RADON-HAZARD POTENTIAL IN THE CENTRAL SEVIER VALLEY, SEVIER COUNTY, UTAH

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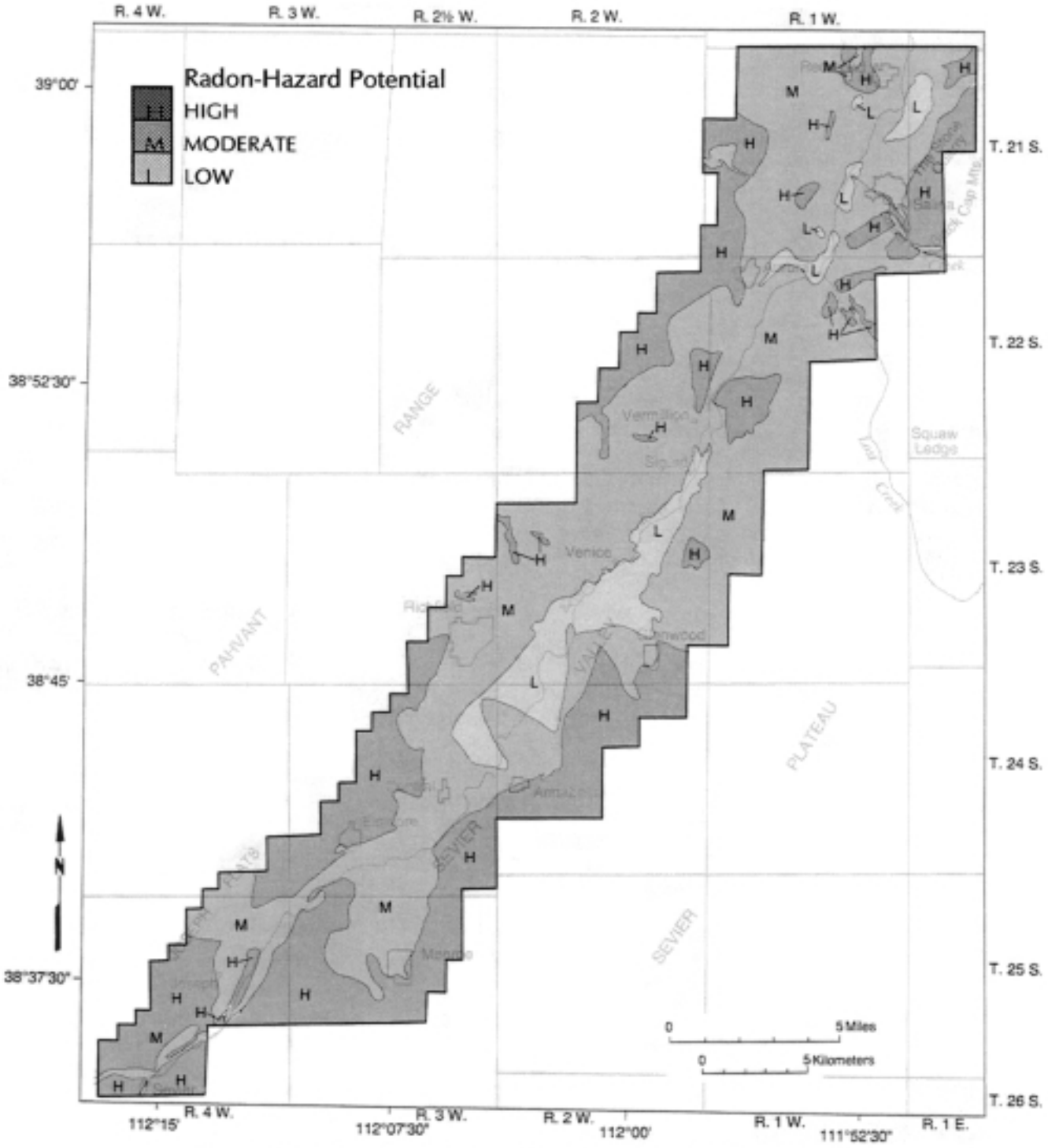

This map shows the radon-hazard potential based on geologic factors. This map is for general reference only. Indoor-radon levels can be strongly affected by non-geologic factors such as weather, lifestyle, and building construction and maintenance. The only way to accurately determine the indoor-radon level within a specific building is to test.

INDOOR RADON

What is radon? **Radon** is a radioactive gas that has no smell, taste, or color. It comes from the natural decay of uranium that is found in nearly all rock and soil. Where geologic conditions are favorable, the potential increases for high indoor levels of radon. In the central Sevier Valley, soil with the greatest potential for high indoor-radon levels is common in the south end of the valley and along the valley margins. This soil is derived from volcanic rock.

If radon is natural, why is it a hazard? Outdoor radon levels never reach dangerous concentrations because air movement scatters radon into the atmosphere. Radon is a hazard in buildings because the gas collects in **enclosed spaces**.

What conditions must be present for high indoor-radon levels? **Four conditions** must be present. The building must: (1) be built on ground that contains sufficient **uranium**, (2) have underlying soil that allows **easy movement** of radon, (3) have **porous building materials, cracks,** or **other openings** below the ground surface that allow radon from soil to enter the building, and (4) have a **lower air pressure inside** than in the soil around the foundation. Radon from building materials, rather than from soil, rarely causes radon problems.

Can radon enter buildings in water? Radon is easily dissolved in water and is released into the air during water use. **However, water rarely contributes significantly to high indoor-radon levels.** High levels of radon have never been found in Utah's public-water supplies, but may be present in well water. If indoor-radon levels are not high, don't be concerned with radon in water.

What are the health risks of radon? Radon decays into radioactive particles that can be trapped in the lungs when inhaled. These particles release energy that damages lung tissue and may lead to lung cancer. **Radon is the second leading cause of lung cancer in the United States.** Only smoking causes more lung-cancer deaths, and chances of getting lung cancer are higher from the combination of smoking and radon than from either source alone. This combination is a particularly serious health risk because the smoke places a greater number of particles in the air, to which radon-decay products become attached and are then inhaled. Not everyone who is exposed to radon develops the disease, but the chances increase with increasing levels of radon and length of exposure. The amount of time between exposure and onset of the disease is usually many years.

How do I test for radon? There are two general ways to test for radon: (1) **short-term testing** takes from two to 90 days, depending on the device; (2) **long-term testing** takes more than 90 days. The U.S. Environmental Protection Agency (EPA) recommends a short-term test first and, if high levels of radon are found, follow up with either a long-term test or a second short-term test. Low-cost, "do-it-yourself" radon test kits are available both through the mail and in retail outlets, or you can hire a trained contractor. Make sure the test kit has passed EPA's testing program or the contractor is EPA qualified.

What can I do if my home has high levels of radon? Levels of radon gas are measured in **picocuries** per liter of air (pCi/L). The EPA suggests that occupants of homes with **radon levels above 4 pCi/L take action** to reduce indoor-radon concentrations. There are several hazard-reduction techniques that cost about the same as other common home repairs.

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