Welcome and Opening Remarks

MARCH 17TH, 2026

EPA Regions and National Radon Services Present

Radon Outreach, Testing, and Mitigation in Schools and Large Buildings Webinar

MARCH 17TH, 2026

Agenda

- **Schools and Large Buildings protocol overview (Brian Hanson – KSU)**
- **School and Large Building Communication and Awareness Success Stories**
  - Amanda Vajda-Kusner – Wisconsin Department of Health Services – Daycare and Outreach
  - Jara Popinga – Oregon Health Authority
- **School and Large Building Testing Strategies and Lessons Learned**
  - Jim Parsons – Choctaw Nation of Oklahoma, Tribal Air Forum and Tribal Testing
  - Cody Barta – Ponca Tribe of Nebraska
- **School and Large Buildings Mitigation Strategies and Lessons Learned**
  - Michelle Thompson, Public Health Industrial Hygienist – Vermont Department of Health
- **Panel Discussion (Brian Hanson – KSU, facilitator)**
- **Resources**
  - Mitigation Training Videos (Justin Otto – North Dakota Department of Environmental Quality)
  - U.S. EPA Tools for Schools Overview (Brian Hanson on behalf of George Brozowski – EPA Region 6)
  - Summary of Resources (Brian Hanson – KSU)
- **Closing (Brian Hanson – KSU)**
- **Funding Opportunities (Brian Hanson – KSU)**

EPA

Meeting Notes

General Protocols for Today

- This meeting is being recorded
  - The recording will be hosted at https://sosradon.org/radon-in-schools
- Questions may be posted at any time in the Q&A box and will be addressed during the panel discussion

Schools and Large Buildings Protocols Overview

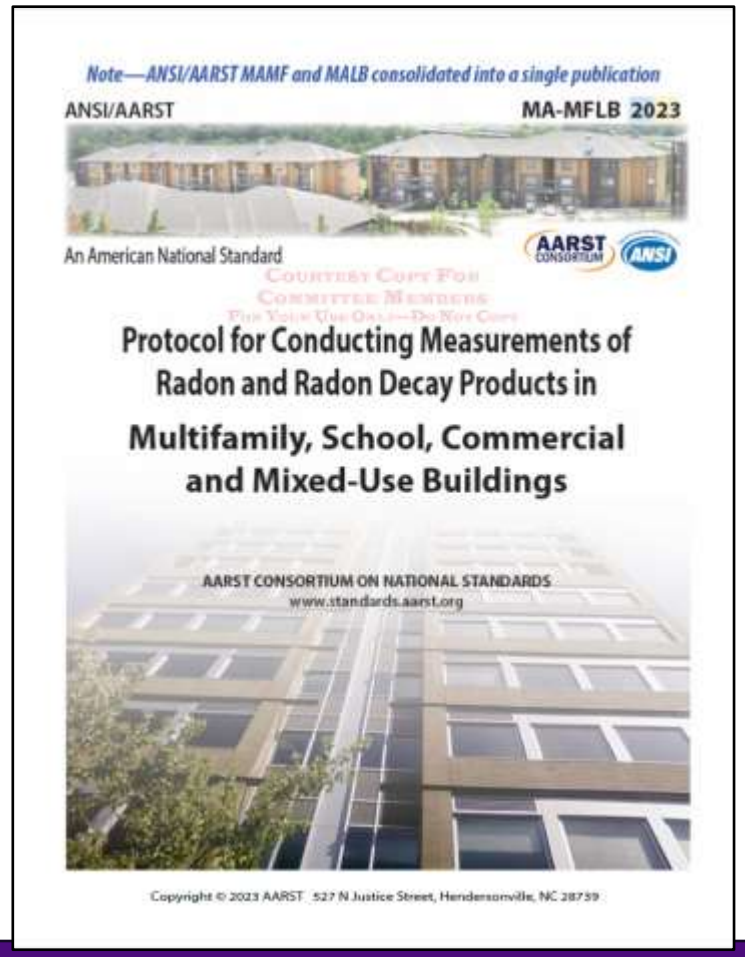
MARCH 17TH, 2026

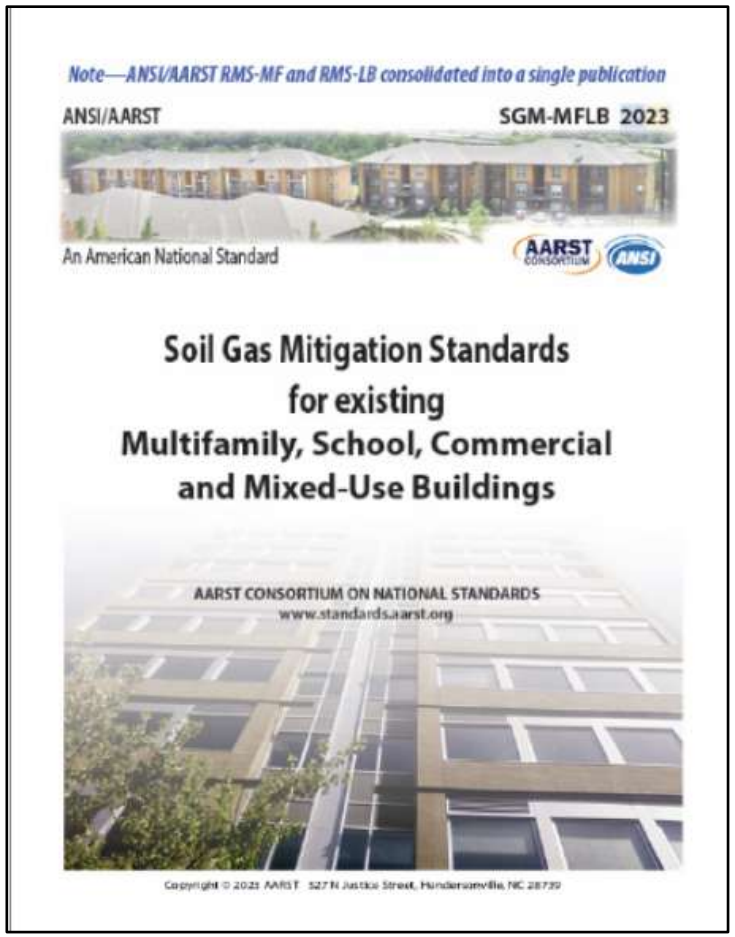
A BRIEF Overview of Large Building Protocols for Radon Measurement and Mitigation

Brian Hanson

Director, K-State Radon Programs

Two National Standards





Large Building Measurement

- Large Building Radon Assessments
  - Protocols address the **WHOLE** building
    - Test 100% of commonly-occupied ground-contact units or spaces
    - Test 10% of commonly-occupied units or spaces on **EACH** additional floor of the building
    - All identified test locations within the building are tested during the **SAME DEPLOYMENT**
    - Include standards-compliant quality control (QC) check measurements
      - Duplicates, blanks and spikes

Building Test Locations

Figure 3 D
Upper floors

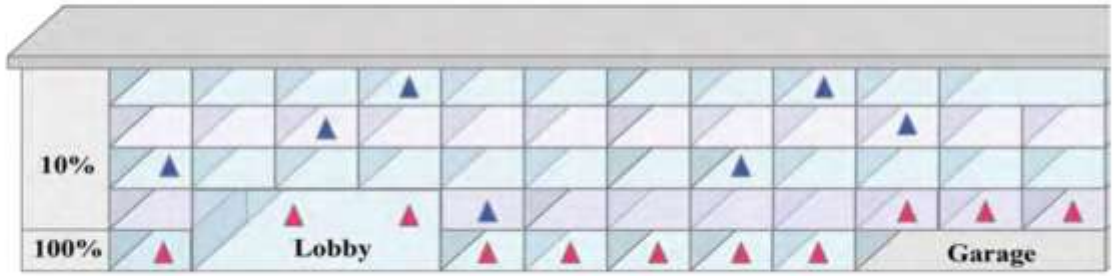


Figure 3 H
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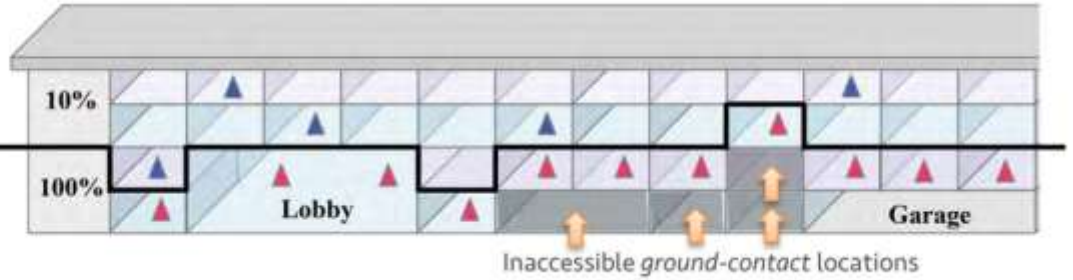
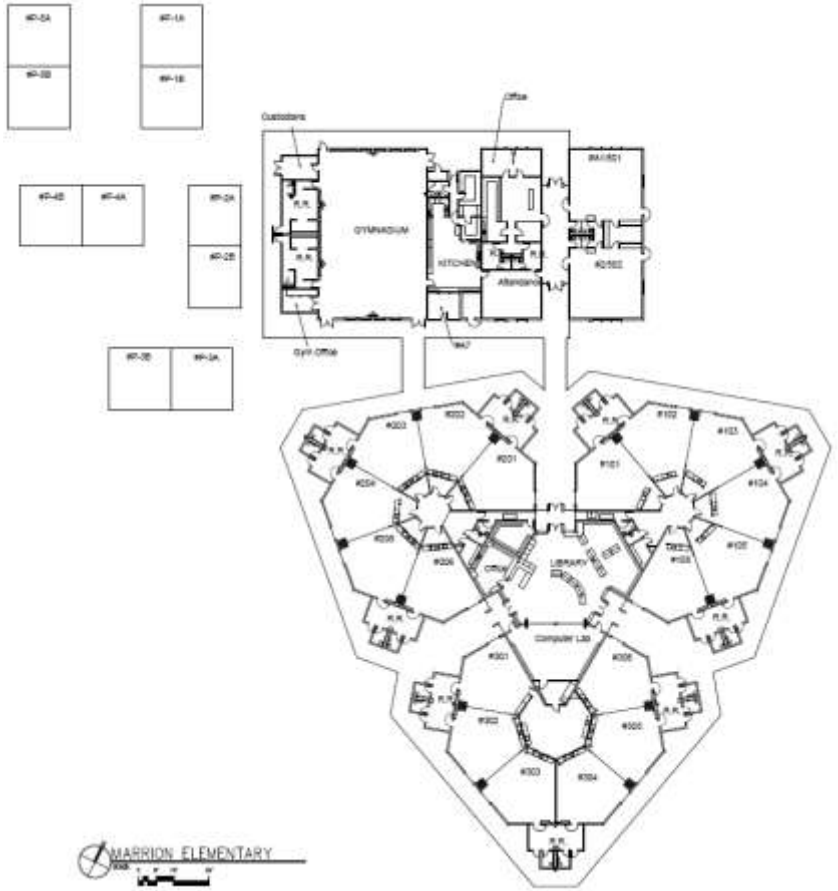


Building Test Locations



Large Building Measurement

- Large Building Radon Assessments
  - Assessments can be performed by
    - Contracted radon measurement professionals with appropriate state or national measurement credentials
    - Conducted internally to the organization with specifically trained personnel

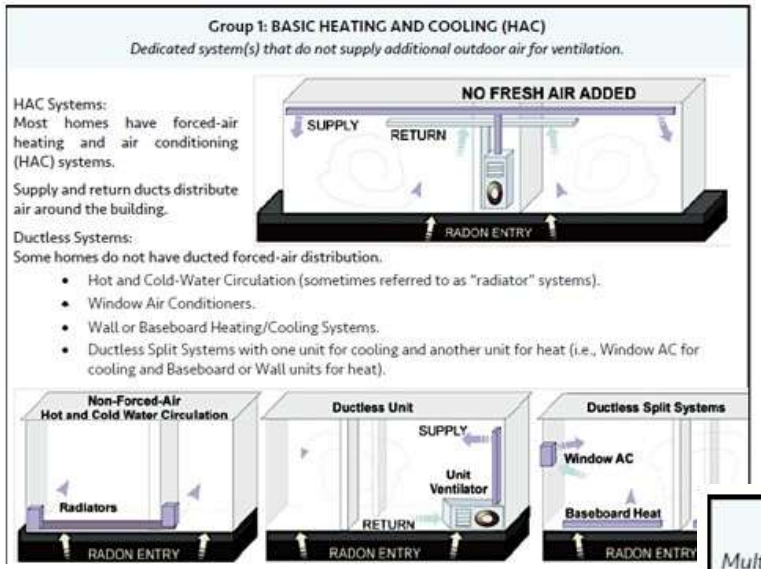
Large Building Mitigation

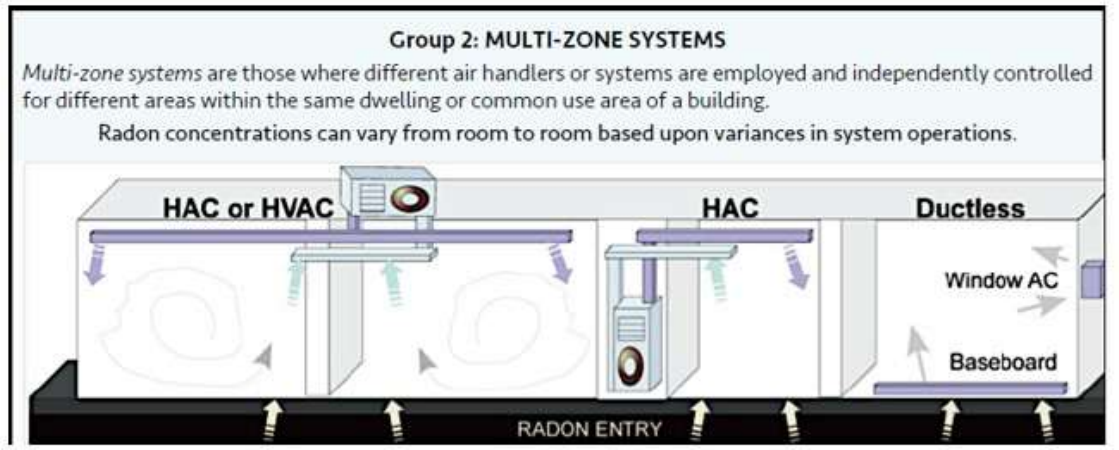
- Large Building Radon Mitigation
  - Protocols address the **WHOLE** building, but
    - The footprint assessment allows mitigation efforts to focus on areas of the structure with identified elevated radon issues
  - Mitigation efforts utilize
    - Active Soil Depressurization (ASD)
    - Non-ASD activities such as ventilation or pressurization approaches
    - A combination of both

