

Testimony in Support of Senate Bill 483 — Private Well Safety Act of 2023 (Senator Karen Lewis Young)

February 15, 2023

Dear Chair Feldman and Members of the Senate Education, Energy, and Environment Committee:

The **undersigned organizations** are grateful for the opportunity to submit written testimony in **support** of Senate Bill 483. The bill would establish a Private Well Safety Program that would provide roughly 830,000 Marylanders who get their drinking water from a private well with the necessary resources and information to monitor and safeguard their household drinking water, and ultimately protect their and their family's health.

While progress has been made, Maryland currently lags far behind most states in private well protections. In a 2020 report released by the Center for Progressive Reform (CPR), researchers found that among 10 key policies and programs that states have implemented to protect private well owners, Maryland ranked among the five states with the fewest protections.¹ Aside from basic construction and safety requirements and an initial water quality test when a new well is drilled, the state does not offer free or low-cost test kits, require notification of well testing results by property owners to potential homebuyers or tenants, or maintain a public database of well testing results. Until 2021, when House Bill 1069 passed, landlords were not required to test wells and provide renters with water testing results. Furthermore, in 2021, the Maryland Department of the Environment (MDE) reported to the General Assembly on the state's Groundwater Protection Program after an eight-year gap, which left many wondering whether the state's groundwater resources are being regularly monitored.² The 2021 report affirms that groundwater quality data is insufficient and that, "...private wells [...] may be contaminated due to the adjacent municipal practices (i.e., discharge, landfill, industrial releases, etc.). These communities often lack the ability to demand greater resources and accountability to protect their vital groundwater resource."

Senate Bill 483 will protect private well owners by:

- Requiring MDE to establish a Private Well Safety Program, which will provide eligible residents with financial assistance to cover the costs associated with water test kits, and when unsafe levels of contamination are found, of well remediation. Counties may apply for funding under the Private Well Safety Program to implement this portion of the bill.
- Requiring MDE to create an accessible online database of well water quality test results, and requiring county health departments and state-certified labs to upload water quality test results to the database periodically.
- Requiring water quality testing during the sale of a home with a well.

¹ Minovi D and Schmitt K. *Tainted Tap: Nitrate Pollution, Factory Farms, and Drinking Water in Maryland and Beyond*. Center for Progressive Reform. Oct 2020. Available at <https://progressivereform.org/our-work/energy-environment/tainted-tap-nitrate/>.

² Maryland Department of the Environment. *Groundwater Protection Program Report to the Maryland General Assembly*. December 2021.

Data suggest these protections are desperately needed in Maryland. The aforementioned CPR report assessed the prevalence of nitrate—an odorless, colorless, and tasteless contaminant often found in groundwater—in private wells on the state’s Lower Eastern Shore. Common sources of nitrate include excess application of manure and fertilizer to fields, as well as septic system drainage. Researchers found that one in 25 wells tested in Wicomico and Worcester counties had nitrate levels above the Environmental Protection Agency’s (EPA) safe drinking water threshold.³

Nitrate levels above this threshold are known to cause blue baby syndrome, a condition fatal to infants through oxygen deprivation. Research has also linked nitrate in drinking water at levels well below EPA’s threshold with an increased risk of cancer, particularly colon cancer, as well as pregnancy complications and thyroid disease.⁴ A 2021 study observed an association between well water usage and cancer, especially colon cancer, among private well users on the Lower Eastern Shore.⁵ Without a public database of well water quality tests or consistent groundwater monitoring, it is nearly impossible to know whether well drinking water is safe. Data from the U.S. Geological Survey and the Chesapeake Bay Program show that nitrogen levels have steadily increased in Lower Eastern Shore waterways.⁶

These findings are nothing new to Maryland regulators. Prior to the release of the 2021 Groundwater Protection Program Report, MDE’s last report, published in 2013, states that “Nitrate pollution in groundwater is becoming increasingly problematic, [...] Due to agricultural land use practices, nitrate concentrations in shallow waters of unconfined Coastal Plain aquifers on Maryland’s Eastern Shore commonly exceed the Federal Drinking Water Standard.”⁷ The 2021 report indicates that not much has changed. While MDE operates a Be Well Wise public education program recommending that well owners test their water annually, evidence suggests this isn’t enough. In a 2020 poll of Lower Eastern Shore residents, nearly three-quarters of private well owners stated that they had never tested their well water, or had not done so in the last year (the state recommends testing annually). The most common explanation for not testing was, “I didn’t know I needed to.” The survey also showed that lower-income residents were less likely to test their wells, indicating that testing costs may be a barrier to maintaining well safety.

