

Vermont Department of Health Radon Testimony

Background on Radon

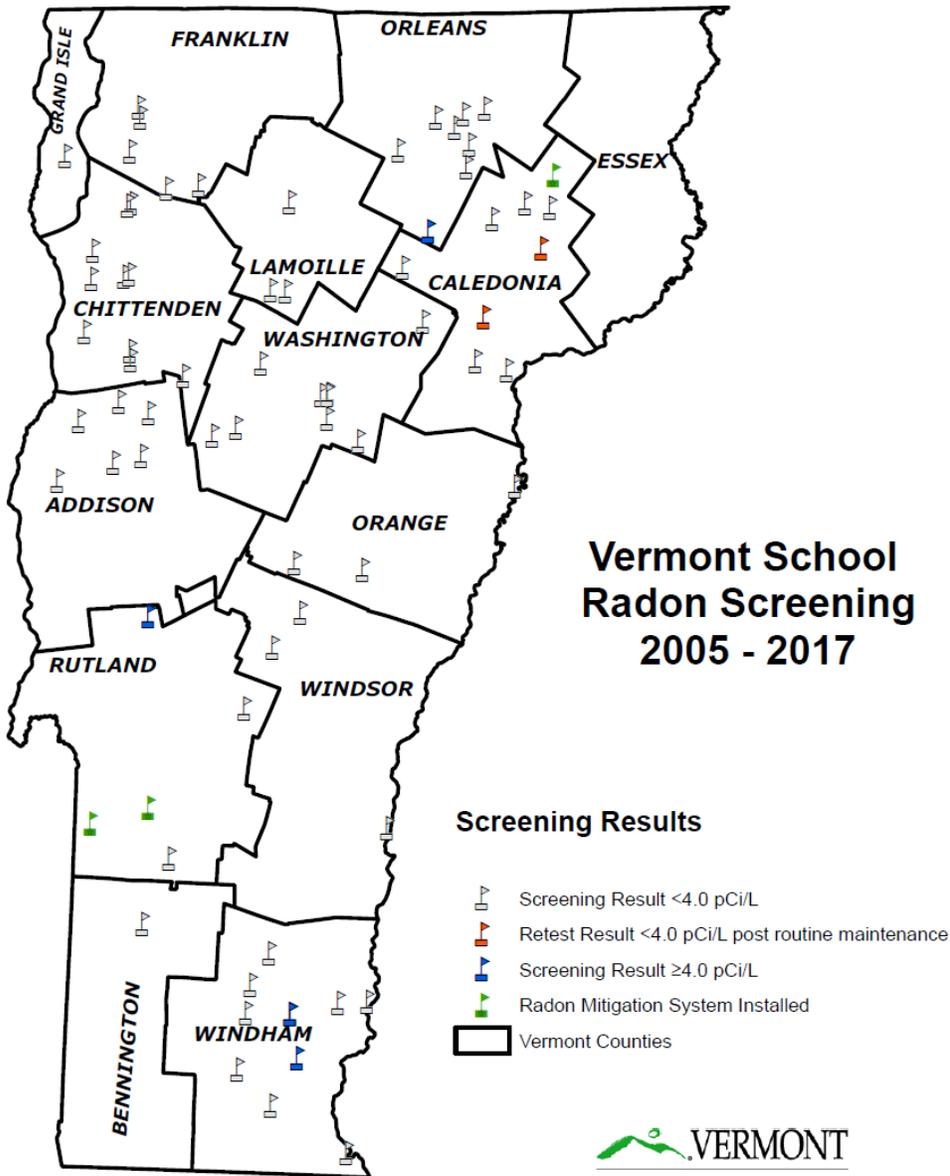
- Radon is a naturally occurring radioactive gas resulting from the decay of uranium, a natural component of the earth's crust.
- Radon comes through foundations in buildings.
- Radon is invisible, odorless and tasteless;
 - The only way to know if a house has elevated levels of radon is to test for it.
- The US EPA recommends remediating radon in buildings that test above 4.0 pCi/L (picocuries per liter)

Radon and Health

- Radon exposure increases risk of lung cancer.
- Radon is the second leading cause of lung cancer in the US after smoking.
 - Among non-smokers, radon is the leading cause of lung cancer.
- The EPA estimates that radon causes approximately 20,000 lung cancer deaths each year in the United States.
- The risk of dying of radon related lung cancer at 4.0 pCi/L (the EPA action level) is 7 deaths per 1000 "never smokers" exposed at this concentration over their lifetime.
 - That rate increases to 62 deaths per 1,000 current or former smokers.
- There is no safe amount of radon, and there is no way to "undo" the risk of exposure after it has occurred.
- Lung cancer deaths due to radon are preventable.

School Testing

- The Health Department's Radon Program provides free radon testing to approximately 8 to 12 public schools every winter. The schools currently volunteer for this testing.
- As of February 2019, a total of 91 Vermont schools have tested.
 - 11 of these schools (12%) had screening results above the EPA action level (4.0 pCi/L).
 - Eight of these schools have worked with the Department of Health to install radon mitigation systems to address the problem.
 - Three of these schools have fixed a radon problem by completing maintenance on their existing ventilation systems.



- EPA recommends that all schools nationwide be tested for radon.
- To date, approximately 20% of the schools nationwide have done some testing. Some states have tested all their public schools.
- The Health Department plans to continue to provide free radon testing services as long as the EPA continues to fund the State Indoor Radon Grant.
- Based on the existing test results, there are likely around 20 public schools in Vermont that have radon concentrations above the EPA's action level and don't know it.
- If 40 schools per year are tested each year four to five schools would be identified with elevated radon levels each year.

H.138 Comments

Funding

- Current federal funding supports testing 8 to 12 schools per year.
- These funds have limitations both on the amount granted and the activities authorized, and it is unclear how much longer EPA will fund the grant.
- Funding for additional school testing kits, as well as additional personnel time (estimate health can test about 15 schools with existing staff a year) would be needed for additional schools.

Scheduling and Efficiency

- If the bill requires the Health Department to test schools, the Department must have the authority to set a schedule for what schools tested are to be test and when.
- The bill could also simply require schools to test by a certain date, and allow them to hire their own certified contractor.

Enforcement

- It is not clear how or who would enforce the requirement of testing once every 15 years.

Notification

- The bill requires principals to share results with the community, but no timeline is provided, nor is there a clear means by which new parents and administrators to a schools would receive notice of testing results.

Technical Corrections

- Page 2, lines 3-4 should read: with the **most recent** ANSI/AARST protocol for conducting Radon and Radon Decay Products in Schools and Large Buildings (~~MALB-2014~~).
- Page 3, lines 2-3 should read: All new school construction, including the expansion of existing schools, shall ~~endeavor to~~ employ radon-resistant new construction.
- Study Committee makeup – consider mitigation AND testing expertise.

Follow-Up Questions

- What is the range that a school would pay a contractor for radon testing?
 - Based on this estimate from one contractor and the range of test kits that we have placed in schools previously, the range is \$245 to \$5,350 **plus** travel time and mileage for two trips to the schools. The one contractor quoted \$45 per hour for travel and 61 cents per mile for mileage.
- What would it take to test 40 schools a year (how much money for kits, how much money to contract or otherwise get the person you would need for the winter?)
 - The cost to test a school would average about \$3,000 per school or \$120,000 for 40 schools. There is no cost difference between hiring a full-time position at the Health Department or contracting the work out.

- How often should schools retest?
 - The Health Department recommends retesting every 5 years or after a major renovation (HVAC upgrade or addition that would disturb the dirt). Retesting every 15 years is a reasonable timeframe.