

Overview of the EPA's State & Tribal Indoor Radon Grants Program: A Focus on Activities Conducted During 2023

Radon is the second-leading cause of lung cancer after smoking. Effective, affordable measures to reduce indoor radon are available and when employed, can prevent radon-induced lung cancer and save lives. For more than 30 years, the U.S. Environmental Protection Agency (EPA) has provided critical funding to support state, territory, and tribal efforts to reduce radon-related lung cancer through the State & Tribal Indoor Radon Grants (SIRG) program. This collaborative partnership between the states, territories, Tribes, and the EPA is critical in reducing radon risk and saving lives.

Despite notable progress, radon continues to be a serious public health concern in the United States. Millions of homes continue to have elevated radon levels, and approximately 20,000 Americans die annually from radon-induced cancer, including people who have quit smoking or never smoked. In fact, radon-induced lung cancer ranks among the top 10 causes of all cancer deaths in the United States among adults who have never smoked.¹ This reinforces the need for expanded radon testing for all homes and buildings, public health-focused policy adoption, and risk reduction measures such as mitigation of elevated radon levels in existing homes and radon-resistant new construction practices. State, territory, and tribal radon programs are vital to implementing successful programs aimed at reducing radon risk.

Improving indoor air quality (IAQ) is a growing public health priority for many families and communities. State and tribal radon programs, community advocates, industry professionals, National Radon Action Plan (NRAP) member organizations, and public health agencies continue to address indoor radon as a critical IAQ issue by building partnerships aimed at tackling emerging challenges and advancing risk reduction. Effective radon risk reduction strategies and policies help to expand testing of homes and buildings, mitigation of high radon levels in existing homes, and the construction of new homes and buildings with radon-reducing features.

Summary of the Report

This annual report highlights successful state and tribal grantee approaches in six key focus areas. The report primarily covers activities conducted during the 2023 SIRG reporting cycle (October 1, 2022 – September 30, 2023).

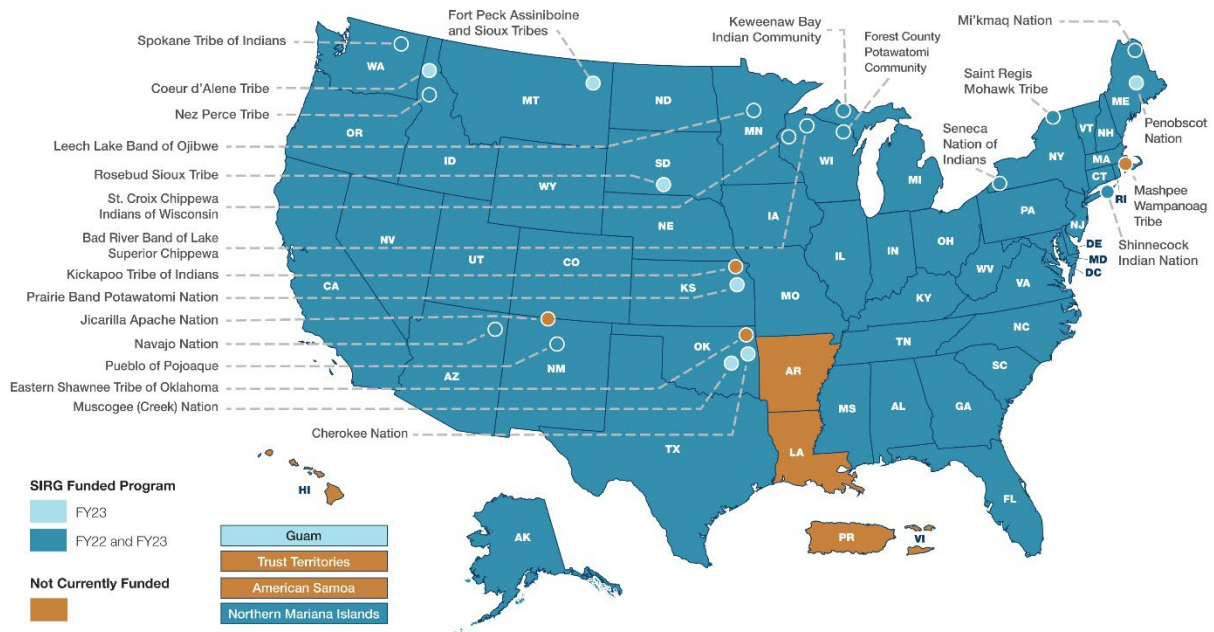
¹ Samet, J. M., E. Avila-Tang, P. Boffetta, L. M. Hannan, S. Olivo-Marston, M. J. Thun, and C. M. Rudin. 2009. "Lung Cancer in Never Smokers: Clinical Epidemiology and Environmental Risk Factors." *Clinical Cancer Research* 15 (18): 5626–5645.

