



Maryland
Department of
the Environment

Maryland Radon Program

EPA Region 3 Stakeholders Meeting

Hershey PA

Tuesday, September 26, 2023



MD Department of the Environment (MDE) Radon Program

Our team – MDE/RHP/RMD/Technical Planning
Section

Health Physicist Supervisor with 4 staff members handle:
Reciprocity, Enforcement, General Licensed Devices,
Radiological/Nuclear Emergency Responses, Regulations,
and

Radon: EPA's State Indoor Radon Grant

**The MDE and MDH work to address radon as a
public health issue, with a focus on outreach
activities**

Protect Your Family from Radon



Radon is a health hazard with a simple solution - Test your home today!

mde.maryland.gov/radon

1-866-703-3266



Welcome to the Radiological Health Program

Mission Statement... To Control the Use of Radiation to Protect Public Health, Safety & the Environment from Inadvertent & Unnecessary Radiation Exposure

National Radon Awareness Month

THE BAD ACTOR - RADON GAS

Radon is a naturally occurring radioactive gas. It is formed by the decay of uranium present in the earth's crust.

- It seeps through the soil under & around building foundations and can accumulate in residential homes.
- It is the second leading cause of lung cancer in the U.S.



The State of Maryland
Proclamation
RADON AWARENESS MONTH
JANUARY 1 - 31, 2016



Don't Mess Up the Test!

- Short-term radon test kits measuring radon for 2 to 4 days generally consist of an adsorptive material such as charcoal. After exposure, the kit is sent to a laboratory for analysis.
- Recommended levels are less than picocuries per liter of air (pCi/L).
- For reliability the test kit manufacturers should be certified by:
 - The National Radon Proficiency Program (NRPP), or
 - The National Radon Safety Board (NRSB)

HOW RADON GETS IN A HOME

NEWS FLASH!!!!

- Several different radon detector systems emerged the month of January in Metropolitan Baltimore and Northern Maryland.
- A total of 1,000 color test kits have been purchased for distribution to Maryland residents. In 2015, 600 kits continue to be distributed to homes in several residential structures during research events throughout Maryland.



- A list of Certified Manufacturers can be found on either:
 - www.nrpp.org or nrpp.com/016
 - www.nrsb.org or www.nrsb.com/016
- Radon test kits can be obtained on-line for all local counties.
- Environmental Hotline: 800-735-3266.

Health Concerns on RADON

- Radon is the second leading cause of lung cancer after tobacco smoking.
- If you are a non-smoker and exposed to radon gas, there is a risk of developing lung cancer.
- If you are a smoker and exposed to radon gas, the risk of developing lung cancer is magnified.
- According to the U.S. Environmental Protection Agency (EPA) has estimated that as many as 21,000 lung cancer deaths are caused by radon each year. (www.radon.com)





National Radon Awareness Month

Clear Channel Outdoor billboards

- Displayed in Carroll, Howard, Frederick, and Baltimore City/County
- 3,773,694 impressions

Transit bus banner signs

- For Baltimore City and Frederick County lines





National Radon Awareness Month

- Governor's Proclamation
- MDE radon page - ~98 hits/day during January 2023
 - Compared to ~32 hits/day during January 2021
- Maryland Realtors, local health departments, etc. helped promote awareness and link our radon page on their media platforms
 - Extending past January, ongoing work in contacting local health departments to have radon information and our link permanently on their websites - [Charles](#), [Dorchester](#), etc.
- Social media posts and trivia on MDE Facebook, Twitter, and Instagram

