

A brief look at radon risks, observations, and what you can do to take action.

June 13, 2023

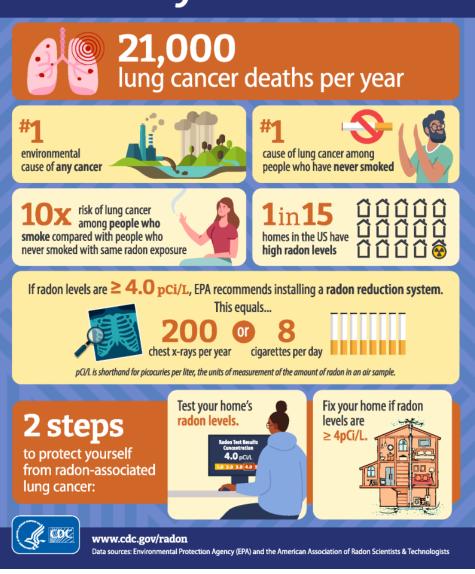
2022 Alaska Radon Poster Contest and 2022 National Radon Poster Contest winner submitted by Luciana Liu from O'Malley Elementary School in Anchorage.

## What is Radon?

Radon is an odorless, tasteless radioactive gas that can cause lung cancer and other serious health effects. In the United States, radon is the leading cause of lung cancer in non-smokers, and it is estimated to cause over 21,000 deaths each year. In fact, if you live in a home with high radon levels, smoking raises your risk of lung cancer by 10 times.

According to the Alaska Division of Public Health, radon is an <u>under-recognized health risk</u> in the state. Many homes tested throughout Alaska have radon levels above the Environmental Protection Agency's (EPA) limit of 4 picocuries per liter of air (pCi/L). Testing your home is the only way to find out if you have a radon problem. If you do, then you can fix it.

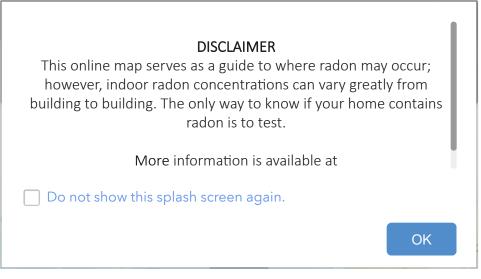
# **Radon by the Numbers**



# Alaska Radon Database

In the entire U.S., one in 15 homes have high radon levels. Unfortunately, we do not know the statistics for Alaska. DGGS and University of Alaska Fairbanks' (UAF) <u>Cooperative Extension</u> <u>Service</u> are creating a radon database and updating the Alaska radon map (below) to better understand radon potential and identify where elevated levels of radon exist in the state. Alaskans are invited to <u>contribute radon test results</u> to the database, which will aggregate results to help preserve confidentiality. Previously collected and new test results are both helpful.

Radon test kits are available in hardware stores and other retail outlets, and for purchase online. Radon service providers will also conduct testing for you. Please fill out a <u>data release form and</u> <u>questionnaire</u> for each test result, so that your information can help other Alaskans. Please contact Jennifer Athey, jennifer.athey@alaska.gov or (907) 451-5028, to submit your results!



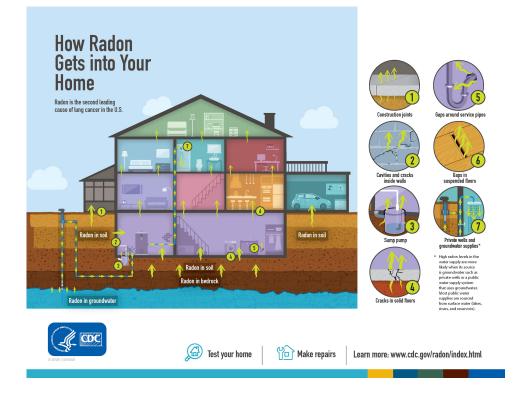
Alaska Radon Web App

The Alaska Radon Map above contains two layers of radon data. By default, the map shows the average values of radon indoor air samples for areas around the state where data are available. The map also contains a predictive layer that models potential radon concentrations released from the ground.

This project began with funding from the EPA's Environmental Information Exchange Network and continues with funding from the EPA's State Indoor Radon Grant to Alaska's Department of Environmental Conservation, Division of Air Quality. The grant is implemented through a partnership of DGGS and UAF's Cooperative Extension Service.

## Where does radon come from?

Radon gas is derived from rocks and dirt in the ground, beginning with the <u>radioactive decay of naturally occurring uranium</u>. There is always some radon in the air around us, but a problem occurs when it leaks in through cracks or gaps underneath the house, causing a potential build-up of radon gas inside the home.

