



# MANITOWOC COUNTY

## 2023 COUNTY ENVIRONMENTAL HEALTH PROFILE

Wisconsin Environmental Public Health Tracking Program







# HOW TO USE ENVIRONMENTAL PUBLIC HEALTH TRACKING DATA

## COMMUNITY HEALTH ASSESSMENTS

Tracking data can help meet state requirements by giving a more complete picture of your county's health.

## COMMUNITY HEALTH IMPROVEMENT PLANS

Use Tracking data and [Ideas for Taking Action](#) to prioritize environmental health and plan strategies for community improvement. Use the data to track progress in meeting your goals.

## RESEARCH

Tracking data are an excellent research tool. Use the data to explore environmental health research questions.

## ACCREDITATION

The Profiles can be used to address Public Health Accreditation Board standards, such as Standard 1.3: "analyze public health data to identify trends in health problems, environmental public health hazards, and social and economic factors that affect the public's health."

## MEDIA STORIES

Give your interview, article, or press release added strength by citing facts and figures from Tracking and [our resources](#).

## SOCIAL MEDIA

Share data about your community on social media to engage with the public.

## GRANT PROPOSALS

Use Tracking data and resources to develop rationale for funding requests. These data can help justify existing programs and show where work needs to be done.

## EDUCATION AND OUTREACH

Tracking data can help you make your case and show the extent of the problem when it's time to create programs and outreach materials for your community.

## POLICY DEVELOPMENT

Tracking data can be used to identify the need for a policy. Once a policy is in place, the data can be used to track progress over time.



**If you have questions about how to use Tracking data in your work, let us know!**  
[dhstracking@wi.gov](mailto:dhstracking@wi.gov)

# MANITOWOC COUNTY

DASHBOARD | 2023 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Alcohol Outlet Density

Rate of alcohol licenses per 500 people



### Motor Vehicle-Related Fatalities

Percent of fatal motor vehicle crashes involving cyclists or pedestrians



## PRIVATE WATER QUALITY

### Arsenic

Percent of test results above EPA standard of 10 µg/L



### Nitrate

Percent of test results above EPA standard of 10 mg/L



## HOME HAZARDS

### Carbon Monoxide Poisoning

Rate of ER visits per 100,000 people



### Childhood Lead Poisoning

Percent of tested children with blood lead  $\geq 5$  µg/dL



### Radon

Percent of tests with results  $\geq 4$  pCi/L



## HEALTH CONDITIONS

### Asthma

Rate of ER visits per 10,000 people



### COPD

Rate of ER visits per 10,000 people



### Lyme Disease

Rate per 100,000 people



## ENVIRONMENTAL JUSTICE

### Social Vulnerability Index (SVI)

On a scale of 0-1, where 1 is the greatest vulnerability



### Poverty

Percent of population in poverty



! Above state value    ✓ At or below state value    ^ Data are suppressed

Data details on next page



# DASHBOARD DATA DETAILS

Below are the references for the data presented in the dashboard. Note that some measures have more years of data available on the Wisconsin Tracking portal. For additional data details, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking's data details or Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Alcohol Outlet Density:** Crude rate of alcohol licenses per 500 people  
**Source:** Division of Care and Treatment Services, Wisconsin Department of Health Services; primary data source is Wisconsin Department of Revenue  
**Years displayed:** 2020-2021

**Motor Vehicle-Related Fatalities:** Percent of fatal motor vehicle crashes involving cyclists or pedestrians  
**Source:** CDC National Environmental Public Health Tracking Data Portal; primary data source is National Highway Traffic Safety Administration  
**Years Displayed:** 2015-2019



## PRIVATE WATER QUALITY

**Arsenic:** Percent of test results that exceed EPA standard of 10 µg/L  
**Nitrate:** Percent of test results that exceed EPA standard of 10 mg/L  
**Source:** [Well Water Quality Viewer](#), Center for Watershed Science and Education, University of Wisconsin-Stevens Point  
**Years displayed:** 1988-2021



## HEALTH CONDITIONS

**Asthma:** Age-adjusted rate of emergency room visits related to asthma per 10,000 people  
**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services  
**Year displayed:** 2021

**Chronic Obstructive Pulmonary Disorder (COPD):** Age-adjusted rate of emergency room visits related to COPD for persons 25 years and older per 10,000 people  
**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services  
**Year displayed:** 2021

**Lyme Disease:** Crude rate of confirmed and probable Lyme disease cases per 100,000 people  
**Source:** Vectorborne Disease Program, Bureau of Communicable Diseases, Division of Public Health, Wisconsin Department of Health Services  
**Year displayed:** 2021



## HOME HAZARDS

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of emergency room visits related to unintentional CO poisoning per 100,000 people  
**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services  
**Years displayed:** 2017-2021

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) who had a blood lead level  $\geq 5$  µg/dL, among those tested  
**Source:** Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services  
**Year displayed:** 2021

**Radon:** Percent of tests with results at or above EPA standard of 4 pCi/L  
**Source:** Radon and Indoor Air Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin

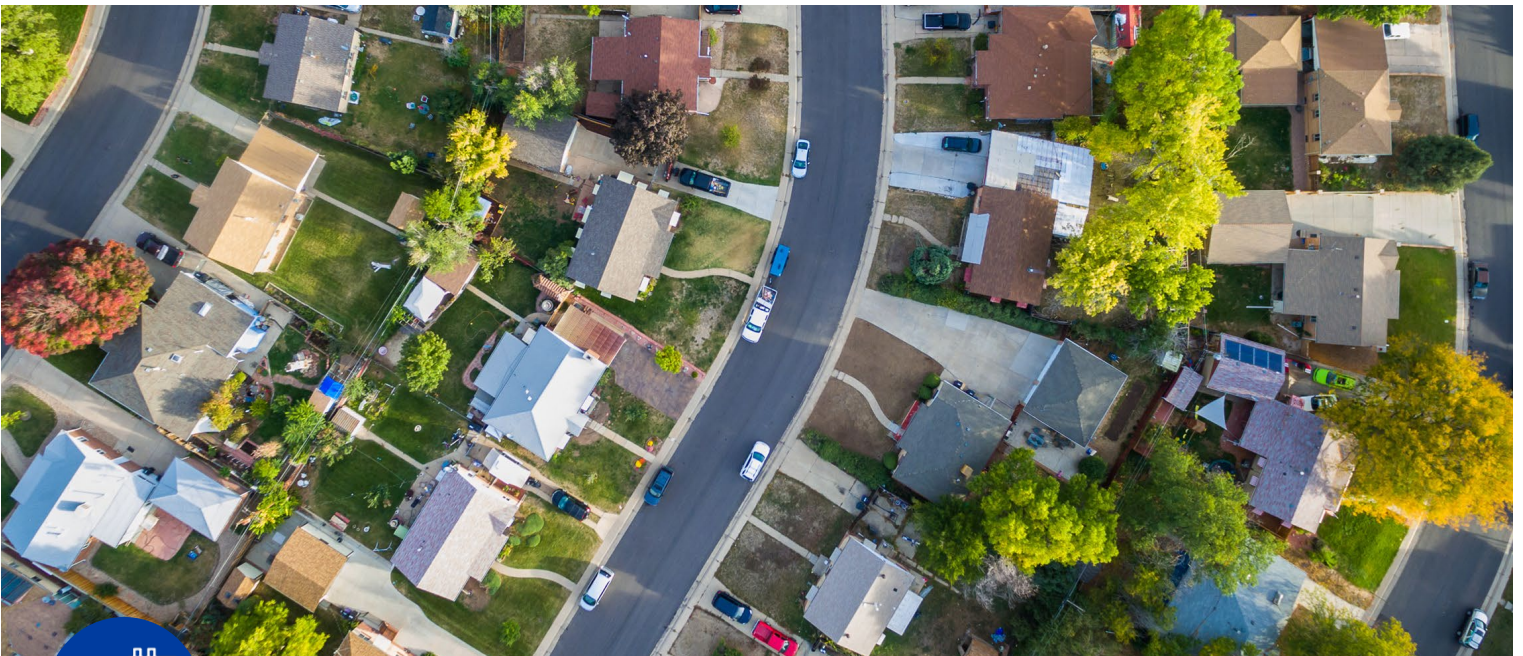


## ENVIRONMENTAL JUSTICE

**Social Vulnerability Index (SVI):** Ranking on a scale of 0-1, where 1 is the greatest vulnerability  
**Source:** CDC Agency for Toxic Substances and Disease Registry (CDC/ATSDR) developed the SVI using Census 2020 and American Community Survey (ACS) data.  
Note: the data displayed in the profile is from 2020 and may not be available on the portal at time of this publication.  
**Year displayed:** 2020

**Poverty:** Percent of population living in poverty  
**Source:** U.S. Census Bureau, SAIPE State and County Estimates for 2021.  
**Year displayed:** 2021





# COMMUNITY HEALTH

MANITOWOC COUNTY

## BACKGROUND

Environment includes not only the air we breathe and the water we drink, but also our built environment: the businesses, parks, schools, bike paths, roads, and features that make up our communities.

Our built environment includes the roads and intersections in our communities. The way that our community is designed can moderate exposure to traffic and the resulting crash fatalities.

Places that sell alcohol are part of our built environment. Examining the number of places that sell alcohol per the county population—known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## MOTOR VEHICLE-RELATED FATALITIES INVOLVING CYCLISTS OR PEDESTRIANS

Biking and walking are healthy, environmentally friendly modes of transportation. Unfortunately, both bikers and walkers are more likely to be seriously injured or killed when involved in a motor vehicle-related crash.

Pedestrian and cyclist fatalities have been on the rise. According to the [Pedestrian and Bicycle Information Center](#), pedestrian and cyclist fatalities in the U.S. increased by 43.6% in the ten-year period between 2010 and 2019. During that same time period, total traffic fatalities increased by 9.4%.

It is important to integrate pedestrian and bike safety into community design, especially concerning lighting, crosswalks, sidewalks, intersections, and bike lanes.

### Alcohol Outlet Density

Rate of alcohol licenses per 500 people



### Motor Vehicle-Related Fatalities

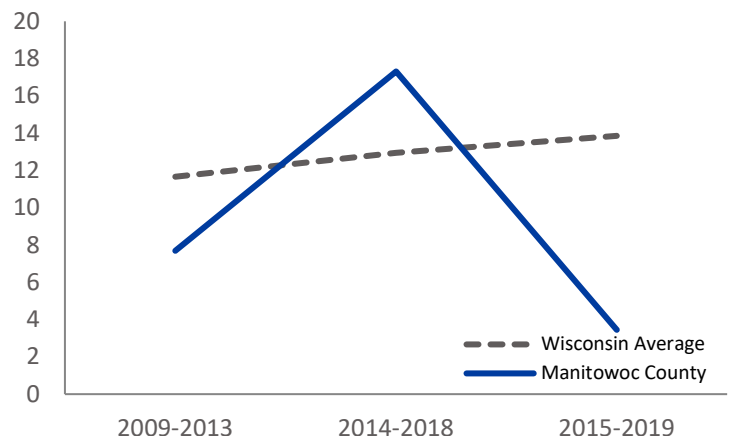
Percent of fatal motor vehicle crashes involving cyclists or pedestrians



! Above state value    ✓ At or below state value    ^ Suppressed

## MOTOR VEHICLE-RELATED FATALITIES

PERCENT OF FATAL MOTOR VEHICLE CRASHES INVOLVING CYCLISTS OR PEDESTRIANS





## ALCOHOL OUTLET DENSITY

Alcohol can have many health consequences, including increased risk for [six types of cancer](#).

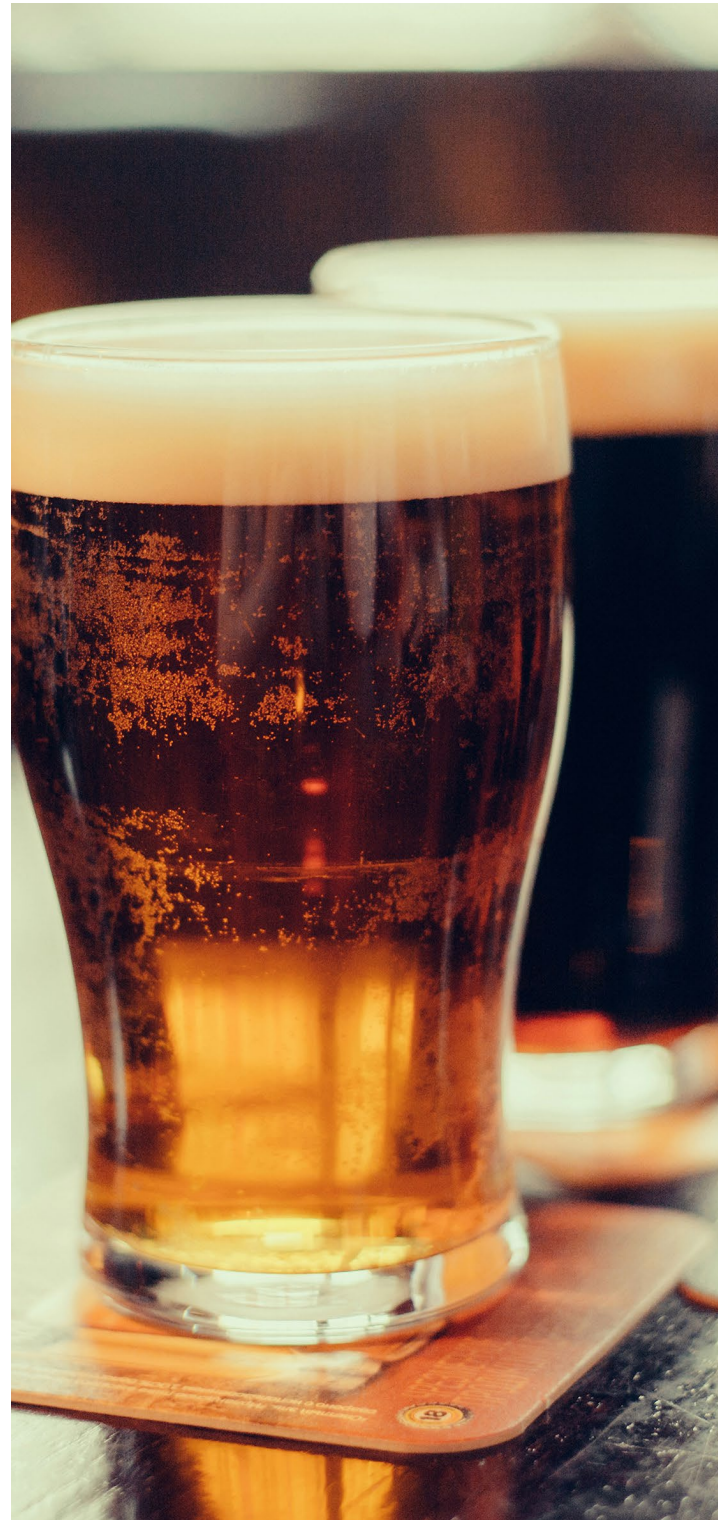
Alcohol outlets are places where alcohol is sold and either consumed on site (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to understand how alcohol impacts people who live there. We can use these data to monitor alcohol-related measures over time and to educate communities, plan programs, and implement policies.

