Readington Township Well Water Testing Program 2021

Major storm and flooding events over the last year have elevated the risk of exposure to common drinking water contaminants for residents who rely on private wells. As stormwater flows over the land, it can pick up bacteria and other pollutants and carry those toward your well. Sources of contaminants may include septic systems, deicers and salt, solvents, used motor oil and automotive fluids, fertilizers, and animal waste. Research shows that drinking water wells that have been impacted by standing water/flooding are more likely to be contaminated with bacteria. Contaminants may not only affect your well, but the aquifer that your well taps into, thus potentially contaminating other wells in your area.

While commercial water companies are required by law to test customers' water, owners of private wells are on their own. Regular monitoring of water quality is critically important to ensuring a safe water supply. Local efforts to provide community-supported testing programs help prevent exposure to drinking water contaminants by making the testing process convenient and affordable. Readington Township partnered with Raritan Headwaters (RHA) in October 2021 to hold a multi-day water testing event enabling residents the opportunity to test their drinking water for a variety of contaminants.

During the event, the Township made test kits available for pick up at 2 locations within the Township- outside the Municipal Building and at the Three Bridges Fire Company. During testing days, Environmental Commission and Readington WaterWatch volunteers and Raritan Headwaters staff greeted residents, answered questions, and distributed test kits. Participants had the option of choosing when to return the filled sample bottles- either the very same morning they picked up their kits or on another of the scheduled well test dates.

Residents had access to online registration and payment for water test kits to make the process even more convenient. While online, they could also view complete details on types of sampling and detailed instructions on how to properly fill their sample bottles.

In total, 301 residents attended the 2021 testing event to pick up a test kit or get additional information on the program. Of these, 263 pre-registered for the event online, a testament to the success and allure of the online registration process.

Of the 301 participants, 286 households took the next step and returned water samples for testing. The following chart is a summary of data collected from these 286 wells on Primary Contaminants of Concern:

Contaminant	# wells tested in 2021	Range of results (ND=NonDetect)	Limit or MCL*	# wells exceeding MCL	Percent wells exceeding MCL
Coliform bacteria	286	Abs-Pres	Absent	86	30%
E.coli (fecal bacteria)	286	Abs-Pres	Absent	19	7%
Nitrate	266	ND-7.27 mg/L	10 mg/L	0	0%
Arsenic	137	ND-11.61 ppb	5 ppb	14	10%
Lead	107	ND-101.5 ppb	15 ppb	4	4%
Gross Alpha (uranium + radium)	53	ND- 9.9 pCi/L	15 pCi/L	0	0%
Radon	87	ND- 5625.9 pCi/L	2000 pCi/L**	32	37%

* Maximum Contaminant Level (MCL). The maximum level of a contaminant which is permitted in public water supplies. Maximum contaminant levels are specified in the Primary Drinking Water Standards set by EPA for contaminants that affect the safety of public drinking water.

** There is no standard set in NJ for radon in water. Standards set in other states in our region are used as guidelines. The most protective of these standards is 2000 pCi/L in New Hampshire.

There are approximately 5000 private wells in Readington supplying drinking water to most residents who live there. Under the New Jersey Private Well Testing Act (PWTA) which was signed into law in 2001, wells must be tested for an array of contaminants upon transfer of ownership or if there is a rental on the property. The NJDEP collects and publishes data on the results of the testing which may be explored at https://www.nj.gov/dep/dsr/pwta/. In Readington Township, 1631 wells (33%) have been tested as mandated under the PWTA between 2002 and 2018. The following table summarizes available data for Readington Township on the percent of exceedances for individual contaminants including the number of wells tested under PWTA.