Large Building Mitigation

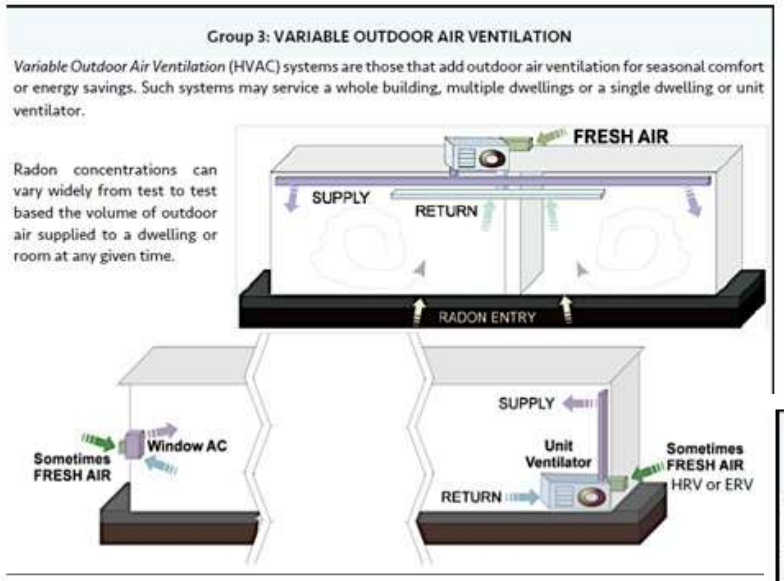
- Large Building Radon Mitigation
  - Strongly encouraged to be contracted to
    - Use of professional mitigation specialists with both appropriate state or national credentials **AND**
    - Large building radon mitigation experience

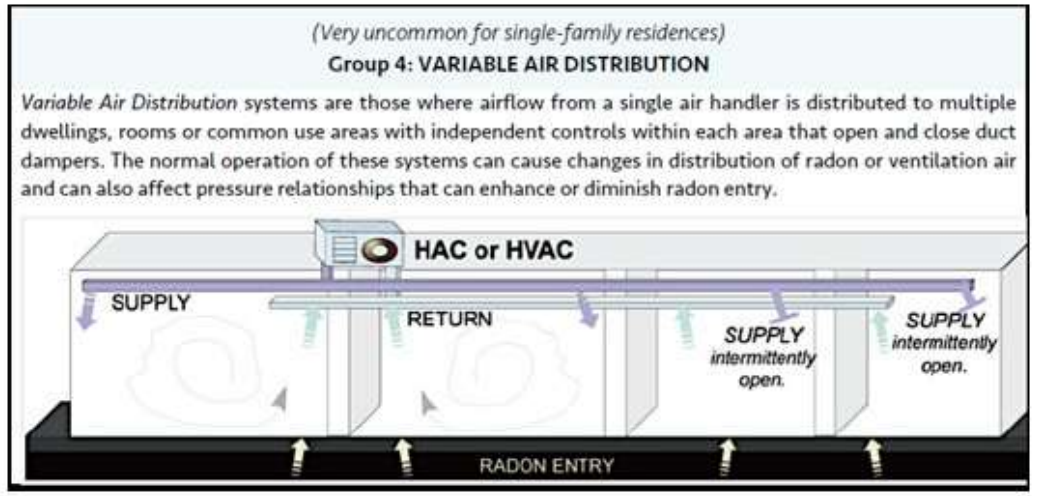
HVAC Considerations for BOTH Assessments and Mitigation





HVAC Considerations for BOTH Assessments and Mitigation





Schools and Large Buildings Communication and Awareness Success Stories

MARCH 17TH, 2026

Communication and Awareness Success Story: Wisconsin

Presented by Amanda Vajda-Kusner, MPH
Wisconsin Indoor Radon Program

WISCONSIN DEPARTMENT of HEALTH SERVICES

Radon Regulations in Wisconsin

Wisconsin has few radon regulations.

Not required:

Credentialing of professional radon service providers.
Radon-specific disclosure/warning at real estate point of sale.
Renter protections specific to radon.
Radon-resistant new construction.

Radon Regulations in Wisconsin

Schools

No testing or mitigation requirements.
Recommendation: Test every 5 years or after any major renovations.

Child care centers

Testing and mitigation **required** for licensed centers (Wis. Stat. § 48.67; Wis. Admin. Code Ch. DCF 250.06(2)(n) & 251.06(2)(p))

DCF Administrative Code (3/1/2023)

Under Wisconsin Department of Children and Families (DCF) administrative code, child care providers are required to:

- Test for radon within 6 months prior to providing care for children.
- Test in the lowest level used by children at least 7 hours per week.
- Notify parents/guardians and mitigate within 12 months if radon test results meet or exceed 4 pCi/L.
- Test again every two years for Family centers or every 5 years for Group centers.

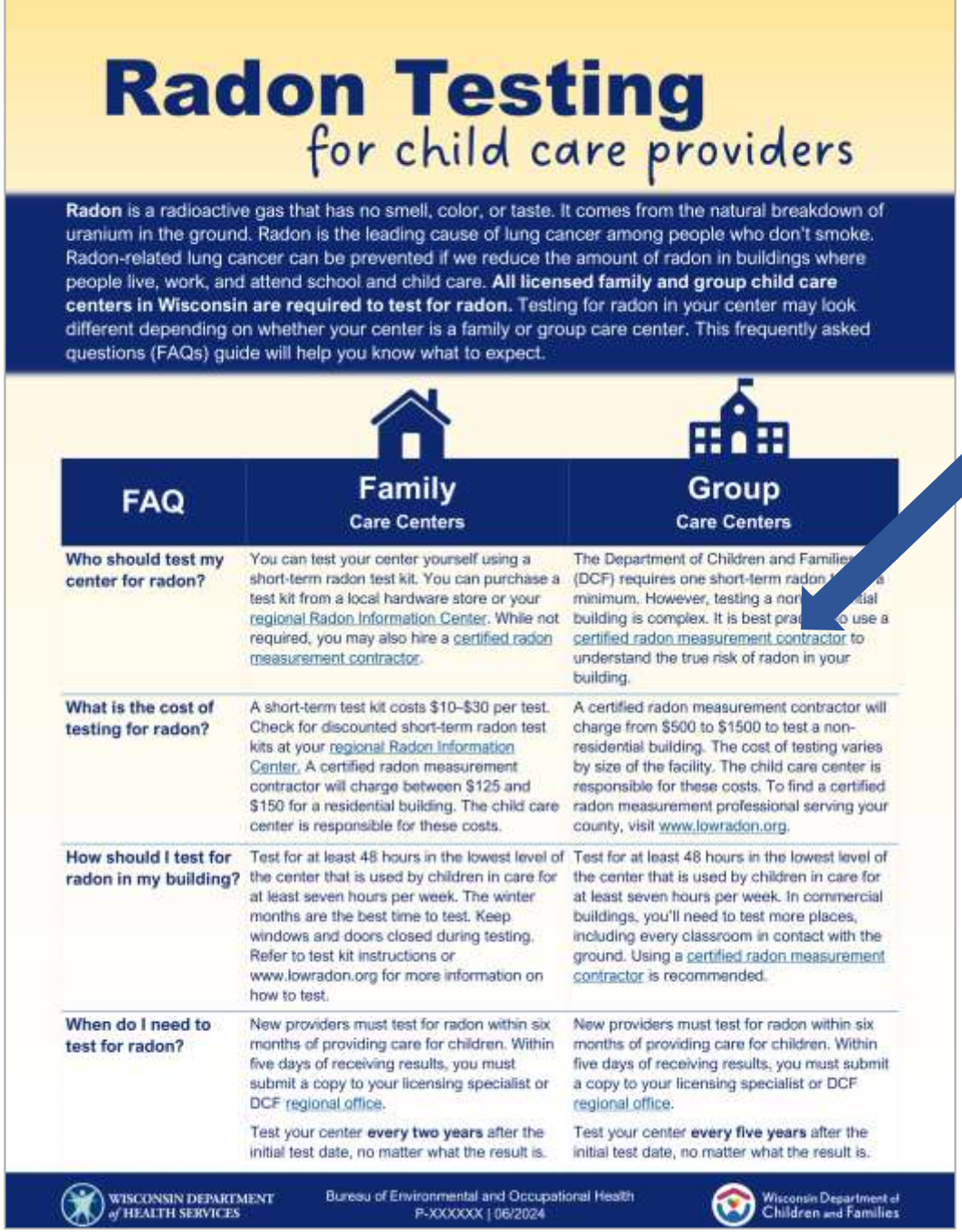
DCF 250
("Family" child care)

DCF 251
("Group" child care)

Where the Rule Falls Short

Using a certified contractor for testing and/or mitigation is **not** required.

Only **one** radon test is required to be deployed, regardless of building size and number of ground contact rooms.



Radon Testing
for child care providers

Radon is a radioactive gas that has no smell, color, or taste. It comes from the natural breakdown of uranium in the ground. Radon is the leading cause of lung cancer among people who don't smoke. Radon-related lung cancer can be prevented if we reduce the amount of radon in buildings where people live, work, and attend school and child care. **All licensed family and group child care centers in Wisconsin are required to test for radon.** Testing for radon in your center may look different depending on whether your center is a family or group care center. This frequently asked questions (FAQs) guide will help you know what to expect.

FAQ	Family Care Centers	Group Care Centers
Who should test my center for radon?	You can test your center yourself using a short-term radon test kit. You can purchase a test kit from a local hardware store or your regional Radon Information Center. While not required, you may also hire a certified radon measurement contractor.	The Department of Children and Families (DCF) requires one short-term radon [illegible] minimum. However, testing a non[illegible]tial building is complex. It is best prac[illegible]o use a certified radon measurement contractor to understand the true risk of radon in your building.
What is the cost of testing for radon?	A short-term test kit costs $10–$30 per test. Check for discounted short-term radon test kits at your regional Radon Information Center. A certified radon measurement contractor will charge between $125 and $150 for a residential building. The child care center is responsible for these costs.	A certified radon measurement contractor will charge from $500 to $1500 to test a non-residential building. The cost of testing varies by size of the facility. The child care center is responsible for these costs. To find a certified radon measurement professional serving your county, visit www.lowradon.org.
How should I test for radon in my building?	Test for at least 48 hours in the lowest level of the center that is used by children in care for at least seven hours per week. The winter months are the best time to test. Keep windows and doors closed during testing. Refer to test kit instructions or www.lowradon.org for more information on how to test.	Test for at least 48 hours in the lowest level of the center that is used by children in care for at least seven hours per week. In commercial buildings, you'll need to test more places, including every classroom in contact with the ground. Using a certified radon measurement contractor is recommended.
When do I need to test for radon?	New providers must test for radon within six months of providing care for children. Within five days of receiving results, you must submit a copy to your licensing specialist or DCF regional office. Test your center **every two years** after the initial test date, no matter what the result is.	New providers must test for radon within six months of providing care for children. Within five days of receiving results, you must submit a copy to your licensing specialist or DCF regional office. Test your center **every five years** after the initial test date, no matter what the result is.

Encourage hiring a certified measurement contractor for non-residential buildings.

Radon Mitigation
for child care providers

Radon is a radioactive gas that has no smell, color, or taste. It comes from the natural breakdown of uranium in the ground. Radon is the leading cause of lung cancer among people who don't smoke. All licensed family and group child care centers in Wisconsin are required to test for radon and **mitigate (reduce) it** if levels are found above 4 picocuries per liter (pCi/L).

Why is radon mitigation important?

When radon enters a building, it can contaminate the indoor air. If radon is breathed in over long periods of time, it can cause lung cancer. Radon-related lung cancer can be prevented if we reduce the amount of radon in buildings where people live, work, and attend school and child care. A **radon mitigation system** prevents radon from entering a building by moving it from the soil under the building to the outside air. The radon then mixes with air and is no longer harmful.

What should I do if the radon levels in my cent are too high (above 4 pCi/L)?

1. Within 12 months of testing, hire a certified radon mitigation contractor to install a radon mitigation system. A list of nationally certified radon mitigation professionals can be found at www.lowradon.org.
2. Notify the parents and guardians of children in care. You can use the included **notification letter template**.
3. After the mitigation system is installed, **test the building again**. Submit updated test results to your child care licensing specialist or Department of Children and Families (DCF) regional office within 12 months of your initial test.
4. Test and submit results **every two years** for family centers or **every five years** for group centers no matter what the result is.

Is funding available to help centers pay for radon testing and mitigation?

Child care centers can use the DCF Child Care Counts Payment Program to help pay for radon testing and mitigation. [illegible]ECECOVID19CCPayments@wisconsin.gov for questions [illegible]

WISCONSIN DEPARTMENT of HEALTH SERVICES

Bureau of Environmental and Occupational Health
P-XXXXXX | 06/2024

Wisconsin Department of Children and Families

Encourage hiring a certified professional for mitigation.

Refer to available funding source.

WI DHS & DCF co-publication demonstrates partnership and mutual agreement.

Encourage parents to test their own homes.

