



## Community Health Profile

# ENVIRONMENTAL HEALTH

Environmental health addresses the health-related aspects of the natural environment and the built environment. The environment includes physical, chemical, and biological factors that are external to us – air, water, food, chemicals, radiation, animals, insects. Certain populations, such as children, pregnant women, and elderly people, are more vulnerable to environmental hazards. Environmental health is a continuously evolving field of study. Much environmental data available is hazard data, which is difficult to link to health outcomes. Another challenge is to understand how chemicals interact and affect human health.

### KEY FACTS

Emissions and concentrations of key pollutants are decreasing, but air quality alerts have been increasing due to seasonal wildfire smoke exposure.

Smoking bans in indoor public places have decreased secondhand smoke exposure, but exposure in homes and cars is still a concern.

Nitrates in water are a continuing concern in private wells in certain parts of the county.

Very few children who are tested have elevated blood lead.

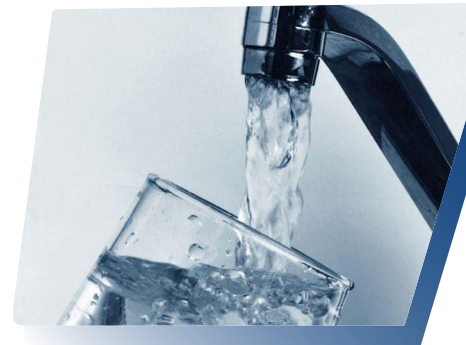
Radon is a serious public health concern in Minnesota. The average radon level in Minnesota is more than three times higher than the U.S. radon level. Thirty-seven percent of homes tested in Dakota County have elevated levels of radon.

### Diseases transmitted from insects to humans

- West Nile virus: 11 cases were reported in Dakota County residents from 2017 to 2021. (Note: data were not reported for 2020.)
- Lyme disease: 65 confirmed cases were reported in Dakota County residents in 2021.

### Quality of drinking water

- Most Dakota County residents receive their drinking water from public systems (20 community and 115 non-community systems), which are highly regulated and tested regularly.
- About 7,500 households in Dakota County rely on drinking water from private wells.
- Between 1999 and 2019, 38 percent of drinking water wells sampled in Dakota County exceeded the Minnesota Department of Health (MDH) drinking water guidelines for nitrate or the discontinued herbicide cyanazine, with nitrate being the most common contaminant. Eight percent of wells tested in 2001-2022 exceeded the standard for cyanazine. This is primarily an issue in the central and eastern parts of the county where agriculture is the dominant land use.



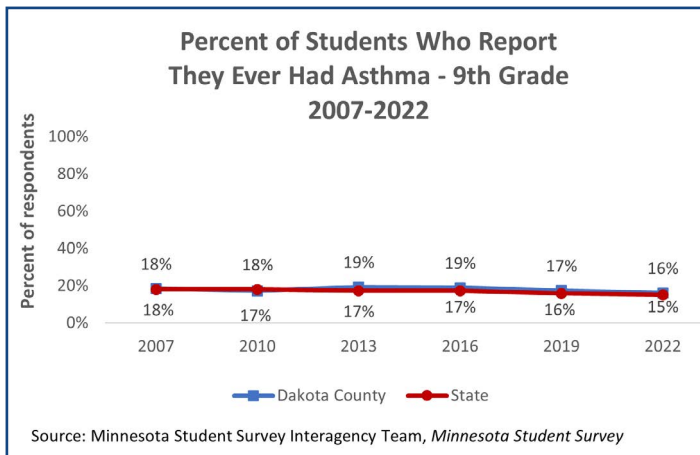
### Food/waterborne illnesses

- Giardiasis is the most common waterborne illness. In 2021, there were 17 cases reported in Dakota County residents. The rate was stable from 2017 to 2020, but it decreased in 2021.
- Each year an estimated 48 million U.S. residents gets sick, 128,000 are hospitalized, and 3,000 die of foodborne illness.
- In 2021, 214 cases of foodborne illness were reported in Dakota County residents. Many mild cases are not detected and therefore not reported and not all foodborne illnesses are reportable.



## Indoor air

- **Radon:** Among the estimated 2,077 Dakota County properties tested for radon from 2010-2020, 37 percent were at a level above which action is recommended (4.0 pCi/L).
- **Secondhand smoke:** In 2023, three percent of Dakota County adults said someone smokes regularly in their home. Eight percent of Dakota County 5th graders reported riding in a car one or more days in the past seven days with someone who was smoking and 13 percent reported being in the same room as someone who was smoking cigarettes (2022).
- **Asthma:** 12 percent of Dakota County 5th graders, 15 percent of 8th graders, and 16 percent of 9th and 11th graders reported in 2022 that they had ever been told they had asthma. In 2023, 10 percent of Dakota County adults reported that they currently had asthma.



## Lead

- Approximately 36 percent of housing units in Dakota County were built before 1980. Lead paint was banned in housing in 1978. Lead-based paint is the greatest source of exposure for children under age six.
- Twenty-three percent of Dakota County children under age six were tested for blood lead levels in 2021, an increase from 2012. The percent of tested children with elevated blood lead levels (5 micrograms/deciliter or greater) was stable from 2012 to 2021 at less than one percent.

## Outdoor air

- Emissions and concentrations of key pollutants, especially fine particles and ozone, have decreased in Minnesota, according to the Minnesota Pollution Control Agency; however, current levels of air pollution still have health impacts. In the five-year period 2018-2021, there were six air pollution alert days in the South Metro region. Air quality alert days began to increase in 2021 due to seasonal Canadian wildfire smoke.
- Concentrations of fine particles (PM 2.5) were generally stable from 2018-2020 in Dakota County.
- Of the 19 Dakota County lakes in which fish were tested for mercury, polychlorinated biphenyls (PCBs) or the perfluorocarbon PFOS in 2023, all have some restrictions for children under 15, pregnant women, and the general population.



For more information:

- Centers for Disease Control and Prevention [www.cdc.gov](http://www.cdc.gov)
- Minnesota Department of Health [www.health.state.mn.us](http://www.health.state.mn.us)
- Minnesota Pollution Control Agency [www.pca.state.mn.us](http://www.pca.state.mn.us)
- U.S. Environmental Protection Agency [www.epa.gov](http://www.epa.gov)

The Dakota County Public Health Department is accredited by the national Public Health Accreditation Board.

For more information about the Dakota County community health assessment, email [public.health@co.dakota.mn.us](mailto:public.health@co.dakota.mn.us) or call 651.554.6100.

