



# ADAMS COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

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

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)



# ADAMS COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

74.5% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

2.4 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

12.1% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

0.0% | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

7.5 | Rate of ER visits per 100,000 people  
Wisconsin: 8.4

### Childhood Lead Poisoning

3.7% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

19.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

31.4 | Rate of ER visits per 10,000 people#  
Wisconsin: 35.1

### Melanoma

22.4 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

93.5 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

31.6 | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

280.4 | Crude rate per 100,000 people  
Wisconsin: 51.7

● Above state value  
● At or below state value

\* Above state value preferred for this measure  
^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

[Data details on next page](#)





# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Year displayed:** 2016

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

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

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

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

**Years displayed:** 2008-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

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

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

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

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH ADAMS COUNTY

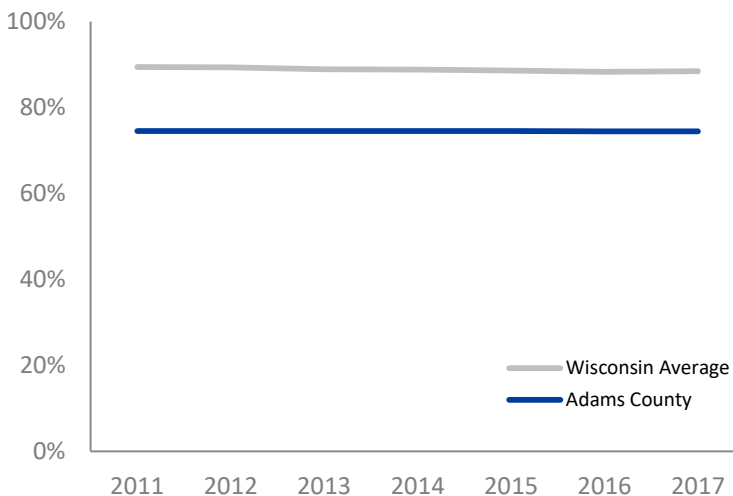
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **74.5%**

**FLUORIDE**  
PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
WISCONSIN: 88.4%

● Above state value

● **2.4**

**ALCOHOL OUTLET DENSITY**  
RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
WISCONSIN: 1.5

● At or below state value

\* Above state value preferred for this measure  
^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).





## ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

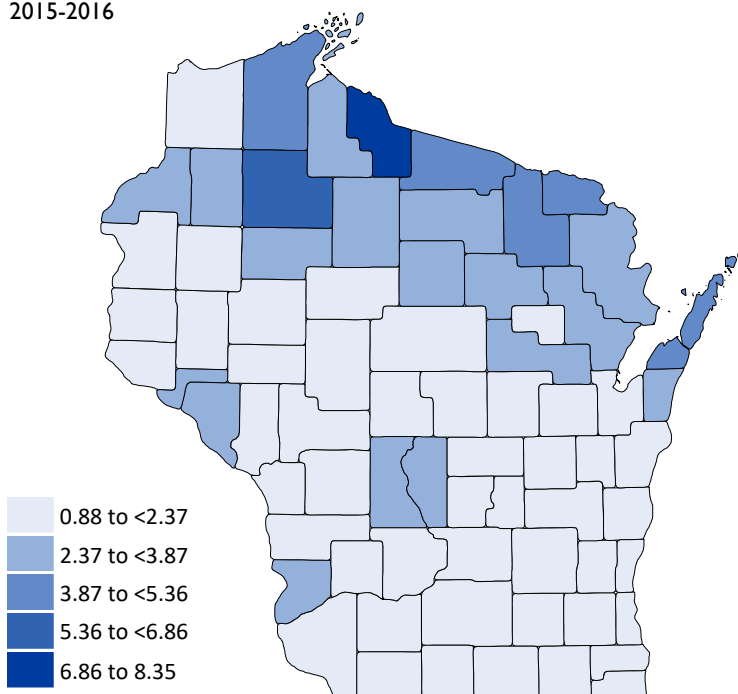
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

## ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



|                             |                                |
|-----------------------------|--------------------------------|
| <b>97</b>                   | <b>16,948</b>                  |
| LICENSES IN<br>ADAMS COUNTY | TOTAL LICENSES IN<br>WISCONSIN |



# PRIVATE WATER QUALITY ADAMS 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 displayed in this report. Users can find public water quality data on our data portal.