Radon Notification

letter for parents and guardians

Dear Parents and Guardians:

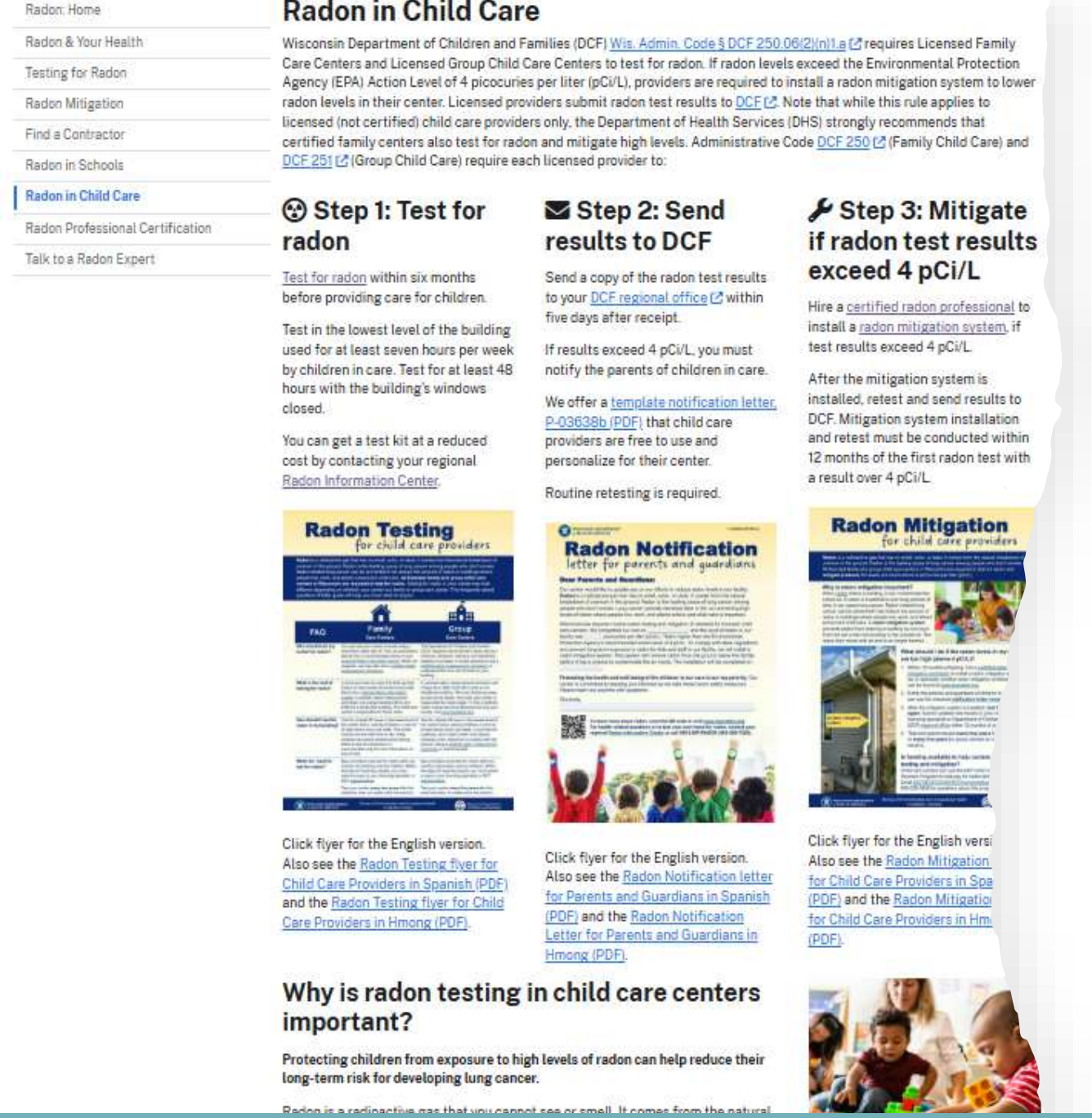
Our center would like to update you on our efforts to reduce radon levels in our facility. **Radon** is a radioactive gas that has no smell, color, or taste. It comes from the natural breakdown of uranium in the ground. Radon is the leading cause of lung cancer among people who don't smoke. Lung cancer typically develops later in life, so preventing high levels of radon where people live, work, and attend school and child care is important.

Wisconsin law requires routine radon testing and mitigation (if needed) for licensed child care centers. We completed our test on _____ and the level of radon in our facility was _____ picocuries per liter (pCi/L). That's higher than the Environmental Protection Agency's recommended action level of 4 pCi/L. To comply with state regulations and prevent long-term exposure to radon for kids and staff in our facility, we will install a radon mitigation system. This system will remove radon from the ground below the facility before it has a chance to contaminate the air inside. The installation will be completed on _____.

Protecting the health and well-being of the children in our care is our top priority. Our center is committed to keeping you informed as we take these radon safety measures. Please reach out anytime with questions.

Sincerely,

To learn more about radon, scan the QR code or visit www.lowradon.org. For health-related questions or to test your own home for radon, contact your regional Radon Information Center or call 888-LOW-RADON (888-569-7236).



These resources and more are available on our Radon in Child Care webpage at www.lowradon.org.

National Radon Action Month (1/2025)

FOR IMMEDIATE RELEASE
January 6, 2025

Contact
DHS Media, 608-266-1683

DHS Encourages Homeowners, Property Owners, and Schools to Test for Radon

Radon exposure is the second leading cause of lung cancer after cigarette smoking

Radon, a colorless, odorless gas, can seep into homes through their foundation and be deadly at high levels. In Wisconsin, 1 in 10 homes has elevated levels. Radon is the second leading cause of lung cancer, and approximately 962 Wisconsinites have radon-induced lung cancer. Fortunately, radon is easy to test for and leaks can be fixed. This National Radon Action Month, the Wisconsin Department of Health Services (DHS) is encouraging home and building owners, and schools, to understand their risk and test their buildings for radon.

"Knowing about radon and testing radon levels in your home can save lives," said DHS State Health Officer Paula Tran. "In Wisconsin, we have 17 Radon Information Centers around the state where experts are available to answer your questions and offer low-cost test kits. Indoor radon levels tend to increase during the colder months, so now is the perfect time to test your home or building for radon if you haven't before."

While radon can affect anyone, children are generally considered to be more sensitive compared to adults due to their smaller lung sizes and faster breathing rates. Along with encouraging testing at home, Wisconsin continues to take steps to improve testing in spaces where children spend significant amounts of time. In March 2023, the Wisconsin Department of Children and Families (DCF) enacted rule changes which require licensed child care providers to test for radon and install a mitigation system if radon levels exceed the EPA action level. In addition, DHS recommends that all schools test for radon at least once every five years or upon completion of any major renovations.

"Since the DCF rule went into effect, 41 child care centers across Wisconsin have mitigated high radon, protecting over 820

WI DHS press release (1/6/25)

"Since the DCF rule went into effect, 41 child care centers across Wisconsin have mitigated high radon, protecting over 820 children enrolled in care from exposure to high radon levels. Preventing exposure to high radon in places where kids spend a lot of time is a significant way to reduce their overall exposure to radon."

- Paula Tran, Wisconsin State Health Officer
January 6, 2025

Updated numbers (through 3/6/26)

Since the DCF rule went into effect, **102 child care centers** across Wisconsin have mitigated high radon, protecting approximately **3,000 children** enrolled in care from exposure to high radon levels.

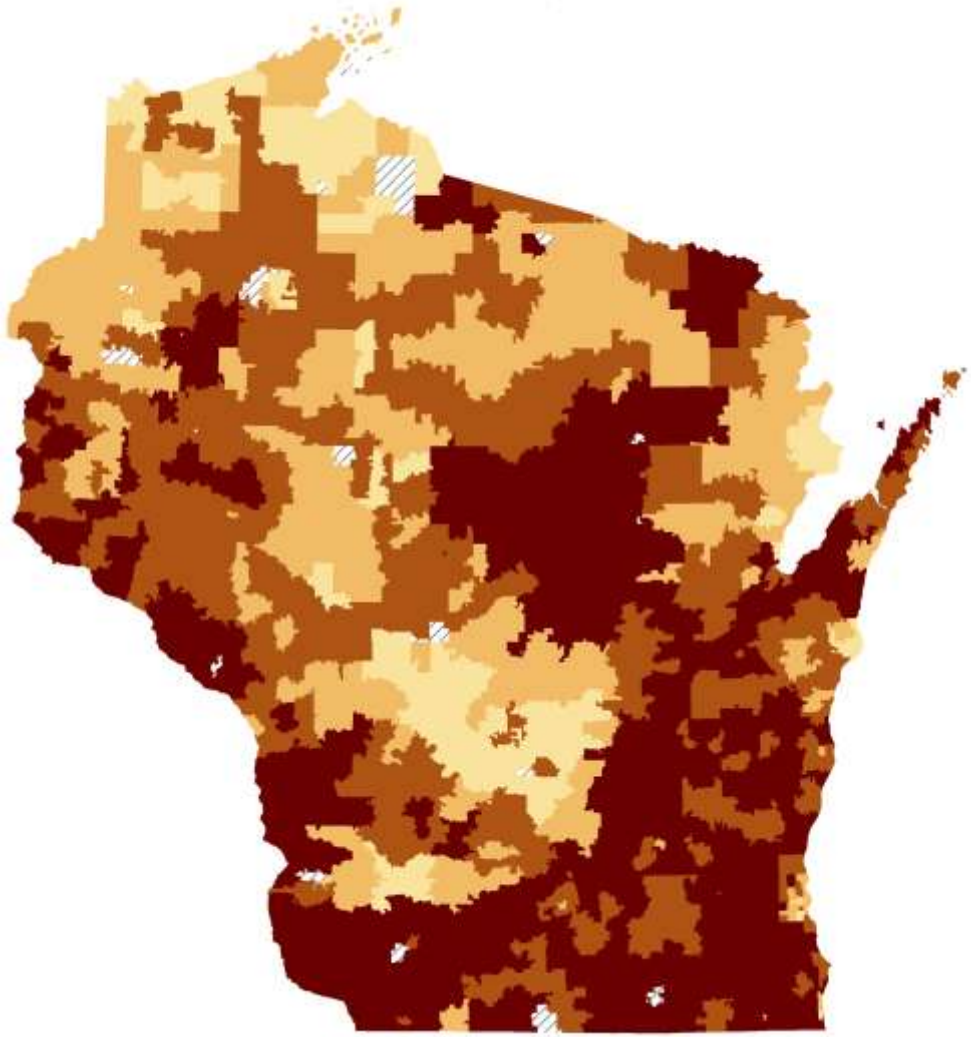
Success!

There are few state laws protecting Wisconsinites from radon.

The DCF rule was a step forward.

We hope this opens the door for more radon protections.

DHSradon@dhs.wisconsin.gov



Testing Radon in Schools
Outreach Materials

Oregon Radon Awareness Program

Jara Popinga, Program Coordinator

Public Health Division
Environmental Public Health Section

Government Agency Roles

OREGON HEALTH AUTHORITY

- Radon content experts. (Oregon Radon Awareness Program)
- Can produce radon education materials for schools.
- Provide support for school districts when it came to testing.

OREGON DEPARTMENT OF EDUCATION

- Oversee all School Districts in Oregon.
- Provided grant funding to help cover testing/mitigation costs.

Oregon Health Authority Requirements

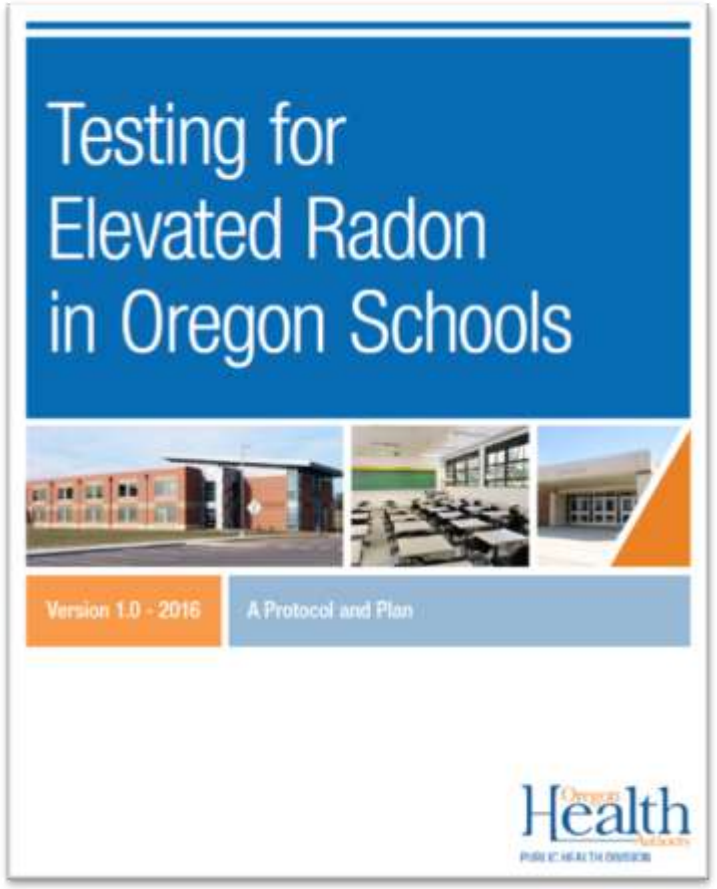
ORS 332.341 & 332.345: Testing for Elevated Radon In Schools (2015)

- OHA to create and disseminate radon risk communication to each school district.
- OHA to create and provide school districts with instructions to conduct radon testing.
- Create a database or filing system to organize and house all the testing plans and radon test results.

School District Requirements
Reoccurs every 10 years

- Submit a Radon Test Plan by to Oregon Health Authority September 2016,
- Conduct radon testing and submit radon test results to Oregon Health Authority by January 2021,
- Post radon test results to school district website.
- Required to mitigate high radon test results. Oregon Department of Education (ODE) provided grant money for testing and mitigation cost.

