

HUD & FHFA Radon Testing Policies

Brian Hanson

K-State Radon Programs

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National Policy Review

Overview of federal and state radon requirements

EPA Has Defined Radon Zones

Each of 3100 counties in the U.S. classified as:

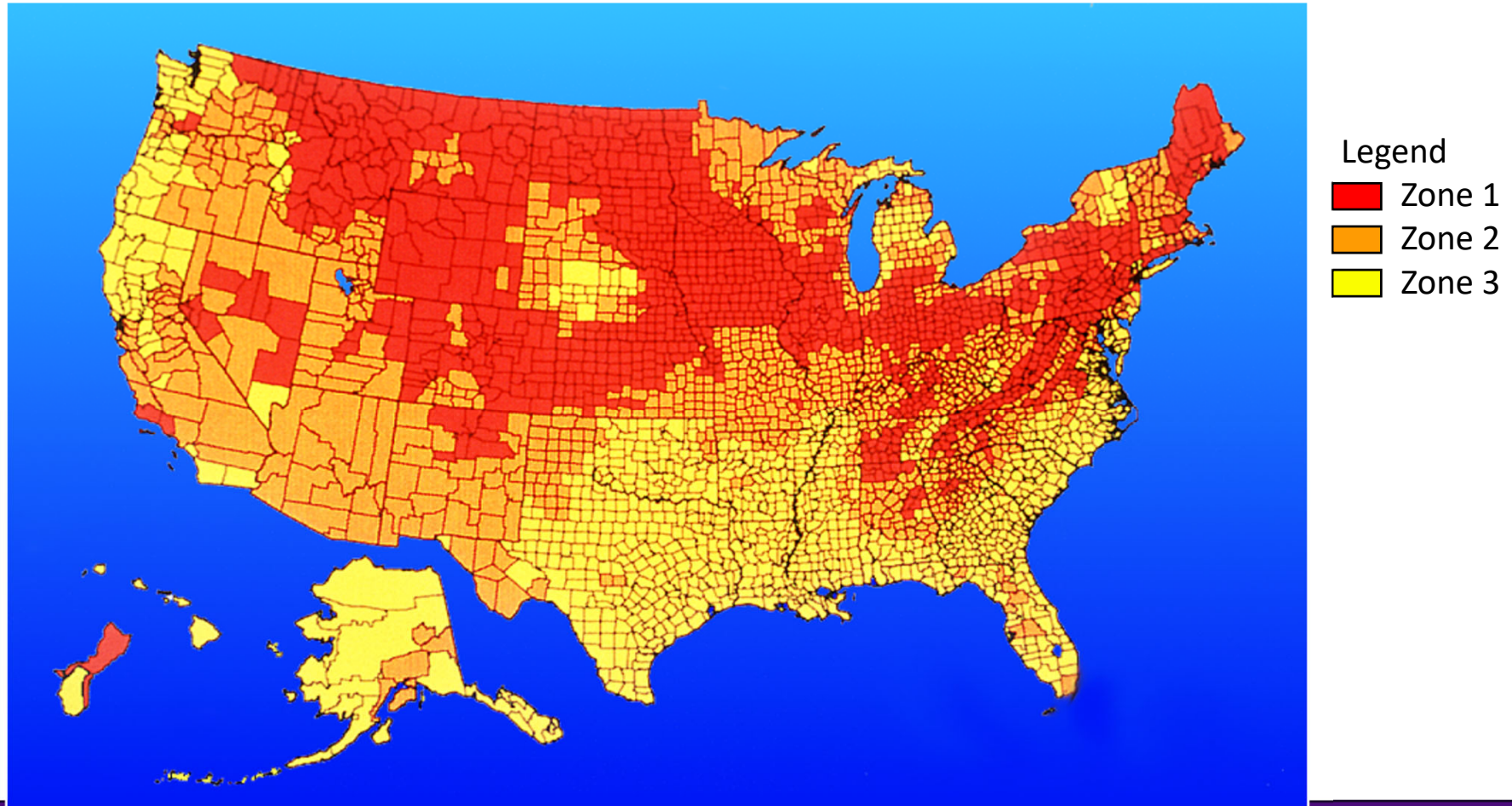
Zone 1 - expect 4.0 pCi/L or greater

Zone 2 - expect 2.0 to 4.0 pCi/L

Zone 3 - expect 2.0 pCi/L or less

Zone designations based on five factors: indoor radon measurements, geology, aerial radioactivity, soil parameters, and foundation type.

