

Well Water Contaminants in Iredell 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	1817	1	0.06%	0.71	11	2.77
Barium	2000	1151	0	0%	70.71	1590	79.68
Beryllium	4	13	0	0%	1.41	2.12	1.47
Cadmium	5	1231	0	0%	0.71	3.54	0.72
Chromium	100	1151	0	0%	0.71	40	7.11
Copper	1300	1151	0	0%	7.07	790	39.41
Lead	15	1818	23	1.27%	3.54	125	4.03
Mercury	2	1045	1	0.1%	0.35	2	0.36
Nitrate	10000	985	3	0.3%	707.11	15000	1166.06
Nitrite	1000	985	0	0%	70.71	800	73.27
Selenium	50	1151	0	0%	3.54	34	3.7
Uranium	30	2	0	0%	0.71	0.71	0.71
NC 2L Groundwater							
Barium	700	1151	4	0.35%	70.71	1590	79.68
Boron	700	12	0	0%	70.71	70.71	70.71
Cadmium	2	1231	7	0.57%	0.71	3.54	0.72
Chromium	10	1151	13	1.13%	0.71	40	7.11
Cobalt	1	12	0	0%	0.71	0.71	0.71
Nickel	100	13	0	0%	7.07	7.07	7.07
Zinc*	1000	1140	68	5.96%	35.36	28000	313.17
Health Advisory							
Iron*	2500 (DEQ)	1151	232	20.16%	70.71	22000	392.26
Manganese*	300 (EPA)	1817	305	16.79%	7.07	3790	42.67
Sodium	20000 (EPA)	1103	1103	100%	1000	370000	10806.62
State Health Goal							
Hexavalent Chromium	0.07	10	10	100%	0.1	1.49	0.61
Thallium	0.2	13	1	7.69%	0.01	1.41	0.13
Vanadium	0.3	3	3	100%	5.3	10.9	8.6

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.