Developed Educational Materials

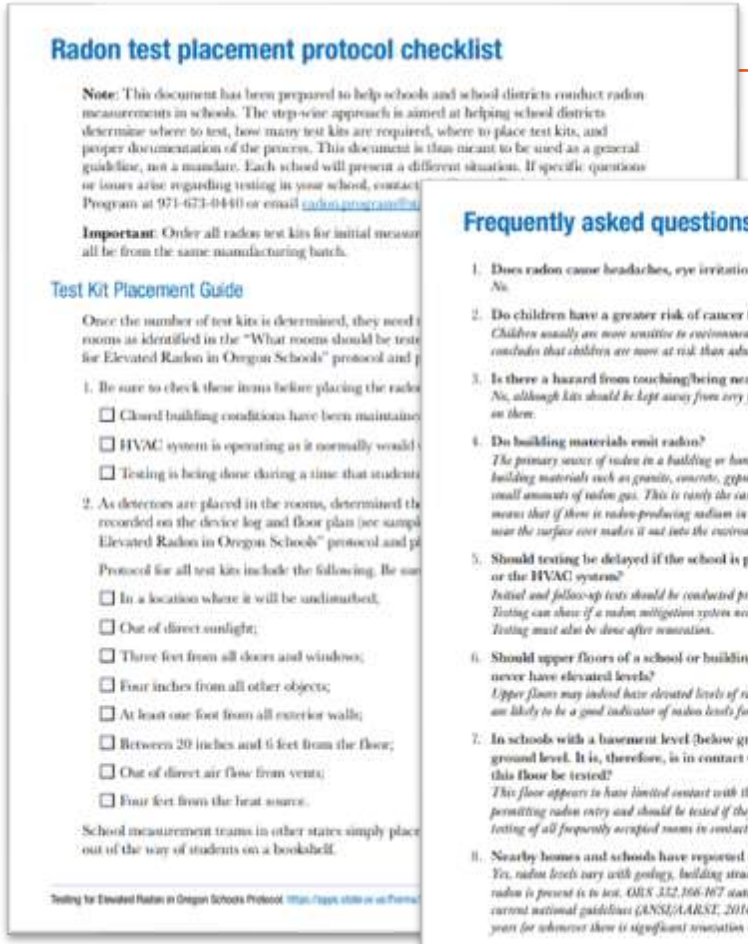


Oregon Health Authority provided ***Testing for Elevated Radon in Oregon Schools – A Protocol and Plan & Risk Communication Tool Kit*** to help schools accurately test for elevated radon levels in school buildings.

Risk Communication Tool Kit Included:

- **Sample Press Release**
- **Memo Template (pre & post test)**
- **PowerPoints for parents and employees**

Document examples



Radon test placement protocol checklist

Note: This document has been prepared to help schools and school districts conduct radon measurements in schools. The step-wise approach is aimed at helping school districts determine where to test, how many test kits are required, where to place test kits, and proper documentation of the process. This document is thus meant to be used as a general guideline, not a mandate. Each school will present a different situation. If specific questions or issues arise regarding testing in your school, contact
Program at 971-673-0440 or email

Important: Order all radon test kits for initial measur
all be from the same manufacturing batch.

Test Kit Placement Guide

Once the number of test kits is determined, they need
rooms as identified in the "What rooms should be test
for Elevated Radon in Oregon Schools" protocol and

1. Be sure to check these items before placing the radon
   - ☐ Closed building conditions have been maintained
   - ☐ HVAC system is operating as it normally would
   - ☐ Testing is being done during a time that students
2. As detectors are placed in the rooms, determined th
   recorded on the device log and floor plan (see sampl
   Elevated Radon in Oregon Schools" protocol and pl

   Protocol for all test kits include the following. Be sur
   - ☐ In a location where it will be undisturbed;
   - ☐ Out of direct sunlight;
   - ☐ Three feet from all doors and windows;
   - ☐ Four inches from all other objects;
   - ☐ At least one foot from all exterior walls;
   - ☐ Between 20 inches and 6 feet from the floor;
   - ☐ Out of direct air flow from vents;
   - ☐ Four feet from the heat source.

School measurement teams in other states simply place
out of the way of students on a bookshelf.

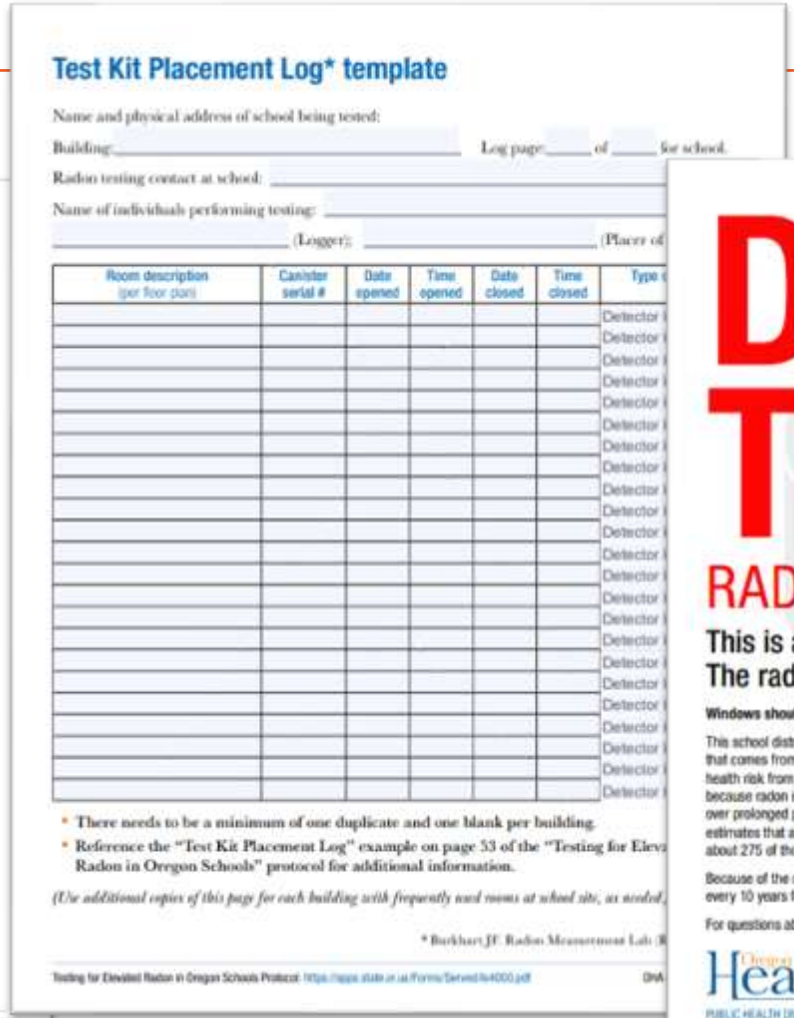
Testing for Elevated Radon in Oregon Schools Protocol

Frequently asked questions about radon and schools

1. **Does radon cause headaches, eye irritation or sick-building syndrome?**
   No.
2. **Do children have a greater risk of cancer from radon exposure?**
   Children usually are more sensitive to environmental pollutants. However, no current data concludes that children are more at risk than adults from radon exposure.
3. **Is there a hazard from touching/being near the radon test kit?**
   No, although kits should be kept away from very young children (toddlers) so they don't eat or chew on them.
4. **Do building materials emit radon?**
   The primary source of radon in a building or home is from the soil underneath it. However, a few building materials such as granite, concrete, gypsum board (sheet rock), bricks and field stone may emit small amounts of radon gas. This is rarely the case because most of these materials are very dense. This means that if there is radon-producing radium in these materials, only a small amount of the radon gas near the surface ever makes it out into the environment.
5. **Should testing be delayed if the school is planning major renovations to the building or the HVAC system?**
   Initial and follow-up tests should be conducted prior to major HVAC or building renovations. Testing can show if a radon mitigation system needs to be installed as a part of renovation. Testing must also be done after renovation.
6. **Should upper floors of a school or building be tested? Does this mean that upper floors never have elevated levels?**
   Upper floors may indeed have elevated levels of radon. However, measurements in ground floor rooms are likely to be a good indicator of radon levels for all floors.
7. **In schools with a basement level (below ground level), the first floor is often built at ground level. It is, therefore, in contact with the soil along its outside edge. Should this floor be tested?**
   This floor appears to have limited contact with the soil. However, the outside rooms may have openings permitting radon entry and should be tested if they are frequently occupied. ORS 332.166-167 requires testing of all frequently occupied rooms in contact with the soil or above a basement or crawlspace.
8. **Nearby homes and schools have reported no elevated levels of radon. Should we still test?**
   Yes, radon levels vary with geology, building structure, HVAC systems, etc. The only way to know if radon is present is to test. ORS 332.166-167 states school buildings should be tested every 10 years; current national guidelines (ANSI/AARST, 2014) recommend that school buildings be re-tested every five years (or whenever there is significant renovation or change to a building's HVAC system).

Testing for Elevated Radon in Oregon Schools Protocol

DHA 4000T (07/16)



Test Kit Placement Log* template

Name and physical address of school being tested:

Building: _____ Log page: ____ of ____ for school.

Radon testing contact at school: _____

Name of individuals performing testing: _____

_____ (Logger); _____ (Placer of

Room description (per floor plan)	Canister serial #	Date opened	Time opened	Date closed	Time closed	Type
						Detector
						Detector
						Detector
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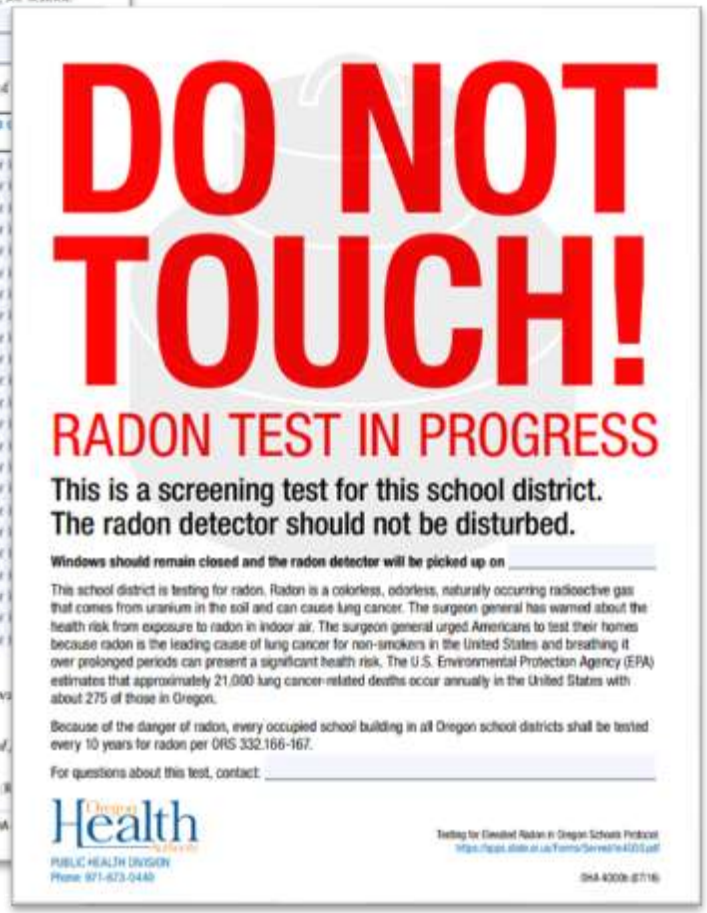
- There needs to be a minimum of one duplicate and one blank per building.
- Reference the "Test Kit Placement Log" example on page 53 of the "Testing for Elev
  Radon in Oregon Schools" protocol for additional information.

(Use additional copies of this page for each building with frequently used rooms at school site, as needed.

* Burkhart JF. Radon Measurement Lab

Testing for Elevated Radon in Oregon Schools Protocol

DHA



DO NOT TOUCH!

RADON TEST IN PROGRESS

This is a screening test for this school district.
The radon detector should not be disturbed.

Windows should remain closed and the radon detector will be picked up on _____

This school district is testing for radon. Radon is a colorless, odorless, naturally occurring radioactive gas that comes from uranium in the soil and can cause lung cancer. The surgeon general has warned about the health risk from exposure to radon in indoor air. The surgeon general urged Americans to test their homes because radon is the leading cause of lung cancer for non-smokers in the United States and breathing it over prolonged periods can present a significant health risk. The U.S. Environmental Protection Agency (EPA) estimates that approximately 21,000 lung cancer-related deaths occur annually in the United States with about 275 of those in Oregon.

Because of the danger of radon, every occupied school building in all Oregon school districts shall be tested every 10 years for radon per ORS 332.166-167.

For questions about this test, contact: _____

Oregon Health Authority
PUBLIC HEALTH DIVISION
Phone: 971-673-0440

Testing for Elevated Radon in Oregon Schools Protocol

DHA 4000b (07/16)

Jara Popinga
jara.popinga@oha.oregon.gov

Schools and Large Buildings
Testing Strategies and Lessons Learned

MARCH 17TH, 2026

James Parsons is an Environmental Specialist with the Choctaw Nation of Oklahoma and is a certified Radon Measurement Professional (RMP).
He holds a Master's degree in Environmental Management and is a certified Project Management Professional (PMP).
Since 2021, he has led the development and expansion of the Tribe's Radon Program, overseeing facility testing, residential outreach, and the creation of a Tribal radon risk map based on actual test data.
His work combines public health protection, regulatory compliance, and structured project management to strengthen environmental initiatives for the Choctaw Nation.