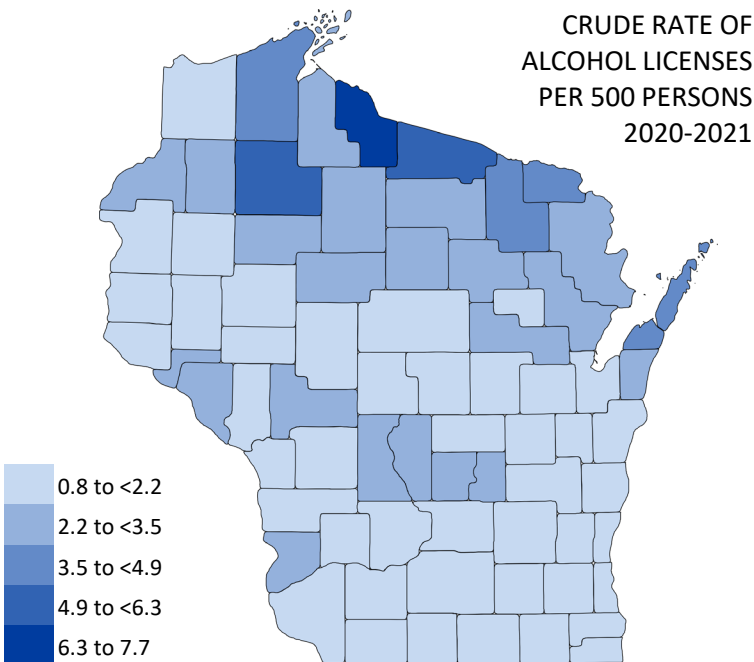
Alcohol outlet data are collected once annually, which means at any given time in the year, a new license could be issued or an old one may not be renewed.

Differences in alcohol outlet density are difficult to interpret. Rural counties may have a higher number of outlets relative to population, but these outlets may be smaller and serve fewer people than a single outlet in a larger city.

Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [Wisconsin Alcohol Policy Project](#).



## ALCOHOL OUTLET DENSITY



<b>268</b>	<b>16,981</b>
ALCOHOL LICENSES IN MANITOWOC COUNTY	TOTAL LICENSES IN WISCONSIN





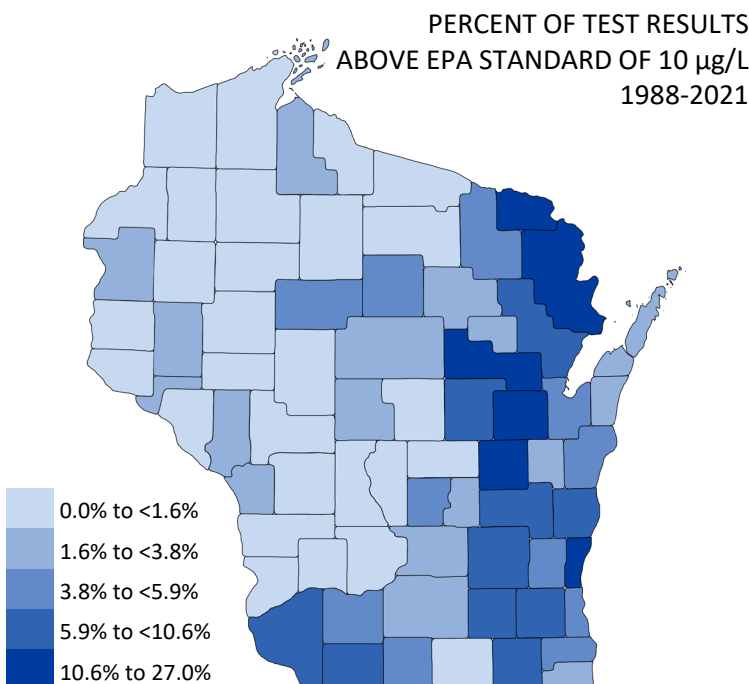
# PRIVATE WATER QUALITY MANITOWOC COUNTY

## BACKGROUND

About four in 10 Wisconsin homes get their water from private wells. Well owners are responsible for monitoring and testing their wells. All private wells should be tested regularly to ensure the water is safe to use and drink.

The University of Wisconsin-Stevens Point's Center for Watershed Science created a [mapping tool](#) to improve access to private well water data. The private well data are voluntarily submitted by homeowners and do not include water quality information for all known wells. County-specific measures for arsenic and nitrate in private wells are included in this report.

## ARSENIC IN PRIVATE WELLS



Source: UW-Stevens Point Well Water Viewer

## ✓ Arsenic

Percent of test results above EPA standard of 10 µg/L



## ✓ Nitrate

Percent of test results above EPA standard of 10 mg/L



! Above state value    ✓ At or below state value    ^ Suppressed

## ARSENIC IN PRIVATE WELLS

Arsenic can naturally occur in soil and rock formations but can also come from some types of pesticides, treated wood, and certain foods. In Wisconsin, high levels of arsenic in wells are most common in the northeastern part of the state but can be found in any county.

