above, what you say to local families may differ from what you say to local government. Taking a few minutes to think about these steps will help ensure a successful community presentation and generate interest in the topic.

Presentation Goals

Let's think about what you want to achieve with your presentation. You don't have to write anything fancy - just take a moment and identify what you want to accomplish. A few examples might include:

- Increasing arsenic and well water knowledge
- Helping people understand how data is used in the classroom
- Telling people how to test their wells
- Showing how important STEM education is

Write your draft presentation goals here:

Basic Arsenic Message

Arsenic can be a tricky topic. You want to make sure the messages you share with your audience are accurate and easy to understand and not scary! We DON'T want to alarm people. Instead, empower them by making sure they understand they can REDUCE exposure. Here are some messages we often try to convey when we speak to communities:

- Arsenic is a known carcinogen. It is known to **cause** bladder, lung, and skin cancer.
- The National Institutes of Health report that the incidence of bladder cancer in Maine, New Hampshire, and Vermont is about 20% higher than that in the United States overall (<https://www.nih.gov/news-events/news-releases/elevated-bladder-cancer-risk-new-england-arsenic-drinking-water-private-wells>).
- Arsenic has been **linked** to many other health concerns. (This can be a slightly tricky statement. Some health concerns are very well researched, so we know they are legitimate, but others are still being explored. Use well known data sources that can be trusted when you speak about other health issues.)
- Arsenic contamination can be natural or man-made.
- In Maine and New Hampshire, arsenic can often be found in private wells.
- Low dose exposure to arsenic can cause health concerns over time. In some places like Bangladesh, people can become sick very quickly due high dose exposure to arsenic in their water.
- The Maximum Contaminant Level (MCL) for arsenic in public water is 10 µg/L (which is the same as 10 ppb). Private wells are not regulated.
- The state of NH is thinking about lowering the state MCL to 5 µg/L. NJ is the only state with a 5 µg/L limit.
- People should test their water for arsenic every 3-5 years.
- If you have high amounts of arsenic in your water, there are steps you can take to reduce exposure.
- There are great resources and programs to help people understand the topic of arsenic and well water.

Basic Data Message

Data literacy is the ability to translate data into stories that people understand. You can use graphs, images, and text to explain your findings in an easy to understand way. Use data visualization to support your arsenic message and enable your audience to make informed and accurate decisions. Here are some questions you can ask and answer using the drinking water dataset collected by all participants in the project:

- What proportion of unfiltered samples from ME/NH were above the 10 µg/L threshold?
- Does filtered water have less arsenic than non-filtered water?
- How much arsenic is in unfiltered water samples by school? By town? By state?
- What proportion of the data are from each type of well?
- Are some filters more effective than others at removing arsenic?