U.S. Radon Zone Map



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OSHA – Radon Occupational Exposure Limit

- The OSHA radon exposure limit for adult employees is 100 pCi/L averaged over a 40-hour workweek [29 CFR 1910.1096(c) (1); 29 CFR 1926.53]
 - Which would result in a cumulative radon decay product exposure of 12 WLM/yr (assuming 100% radon decay product equilibrium) if the worker was exposed at this concentration for one working year (i.e., 2,000 hours).

http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10098.

29 CFR Part 1910.1096 (c) (1)

U.S. Worker Regulations

Agency	Coverage	Annual Level (WLM)
OSHA	Workers not covered by the DOE, MSHA, or NRC	12
DOE	DOE Workers	10
NRC	Licensee workers	4
MSHA	Underground miners	4

OSHA's 12 WLM limit is over 3.5 times higher than any country with a regulation for occupational exposure and over 12 times higher than most European Countries.

<https://apps.who.int/gho/data/node.main.RADON03?lang=en>

HUD Multifamily Housing Radon Notice

- HUD Radon Announcement 2/4/2013
 - Requires radon testing be included in environmental reports for FHA-insured multi-family housing mortgages
 - Elevated levels will have to be mitigated
- HUD MAP 2020 Listed Projects
 - Requires use of **ANSI/AARST MAMF-2017 with 1/2021 REVISIONS**
 - 100% ground-contact unit testing, 10%/minimum 1 unit off ground contact
 - Requires national certification for measurement activities
 - Requires state-issued certification/license for measurement activities in states with adopted requirements
 - Can be an issue of dual-certification

