



**Department of Facilities Management
Division of Sustainability and Compliance**

Radon Briefing

Montgomery County Public Schools



RADON - OVERVIEW

- Radon is an invisible, odorless, and radioactive gas created during the natural breakdown of uranium in rocks and soils
- Radon occurs naturally in outdoor air and is found in buildings and homes
- Radon becomes a potential health issue when it seeps into buildings through openings in the foundation.



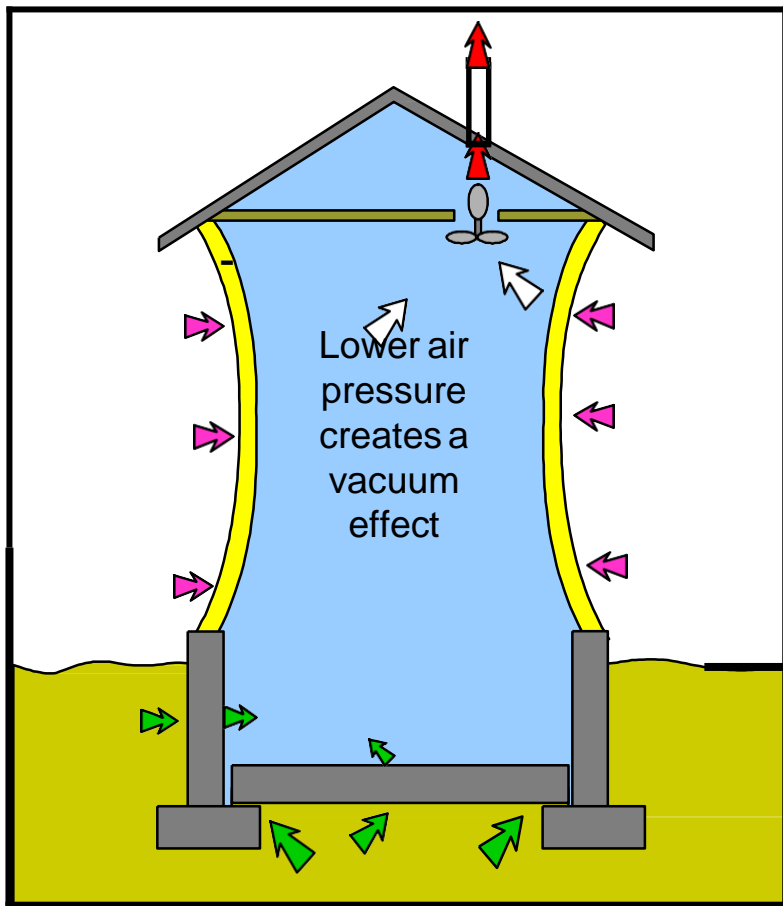
How radon gets into buildings:

1. Cracks in solid floors
2. Construction joints
3. Cracks in walls
4. Gaps in suspended floors
5. Gaps around service pipes
6. Cavities inside walls
7. Well water supply