Choctaw Nation

Environmental Protection Service

Air Quality Division

Choctaw Nation of Oklahoma Radon Program Overview

James Parsons, Environmental Officer (RMP)

Environmental Compliance

Program Purpose & Scope

- Protect Tribal members and employees from radon exposure
  - Conduct facility and residential testing
  - Expand community outreach and education
  - Develop data-driven Tribal radon risk mapping

Program Launch – 2022

- Certification completed Fall 2021
  - 31 government facilities tested
  - 2 Tribal homes tested
  - 3 total structures exceeded 4.0 pCi/L action level

Program Expansion – 2023–2025

- Completed testing of Jones Academy facilities
- 700 residential test kits distributed at events
  - 10–15% general return rate
- FY 2025
  - Targeted Radon Action Month distribution
    - Distributed ~60 test kits
    - ~60% return rate when kits are requested
    - No test results above 4

Tribal Radon Risk Mapping Initiative

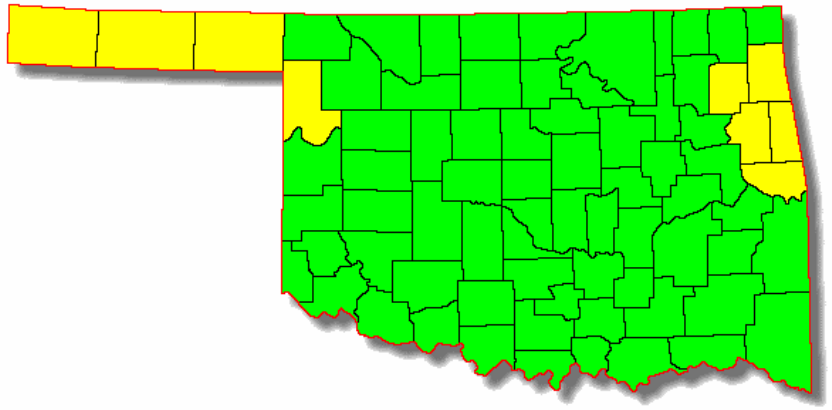
- EPA map based on geological modeling
  - Tribal map based on actual test data
  - 135 total completed tests
  - Most zip codes under-sampled (<10 tests)

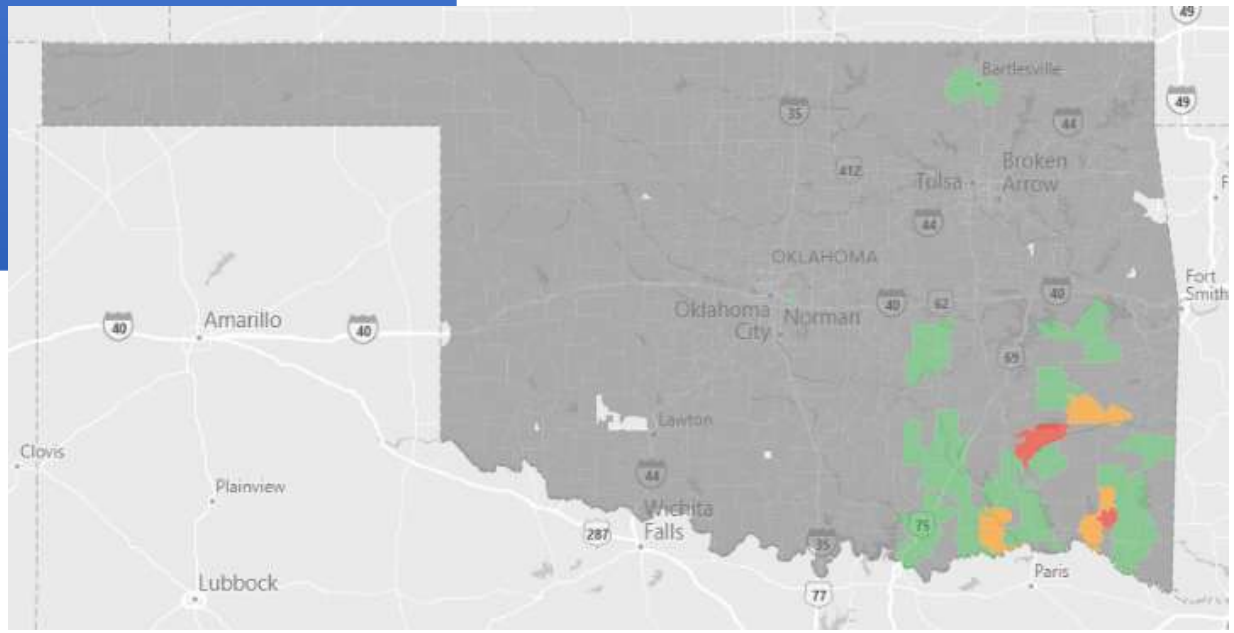
Radon Data Coverage – Current Status

Current Coverage Snapshot

- 135 Total Tests Collected
- Majority of Zip Codes: <10 Tests
- Several Areas: 1–2 Tests Only

Strategic Priority: Increase Geographic Coverage to Strengthen Risk Modeling Accuracy





2025–2026 Strategic Priorities

- SIRG HUD compliance implementation – January 2026
  - Targeted Radon Action Month distribution
    - Distributed 230 test kits with a usage rate of 6.2%
    - 3 test results above 4.
    - 3 testing errors due to timeliness
  - Expand education and awareness campaigns
  - Train and certify two additional staff members

Conclusion

- Testing drives awareness
  - Data drives strategy
  - Prevention protects our communities

Questions?

- Thank you for your time and attention.

PONCA TRIBE OF NEBRASKA'S

RADON RECOGNITION AND REDUCTION PROGRAM

Cody Barta
Environmental Specialist
Ponca Tribe Of Nebraska

PRIMARY FUNDING

OTHER PARTNERS

AMERICAN LUNG ASSOCIATION®

NEBRASKA
Good Life. Great Mission.
DEPARTMENT OF HEALTH AND HUMAN SERVICES

PTN RADON TESTING PROGRAM

- Residences owned by Tribal Members (within service delivery counties)
- Ponca Housing Authority Housing
- PTN Owned Buildings (offices, clinics, etc)

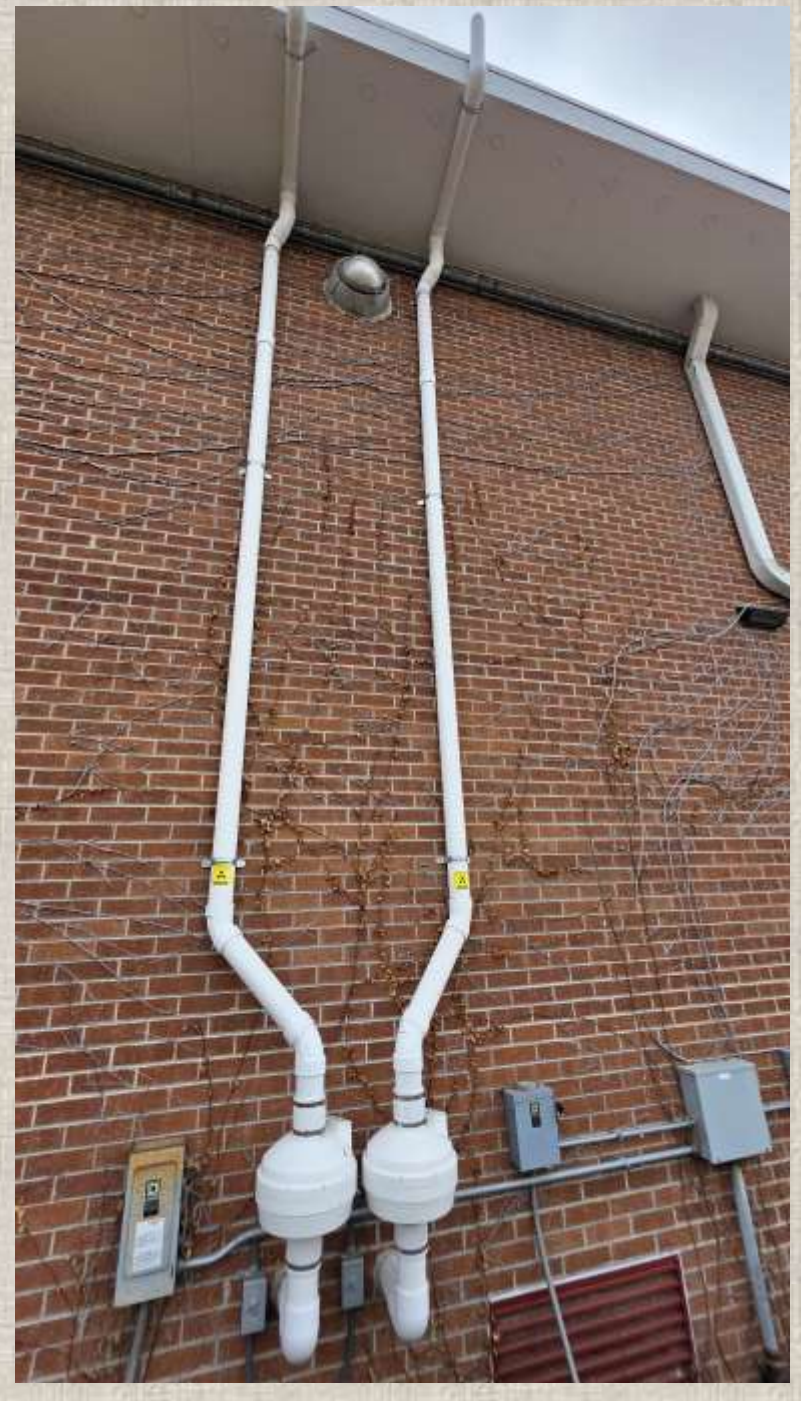
ELECTRET ION CHAMBERS

- Analysis is done in-house
- **Great for large building testing**
- Reusable
- Large upfront cost ⇨ low continued cost for calibrations, etc

A LARGE BUILDING TESTING AND MITIGATION SUCCESS STORY

- Health Clinic and Community Center
- Radon Testing with EICs
  - Ground contact levels elevated above EPA action level of 4.0 picocuries per liter of air
- Secured funding for mitigation through our tribal Health Services department

- Worked with local licensed mitigation company
- 6 suction points total on 2 mitigation systems on two floors
- Lowered radon level to below EPA action level
- Made the building safer for employees and tribal members



THANKS FOR YOUR TIME!

PONCA TRIBE OF NEBRASKA
Environmental Department

Contact:
Cody Barta – Environmental Specialist
Ponca Tribe of Nebraska
cbarta@poncatribe-ne.gov

Schools and Large Buildings Mitigation Strategies and Lessons Learned

MARCH 17TH, 2026

School Radon Testing in Vermont – Lessons Learned

Presenter: Michelle Thompson, Vermont Department of Health

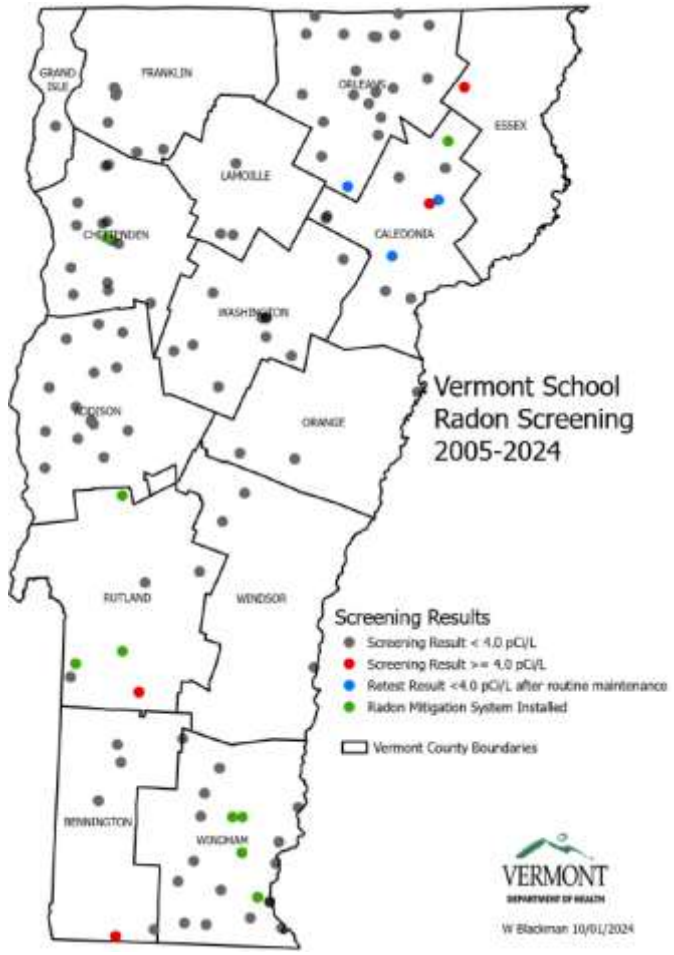
March 17, 2026

VERMONT
DEPARTMENT OF HEALTH

Radon is a problem in Vermont schools.

More than 17% of schools found **at least one room** with elevated radon.

For most school children and staff, the **second largest contributor** to their radon exposure is likely to be their school.



All Vermont schools were required to test for radon by June 30, 2025.

Sec. 12. RADON TESTING; SCHOOL FACILITIES

(a) On or before June 30, 2025, each public school and approved independent school, as defined in 16 V.S.A. § 11, **shall perform a radon measurement** in accordance with the ANSI/AARST protocol for conducting Radon and Radon Decay Products in Schools and Large Buildings (MALB2014) on any facility that has not had a test completed in five or more years;

(b) Each public school and approved independent school **shall make available the results of the radon measurement** described in subsection (a) of this section to each employee and student at the school.

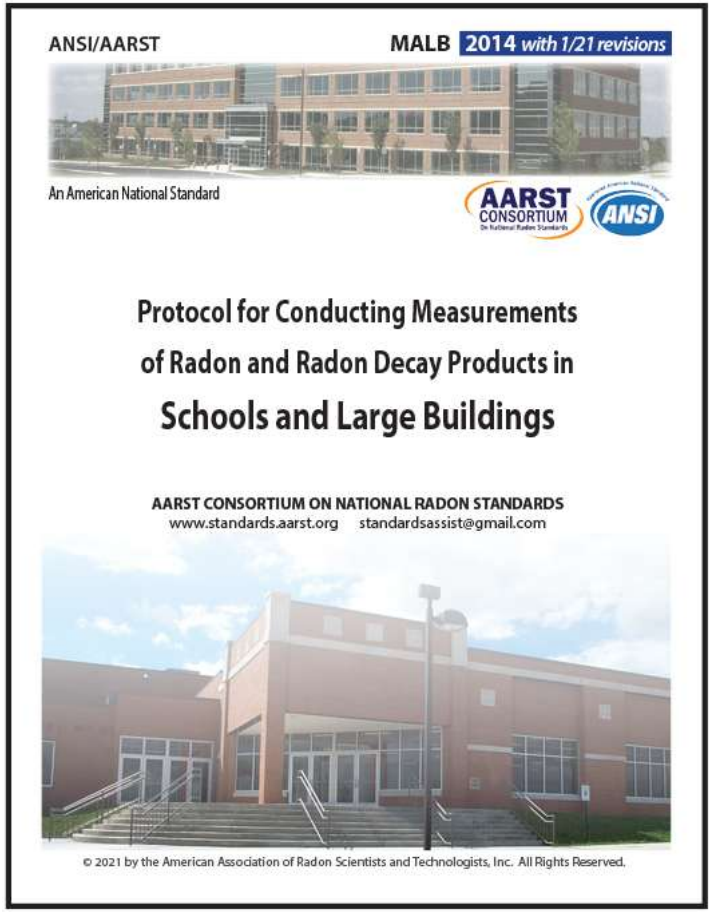
The school radon testing law has some benefits.

