

5 Year Mitigation Licensing Recap

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Agenda

- How our program is set up
- How our inspection process works
- Summary and highlights from first 5 years

MN Licensing Program Overview

- Licensing program is regulated by Minnesota Department of Health
- Part of Indoor Air Unit
 - 7 staff (including supervisor and admin) – roughly 3 FTE for radon licensing
 - Also handle SIRG grant and Clean Indoor Air Act
- 5 radon license types
 - Measurement
 - Mitigation (includes measurement license) (2 types)
 - Mitigation company
 - Laboratory
- Adopted the ANSI/AARST Standards
- MDH system tag required for each installation – Purchase from MDH
 - Licensees report their work at least quarterly

Brief History

- Licensing efforts started in 2014 / passed in 2015
- Licensing was set to go into effect 1/1/2019
- Injunction and court case delayed implementation until 6/1/2020
 - Tag requirement was delayed three months until 9/1/2020
- COVID – Spring 2020
- Inflation and tightened real estate market
- Two mitigation standard updates



Mitigation by the Numbers

Stats compiled by year of licensing

- Year 1 - 6/1/20 to 5/31/21
- Year 2 – 6/1/21 to 5/31/22
- Year 3 – 6/1/22 to 5/31/23
- Year 4 – 6/1/23 to 5/31/24
- Year 5 – 6/1/24 to 5/31/25

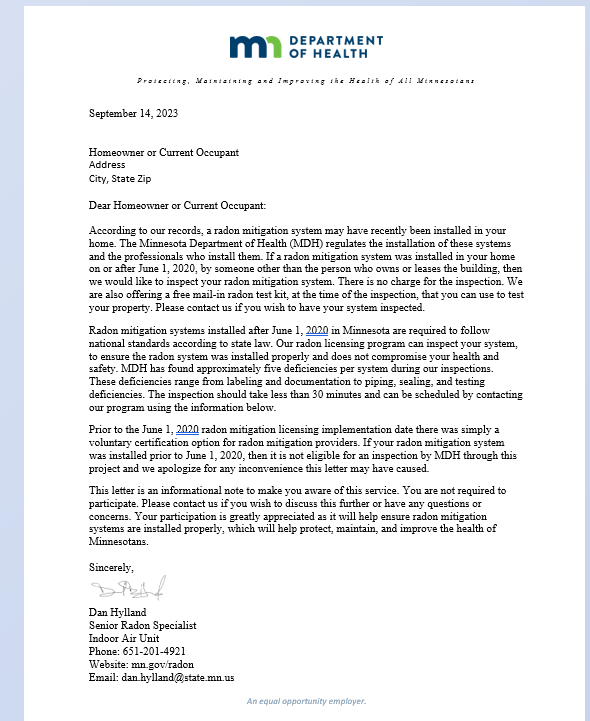
What do we do?

- Review applications and issue licenses
- Answer questions from the public and licensees
- Work with IT staff on the licensing/reporting website
- Create templates to help licensees comply with the rules
- Create continuing education classes
- Perform inspections and issue enforcement
 - Try to inspect every mitigator once or twice a year



Source of Inspections

- Complaints
 - Manage homeowner expectations (radon reduction, system noise, aesthetics)
- Requests from homeowners
- Other investigations
- Inspection request letters to homeowners
 - 4,200 letters sent over 5 years
 - Roughly 17% average response rate on the letters
 - Can differ drastically by licensee



Inspection Numbers

- Some mitigators end up getting inspected more than others
 - Number of complaints from the public
 - Contractor interaction with homeowner
 - Low/no response from inspection request letters
 - No work performed
 - Others in company report the work completed
 - Newly licensed
 - Not reporting work

