

# Fluoride

## Recommended Safety Standards

NC groundwater: 2 mg/L

EPA drinking water: 4 mg/L

### ❖ What is fluoride?

Fluorine is a naturally-occurring gas with a pungent odor and a pale yellow-green color. Fluorides are formed when fluorine combines with metals, typically in the form of a white solid.

### ❖ How does fluoride get into my well water?

Many times, fluorides are added to drinking water supplies and to dental products with the purpose of cavity prevention. Fluorides can be released into the air from industry and volcanoes. Wind and rain then transports the fluorides into nearby water, food, and soil sources.

### ❖ What are the health effects of fluoride?

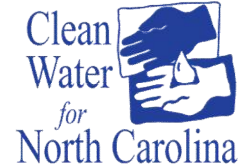
High levels of fluoride in adults can cause an increase in bone density. If the concentration is very high, bone fragility and a brittle texture can result. There is an increased risk of breaking bones as a result. In animals, decreased fertility can result from high fluoride doses. Cancer is not correlated with high levels of fluoride in drinking water. For further reading on the potential health effects of fluoride, please visit <https://www.atsdr.cdc.gov/substances/toxsubstance.asp?toxid=38>.

### ❖ Who is most affected by fluoride?

If you live in communities with fluoridated water or high levels of naturally-occurring fluoride or you live near an industry with fluoride-containing substances, you might be exposed to higher levels within your well water. Children can experience dental fluorosis if they drink excess fluoride before the age of 8. For more information about efforts to end drinking water fluoridation, please visit <http://momsagainstfluoridation.org/>.

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

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?

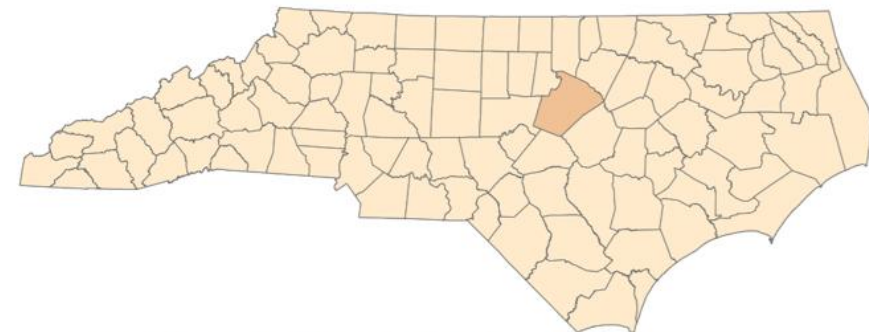
Call Clean Water for North Carolina.

Asheville office: 800-929-4480, [amanda@cwfn.org](mailto:amanda@cwfn.org)

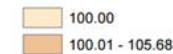
Durham office: 919-401-9600, [hope@cwfn.org](mailto:hope@cwfn.org)

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

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



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



#### Fluoride MCL: 4,000 $\mu\text{g/L}$

Fluoride is a naturally-occurring element that may be present in ground water from the erosion of natural deposits. Fluoride is added to some public drinking water supplies to promote strong teeth. Fluoride may also be found in the discharges from fertilizer and aluminum factories.<sup>11,25</sup>