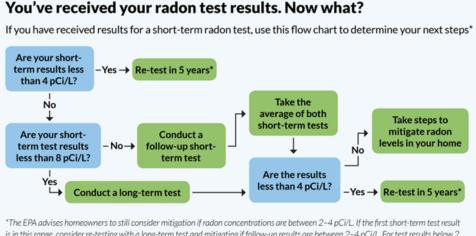


## How can I test for radon?

Testing for radon can be simple and inexpensive. To raise public awareness of radon in Alaska, the Alaska Radon Program runs a free test kit giveaway for <u>National Radon Action Month</u> in January. It's a great time to test your home or building for radon! <u>Request a</u> <u>free radon test kit</u> for next January. Due to limited supplies, please request only one test kit per residence and consider a different test kit provider if you have received a free test kit from our program within the past 5 years. Low-cost radon test kits are also available from National Radon Program Services.

# I've tested and I have my results. Now what do I do?

The EPA recommends that buildings with radon concentrations equal to or greater than 4 pCi/L be mitigated for radon, and it recommends that homeowners consider mitigation for homes with 2–4 pCi/L of radon. <u>Understanding your test results</u> is critical for determining next steps. The flowchart below is a handy visual for decision making.



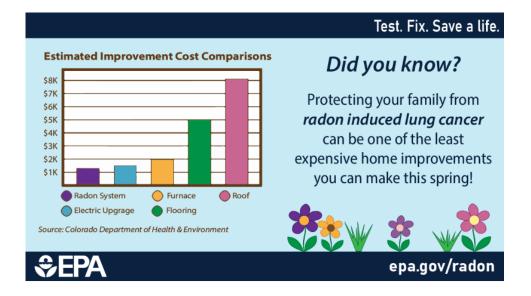
The EPA davises nonrecovers to still consider mitigation if radon concentrations are between 2-4 pCi/L. If the inst short-term test result is in this range, consider re-testing with a long-term test and mitigating if follow-up results are between 2-4 pCi/L. For test results below 2 pCi/L, no additional actions are suggested because it is very difficult to reduce radon concentrations under 2 pCi/L.

### My house has radon. How do I fix it?

As a homeowner, you have two options for mitigating your home: finding a contractor or doing the work yourself. Do-it-yourself (DIY) resources are available online, including a <u>short guide</u> from the Alaska Radon Program.

Finding a contractor in Alaska may be challenging, depending on your location. We recommend using certified contractors for radon mitigation where possible. Two potential sources of credentialed contractors are the <u>National Radon Proficiency Program</u> and National Radon Safety Board.

Additionally, some Alaskan contractors and engineers were certified and passed competency testing for radon mitigation in the past. Other contractors not specifically certified may have experience installing effective mitigation systems. It's a good idea to choose a licensed, bonded, and insured contractor for a radon mitigation project. This helps ensure the quality of their work and holds them accountable for installing an effective system. For your own comfort, you may want to ask potential contractors questions, such as for a list of references. Additional suggestions are available from the short guide, Understanding Your Radon Test Results.



# I'm building a new house. Should I worry about radon?

Any home or building can concentrate radon to health-affecting levels. Newly constructed buildings designed to be extremely energy efficient may even concentrate radon more effectively than older houses that are not airtight. <u>Radon-resistant features</u> are much less expensive to install during construction than mitigation after a building is already constructed. If your home is built with a radon-reducing system, don't forget to test it immediately after moving in.

### Where can I learn more?

Here are some useful links to get you started:

• UAF Cooperative Extension Service: Radon mitigation in superinsulated slab - (YouTube)

- UAF Cold Climate Housing: Radon mitigation in new construction (YouTube)
- Radon | US EPA
- Radon | NCEH | CDC

### **Contact information**

For radon kit information, please contact: Jennifer Athey Alaska Division of Geological & Geophysical Surveys 3354 College Road Fairbanks, AK 99709 (907) 451-5028 jennifer.athey@alaska.gov https://dggs.alaska.gov/hazards/radon.htm

# For general questions about radon, testing, and building repair and mitigation, please contact:

Art Nash

University of Alaska Fairbanks' Cooperative Extension Service Toll-free Alaska Radon Hotline, 1 (800) 478-8324 <u>alnashjr@alaska.edu</u> http://www.uaf.edu/ces/foodhealth/radon/

### Alaska Division of Geological & Geophysical Surveys