HOW AIR PRESSURE AFFECTS RADON ENTRY

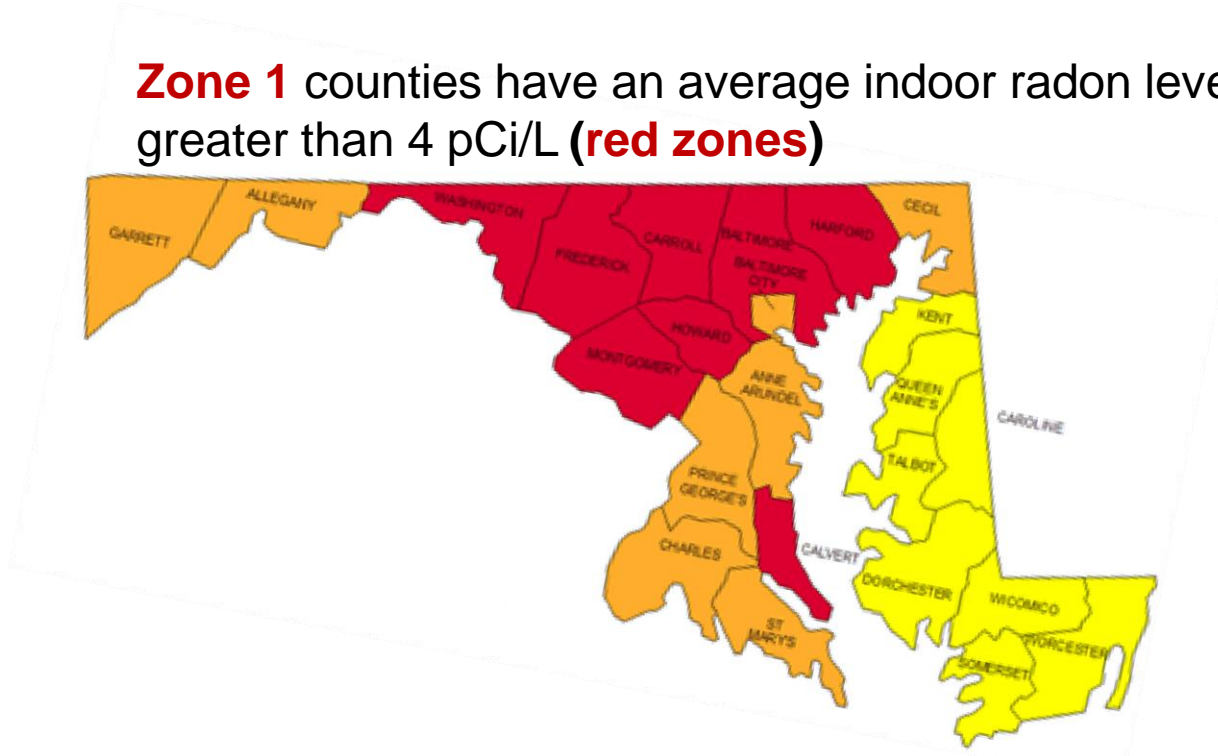


- The air pressure inside a building is generally lower than in the surrounding air and soil.
- The difference in pressure causes the building to act like a vacuum.
- Lower building air pressures and vacuums are created when exhaust fans remove air from the building, and when warm air rises and escapes through the roof.



EPA MAP of MARYLAND RADON ZONES

Zone 1 counties have an average indoor radon level greater than 4 pCi/L (**red zones**)



Location	Average Radon Levels (pCi/L)
Outdoor air – U.S.	0.4
Indoor air - Montgomery County	4.7



EPA GUIDELINES

- If a room is found to have a level of 4 pCi/L or greater, this measurement result should be confirmed with another test.
- If the second test is also at or above 4 pCi/L, EPA recommends that corrective action be taken to reduce the radon level to below 4 pCi/L.
- MCPS uses EPA Guidelines and Protocols.



EPA GUIDANCE ON MITIGATION TIMELINE

- Very elevated radon levels (e.g., greater than 10 pCi/L) demand a quicker response.
- In considering what radon exposure level presents a short-term safety hazard, EPA states that if radon levels approach 100 pCi/L or greater, school officials should consider relocating students until the levels can be reduced.



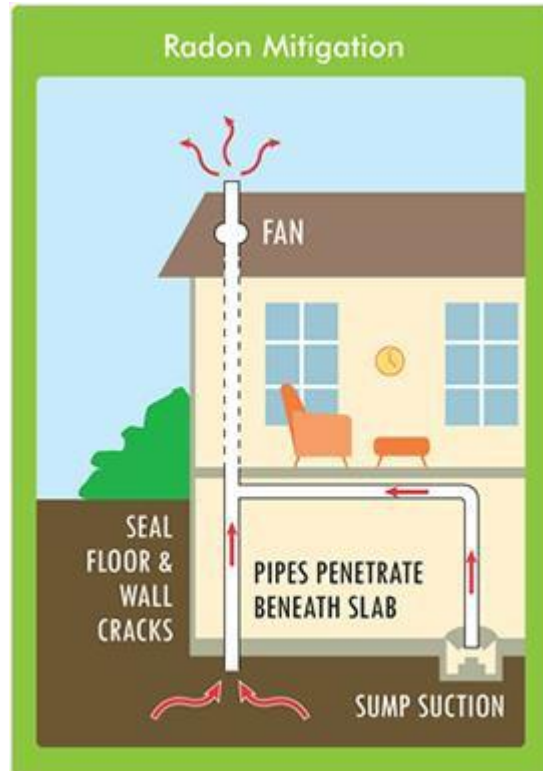
RADON TESTING - HISTORY

- Since the late 1980s, Montgomery County Public Schools (MCPS) has tested for radon in our schools.
- An intensive period of systemwide testing and remediation was accomplished in the late 1980s through the mid 1990s to ensure that all schools complied with US Environmental Protection Agency (EPA) guidance for radon.
- Since that era, radon prevention measures such as sub-slab vapor barriers, proper sealing, and sub-slab vents have been incorporated into all new construction.



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TYPICAL RADON MITIGATION SYSTEM





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CONTACT INFORMATION

- If you have questions about MCPS radon testing, please contact the MCPS Division of **Sustainability and Compliance** at 240-740- 3210.