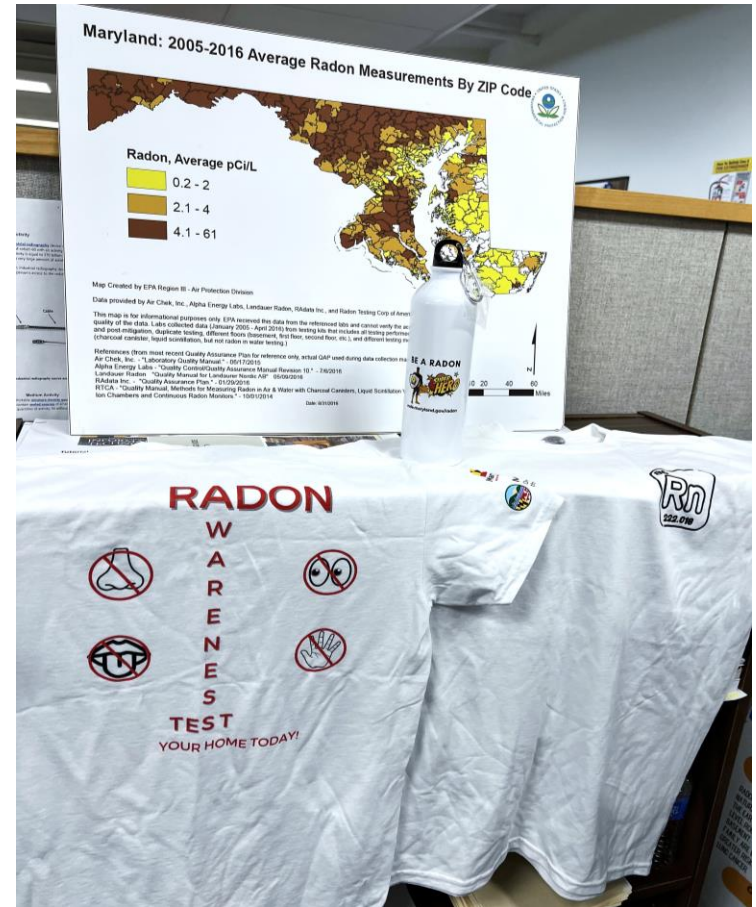




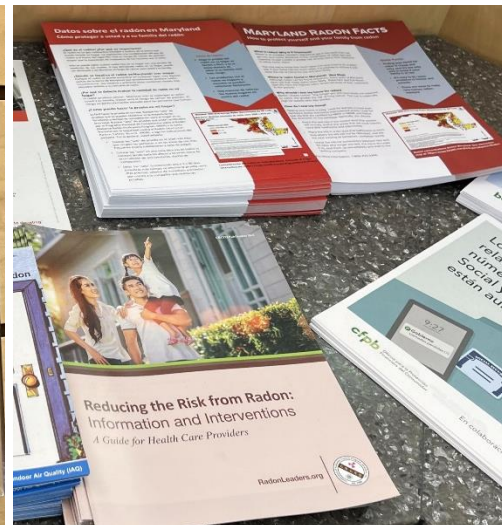
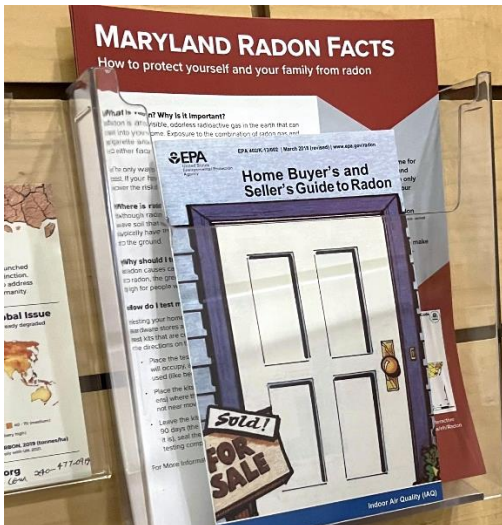
Community Outreach

Provided flyers and pamphlets for community distribution

- ~700 to libraries in Howard and PG county
- ~100 to real estate agencies in Howard county



Designed t-shirts and water bottles for outreach events





Outreach Events in 2023

Southampton Middle School Presentation (02/02/23)





MDE Radon Webpage

Radiological Health

- > Dental Machine Guidelines
- > Informational Memos
- > Licensing Guidelines
- > Radioactive Materials Licensing Forms
- > Radon
- > Regulations for Control of Ionizing Radiation
- > X-ray Application Forms and Guidance
- > Radiological Health Home



State of Maryland
Proclamation for Radon Gas

Radon Exposure in Your Home...What's Your Radon Risk?

Radon exposure is a health hazard with a simple solution. Radon is an invisible, odorless radioactive gas in the earth that can enter into lower level rooms of your home, like a basement. The longer you and your family are exposed to radon, the greater risk you have of developing lung cancer. Testing for radon is easy, affordable and the best way to protect your family from exposure. Radon test kits are available at home improvement stores or online.

ORDER YOUR RADON TEST KIT HERE!!

Radon exposure is a health hazard -
Test your home today!

Maryland Department of the Environment
MARYLAND Department of Health

TEST YOUR HOME TODAY! (Video)



Ordering Test Kits

When your testing kit arrives carefully remove the packaging.