³ Minovi and Schmitt, 2020.

⁴ Ward MH, et al. Drinking Water Nitrate and Human Health: An Updated Review. *Int J Environ Res Public Health*. 2018;15(7):1557.

⁵ DeRidder A, Kalluri S, and Holdai V. A Retrospective Chart Review Evaluating the Relationship Between Cancer Diagnosis and Residential Water Source on the Lower Eastern Shore of Maryland, USA. *Int J Environ Res Public Health*. 2021;8(1):145.

⁶ Ator SW and Denver JM. *Understanding Nutrients in the Chesapeake Bay Watershed and Implications for Management and Restoration—the Eastern Shore*. U.S. Geological Survey. 2015. Available at <https://pubs.usgs.gov/circ/1406/pdf/circ1406.pdf>; Chesapeake Bay Program. *Chesapeake Assessment and Scenario Tool, Version 2019*. Last visited September 27, 2020.

⁷ Maryland Department of the Environment. *Groundwater Protection Program Annual Report to the Maryland General Assembly 2013*. July 2013. Available at https://mde.maryland.gov/programs/Water/water_supply/Source_Water_Assessment_Program/Documents/FINAL_GWR%20report_1_2013%203_.pdf.

Recent research supports these findings. In 2021, CPR, the Assateague Coastal Trust, the Environmental Integrity Project, and the University of Maryland School of Public Health partnered to launch the [Lower Shore Safe Well Water Initiative](#) (LSSWWI), whereby well owners in Somerset, Wicomico, and Worcester county could sign up to receive a free nitrate test kit in the mail. Between April and November, 127 wells on Maryland's Lower Shore were sampled. Prior to participating in the program, 81 percent of participants had never tested their wells or had done so only once. Only two participants reported testing their wells annually. Furthermore, 30 percent of participants reported having no water treatment systems in their homes, and 41 percent said they had never received information about their well from any source, including MDE and their local health department. The participants' wells ranged from two to 86 years old, with an average of 26 years.

Overall, five percent of samples collected through the LSSWWI exceeded EPA's safe drinking water threshold for nitrate, and an additional 12 percent had nitrate levels that may be hazardous to health. In a follow-up survey of participants, more than a third of respondents said that cost of testing and/or remediation, and/or not knowing where to get test kits were barriers to testing their well water. Furthermore, 98 percent of respondents said they would support efforts by the state of Maryland to provide free or low-cost test kits to well owners and 87 percent of respondents said they would support efforts by the state of Maryland to provide grants to well owners to clean up contaminated wells.

Whether it is nitrates or another drinking water contaminant, Senate Bill 483 is a critical first step to ensuring that all Marylanders have a right to safe, clean drinking water. It is well past time the state implements common-sense protections to support private well owners, especially lower-income families who may bear a disproportionate burden from unsafe drinking water. In an effort to safeguard Maryland's groundwater resources and protect the health of Maryland well users, we urge the Committee to adopt a **FAVORABLE** report on Senate Bill 483.

Sincerely,

Assateague Coastal Trust
Arundel Rivers Federation
Blue Water Baltimore
Center for Progressive Reform
Chesapeake Bay Foundation
Chesapeake Legal Alliance
Clean Water Action
Environmental Integrity Project
John Hopkins Center for a Livable Future
Maryland Campaign for Environmental Human Rights
Maryland Legislative Coalition
MLC Climate Justice Wing
Maryland Pesticide Education Network
Sentinels of Eastern Shore Health

Sierra Club - Maryland
ShoreRivers
Unitarian Universalist Legislative Ministry of Maryland
Waterkeepers Chesapeake

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Frequently Asked Questions

1. What does the bill do?

The Private Well Safety Act (Senate Bill 483) would allow the Maryland Department of the Environment (the Department) and eligible counties to provide Marylanders with financial assistance to cover the costs associated with well water quality testing, and when unsafe levels of contamination are found – well remediation.