Fifty-one states (including Washington DC) and 19 Tribes requested and received SIRG funding to support their radon programs in 2023. Seven new Tribes received funding to help establish radon programs: the Cherokee Nation, the Coeur d'Alene Tribe, the Fort Peck Assiniboine and Sioux Tribes, the Muscogee (Creek) Nation, the Penobscot Nation, the Prairie Band Potawatomi Nation, and the Rosebud Sioux Tribe.

In addition to the overall national progress supported by SIRG funding, the EPA continues to look for opportunities to assist underserved communities through state and tribal radon grants. Some state and tribal radon programs pair SIRG funding with other healthy housing, housing finance, and/or low-income mitigation assistance program funding to expand opportunities for residents to access testing and mitigating resources.²

This summary report and the variety of program activities and approaches shared by states and Tribes show the importance of partnership, community-tailored programs, and lasting approaches to radon risk reduction.

Map of Current and Recently Funded Grantees Across the United States



² The National Center for Healthy Housing and the American Lung Association. 2024. "Finding Funding to Fix Radon Problems." Available at: https://nchh.org/resource-library/2024.06.25_ala-nchh-webinar_finding-funding-to-fix-radon-problems_common-questions.pdf.

Key Take-Aways and Significant Progress:

- 49 of the 51 states (including Washington DC) and nine of the 19 tribes that received FY23 SIRG funding submitted information on planned and conducted radon activities.
- In recent years, the EPA has focused on expanding the number of tribes receiving SIRG funds. In 2023, 19 tribes received funding, compared to the 13 tribes that received funding in the previous year.
- Grantees continue to make progress adopting consensus radon measurement standards as well as radon-resistant new construction requirements at the state and local level.
- **Colorado** passed a new law for realtors and landlords that requires the disclosure of information about radon in residential real property transactions.

Spotlight: Successful Approaches for Reducing Radon Risk

This section showcases examples of state and tribal projects and activities under key risk reduction strategies funded in part by the EPA's SIRG program.

Adoption of radon-reduction strategies including state policies/regulations or building codes:

- **Washington** state mandates that all new construction must minimize exposure to radon through ventilation and radon-resistant construction requirements. Sellers are also required to disclose known radon levels in their homes. These policies establish comprehensive statewide measures to minimize radon exposure in new construction and ensure transparency in real estate transactions.
- Recently, the **Vermont** residential energy code was updated to include radon mitigation as an option that can be used as part of a compliance plan.
- The **Kansas** Department of Health and Environment's Radiation Control Program revised their statewide radon regulations to adopt the most current consensus radon measurement and mitigation standards. The program also adopted multifamily and large building measurement and mitigation standards.
- As of July 2023, Montgomery County, **Maryland** requires radon testing for multifamily (including condominiums) and single-family rental housing, as well as disclosure and mitigation of radon hazards above the EPA's recommended action level.

Testing and remediation of schools and childcare facilities:

- In **Minnesota**, the number of schools tested for radon increased significantly over the last four years. Testing rates increased from approximately 6,500 schools in 2020 to more than 16,700 schools in 2023. Beginning in 2021, the Minnesota Department of Health determined that school testing must be conducted by licensed professionals.

- In **New Jersey**, more than 250 childcare centers and 33 schools were tested during this reporting cycle. One mitigation system was installed at a daycare center and three mitigation systems were installed in school buildings.
- **Texas** Tech University, which operates the state's radon program, partnered with the Texas Department of State Health Services to promote their free radon testing program as part of the Choose Safe Places program, which targets low-income Texas daycares. With this partnership in place, the state expects to see an increase in radon testing rates for daycares in the next year.
- In **West Virginia**, 74 total schools and daycares tested for radon. After high radon readings in three schools, the schools adjusted HVAC systems to reduce radon levels below the EPA's action level.
- In **Wisconsin**, more than 1,400 schools and daycares were tested for radon during this reporting cycle. Furthermore, Wisconsin's Department of Children and Families and the Department of Health Services is developing an improved data sharing system to capture a more accurate estimate of how many schools and childcare facilities are tested for radon across the state. Additionally, the Choose Safe Places program recommends radon testing as part of a comprehensive environmental health screening tool for new childcare facilities.