Drinking water with high levels of arsenic can cause skin rashes and stomach problems. Arsenic can also increase the risk for certain kinds of cancer. Infants and children are especially sensitive to arsenic, and high levels can affect [cognitive development](#).



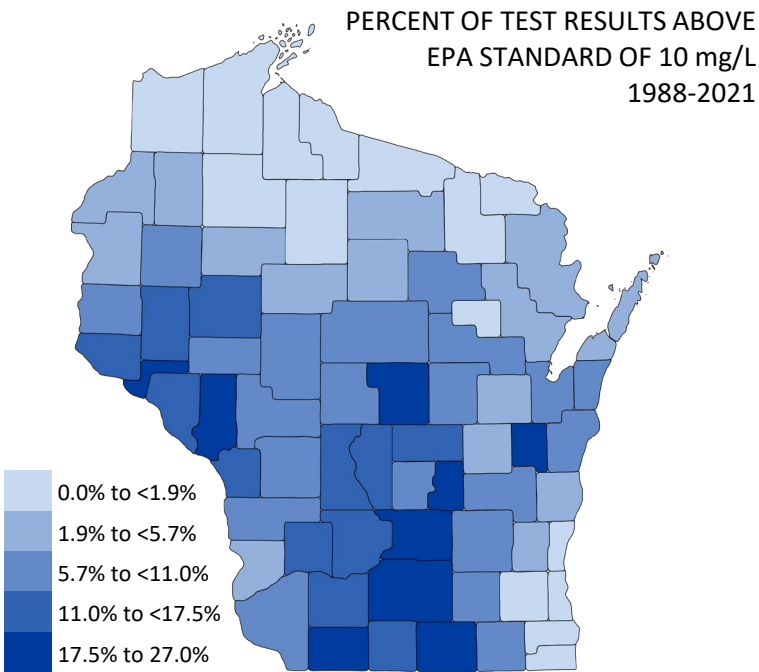
## NITRATE IN PRIVATE WELLS

Nitrate naturally occurs in plants and animals and can enter groundwater from fertilizers or animal and human waste.

In Wisconsin, nitrate is one of the most common groundwater contaminants. High nitrate levels are linked with [some birth defects](#).

Infants who consume drinking water with high nitrate levels are at risk of blue baby syndrome, a condition that limits the blood's ability to carry oxygen.

## NITRATE IN PRIVATE WELLS



Source: UW-Stevens Point Well Water Viewer



## ABOUT THE PRIVATE WELL WATER DATA

The data displayed in the private well water section include samples collected from 1988 to July 2021. The maps include results of 52,436 arsenic samples and 212,887 nitrate samples. The number of samples collected varies from year to year and by county; accordingly, some years and counties are better represented than others.

These data do not include all well tests conducted in the state; some tests done by private labs and local labs are not submitted to be displayed on the Well Water Viewer.

To explore data for other water contaminants, visit the [UW Stevens Point Well Water Viewer](#).





# HOME HAZARDS

MANITOWOC COUNTY

## BACKGROUND

Because we spend a great deal of time in our homes, it's important that they are safe and healthy. Carbon monoxide (CO) poisoning, childhood lead poisoning, and radon are three home hazards tracked by the Wisconsin Environmental Public Health Tracking Program.

### ! Carbon Monoxide Poisoning

Rate of ER visits per 100,000 people



### ! Childhood Lead Poisoning

Percent of tested children with blood lead  $\geq 5 \mu\text{g/dL}$



! Above state value    ✓ At or below state value    ^ Suppressed

### ✓ Radon

Percent of tests with results  $\geq 4 \text{ pCi/L}$



## CARBON MONOXIDE POISONING

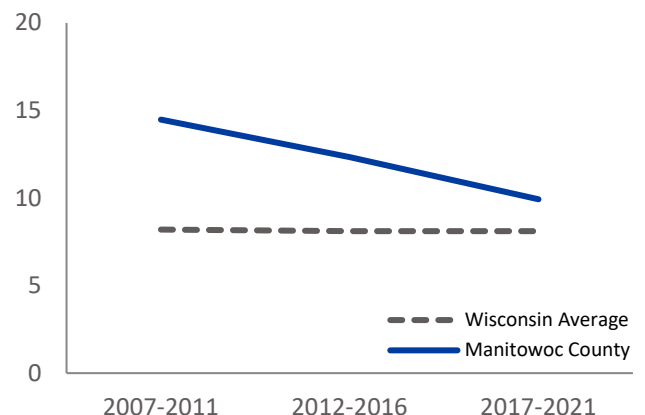
CO is a toxic gas that cannot be seen or smelled. CO is created whenever fuel or other materials are burned. Wisconsin state law requires all homes to have a CO detector on every level.

Carbon monoxide (CO) poisoning prevents oxygen from getting to the body, which can damage tissue and even cause death.

CO poisoning is also a risk in indoor ice arenas and recreational facilities where gasoline-powered equipment (e.g., ice resurfacers, motorbikes, go-karts) is used. While there is no state law requiring CO detectors in these venues, it is still important to monitor CO levels in the air and take action if levels are unsafe.

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PERSONS





### CHILDHOOD LEAD POISONING

Lead poisoning slows growth and development in children, particularly in the brain. Lead poisoning is also associated with problems later in life, such as poor academic outcomes and increased incarceration.

Exposure to even low levels of lead can cause damage over time, especially in children. Blood lead levels are measured in micrograms per deciliter (µg/dL). While the Centers for Disease Control and Prevention used 5 µg/dL as the reference value for childhood lead poisoning in the past, recently the reference value was changed to 3.5 µg/dL. Wisconsin adopted this threshold in 2021, and the portal will begin to track data using that threshold beginning in 2022. In the meantime, data presented use the 5 µg/dL value.

In most Wisconsin counties, the percentage of children poisoned is low. However, because counties vary greatly in the number of children tested for lead poisoning, these percentages should be interpreted with caution. For example, if eight children were tested in a county and two were poisoned, the percentage of children poisoned for that county would be 25%.

### RADON

Radon is a naturally-occurring gas released from the ground that is radioactive and can cause lung cancer. Radon can leak into homes and other buildings through cracks in the foundation.

Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

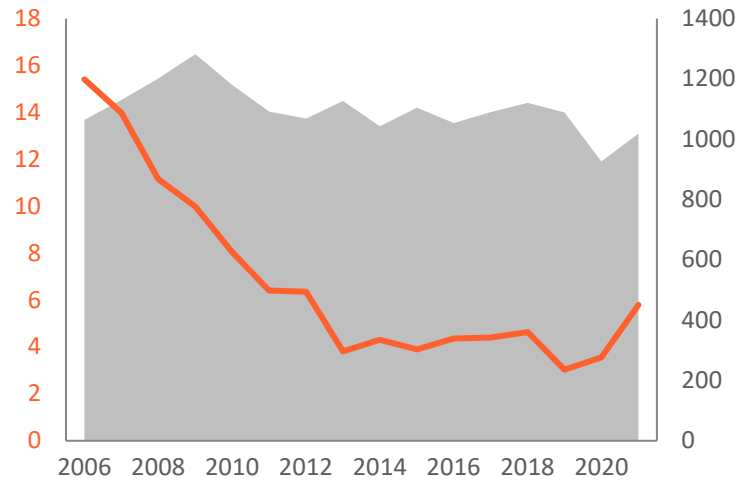
The radon data we present are only a fraction of the tests completed in Wisconsin. The data presented include all tests facilitated by the Radon and Indoor Air Program and Radon Information Centers, but may not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [The Wisconsin Radon Program](#).

The Environmental Protection Agency (EPA) recommends all homes with radon levels of four picocuries per liter (4 pCi/L) or higher be fixed. There are many certified radon mitigation contractors throughout the state who can fix radon problems in homes. Learn more at [lowradon.org](#).

### CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD  $\geq 5$  µg/dL

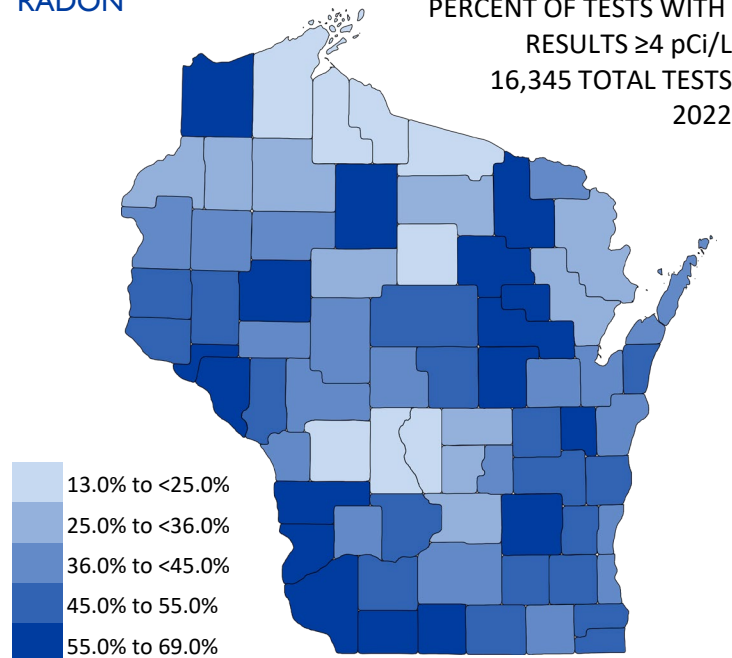
NUMBER OF CHILDREN TESTED



**Note:** To facilitate accurate interpretation, the figure above displays both the percentage of children poisoned among those tested and the total number of children tested. More detailed information on the number of children poisoned at the census tract level is available on the [Wisconsin Tracking data portal](#).

### RADON

PERCENT OF TESTS WITH RESULTS  $\geq 4$  pCi/L  
16,345 TOTAL TESTS  
2022



**Note:** The data for this map represent the percent of tests with results at or above the EPA standard of 4 pCi/L. These percentages may not be representative of radon levels for the entire county and should be interpreted with caution.





# HEALTH CONDITIONS

MANITOWOC COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, chronic obstructive pulmonary disease (COPD), and Lyme disease. Each of these measures is strongly linked to one or more environmental factors.

### ✓ Asthma

Rate of ER visits per 10,000 people



### ! COPD

Rate of ER visits per 10,000 people



### ✓ Lyme Disease

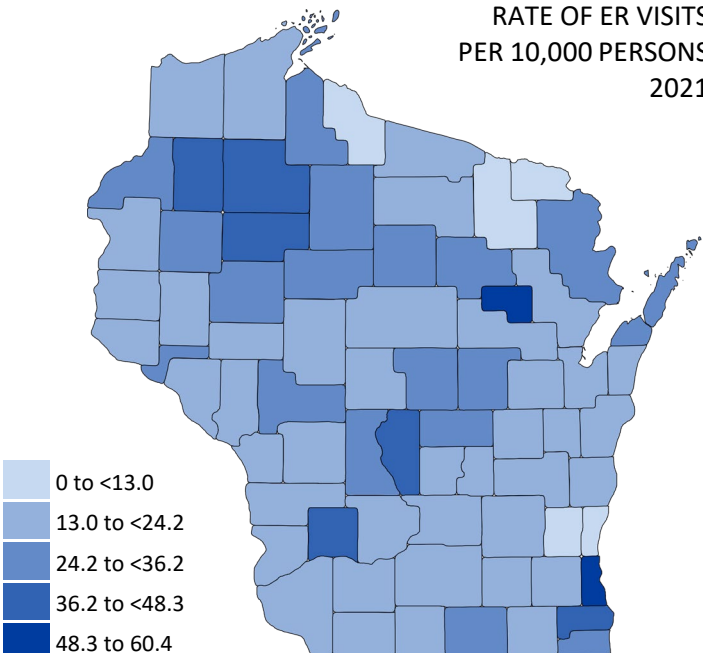
Rate per 100,000 people



! Above state value    ✓ At or below state value    ^ Suppressed

## ASTHMA

RATE OF ER VISITS PER 10,000 PERSONS 2021



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms may occur from exposure to common triggers, such as tobacco smoke, outdoor air pollution, or pollen.

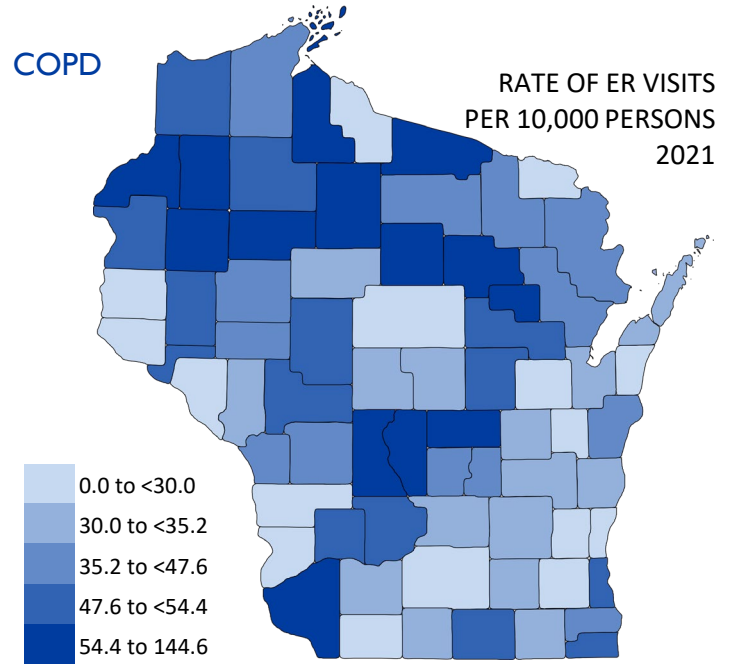
The overall rate of asthma emergency room visits in Wisconsin has slightly declined since 2004. Rates at the county level are more variable. In Wisconsin, asthma rates vary considerably by race and ethnicity. Read more about these differences in our [asthma disparities surveillance brief](#). To learn more about the burden of asthma and resources in Wisconsin, visit our [Asthma Program's webpage](#). View more years of asthma data on our portal.



### CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD)

COPD refers to a group of diseases that cause airflow blockage and breathing-related problems. COPD includes emphysema and chronic bronchitis. COPD is usually caused by cigarette smoking, but long-term exposure to other lung irritants, like secondhand smoke, can also contribute to COPD.

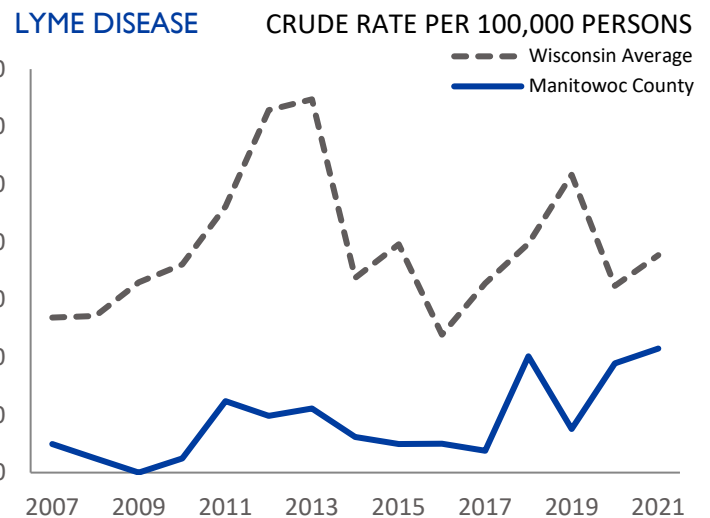
[According to the CDC](#), tobacco smoking accounts for as many as 8 out of 10 COPD-related deaths. According to Wisconsin Tobacco Prevention and Control Program, 17% of Wisconsin residents currently smoke. To learn more about tobacco in Wisconsin, visit the [Wisconsin Tobacco Prevention and Control webpage](#).



### LYME DISEASE

Lyme disease is spread by the bite of an infected black-legged tick (*Ixodes scapularis*) and is becoming more common in Wisconsin. The highest number of cases is typically reported in the northwestern region of Wisconsin, but in recent years cases have increased in the central and eastern regions. In 2021, Wisconsin had 4,863 estimated cases of Lyme disease. The average number of reported cases has more than doubled over the past 15 years.

Wisconsin’s climate has become generally warmer and wetter, which can provide more favorable conditions for ticks. Climate change has contributed toward the expanded geographic distribution of ticks as well as a longer season of tick activity and potential for Lyme disease transmission. Other factors, such as host populations (for example, deer and mice), awareness of Lyme disease, and land use changes, also impact Lyme disease rates.



### INTERPRETING LYME DISEASE DATA

The crude rate includes confirmed cases of Lyme disease—not probable or estimated cases—until 2008. Starting in 2008, the crude rate includes confirmed and probable cases. The criteria for reporting Lyme disease were revised again in 2012 to require reporting and follow-up only for cases with an erythema migrans (EM) rash. To compensate for this change, epidemiologists used a statistical method to estimate the true number of cases based on the number of total laboratory reports for each year since 2012. As such, rates of confirmed cases might appear to decrease since 2012, but this is likely due to the change in case definition, not from a reduced burden of Lyme disease. On the Tracking portal, estimated cases are only available at the state level, not the county level. The crude rate of cases reported here is an underestimate of the true rate of Lyme disease (see data details on page 16 for more information).







# ENVIRONMENTAL JUSTICE

MANITOWOC COUNTY

## BACKGROUND

All people are entitled to equal protection from environmental hazards and equal access to the development, implementation, and enforcement of environmental laws, regulations, and policies. Harmful environmental exposures contribute to unequal health outcomes for communities of color with less socioeconomic stability. For example, data clearly show that these communities (and all those that have been made marginalized) bear a greater burden of chronic disease, low birth weight, and the effects of climate change. In this section, we focus on demographic factors, environmental burdens, socioeconomic conditions, and public health concerns directly related to environmental justice.

## ENVIRONMENTAL JUSTICE INDICES

There are three key measures for assessing environmental justice. The three indices we track in Wisconsin are:

**The Social Vulnerability Index (SVI)**, which is a measure of how likely a community would be to adapt if confronted with external stresses on human health, like disasters or disease outbreaks.

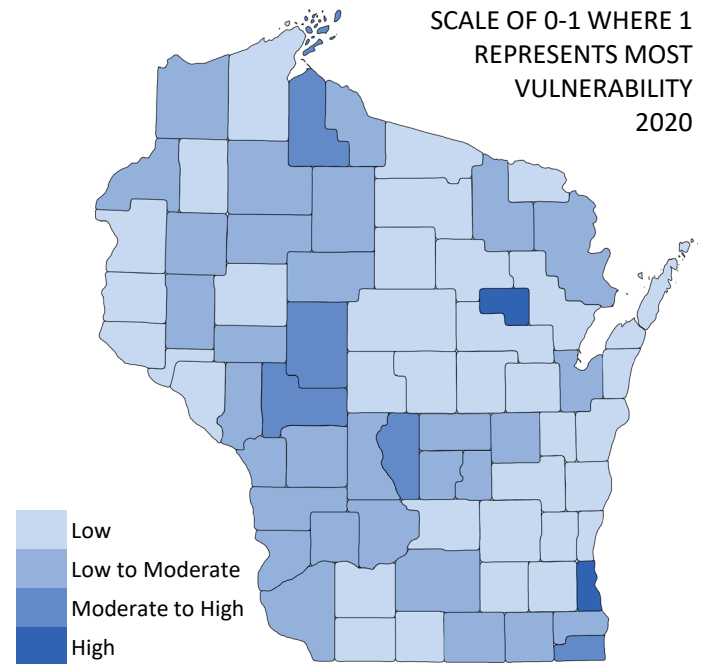
**The Environmental Quality Index (EQI)**, which is a combination of five domain indices: air, built design, land, sociodemographic, and water. The domains are a way of organizing wide-ranging data into meaningful categories as defined by the EPA.

**The Environmental Justice Index (EJI)**, which measures the cumulative effects of environmental justice indicators on human health and well-being. It includes factors like environmental burden and vulnerability.