Makes radon testing a requirement

Requires some notification of results

Requires testing in accordance with an ANSI/AARST standard (MALB2014) which includes:

- Hiring a qualified measurement professional
- Testing at a time that is representative of normal occupied building operating conditions



However, the law is missing some key requirements.

Results are not required to be reported to the state – we have no idea what compliance looks like.

Results must be made available to staff and students, but **notification of results to parents, caregivers and the broader school community is not required**.

Future testing is not required.

Mitigation is not required when elevated radon levels are found.

Improving the law could lead to more risk reduction.

Require mitigation when elevated radon levels are found in school buildings.

Require broader notification to parents, caregivers and community members.

School testing in VT is happening but could be improved to further protect public health and reduce radon risk.

1 Radon is a problem in Vermont schools.

2 Increased awareness and a school testing law has led to increased radon testing in schools.

3 The current law is missing key best practices, like required mitigation, and could be improved to better facilitate radon risk reduction.

Thank you!

Let’s stay in touch.

Email: radon@vermont.gov

Web: HealthVermont.gov/radon-schools

Social: @HealthVermont

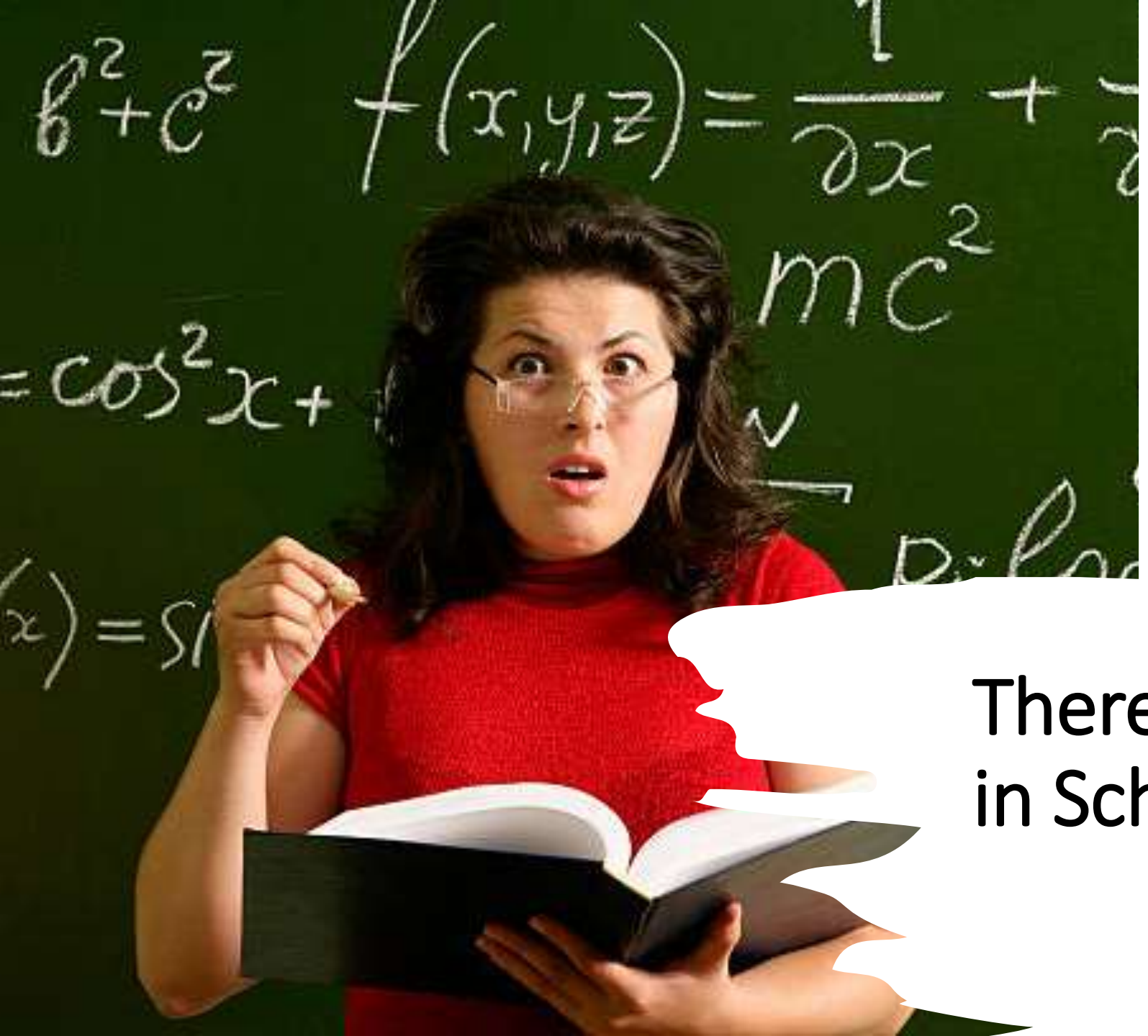
VERMONT
DEPARTMENT OF HEALTH

Panel Discussion Q & A
20 minutes

MARCH 17TH, 2026

Resources for Schools and Large Buildings Radon Work

MARCH 17TH, 2026



There's More to Radon in Schools Than Testing

History of radon testing in North Dakota schools in the 1980's and 1990's

- Started testing radon in schools in 1989 and continued through the 1990's

- Radon testing in schools for the most part stopped in the 1990'S
  - Not sure why?
    - Short staff
    - Short funding
    - All schools were tested, job well done.
- **<u>One of the Big Negatives</u>**
  - Lot of schools with elevated radon were not mitigated
  - Department is only aware of **three** schools that were mitigated from 1989-1990's
    - Most likely reason was lack of funding

Radon testing was very limited until 2018

- Radon Program partnered up with the North Dakota Cancer Coalition (NDCC)
- How did the partnership begin?
  - Simple 1hr presentation on radon
  - Director of the NDCC said they want to team up with the Radon Program
  - Director asked what would be a good radon project in North Dakota
    - **<u>How about radon testing in schools</u>**

Radon testing in schools started December 2018

- Tested 30 the first fiscal year
- 1377 activated charcoal radon tests were analyzed
- Radon Program goal: Testing 25 schools every fiscal year
  - Highest was 45 in a fiscal year

Radon came back elevated

- 7 of 30 schools tested had elevated radon levels
- Schools with elevated radon levels had tons of concerns:
  - Do we have to shut the school down?
  - Do we have to demolish the school?
  - Can the radon levels be fixed?
  - We can’t afford radon mitigation; we have higher priorities that need to be addressed that we can’t afford
  - These were all real concerns that needed to be addressed


LISTEN, GARDEN SNAIL, YOU CLEARLY GOT
THE SKILLS TO PAY THE BILLS.

Dealing with radon in schools

- Needed to educate maintenance staff on the fundamentals
  - What is radon, where does radon come from and what are the health effects
  - Stress the importance of testing schools for radon
  - How is radon drawn into a building
  - Rooms with exhaust only
  - Pressure within a building is important
  - Appreciation for effect of HVAC modifications on radon levels in the future
  - How to address elevated radon

Fundamentals Video Link:
https://deq.nd.gov/WM/radon/mitigation/Dealing-Radon-Schools/Dealing-Radon-Schools.html

All schools have solutions; Not all solutions are the same!

Link: https://deq.nd.gov/wm/radon/schools

- Three videos for school maintenance personnel
- Radon - North Dakota Department of Environmental Quality (nd.gov)
- Fundamentals and 4 case studies

For More Information

- **Justin Otto, North Dakota Radon Program Coordinator**
  - North Dakota Department of Environmental Quality
  - Phone: 701-328-5246
  - Email: jotto@nd.gov
  - Website: https://deq.nd.gov/wm/radon/

EPA's IAQ Tools for Schools

George Brozowski
U.S. Environmental Protection Agency
Region 6
Air & Radiation Division
Indoor Air Quality Training
brozowski.george@epa.gov

EPA'S MISSION

To protect human health and the environment

Why is IAQ important?

- Americans spend about 90% of their day indoors: in classrooms, in offices, at home.

- Indoor pollution is two to five times higher than outdoor levels, and on occasion **100 times higher.**

IAQ Tools for Schools Action Kit

EPA has developed the Indoor Air Quality Tools for Schools (IAQ-TfS) program.

1. It is a practical plan for improving your IAQ knowledge using straightforward solutions and individuals already on staff.
2. It includes checklists, factsheet, and a variety of supporting materials to address the IAQ issues found in many of the nation's schools.
3. The kit serves as the knowledge base for comprehensive IAQ management in schools.

30 years ago, the program was a large binder containing the information listed about. Today, TfS is an app for your smartphone to download free and share with everyone in your school building.

The program takes a common-sense approach to tackling indoor air issues within your school building. The program is also adaptable to your time and resources

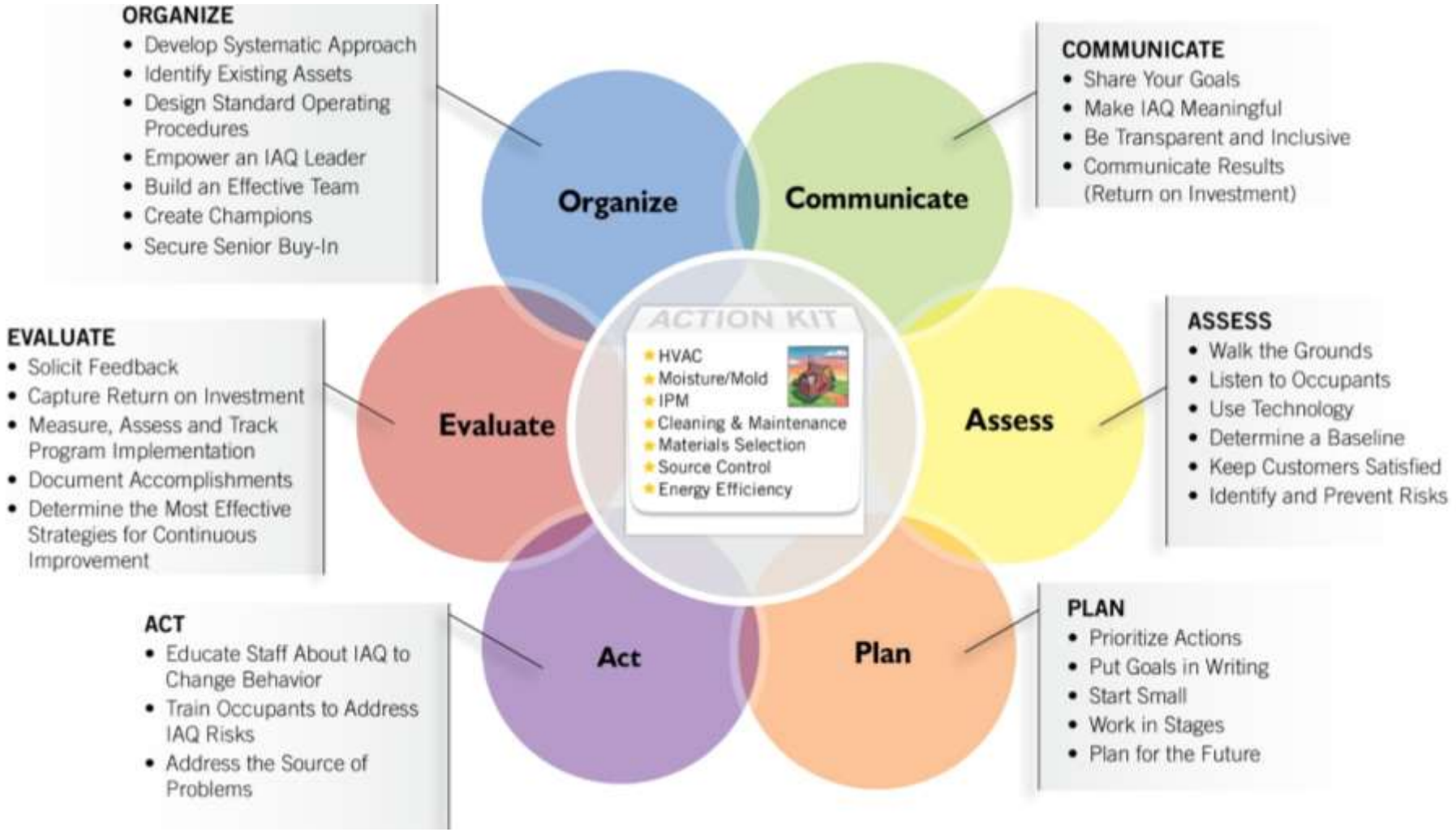
IAQ Tools for Schools Action Kit

What is it? A practical plan for improving your IAQ knowledge using straightforward solutions and individuals already on staff.