Inspection Process

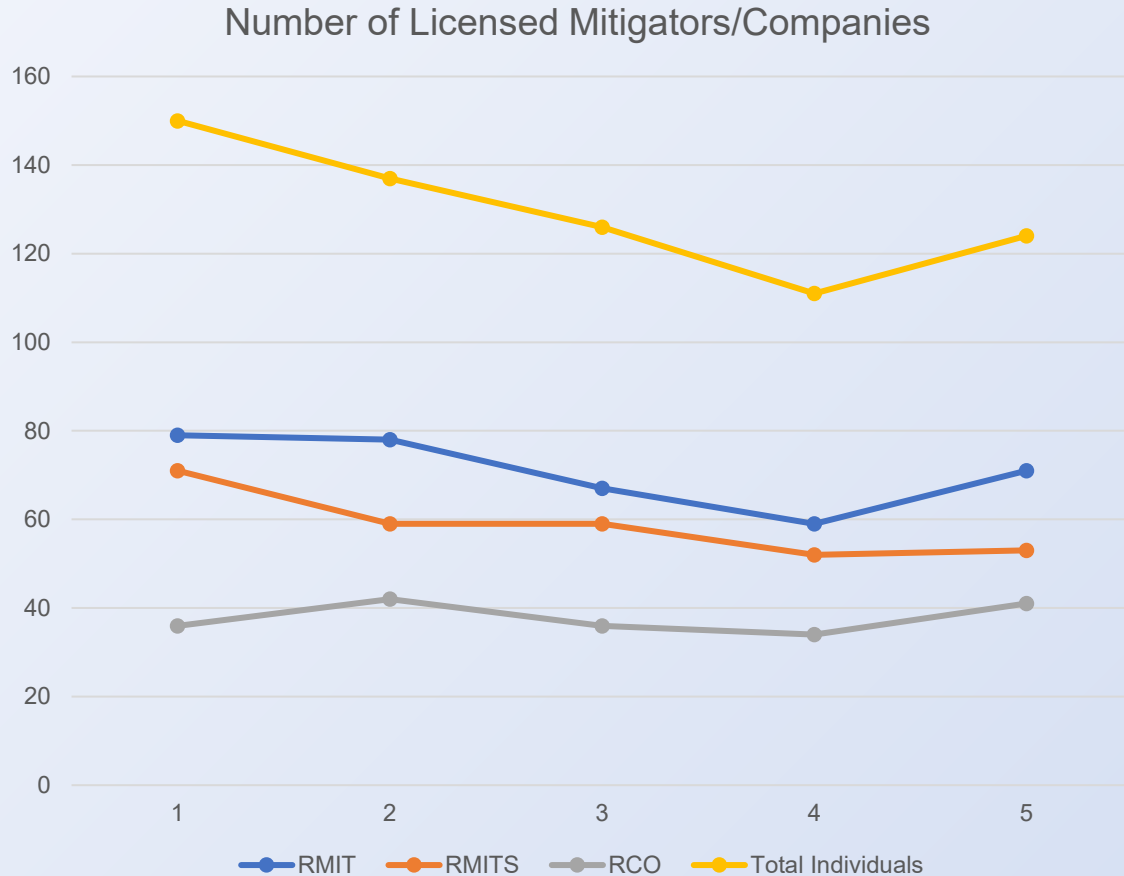
- Coordinate inspections in similar geographic locations
- Perform 20-30 minute inspection
 - Take photos, request test results for review
- Checklist sent to homeowner and contractor
- Enforcement documents issued if necessary
- Photos/documentation submitted to MDH by licensee to ensure compliance



Enforcement Process

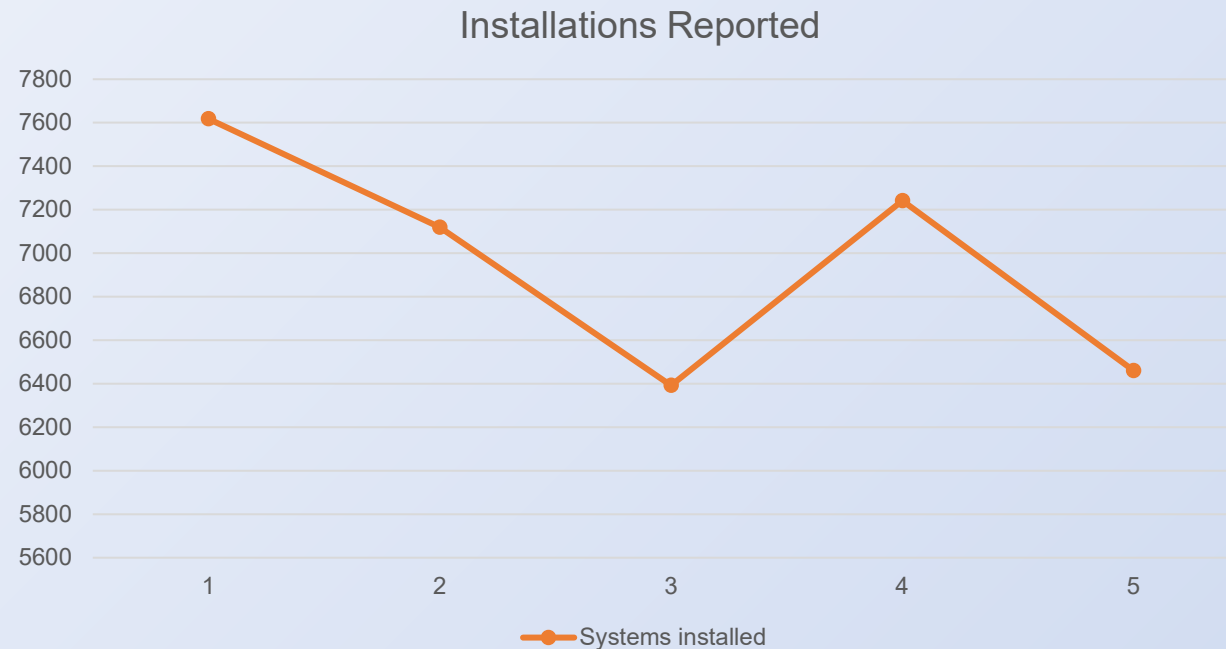
- Follow same enforcement process as other units at MDH
- First year was compliance assistance
 - Checklist sent but no enforcement
- Second year mostly Correction Orders were sent
 - Fix it ticket – no fine
- Administrative Penalty Orders (APO) are issued for repeat or severe violations
 - Fix it ticket and forgivable or nonforgivable fine
 - Fine based on deviation from compliance and potential for harm