## ABOUT THE SOCIAL VULNERABILITY INDEX (SVI)

The Social Vulnerability Index (SVI) indicates how well a community can endure external stresses on human health, like disasters or disease outbreaks. The SVI compares counties using 16 social factors. Values range from 0 to 1, with higher numbers indicating greater vulnerability. The Wisconsin counties in this dataset are ranked against all U.S. counties. An overall Wisconsin SVI was calculated by averaging all Wisconsin county values.

## SOCIAL VULNERABILITY INDEX BY COUNTY



**Note:** Low values range from 0.0 to <0.2. Low to moderate values range from 0.2 to <0.5. Moderate to high values range from 0.5 to <0.7. High values range from 0.7 to 1.0.

## UNDERSTANDING A COUNTY'S SVI:

In 2020, the Manitowoc County SVI was 0.1047 — this means the county was estimated to be less vulnerable to the effects of hazardous events than 90% of all counties in the United States. In 2020, the SVI for Wisconsin counties was 0.24. This means Wisconsin counties were, on average, less vulnerable to hazardous events than 76% of all other U.S. counties.



### TWO OTHER INDICES: EQI and EJI

The **environmental quality index (EQI)** is a data snapshot encompassing the air, built design, land, sociodemographic, and water domains. To interpret EQI, simply look for the lowest numbers; these scores are assigned to the very best, cleanest, best-designed environments. Places with higher EQI can often be improved by rethinking their built design or undertaking an environmental remediation. We track EQI by county and census tract, enabling portal users to direct resources to the communities where they are needed most.

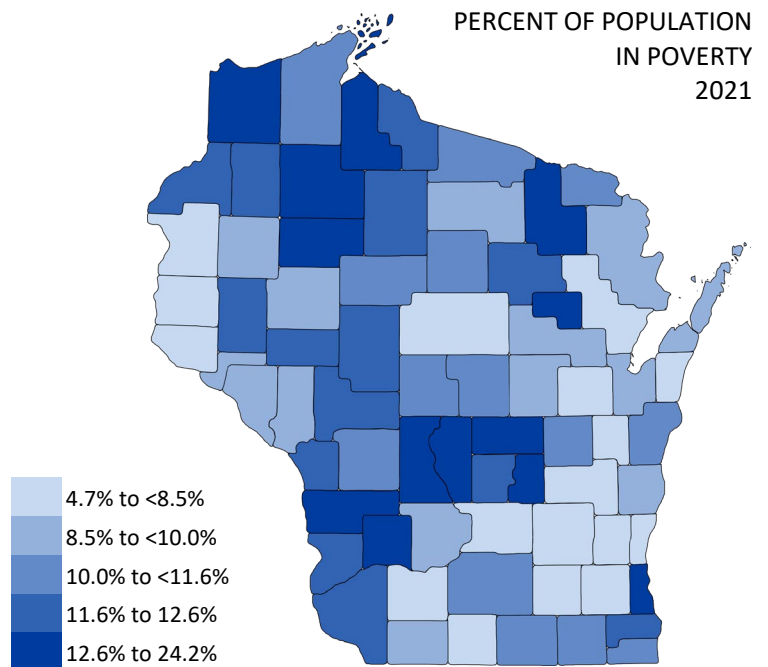
The **environmental justice index (EJI)** is the broadest measurement; it is calculated using the combined data from a location's environmental burden, social vulnerability, and health vulnerability. The EJI gives us a measure of the cumulative effects of environmental justice indicators on human health and well-being. The EJI value is easy to understand in terms of comparison. For example, if the number that you see when you select a county is .75, that means 75% of census tracts in the nation likely experience less severe impacts from environmental injustice than the area you selected. It also means 25% of tracts in the nation likely experience more severe effects.

### POVERTY

One of the factors in the EJI is and SVI is poverty status. It is determined by comparing total annual family income before tax to a table of federal poverty thresholds that vary by family size, number of related children, and age of householder. If a family's income is less than the dollar value of the appropriate threshold, then that family and every individual in it are considered to be in poverty. For people not living in families, poverty status is determined by comparing the individual's total income to their threshold.

The estimates presented are not direct counts from enumerations or administrative records, nor direct estimates from sample surveys. Instead, for counties and states, income and poverty estimates are modeled by combining survey data with population estimates and administrative records including American Community Survey (ACS), Annual Social and Economic Supplement (ASEC), Decennial Census, Federal Income Tax Returns, SNAP Benefits Recipients, BEA Personal Income Estimates, Supplemental Security Income Estimates, Population Estimates, and Denominators for Poverty Rates. Not all of these data sources are publicly available.

### POVERTY BY COUNTY



### USING ENVIRONMENTAL JUSTICE DATA

Environmental justice data is useful for anyone interested in working to build healthier communities. You can use environmental justice tracking data to identify areas that may require additional resources to improve environmental health and health equity. These data can also help you characterize the unique environmental and social factors that can combine to create a burden on health, and inform policy and decision-making to address those factors. Information on environmental justice can also help you set goals and measure progress towards environmental justice and health equity.





# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Alcohol Outlet Density:** Crude rate of alcohol licenses per 500 people

**Source:** Division of Care and Treatment Services, Wisconsin Department of Health Services; primary data source is Wisconsin Department of Revenue

**Years displayed:** 2020-2021

**Data details:** Data are a point-in-time estimate, meaning the data are shared once annually and may change throughout the year when a new license is issued or an old one not renewed. Data are not suppressed for this measure. Crude rate of alcohol licenses per 500 people is the number of establishments with a liquor license divided by the total number of people in the county, expressed as a number per 500 people in the population.

**Motor Vehicle-Related Fatalities:** Percent of fatal motor vehicle crashes involving cyclists or pedestrians

**Source:** CDC National Environmental Public Health Tracking Data Portal; primary data source is National Highway Traffic Safety Administration

**Years displayed:** 2009-2019

**Data details:** Data were obtained from the National Highway Traffic Safety Administration's Fatality Analysis Reporting System (FARS). Percentages were calculated by dividing the number of distinct crashes involving bicyclists or pedestrians by the total number of distinct fatal crashes, then multiplying by 100.



## PRIVATE WATER QUALITY

**Arsenic:** Percent of test results for arsenic that exceed EPA standard of 10 µg/L

**Nitrate:** Percent of test results for nitrate that exceed EPA standard of 10 mg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to July 2021

**Data details:** The statewide comparison number was calculated by dividing the total number of tests that exceed EPA standard by the total number of tests and multiplying by 100. Per the Well Water Quality Viewer, "The viewer summarizes private well water quality data from the Center for Watershed Science and Education, the Wisconsin Department of Agriculture, Trade, and Consumer Protection, the Department of Natural Resources Groundwater Retrieval Network, Eau Claire City-County Health Department, and LaCrosse County Health Department. It is not considered a scientific study and **does not** represent well water quality information for all known private wells."



