

# Private Well Program to Protect Public Health: Water Testing Results

In 2021, RCAP Solutions conducted 240 well assessments and water tests across six Massachusetts towns which had a high concentration of private wells. We discovered that approximately 27% of wells had levels of contaminants exceeding state health standards and/or suggesting potential health risks. State health standards are based on federal standards and are adopted by the Massachusetts Department of Environmental Protection (MassDEP).

In comparison, data from MassDEP shows that only about 4.63% of community public water systems (PWS) throughout the state had instances of contaminants exceeding state health standards and/or suggesting potential health risks.

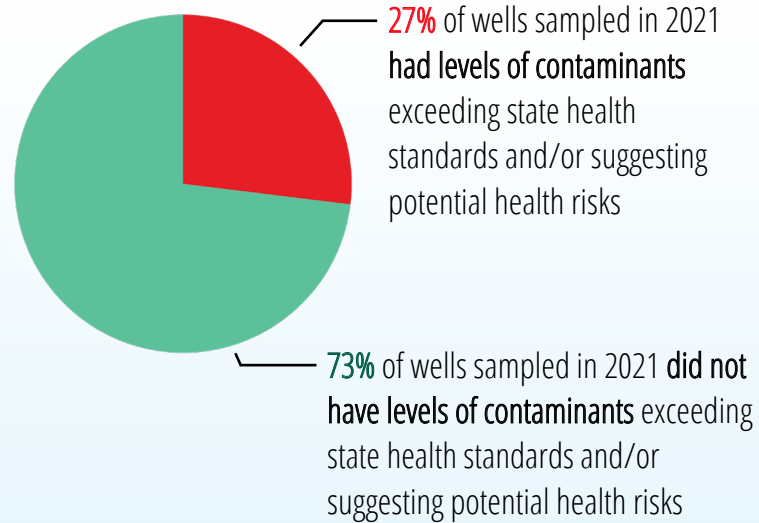
These results show that sensible, health-based regulations and oversight for drinking water wells would lead to a public health benefit. Our full findings are outlined below.

## About the Private Well Program to Protect Public Health

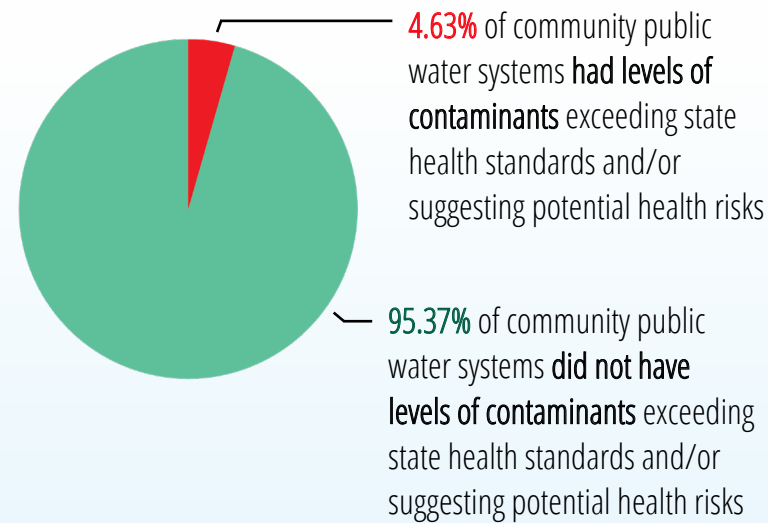
The Private Well Program to Protect Public Health is a community partnership funded by The Health Foundation of Central Massachusetts. In an ongoing effort to promote better public health and safety for Massachusetts households with private wells, RCAP Solutions is engaging with key stakeholders and state government officials to advocate for public policy that would ensure well water is tested for contaminants on a routine basis.

The program is also testing well water quality throughout Massachusetts, educating homeowners on what their water test results show, and working directly with homeowners if there is a need for remediation efforts. Using the data gathered from this program, we hope to effect change by moving the Massachusetts legislature to enact statewide private well regulations that are on par with regulations for public water systems. For more information, visit: [www.rcapsolutions.org/ma-private-wells](http://www.rcapsolutions.org/ma-private-wells)

**Private Wells Sampled by RCAP Solutions (2021)**



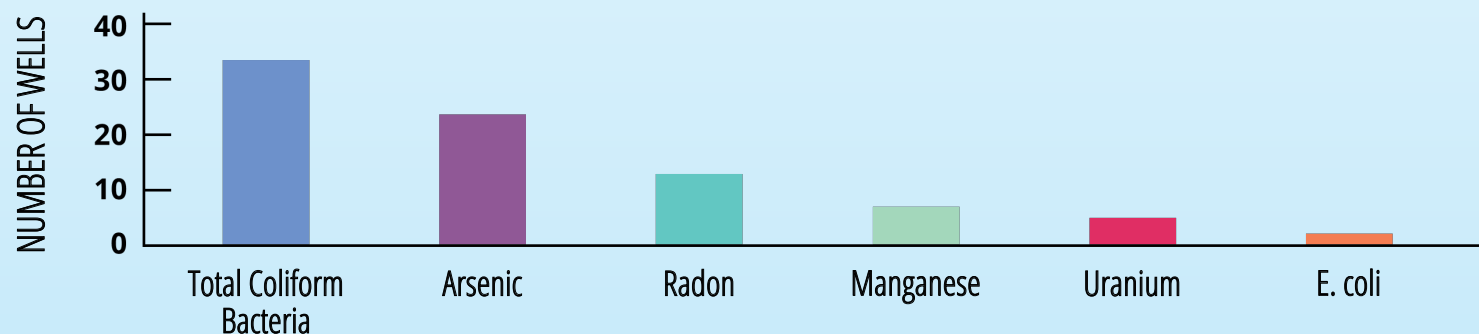
**MassDEP Data for Community Public Water Systems in Massachusetts (2021)**



**Results by Town:** Data in each individual targeted town ranged from 10% to 55% of wells having levels of contaminants exceeding state health standards and/or suggesting potential health risks.

**Private wells vs. community public water systems, what's the difference?** Private wells usually supply water to an individual residence. These wells, which draw their water from the ground, are not subject to any statewide health-based regulations. Community public water systems supply drinking water to the greater public on a daily basis (e.g., at gas stations, campgrounds, etc.) and are subject to statewide health-based regulations.

## Most Common Contaminants Found



## Water Quality Standards and Potential Health Impacts

Massachusetts Maximum Contaminant Levels (MMCLs) are a set of guidance levels for various contaminants that could potentially be found in drinking water. These levels are based on U.S. Environmental Protection Agency (EPA) federal standards for drinking water, though MassDEP has adopted more stringent standards in some cases.

There are several potential health problems that can occur if contaminated water is consumed. In addition, contaminants may impact the aesthetic of drinking water (e.g., taste, color, odor) or a home's infrastructure.

Contaminant	MMCL	Examples of Potential Health Risks
Arsenic	.010 mg/L	Cancer, skin damage, circulatory system problems
E. coli	Present/absent	Gastrointestinal illness
Nitrate	10 mg/L	Can cause death in babies younger than 6 months
Radon	10,000 pCi/L	Cancer
Total Coliform Bacteria	Present/absent	Gastrointestinal illness
Uranium	.030 mg/L	Cancer, kidney toxicity
Manganese	.3 mg/L	Neurological effects

Source: EPA and MassDEP. MCLs are measured in parts per liter. "Present/absent" indicates contaminant exceedance is determined by presence or absence.