




CLIMATE AND HEALTH
Fact Sheet

Public Health and Drinking Water Quality: How State Laws Affect Responses to Water Quality Contamination in Private Wells.

Introduction

Is this tap water clean? What's the source of this water? What methods are used to determine whether the water is safe for drinking? Answers to these questions depend on whether tap water is distributed via a public water system or a private well. There are distinct differences in how our laws do (or don't) protect us from drinking water contamination. Household water that runs from our taps - including water used for drinking, cooking, and bathing - comes from either a public water system or a private well. While a landmark federal law, the [Safe Drinking Water Act](#), generally protects individuals that use a public water supply from exposure to unsafe levels



of [regulated](#) contaminants, there is no similar protection for U.S. residents who rely on private wells for water. According to the Centers for Disease Control and Prevention, about [one in five private wells](#) contain unhealthy levels of contaminants. As natural disasters caused or exacerbated by climate change are on the rise, the one in eight Americans that rely on private wells for drinking water, largely in rural communities, should be aware of the potential health risks that flooding, storms, and wildfires pose for their drinking water. These natural disasters can damage private wells and cause underground water sources tapped by private wells to become polluted by a variety of sources, like coal ash, or animal waste from overflowing hog or cattle manure lagoons.

[Federal laws](#) do not regulate the quality or safety of drinking water from private wells. While most states set standards for well drilling, only a few states have established water quality testing requirements for private wells or set legal pathways to mitigate and respond to sources of private well contamination. This often leaves local health departments as the first line of defense in protecting private well users from exposure to contamination, and many local governments can help homeowners test their drinking water quality. However absent state requirements, these programs are often voluntary. State and local public health programs may also provide guidance and resources to help test well water quality in the wake of a natural disaster, like flooding or wildfires, that can impact the integrity of private wells. For example, Oregon established a [voucher program](#) that provides funds for private well testing following the Labor Day fires of 2020. And the state of North Carolina offered well testing following Hurricane Florence, which flooded hog lagoons in 2018.

Without information about water quality in private wells, regulatory tools may be difficult to implement, and users of private wells may remain unprotected. State laws that require water quality sampling of private wells can help promote drinking water safety before, during, and after a storm event. This fact sheet sets forth background research and analysis related to several relevant states' laws. It seeks to provide a foundation for more comprehensive policy surveillance in the future, and for states to consider legislative action in the present.



Legal Background

State laws and policies requiring water quality testing of private wells vary both in scope and the extent to which that water quality data is made available to the public. Our review of a sample of state laws revealed some key similarities and differences between programs. Select examples are discussed below.


Water Quality Testing Requirements

The most common triggers for testing water quality in private wells are when a new well is built or a property changes ownership. It is common for a state to require water quality testing for a new well, but fewer states require water quality sampling of private wells as a condition of sale.

A handful of states require landlords to sample the water quality of private wells and provide that data to tenants. For example, a new [Maryland state law](#) that will go into effect later this year requires owners of residential rental properties to test water quality in private wells every three years and provide those results to tenants. Where well water does not meet drinking water standards, or harmful levels of a contaminant are found, the landlord must either provide an ongoing supply of clean water, remediate the contamination, or provide the tenant with an option to cancel their lease. Some states require water quality testing, but limit these programs by region or pollutant, for example [Maine](#) requires residential landlords to test for only pollutant - arsenic - every five years and provide those results to tenants.

Some states have developed programs that authorize testing for private wells in the vicinity of a potential pollution source, like a [Virginia law](#) that requires the utility to pay for a well water test on behalf of private well owners who are located within 1.5 miles of a coal ash plant once before July 2021, and then once per year for five years following closure of a coal ash pond, and once every five years thereafter.

In [Connecticut](#), the local director of health may require private wells to be tested for pesticides, herbicides, or organic chemicals in areas where nitrate-nitrogen ([a contaminant that can lead to low blood oxygen levels and is associated with certain cancers, birth](#)



[defects, and thyroid disease](#)) in groundwater exceeds 10 mg/L or the well is located on or in proximity to land “associated with the past or present production, storage, use or disposal of organic chemicals.” And in specified counties, the [Oregon Health](#) Authority will provide vouchers to sample nitrate levels in private wells and deliver free bottled water for households with private wells that contain nitrate at 10 mg/L or higher.