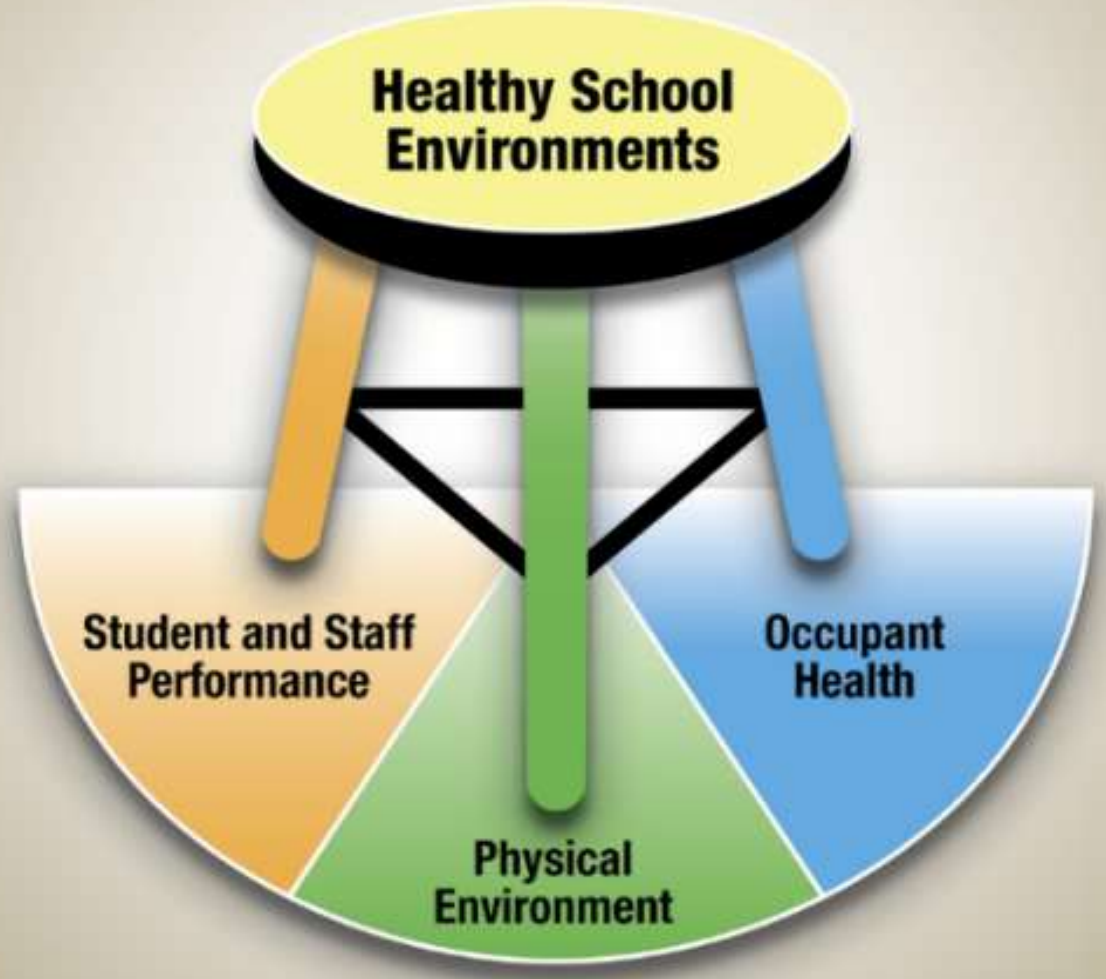
The Action Kit includes:

- Reference guides
- Checklists
- Fact sheets
- Sample policies
- Comprehensive IAQ management plans
- The Framework for Effective School IAQ Management
- The Seven Technical Solutions

The Framework for Effective School IAQ Management: Six Key Drivers



The Three-Legged Stool: Healthy School Environments



Healthy School Environments = ↑ Student and Staff Performance

- Improves student attendance.
- Asthma is the leading cause of school absenteeism.
- Reduces liability and lawsuits
- Improves state test scores.
- Improves teacher and staff performance.
- Improves teacher retention.
- Reduces the need to hire substitute teachers.
- Reduces school closings and relocations.
- Reduces energy costs
- Reduces cost of equipment replacement and repair

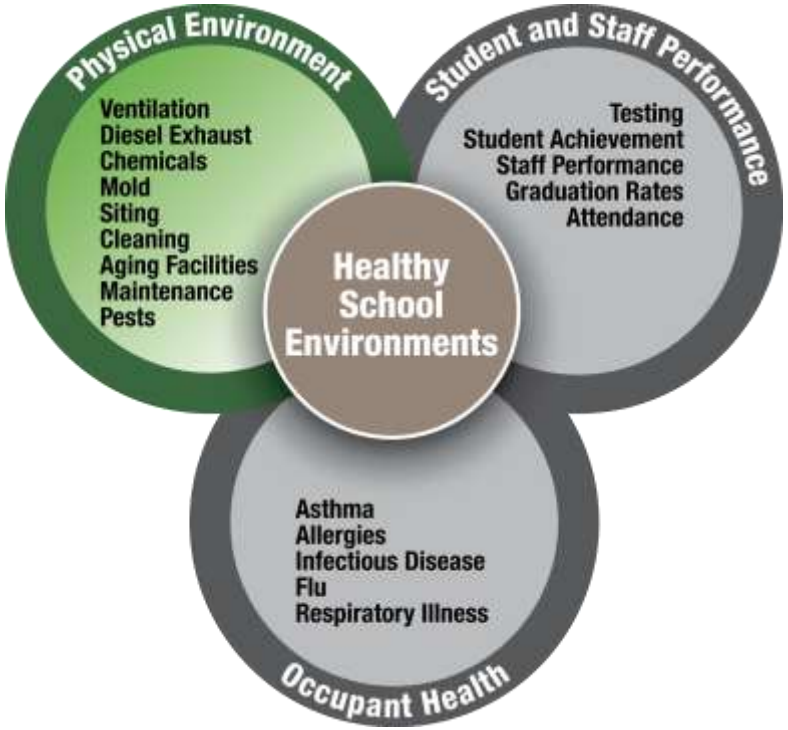
Sources:

www.epa.gov/sites/production/files/2014-08/documents/evaluation_resource.pdf

www.epa.gov/iaq-schools/how-does-indoor-air-quality-impact-student-health-and-academic-performance

Physical Environment

- The most recent data indicates that the average school in the United States is 55 years old.
  - San Antonio has buildings over 100 years ago!
- One-quarter of schools need extensive repair, and one-half of schools' report complaints related to indoor air quality.
- The physical environment includes not just the age and repair of the building but also the methods used to maintain it regularly, such as cleaning and pest control chemicals.



Schools are unique!

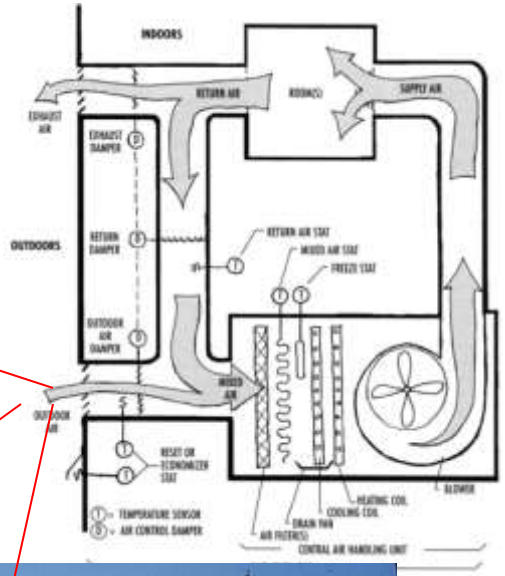
- Tight budgets
- Densely populated space
- Old buildings/deferred maintenance
- Special sources of pollution
- “Inventive” space utilization
- Additions/Temporary space

Major causes of poor IAQ

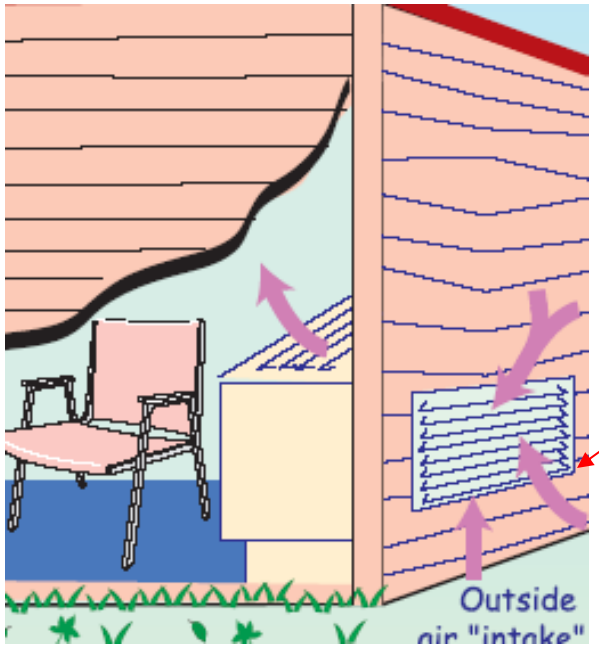
- Pollution sources
- Improperly operated and maintained HVAC
- Building occupants and their activities

But these aren't **Root Causes** !

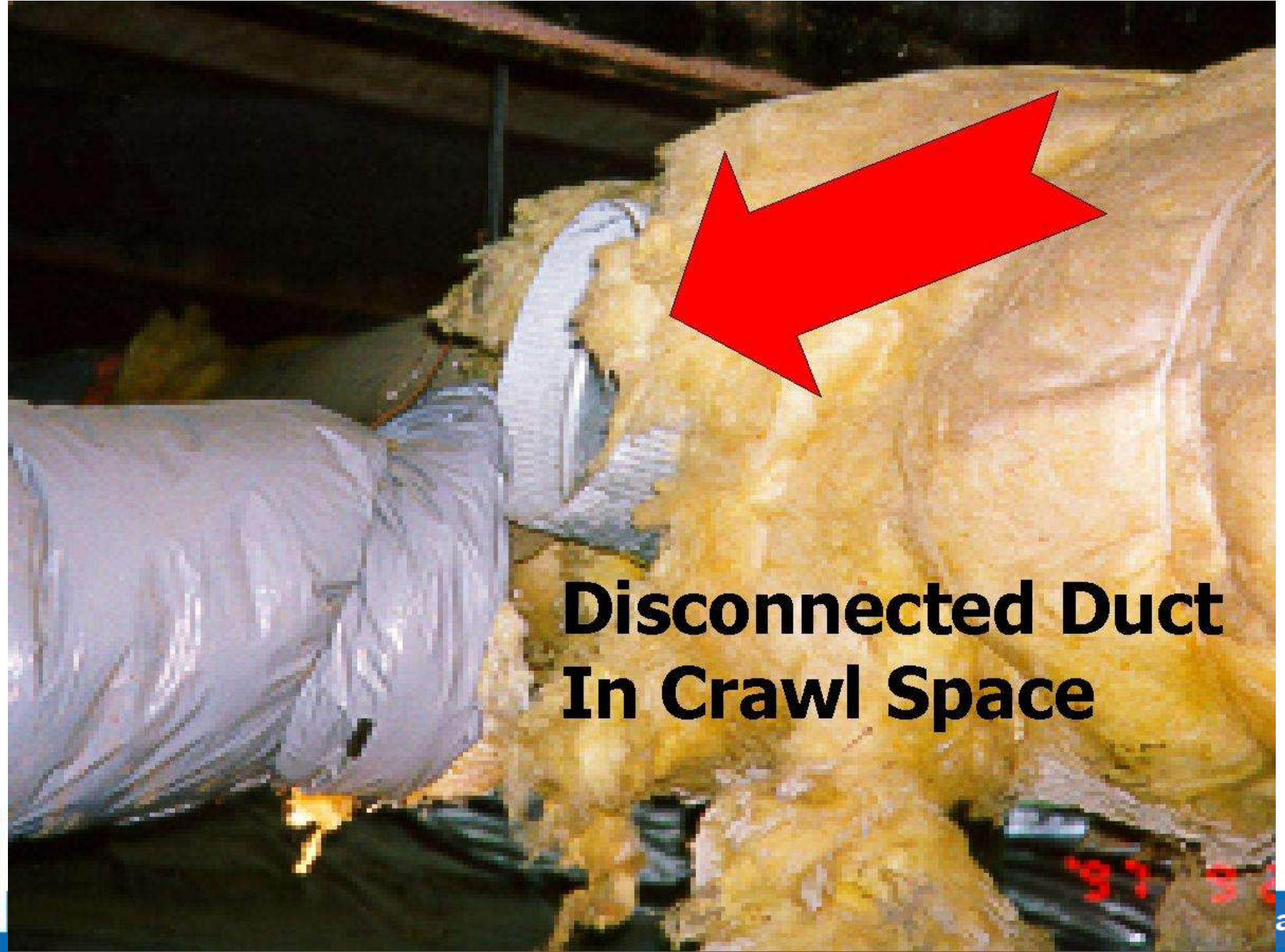
School occupants should learn a little about their ventilation systems.



Outside air gets pulled in here.




Make sure there are no sources of pollution near outside air intakes such as buses or cars with their engines on, flowering plants or pesticides.


Disconnected Duct
In Crawl Space

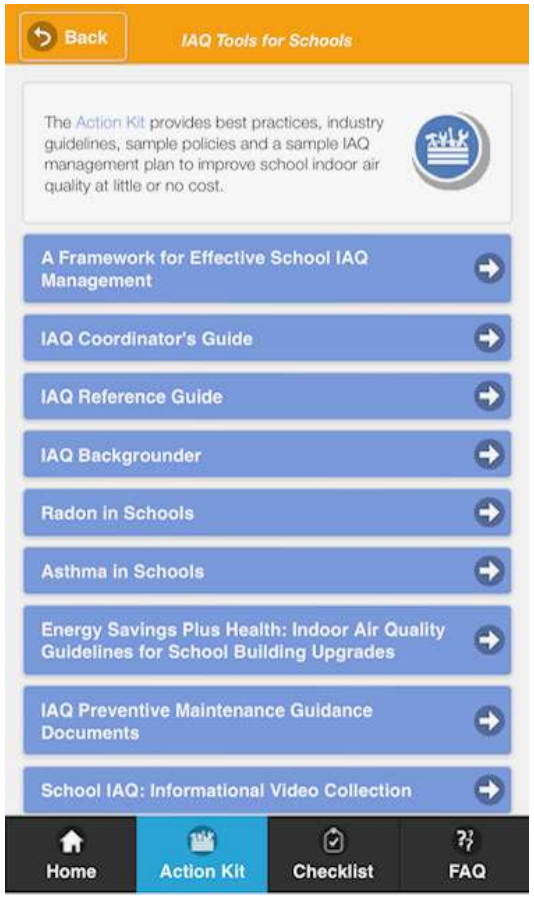
You don't have to test to **see** that you have a problem!