Stats – License Numbers



		RMIT	RMITS	RCO	Total Individuals	Total Licenses
6/1/20-5/31/21	1	79	71	36	150	186
6/1/21-5/31/22	2	78	59	42	137	179
6/1/22-5/31/23	3	67	59	36	126	162
6/1/23-5/31/24	4	59	52	34	111	145
6/1/24-5/31/25	5	71	53	41	124	165

Installations Reported to MDH

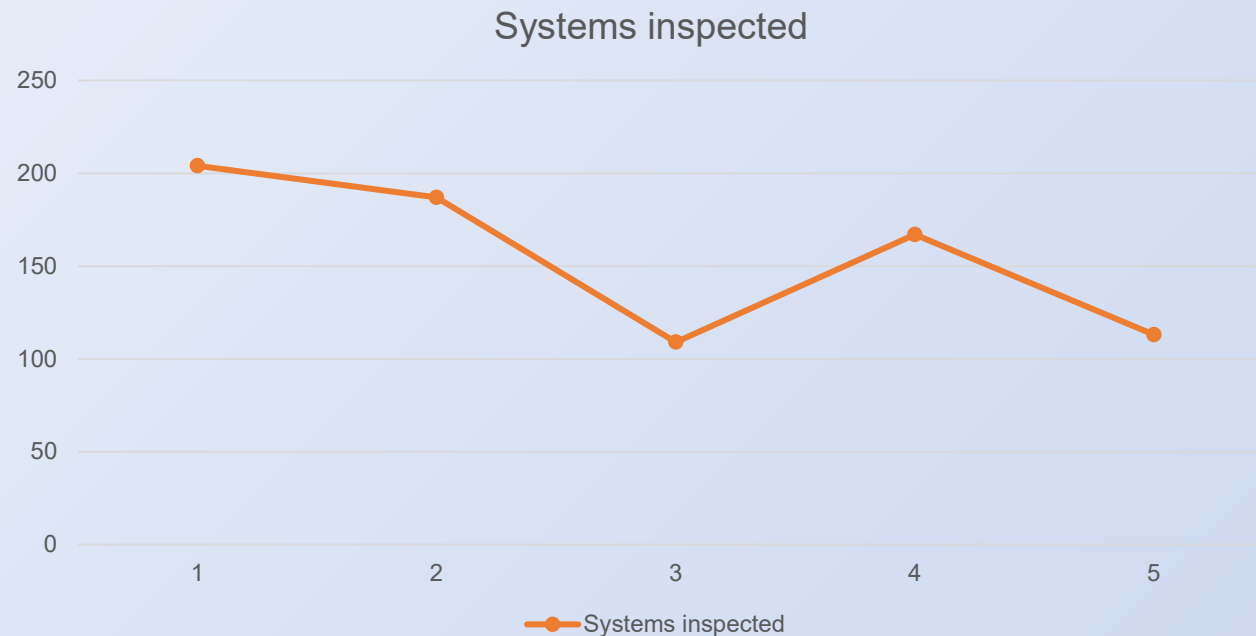


★ 34,832 installations reported in first 5 years

★ Average 6,966 installations reported each year

Systems Inspected

- Total of 780 inspections in first 5 years
- ★ Average 156 inspections per year
- Average 2.2% of installations inspected / year
- Chart by year of licensing when system was installed (not tallied by year it was inspected):