Radon Testing

Current contractor Alpha Energy Labs - \$3 kits available on MDE website

From January to July 2023: 1629 kits distributed and 849 kits analyzed

~52.12% return rate

Average return time is ~57 days

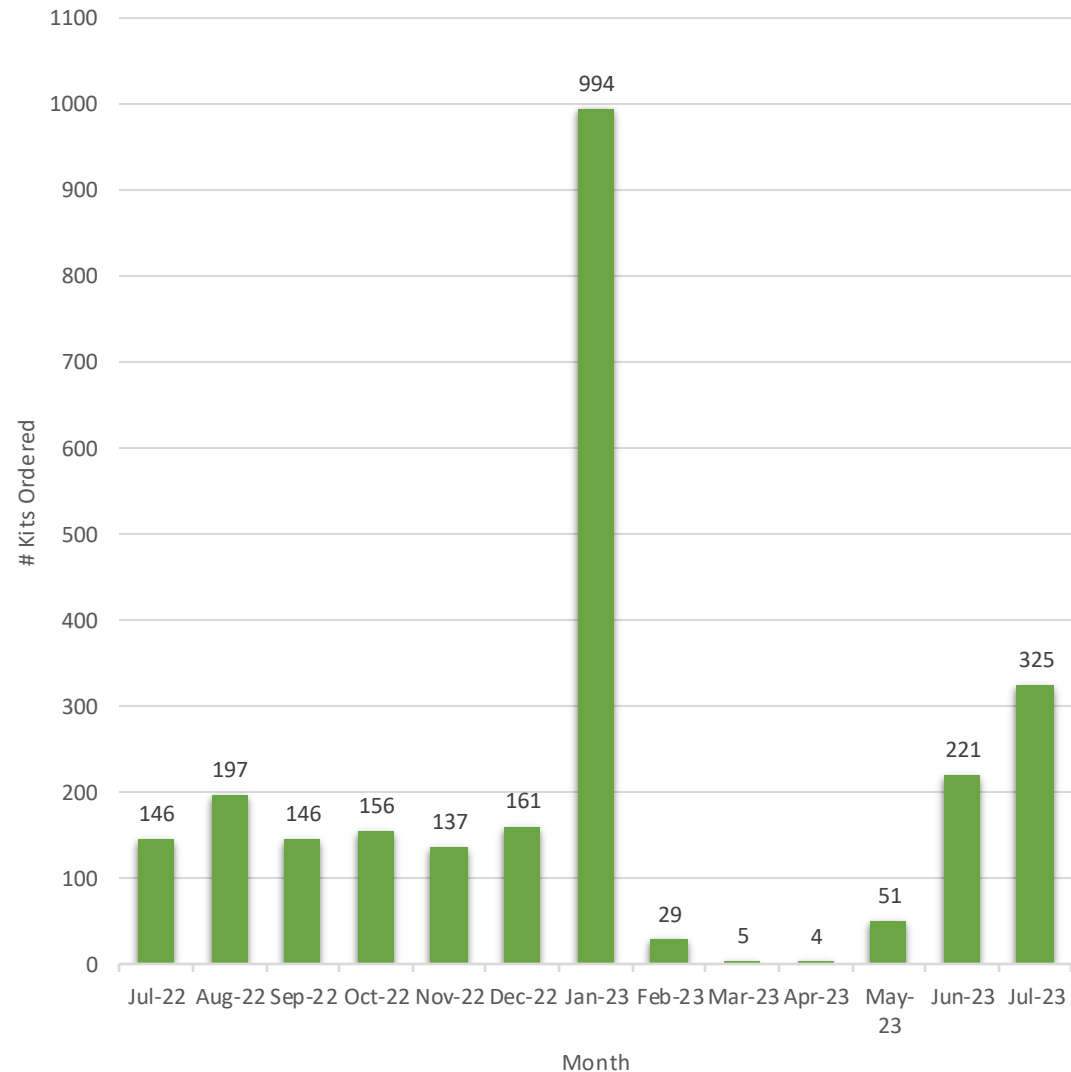
- ~110 radon professionals certified by NRSB and/or NRPP in MD as of now
 - Updated list of certified mitigators in MD – **currently 29 active**
 - Build relationship for collaborative improvement – recently contacted for statistics, observations and suggestions, opportunities and events (like this meeting!), etc.



