

# RADON RISK REDUCTION

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A 50-State Survey  
of State Laws and  
Policies for Radon  
Disclosure, Testing,  
and Mitigation

## A Fractured Policy Landscape



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## ABOUT CHLPI

The Center for Health Law and Policy Innovation of Harvard Law School (CHLPI) advocates for legal, regulatory, and policy reforms to improve the health of underserved populations, with a focus on the needs of low-income people living with chronic illnesses and disabilities. CHLPI works with consumers, advocates, community-based organizations, health and social services professionals, government officials, and others to expand access to high-quality healthcare; to reduce health disparities; to develop community advocacy capacity; and to promote more equitable and effective healthcare systems. CHLPI is a clinical teaching program of Harvard Law School and mentors students to become skilled, innovative, and thoughtful practitioners as well as leaders in health and public health law and policy. Publications from CHLPI are available at [www.chlpi.org](http://www.chlpi.org).

## ABOUT MAINE LUNG CANCER COALITION

The Maine Lung Cancer Coalition (MLCC) is a statewide, multi-sector partnership working to reduce the burden of lung cancer in Maine. MLCC is led by Maine Medical Center, with participation from health systems, advocacy organizations, state government, academic institutions, and professional associations. The MLCC's primary goals are to engage and educate stakeholders about evidence-based lung cancer prevention and screening practices; and to develop, implement, and evaluate innovative programs to increase access to prevention, screening, and treatment services for all Mainers.

### MLCC IS FUNDED BY



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## MAPS

All maps in this report are sourced from the U.S. Environmental Protection Agency.

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## State Radon Law and Policy: An Overview

Exposure to radon, a naturally-occurring gas, is the second-leading cause of lung cancer in the United States and the leading cause of lung cancer among non-smokers. Despite the significant health hazards posed by radon, state laws and policies addressing the toxin are inconsistent across the country. As a result, many people are at risk of being unknowingly exposed to high levels of radon and financially unable to mitigate the threat. From 2019-2020, the Center for

Health Law & Policy Innovation (CHLPI) conducted a 50-state survey of laws and policies related to radon disclosure, testing, and mitigation. This report analyzes state approaches to radon risk reduction, highlights inequities that result from the fractured policy landscape, and identifies model policies that will increase protection from exposure to dangerous levels of radon for residents in every state.

### ***Health Risks from Radon Exposure: An Overview***

- Radon is the second-leading cause of lung cancer in the United States and the leading cause of lung cancer in non-smokers.<sup>1</sup>
- The Environmental Protection Agency (EPA) estimates that radon causes 21,000 lung cancer deaths each year.<sup>2</sup>
- Nearly 1 out of every 15 homes in the U.S. has elevated radon levels.<sup>3</sup>
- The average indoor radon level is estimated to be about 1.3 picocuries per liter (pCi/L).<sup>4</sup> The EPA recommends that homeowners take action to mitigate radon at levels of 4 pCi/L or higher.<sup>5</sup> However, the EPA warns that “any radon exposure carries some risk—no level of radon is safe.”<sup>6</sup>
- People who smoke cigarettes are at a higher risk from radon because of certain synergistic effects. For people who smoke and live in a home with an average radon level of 4 pCi/L, the risk of lung cancer is 5 times the risk of dying in a car crash.<sup>7</sup>
- Individuals can test their home for radon using a radon test kit. The cost of these test kits varies from less than \$20 to more than \$100, depending on the type of kit.<sup>8</sup>
- Radon exposure can be addressed by making site repairs, including fixing cracks and gaps in plaster and increasing ventilation. Mitigation for homes costs an average of \$1,200,<sup>9</sup> and most states do not offer any financial assistance for radon mitigation to homeowners, regardless of income.

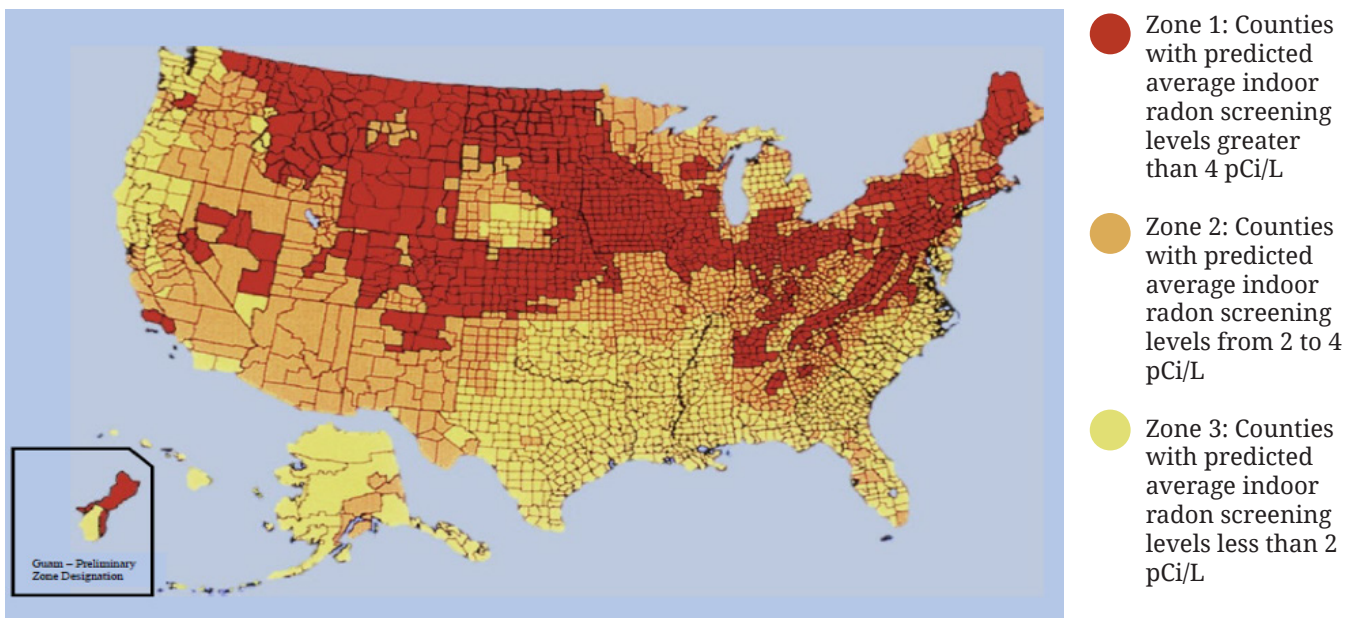
Radon is a radioactive gas formed by the natural decay of uranium that is found in rock, water, and nearly all soils.<sup>10</sup> As radon rises, it enters buildings through cracks, joints, and gaps.<sup>11</sup> Homes, schools, and other buildings can trap radon gas inside where it may build up to dangerously elevated levels.<sup>12</sup> Radon exposure increases the risk of developing lung cancer,<sup>13</sup> and due to synergistic effects of smoking and radon, smokers and former smokers are especially at risk.<sup>14</sup> Some experts believe that radon exposure may be particularly harmful to children,<sup>15</sup> and some studies suggest that radon exposure may also increase the risk of developing leukemia.<sup>16</sup>

Radon has no odor, taste, or visual marker—the only way to identify elevated levels of radon is through testing. As a result, many people may not realize dangerously high levels of radon permeate their homes, children’s schools, nursing homes, or other facilities. While some parts of the country

are more prone to elevated radon levels, the threat is not limited to certain geographic areas. Dangerously high radon levels have been found in every state.<sup>17</sup> Any building—new or old, with or without a basement—may have a radon problem.<sup>18</sup>

State approaches to radon risk reduction vary. While some states have relatively comprehensive policies (i.e., a framework that supports radon testing, disclosure about risk, and mitigation), others do not explicitly regulate this issue at all and most lack a multi-pronged approach.<sup>19</sup> Colorado has one of the most comprehensive approaches: the state requires real estate brokers to disclose known elevated radon levels to prospective buyers or tenants,<sup>20</sup> requires that schools test for radon,<sup>21</sup> supports exposure mitigation in schools,<sup>22</sup> and is one of the few states that provides direct financial assistance to help low-income homeowners mitigate radon problems.<sup>23</sup> In contrast, Virginia lacks disclo-

### ***EPA Map of Radon Zones***



**Caution: Understanding Radon Zones.** Homes and other properties with elevated radon levels exist in all three zones and properties should be tested without regard to geographic location. Individuals should not rely on the map to determine whether or not a property should be tested for radon.

sure requirements of any kind and, while the state requires schools to test for radon, its laws and regulations do not address mitigation.<sup>24</sup>

Many states—including Wyoming, Massachusetts, Missouri, Alabama, and Arkansas—have no statutes or regulations about testing, disclosure, or mitigation in place to protect their residents from radon. This inconsistent patchwork of policies leaves many residents vulnerable to radon exposure without the means to address the risk.

This issue brief provides an overview of three categories of state radon laws and policies:

1. Disclosure requirements, which mandate the disclosure of known elevated radon levels in buildings that are sold, for schools and other facilities such as daycares and nursing homes, or within water supplies.
2. Testing policies, which include both requirements to test for radon in schools, homes, and other types of buildings/facilities, as well as financial support or incentives that states may provide to encourage testing.
3. Mitigation policies, which include requirements to mitigate elevated radon levels as well as financial support or incentives that states may provide to enable mitigation.

Through highlighting best practices and drawing contrasts between state approaches to elevated radon, we seek to identify strong policies that can protect residents of every state from exposure to dangerous levels of radon.

## METHODOLOGY

The 50-state survey focused on policies affecting populations lacking resources or agency to test for and mitigate exposure: children, adults residing in 24-hour care facilities or within correctional institutions, and low-income households. Therefore, the survey examined state laws and regulations relating to radon disclosure, testing, and mitigation.<sup>25</sup>

The survey recognized states as having a disclosure law or regulation only if disclosure is mandatory; notification requirements that provide general warnings about the health risks of radon exposure were not included within this category.<sup>26</sup>

Within the testing category, researchers identified whether state law or regulation addresses radon testing in (a) residential properties, (b) schools, or (c) other buildings. States were identified in the survey as having a testing requirement only if testing was mandatory; states with laws or regulations that only recommend or encourage testing were not included as having testing requirements.

For mitigation requirements, researchers first identified whether a state law or regulation mandates mitigation. If so, researchers noted the required remedial action and whether there is a threshold level of exposure that triggers the mitigation requirement. Researchers explored whether the policy provides incentives to mitigate or other avenues of recourse to reduce exposure. Researchers also noted whether state policies differentiate between sources of exposure, such as air versus water. Lastly, researchers identified policies relating to financing mitigation, including whether a state (a) makes funds available specifically for radon miti-

gation assistance; (b) has programs to assist homeowners in financing home improvements that affect the safety or habitability of their homes; or (c) has programs to assist with financing improvements that affect the safety of schools.

Laws and policies relating to disposal of hazardous waste, which sometimes include radon, were not reviewed; nor were laws and policies primarily relating to professional

licensing—such as radon testing or mitigation certification requirements for individuals or companies. Funding sources directed at environmental hazards writ large and environmental laws not specific to radon were not considered in depth. Finally, as the survey focused on state law and regulation, additional potential sources of related requirements—such as agency guidance documents or private industry practices—are excluded from the review.