Mitigation Inspection Numbers

- Lag period between installation and inspection
 - Four 1st year installations were inspected in 2024 and 2025.
 - The number of year 5 inspections will increase in the coming months
- Dip in 2023 inspections coincided with
 - Mitigation standard update - form updates and education
 - Started more investigations on untagged work - led to focus on older jobs
 - More inspections required enforcement
 - John joined in 2023

Average number of issues found per inspection

Year 1 – 6.3

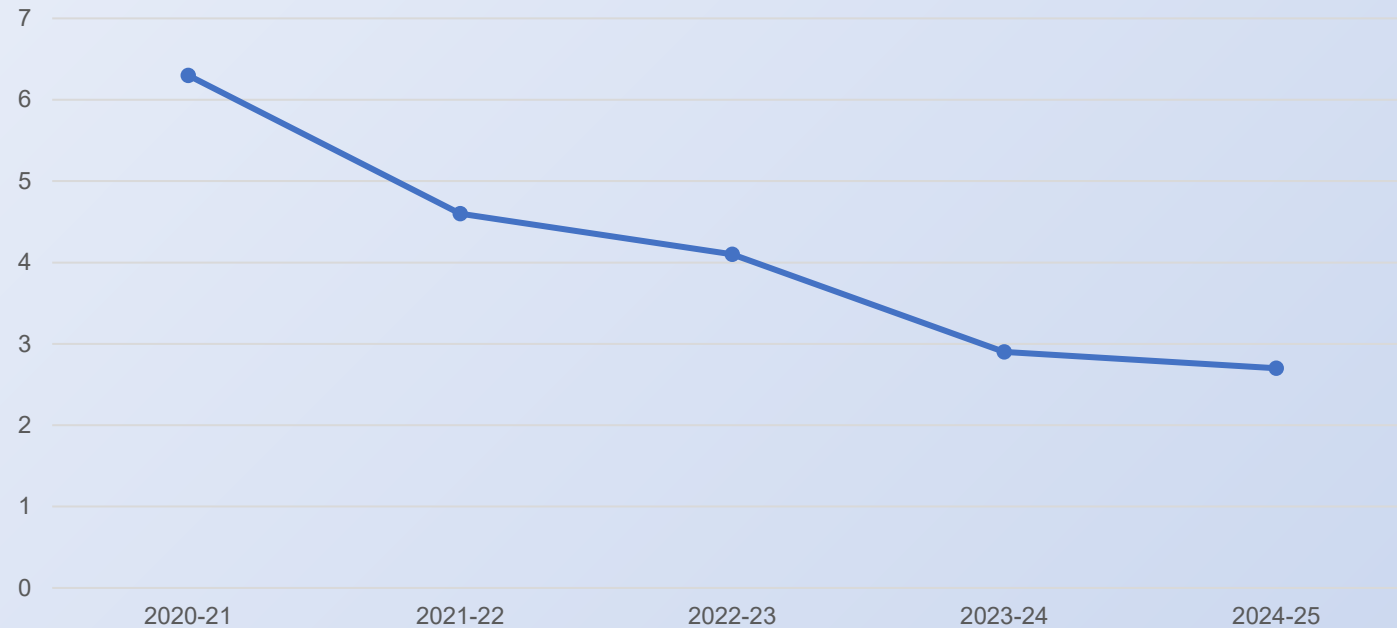
Year 2 – 4.6

Year 3 – 4.1

Year 4 – 2.9

★ Year 5 – 2.7

Average Number of Mitigation Issues by Year



Mitigation Inspection Numbers

★ Average number of issues per inspection has decreased by approx 57%

- Decrease has occurred even with standard changes and additional requirements added
- Still some inspections with double digit issues
 - Some are unlicensed or newly licensed
 - Some are licensees who have been licensed for years and have had prior inspections without those violations
 - Seem to suggest a problem with QC and lack of oversight of employees

Major Violations

No MDH system tag: (# of instances per year)

- Year 1 – 13
- Year 2 – 9
- Year 3 – 21
- Year 4 – 9
- Year 5 – 3

Notes: General trend in finding fewer untagged systems (other than in year 3 when we started doing more investigations)

m DEPARTMENT
OF HEALTH

Radon Mitigation System Tag

RCO-00037-2020155-00590

Example Company
Licensee

RCO-00037
License Number

(555) 555-5555
Phone Number

Install Date

Installer Name

*MDH Indoor Air Unit
651-201-4001
www.health.state.mn.us/radon
health.indoorair@state.mn.us*