FHFA Multifamily Housing Radon Requirements

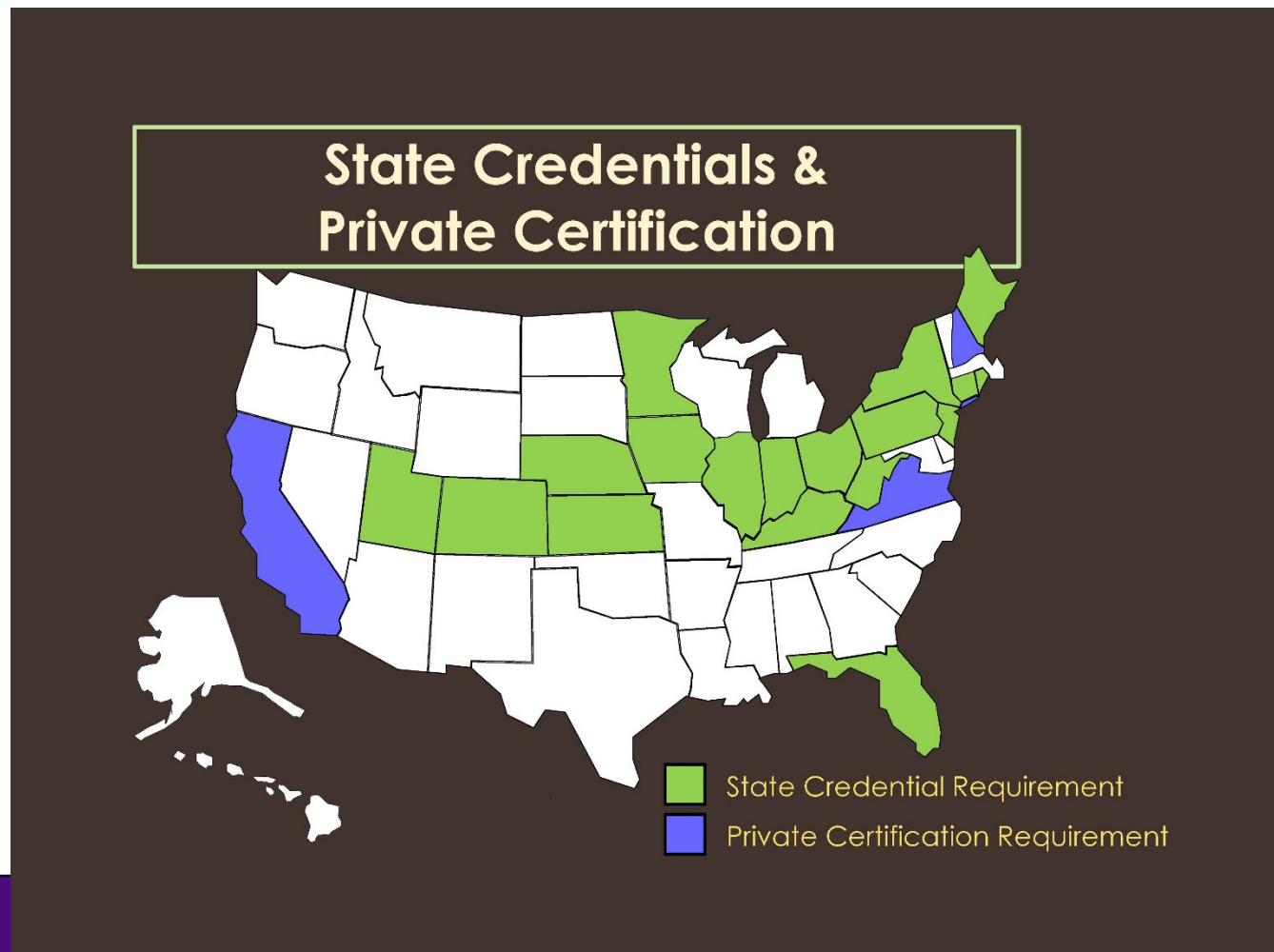
Federal Housing Finance Agency (FHFA) radon requirements to Fannie Mae and Freddie Mac

- In effect June 30, 2020
- Required radon elements
 - Radon testing at multifamily Enterprise-backed properties
 - Minimum of 25% of ground contact units tested in all buildings associated with the properties
 - Certification States: Radon testing **SHALL** follow current adopted radon measurement standards
 - Allow an environmental professional to manage radon testing procedure (national policy)
 - Certification States: testing **MAY ONLY** be conducted by a state-certified measurement professional

FHFA Multifamily Housing Radon Requirements

- Required radon elements, cont.
 - Requires following state statutes regarding radon
 - Requires provision of tenant notifications of radon testing on Enterprise-backed multifamily properties
 - Provides additional guidance on Enterprise's radon standards
- <https://www.fhfa.gov/Media/Blog/Pages/FHFA-Increases-Radon-Testing-Requirements-at-Enterprise-Backed-Multifamily-Properties.aspx>

State Licensing/National Proficiency Requirements



Adoptions of the ANSI-AARST Radon Standards

STATE	ANSI-AARST	EPA, ASTM, other
California, Colorado*, Connecticut, Indiana, Kentucky, Minnesota, Rhode Island, West Virginia	All	
Florida, Kansas, Nebraska, New Jersey	(rule change under review)	All
Maine, Ohio, Virginia		All
Illinois, Pennsylvania	Multifamily	Single Family
Iowa	Measurement	Mitigation
New Hampshire, Utah	Mitigation	

CO Radon Standards

- Colorado-adopted ANSI/AARST Standards

- Measurement Standards

- ANSI/AARST MAH-2019
Protocol for Conducting Measurements of Radon and Radon Decay Products in Homes
 - ANSI/AARST MAMF-2017 with 1/2021 REVISIONS
Protocol for Conducting Measurements of Radon and Radon Decay Products in Multifamily Buildings
 - ANSI/AARST MALB-2014 with 1/2021 REVISIONS
Protocol for Conducting Measurements of Radon and Radon Decay Products In Schools and Large Buildings
 - ANSI/AARST MW-RN 2020
Protocols for the Collection, Transfer and Measurement of Radon in Water
 - ANSI/AARST MS-QA 2019
Radon Measurement Systems Quality Assurance