The bill also creates an accessible online database of well water quality test results to ensure that the public has easy access to groundwater data.

Lastly, modeled after New Jersey's Private Well Testing Act (2001), Senate Bill 483 would require drinking water quality testing during the sale of a home with a well. Potential buyers would have the opportunity to sign a waiver to avoid this requirement, as it may not be appropriate in all cases.

2. Who may apply for financial assistance to cover the costs of well testing and remediation?

Any household, where one or more individuals reside, served primarily by a private or domestic well. The bill explicitly bars financial assistance for testing or remediation of: (1) work conducted before the grant award was approved, (2) wells serving commercial establishments, (3) private wells that do not meet the contamination criteria, (4) dug wells, and (5) point-driven wells. A single household may not receive more than one award for testing and one award for remediation in a single year.

The bill does not place any financial restrictions on who may apply for assistance for well water quality testing and remediation, but the bill does direct the Department to come up with an income guideline scale in order to provide consistent awards to Marylanders in certain income brackets. Marylanders with a household income below 50 percent of the state's median income level are eligible to receive up to 100 percent of the costs associated with testing and remediation.

The minimum sampling parameters covered for water quality testing under this portion of the bill include bacteria, nitrate, and turbidity. However, the bill directs the Department to develop a list of additional standards for water quality testing that the

Department deems necessary for each county, including but not limited to: (1) manganese, (2) arsenic, (3) radon, (4) mercury, and (5) volatile organic compounds for which there is a Maximum Contaminant Level.

The bill also allows the Department, or eligible counties, to collect an application fee (not to exceed \$10 for testing and \$250 for remediation) for this financial assistance. The Department, or eligible county, may also waive the application fee based on the applicant's income levels.

3. What private or domestic well remediation is covered under the bill?

The bill defines remediation as the drilling of a new well or a connection to a public water supply. Remediation does not include ongoing treatment, such as on-site filtration systems, because there will be ongoing maintenance costs involved and it would require permanent deviation agreements to be recorded to the land records. Thus, providing funding for the perpetual maintenance of treatment systems is not a feasible or reasonable use of these funds.

The relevant bill language is modeled after Wisconsin's Well Compensation Grant Program, which provides financial assistance to residents to remediate contaminated wells.

4. When would a household become eligible for financial assistance to remediate their private or domestic well?

A resident or household with a private or domestic well can seek financial assistance to remediate their well if it is contaminated. A resident or household can demonstrate contamination if:

- water quality testing (conducted by a state-approved laboratory) that a substance exceeds the legal threshold limit on the amount that is allowed in a public water system (the 'Maximum Contaminant Level' (MCL) under the Safe Drinking Water Act (SDWA)); OR
- There is a harmful level of another contaminant, as determined by the Department of the Environment.

COMAR doesn't explicitly define what a private or domestic well is, but generally private wells are drinking water sources that do not meet the COMAR definition of a public water system. COMAR defines a public water system as "a system that provides water for human consumption to the public through pipes or other constructed

conveyances, if the system has at least 15 service connections or regularly serves at least 25 individuals daily at least 60 days out of the year."

5. Are counties required to participate in the Private Well Safety Program?

No, county health departments must apply for grant resources from the Department in order to participate in the program to provide financial assistance to county residents. Grants to the county health departments must include consideration of administration costs.

The Department will be responsible for providing financial assistance directly to residents living in counties not participating in the program.

6. What does a county health department need to do to participate in the Private Well Safety Program?

To receive grant funding, counties must agree to engage in outreach activities to educate residents on the availability of financial assistance for private well testing and remediation, as well as the importance of annual testing. This includes publishing information on the website, providing information over the phone when residents call about their private wells and submitting an annual report to the Department. The report must be submitted to the Department by September 1st annually, and include:

- the locations of covered households that received a grant award;
- the dollar amount awarded to each household, categorized by funding for water quality testing and remediation;
- the total number of water quality tests conducted and the proportion that detected a substance that exceeds the Maximum Contaminant Level for that substance, categorized by zip code or other identifying factors;
- the number of water quality tests conducted within the previous 12-month period and the proportion that detected a substance that exceeds the maximum contaminant level for that substance, categorized by "census tract or other identifying factors";
- the location of areas of potential concern;
- the most commonly detected contaminants of concern, categorized by "census tract or other identifying factors"; and
- any other information required by the Department.