Major Violations

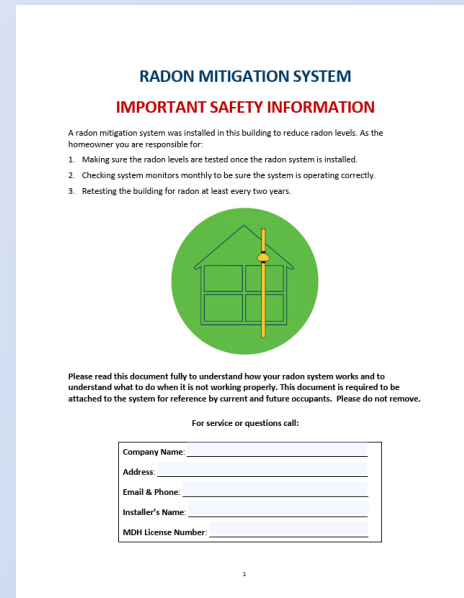
Unlicensed installer: (# of instances per year)

- Year 1 – 8
- Year 2 – 2
- Year 3 – 5
- Year 4 – 3
- Year 5 – 1

Notes: General trend in finding fewer systems installed by unlicensed individuals

























Success Story - MDH OM&M Plan Template

- 50% of year 5 systems inspected still have OM&M plan deficiencies
 - Most common violation in year 5 inspections
- Still the number one issue, but a lot of progress has been made
- There are a lot of requirements within the OMM plan
- There is a low violation rate when the MDH OMM template is used.
- 44% of year 1 installations didn't have an OMM plan at all!
- Important as it helps to ensure that the system will continue to protect homeowners for years to come



Success Story - Assistance

- Classes
 - Webinars
 - In-person
 - Learning Center
- Consultations
- Questions
- Can I...?

Name	Type	Time to Complete	Rating
 Radon System Noise 2022 (CE 22-04)	Online Course	52m	Click to Enroll 
 Navigating the Radon IT System 2...	Online Course	56m	Click to Enroll 
 Radon Entry and Weather Anomal...	Online Course	1h 11m	Click to Enroll 
 Radon Basics, Laws, Education & D...	Online Course		Click to Enroll 
 Radon Mitigation and Sumps (CE 2...	Online Course	1h 2m	Click to Enroll 
 Radon Measurement Overview 20...	Online Course	2h 10m	Click to Enroll 
 Common Radon Audit and Inspect...	Online Course	1h 2m	Click to Enroll 
 Did You Know? Common Radon Mi...	Online Course	1h 57m	Click to Enroll 
 Radon Mitigation OM&M Plan Upd...	Online Course	1h 7m	Click to Enroll 
 Radon Mitigation Standard Updat...	Online Course	1h	Click to Enroll 
 Structural Alterations for Radon ...	Online Course	53m	Click to Enroll 
 Radon Mitigation: Building Investi...	Online Course	1h 47m	Click to Enroll 

