

Cadmium & PRIVATE WELLS



What is cadmium?

Cadmium is a natural element found in rocks deep underground and soil. In the environment, cadmium is found joined to other elements like sulfur, chlorine, and oxygen.

Cadmium is used in batteries, pigments, metal coatings and plastics.

How does cadmium get in my private well water?

Cadmium can enter your private well water from erosion of rocks underground. Cadmium can also enter groundwater from mining practices, burning coal and household waste.

Acidic water (water with low pH) can cause cadmium to leach from pipes in your well components or your home plumbing system.

How can cadmium affect my health?

Cadmium is not considered an essential element, meaning your body does not require it. You can't see, smell, or taste cadmium.

Drinking high levels of cadmium over short periods can lead to:

- Vomiting
- Diarrhea

Drinking cadmium over long periods may lead to fragile bones, kidney and lung damage.

What level of cadmium should I be concerned about?

The **NC Department of Environmental Quality** developed a groundwater standard of **0.002 milligrams of cadmium per liter of water (mg/L)**. Ground water standards are developed to protect public health. This standard was developed in 2013.

The **US Environmental Protection Agency** developed a public drinking water standard of **0.005 mg/L** for cadmium. Public drinking water standards are based on public health protection and cost of treatment/testing at large utilities. This standard was developed in 1992 and validated in 2017.

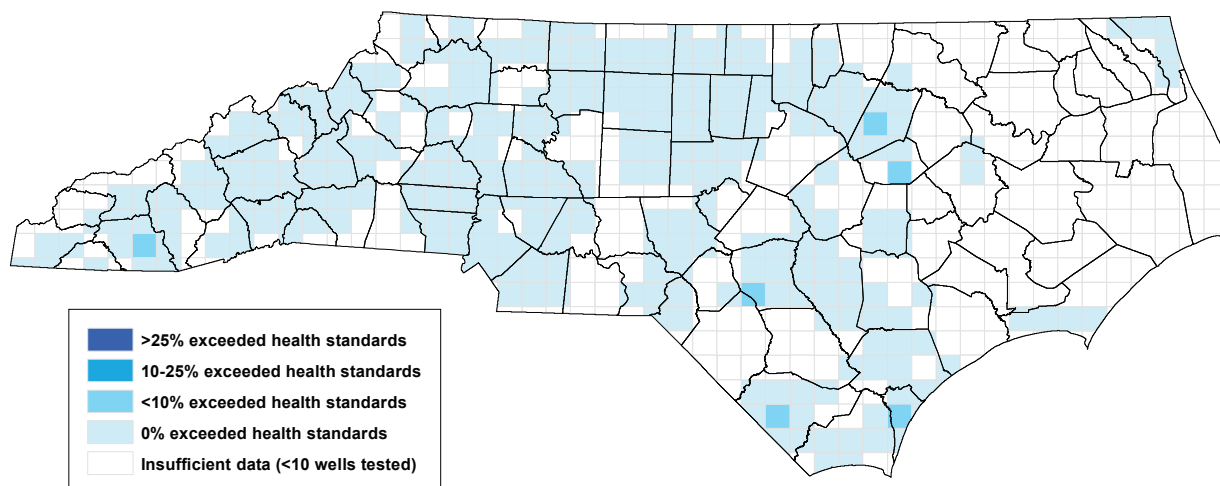
What if my cadmium levels are high?

You can install a treatment system to reduce the levels of cadmium in your private well. Treatment systems that reduce the levels of cadmium in your well water include:

- Activated carbon filtration
- Distillation
- Reverse osmosis

You can also reduce your exposure by using bottled water or connecting to public water supply, if possible.

Percent of Private Wells Tested Exceeding State and/or Federal Standards for Cadmium, 2011-2013



How do I test for cadmium in my private well?

Use a certified lab to test your well water for cadmium every two years, as part of the inorganic panel screen. Contact the private well program at your county health department to assist you with getting your water tested. Pricing of testing varies from county to county.

Where is cadmium found in NC?

Cadmium is found at varying levels (0.001-0.047 mg/L) throughout NC. **Less than 1%** of wells sampled for cadmium in NC from 2011 to 2013 exceeded state and/or federal standards. Yet, there are several areas in NC with at least 10% of the wells exceeding state and/or federal standards. See map for areas with elevated cadmium.

Where can I find more information about cadmium and my well?

Visit the NC Division of Public Health's Private Well and Health Program website: <http://epi.publichealth.nc.gov/oeep/programs/wellwater.html>.

There you can find:

- Contacts for your county private well program
- Cadmium in well water maps
- A guide for selecting a treatment system
- Other private well resources

You can also call the Private Well and Health Program at 919-707-5900.

Where did this information come from?

Agency for Toxic Substances & Disease Registry: www.atsdr.cdc.gov/toxfaqs/tfacts5.pdf

World Health Organization: www.who.int/water_sanitation_health/dwq/chemicals/cadmium.pdf

National Sanitation Foundation: www.nsf.org/consumer-resources/what-is-nsf-certification/water-filters-treatment-certification/contaminant-reduction-claims-guide

