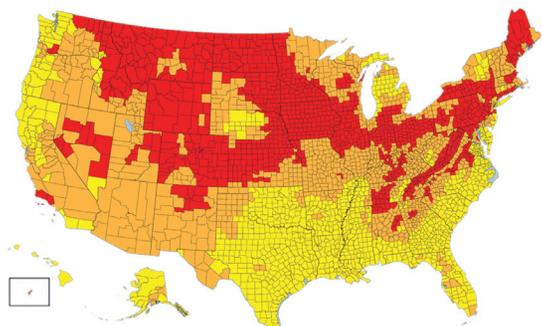




## Radon

Radon is a radioactive gas that comes from the natural radioactive decay of radium, which is a natural decay product of uranium. Scientifically 'radon' is known to be radon-222, the most abundant isotope of the element radon. It is a colorless, odorless and chemically inert gas that cannot be detected by human senses.



Zone 1 counties have a predicted average indoor radon screening level greater than 4 pCi/L (pico curies per liter) (red zones)

Zone 2 counties have a predicted average indoor radon screening level between 2 and 4 pCi/L (orange zones)

Zone 3 counties have a predicted average indoor radon screening level less than 2 pCi/L (yellow zones)

Uranium is a part of our earth's crust and therefore radium and radon are naturally present. Their concentrations vary across the country based on geological formations and the depth at which the uranium is found in the ground, among other factors.

Radon formed in the top 10 meters of the earth provides the largest component of radon entering the atmosphere. The second



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most important contributor to radon comes from groundwater that occurs around the property and also water that is brought into homes and buildings through plumbing.

*Radon is impossible for occupants and building owners to detect using their normal senses. Affordable testing procedures that are completely noninvasive are available to test for this dangerous gas.*

## Hiring a Radon Inspector

A qualified radon inspector should be able to provide references and qualifications to the building owner or occupants. The inspector should explain the testing procedure and how the process works.

During a radon test there are several conditions that should be present to ensure an accurate test, these include:

- ◆ The property should ideally remain under closed-house conditions during the entire time of the test.
- ◆ The property's heating systems should be operated under normal conditions during the test (if applicable).
- ◆ Do not disturb the testing device during the testing period.
- ◆ If a radon-reduction system is in place be sure the system is working properly and will be in operation during the entire test period.

Depending on what the investigator discovers he/she may recommend the building owner install a radon-reduction system. These systems are typically not cost prohibitive and are generally a simple and effective method to reduce occupant exposure to radon.

*It is important if hiring a professional to conduct the inspection that only experienced and qualified professionals perform this important task. Be sure to also verify that any samples that are taken are to be analyzed by an accredited independent laboratory such as EMSL Analytical, Inc.*

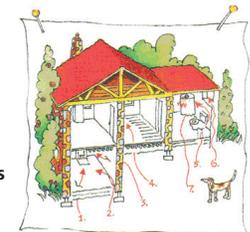
## How does Radon Enter a Property?

Since radon is a naturally occurring radioactive gas its presence is often a matter of where a property is built and how it is constructed. Air pressure also plays an important role and inside many buildings the pressure is lower than the pressure in the soils around the property's foundation or basement. Because of this difference in pressure the building acts like a vacuum to draw in the radon gas through cracks and openings. The gas is then trapped in the building where it can build up.

Both new homes and old homes, and those with or without basements, can be susceptible. Radon can also enter the home through water in the soil and from ground water pumped into the house through the plumbing.

### Major Radon Entry Routes:

1. Cracks in solid floors
2. Construction joints
3. Cracks in walls
4. Gaps in suspended floors
5. Gaps around service pipes
6. Cavities inside walls
7. The water supply



## Resources

American Indoor Air Quality Council  
[www.iaqcouncil.org](http://www.iaqcouncil.org)

California Indoor Air Quality Program [www.cal-iaq.org](http://www.cal-iaq.org)

Centers for Disease Control & Prevention  
[www.cdc.gov/ncidod/dpd/healthywater/factsheets/radon.htm](http://www.cdc.gov/ncidod/dpd/healthywater/factsheets/radon.htm)

EMSL Analytical, Inc. [www.radontestinglab.com](http://www.radontestinglab.com)

Indoor Air Quality Association [www.iaqa.org](http://www.iaqa.org)

LA Testing [www.LATesting.com](http://www.LATesting.com)

National Safety Council [www.nsc.org/issues/radon/](http://www.nsc.org/issues/radon/)

U.S. Environmental Protection Agency  
[www.epa.gov/iaq/radon/](http://www.epa.gov/iaq/radon/)