Counties may add explanatory or qualifying information to their report's results.

7. Will the Private Well Safety Act require testing during the sale of a home with a private or domestic well?

Yes, but not always. Any contract for the sale of real property on which a private or domestic well is located shall include a provision requiring, as a condition of the sale, that water quality testing of the well be conducted. However, the bill includes language allowing for the waiver of this requirement, with the signature of the buyer.

8. What type of testing is required for real estate transfers?

The testing that is required for real estate transfers matches the testing required to obtain a Certificate of Potability: 2 bacteria samples, 1 nitrate, and 1 turbidity sample. The average cost for this type of test is \$79.

Sampling and testing must be conducted by a state-certified laboratory.

9. How long will a well water quality test remain valid to fulfill the real estate transfer portion of the bill?

3 years

10. What type of reporting is required under the bill?

In addition to the reporting required of participating counties (see #5 above), state-approved laboratories in certain circumstances will be required to report to the the Department. Likewise, the Maryland Department of the Environment will be required to report on the implementation of the Private Well Safety Program to gauge its impact and insights on the status of local groundwater quality across the state.

For state-approved laboratories, any test conducted under the Private Well Safety Program must be sent to the Department an ongoing basis (at least quarterly). This includes private well water quality testing: (1) pursuant to the landlord testing required under state law (House Bill 1069, 2021; Ch. 622), (2) conducted for a resident or household receiving financial assistance under Senate Bill 483, or (3) private well water quality testing for to the real estate transfer requirements under Senate Bill 483. The Department will provide a standardized reporting form to state-certified laboratories to

fulfill these requirements. The report should include the results of the water quality tests, including any detected contamination exceeding the Maximum Contaminant Level, and other basic identifying information, such as the location of the well and the timing of sampling and testing.

For real estate transfers, laboratories have 5 days to send the testing and sampling results to the Department. Laboratories must submit results for any other testing covered under the Private Well Safety Act on an ongoing basis (at least quarterly).

Under the Private Well Safety Act, the Department is required to report to the Maryland General Assembly, on or before January 1 every year, the following information:

- The total number of water quality tests conducted under the program and the proportion that detected a substance that exceeds the Maximum Contaminant Level for that substance, categorized by county and census tract, or other identifying factors.
- The total number of water quality tests conducted within the previous 12-month period and the proportion that detected a substance that exceeds the Maximum Contaminant Level for that substance, categorized by county and census tract, or other identifying factors.
- The location of "hotspots" or other areas of known contamination. A hotspot means a census tract, or another identifying factor, where at least 50 percent of the water quality testing completed within the past 2 years detected a substance that exceeds the Maximum Contaminant Level for that substance.
- A description of the benefits realized and deficiencies addressed as a result of the program and recommendations for any appropriate legislative action; and
- The most commonly detected contaminants of concern, categorized by census tract, or by other identifying factors.

11. What type of verification is needed under the bill?

To receive financial assistance to test or remediate well water, a resident or household must prove income levels by submitting a copy of their most recent state income tax return, or an affidavit of:

- (1) a filing of a household income exemption,
- (2) a household income reduction; or
- (3) the projected household income for the current year.

12. What factors may the Department consider in awarding grants to counties?

- The estimated proportion of covered households in the eligible county;
- The county's specific needs related to the costs of administering and implementing grants under the fund;
- The county's need to address public health concerns or specific contamination concerns; and
- Any other relevant factor, as determined by the Department.

13. What information will be housed in the private well water quality database?

To populate the private well water quality database, or portal, the Private Well Safety Act directs the Department to:

- (1) receive the results of water quality testing from state-certified laboratories and the Maryland Geological Survey;
- (2) upload Certificates of Potability, results of water quality testing, and other relevant information submitted to the Department related to private wells, on at least a quarterly basis; and
- (3) provide public access to the information received under items (1) and (2) of this subsection in a manner that is easy to use and categorized by county.

On an ongoing basis, a county may submit to the Department records of Certificates of Potability and any results of water quality testing received voluntarily from residents.