According to the City of Austin, Texas website, Psychologist Abraham Maslow used a much broader definition of safety in his famous “Hierarchy of Human Needs” model. He said that one of the most fundamental needs that we have is safety. This includes not only physical safety but also security of our health, money, belongings, jobs, and families.

Public safety is often thought of as the protection of the public from dangers and threats such as crimes and disasters. Delving more deeply into the definitions of safety and security reveals that these concepts are complex, and safety can be broadened into an umbrella term covering a wide range of quality of life issues.

According to Maslow’s “Hierarchy of Needs,” safety and security are basic needs.

DGGS is a science-focused agency within the Department of Natural Resources. Its mission is to “determine the potential of Alaskan land for production of metals, minerals, fuels, and geothermal resources, the locations and supplies of groundwater and construction material, and the potential geologic hazards to buildings, roads, bridges, and other installations and structures” (AS 41.08.020).

DGGS’ goal is to provide unbiased scientific data and interpretations to answer important questions about the geology of the state, to benefit the health and welfare of Alaskans. We partner with emergency coordinators, communities, and other science agencies to provide timely information on imminent and long-term threats to the public and infrastructure. Below are examples of DGGS programs that may be of interest to public health professionals.

For example, Alaska spatial data coordinated through the Alaska Geospatial Council (see left) and applied science investigations by DGGS programs (see lower right) provide baseline and pertinent information for emergency operations, land management, and many other issues that affect Alaskans’ quality of life.

Public health is another key component of safety and security, as it encompasses not only the health and well-being of individuals but also the collective health of communities and populations. DGGS’ Applied science and collaboration benefits public safety, security, and health.

Radon is a naturally occurring radioactive gas that can concentrate in buildings. In the United States, radon is the #2 cause of lung cancer, following smoking, and it is estimated to cause over 21,000 deaths each year.

According to the Alaska Division of Public Health, radon is an under-recognized health risk in the state. In fact, 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). Despite new available data, many people in Alaska are unaware that radon is a hazard in the state.

The Centers for Disease Control and Prevention encourage healthcare providers to incorporate radon awareness in their practice.

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1993 Alaska

2022 Fairbanks

Radon case study: Collaboration with healthcare professionals is critical

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Even in North Dakota, a high radon state, a recent study by Schmitz and others (2021) showed that “most North Dakota family physicians are knowledgeable about radon, and more than one-third have tested their own homes. However, only a minority transmit this knowledge to their patients.”

The Centers for Disease Control and Prevention encourage healthcare providers to incorporate radon awareness in their practice.