

Well Water Contaminants in Columbus 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	1247	3	0.24%	0.71	46	2.99
Barium	2000	832	0	0%	70.71	1100	89.76
Beryllium	4	2	0	0%	2.12	2.12	2.12
Cadmium	5	1104	2	0.18%	0.71	47	0.76
Chromium	100	832	0	0%	7.07	50	7.12
Copper	1300	832	0	0%	35.36	690	39.52
Lead	15	1244	11	0.88%	3.54	48	3.83
Mercury	2	755	0	0%	0.35	0.35	0.35
Nitrate	10000	705	0	0%	707.11	7500	724.23
Nitrite	1000	705	0	0%	70.71	130	70.88
Selenium	50	832	0	0%	3.54	44	3.61
Uranium	30	0	-	-	-	-	-
NC 2L Groundwater							
Barium	700	832	2	0.24%	70.71	1100	89.76
Boron	700	0	-	-	-	-	-
Cadmium	2	1104	3	0.27%	0.71	47	0.76
Chromium	10	832	1	0.12%	7.07	50	7.12
Cobalt	1	0	-	-	-	-	-
Nickel	100	0	-	-	-	-	-
Zinc*	1000	832	6	0.72%	35.36	24000	105.89
Health Advisory							
Iron*	2500 (DEQ)	840	134	15.95%	70.71	8500	304.29
Manganese*	300 (EPA)	1252	144	11.5%	21.21	5960	34.23
Sodium	20000 (EPA)	817	817	100%	3200	800000	61181.88
State Health Goal							
Hexavalent Chromium	0.07	0	-	-	-	-	-
Thallium	0.2	2	2	100%	1.41	1.41	1.41
Vanadium	0.3	0	-	-	-	-	-

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.