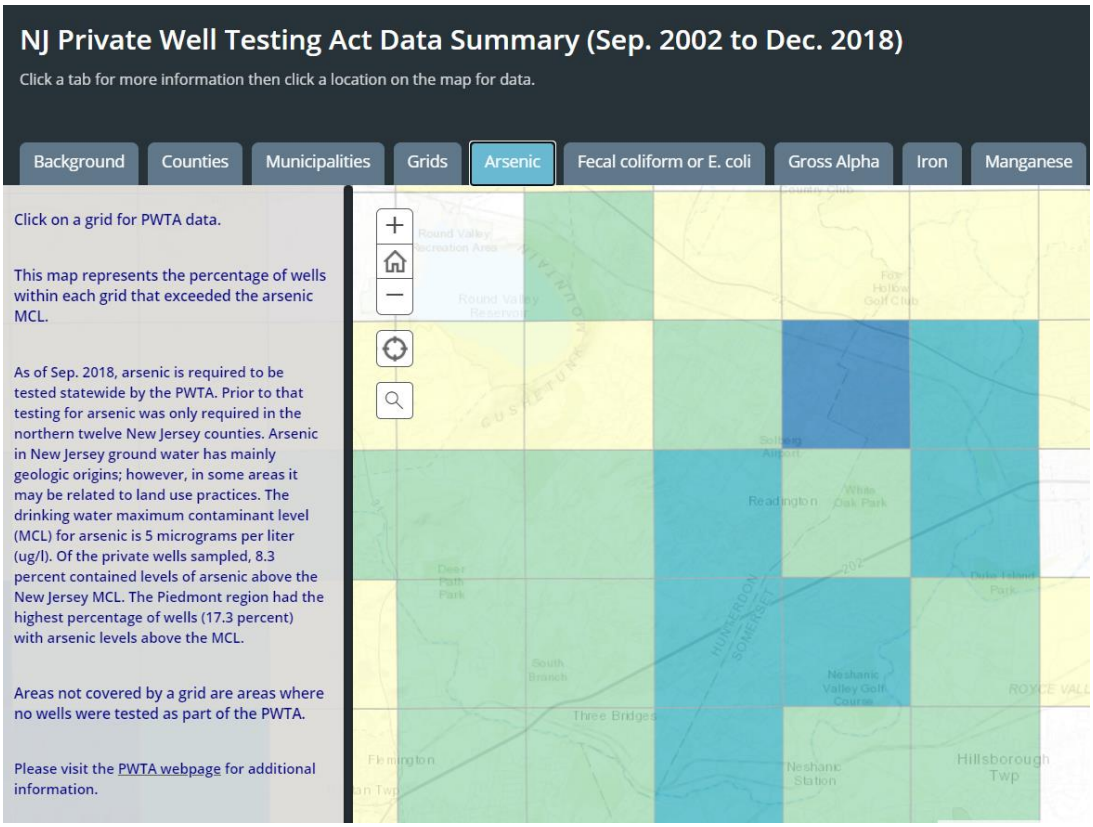
Private Well Testing Act Results Sept. 2002- Dec. 2018

Parameter	Readington Township			Hunterdon County	New Jersey
	# Wells sampled	# Wells exceeding MCL	Exceedance Rate	Exceedance Rate	Exceedance Rate
E. coli	1631	83	5.1%	3.2%	2.0%
Nitrate	1631	7	0.4%	0.7%	2.7%
Arsenic	1631	346	21.2%	16.3%	8.3%
Gross Alpha	1430	17	1.2%	5.5%	10.9%

VOC	1631	26	1.6%	0.6%	1.2%
Iron	1631	132	8.1%	17.5%	29.4%
Manganese	1631	55	3.4%	10.9%	19.9%
pH	1629	176	10.8%	27.4%	45.6%

Source: NJ Private Well Testing Act Data Summary (Sep. 2002 to Dec. 2018) NJDEP (2021)

https://njdep.maps.arcgis.com/apps/MapSeries/index.html?appid=826ec9fae77543caa582a787d5f088e7



Map image from NJDEP Private Well Testing Act Data Summary (Sep. 2002 to Dec. 2018)
https://njdep.maps.arcgis.com/apps/MapSeries/index.html?appid=826ec9fae77543caa582a787d5f088e7

Private well owners are responsible for the safety of their water and regular testing is the only way to know for certain that the water is safe to drink. Based on available data and current public health guidelines, residents of Readington Township are encouraged to test their wells annually for coliform bacteria and nitrates or after a flooding event. Those residents living in older homes, built before 1987, are at greater risk of lead exposure from older pipes and solder and should test for lead in their water every 5 years even if they get their water from a public supply. Elevated levels of arsenic in well water (over 5ppb) impacts about 20% of the homes in Readington and carcinogenic volatile organic compounds may also be present, so it is best to test for these at least once but ideally every 5 years.

Furthermore, residents can protect their water supply by carefully managing activities on their property and near the well. This includes keeping hazardous chemicals out of septic systems, pumping their septic system every 3 years, and limiting the application of fertilizers to lawns and gardens. For more information on RHA's Community Well Testing Program, visit www.testmywell.org.