## HOME HAZARDS

**Carbon Monoxide (CO) Poisoning:** Annual average age-adjusted rate of emergency room visits related to unintentional CO poisoning per 100,00 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2010-2021

**Data details:** This measure includes carbon monoxide poisonings that were unintentional (fire- or non-fire-related) and of unknown intent. These data are from emergency room visit records. The measure includes cases with an ICD-9 code (from 2010 through quarter three of 2015) of 986 or cause of injury code E868.2, E868.3, E868.8, E868.9, E982.0, or E982.1 and cases with an ICD-10 code (from quarter four of 2015 through 2021) of T58.01, T58.04, T58.11, T58.14, T58.2X1, T58.2X4, T58.8X1, T58.8X4, T58.91, and T58.94. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates intentional exposure. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) who had a blood lead level  $\geq 5$  µg/dL, among those tested; and the total number of children (less than 6 years of age) who were tested

**Source:** Wisconsin Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2006-2021

**Data details:** Wisconsin blood lead testing data from children less than 6 years of age are reported to the Childhood Lead Poisoning Prevention Program. Data are de-duplicated such that they contain the most recent confirmatory (venous) test following an elevated screening (capillary) test. If no confirmatory test for the individual is available, the most recent screening test result is used. The Wisconsin average includes all tests, regardless of whether there is location data for a given test.

**Radon:** Percent of radon tests with results at or above EPA standard of 4 pCi/L

**Source:** Wisconsin Radon and Indoor Air Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2022

**Data details:** The map of these data comes from the CDC National Environmental Public Health Tracking Data Portal. The Wisconsin Radon and Indoor Air Program requested data from six private labs: AccuStar, Air Chek Inc., DrHomeAir, PRO-LAB Inc., Radonova, and Radon Testing Corporation of America (RTCA). The radon data we present from these six companies do not include all of the tests completed in Wisconsin. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. Data from tests where the testing media was water were excluded. Some records were missing county name, so county had to be determined by using a 5-digit zip code. Although this technique proved to be accurate in most cases, there may be some records where the county was misclassified. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

**Asthma:** Age-adjusted rate of emergency room visits related to asthma per 10,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2021

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-10 code of J45 (inclusive of all sub-variation codes). Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Chronic Obstructive Pulmonary Disorder (COPD):** Age-adjusted rate of emergency room visits related to COPD for persons 25 years and older per 10,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2021

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-10 code of J40 through J44 (inclusive of all sub-variation codes). Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Lyme Disease:** Crude rate of confirmed and probable Lyme disease cases per 100,000 people

**Source:** Vectorborne Disease Program, Bureau of Communicable Diseases, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2007-2021; data from 2021 are displayed on the dashboard

**Data details:** These data are from the Wisconsin Electronic Disease Surveillance System (WEDSS). County-level data are based on the county of residence of the case; some infections may have been acquired during travel to other areas. The crude rate numerator includes only confirmed and probable (when available) cases and does not include estimated cases. Confirmed cases of Lyme disease include: 1) those with an erythema migrans (EM) rash that is greater than or equal to 5 cm in diameter and diagnosed by a medical professional or 2) those with at least one non-EM confirmatory sign or symptom indicating late manifestation of disease (arthritis, Bell's palsy or other cranial neuritis, encephalomyelitis, lymphocytic meningitis, radiculoneuropathy, or 2nd or 3rd degree atrioventricular block) that also has laboratory evidence of infection that meets criteria. In 2008, the national surveillance case definition for Lyme disease introduced probable cases. In 2012, the criteria for reporting Lyme disease changed so only cases with an EM rash required follow-up. Read the [data details on our website](#) for more information.



## ENVIRONMENTAL JUSTICE

**Social Vulnerability Index:** SVI scores range from 0.00 to 1.00. A score of 1.00 represents the greatest level of social vulnerability to human suffering and financial loss in the event of an emergency.

**Source:** Data are provided by CDC/ATSDR's Geospatial Research, Analysis & Service Program and are developed using Census 2010 and American Community Survey (ACS) data.

**Year displayed:** 2020

**Data details:** The Social Vulnerability Index (SVI) uses U.S. Census data to determine the social vulnerability of every census tract. Census tracts are subdivisions of counties for which the Census collects statistical data. The SVI evaluates each tract on 15 social factors, including poverty, lack of vehicle access, and crowded housing, and groups them into four related themes. The SVI also provides an overall measure that includes all 15 social factors.

**Poverty:** Percent of population living in poverty.

**Source:** U.S. Census Bureau, SAIPE State and County Estimates for 2021.

**Year displayed:** 2021

**Data details:** The U.S. Census Bureau's Small Area Income and Poverty Estimates (SAIPE) program produces single-year estimates of income and poverty for all U.S. states and counties. The main objective of this program is to provide estimates of income and poverty for the administration of federal programs and the allocation of federal funds to local jurisdictions. In addition to these federal programs, state and local programs use the income and poverty estimates for distributing funds and managing programs. Poverty status is determined by comparing total annual family income before tax to a table of federal poverty thresholds that vary by family size, number of related children, and age of householder. If a family's income is less than the dollar value of the appropriate threshold, then that family and every individual in it are considered to be in poverty. For people not living in families, poverty status is determined by comparing the individual's total income to their threshold. The estimates presented are not direct counts from enumerations or administrative records, nor direct estimates from sample surveys. Instead, for counties and states, income and poverty estimates are modeled by combining survey data with population estimates and administrative records including American Community Survey (ACS), Annual Social and Economic Supplement (ASEC), Decennial Census, Federal Income Tax Returns, SNAP Benefits Recipients, BEA Personal Income Estimates, Supplemental Security Income Estimates, Population Estimates, and Denominators for Poverty Rates. Not all of these data sources are publicly available.





## TAKING THE NEXT STEP

### Present to Partners

We created a Profile Template Slide Deck as a guide for presentations. The slide deck is free to use and completely customizable. See the notes section for ideas and considerations for tailoring your talk. Visit the [Profiles page of our website](#) to download the template.

### Plan Strategies for Taking Action

We know it's a challenge to translate data into action. To help get you started, we created a short menu of potential strategies for addressing the topics in this Profile called *Ideas for Taking Action*. To help communities of all sizes and resource levels, we organized them by the scope of the strategy, from increasing individual knowledge to addressing laws and policies. We also publish success stories from the recipients of our mini-grant program. Reviewing these stories is a great way to get ideas and connect with communities doing similar work. Visit the [Ideas for Taking Action page of our website](#) to learn more.

### Receive Our Semiannual Newsletter

Stay up to date on the latest Wisconsin Environmental Public Health Tracking news and resources by subscribing to our newsletter. Head to [our website](#) and click the link to subscribe.

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### Special Thanks

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MAY 2023 | P-00719 (Rev. 05/2023)