CO Radon Standards

- Colorado-adopted ANSI/AARST Standards

- Mitigation

- ANSI/AARST SGM-SF-2017 with 12/2020 REVISIONS
Soil Gas Mitigation Standards for Existing Homes
- ANSI/AARST RMS-MF-2018 with 12/2020 REVISIONS
Radon Mitigation Standards for Multifamily Buildings
- ANSI/AARST RMS-LB-2018 with 12/2020 REVISIONS
Radon Mitigation Standards for Schools and Large Buildings
- ANSI/AARST CCAH 2020
Reducing Radon in New Construction of 1 & 2 Family Dwellings and Townhouses
- ANSI/AARST RRNC 2020
Rough-in of Radon Control Components in New Construction of 1 & 2 Family Dwellings and Townhouses
- ANSI/AARST CC-1000 2018
Soil Gas Control Systems in New Construction of Buildings [Large Buildings]

KS Radon Standards

•KDHE Division of Public Health Radiation Control Section

- ANSI-AARST Standards Under Review for Adoption

- Single-Family

- ANSI/AARST MAH-2019
Protocol for Conducting Measurements of Radon and Radon Decay Products in Homes
 - ANSI/AARST SGM-SF-2017 with 12/2020 REVISIONS
Soil Gas Mitigation Standards for Existing Homes

- Large Buildings

- ANSI/AARST MAMF-2017 with 1/2021 REVISIONS
Protocol for Conducting Measurements of Radon and Radon Decay Products in Multifamily Buildings
 - ANSI/AARST RMS-MF-2018 with 12/2020 REVISIONS
Radon Mitigation Standards for Multifamily Buildings
 - ANSI/AARST MALB-2014 with 1/2021 REVISIONS
Protocol for Conducting Measurements of Radon and Radon Decay Products In Schools and Large Buildings
 - ANSI/AARST RMS-LB-2018 with 12/2020 REVISIONS

Radon Mitigation Standards for Schools and Large Buildings Not To-Be Adopted ANSI-AARST Standards **New Construction**

- Not to be adopted

- Radon in Water
 - Quality Assurance
 - RRNC standards

IA Radon Standards

• Iowa Department of Health and Human Services

- Effective March 15, 2023

• Measurement

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Radon Measurement Systems Quality Assurance

• Mitigation

- EPA RMS, **and**
- ASTM E-2121

NE Radon Standards

- Nebraska Department of Health and Human Services
 - ANSI-AARST Standards Under Review for Adoption
 - ANSI/AARST MAH-2019
Protocol for Conducting Measurements of Radon and Radon Decay Products in Homes
 - ANSI/AARST MA-MFLB 2022
Protocol for Conducting Measurements of Radon and Radon Decay Products in Multifamily, School, Commercial and Mixed-Use Buildings
 - ANSI/AARST
Soil Gas Mitigation Standards for Existing Homes
 - Still in the review process with no expected date
 - Specific rules/regulations to follow

History of Radon Standards

- The U.S. EPA **RECOMMENDS** no longer using the now very dated standards
 - **RECOMMENDS** using the AARST-ANSI consensus standards

KS Radon Standards

- **KDHE Division of Public Health Radiation Control Section**
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Questions?

Cause, boy do I have answers...

We're From the Government, We're Here to Help

Kansas Radon Chamber

www.ksuradonchamber.org

National Radon Program Services

www.sosradon.org

Kansas Radon Program

www.kansasradonprogram.org

MURC Radon Training

<https://radoncourses.com/>

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Resources for You

- Call Kansas Radon Program
 - **800.693.5343**
 - <https://kansasradonprogram.org/home>

- Brian Hanson
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 - bhanson@ksu.edu