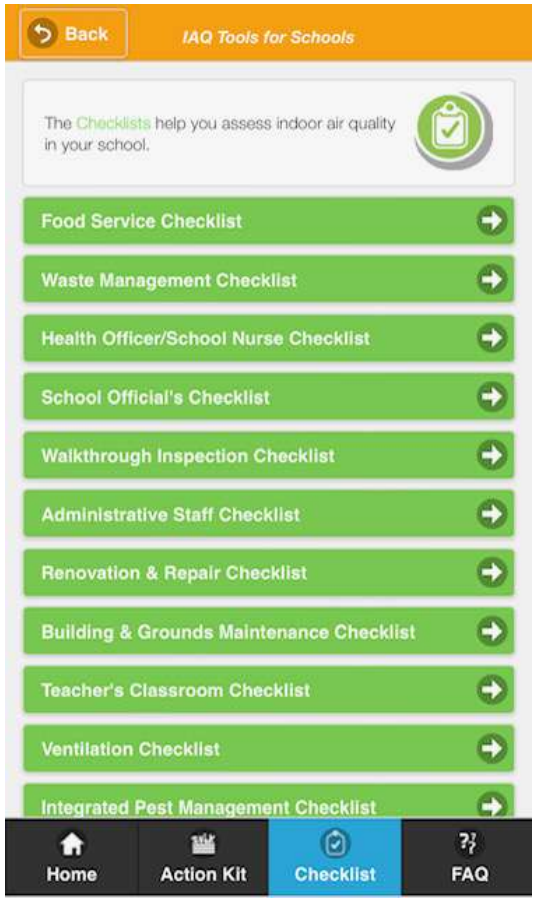
You **can** learn what to do about it.

Tools for Schools responds to Root Causes

- Provides basic knowledge
- Checklists point out typical activities
- Channels for good communication

Tools for Schools App





The IAQ Team

Students

Nurses

Planning/Contracting

School staff

Parents

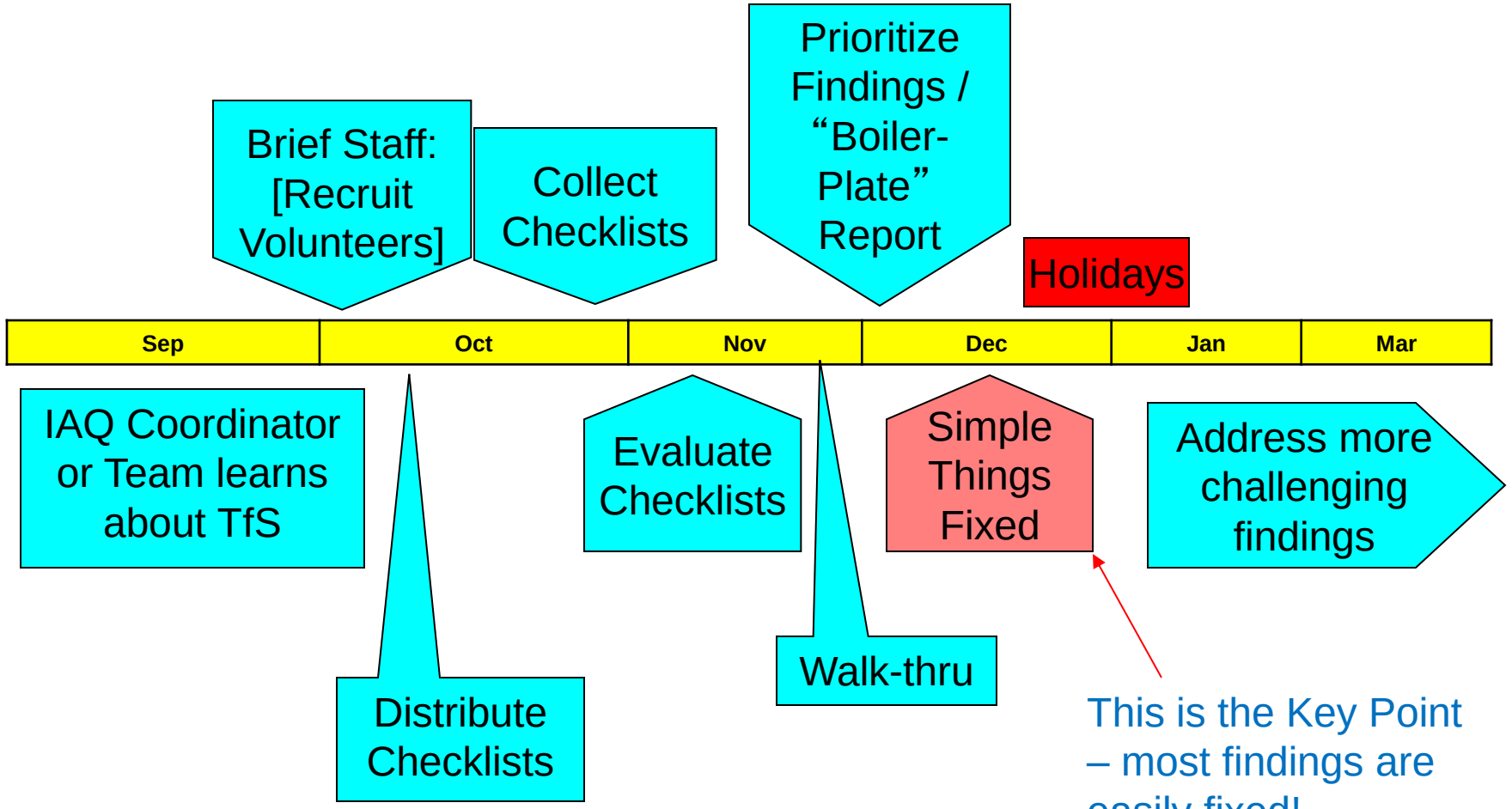
School Board

Facilities/Maintenance

Teachers

Tools for Schools Timeline

(Activities by both site and district personnel.)



EPA Resources to Get You Started!

IAQ Tools for Schools
Action Kit

IAQ Tools for Schools
Mobile App

Framework for Effective IAQ Management

IAQ Master Class Professional Training Webinar Series

Energy Savings Plus Health Guide and Interactive Air Quality Planner

IAQ Tools for Schools:
Preventive Maintenance Guidance

www.epa.gov/iaq-schools

Clean Air Building Challenge

A set of guiding principles and best practices to assist building owners and operators with reducing risks from airborne viruses and other contaminants indoors.

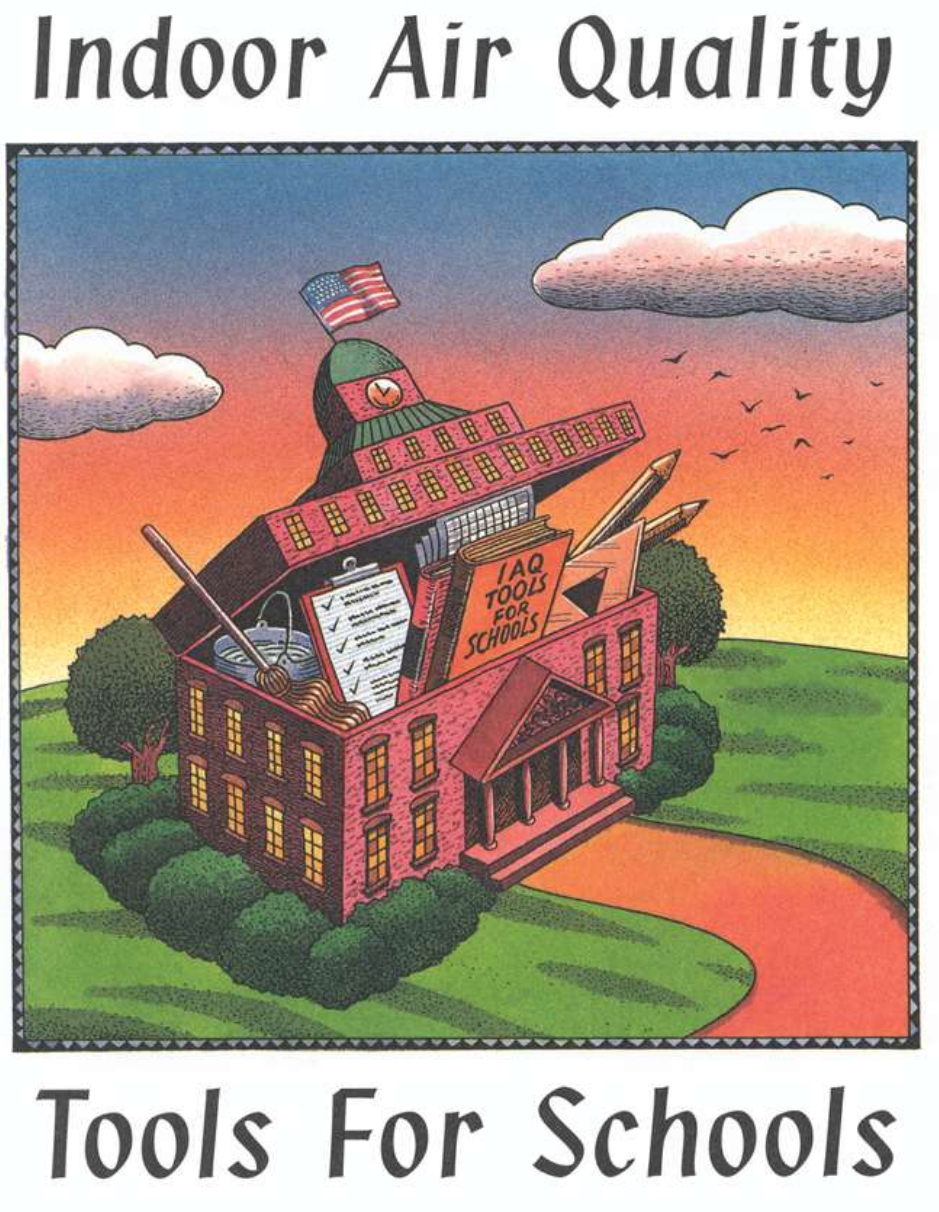
The Clean Air in Buildings Challenge highlights a range of recommendations and resources available for improving ventilation and indoor air quality, which can help to better protect the health of building occupants and reduce the risk of COVID-19 spread.

Key actions outlined in the Clean Air in Buildings Challenge include:

- Create a clean indoor air action plan,
- Improving Air Quality - https://www.epa.gov/indoor-air-quality-iaq/improving-indoor-air-quality
- Air cleaners/Air Filters - https://www.epa.gov/indoor-air-quality-iaq/air-cleaners-and-air-filters-home

https://www.epa.gov/coronavirus/can-air-cleaning-devices-use-bipolar-ionization-including-portable-air-cleaners-and

Thanks for your attention!



A Handful of Resources from a Few Partners

Brian Hanson

Director, K-State Radon Programs

National Outreach thru K-State

- National Radon Program Services
  - https://sosradon.org/
  - School resources
    - https://sosradon.org/radon-in-schools
  - Multi-family requirement information
    - https://sosradon.org/state-mf-requirements
  - Mitigation resources
    - https://sosradon.org/Mitigation
  - RRNC resources
    - https://sosradon.org/rrnc
  - Video resources
    - https://sosradon.org/videos

EPA Resources- National

- EPA HQ
  - https://www.epa.gov/radon
- Wichita State University Environmental Finance Center
  - https://www.wichita.edu/academics/fairmount_las/hugowall/efc/
- Check with your EPA Regional Officers
  - https://www.epa.gov/aboutepa/regional-and-geographic-offices

CRCPD Radon Resources

- **Conference for Radiation Control Program Directors, https://crcpd.org/**

  https://crcpd.org/radon/

- **Radon Leaders Saving Lives, www.radonleaders.org**

Radon Leaders Saving Lives

- **National Radon Action Plan** http://www.radonleaders.org/resources/nationalradonactionplan
- **Customizable Radon Outreach Resources** http://www.radonleaders.org/customizable_outreach_resources
- **Radon Change Package** http://www.radonleaders.org/resources/changepackage
- **Reducing the Risk From Radon: Information and Interventions** http://www.radonleaders.org/resources/reducingtheriskfromradon
- **What's going on in states across the country.**
- **National radon poster and video contest.**
- **January Radon Action Month resources**
- **Radon Research**
- **Data exchange program.**

CRCPD

A Partnership Dedicated to Radiation Protection

CRCPD

American Lung Association Resources

Activities:

- **Digital advertising campaign featuring:**
  - Maria Steele
  - Thomas Gross
- **Press release**
- **Resource sharing –** healthcare professionals; community health workers; public health professionals
- ***COMING SOON!* Influencer campaign**

American Lung Association Resources

Webinar featuring Energy Association of Iowa Schools
Visit **Energyais.org**

Clean Air School Challenge
Visit **Lung.org/CASC**

Oregon Schools Communication Plan for Radon Measurement

- Oregon school-specific radon assessment tools
  - School resources
    - Protocols and Planning
      - https://www.oregon.gov/oha/ph/healthyenvironments/healthyneighborhoods/radongas/pages/testing-in-schools-.aspx#protocol
    - Communications Toolkit
      - https://www.oregon.gov/oha/ph/healthyenvironments/healthyneighborhoods/radongas/pages/testing-in-schools-.aspx#toolkit

Finding Radon Professionals

- Licensure States
  - Obtain lists of radon measurement and mitigation professionals from your state radon program office
- Non-licensure States
  - National Radon Proficiency Program
    - https://nrpp.info/
  - National Radon Safety Board
    - https://nrsb.org/
  - Many non-licensure states keep these lists, talk to your state radon program office

Closing and a Few Funding Resources

MARCH 17TH, 2026

A Handful of Funding Opportunities

Brian Hanson

Director, K-State Radon Programs

EPA Opportunities

Wildfire Smoke Preparedness in Community Buildings Grant Program -

- EPA's Office of Radiation and Indoor Air is announcing the availability of funds and soliciting applications from eligible entities to improve public health protection against smoke from wildfires by enhancing preparedness in community buildings.
- The total estimated funding for this competitive opportunity is approximately $13,580,000.
- Applications are due **April 15, 2026.**

ALA's Clean Air School Challenge

ALA's Clean Air School Challenge -

- Grant funding is available for schools to assess their IAQ, develop an IAQ management plan, and/or implement activities of an IAQ management plan.
- **Individual schools can receive up to $9,500 and districts up to $95,000**.
- Check out answers to frequently asked questions, sign your school up today or contact CASC@Lung.org to get more information.

GoGreen Initiative (GGI)

GoGreen Initiative (GGI)

- In partnership with National School Board Association) select **10 school districts** to receive intensive technical assistance implementing an IAQ Management Plan in all their schools.
- **Each school receives an up to $45,000 mini-grant** (subaward) to support their program.
- Applications for the 2nd cohort just wrapped Feb 27 but there will be another opportunity to apply next year!

Thank You!

Brian Hanson, Director K-State Radon Programs

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radon@ksu.edu

800.767.7236

www.sosradon.org/radon-in-schools
recording and presentations
will be posted when available