● **12.1%**

**NITRATE**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 mg/L  
**WISCONSIN: 11.0%**

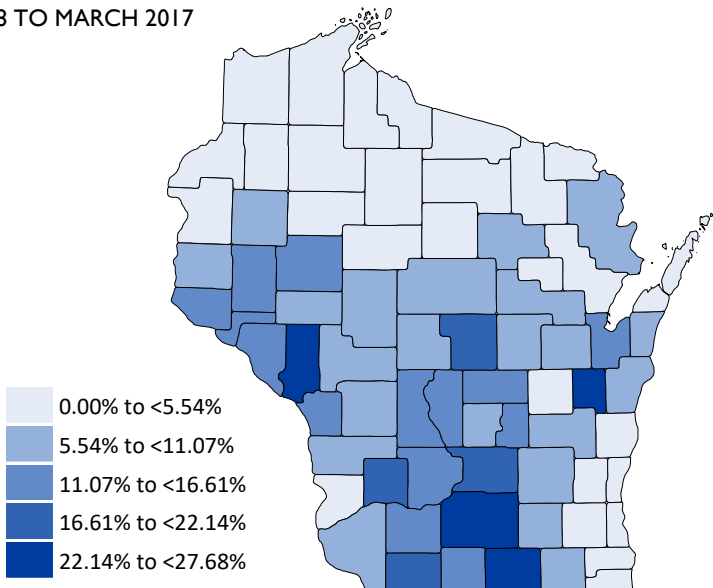
● **0.0%**

**ARSENIC**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 µg/L  
**WISCONSIN: 6.0%**

● Above state value    ● At or below state value    ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
 1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS ADAMS 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.

● **7.5**

**CARBON MONOXIDE POISONING**

RATE OF ER VISITS RELATED TO CO POISONING PER 100,000

WISCONSIN: 8.4

● **3.7%**

**CHILDHOOD LEAD POISONING**

PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$

WISCONSIN: 5.0%

● **19.0%**

**RADON**

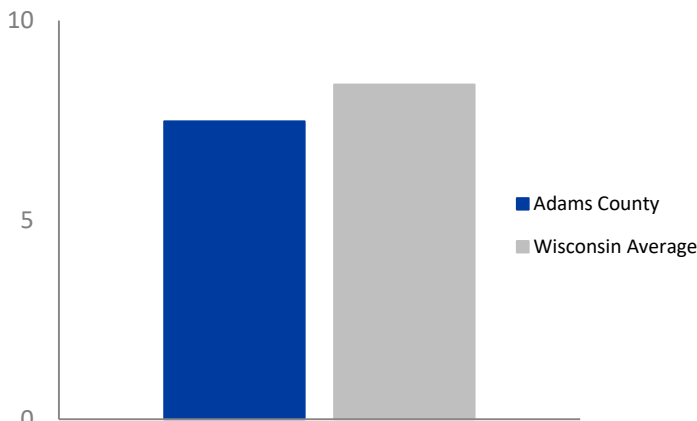
PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$

WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE  
2008-2017



## CARBON MONOXIDE POISONING

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

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.





## 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter (µg/dL). The Centers for Disease Control and Prevention defines lead poisoning at or above 5 µg/dL.

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

## RADON

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

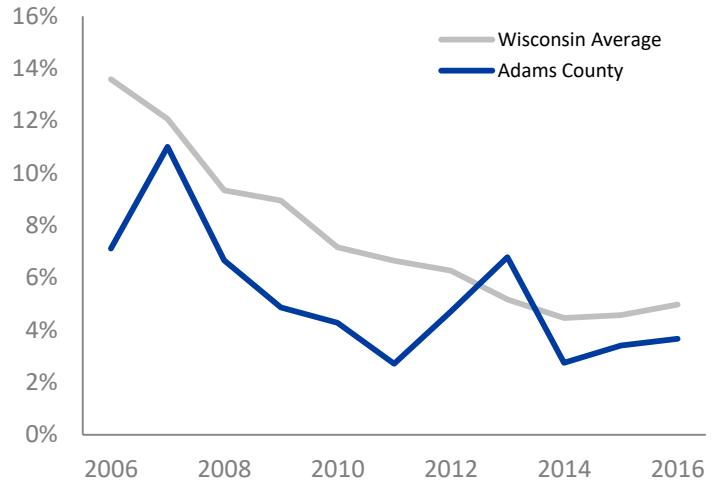
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

## CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD ≥5 µg/dL

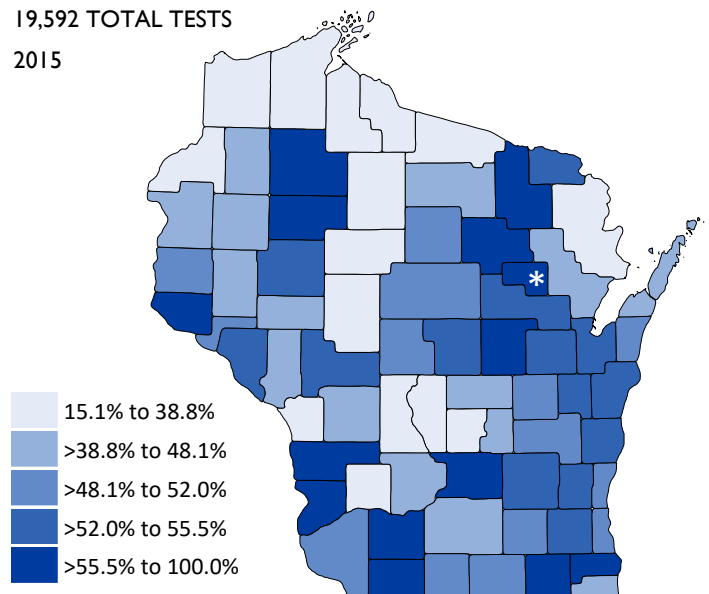


## RADON

PERCENT OF TESTS WITH RESULTS ≥4 pCi/L

19,592 TOTAL TESTS

2015



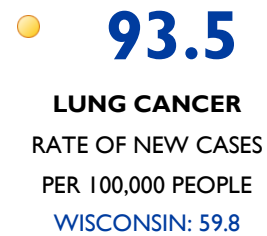
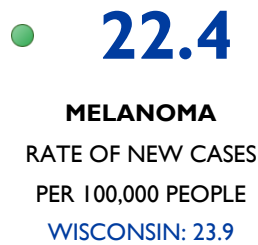
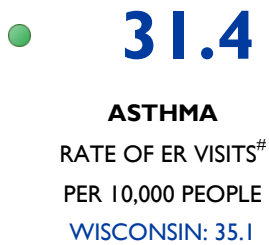
**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.



# HEALTH CONDITIONS ADAMS COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.

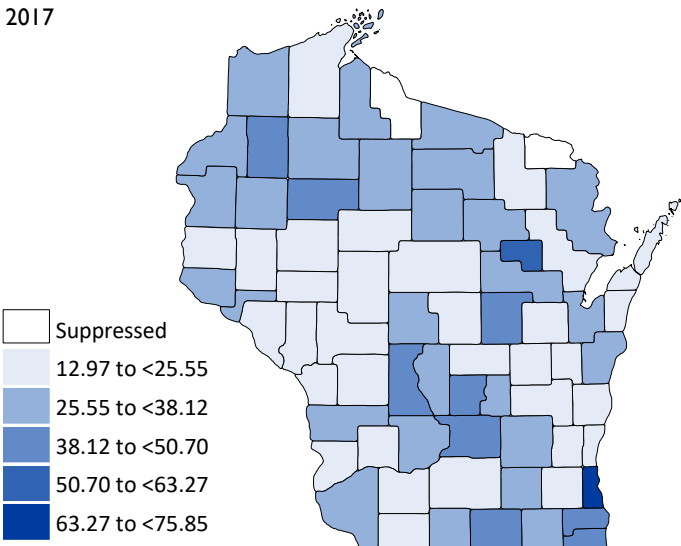


- Above state value
- At or below state value
- ^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.