Funny Story – Braunschweiger Liverwurst

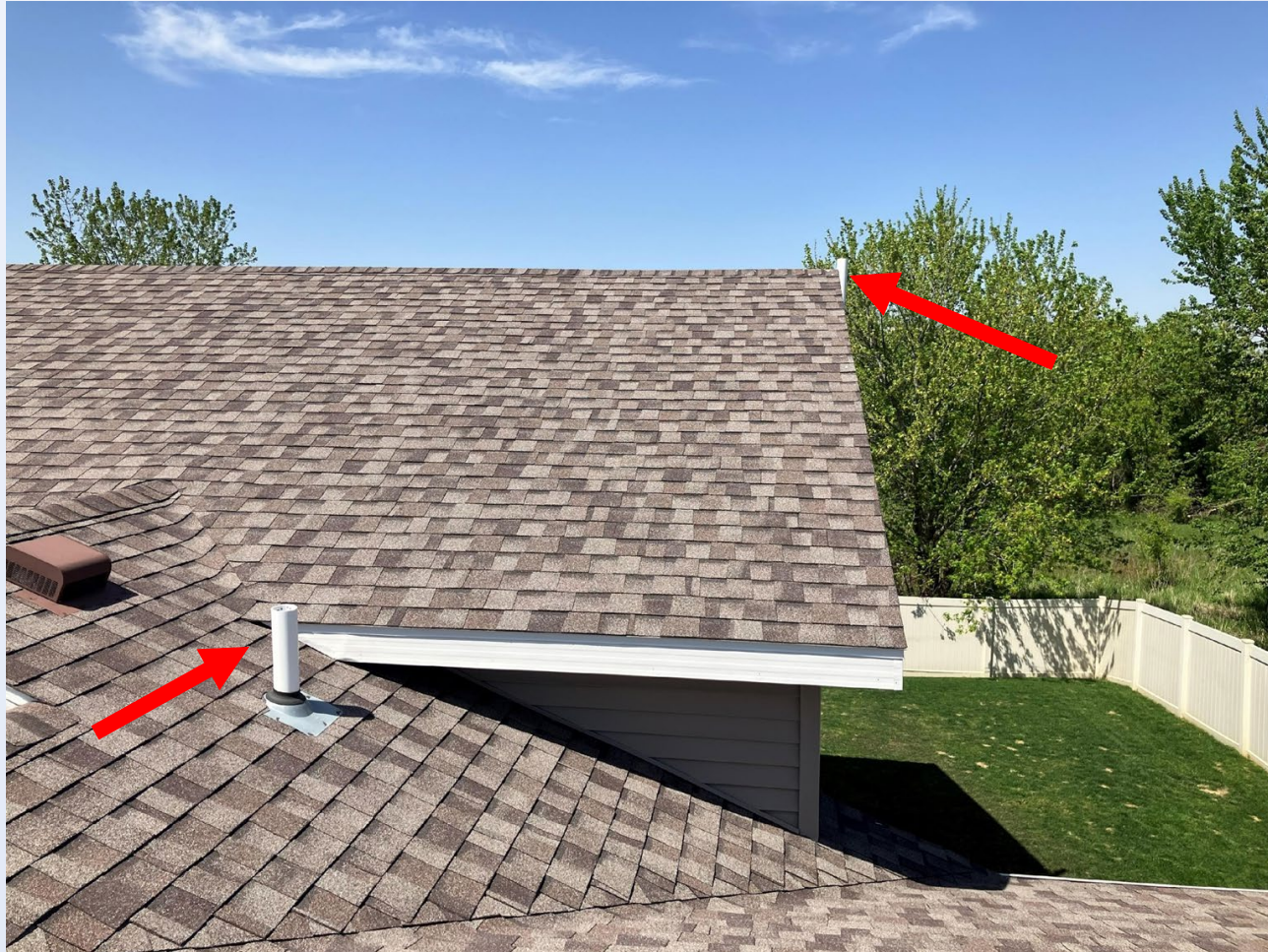


Interesting Story

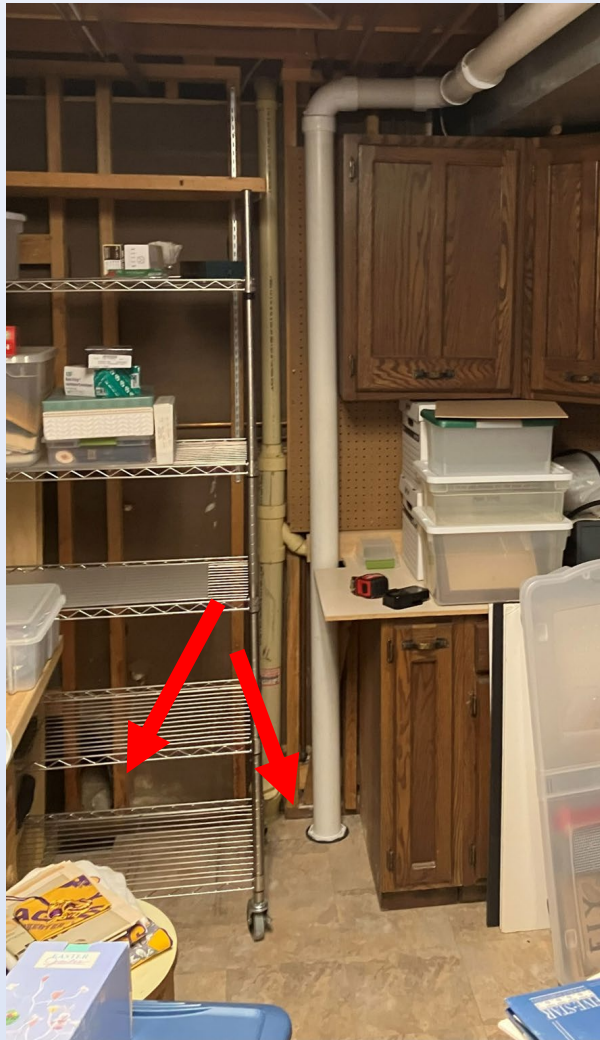
- 16% of homes inspected since 2/20/24 had tests done by homeowners with consumer grade radon monitors



