

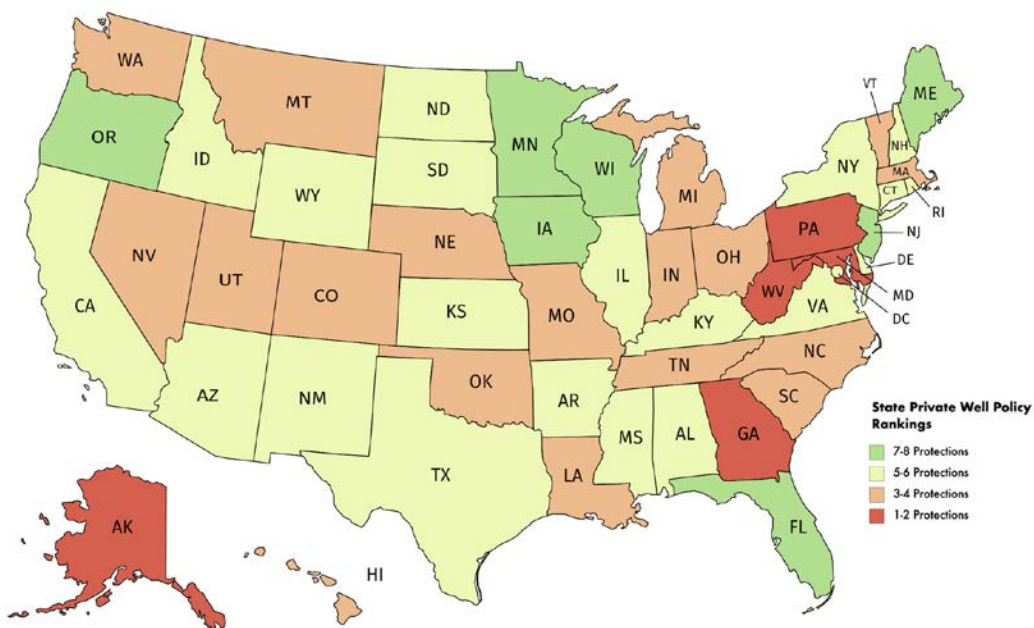


Tainted Tap: Nitrate Pollution, Factory Farms, & Drinking Water in Maryland and Beyond

An Action Summary for Policymakers & Advocates

Everyone deserves safe drinking water. Yet, approximately 42 million people in the United States rely on drinking water that is not subject to safety regulations, primarily from private wells, and an estimated 19.5 million Americans fall ill each year from drinking contaminated water. Private wells are not regulated by the federal government, making it vitally important for states to adopt strong laws, standards, and regulations to ensure the safety of families who rely on well water.

In our recent report, *Tainted Tap: Nitrate Pollution, Factory Farms, and Drinking Water in Maryland and Beyond*, we rated each state and the District of Columbia based on ten key well water protection policies (see Table 5 and Figure 6 in the report). In this summary, we highlight our key findings and suggest state actions to ensure the safety of well water and the health of residents who rely on it.



While every state has adopted regulations governing the drilling and construction of new wells, state requirements concerning well water quality vary dramatically and often do not provide necessary protections for people who rely on well water. For instance:

- Forty-six states do not have basic rules in place to protect tenants who drink well water in apartments or rented commercial properties.
- Forty-six states do not provide notice to private well owners who may be impacted by known groundwater contamination.

- Thirty-eight states do not require homeowners to disclose recent well water quality test results to potential homebuyers.
- Half of the states do not require initial water quality testing at the time a well is drilled and constructed.
- Only 17 states offer free or low-cost water test kits to residents who drink well water, and only a handful have well remediation programs.

In our [report](#), we examine nitrate contamination in well drinking water on Maryland's Lower Eastern Shore, which serves as a case study for the public health hazards that can arise from drinking water contaminated by industrial polluters.

Nitrates are a toxic compound found in groundwater and surface waters, sometimes at unsafe levels. One major source of nitrates is animal waste from industrial agriculture operations. Nitrate consumption has been linked to cancer, thyroid disease, and neonatal health issues, including a condition fatal to infants.

The majority of Lower Eastern Shore residents rely on private wells for their drinking water, and all private wells and public water utilities draw from groundwater. Maryland's Lower Eastern Shore is also home to a majority of the state's industrial agricultural operations, including an estimated 43,745,535 chickens — or 241 chickens to every Lower Eastern Shore resident.

In two counties, 1 out of 10 private wells sampled between 1965 to 2020 had nitrate concentrations of 3 mg/L or above, a level that may be or become hazardous to health. Nearly 4 percent of wells had nitrate levels above EPA's Maximum Contaminant Level of 10 mg/L. However, because Maryland does not require periodic testing of well water quality, and since industrial agriculture has grown exponentially since many wells were initially drilled and tested, it is impossible to know just how many wells in the region may be providing residents with unsafe water.

Rates of cancer, colorectal cancer, infant mortality, and low birth weight, which have all been linked to nitrate consumption, tend to be greater in Lower Eastern Shore counties compared to the state as a whole. Likewise, the proportion of people living in poverty is greater in Lower Eastern Shore counties compared to the state overall. The region is also home to the highest proportion of Black residents relative to the rest of Maryland's shore, suggesting that the adverse impacts of nitrate pollution could widen existing health disparities borne by systemic racism.

Maryland has not implemented any programs to mitigate the public health hazards of nitrate consumption in well drinking water on the Lower Eastern Shore. In reviewing the ten protective policies and programs states have adopted to protect the drinking water of private well owners, Maryland ranked among the five states with the fewest protective policies.

Our report recommends a number of policies Maryland and other states can adopt to better protect their residents who rely on well water. Beyond basic requirements for well construction, states should incorporate the following policies, programs, and tools to ensure families with well water remain safe from unknown contaminants:

1. **Low-cost or no-cost subsidized well water test kits** and analysis;
2. **Financial and technical assistance for residents** to remediate contaminated well water;
3. **Mandated well water quality test** around time of well construction (either required by well owner, well driller, or county health department) that proves well water is safe for consumption based on federal safe drinking water thresholds;
4. **Disclosure of known well water quality problems** upon property transfer;
5. **Regular landlord well water testing** for leased properties, with disclosure to tenants;
6. **Well water quality surveillance**, sampling, and groundwater monitoring programs, with efforts to identify and track sources of contamination, administered by the state and county health departments;
7. **Publicize** areas of known groundwater contamination, assessments of groundwater quality, and sources of contamination;
8. **Public access to well data**, information, and water quality tests on a online portal operated by state and local health departments;
9. **Regular information-sharing** between relevant state and local agencies and state-approved laboratories regarding groundwater contamination and private well water;
10. **Notification to private well owners** of nearby groundwater contamination after relevant state agencies are made aware;
11. **Outreach and education programs** highlighting the importance of regular testing and the availability of assistance;
12. **Extended federal Safe Drinking Water Act standards** to protect groundwater that sources private wells; and
13. **Greater authority for local water boards** or other relevant agencies to order remedial action in cases of contaminated wells.

States, particularly those with nitrate or other suspected or known contamination problems, should develop these protections now. We hope you find our [full report](#) informative for improving your state's protections for residents who drink well water.

Katlyn Schmitt and Darya Minvoi, October 2020