

## Testing Private Residential Wells

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### Issue

Does state law require private residential wells to be tested for contaminants? If so, does such testing include sodium chloride? Does the state require existing wells to be tested as a condition of selling a home?

### Summary

Local health districts and departments oversee private residential wells, and well owners are responsible for maintaining the well and testing the quality of their own drinking water. State regulation requires water quality tests for newly constructed private residential wells, but neither state law nor regulation requires such testing after the wells are initially constructed. Therefore, existing private wells are not tested unless the (1) homeowner arranges for the test or (2) local health department or the Department of Energy and Environmental Protection (DEEP) tests the well as part of an investigation ([Conn. Agencies Regs. §§ 19-13-B101](#) and [19-13-B102](#)).

Additionally, neither state law nor regulation requires an existing well to be tested as a condition of selling a home ([Conn. Agencies Regs. § 19-13-B101](#)). Instead, the law requires a homeowner to notify the purchaser that information about well testing is available on the Department of Public Health's (DPH) website. But failure to provide the notification does not invalidate the property's sale.

Although the law does not require existing wells to be tested as part of a home's sale, banks providing the mortgage for a home purchase typically require such testing. The law requires an environmental lab that conducts a test in connection to a home sale to report the results to DPH and the local health department within 30 days after completing it ([CGS § 19a-37](#) and [Conn. Agencies Regs. § 19-13-B101](#)).

DPH sets water quality standards for private wells, called “action levels,” to protect well users from health risks. In most cases, these standards mirror the federal Environmental Protection Agency’s (EPA) maximum contaminant levels for public system drinking water. DPH notes that there are no enforceable federal or state standards for the level of sodium in drinking water. However, the department has set a standard of 100 milligrams per liter (mg/L) for sodium and 250 mg/L for chloride. For more information, see DPH’s sodium chloride [fact sheet](#).

## Water Quality Testing

State regulation requires water quality tests for newly constructed private residential wells, but neither state law nor regulation requires such testing after the wells are initially constructed ([Conn. Agencies Regs. §§ 19-13-B101](#) and [19-13-B102](#)).

By law, a local or district health director may require an existing private residential well to be tested for arsenic, radium, uranium, radon, gross alpha emitters, pesticides, herbicides, or organic chemicals if he or she reasonably suspects the presence of these contaminants in the groundwater ([CGS § 19a-37](#)). Therefore, after the well is initially constructed, water quality testing occurs only when the (1) homeowner arranges for the test or (2) state tests the well as part of an investigation for suspected contamination.

DPH sets water quality standards for private wells, called “action levels,” to protect well users from health risks. In most cases, these standards mirror the federal Environmental Protection Agency’s (EPA) maximum contaminant levels for public system drinking water. According to DPH, a small number of contaminants have stricter action levels than federal standards because these standards are either (1) outdated or (2) based on detecting and removing the contaminant from a public water supply and not a private residential well.

DPH notes that there are no enforceable federal or state standards for the level of sodium in drinking water. However, the department has set a standard of 100 mg/L for sodium and 250 mg/L for chloride. According to DPH, these levels are intended to (1) mitigate health concerns with sodium and high blood pressure and (2) keep drinking water from tasting salty and from having a corrosive effect on plumbing.

Attachment 1 lists DPH guidelines for private well testing, including the (1) types of contaminants to test for, (2) testing frequency, and (3) rationale for the test. Attachment 2 lists DPH’s current action levels for various well water contaminants.

**Attachment 1**  
**DPH-Recommended Water Tests for Private Residential Wells**

<i>Type of Test</i>	<i>Frequency</i>	<i>Reason</i>
Basic Indicators (Potability)	<ul style="list-style-type: none"> <li>Annually and after repair or replacement of the well, pump, or water pipes</li> </ul>	<ul style="list-style-type: none"> <li>Provides a general indication of water quality</li> <li>Required for all new wells</li> </ul>
Lead	<ul style="list-style-type: none"> <li>At least once</li> <li>Also test when planning a pregnancy or if you have a child under age six</li> <li>If your water is corrosive (i.e., a pH less than 6.0), test every three to five years</li> </ul>	<ul style="list-style-type: none"> <li>Lead can leach from a home's plumbing system (pipes, faucets, valves, etc.)</li> <li>Young children are more susceptible to harmful effects from lead exposure</li> </ul>
Arsenic, Uranium, and Radon	<ul style="list-style-type: none"> <li>At least once</li> <li>Ideally, repeat the test every five years</li> </ul>	<ul style="list-style-type: none"> <li>Arsenic, uranium, and radon naturally occur in some groundwater in CT</li> <li>Private wells with high levels have been found sporadically around CT</li> <li>Levels can fluctuate over time</li> </ul>
Volatile Organic Compounds (VOCs)	<ul style="list-style-type: none"> <li>At least once</li> <li>More often if a problem is suspected or identified</li> </ul>	<ul style="list-style-type: none"> <li>Gasoline, oil, solvents, or industrial chemicals spilled or leaked on the ground could get into your well water</li> </ul>
Fluoride	<ul style="list-style-type: none"> <li>Every five years when a child under 12 is present</li> </ul>	<ul style="list-style-type: none"> <li>Fluoride can occur naturally in wells throughout CT</li> <li>A child's permanent teeth can become discolored from excess fluoride</li> <li>Too little fluoride can increase risk of tooth decay</li> <li>Your child's dentist will likely ask you about the fluoride level in your well water</li> </ul>

Source: DPH Publication No. 24a: [Private Well Testing](#), October 2019

**Attachment 2**  
**DPH Action Levels for Private Residential Wells**

<b>Contaminant</b>	<b>Action Level (parts per billion per liter of water (ug/L))</b>
Arsenic	10
Barium	2000
Benzene	1
Carbon tetrachloride	0.5
Chlordane	0.3
Chromium	15
1,4-dichlorobenzene	5
1,2-dichloroethane	0.5
Dichloromethane	5
2,4-dichlorophenoxyacetic acid	70
1,2-dichloropropane	1
1,1-dichloroethane	25
1,1-dichloroethylene	7
Dieldrin	0.03
1,4-dioxane	3
Endrin	2
Ethylene dibromide	0.05
Isopropanol	2300
Lead	15
Manganese	300
Mercury	2
Methoxychlor	40
Methyl t-butyl ether	70
Nitrate nitrogen	10,000
Nitrite nitrogen	1,000
Perfluorinated alkyl substances	0.07
Polychlorinated biphenyls	0.2
Selenium	50
Silvex	50
Tertiary-butyl alcohol (total oxygenates)	100
Tetrachloroethylene	5
Toluene	150
Total petroleum hydrocarbon	250
1,1,1-trichloroethane	200
Trichloroethylene	1
1,2,3-trichloropropane	0.05
Vinyl chloride	0.5

Source: DPH Publication: [Action Level List for Private Wells](#), March 2019

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