

Frequently Asked Questions for Private Well Users

Regarding the state of New Hampshire's Maximum Contaminant Level (MCL) Reduction for Arsenic in Public Water

Why was the standard lowered?

New Hampshire Department of Environmental Services (NHDES) was directed in 2018 to review the 10 ppb Maximum Contaminant Level (MCL) for arsenic in public drinking water. After conducting the review, NHDES found that recent research supports a lower limit of 5 ppb. Arsenic occurs naturally in the bedrock of many parts of our state, increasing exposure levels for New Hampshire (NH) residents through drinking water. It is estimated that two-thirds of all wells in NH have over 1 part per billion (ppb) of arsenic, and about three in ten private wells have arsenic above the NHDES new limit of 5 ppb.

Based on cancer data from 2012-2016, New Hampshire has the highest rate of bladder cancer in the nation. Bladder cancer is associated with chronic arsenic exposure; the reduction from 10 ppb (the U.S Environmental Protection Agency MCL) to 5 ppb is expected to decrease bladder cancer rates in NH over a period of years. New research based on populations in NH also shows that the current EPA standard of 10 ppb is not sufficiently protective of vulnerable populations including pregnant women, infants and children.

Establishing a 5 ppb MCL for arsenic in public water systems will benefit all NH residents, including those served by public water systems and private well users.

Is the reduction based on new information about arsenic's health effects?

Yes. Based on a review of research on arsenic health effects, NHDES found that recent studies supported a lower limit of 5 ppb. New research from the Geisel School of Medicine at Dartmouth based on the ongoing New Hampshire Birth Cohort Study (which examines arsenic exposure levels that are common in New Hampshire), indicates that the current EPA standard of 10 ppb is not sufficiently protective of vulnerable populations including pregnant women, infants and children. NHDES found that 10 ppb does not represent the appropriate balance between health risk and the cost of water treatment.

What are the health effects for pregnant women, and children?

Arsenic exposure from water and food, at levels found in New Hampshire, may be associated with adverse birth outcomes and infections in infants as well as higher blood pressure and risk of gestational diabetes in pregnant women.

In a small study of school children in Maine, higher drinking water concentrations (above 5 ppb) were associated with lower IQ scores in elementary school aged children. This finding is consistent with studies conducted in more highly exposed populations such as in Bangladesh, Taiwan and some areas in Spain. The New Hampshire Birth Cohort Study will be investigating this question more in the future.

If I am a Private Well User, what should I do?

If you receive your drinking water from a private well, [Get Your Water Tested](#). If testing results show that you have arsenic above 5 ppb in your water, you will want to consider treatment options. Be in touch with experts at NHDES and **use the [Be Well Informed website](#)**.

Who will cover the costs of testing and treatment?

It will still be up to private well users to test and if necessary, treat their water in order to protect their health.

Private well owners will need to cover the cost of testing and remediation [treatment or other options], if needed, on their own. Testing ranges from \$15 for arsenic only to \$90 for the recommended well water testing list of contaminants including arsenic. See the [NHDES website for more information](#) on testing options, including [Be Well Informed](#), a tool to help guide private well owners with interpreting and responding to their well water test results.

The increased cost of meeting the lower arsenic limit of 5 ppb in **public water systems** will be paid for by water systems and their customers.

Why is New Hampshire's number different than EPA's?

The current federal MCL of 10ppb was established by the US EPA in 2001. Based on a review of health effects research published since then, NHDES found that 10 ppb does not represent the appropriate balance between health risk and the cost of water treatment in New Hampshire.

See **Health Effects** above.

Is there an acceptable level for arsenic in drinking water?

Keeping your arsenic exposure as low as possible based on how you could be exposed through water, food or other sources will reduce your long-term health risk.

Bedrock-aquifer wells in NH are more likely to have higher arsenic levels in their water compared to other states. Cancer risk still exists at low levels of arsenic exposure. Reducing exposure will reduce risk.

Why is New Hampshire's level 5 and not 0?

Because arsenic is an established carcinogen, the non-regulatory goal set by the EPA is zero, but the technological feasibility and cost to get all the public drinking water systems into compliance had to be considered. Using the best available peer-reviewed data, studies, and methods, this reduced MCL of 5 ppb is considered to be the level that public water systems can consistently achieve to protect public health for all age groups.

Is 5 ppb low enough to protect health?

Keeping exposure to arsenic as low as possible helps to protect human health. The new MCL of 5 ppb was selected based on a thorough examination of the costs of compliance, the public health benefit, and the ability of public water treatment systems in NH to treat to that level.

Is bottled water free from arsenic?

Bottled water is regulated by the US FDA following the federal standard for public drinking water of 10 ppb. Bottled water may also be regulated by the state where it is bottled, such as in NH. If it is bottled in NH it will need to meet the state standard of 5 ppb starting in 2021; water bottled elsewhere in the United States might allow up to 10 ppb, depending on the state regulations.

Should we be more concerned about bathing exposure, especially for children?

Exposure to arsenic through the skin while bathing is not a concern.

If you are on a private well that has not been tested for arsenic, consumption of any amount of water is a potential exposure risk. If children are drinking a large amount of bath water, comparable to what they would be drinking from the tap, exposure through drinking bathwater is a concern. Private well users should have their water tested—particularly the water they are using to drink and cook with. If the arsenic concentration is above 5 ppb they should consider treatment options and/or alternative sources of water for the water used for drinking and cooking.

Visit NHDES' [Be Well Informed website](#) for an explanation of your test results and treatment options and be in touch with experts at NHDES.

If you have other contaminants in your water that are of concern, follow up with NHDES and use the [Be Well Informed website](#).

Is arsenic as bad as PFAS?

NHDES' recently adopted limits for [PFAS in drinking water](#) are based on a level at which no adverse health effects would be expected based on current PFAS research. The new 5 ppb limit for arsenic recognizes that some risk of adverse health effects still exists, but the costs and technological feasibility of treating water in public water systems make a limit lower than 5 ppb difficult to achieve in many water systems.

PFAS is a relatively newer concern and we have had a lot more opportunities to study arsenic over time.

- For Additional Information on Arsenic, please visit www.ArsenicandYou.org
- Relevant research studies are listed in the [NHDES Report to the Legislature](#) on reducing the arsenic MCL in public water from 10 to 5 parts per billion

Definition of Acronyms:

ppb – parts per billion; MCL – maximum contaminant level; EPA – U.S. Environmental Protection Agency; NHDES – New Hampshire Department of Environmental Services