# Why Focus on State Law and Policy?

## The Limits of the Federal Radon Program

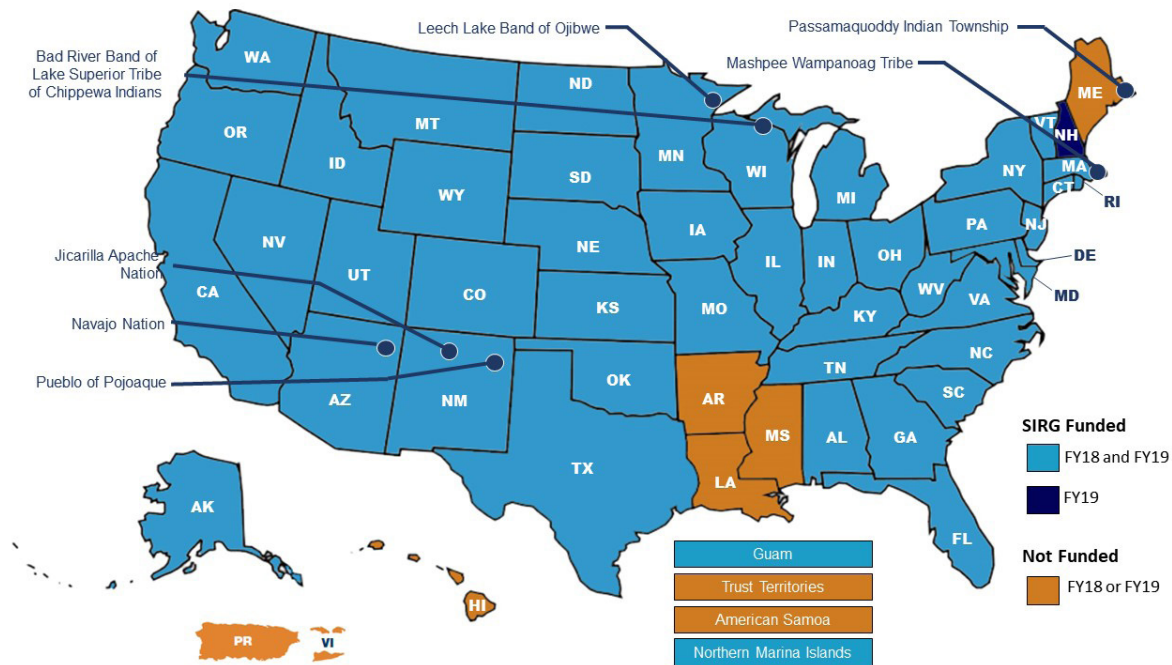
### CLARIFYING THE LIMITS OF THE STATE INDOOR RADON GRANT (SIRG) PROGRAM

The Environmental Protection Agency (EPA) administers a relatively small amount of federal funding annually (approximately \$7.789 million in 2019)<sup>27</sup> to address radon through the State Indoor Radon Grant (SIRG) program. First established in 1988, SIRG helps to support critical public health education and radon

surveillance infrastructure. However, the SIRG program’s authorizing legislation generally prohibits SIRG funding from being used to provide direct financial assistance to homeowners or schools to mitigate high levels of radon (except in a few limited circumstances).<sup>28</sup>

SIRG Funding-Eligible Activities	SIRG Funding-Ineligible Activities
<ul style="list-style-type: none"><li>• Testing for radon and distributing test kits</li><li>• Distributing educational materials</li><li>• Providing training to state or local employees</li><li>• Paying for mitigation demonstrations to show mitigation techniques</li><li>• Funding a toll-free radon hotline</li><li>• Implementing state radon programs, allowing activities such as:<ul style="list-style-type: none"><li>◦ Creating real estate transaction requirements</li><li>◦ Promoting radon-resistant construction techniques</li><li>◦ Creating certification programs for radon testing/mitigation</li><li>◦ Creating programs to disseminate radon information</li></ul></li></ul>	<ul style="list-style-type: none"><li>• Directly providing financial assistance to homeowners or schools, including:<ul style="list-style-type: none"><li>◦ Directly providing mitigation services</li><li>◦ Distributing loans to finance mitigation</li><li>◦ Providing grants or funds to defray the cost of mitigation</li><li>◦ Subsidizing mitigation</li></ul></li></ul>

## Map showing states and tribes that received FY18 and FY19 SIRG funding



While raising radon awareness is important, the low amount of funding and prohibition on direct assistance means SIRG funding, the only dedicated federal support for state radon programs, cannot be used where it may be most needed: to assist low-income

homeowners or under-resourced school districts mitigate a known radon risk. Therefore, most opportunities for subsidized radon mitigation are created, administered, and funded by states.

### Exceptions: SIRG funding can be used for test kits and demonstration projects

SIRG's prohibition on direct financial assistance contains two significant exceptions: states may provide financial assistance to 1) purchase radon measurement devices and 2) put on a "demonstration project."<sup>29</sup> However, costs associated with mitigation demonstrations and the purchase of measurement equipment cannot exceed 50% of the state's total grant award.<sup>30</sup>

4. The radon measurement device exception enables states to provide homeowners and school districts with free radon test kits.<sup>31</sup> Several states that provide testing support, such as Michigan and Pennsylvania, rely in part on SIRG funding to do so.<sup>32</sup>
5. The demonstration project exception allows states to provide direct mitigation services in very limited circumstances. To put on a demonstration project, the state selects a home or school with elevated levels of radon. The state then uses a licensed contractor to install functioning mitigation technology. The demonstration project must provide an example of effective mitigation to the community, furthering knowledge of radon and remediation strategies.<sup>33</sup> In some states, this means that recipients of the demonstration project must be willing to host an "open house" event for local residents to view the final installation product.<sup>34</sup> States may take advantage of the demonstration project exception to address high levels of radon in a particular home or school. The EPA recommends prioritizing low-income households when planning demonstration projects.<sup>35</sup>

# Radon Laws and Policies Throughout the United States

While some federal laws and regulations apply to radon, radon laws and policies are primarily determined by each state. State radon policies vary considerably throughout the country, often in ways that do not correlate with geographical variations in risk of radon exposure. As a result, many people face significant barriers to mitigating—or even knowing about—their risk of radon exposure. The Radon Policy Pyramid shows which states have policies relating to disclosure, testing, and mitigation as of Spring 2020.

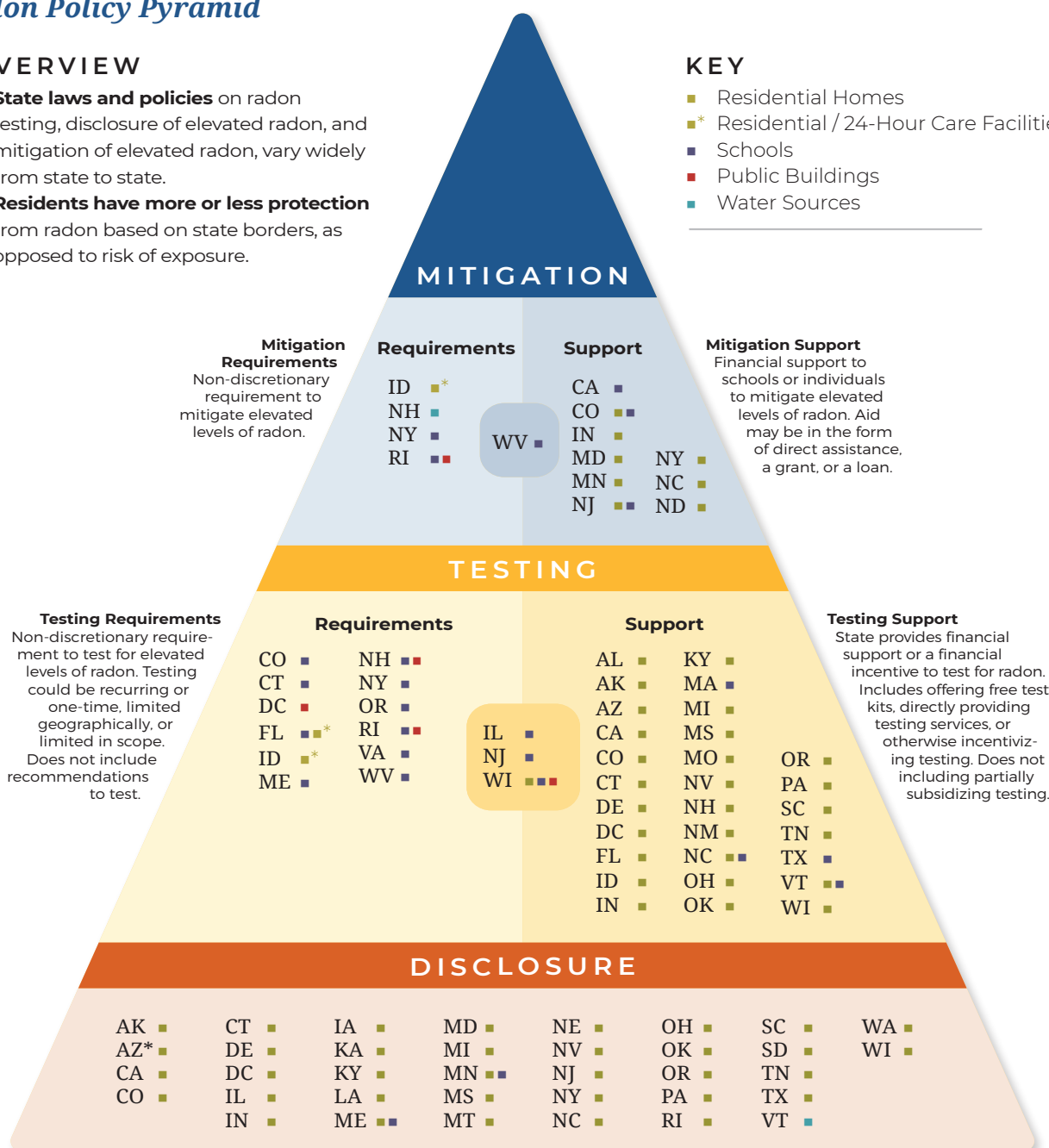
## Radon Policy Pyramid

### OVERVIEW

- **State laws and policies** on radon testing, disclosure of elevated radon, and mitigation of elevated radon, vary widely from state to state.
- **Residents have more or less protection** from radon based on state borders, as opposed to risk of exposure.

### KEY

- Residential Homes
- \* Residential / 24-Hour Care Facilities
- Schools
- Public Buildings
- Water Sources



**Disclosure Requirements** Non-discretionary requirement to disclose the known presence of radon. Disclosure may be to potential real estate purchasers, tenants, parents, or consumers. Does not include more basic requirements to provide a general warning that radon may be present and about the dangers of radon; however, this kind of requirement is a necessary and important component of disclosure laws.

\* Arizona has no statutory requirement to disclose radon but does have case law holding that elevated levels of radon are a "material defect" that must be disclosed in a real estate transaction.

