Radon and Radon Mitigation in Maryland

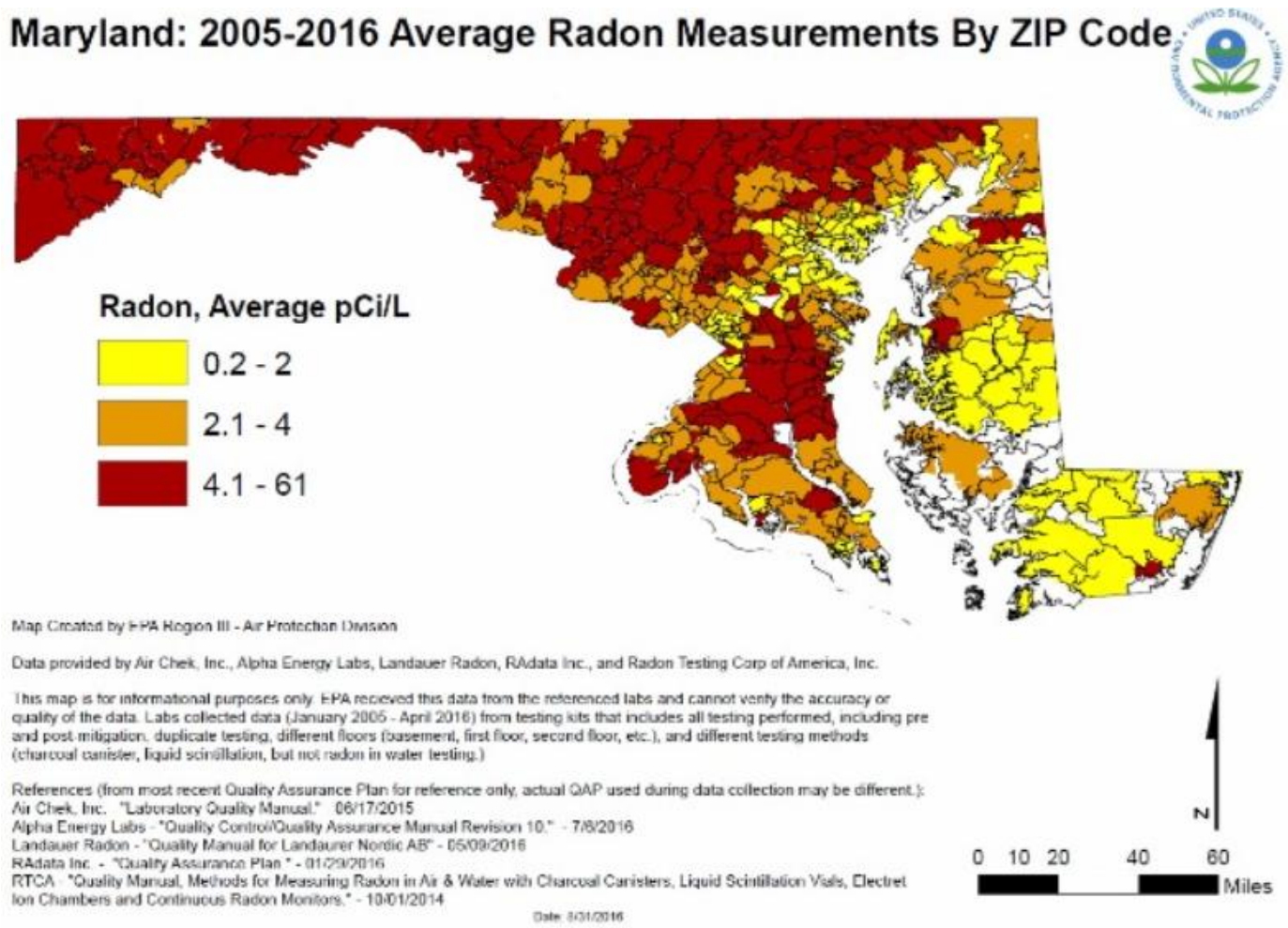
Radon is a natural, invisible, odorless, and tasteless radioactive gas. It comes from the breakdown of uranium in soil and rock, seeping into homes and buildings, where it can build up to dangerous levels. Over time, breathing in radon's tiny radioactive particles can damage lung cells and lead to **lung cancer**. Understanding radon and how to fix a problem is crucial for health in Maryland.

What is Radon and How It Enters Homes

Radon gas forms continuously in the ground and gets pulled into homes through cracks in foundations, pipe openings, or sump pumps, often building up in basements. Any home in Maryland, regardless of age or type, can have radon. Levels vary widely across the state and even between neighbors.

The Health Risk of Radon Exposure in Maryland

Radon is the **second leading cause of lung cancer** overall and the **number one cause of lung cancer for non-smokers** in Maryland. The more radon exposure and the longer it occurs, the higher the risk, which is greatly increased for smokers. Some Maryland indoor radon levels are as high as 5.4 pCi/L on average, with a statewide average around 3.2 pCi/L, indicating many homes may exceed recommended levels.



How to Test for Radon in Maryland

Testing is the only way to detect radon. It's easy and affordable:

- **Home Test Kits:** You can buy short-term (2-90 days) or long-term (over 90 days) kits at hardware stores or online. Maryland residents can also **order discounted test kits for as little as $3 from the Maryland Department of Health (MDH)** through their partner website: https://states.aelabs.com/#/md.
- **Professional Testing:** Certified radon professionals can provide detailed reports, Montgomery County requires radon testing for single-family homes for sale.

The U.S. Environmental Protection Agency (EPA) suggests **taking action if your test result is 4.0 picocuries per liter (pCi/L) or higher**. While not required statewide, Montgomery County mandates testing for single-family home sales and rentals, with required disclosure and mitigation for high levels. All Maryland public and private schools must also test for radon every five years.

Radon Mitigation: Reducing Indoor Radon Levels in Maryland

Radon mitigation uses special techniques to lower radon levels, performed by licensed Maryland professionals. The most common method is **sub-slab depressurization (SSD)**:

- **Sub-Slab Depressurization (SSD):** This system creates gentle suction under your home's foundation, collecting radon gas before it enters your living space. A fan in a pipe vents the gas safely outside, above the roof.
    - **Passive SSD:** Uses natural air movement; often built into new homes in areas like Montgomery County due to building rules.
    - **Active SSD:** Uses an electric fan for more consistent and effective radon reduction. Most installed systems in Maryland are active.

Other methods include sealing foundation cracks, covering sump pits, or using specialized ventilation systems, though these are often supplementary for high levels.

Why is Radon Mitigation Important in Maryland?

Fixing a radon problem is vital to protect Marylanders from radon-induced lung cancer. By lowering indoor radon levels to safe standards, people significantly reduce their long-term exposure and risk. Professional systems are very effective, often reducing radon by 90% or more. Since radon is a preventable cause of lung cancer and prevalent in Maryland, testing and mitigation are key to the state's public health strategy.

Conclusion

Radon is a hidden but solvable danger in Maryland homes. Regular testing (with affordable MDH kits) and professional mitigation, if needed, are crucial steps for every homeowner and landlord. These actions significantly reduce lung cancer risk, creating healthier indoor environments for Maryland families.