Kits Ordered by Month

- Significant spike in orders during January 2023 from National Radon Awareness Month activities
- Increase in orders during July 2023 likely result of more MDE outreach involvement and Montgomery County's law requiring radon testing for multifamily and single-family rental housing (enacted 07/01/23)

Number of Radon Test Kits Ordered per Month in Maryland (07/2022-07/2023)

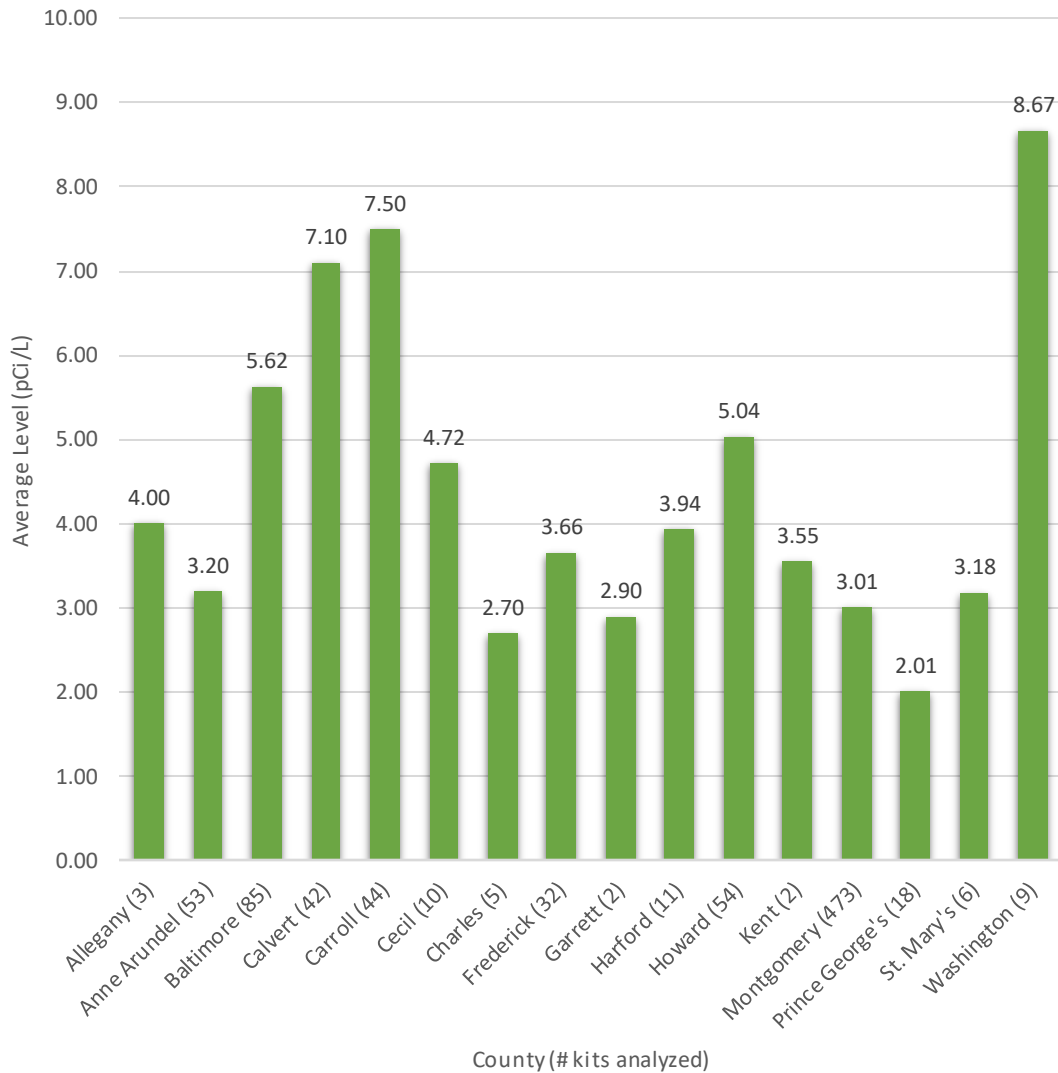




Average Radon Activity Level per Maryland County (01/2023-07/2023)

Results by County

| County (# kits analyzed) | Average Level (pCi/L) |
|--------------------------|-----------------------|
| Allegany (3) | 4.00 |
| Anne Arundel (53) | 3.20 |
| Baltimore (85) | 5.62 |
| Calvert (42) | 7.10 |
| Carroll (44) | 7.50 |
| Cecil (10) | 4.72 |
| Charles (5) | 2.70 |
| Frederick (32) | 3.66 |
| Garrett (2) | 2.90 |
| Harford (11) | 3.94 |
| Howard (54) | 5.04 |
| Kent (2) | 3.55 |
| Montgomery (473) | 3.01 |
| Prince George's (18) | 2.01 |
| St. Mary's (6) | 3.18 |
| Washington (9) | 8.67 |