## Radon Policy Pyramid, Explained

	STATE POLICIES INCLUDED IN CATEGORY	STATE INITIATIVES EXCLUDED FROM CATEGORY
<b>Mitigation Requirements</b>	<ul style="list-style-type: none"> <li>Mandatory mitigation when elevated radon is discovered in               <ul style="list-style-type: none"> <li>Schools</li> <li>Rental properties</li> <li>Water sources</li> <li>Public buildings</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Recommendations on how to mitigate</li> <li>Best practices</li> <li>Suggestions</li> <li>Preemptive requirements (e.g., in building codes) to use radon-reduction techniques in new construction               <ul style="list-style-type: none"> <li>Note: While not explored in this report, this kind of requirement plays an important role in radon risk reduction<sup>36</sup></li> </ul> </li> </ul>
<b>Mitigation Support</b>	<ul style="list-style-type: none"> <li>Directly providing mitigation services to individuals or schools</li> <li>Providing funds to install mitigation equipment in one's home or school</li> <li>Providing funds to address general safety issues in one's home</li> <li>Could rely on federal funds like CDBG</li> <li>Distributing loans to install radon mitigation equipment in one's home</li> <li>Distributing loans to address several safety needs at once in one's home</li> </ul>	<ul style="list-style-type: none"> <li>SIRG funding</li> <li>Toll-free hotlines</li> <li>Information pamphlets</li> <li>Demonstration projects</li> <li>Information campaigns meant to raise awareness               <ul style="list-style-type: none"> <li>Poster contests</li> </ul> </li> <li>Requiring schools or school districts to pay for their own mitigation out of the school or school district budget</li> </ul>
<b>Testing Requirements</b>	<ul style="list-style-type: none"> <li>Non-discretionary testing of               <ul style="list-style-type: none"> <li>Schools</li> <li>Rental properties</li> <li>Water sources</li> <li>Public buildings</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Recommendations on how often schools should test for radon</li> <li>Legislation encouraging testing without mandating testing</li> </ul>
<b>Testing Support</b>	<ul style="list-style-type: none"> <li>Free test kits (can be funded by SIRG)</li> <li>Direct testing of homes or schools</li> <li>Legislative exemptions designed to increase testing, such as waiving licensing requirements for school administrators</li> </ul>	<ul style="list-style-type: none"> <li>Subsidized test kits</li> <li>Information pamphlets on how to test or where to obtain a test kit</li> </ul>
<b>Disclosure Requirements</b>	<ul style="list-style-type: none"> <li>Mandatory disclosure to potential real estate buyer that property contains elevated levels of radon</li> <li>Mandatory disclosure to parents of elevated radon in schools</li> <li>Mandatory disclosure to water users of elevated radon in the water</li> <li>Mandatory disclosure to tenants or potential tenants of elevated levels of radon</li> </ul>	<ul style="list-style-type: none"> <li>Standalone generic statements in real estate documents about the dangers or potential hazards of radon (e.g., statements that radon "may" exist on the property, or that elevated levels of radon have been found throughout the state)               <ul style="list-style-type: none"> <li>Note: This kind of requirement is still a necessary and important component of disclosure laws</li> </ul> </li> <li>Statements offering resources to learn more about radon, or recommending readers to contact their local Department of Health</li> <li>Warning individuals at a school or daycare that elevated radon "could" be present</li> <li>Disclosure solely to state departments or officials, rather than the citizens directly affected by the radon levels</li> <li>Merely making test results "available upon request," rather than affirmatively notifying parents, tenants, or consumers of elevated radon</li> </ul>

As shown in the Radon Policy Pyramid, state approaches to addressing radon risk in homes, schools, or other locations fall into three general categories: 1) disclosure requirements, 2) testing policies, and 3) mitigation policies.

## Disclosure Laws

A disclosure law includes any non-discretionary requirement to disclose the known presence of radon.<sup>36</sup> A majority of states have enacted some form of radon disclosure requirement.

A typical disclosure statute requires sellers to notify potential real estate buyers of any radon test results showing elevated radon levels.<sup>37</sup> In some states, the residential real estate disclosure requirement extends to potential tenants or lessees.<sup>38</sup>

Some residential disclosure statutes are stronger than others. In addition to mandating that the known presence of elevated radon levels be disclosed, features of a strong radon disclosure statute include:

### 1. A clear warning comprehensively laying out the risks of radon

Individuals may be unaware of the link between radon and lung cancer, or may not know why the presence of elevated

radon on a property is concerning. A simple “Yes/No” checkbox indicating whether the property owner is aware of elevated radon levels does not provide enough information for potential buyers and others to make an informed decision. A strong disclosure statute requires sellers to notify buyers of the presence of radon and also requires description of the risks of residing in a property with elevated radon levels.

### 2. A mandatory statement that radon could exist on the property

Notably, disclosure statutes only require the admission of actual knowledge, and do not create an affirmative obligation to test for radon.<sup>39</sup> This statutory scheme can have the perverse effect of disincentivizing testing, especially where there is no support for mitigating radon once exposure is discovered. Accordingly, a strong disclosure statute will also require a general warning about the hazards of radon. A mandatory warning, whether there is a known radon hazard or not, can alert people to ask that the property be tested, or spur individuals to test the property on their own after purchase.

### 3. Acknowledgement of radon risks

Real estate documents are often long and complex, containing a myriad of warnings.

States with Real Estate Disclosure Statutes

Alaska	DC	Louisiana	Montana	Ohio	South Dakota
Arizona	Illinois	Maine	Nebraska	Oklahoma	Tennessee
California	Indiana	Maryland	Nevada	Oregon	Texas
Colorado	Iowa	Michigan	New Jersey	Pennsylvania	Washington
Connecticut	Kansas	Minnesota	New York	Rhode Island	Wisconsin
Delaware	Kentucky	Mississippi	North Carolina	South Carolina	

A radon disclosure could easily be lost among the fine print of other hazards like lead, mold, or asbestos. Strong disclosure statutes require some form of active engagement, such as a signature beneath the radon warning. Requiring conscious interaction with the radon warning prevents individuals from overlooking the risk, and property owners from burying the information.

#### ***4. Application to a range of residential real estate transactions***

A strong disclosure statutory scheme ensures radon-related awareness in situations involving both the sale of residential real estate and in rental arrangements.

### ***Policy in Practice***

#### **Residential Real Estate Disclosure Statute: Illinois**

The Illinois Radon Awareness Act<sup>40</sup> contains all four factors indicative of a strong radon disclosure statute.

##### ***1. A clear warning comprehensively laying out the risks of radon***

The Illinois disclosure statute warns that, “Radon, a Class-A human carcinogen, is the leading cause of lung cancer in non-smokers and the second leading cause overall.”

##### ***2. A mandatory statement that radon could exist on the property***

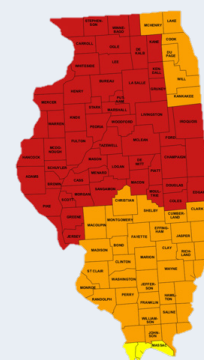
Sellers of residential property must include a general warning about radon in sale documents even if they are not aware of elevated levels on the property.

##### ***3. Acknowledgement of radon risks***

The Illinois statute contains several points at which buyers and sellers must initial the radon-specific warning.

##### ***4. Application to a range of residential real estate transactions***

The Illinois Radon Awareness Act imposes disclosure requirements on sellers of residential property in one section, and on landlords (regarding disclosures to current and prospective tenants) in another.



### **Other Kinds of Disclosure Statutes**

Disclosure requirements are not limited to real estate purchases. Minnesota<sup>41</sup> and Maine<sup>42</sup> require schools that voluntarily test for radon to disclose the results to parents.<sup>43</sup> Vermont requires public water suppliers to report radon test results to consumers.<sup>44</sup> Increasing awareness of radon in the community through these kinds of disclosures can prompt public pressure or spur local efforts to address the problem. In contrast, when schools and other entities are not required to disclose testing results, it can be difficult to confirm that appropriate mitigation is taking place.

# Testing Policies

## TESTING REQUIREMENTS

Fifteen states have a radon testing requirement, which is any non-discretionary requirement to test for elevated levels of radon.<sup>45</sup>

Testing requirements target a range of sites but are primarily focused on schools<sup>46</sup> and public buildings.<sup>47</sup> Outliers include: Wisconsin (charging the Department of Health Services to create a program measuring radon in “homes”),<sup>48</sup> Maine (requiring landlords to test existing rental properties once by 2014 and then every 10 years after when requested by a tenant, and requiring that new rental properties be tested within 12 months of occupancy),<sup>49</sup> Idaho (requiring testing of children’s residential care facilities, such as group homes),<sup>50</sup> and Florida (requiring testing of 24-hour care facilities, such as group homes, nursing homes, and detention centers).<sup>51</sup>

The scope and specificity of testing requirements vary considerably. For example, some states target public schools<sup>52</sup> while others broadly include all public and private school buildings and daycares.<sup>53</sup> Some statutes are generally applicable (e.g., they apply to all schools)<sup>54</sup> while others target entities in counties designated as having high-radon potential.<sup>55</sup> Some testing requirements are recurring,<sup>56</sup> some states only require one-off testing,<sup>57</sup> and some statutes are vague—calling for testing “as appropriate.”<sup>58</sup> A number of states have highly specific statutes that direct where to test, such as ground-level rooms and crawl-spaces<sup>59</sup> or the lowest point used as office space.<sup>60</sup>

Overall, there is a lack of consistency in testing statutes across the country.

## TESTING SUPPORT

Many states (33/50) provide financial support or financial incentives to test for radon. Free radon test kits are the most common form of support. At least 28 states have offered free test kits to residents in the past. However, many of these free test kits are limited in amount and states often run out of supply. Some states only offer free test kits in the month of January to promote radon awareness month.

Some states—such as Texas,<sup>61</sup> New Jersey,<sup>62</sup> Vermont,<sup>63</sup> Massachusetts,<sup>64</sup> and North Carolina<sup>65</sup>—have provided free testing to schools and school districts in the past.

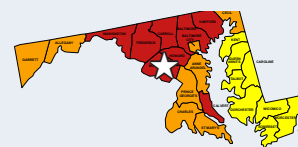
Other states do not provide testing support but take other actions they hope will encourage radon testing. For example, Illinois school employees are permitted to test for radon after they take an internet-based training course.<sup>66</sup> This allows school administrators to test for radon in their district without engaging a licensed radon measurement contractor as would otherwise be required. While not engaging a licensed contractor may reduce the cost of radon testing, this approach may also have unintended consequences. Radon certification and licensing requirements exist to ensure a baseline of qualified testing. By removing this safeguard, a state runs the risk of sub-standard testing and possibly missing elevated radon levels.

States Offering Free Test Kits

Alabama	Connecticut	Indiana	Nevada	Ohio	Tennessee
Alaska	Delaware	Kentucky	New Hampshire	Oklahoma	Vermont
Arizona	DC	Michigan	New Mexico	Oregon	Wyoming
California	Florida	Mississippi	North Carolina	Pennsylvania	
Colorado	Idaho	Missouri	North Dakota	South Carolina	

## Policy in Practice

### Testing as Part of Residential Real Estate Transactions: Montgomery County, MD



Under county law, single-family homes (subject to certain exceptions) must be tested for radon before a sale is completed.<sup>67</sup> Under the law, the seller must perform the test unless the buyer chooses to. Both parties must receive a copy of the results.<sup>68</sup>

## Mitigation Policies

### MITIGATION REQUIREMENTS

Only five states explicitly require mitigation for high levels of radon. Most of these mitigation requirements are either limited in scope, vague (and therefore difficult to enforce), or both. For example, New Hampshire only requires mitigation where “large groundwater withdrawal causes a water source to develop radon in excess of 2,000 picocuries per liter.”<sup>69</sup> While the policy is a step in the right direction, it does not require any measures to address naturally occurring elevated radon levels. In New York, school districts are directed to “take responsibility to be aware of the geological potential for high levels of radon in schools and to test and mitigate as appropriate.”<sup>70</sup> The requirement lacks benchmarks (e.g. there is no requirement to mitigate radon levels above a certain pCi/L threshold) as well as sufficient details to hold school districts accountable (e.g. information on how often schools should test).

### MITIGATION SUPPORT

Only a handful of states (10/50) offer mitigation support.<sup>71</sup> Mitigation support includes any financial support to schools or individuals to mitigate elevated levels of radon and falls into three main categories: federal funds, state loan programs, and state grant programs.

