

WATAUGA COUNTY

TAKE ACTION

**TEST THE INDOOR AIR OF BUILDINGS.
TEST YOUR PRIVATE WELL WATER.**

SOURCE OF RADON Radon is a gas that is naturally present in rocks and soil in North Carolina. It is created when uranium in the ground decays. Some building materials can also have uranium, and the only way to know if radon is being released indoors is by testing the air. Radon itself cannot be seen, smelled, or tasted.

TEST YOUR INDOOR AIR

It is important to test the air in your home, apartment, or commercial building for radon every two years. Radon is a gas that can be harmful and cause lung cancer if it builds up in the indoor air you breathe.

- If the indoor radon level is between 2 and 3.9 picoCuries per liter of air, the NC Radon Program recommends you consider hiring a certified radon professional to install a system that will lower the radon level and make your air safer to breathe.
- If the radon level in your home or building is equal to or higher than 4.0 picoCuries per liter of air, the NC Radon Program strongly recommends that you hire a certified radon professional. They can install a system that will lower the radon level and make your air much safer to breathe.

PROTECT THE MOST VULNERABLE

Smokers and People Exposed to Secondhand Smoke

While breathing in radon alone can cause lung cancer, the Centers for Disease Control and Prevention (CDC) reports that people who smoked or currently smoke and are exposed to radon are 25 times more likely to get lung cancer.⁽⁹⁾

Children

The CDC reports that children are twice as likely to be affected by breathing in radon than adults. Additionally, if children are exposed to tobacco smoke and elevated radon levels, their risk of developing lung cancer increases at least 20 times.⁽¹⁰⁾

TEST YOUR PRIVATE WELL WATER

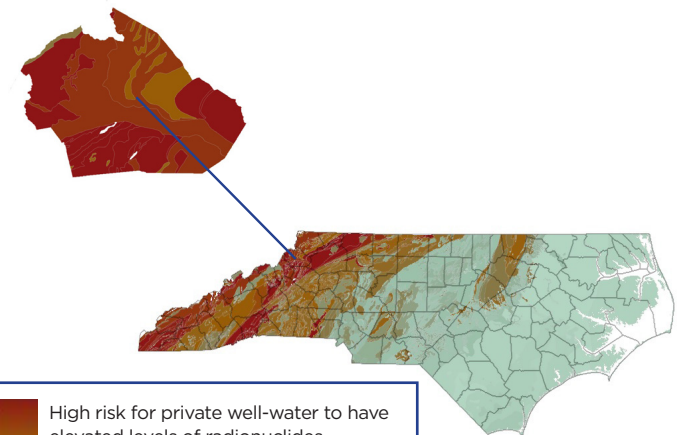
Testing the water from your private well is important for making sure it is safe to drink. If your drinking water comes from a private well, the NCDHHS, Division of Public Health suggests testing it for radon, gross alpha, gross beta, and Uranium.^(2,3)

Exposure to radionuclides via drinking water has linked with various health effects^(2,3)

Radon: Stomach cancer	Uranium: Kidney damage, cancer	Radium: Bone cancer
------------------------------	---------------------------------------	----------------------------

If your radon level in the water is above 4,000 picoCuries per liter, it is recommended that you hire a certified radon professional to install a system that will reduce the radon level.

Owners of buildings built with certain materials, such as large buildings and mid- high-rise condominiums, should consider testing the indoor radon level. The CDC reports that “any buildings built with sandstone, concrete, brick, natural stone, gypsum, and granite contain naturally occurring radioactive elements like radium, uranium, and thorium.” The only way to know if these materials increase indoor radon levels is by testing for radon.⁽¹¹⁾



High risk for private well-water to have elevated levels of radionuclides.

Moderate risk for private well-water to have elevated levels of radionuclides.

Very low risk for private well-water to have elevated levels of radionuclides.

Image source: North Carolina Geological Survey.

MORE INFORMATION

1. <http://radon.ncdhhs.gov/>
2. https://epi.dph.ncdhhs.gov/oeo/docs/Uranium_WellWaterFactSt.pdf
3. https://epi.dph.ncdhhs.gov/oeo/docs/Radionuclides_WellWaterFactSt.pdf
4. www.ncdhhs.gov/buyers-and-sellers-guide-radon/download?attachment
5. www.ncdhhs.gov/installing-radon-mitigation-system/download?attachment
6. www.ncdhhs.gov/homes-radon-mitigation-systems/download?attachment
7. www.dph.ncdhhs.gov/chronicdiseaseandinjury/cancerpreventionandcontrol/index.htm
8. <https://schs.dph.ncdhhs.gov/units/ldas/docs/NCSHIP-2022-Full.pdf>
9. [www.atsdr.cdc.gov/csem/radon/health_effects.html#:~:text=The%20lung%20cancer%20risk%20for,L%20\(Darby%20et%20al](http://www.atsdr.cdc.gov/csem/radon/health_effects.html#:~:text=The%20lung%20cancer%20risk%20for,L%20(Darby%20et%20al)
10. www.atsdr.cdc.gov/csem/radon/who_risk.html#:~:text=Risk%20of%20lung%20cancer%20in,increases%20at%20least%2020%20times
11. www.cdc.gov/hceh/radiation/building.html#:~:text=Radioactive%20materials%20in%20sandstone%2C%20concrete,radium%2C%20uranium%2C%20and%20thorium



NC DEPARTMENT OF HEALTH AND HUMAN SERVICES
Division of Health Service Regulation

Radiation Protection Section
radon.ncdhhs.gov
NCDHHS is an equal opportunity employer and provider. • 10/2023