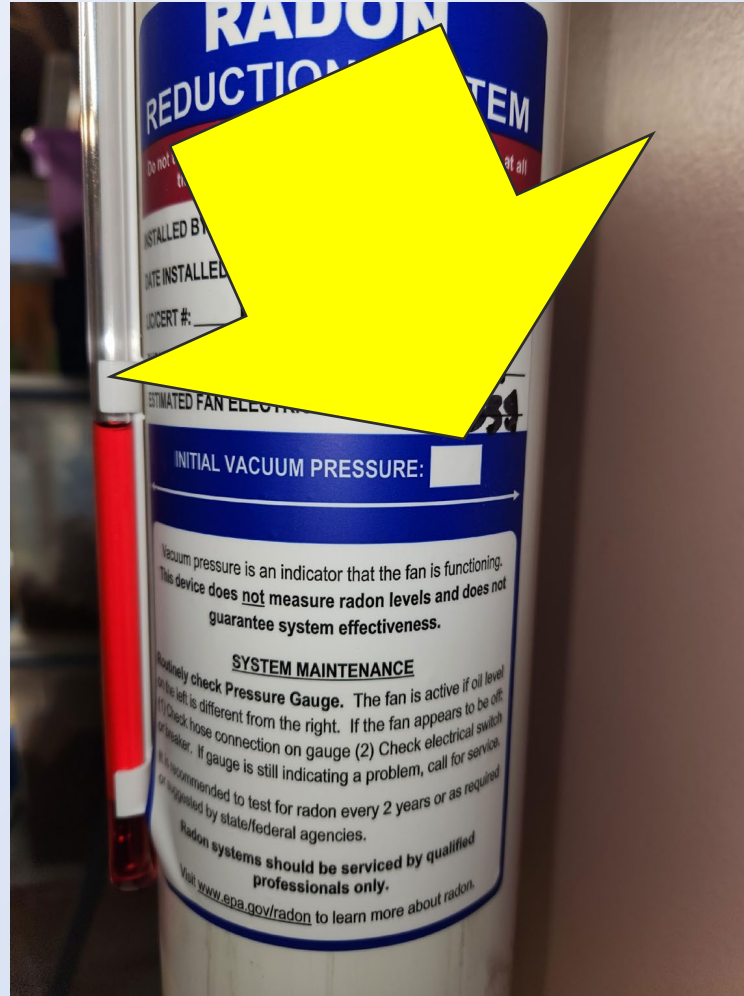
Frustrating Story – Simple Errors



Frustrating Story – Simple Errors

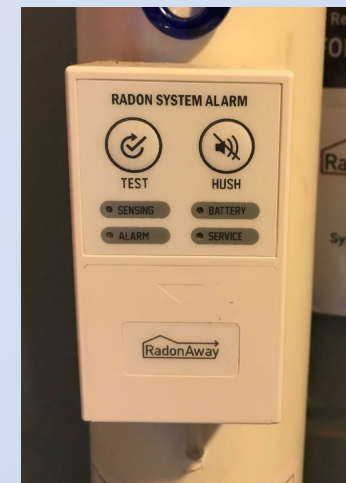
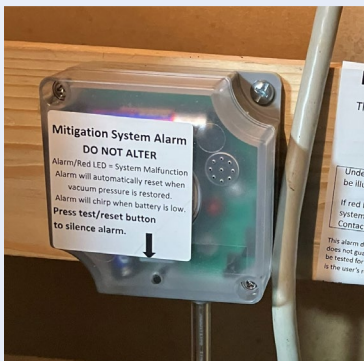


Frustrating Story – Simple Errors



Good News or Bad News First?

- 3% - no alarm in year 5 – down from 73% in year 1
- Still had another 4% that aren't activated but even that has improved in the last few years
- New concerns of proper installation, function, reliability, and homeowner understanding of how to operate it
- Some new options available



Looking Forward

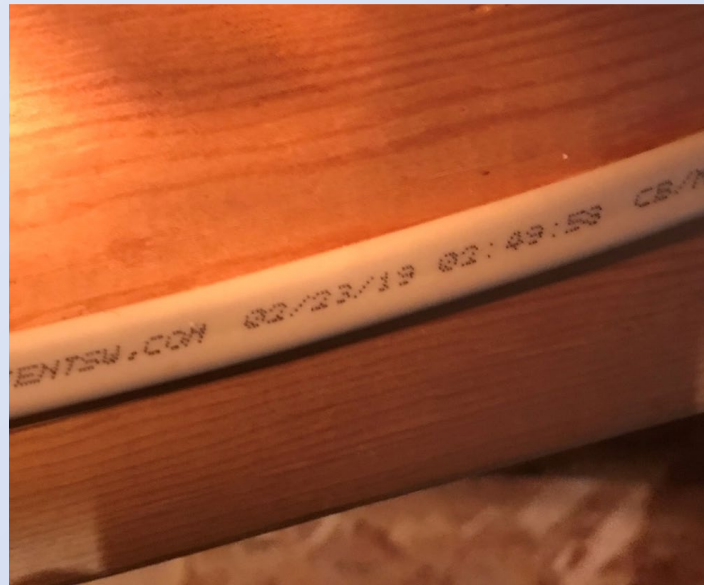
- Shift from “I didn’t know” to “I didn’t care”
- Need for regulation will continue – QC issues and new installers
- Working to get changes to the mitigation standard to clarify, simplify, and close loopholes
- Continue building our online education offerings
- ???