### 1. Federal funds

First, some states rely on federal funds to support mitigation. As stated previously, SIRG funds may not be used to provide direct financial aid to individual homeowners or schools.<sup>72</sup> Most states use SIRG funds to create “radon programs” that disseminate information and educate the public on radon hazards, but do not actually support mitigation. However, some other federal funds can be used to provide direct financial aid to individuals. The federal programs listed in Federal Funding Programs (see page 17) are not specifically directed at radon, but their broad funding parameters allow states to make these funds available for radon mitigation. Some states are currently using federal funds in this way.

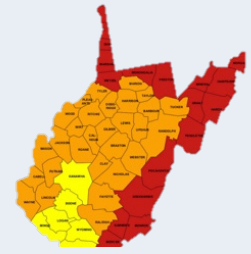
### 2. State loan programs

Second, several states use loan programs to help homeowners pay for radon mitigation. Currently, no state has a loan program specifically dedicated to mitigating radon. However, several states, including Maryland,<sup>73</sup> Minnesota,<sup>74</sup> and North Dakota,<sup>75</sup> have general home improvement loans that can be used to address any home safety concern. These loans can be used for radon mitigation but also cover other environmental hazards like lead or asbestos.

## *Policy in Practice*

### **Radon Mitigation in Schools: West Virginia**

West Virginia supports radon mitigation in schools through four primary levers:



#### **1. Mitigation requirement is supported by a testing requirement**

In West Virginia, testing is required in new public school buildings within a year of the building being occupied and every five years after.<sup>76</sup> Where unacceptable elevated levels of radon are identified, the mitigation requirement is triggered. The pairing of the requirements ensures that mitigation cannot be avoided by disregarding testing.

#### **2. Statute unambiguously directs entities to mitigate elevated radon, leaving no room for discretionary enforcement**

Under W. Va. Code Ann. § 18-9E-3, if elevated radon is found in a school, mitigation “shall” take place.<sup>77</sup> This language prevents inconsistent or discretionary decision-making by the school administrators related to mitigation.

#### **3. State provides a funding source to support mitigation**

The School Building Authority of West Virginia maintains a School Major Improvement Fund that can provide needs-based grants to carry out facility improvements that cost between \$50,000 to \$100,000. This fund can be used to improve facilities to meet all applicable codes, which explicitly includes compliance with radon risk reduction requirements.<sup>78</sup> Providing a source of funding for radon remediation helps to ensure that schools do not avoid mitigation for budgetary reasons.

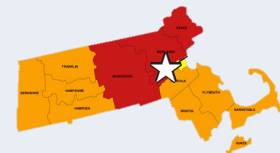
#### **4. Statute provides a concrete standard that mitigation must achieve**

Under W. Va. Code Ann. § 18-9E-3, industry techniques must be used to reduce radon levels “below the level determined acceptable by the school building authority.”<sup>79</sup> By requiring the school building authority to set a concrete level, the statute ensures tangible results that may be proven and verified by independent parties, such as concerned parents.

## *Policy in Practice*

### **Deployment of Federal Funds: Waltham, MA**

The city of Waltham, Massachusetts uses the CDBG program to fund the Housing Rehabilitation Program, which provides 0% interest deferred loans to address environmental hazard removal such as lead, asbestos, and radon.<sup>80</sup>



## Federal Funding Programs

Program	Funding Source	Description
Community Development Block Grant (CDBG) <sup>81</sup>	Department of Housing and Urban Development (HUD)	<p>States and localities may use CDBG funding to support decent housing and a suitable living environment for low- and moderate-income persons.<sup>82</sup></p> <p>New Jersey<sup>83</sup> and Indiana<sup>84</sup> use CDBG funds to distribute grants to low-income individuals to repair any housing issues that threaten the safety and habitability of the home. Some cities, like Waltham, Massachusetts, have comparable municipal programs.<sup>85</sup></p> <p>Although most CDBG programs are not specifically aimed at radon, the broad nature of the programs mean that homeowners can use CDBG funding to address radon.</p>
Home Investments Partnership Program (HOME) <sup>86</sup>	Department of Housing and Urban Development (HUD)	<p>States and localities may use HOME funds to build or rehabilitate housing.<sup>87</sup></p> <p>Some state agencies, like the New York State Department of Health, have specifically recommended the use of HOME funds for radon mitigation.<sup>88</sup></p>
Section 203(k) insurance program <sup>89</sup>	Department of Housing and Urban Development (HUD)	<p>Homeowners may apply for a limited 203(K) loan to finance the elimination of health and safety hazards such as radon.<sup>90</sup></p>
Section 504 Home Repair program, also known as the Single Family Housing Repair Loans & Grants	Department of Agriculture (USDA)	<p>Section 504 provides loans to low-income homeowners and grants to elderly homeowners who seek to repair, improve, or modernize their home.<sup>91</sup></p> <p>Section 504 may be used to remove health and safety hazards from a home, like radon.</p>
Section 502 Direct Single Family Loan Program	Department of Agriculture (USDA)	<p>Section 502 assists low-income applicants in obtaining decent, safe and sanitary housing in eligible rural areas through loan payment assistance.<sup>92</sup></p> <p>Section 502 may be used towards repairs and improvements that will remove health and safety hazards, such as radon.</p>

State loan programs vary in structure. Some states, such as Maryland, choose to finance the loans themselves,<sup>93</sup> while others, such as Minnesota and North Dakota, partner with various lending institutions.<sup>94</sup>

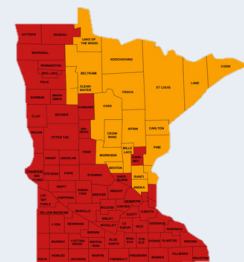
Despite the variation, the loan programs have several aspects in common. All en-

vironmental hazard-oriented loans are either low interest<sup>95</sup> or 0% deferred interest.<sup>96</sup> Moreover, all states require loan applicants to fall below a certain income level. Lastly, most stipulate that loans may only be made when financing is not otherwise available from private lenders.<sup>97</sup>

### *Policy in Practice*

#### **Home Improvement Loan Program: Minnesota**

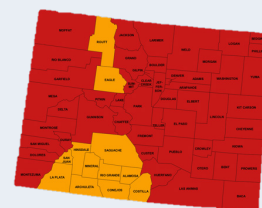
The Minnesota Rehabilitation Loan Program/Emergency Loan Program (RLP/ELP) creates deferred, 0% interest loans for low-income people.<sup>98</sup> The loans may be used to finance home improvements that affect the safety, habitability, energy efficiency, or accessibility of their homes.<sup>99</sup> This broad definition includes radon, along with lead and mold remediation, electrical and plumbing issues, and weatherization concerns.<sup>100</sup> Minnesota Housing partners with lending institutions (mainly local nonprofits or government entities) to provide these loans.<sup>101</sup> As long as individuals comply with the terms of the loan (namely, remaining in the homes for the duration of the loan), the loan is forgiven at maturation.<sup>102</sup> In FY2017, Minnesota Housing supported mitigation of high radon levels for 260 families through loans.<sup>103</sup>



### *Policy in Practice*

#### **Radon Mitigation Grant Program: Colorado**

The Colorado Low-Income Radon Mitigation Assistance (LIRMA) program provides financial assistance to low-income homeowners to install radon mitigation systems.<sup>104</sup> LIRMA is funded by the Hazardous Substance Response Fund, which relies on a solid waste tax.<sup>105</sup> LIRMA funds mitigation for approximately 100 homes in Colorado each year, split roughly 50/50 between urban and rural populations.<sup>106</sup>





### 3. State grant programs

Third, a handful of states offer direct financial assistance to mitigate radon. These programs vary considerably in structure, target demographic, funding, and implementation. States may offer financial assistance to individual homeowners,<sup>107</sup> to schools,<sup>108</sup> or both.<sup>109</sup> In addition, states may offer financial assistance to mitigate radon specifically,<sup>110</sup> or may offer grants to correct environmental hazards in general.<sup>111</sup> New York<sup>112</sup> and Colorado<sup>113</sup> offer grants to mitigate radon specifically.

Indiana,<sup>114</sup> Minnesota,<sup>115</sup> and New Jersey<sup>116</sup> all offer individual homeowners grants to correct environmental safety hazards in their homes. These grants may be used to address any hazard that adversely affects the occupants' health, such as radon, lead, or asbestos.

Some states focus on offering support to schools or school districts. This support may take the form of generic grants to schools to address any environmental hazard or improve school safety, or a specific grant to mitigate radon risk.

States Offering Support to Address Generic Health Hazards	States Offering Support to Mitigate Elevated Radon
California <sup>117</sup>	New York <sup>120</sup>
Colorado <sup>118</sup>	Vermont <sup>121</sup>
New Jersey <sup>119</sup>	West Virginia <sup>122</sup>

# Analysis

Based on the 50-state survey, CHLPI identified three trends in state radon schemes.

## ***1. State responses to radon are not always consistent with geographic level of risk***

In many states, the policy response to radon is not correlated with the level of naturally-occurring risk identified by the EPA. Some states with more comprehensive radon schemes, like Florida, have few or no geographic areas that are at high risk for elevated radon.<sup>123</sup> On the other hand, some states with much higher levels of risk, such as South Dakota, have virtually no protections.<sup>124</sup> The ability of individuals, especially those lacking financial resources, to discover and remediate a radon risk thus frequently depends on state residency—not on the degree of exposure. For example, the majority of land in both Colorado and Wyoming falls into the red zone of the EPA’s map, meaning they are more likely to have dangerous indoor radon levels of 4 pCi/L or above.<sup>125</sup> Yet someone in Colorado could discover this threat through radon disclosure requirements, testing requirements in schools, and testing support for homeowners, while Wyoming only offers testing support for homeowners. Moreover, residents of Colorado might take advantage of mitigation support for schools and homeowners to address high levels of radon, while a resident of Wyoming has access to neither. Residents in neighboring states therefore have significantly different tools and resources to address radon exposure, despite facing the same level of risk.

## ***2. Radon policies are often narrowly crafted to focus on potential exposure in one type of indoor environment, with gaps that can leave residents vulnerable***

Radon policies are narrowly crafted. Residential disclosure may be tied to the sale of residential real estate but not landlord-tenant arrangements. Testing may be required in one type of site (e.g., public schools) but not another site with similar characteristics (e.g., private schools). The few existing mitigation requirements are limited in scope to a highly specific setting (e.g., children’s residential care facilities) or occurrence (e.g., when an increase in radon levels is caused by a large groundwater withdrawal).

The absence of more inclusive and comprehensive approaches means that many residents are excluded from state-sponsored radon risk reduction efforts.

## ***3. Disclosure, testing, and mitigation measures do not align***

A comprehensive radon scheme first alerts residents of risk via strong testing and disclosure policies, and then supports risk remediation through mitigation policies. However, most states fail to address radon in this systematic way. In some states, disclosure of elevated radon levels is mandatory—but only if someone elects to conduct testing. Testing may be required in schools, but if mitigation is not mandatory and there is no obligation to disclose test results to parents, schools

may elect not to take action and leave parents in the dark. Further, state policies that increase radon awareness through testing- and disclosure-related initiatives are rarely paired with policies that require or facilitate mitigation. As a result, whether state policies target radon exposure in schools, homes, or some other setting, it is typical that residents are only partially protected against risk by state policy. In several states, there are no such policies in place.

Nationwide, inconsistent radon disclosure laws and testing policies mean many people are not aware of potential exposure to the hazardous gas. Inconsistent mitigation policies mean many people that are aware

of their risk are unable to remediate the issue. Low-income communities are disproportionately negatively impacted by weak statutory schemes because of cost barriers. In addition, people with less agency over the conditions of places in which they live—such as youth in group homes or other residential facilities, people in assisted living facilities, and people who are incarcerated—are disproportionately vulnerable in the absence of statutory schemes that target a broad range of entities. A more equitable approach to radon must include 1) more comprehensive disclosure and testing policies to ensure all residents are equally informed of radon threats, and 2) more comprehensive mitigation policies to ensure all residents are able to lower the risk of developing lung cancer.