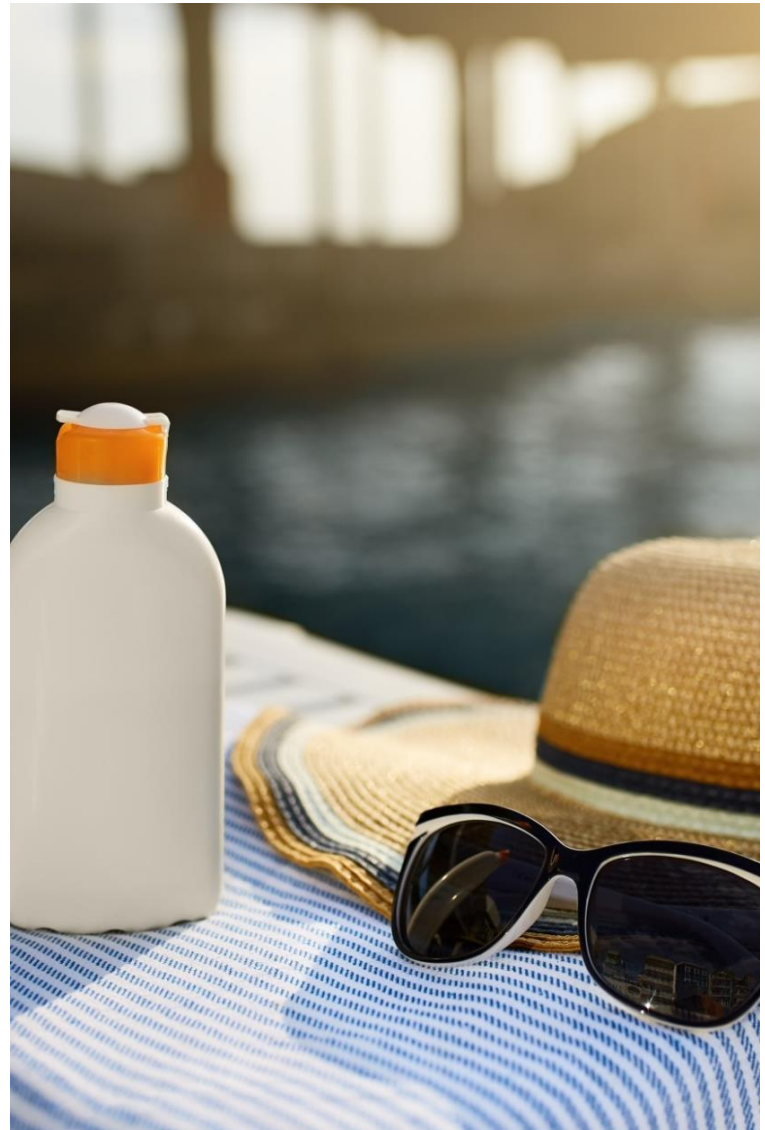
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

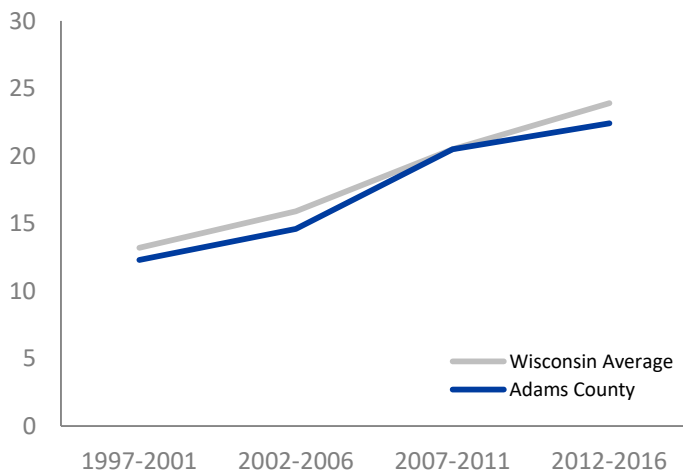
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



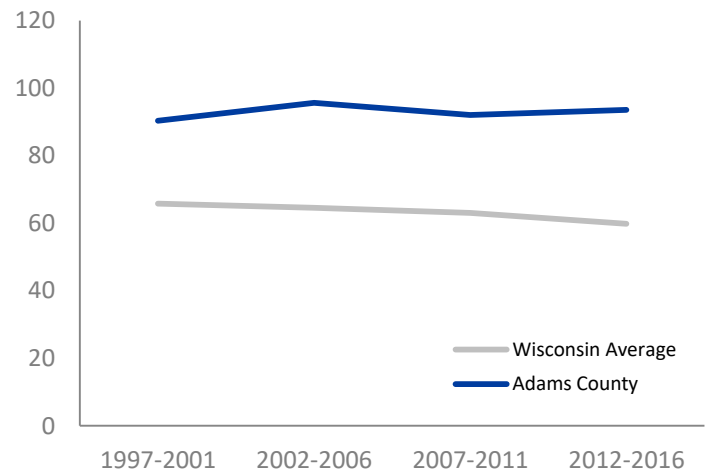
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE ADAMS COUNTY

## BACKGROUND

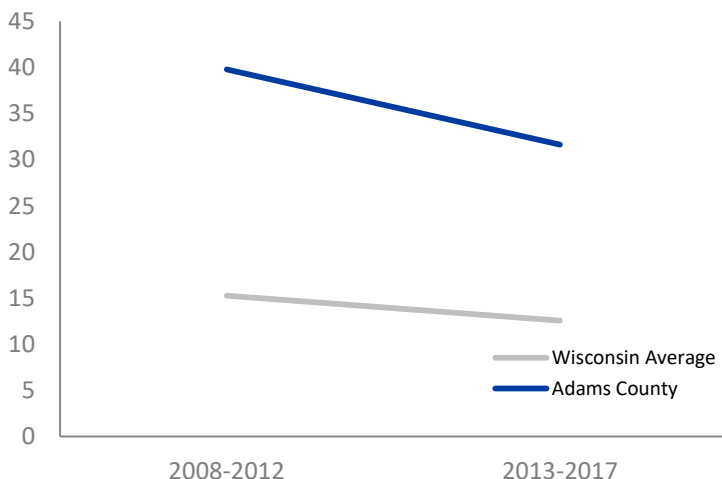
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **31.6**  
**HEAT STRESS**  
 RATE OF ER VISITS  
 PER 100,000 PEOPLE  
 WISCONSIN: 12.6