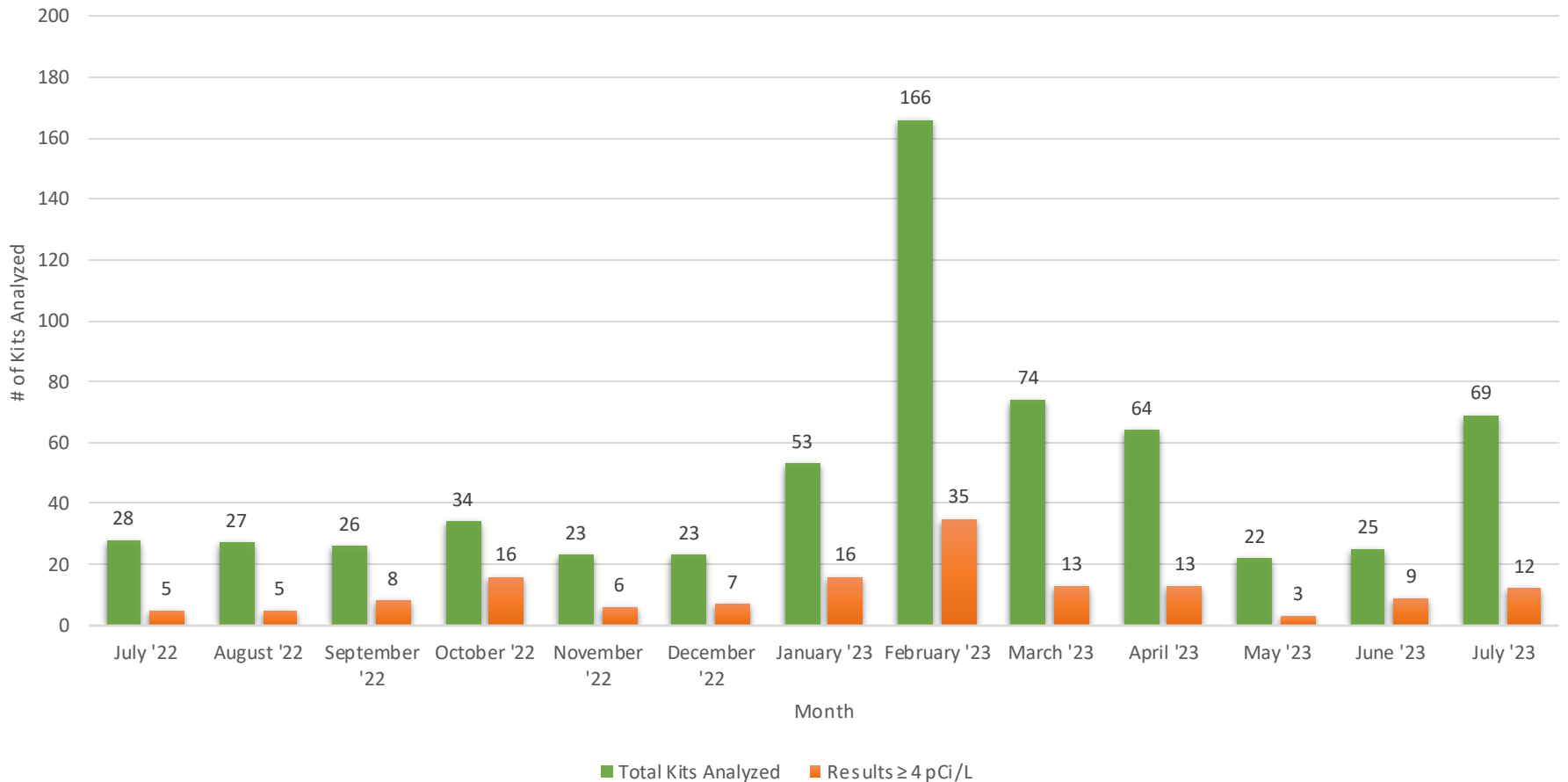


***None analyzed from Caroline, Dorchester, Queen Anne's, Somerset, Talbot, Wicomico, Worcester**



~23% of results ≥ 4 pCi/L for Montgomery County

Number of Results with Radon Activity Levels ≥ 4 pCi/L for Montgomery County (07/2022-07/2023)





What We're Working On

- Streamline radon data and analysis
 - Improving data quality – increase testing in counties lacking data
 - Updating MD radon map (currently 2005-2016 data) – determine trends and identify areas for outreach focus
- Expand our areas of outreach and increase in-person activities
 - Coordinating with libraries to hold presentations and set up displays throughout National Radon Awareness month
- Collaborate with The American Association of Radon Scientists and Technologists (AARST) MD Chapter
 - Integrating radon education in newborn programs at hospitals
- Continue developing connections with our community and contacting stakeholders to gain support/interest



Thank you!

Maryland Department of the Environment

Our goal is to protect public health through promoting radon risk reduction and raising awareness

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