# Comprehensive Radon Protection Laws and Policies

## CREATING A COMPREHENSIVE PROGRAM

While every state has room for improvement, some states are leading the way in implementing radon laws and policies that protect and support residents. The following table describes laws and programs implemented around the country. States can model improvements in their radon protection schemes on these policies, including each of the following elements to form a comprehensive radon program. A model radon regulatory program has each of the following:

1. A radon disclosure requirement that requires communication of known risks, a clear and explicit warning where actual risk is unknown, and an affirmative acknowledgment of the information by the recipient of the disclosure.
2. Requirements to test in (at minimum) rental properties, residential/24-hour care facilities, schools, and public buildings, and as part of residential transactions.
3. Testing support for individuals or municipalities where testing cost is a barrier.
4. Required mitigation of elevated radon levels.
5. Support for mitigation where cost is a barrier.

A Model State's Comprehensive Radon Program	
DISCLOSURE LAW	<div><div><div><b>Illinois</b></div><div>A strong disclosure statute contains these three factors, present in the Illinois Radon Awareness Act,<sup>126</sup> that promote radon awareness and risk reduction.</div><div><div><div><b>1. A clear warning comprehensively laying out the risks of radon</b></div><div>The Illinois disclosure statute warns that, "Radon, a Class-A human carcinogen, is the leading cause of lung cancer in non-smokers and the second leading cause overall."</div></div><div><div><b>2. A mandatory statement that radon could exist on the property</b></div><div>Sellers of residential property must include a general warning about radon in sale documents even if they are not aware of elevated levels on the property.</div></div><div><div><b>3. Acknowledgement of radon risk</b></div><div>The Illinois statute contains several points at which buyers and sellers must initial the radon-specific warning.</div></div><div>In addition, <b>for residential real estate disclosures, disclosure should be mandated in both sale and lease arrangements.</b> The Illinois Radon Awareness Act imposes disclosure requirements on sellers of residential property and on landlords (regarding disclosures to current and prospective tenants).</div></div><div></div></div></div>

**TESTING  
REQUIREMENT**

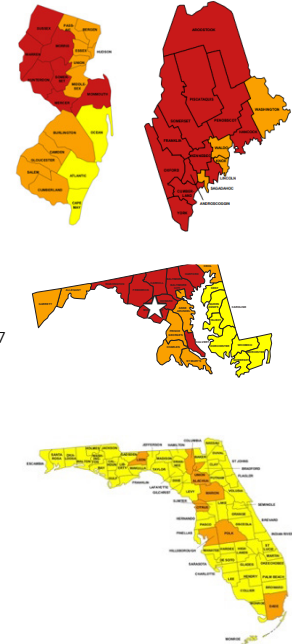
**Florida, Maine, New Jersey, Montgomery County (Maryland)**

An ideal testing program:

**1. Mandates testing for a range of types of buildings/facilities**

Florida requires all public and private school buildings, 24-hour care facilities, and daycares within “Intermediate” or “Elevated Radon Potential” zones to test for radon. 24-hour care facilities are, among other types of facilities, nursing homes, foster homes, assisted living facilities, mental health facilities, correctional institutions, detention centers, and pre-release centers.<sup>127</sup>

In terms of models for requirements to test in additional sites, Maine law requires testing of rental properties, setting forth specific requirements for both properties in existence at the time of the law’s enactment and new properties.<sup>128</sup> Montgomery County, Maryland requires radon testing as part of many residential real estate transactions.<sup>129</sup>



**2. Requires recurring testing to identify dangerous developments in a timely manner**

Both the Florida and Maine frameworks have room for improvement. The Florida statute lays out detailed testing requirements and specifications; however, the state only requires an initial test within a year of habitability, and a follow-up test five years later. Additional testing is only required if significant structural changes occur.<sup>130</sup> Similarly, in Maine, recurring testing is only required upon request by a tenant.<sup>131</sup> New Jersey, by contrast, requires all licensed daycares to test for radon once every five years.<sup>132</sup> New Jersey’s approach is more protective.

**TESTING  
SUPPORT**

**Ohio**

A strong testing support program offers radon tests throughout the year, does not limit free test kits to residents of certain counties, and does not run out of stock quickly.

Ohio offers free test kits to any resident year-round, regardless of income level.



**MITIGATION  
REQUIREMENT**

**West Virginia**

A strong mitigation requirement mandates radon remediation to at least less than 4 pCi/L.

West Virginia's school mitigation scheme contains some important elements to ensure efficient and prompt mitigation. These elements are explored below.



**1. Mitigation requirement is supported by a testing requirement**

Mitigation requirements should be supported by a testing requirement. In West Virginia, testing is required in new public school buildings within a year of the building being occupied and every five years after.<sup>133</sup> Where unacceptable elevated levels of radon are identified, the mitigation requirement is triggered. The pairing of the requirements ensures that mitigation cannot be avoided by disregarding testing.

Ideally, testing and mitigation would be required in all schools. Additionally, it is important for a statute to set forth a firm timeline within which mitigation must occur following discovery of elevated radon levels. Ideally, testing and mitigation would take place prior to the occupancy of high-radon areas.

**2. Statute unambiguously directs entities to mitigate**

Statute unambiguously directs entities to mitigate elevated radon, leaving no room for discretionary enforcement.

Under W. Va. Code Ann. § 18-9E-3, if elevated radon is found in a school, mitigation “shall” take place.<sup>134</sup> This language prevents inconsistent or discretionary decision-making by the school administrators related to mitigation.

**3. State provides a funding source to support mitigation**

The School Building Authority of West Virginia maintains a School Major Improvement Fund that can provide needs-based grants to carry out facility improvements that cost between \$50,000 to \$100,000. This fund can be used to improve facilities to meet all applicable codes, which explicitly includes compliance with radon risk reduction requirements.<sup>135</sup>

**4. Statute provides a concrete standard that mitigation must achieve**

Under W. Va. Code Ann. § 18-9E-3, mitigation must occur so that levels are “below the level determined acceptable by the school building authority.”<sup>136</sup>

West Virginia law defers to the school building authority to set acceptable levels of radon exposure; however, EPA action levels should be used as a baseline because of the EPA's expertise on the topic. State and local authorities may have the flexibility to choose a more protective threshold but should not have the flexibility to set a less protective one.

**MITIGATION  
SUPPORT**

**Colorado**

A strong mitigation support program offers grants directly to homeowners, schools, and other target entities to remediate radon threats.

The Colorado Low-Income Radon Mitigation Assistance (LIRMA) program provides financial assistance to low-income homeowners to install radon mitigation systems.<sup>137</sup>

The Colorado Building Excellent Schools Today (BEST) fund can be used by school districts to address safety hazards or health concerns at existing public schools, including radon.<sup>138</sup> BEST draws funding from the State Land Trust, Colorado Lottery, Matching Funds, Interest on Funds, and the Marijuana Excise Tax.<sup>139</sup>



## WHAT MORE CAN YOUR STATE DO?

Every state can do more to protect residents from radon. The table below highlights the categories of laws and policies identified in different states. Refer back to the Radon Policy Pyramid, Explained (page 11) to see the types of initiatives included in the scope of research.

### KEY

- R** Residential Homes
- R\*** Residential/24-hour Care Facilities
- S** Schools
- PB** Public Buildings
- W** Water Sources

STATE	DISCLOSURE REQUIREMENT	TESTING REQUIREMENT	TESTING SUP-PORT	MITIGATION REQUIREMENT	MITIGATION SUPPORT
Alabama			R		
Alaska	R		R		
Arizona	R		R		
Arkansas					
California	R		R		S
Colorado	R	S	R		R/S
Connecticut	R	S	R		
District of Columbia	R	PB	R		
Delaware	R		R		
Florida		R*/S	R		
Georgia					
Hawaii					
Idaho		R*	R	R*	
Illinois	R	S	S		
Indiana	R		R		R
Iowa	R				
Kansas	R				
Kentucky	R		R		
Louisiana	R				
Maine	R/S	R			
Maryland	R				R
Massachusetts			S		
Michigan	R		R		
Minnesota	R/S				R

STATE	DISCLOSURE REQUIREMENT	TESTING REQUIREMENT	TESTING SUP- PORT	MITIGATION REQUIREMENT	MITIGATION SUPPORT
Mississippi	R		R		
Missouri			R		
Montana	R				
Nebraska	R				
Nevada	R		R		
New Hampshire		PB	R	W	
New Jersey	R	S	S		R/S
New Mexico			R		
New York	R	S		S	R
North Carolina	R		R/S		R
North Dakota			R		R
Ohio	R		R		
Oklahoma	R		R		
Oregon	R	S	R		
Pennsylvania	R		R		
Rhode Island	R	S/PB		S/PB	
South Carolina	R		R		
South Dakota	R				
Tennessee	R		R		
Texas	R		S		
Utah					
Vermont	W		R/S		
Virginia		S			
Washington	R				
West Virginia		S		S	S
Wisconsin	R	R/S/PB	R/S/PB		
Wyoming			R		



## Conclusion and Future Directions

Radon is a serious health threat to people throughout the country, but strong laws and policies can help to reduce the risk of radon exposure. To protect residents from radon, states should focus their efforts on:

### CREATING COMPREHENSIVE AND SYSTEMATIC STATE RADON SCHEMES

States should create comprehensive radon schemes by strengthening existing laws and regulations, enacting new laws and regulations where necessary, and developing financial assistance programs to help residents with testing and mitigation. A comprehensive radon scheme accomplishes two main goals:

#### 1. Identifying exposure

**Testing policies** ensure sources of radon exposure are identified. States should impose recurring testing requirements in key locations such as schools, rental properties, and residential care facilities, and provide adequate testing support for low-income homeowners and public buildings.

**Disclosure requirements** further ensure residents know about their risk of exposure to radon. In addition to requiring disclosure of known elevated levels of radon, states should mandate that all residential real estate transactions (including sale and lease arrangements) include clear and understandable warnings that inform of the dangers of radon.

## 2. Addressing exposure

**Mitigation policies** ensure that radon risks, once known, can be promptly addressed. Mitigation requirements in schools and mitigation support for homeowners ensure that residents have the financial resources to remediate the threat of radon once known.

## PRIORITIZING POPULATIONS MORE LIKELY TO BE EXPOSED WITHOUT RECOURSE

States should ensure that protections are in place for residents with less control over exposure risk reduction and that resources are directed towards helping low-income residents reduce risk. For example:

1. Many existing disclosure requirements apply only to real estate buyers; state policies should require disclosure of known of known risks to renters and recurrent testing of rental properties.
2. Incorporating testing and mitigation requirements into the licensing requirements for a range of facilities, such as residential/24-hour care facilities, expands protections for residents with less control over risk reduction in their own lives.

3. In designing testing and mitigation requirements for locations such as schools and public buildings, states should direct support for these services to less affluent areas first.

## DEVELOPING AND PROMOTING CREATIVE FUNDING PLANS

States should be creative in how they fund, support, and otherwise promote radon risk reduction initiatives. States may use and promote the use of federal funds to pursue comprehensive radon schemes: SIRG funds may be used towards testing support and demonstration projects; CDBG funds and HOME funds may be utilized to mitigate radon; and residents may use HUD and USDA loans to mitigate radon.

