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.

**Diseases transmitted from insects to humans**
- West Nile virus: seven cases were reported in Dakota County residents from 2013 to 2017.
- Lyme disease: 90 confirmed cases were reported in Dakota County residents in 2017.

**Quality of drinking water**
- Most Dakota County residents receive their drinking water from public systems (21 community and 118 non-community systems), which are highly regulated and tested regularly.
- About 7,500 households in Dakota County rely on drinking water from private wells.
- The “Targeted Townships” Project tested 1,391 private wells in the cities of Hastings, Farmington and Rosemount and 11 rural cities and townships in 2013 and 2014. The study found that 26 percent of the wells exceeded the standard for nitrate (10 mg/L).
- None of the public water systems in Dakota County exceeded the standard for nitrate in 2016.

**Food/waterborne illnesses**
- Giardiasis is the most common waterborne illness. In 2017, there were 24 cases reported in Dakota County residents. The rate fluctuated from 2008 to 2017.
- Each year an estimated one in six U.S. residents gets sick, 128,000 are hospitalized, and 3,000 die of foodborne illness.
- In 2017, 167 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.
**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 2013-2017, there were 10 air pollution alert days in the Twin Cities region.
- Concentrations of fine particles (PM 2.5) generally decreased from 2012-2016 in Dakota County.
- Of the 21 Dakota County lakes in which fish were tested for mercury, polychlorinated biphenyls (PCBs) or the perfluorocarbon PFOS in 2018, all have some restrictions for children under 15 and pregnant women, and 19 have restrictions for the general population.

### Indoor air

- **Radon**: Among 11,081 Dakota County properties tested for radon from 2010-2016, 40 percent were at a level above which action is recommended (4.0 pCi/L).
- **Mold**: Dakota County Public Health received 29 complaints due to mold in 2018.
- **Asthma**: 13 percent of Dakota County 5th graders, 17.5 percent of 8th graders, 18.5 percent of 9th graders, and 19 percent of 11th graders reported in 2016 that they had ever been told they had asthma. In 2014, 13 percent of Dakota County adults (25 and older) reported that they had asthma.

### Lead

- Approximately 38 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 2017, an increase from 2008. The percent of tested children with elevated blood lead levels (5 micrograms/deciliter or greater) was stable from 2011 to 2017 at 0.3 percent.

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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 or call 651.554.6100.