Mitigation Inspection Numbers

- **Year 5** top Issues: (____% of systems inspected had____)

Mitigation Inspection Numbers

- 41% - Electrical permit not obtained or the permit was never finalized
 - Regulated by electrical inspector and not MDH - Noted on the checklist for the homeowner and contractor to follow up on
 - Down from 58% in year one but has consistently remains a very common issue each year



Mitigation Inspection Numbers

17% - Not sealing floor/wall joint, utility penetrations, or large openings

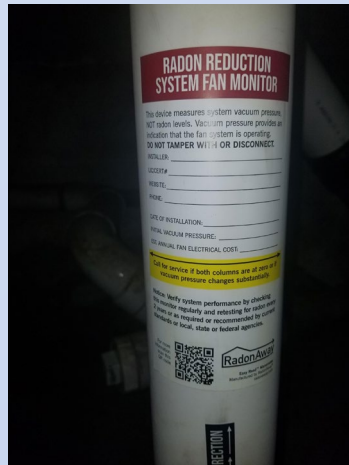
- Instances of not sealing some openings has improved
- Little improvement on sealing large openings u



Mitigation Inspection Numbers

14% - Primary label missing information

- Includes most vital information for homeowner to know about maintaining the system.
- Huge improvements since year 1
- Most common item missing is not recording the initial manometer reading



Mitigation Inspection Numbers

12% - Water heater shows signs of prior backdrafting – no improvement

- Not officially cited
- Added to the checklist to inform the homeowner and contractor



Mitigation Inspection Numbers

11% - Pipe support – down from 16% in year 1 but fairly common each year



Mitigation Inspection Numbers

10% - Vent termination point issues

- Frequency was decreasing until additional and more detailed requirements came out in the last standard revisions.
- Is now trending back down again.



Mitigation Inspection Numbers

31% - had deficiencies with regards to dealing with sump baskets

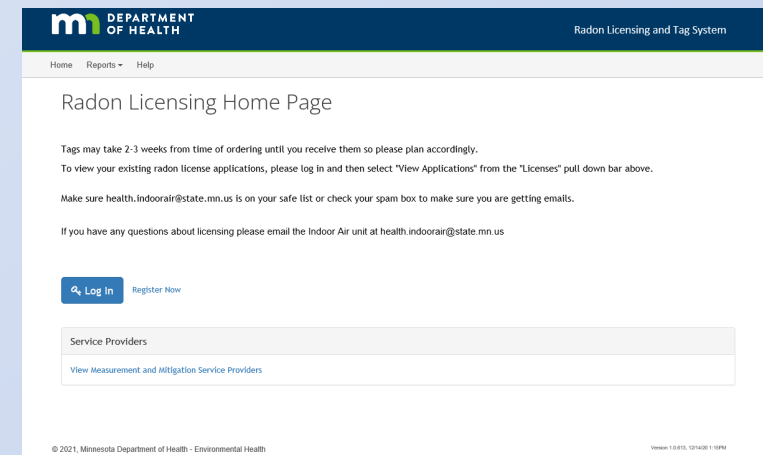
- 10% - issues with sealing the sump cover
 - Not covered at all, cover that is not durable (tape), penetrations not sealed, etc...
 - Very little gains over the years – continues to be a common issue
- 10% - Sump access port missing / unapproved sealing method
 - Big improvement after 1st year but then has remained a consistent issue
- 8% - sump cover not labeled
 - Has had a general decline in prevalence over the years.



Mitigation Inspection Numbers

9% - Installation not reported to MDH in Quarterly Reporting

- Will probably go up
- Has been fairly constant between 16% to 18% except for a spike in year 3 to **42%**
- Important to properly regulate the industry and for data/research purposes



Mitigation Inspection Numbers

- 4% - Exterior fan with plugged disconnect
 - Down from 19% in year 1



Questions



Thank you!

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Mn.gov/radon