Through implementing comprehensive radon policies, states can improve the health and well-being of their residents. Effective state approaches to radon may reduce the prevalence of lung cancer, decrease future health expenditures, and most importantly, save lives. States should take bold action to ensure that they have laws and policies that are specific and comprehensive to protect all residents, especially the most vulnerable, from the risks of radon exposure.

## ENDNOTES

1. See *Health Risk of Radon*, U.S. ENVTL. PROTECTION AGENCY, <https://www.epa.gov/radon/health-risk-radon>.
2. See *Health Risk of Radon*, U.S. ENVTL. PROTECTION AGENCY, <https://www.epa.gov/radon/health-risk-radon>.
3. See U.S. ENVTL. PROTECTION AGENCY, A CITIZEN'S GUIDE TO RADON 4 (Dec. 2016), [https://www.epa.gov/sites/production/files/2016-12/documents/2016\\_a\\_citizens\\_guide\\_to\\_radon.pdf](https://www.epa.gov/sites/production/files/2016-12/documents/2016_a_citizens_guide_to_radon.pdf).
4. See U.S. ENVTL. PROTECTION AGENCY, A CITIZEN'S GUIDE TO RADON 7 (Dec. 2016), [https://www.epa.gov/sites/production/files/2016-12/documents/2016\\_a\\_citizens\\_guide\\_to\\_radon.pdf](https://www.epa.gov/sites/production/files/2016-12/documents/2016_a_citizens_guide_to_radon.pdf).
5. See U.S. ENVTL. PROTECTION AGENCY, A CITIZEN'S GUIDE TO RADON 3 (Dec. 2016), [https://www.epa.gov/sites/production/files/2016-12/documents/2016\\_a\\_citizens\\_guide\\_to\\_radon.pdf](https://www.epa.gov/sites/production/files/2016-12/documents/2016_a_citizens_guide_to_radon.pdf).
6. See U.S. ENVTL. PROTECTION AGENCY, A CITIZEN'S GUIDE TO RADON 7 (Dec. 2016), [https://www.epa.gov/sites/production/files/2016-12/documents/2016\\_a\\_citizens\\_guide\\_to\\_radon.pdf](https://www.epa.gov/sites/production/files/2016-12/documents/2016_a_citizens_guide_to_radon.pdf).
7. See U.S. ENVTL. PROTECTION AGENCY, A CITIZEN'S GUIDE TO RADON 12 (Dec. 2016), [https://www.epa.gov/sites/production/files/2016-12/documents/2016\\_a\\_citizens\\_guide\\_to\\_radon.pdf](https://www.epa.gov/sites/production/files/2016-12/documents/2016_a_citizens_guide_to_radon.pdf).
8. See, e.g., Welcome page, RADONOVA, <https://radonova.com/> (last visited Mar. 22, 2020); Welcome page, AirCHECK, <https://www.radon.com/> (last visited Mar. 22, 2020).
9. See Kan. State Univ., *Reducing Radon in Your Home*, NATIONAL RADON PROGRAM SERVICES, <https://sosradon.org/reducing-radon-in-your-home>. Fan warranties are typically 5 years, with life spans from 10-15 years.
10. See U.S. ENVTL. PROTECTION AGENCY, HOME BUYER'S AND SELLER'S GUIDE TO RADON 3 (Mar. 2018), <https://www.epa.gov/sites/production/files/2015-05/documents/hmbuygud.pdf>; U.S. ENVTL. PROTECTION AGENCY, A CITIZEN'S GUIDE TO RADON 4 (Dec. 2016), [https://www.epa.gov/sites/production/files/2016-12/documents/2016\\_a\\_citizens\\_guide\\_to\\_radon.pdf](https://www.epa.gov/sites/production/files/2016-12/documents/2016_a_citizens_guide_to_radon.pdf).
11. See U.S. ENVTL. PROTECTION AGENCY, HOME BUYER'S AND SELLER'S GUIDE TO RADON 3 (Mar. 2018), <https://www.epa.gov/sites/production/files/2015-05/documents/hmbuygud.pdf>.
12. See U.S. ENVTL. PROTECTION AGENCY, A CITIZEN'S GUIDE TO RADON 4 (Dec. 2016), available at [https://www.epa.gov/sites/production/files/2016-12/documents/2016\\_a\\_citizens\\_guide\\_to\\_radon.pdf](https://www.epa.gov/sites/production/files/2016-12/documents/2016_a_citizens_guide_to_radon.pdf).
13. See *Health Risk of Radon*, U.S. ENVTL. PROTECTION AGENCY, <https://www.epa.gov/radon/health-risk-radon>.
14. See U.S. ENVTL. PROTECTION AGENCY, A CITIZEN'S GUIDE TO RADON 11-13, 16 (Dec. 2016), [https://www.epa.gov/sites/production/files/2016-12/documents/2016\\_a\\_citizens\\_guide\\_to\\_radon.pdf](https://www.epa.gov/sites/production/files/2016-12/documents/2016_a_citizens_guide_to_radon.pdf).
15. See, e.g., RADON TASK FORCE OF THE ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM, RADON MONITORING AND DATA COLLECTION IN THE UNITED STATES 4 (2014), <https://ephtracking.cdc.gov/docs/RadonMonitoring-DataCollection-US.pdf>.
16. See WORLD HEALTH ORGANIZATION, WHO HANDBOOK ON INDOOR RADON: A PUBLIC HEALTH PERSPECTIVE (2009); Brian J. Smith et al., *Iowa Radon Leukaemia Study: A Hierarchical Population Risk Model for Spatially Correlated Exposure Measured with Error*, 26 STAT. MED. 4619, 4636-38 (2007).
17. See U.S. ENVTL. PROTECTION AGENCY, A CITIZEN'S GUIDE TO RADON 4 (Dec. 2016), [https://www.epa.gov/sites/production/files/2016-12/documents/2016\\_a\\_citizens\\_guide\\_to\\_radon.pdf](https://www.epa.gov/sites/production/files/2016-12/documents/2016_a_citizens_guide_to_radon.pdf).
18. See U.S. ENVTL. PROTECTION AGENCY, A CITIZEN'S GUIDE TO RADON 4 (Dec. 2016), [https://www.epa.gov/sites/production/files/2016-12/documents/2016\\_a\\_citizens\\_guide\\_to\\_radon.pdf](https://www.epa.gov/sites/production/files/2016-12/documents/2016_a_citizens_guide_to_radon.pdf).
19. Many states lack laws and regulations that focus on radon from the perspective of public health and safety. Our focus, in both the 50-state survey and this issue brief, is on laws and policies that affect how residents might know about and be protected from radon and radon-related health risks. Therefore, the survey focused on state laws and policies relating to radon disclosure, testing, and mitigation; laws and policies relating to certification requirements for radon testing or mitigation were not reviewed, nor were laws and policies relating to disposal of hazardous waste and environmental laws of a more general focus. For more on the scope of this brief, see Methodology on page 7.
20. COLO. REV. STAT. § 12-10-404.
21. 6 COLO. CODE REGS. § 1010-6.8.1.
22. COLO. REV. STAT. §§ 7-116-101-43.7-22; see also COLO. DEP'T OF EDUC., BUILDING EXCELLENT SCHOOLS TODAY (BEST) ANNUAL REPORT 30, 38, 81, 100 (Feb. 2017), <https://www.cde.state.co.us/cdefinance/ccabestlegislative-reportfy15-16>.
23. COLO. REV. STAT. § 12-10-404.
24. See VA. CODE ANN. § 138-22.1.
25. Researchers searched databases for relevant state laws and proceeded to search state regulations only if such laws were not found or if additional information was required to understand the law.
26. See, e.g., 420 ILL. COMP. STAT. 46/10 (requiring sellers of residential real property to provide buyers with a boilerplate statement warning that the property may present exposure to dangerous levels of indoor radon gas that may increase the risk of developing lung cancer and encouraging buyers to test for radon).
27. Originally Congress allocated \$8.051 million, which was cut to \$7.789 million after rescission. See H.R. REP. NO. 115-765, 67. For a summary of annual funding since 2011, see U.S. ENVTL. PROTECTION AGENCY, 2011-2019 SIRG FUNDING REGIONAL ALLOCATION (Mar. 2019), [https://www.epa.gov/sites/production/files/2018-05/documents/may\\_2018\\_sirg\\_regional\\_allocation\\_1.pdf](https://www.epa.gov/sites/production/files/2018-05/documents/may_2018_sirg_regional_allocation_1.pdf).
28. 15 U.S.C. § 2666 (i)(4) ("A State may use funds received under this section for financial assistance to persons only to the extent such assistance is related to demonstration projects or the purchase and analysis of radon measurement devices."). SIRG funds may not be used to provide grants, loans, or direct mitigation services to homeowners or schools. However, the funds may be used to fund a variety of tangential mitigation services such as creating toll-free hotlines, holding demonstration projects to display different kinds of mitigation techniques, distributing test kits, or creating informational pamphlets to promote radon education.
29. 15 U.S.C. § 2666 (i)(4).
30. 15 U.S.C. § 2666 (i)(2).
31. See U.S. ENVTL. PROTECTION AGENCY, STATE AND TRIBAL INDOOR RADON GRANTS PROGRAM GUIDANCE AND HANDBOOK 27 (Jan. 2005), [https://www.epa.gov/sites/production/files/2014-08/documents/guidance\\_and\\_handbook.pdf](https://www.epa.gov/sites/production/files/2014-08/documents/guidance_and_handbook.pdf).
32. See U.S. ENVTL. PROTECTION AGENCY, OVERVIEW OF EPA'S STATE INDOOR RADON GRANTS PROGRAM: A FOCUS ON ACTIVITIES CONDUCTED DURING FISCAL YEARS 2017-2018 5-6 (Apr. 2019), [https://www.epa.gov/sites/production/files/2019-04/documents/sirg\\_fy17\\_house\\_report\\_summary\\_final.pdf](https://www.epa.gov/sites/production/files/2019-04/documents/sirg_fy17_house_report_summary_final.pdf).
33. See U.S. ENVTL. PROTECTION AGENCY, STATE AND TRIBAL INDOOR RADON GRANTS PROGRAM GUIDANCE AND HANDBOOK 21 (Jan. 2005), [https://www.epa.gov/sites/production/files/2014-08/documents/guidance\\_and\\_handbook.pdf](https://www.epa.gov/sites/production/files/2014-08/documents/guidance_and_handbook.pdf).
34. See, e.g., KANSAS RADON PROGRAM, RADON AWARENESS AND RISK REDUCTION MINIGRANT PROGRAM 2-4, available at [https://kansas-radonprogram.org/files/kansasradon-program/2014\\_SIRG%202024\\_mini%20grant%20application.pdf](https://kansas-radonprogram.org/files/kansasradon-program/2014_SIRG%202024_mini%20grant%20application.pdf).
35. See, e.g., U.S. ENVTL. PROTECTION AGENCY, STATE AND TRIBAL INDOOR RADON GRANTS PROGRAM GUIDANCE AND HANDBOOK 21 (Jan. 2005), [https://www.epa.gov/sites/production/files/2014-08/documents/guidance\\_and\\_handbook.pdf](https://www.epa.gov/sites/production/files/2014-08/documents/guidance_and_handbook.pdf).
36. The Environmental Law Institute is a source for additional information on state policy regarding radon control and new construction initiatives. See, e.g., ENVTL LAW INST., *Radon Control in New Home Construction: Developments in State Policy*, ELL.ORG, <https://www.ell.org/buildings/radon-control-new-home-construction-7>.
37. Some statutes only include language that radon "may" exist on a property, or that elevated levels of radon have been found throughout the state. See N.H. REV. STAT. ANN. § 477:4-a. In this issue brief, warnings of that nature, without any requirement to disclose known hazards, are not considered true disclosure requirements.
38. Most states require sellers of real property to disclose actual knowledge of radon hazards on the property.
39. See, e.g., 420 ILL. COMP. STAT. 46/25.
40. Some disclosure statutes explicitly warn that the legislation does not create an obligation to test for radon. See, e.g., 420 ILL. COMP. STAT. 46/10.
41. 420 ILL. COMP. STAT. 46/1 to 46/99.
42. See MINN. STAT. § 123B.571.
43. See ME. REV. STAT. tit. 20-A, § 4013.
44. Some states merely make test results "available" to parents, rather than affirmatively requiring notification of elevated radon. See, e.g., OR. REV. STAT. § 332.345. In this issue brief, such statutes are not considered disclosure statements.
45. See 12-030 21 VT. CODE R. § 10.5.
46. Many states have statutes that "recommend" schools test for radon or provide best practices for testing. See, e.g., 105 ILL. COMP. STAT. 5/10-20.48; 105 ILL. COMP. STAT. 5/34-18.39. Other statutes state that commissioners of health can develop a plan to "encourage" testing, or that school districts "may" include radon testing as part of its plan. See, e.g., MINN. STAT. § 123B.571. For the purposes of this issue brief, such non-binding suggestions or recommendations are not considered true testing requirements.
47. "School" may refer to daycares, private schools, public schools, or some combination of the three.
48. A "public building" is a building owned, managed, leased, furnished, or occupied by a state or city but does not include schools or daycares.
49. WIS. STAT. ANN. § 254.34.
50. ME. REV. STAT. tit. 14, § 6030-D. Landlords must disclose test results to existing tenants and before a potential tenant enters a lease. ME. STAT. REV. tit. 14, § 6030-D.
51. IDAHO ADMIN. CODE T. 16.06.02.726.
52. FLA. STAT. ANN. § 404.056. Nursing homes, foster homes, assisted living facilities, mental health facilities, correctional institutions, detention centers, pre-release centers, and other types of facilities fall into the definition of "24-hour care facilities." See
- FLORIDA HEALTH, MANDATORY RADON TESTING PROTOCOLS 2 (Sep. 2015), [http://www.floridahealth.gov/environmental-health/radon/\\_documents/Mandatory-testing-protocols.pdf](http://www.floridahealth.gov/environmental-health/radon/_documents/Mandatory-testing-protocols.pdf).
53. See, e.g., CONN. GEN. STAT. § 19a-37b.
54. See, e.g., FLA. STAT. ANN. § 404.056.
55. See, e.g., CONN. GEN. STAT. § 10-220.
56. See, e.g., FLA. STAT. ANN. § 404.056.
57. See, e.g., N.J. STAT. ANN. § 18A:20-40.
58. See, e.g., VA. CODE ANN. § 138-22.1.
59. See, e.g., N.Y. COMP. CODES R. & REGS. tit. 8, § 155.5.
60. See, e.g., OR. REV. STAT. § 332.345.
61. See, e.g., N.H. CODE ADMIN. R. ANN. ENV-A 2203.04.
62. See TEXAS DEP'T OF STATE HEALTH SERVS., FREE RADON TEST KITS FOR SCHOOLS, [https://www.swcpeh.org/\\_documents/pdf/tc\\_general\\_radon-testing.pdf](https://www.swcpeh.org/_documents/pdf/tc_general_radon-testing.pdf).
63. See *Radon Testing in Schools*, NEW JERSEY DEP'T OF ENVTL. PROTECTION, <https://www.nj.gov/deprpp/radon/school.htm>.
64. See *Radon in Schools*, VERMONT DEP'T OF HEALTH, <https://www.healthvermont.gov/environment/school/radon-schools>.
65. See *Massachusetts Env'tl Public Health Tracking - Radon*, MASS.GOV, <https://matracking.ehs.state.ma.us/Environmental-Data/radon/index.html>.
66. See Nathan Morabito, *Schools Can Test Radon for Free, But Don't*, WCNC, Mar. 8, 2019.
67. See 105 ILL. COMP. STAT. 5/10-20.48.
68. See *Radon and Buying or Building a Home*, MONTGOMERY, MD, DEP'T OF ENVTL. PROTECTION, <https://www.montgomerycountymd.gov/green/air/home-sales.html>.
69. See *Radon and Buying or Building a Home*, MONTGOMERY, MD, DEP'T OF ENVTL. PROTECTION, <https://www.montgomerycountymd.gov/green/air/home-sales.html>.
70. N.H. CODE ADMIN. R. ANN. ENV-Wq 403.32(e)(5).
71. N.Y. COMP. CODES R. & REGS. tit. 8, § 155.5(m).
72. Connecticut and Pennsylvania offered radon mitigation support in the past; however, they are not included in this number because the relevant programs no longer offer financial support for radon mitigation. In Pennsylvania, the Pennsylvania Housing Finance Agency (PHFA) was authorized to establish a low-interest loan program to assist people whose homes had "dangerous levels" of radon gas. 35 PA. CONS. STAT. § 7503. PHFA no longer offers this loan program, nor any other low-income loan that may be used to address safety or environmental hazards. In Connecticut, the Health Homes Fund allowed homeowners to apply for grants to address any safety hazard in the home, including radon. However, due to a recent amendment, the fund may currently only be used for lead abatement. See CONN. GEN. STAT. § 446-8.
73. 15 U.S.C. § 2666 (i)(4) ("A State may use funds received under this section for financial assistance to persons only to the extent such assistance is related to demonstration projects or the purchase and analysis of radon measurement devices.").
74. See MD. HOUS. & CMTY. DEV. § 4-901 to -933. The Maryland Housing Rehabilitation Program (MHRP) previously included a "special loan program" specifically dedicated to radon and lead remediation. MD. HOUS. & CMTY. DEV. § 4-930. The Radon and Asbestos Abatement Pilot Program (RAAPP) offered low-interest loans to applicants who owned a building in need of radon or asbestos abatement. MHRP does not