Addressing radon in homes and residential real estate transactions:

- **South Dakota** tested 239 housing units for radon, of which, 134 housing units were mitigated for radon and 12 housing units were built with radon-reducing features. The South Dakota radon program focused some outreach efforts on retrieving radon test kits that were distributed during the 2023 reporting cycle and achieved a return rate of approximately 43 percent.
- **Utah** tested more than 33,000 housing units for radon, of which, 9,300 housing units were mitigated for radon and more than 1,400 housing units were built with radon reducing features. Three builders include reducing features in all houses built in the state. The incorporation of radon-reducing features in new buildings by multiple builders indicates a growing commitment to long-term radon safety.
- **Nevada** tested more than 3,600 housing units for radon, of which, 190 were mitigated for radon and 19 were built with radon-reducing features. Although Nevada does not currently have regulation requiring new construction to incorporate features that reduce radon, three builders include radon-reducing features in all houses. These activities demonstrate proactive measures taken to address radon exposure in Nevada, even in the absence of regulatory support for radon-resistant new construction measures.

Inclusion of radon in cancer control plans:

- The 2022-2026 **Rhode Island** Cancer Prevention and Control Strategic Plan's strategies include modifying existing data tools to better promote new radon-resistant technologies, educating the public, and continuing the radon surcharge fee assessment on new construction. The plan calls for participation with local communities as partners with the Rhode Island Department of Health (RIDOH)'s Radon Program.
- The 2020-2025 **North Carolina** Cancer Control Plan now identifies radon-induced lung cancer as a priority issue. In addition, the North Carolina Department of Health and Human Services is adding radon-induced lung cancer prevention strategies to the State Health Improvement Plan. The plan is a significant resource to several North Carolina Department of Health and Human Services sections, county health departments, and local efforts to conduct community health assessments.

Education and outreach to the medical community:

- The **Nebraska** Radon Program developed both live and recorded radon education presentations which were shared with the Bryan Health Network to support their work on cancer prevention programs, primary prevention, and screening programs.
- The **New Hampshire** Department of Health and Human Services Radon Program is supporting a Dartmouth Cancer Center pilot grant application to co-develop and test a community-based intervention to increase radon testing. Associated activities include conducting interviews to develop a study that presents radon testing experiences, publicizing the study to recruit focus-group participants, and co-designing educational materials.

Continuing education, outreach, and technical support:

- The **Navajo Nation** Environmental Protection Agency disseminated radon information at 12 Navajo Nation Chapter meetings focused on indoor air quality topics. Additionally, the Navajo Nation Environmental Protection Agency advertised the availability of radon test kits through an article in the Navajo Times and via radio announcements to increase awareness across the Nation.
- The **Nez Perce** Tribal Air Quality Program partnered with the Nez Perce Tribal Housing Authority (NPTHA) to complete radon testing in 69 tribal residences and three tribal administration buildings. The program also focused on training tribal housing staff about radon. In September 2023, the program partnered with NPTHA and Kansas State University to host a "Radon Mitigation Short Course for Tribal Housing." Tribal air quality professionals from several additional tribes including the Coeur d'Alene Tribal Housing

Authority, Coeur d'Alene Tribe, Spokane Tribe of Indians, and Yakama Nation Housing Authority were also able to attend the training.

- **Colorado** distributed 2,415 test kits and certified 449 testers and 182 mitigators. As a result of various interventions, the state estimates over 37,000 individuals have experienced reduced radon exposure. Additionally, 500 individuals received radon-related training or continuing education credits, reflecting proactive measures to address radon exposure in Colorado.
- In **Virginia**, the American Lung Association conducted an effective statewide ad campaign, which spurred requests for more than 6,100 radon test kits from residents and homeowners.

Additional Success Stories

The states, territories, and tribes engaged in other radon risk reduction activities that fall outside the six key areas of focus and may draw on additional sources of funding. These include:

- A local newspaper in Gillette, Wyoming published an article describing the importance of radon awareness, and including additional information from interviews with the **Wyoming** Radon Program and a resident who received a lung cancer diagnosis despite never smoking. After testing and discovering that the home they had lived in for decades had elevated radon levels, the resident became a radon awareness advocate, encouraging others to test their homes for radon. The article sparked an increase in radon test kit orders in the Gillette area as well as interest in professional radon tester/mitigator certification.
- The **Indiana** Department of Health (IDOH) allocated \$10,000 for FY23 to drive radon testing in school districts statewide. With support from the American Lung Association, a teacher from Fort Wayne Community Schools used this funding to test and confirm nine school buildings in that district had radon levels below the EPA's recommended action limit. The teacher plans to share the radon testing results with the school board and advocate for funding to test the remaining 51 schools in the school district.
- The **Alaska** Division of Geological & Geological Surveys began including radon potential in geologic hazard evaluations of state lands identified for various transactions, such as the sale and transfer of property. Including radon potential in land reviews elevates radon awareness in agencies and landowners and has the potential to inform construction decisions that account for IAQ.