

Iron

Recommended Safety Standards

NC groundwater: 0.3 mg/L

EPA drinking water: 0.3 mg/L

❖ What is iron?

Iron is a metallic element and the most common element on earth by mass. If your water is not clear, iron may be to blame - organic or ferric iron cause water discolorations. Ferrous iron oxidizes with the air which causes clothes and other materials to have a reddish-brown color.

❖ How does iron get into my well water?

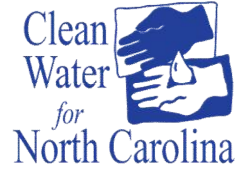
Iron is commonly found in groundwater in some parts of NC, or can also be in well water due to iron pipe corrosion. Iron is correlated with a low pH which also needs to be tested for if water is discolored.

❖ What are the health effects of iron?

Iron, in small concentrations, is essential to human health but high concentrations can give the water a disagreeable metallic taste. Iron contamination is considered an aesthetic issue, but makes water unpalatable and may stain clothing and appliances. Produce cooked in iron-contaminated water will turn dark. For further reading on the health effects of iron, please visit <http://soiltesting.tamu.edu/publications/L-5451.pdf>.

❖ Who is most affected by iron?

Iron's health effects are based on aesthetics and not safety concerns. Aesthetics include odor, taste, and color. Unpalatable household water can lead people to drink less and cause dehydration or other health issues.



❖ How do I know if my well water is contaminated with iron?

If your well was installed before July 2008, call your local environmental health office and ask for the well program or contact Clean Water for North Carolina if you are unsure of the appropriate point of contact for your area.

Still have questions or concerns?

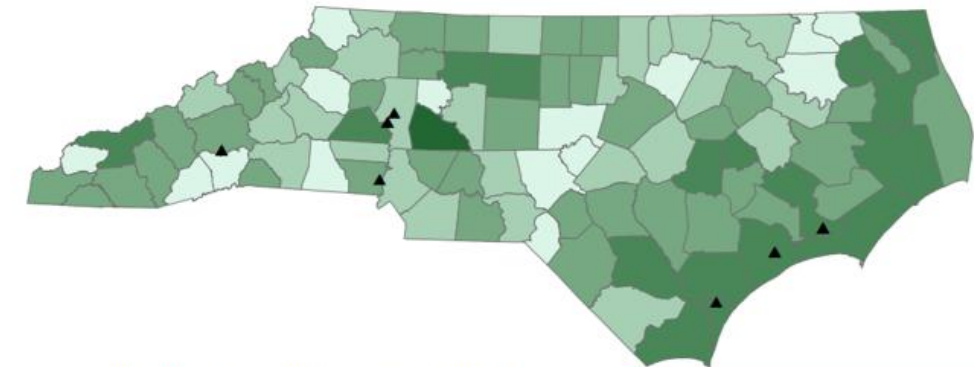
Call Clean Water for North Carolina.

Asheville office: 800-929-4480, amanda@cwfncc.org

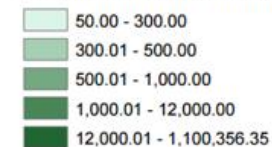
Durham office: 919-401-9600, hope@cwfncc.org

Website: <http://www.cwfncc.org>

Concentration of Iron Detected in NC Private Well Water ($\mu\text{g/L}$), Average 2010



Concentration of iron detected in private wells ($\mu\text{g/L}$)



▲ National Priorities List sites reporting iron

Iron SMCL: 300 $\mu\text{g/L}$

Iron is a naturally-occurring element that may be present in ground water from the erosion of natural deposits. Iron is considered a secondary contaminant because drinking water that contains iron is not expected to cause negative health effects but may cause a disagreeable taste to drinking water or cause staining of plumbing fixtures.¹¹