currently offer RAAPP loans. However, MHRP offers “regular” rehabilitation loans that may be used to fund a “loan for a single family project.” Md. HOUS. & CMty. DEV. § 4-901. These loans may be used to “correct health and safety violations.” See *Maryland Housing Rehabilitation Program - Single Family*, MARYLAND DEP’T OF HOUS. AND CMty. DEV., <https://dhcd.maryland.gov/residents/pages/mhrp-sf/default.aspx>. Such a broad definition seems to encompass radon remediation.

75. See Minn. Stat. § 462A.05.
76. See N.D. CENT. CODE § 54-17-07.3.
77. W. VA. CODE § 18-9E-3.
78. W. VA. CODE § 18-9E-3.
79. W. VA. CODE § 18-9D-16.
80. W. VA. CODE § 18-9E-3.
81. See, e.g., CITY OF WALTHAM, CITY OF WALTHAM PLANNING DEPARTMENT – HOUSING DIVISION – REHABILITATION LOAN PROGRAM (June 2017), [https://www.city.waltham.ma.us/sites/g/files/vyhlfi1386/f/file/file/rehab\\_application\\_2017.pdf](https://www.city.waltham.ma.us/sites/g/files/vyhlfi1386/f/file/file/rehab_application_2017.pdf).
82. See 42 U.S.C. § 5301; 12 U.S.C. § 1701x; 24 C.F.R. § 570.200.
83. See 42 U.S.C. § 5301; 12 U.S.C. § 1701x; 24 C.F.R. § 570.200.
84. See, e.g., State of New Jersey Recovery and Reinvestment Plan, *Community Development Block Grant*, NJ.GOV, <https://www.nj.gov/recovery/programs/cdbg.html#:~:text=The%20State%20administers%20the%20small,no%20other%20resources%20are%20available>.
85. See Indiana Hous. & Comty. Dev. Auth., *Repairs to Your Home*, IN.GOV, <https://www.in.gov/ihcda/4074.htm>.
86. See, e.g., CITY OF WALTHAM, CITY OF WALTHAM PLANNING DEPARTMENT – HOUSING DIVISION – REHABILITATION LOAN PROGRAM (June 2017), [https://www.city.waltham.ma.us/sites/g/files/vyhlfi1386/f/file/file/rehab\\_application\\_2017.pdf](https://www.city.waltham.ma.us/sites/g/files/vyhlfi1386/f/file/file/rehab_application_2017.pdf).
87. See 42 U.S.C. § 12741.
88. See 42 U.S.C. § 12741.
89. See ALLIANCE FOR HEALTHY HOMES, A GUIDE FOR FINANCING RADON MITIGATION TO REDUCE EXPOSURE IN EXISTING HOUSING (Dec. 2009), [https://www.health.ny.gov/environmental/radiological/radon/docs/radon\\_financing.pdf](https://www.health.ny.gov/environmental/radiological/radon/docs/radon_financing.pdf).
90. See 12 U.S.C. § 1709(4k); 24 C.F.R. § 203.50.
91. U.S. Dep’t of Hous. and Urban Dev., 203(K) *Rehabilitation Mortgage Insurance*, HUD.GOV, [https://www.hud.gov/program\\_offices/housing/sfh/203k](https://www.hud.gov/program_offices/housing/sfh/203k).
92. See 42 U.S.C. 1474; 7 C.F.R. § 3550.2.
93. See 42 U.S.C. 1474; 7 C.F.R. § 3550.2.
94. See Md. HOUS. & CMty. DEV. § 4-906 to -908.
95. See Minn. R. 4900.0010; N.D. CENT. CODE § 07.2-17-54.
96. See, e.g., Md. HOUS. & CMty. DEV. § 4-916; 35 PA. CONS. STAT. § 7503; N.D. CENT. CODE § 54-17-07.3.
97. See MINN. STAT. § 462A.05.
98. See, e.g., MINN. STAT. § 462A.05; Md. HOUS. & CMty. DEV. § 4-917(a)(2).
99. See MINN. STAT. § 462A.05; *Financial Assistance for Radon*, MINNESOTA DEP’T OF HEALTH, <https://www.health.state.mn.us/communities/environment/air/radon/financial.html>.
100. See *Financial Assistance for Radon*, MINNESOTA DEP’T OF HEALTH, <https://www.health.state.mn.us/communities/environment/air/radon/financial.html>.