Privacy and Dissemination of Water Quality Testing Results from Private Wells

Just as state laws related to private well water protections vary widely, so does the privacy of collected water quality data. While some state laws include specific guidance about how water quality data may be shared and used, several state policies were silent on the issue. Some states require water quality testing results to be [made public](#), others make these [results private](#) or require a public compilation of the data by region without identifying the actual site of the tested well. The extent to which private well water quality data is shared also varies greatly by state. At one end of the spectrum, the county of Kalamazoo, Michigan reports any water quality data collected via an [online database searchable by address](#). On the other end of the spectrum, some state laws specifically limit the sharing of data. For example, New Jersey law requires that water quality data be made available to the public, but prevents disclosure of the location where samples were obtained. Where the state law that governs testing water quality in private wells is silent about the privacy of this data, a state’s freedom of information act or data privacy act may provide guidance.

The following chart identifies the water quality testing and information sharing requirements of a select group of states. The chart includes information about when water quality testing is required, to whom the water quality data is required, or allowed, to be disclosed, the method of public disclosure of this data, and notice and remediation requirements where a private well is found to be contaminated. While this chart is not comprehensive, it does provide some initial insight into the types of programs that are being used to help protect private well users from drinking water contamination.

Sampling of Private Well Testing Requirements in Selected States

(Pollutants specified in testing and disclosure requirements vary by state and are not identified here.)

Enacted or adopted as of 12/31/2023

| State | Citation | Private Well Testing Requirements | | | | Parties to Whom Water Quality Data Must be Disclosed | | | Public Disclosure of Water Quality Data | | | Requirements When Contamination is Identified | | |
|-------|---|--|----------------------|-----------------|--|--|--------|-------|---|-----------------|------|--|-----------------------------------|--|
| | | When the Well is Constructed or Put into Service | At Property Transfer | Rental Property | Other | Potential Purchaser | Tenant | Gov't | Address of the Well | Aggregated Data | None | Parties Who Receive Notice | Remediation Required | Other |
| CT | <u>Conn. Gen. Stat. §§ 19a-37</u> | X | | | May require testing in area where pollutant is present in groundwater or naturally occurring | | | X | | | X | | | Certificate of occupancy can be withheld or revoked by an administrative agency or health officials in specified circumstances |
| MD | <u>Md. Code Envir. §§ 9-4A-01 – 9-4A-04*</u> <u>Md. Code Real Prop. §§ 10-713*</u> Md. Code Envir. §§ 26.04.04.30-.32 | X | X Can be waived | Every 3 years | | X | X | X | | By county | | Department of Environment and local public health department | X Or option to terminate lease | |



| State | Citation | Private Well Testing Requirements | | | | Parties to Whom Water Quality Data Must be Disclosed | | | Public Disclosure of Water Quality Data | | | Requirements When Contamination is Identified | | |
|-------|---|--|----------------------|-----------------|-------|--|------------------------------|-------|---|---|------|---|----------------------|---|
| | | When the Well is Constructed or Put into Service | At Property Transfer | Rental Property | Other | Potential Purchaser | Tenant | Gov't | Address of the Well | Aggregated Data | None | Parties Who Receive Notice | Remediation Required | Other |
| NJ | <u>N.J. Stat. §§ 58:12A-27 - 32</u> | X | X | Every 5 years | | X | X | X | | County and city or geographic area | | County health department and nearby private well owners | | |
| NC | <u>N.C. Gen. Stat. § 87-97</u> | X | | | | | X To the extent practical | X | X | | | Local public health department, well owner or leaseholder | | |
| RI | <u>R.I. Gen. Laws § 23-1-5.3</u> <u>R.I. Gen. Laws § 23-27.3-120.3</u> | X | X | | | X | | X | | Areas where contaminants are public health concerns | | | | Well may be deemed a danger to public safety and welfare, no certificate of use and occupancy until corrective action taken |

* These statutes take effect October 1, 2024, see Maryland Private Well Safety Act of 2023, 2023 Md. Laws Ch. 587 *H.B.11) for the source of these statutory amendments.



Conclusion

This initial analysis indicates the need for a more comprehensive review of state laws related to water quality testing of private wells. This information could be used by states wishing to develop (or revise) water quality testing requirements to create comprehensive data collection and dissemination program that allow, or require, state or local agencies to assess the type and extent of private well contamination and develop programs to protect private well owners and users from contamination. As states or localities consider adopting or strengthening private well sampling and protection programs, considerations may include:

- 1) who is required to sample their well water quality
- 2) what triggers sampling
- 3) which pollutants are tested
- 4) who the data will be used to protect—owners, renters, neighbors, etc.,
- 5) privacy or disclosure of the data
- 6) whether to tie contamination determinations to public water supply standards
- 7) notification of affected parties and the public of contamination
- 8) whether to develop a remediation program
- 9) use of government funds for testing and/or remediation requirements
- 10) prioritizing disproportionately affected communities or populations for remediation efforts

The data that will be collected as a result of these efforts will enable states to track changes in groundwater quality and provide much needed attention to the quality, and potential health risks, of water in private wells.

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