

Well Water Contaminants in Chatham County

Contaminant	Drinking Water Standard	Private Well Water Test Results					
		Total wells tested	Number of wells tested above standard	Percentage (%) of wells tested above standard	Minimum	Maximum	Average
Maximum Contaminant Level (MCL)							
Arsenic	10	3129	85	2.72%	0.71	127	3.56
Barium	2000	2068	0	0%	7	1440	104.45
Beryllium	4	23	0	0%	0.71	1.41	1.05
Cadmium	5	2157	1	0.05%	0.71	5	0.72
Chromium	100	2068	1	0.05%	0.71	100	7.22
Copper	1300	2071	7	0.34%	3.54	13000	61.47
Lead	15	3128	61	1.95%	0.71	162	4.28
Mercury	2	1578	3	0.19%	0.35	4.1	0.36
Nitrate	10000	1761	41	2.33%	707.11	120000	1565.73
Nitrite	1000	1761	0	0%	70.71	570	72.08
Selenium	50	2069	8	0.39%	3.54	155	4.14
Uranium	30	2	0	0%	0.71	0.71	0.71
NC 2L Groundwater							
Barium	700	2068	8	0.39%	7	1440	104.45
Boron	700	23	0	0%	3.54	70.71	41
Cadmium	2	2157	9	0.42%	0.71	5	0.72
Chromium	10	2068	25	1.21%	0.71	100	7.22
Cobalt	1	23	1	4.35%	0.35	1.4	0.57
Nickel	100	23	0	0%	0.71	12	4.77
Zinc*	1000	2068	201	9.72%	35.36	36000	555.5
Health Advisory							
Iron*	2500 (DEQ)	2068	409	19.78%	70.71	34000	456.86
Manganese*	300 (EPA)	3128	1129	36.09%	0.71	3900	120.63
Sodium	20000 (EPA)	1960	1959	99.95%	707.11	826300	26742.38
State Health Goal							
Hexavalent Chromium	0.07	26	7	26.92%	0.04	1.48	0.18
Thallium	0.2	23	0	0%	0.07	0.07	0.07
Vanadium	0.3	23	13	56.52%	0.14	4.3	1.19

Contaminant levels are measured in micrograms per liter (µg/L), which is equal to parts per billion (ppb). Note: Copper and Lead standards are called "Action Levels".

*The EPA also has a nuisance standard for aesthetic effects caused by these contaminants, however, this table uses the health-based standard.

Maximum Contaminant Level (MCL): The highest level of a contaminant that the US EPA allows in drinking water supplied by public utilities. An MCL takes into consideration the best available treatment technology and associated costs along with health risk. More information about MCL standards: <https://bit.ly/epa-MCL>.

NC 2L Groundwater: Set by NC DEQ as the highest level of a contaminant allowed in groundwater, which may be tolerated without creating a threat to human health or which would otherwise make the groundwater unsuitable for its intended best usage, such as a drinking water. Note: Barium, Cadmium, and Chromium have different standards under state and federal regulations; both are included in this table. More information about NC 2L Groundwater standards: <https://bit.ly/nc2Lgw>.

Health Advisory: In the absence of federal standards, the US EPA and state agencies can issue advisories to communicate the level of a contaminant in drinking water at which harmful health and/or aesthetic effects are not anticipated to occur over a specific period of time.

State Health Goal: In the absence of state and federal standards, level established by NC DHHS to communicate to private well users the risk associated with using their well water.

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For more information visit:

<https://sph.unc.edu/superfund-pages-for-communities/>

Eaves LA, Keil AP, Rager JE, George A, Fry RC. Analysis of the novel NCWELL database highlights two decades of co-occurrence of toxic metals in North Carolina private well water: Public health and environmental justice implications. *Sci Total Environ.* 2022 Mar 15;812:151479. doi: [10.1016/j.scitotenv.2021.151479](https://doi.org/10.1016/j.scitotenv.2021.151479). Epub 2021 Nov 9. PMID: 34767890.

