

## Regulating Private Water Wells

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Almost 42 million people rely on unregulated drinking water in the U.S., primarily from private wells. In certain states, such as Alaska, Maine, New Hampshire and North Carolina, over 30% of residents are served by an unregulated water system. In California, Michigan, New York, North Carolina, Pennsylvania and Texas, over 2 million residents in each state use unregulated water daily.

Unregulated water systems—defined as having less than 15 service connections or serving less than 25 people—are not subject to the federal Safe Drinking Water Act (SDWA), which governs most the nation's water supply. The owners of these unregulated wells are responsible for ensuring that their well water is safe for drinking.

Because water-borne illnesses stemming from private wells affect the people who use them, some states are stepping up efforts to regulate these wells. Several states have modified their laws to cover private water wells, the small systems that have less than 15 connections, serve less than 25 people or are in use less than 60 days a year.

Private water wells can become contaminated through naturally occurring chemicals and minerals (like arsenic and radon), human activities (pesticide and chemical use, animal feeding operations), malfunctioning wastewater treatment systems (such as sewer overflows and on-site

septic system issues), and other sources.

Over 7% of water-borne disease outbreaks nationally are associated with private unregulated wells. A study in North Carolina found that between 2007 and 2013, 99% of emergency department visits for acute gastrointestinal illness caused by contaminated drinking water were associated with private wells. Another study of nearly 4,000 private wells in rural Wisconsin found that 47% exceeded at least one health-based water quality standard.

Around 23% of private wells contain contaminants exceeding Environmental Protection Agency (EPA) drinking water standards. Most of these contaminants came from natural sources, such as radon and arsenic, but nitrates from fertilizers and septic systems were found in a quarter of all wells in agricultural areas.

Cost can be another barrier to keeping well water safe. Testing for volatile organic compounds, pesticides, metals, nitrate, bacteria and radioactive contaminants can exceed \$500.

### State Action

A state's definition of a regulated well must be at least as stringent as the SDWA's. But they can be more stringent, and many are.

Washington state has the most stringent standards, requiring wells that serve three or more connections to follow water quality and operation

### Did You Know?

- Private well owners use, on average, 81 gallons daily. Nevadans use the most—189 gallons daily, while Wisconsin well owners use the least—48 gallons.
- Total water-related illnesses, including Giardia, cryptosporidiosis and Legionnaires' disease, result in an estimated 40,000 hospitalizations each year and cost \$970 million annually.
- Arsenic contamination, which is associated with heart disease and several types of cancer, contributes to approximately 1,000 deaths and \$9.7 billion in economic consequences annually.



