

The National Environmental Health Association (NEHA) represents more than 7,000 governmental, private, academic, and uniformed services sector environmental health professionals in the U.S., its territories, and

advocate for excellence in the practice of environmental health as it delivers on its mission to build, sustain, and empower an effective environmental health workforce.

## Policy Statement on Well Water Quality Testing Regulation Adopted: November 2021 Policy Sunset: November 2026

Over 15% of the population relies on a private well as their primary source of drinking water, for which there are no federal water quality requirements. Furthermore, most states do not regulate private well water quality. This lack of regulation leaves testing the well water and ensuring that it is safe to drink largely up to the homeowner. Unfortunately, many well users do not test their water regularly, putting them at risk for potential health effects from contaminated water (Paul et al., 2015). In fact, while disease outbreaks from public water systems have declined between 1971 and 2008, outbreaks from private water sources, such as private wells, have increased (Farquhar, 2018).

## NEHA's Policy Statement

NEHA advocates for national, state, and local policies, regulations, research, and resources that will enhance the abilities of environmental health professionals to ensure the safety of private well users to protect public health.

NEHA supports the following policies and actions:

- Implement state and/or local legislation requiring and regulating routine private well water quality testing and making testing conducted under such regulations free or of low cost to well users.
- Mechanisms for determining private well distribution and private well testing distribution within jurisdictions to determine who could be impacted by federally unregulated drinking water.
- Inclusion of local contaminants of concern, either naturally occurring or resulting from land-use activities, in state and local regulations.
- Increased collection of data on contaminants within jurisdictions and assessment of contaminant exposures and water quality issues affecting the community of private well users to better calculate the risks that private well water users are facing in their areas.

• Support federal and state funding for locally operated testing and education programs.

## Analysis

W ell water can become contaminated from septic systems, agricultural activities, industrial land use such as mining, naturally occurring contaminants in bedrock, and many other sources (Barringer & Szabo, 2006; Bunnell et al., 2006; Cappello et al., 2013). Research has demonstrated the impact of harmful contaminants in water, such as arsenic, which includes elevated risk for certain types of cancer such as bladder, skin, lung, and colorectal cancer (Baris et al., 2016; Mayer & Goldman, 2016; Schullehner et al., 2018; Shiber, 2005). Drinking water contaminated with arsenic, atrazine, and nitrate- nitrite has been associated with adverse birth outcomes such as preterm delivery and low birthrate (Almberg, 2016; Stayner et al., 2017). W hile there are several strategies to improve voluntary testing rates, they may not be equally available to different populations of well users across state and local regulations, especially those offered for free or at a reduced cost.

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may be associated with an increased risk of acute gastrointestinal illness (Strauss et al., 2001). Federally unregulated drinking water poses different but severe health risks to private well users in the U.S. and a lack of testing makes residents unaware of what their particular risks could be.

Susceptible populations such as infants and young children are at particular risk from well water contamination due to the developmental immaturity of their kidneys and other organ systems, as well as the large quantity of water they consume relative to their body mass. In rural Connecticut a private well connecting to the Brookfield Gneiss, a geologic formation known to contain

of 7 family members. Nearby wells in the area were also found to be contaminated with elevated uranium, arsenic, and radon levels (Magdo et al., 2007). Well water contaminated with nitrate that is used to prepare infant formula is a well-known risk factor for blue baby syndrome, a condition that causes a blue-gray skin color, irritability, lethargy, and can lead to coma or death in

reduced cost testing programs, others might not even be aware of the need to test their well water or know how to do so (Schneider, 2019). Even in states and localities that do have strong guidance programs, well users in the community might not receive the information they need for taking appropriate action. In New Jersey, for example, higher testing did occur in areas with a history of testing promotion. The well users in these areas, how ever, were more likely to test if t

easily accessible guidance resources are essential to well users who regularly testing their well water, regulations ensure that private wells will be tested at least once and regulations offering free or reduced cost testing would alleviate the financial barriers that keep some well users from testing. NEHA supports efforts to regulate private water and to eliminate barriers to private water testing, such as cost and awareness of the issue, that keep people from testing their private water systems to the extent that they should.

Currently, only 18 out of 50 states have a requirement for well water quality testing. Local regulations vary in type and frequency across the U.S. The most common types of regulations are testing at the time of well construction, at the time of well repair, and before4.i ty3()-3(kee)10(p6t)6(u)h1d

country difficult. A nationally consistent survey of both number and location of private well water users would help to determine where resources and education for the public could be more necessary and in what locations more robust regulation would be necessary.

Access to safe drinking water is provided to many homeowners in the U.S. subject to federal regulation, but a substantial proportion of people get their water from federally unregulated sources. A lack of testing of drinking water poses significant health risks to private well water users and a lack of robust regulation and testing continues to create barriers to safe drinking water access. NEHA advocates for improved mechanisms to determine where such homeowners live and what their particular risks are, as well as supports efforts to improve the health and safety of homeowners who rely on private water systems.

## References

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