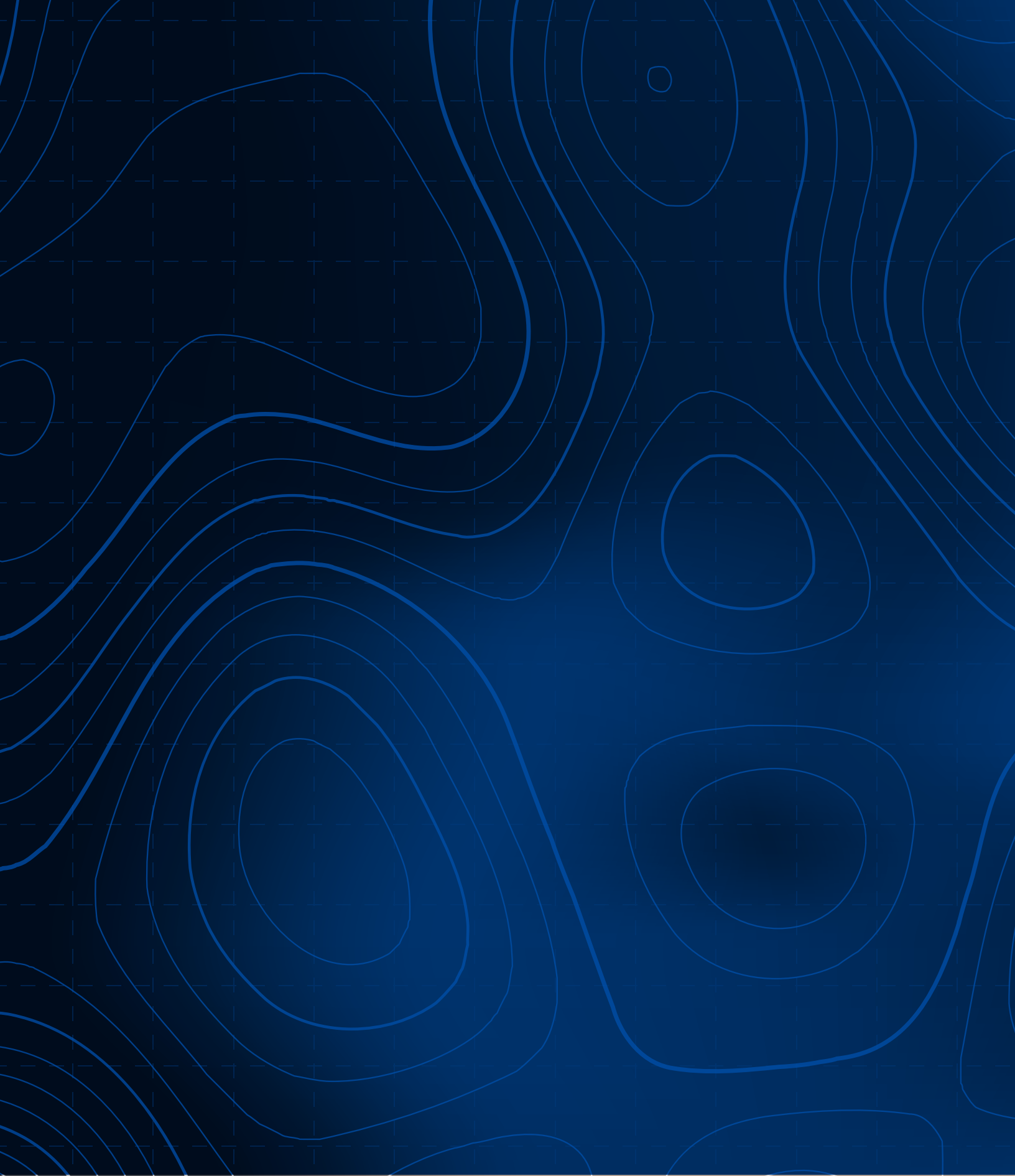
101. See *Rehabilitation Loan/Emergency and Accessibility Loan Programs (RLP/ELP)*, MINNESOTA HOUSING, <http://www.mnhousing.gov>.
102. See *Find a Lender*, MINNESOTA HOUSING, <http://www.mnhousing.gov>.
103. See *Rehabilitation Loan/Emergency and Accessibility Loan Programs (RLP/ELP)*, MINNESOTA HOUSING, <http://www.mnhousing.gov>.
104. See MINNESOTA HOUSE RESEARCH DEP’T, STATE-FUNDED MINNESOTA HOUSING FINANCE AGENCY PROGRAMS 4 (Jan. 2019), <https://www.house.leg.state.mn.us/hrd/pubs/mhfaqprog.pdf>.
105. See COLO. REV. STAT. § 25-11-114.
106. See COLO. REV. STAT. § 25-16-104.6.
107. Telephone Interview with Chrys Kelley, Radon Program Coordinator, Colorado Dep’t of Public Health & Environment (Oct. 18, 2019); see also MICHAEL BOOTH, REDUCING THE RISK OF LUNG CANCER, FREE OF CHARGE, Colorado Trust (Aug. 2019), <https://www.coloradotrusted.org/content/story/reducing-risk-lung-cancer-free-charge>.
108. See MINN. STAT. § 144.9513. In Minnesota, Healthy Housing Grants may be used to mitigate any “hazards in housing that contribute to adverse health outcomes.”
109. See, e.g., W. VA. CODE § 18-9D-16. In West Virginia, the School Major Improvement Fund can be used to improve school facilities to meet all applicable codes. Complying with safe radon levels is explicitly mentioned as an acceptable project.
110. See COLO. REV. STAT. § 25-11-114. Through Colorado’s Low-Income Mitigation Assistance Program, homeowners apply for funding to address radon in their homes. See also COLO. REV. STAT. § 22-43.7-101 to 22-43.7-116. Through the Building Excellent Schools Today program, school districts apply for grants to address safety hazards or health concerns at existing public school facilities. Although both programs can be used to address radon, they are distributed by separate departments and draw funding from separate sources.
111. See, e.g., COLO. REV. STAT. § 25-11-114. Colorado’s Low-Income Mitigation Assistance Program may only be used to address radon issues in the home.
112. See, e.g., MINN. STAT. § 144.9513. In Minnesota, Healthy Housing Grants may be used to mitigate any “hazards in housing that contribute to adverse health outcomes.”
113. See N.Y. COMP. CODES R. & REGS. tit. 9, § 7930.1. Eligible homeowners with elevated levels of radon may receive financial assistance from the State Department of Health for the performance of radon diagnostic services and the preparation of specifications for appropriate mitigation measures.
114. See COLO. REV. STAT. § 25-11-114. Through the Colorado Low-Income Mitigation Assistance Program, low-income Colorado homeowners may apply for grant to defray costs of radon mitigation.
115. See Indiana Hous. & Comty. Dev. Auth., *Repairs to Your Home*, IN.GOV, <https://www.in.gov/ihcda/4074.htm>. Through the Owner-Occupied Rehabilitation Program, the Indiana Housing & Community Development Authority distributes funds to repair housing issues that threaten the integrity of the home.
116. See MINN. STAT. § 144.9513. In Minnesota, Healthy Housing Grants may be used to mitigate any “hazards in housing that contribute to adverse health outcomes.”

117. See, e.g., State of New Jersey Recovery and Reinvestment Plan, *Community Development Block Grant*, NJ.GOV. Any eligible New Jersey county or municipality may apply to the Emergency Housing Repair Fund to help low- and moderate-income homeowners correct housing deficiencies. Homeowners contact their locality with a request to fix their private home, and the locality applies for the grant on the homeowner’s behalf.
118. See CAL. CODE REGS. tit. 2, § 1859.79.2; CAL. EDUC. CODE § 17074.25. See also California Office of Public School Construction, *Access Financial Hardship Assistance for School Construction*, CA.GOV, <https://www.dgs.ca.gov/OPSC/Services/Page-Content/Office-of-Public-School-Construction-Services-List-Folder/Access-Financial-Hardship-Assistance-for-School-Construction>. California’s School Facility Program offers Modernization Funding for California schools that have buildings over 25 years old. The modernization grant is provided for “improvements that extend the useful life of, or enhance the physical environment of, the school.”
119. See COLO. REV. STAT. § 22-43.7-101 to 22-43.7-116. Through the Building Excellent Schools Today program, Colorado school districts apply for grants to address safety hazards or health concerns at existing public-school facilities.
120. See N.J. STAT. ANN. § 18A:7G-5. Through the Schools Facility Project, New Jersey schools can request grants to fund “school facilities projects.” Projects addressing health and safety needs are given top priority.
121. See N.Y. COMP. CODES R. & REGS. tit. 8, § 155.5 (stating that “[school districts] shall take responsibility to be aware of the geological potential for high levels of radon and to test and mitigate as appropriate.”).
122. See *Radon in Schools*, VERMONT DEP’T OF HEALTH, <https://www.healthvermont.gov/environment/school/radon-schools>. The Vermont Department of Health offers “free school radon testing and technical assistance to schools with elevated levels of radon.”
123. See W. VA. CODE § 18-9E-3. If elevated radon is detected in a school, “any industry accepted mitigation technique shall be used to reduce the radon level to the level or below the level determined acceptable by the school building authority.” See also W. VA. CODE § 18-9D-16. The School Major Improvement Fund can be used to improve school facilities to meet all applicable codes. Compliance with safe radon levels is explicitly mentioned as an acceptable project.
124. Florida requires radon testing in all public and private school buildings in “Intermediate” or “Elevated Radon Potential” radon zones. See FLA. STAT. § 404.056. The Department of Health has also given out free test kits to homeowners in the past. Yet Florida has extremely low levels of radon. Not a single county has an average indoor radon level of 4 pCi/L. The majority of counties average less than 2 pCi/L, with only nine counties registering an average indoor radon level of 2-4 pCi/L. See U.S. ENVTL. PROTECTION AGENCY, FLORIDA – EPA MAP OF RADON ZONES (Mar. 2018), available at <https://www.epa.gov/sites/production/files/2014-08/documents/florida.pdf>.
125. South Dakota does not have mitigation requirements, a mitigation support provision, a testing requirement, or testing support. South Dakota only has a disclosure requirement for real estate purchasers. See S.D. CODIFIED LAWS

§ 43-4-44. Yet over half of South Dakota counties average more than 4 pCi/L, the level at which the EPA recommends mitigation. The other half of South Dakota counties average 2-4 pCi/L. See U.S. ENVTL. PROTECTION AGENCY, SOUTH DAKOTA – EPA MAP OF RADON ZONES (Mar. 2018), [https://www.epa.gov/sites/production/files/2014-08/documents/south\\_dakota.pdf](https://www.epa.gov/sites/production/files/2014-08/documents/south_dakota.pdf).

126. See U.S. ENVTL. PROTECTION AGENCY, COLORADO – EPA MAP OF RADON ZONES, <https://www.epa.gov/sites/production/files/2014-08/documents/colorado.pdf>; U.S. ENVTL. PROTECTION AGENCY, WYOMING – EPA MAP OF RADON ZONES, <https://www.epa.gov/sites/production/files/2014-08/documents/wyoming.pdf>.
127. 420 ILL. COMP. STAT. 46/1 to 46/99.
128. See FLA. STAT. § 404.056.120; FLORIDA HEALTH, MANDATORY RADON TESTING PROTOCOLS 2 (Sep. 2015), <http://www.floridahealth.gov/environmental-health/radon/documents/Mandatory-testing-protocols.pdf>.
129. See ME. REV. STAT. tit. 14, § 6030-D. Landlords must disclose test results to existing tenants and before a potential tenant enters a lease. ME. REV. STAT. tit. 14, § 6030-D.
130. See *Radon and Buying or Building a Home*, MONTGOMERY, MD, DEP’T OF ENVTL. PROTECTION, <https://www.montgomery-county.md.gov/green/air/home-sales.html>.
131. See FLA. STAT. § 404.056.120.
132. See ME. REV. STAT. tit. 14, § 6030-D.
133. See N.J. STAT. ANN. § 18A:20-40.
134. See W. VA. CODE § 18-9E-3.
135. See W. VA. CODE § 18-9E-3.
136. See W. VA. CODE § 18-9D-16.
137. See W. VA. CODE § 18-9E-3.
138. See COLO. REV. STAT. § 25-11-114.
139. See COLO. REV. STAT. § 22-43.7-101 to 22-43.7-116. See also COLO. DEP’T OF EDUC., BUILDING EXCELLENT SCHOOLS TODAY (BEST) ANNUAL REPORT 30, 38, 81, 100, (Feb. 2017), <https://www.cde.state.co.us/cdefinance/ccabestlegislative-report/fy15-16>.
140. See COLO. REV. STAT. § 22-43.7-104. See also *BEST Grant FAQ*, COLORADO DEP’T OF EDUC., <https://www.cde.state.co.us/capitalconstruction/best-faq#whoqua>.

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