● **280.4**  
**LYME DISEASE**  
 RATE OF CASES  
 PER 100,000 PEOPLE  
 WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

## LYME DISEASE AT THE NATIONAL LEVEL

OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001



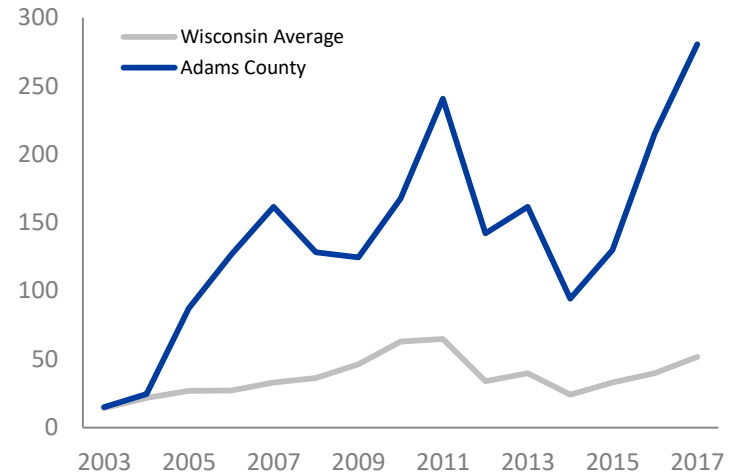
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population. For the majority of Profiles, these data were averaged over five years (2013-2017). For this county's Profile, that five-year average was suppressed. To eliminate the suppression in this Profile, these data were instead averaged over 10 years (2008-2017).

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

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

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

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

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

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

Bureau of Environmental and Occupational Health  
Wisconsin Department of Health Services | Division of Public Health

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MAY 2019 | P-00719 (Rev. 05/2019)





# ASHLAND COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

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

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# ASHLAND COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

● 82.9% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

● 3.1 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

● 0.0% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

● 3.0% | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

● 10.9 | Rate of ER visits per 100,000 people  
Wisconsin: 7.9

### Childhood Lead Poisoning

● 4.0% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

● 15.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

● 33.6 | Rate of ER visits per 10,000 people<sup>#</sup>  
Wisconsin: 35.1

### Melanoma

● 17.1 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

● 71.8 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

● 14.1 | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

● 45.2 | Crude rate per 100,000 people  
Wisconsin: 51.7

● Above state value  
● At or below state value

\* Above state value preferred for this measure  
^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

[Data details on next page](#)



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Year displayed:** 2016

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

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

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

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

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

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

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

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

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH ASHLAND COUNTY

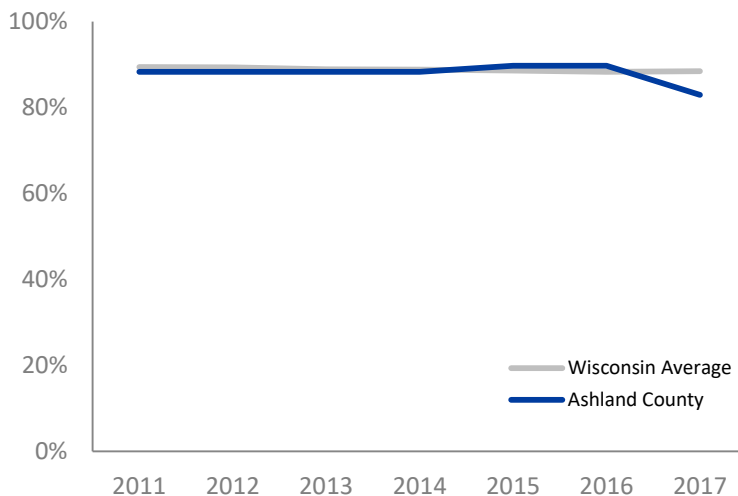
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **82.9%**

**FLUORIDE**  
PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
WISCONSIN: 88.4%

● **3.1**

**ALCOHOL OUTLET DENSITY**  
RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



## ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

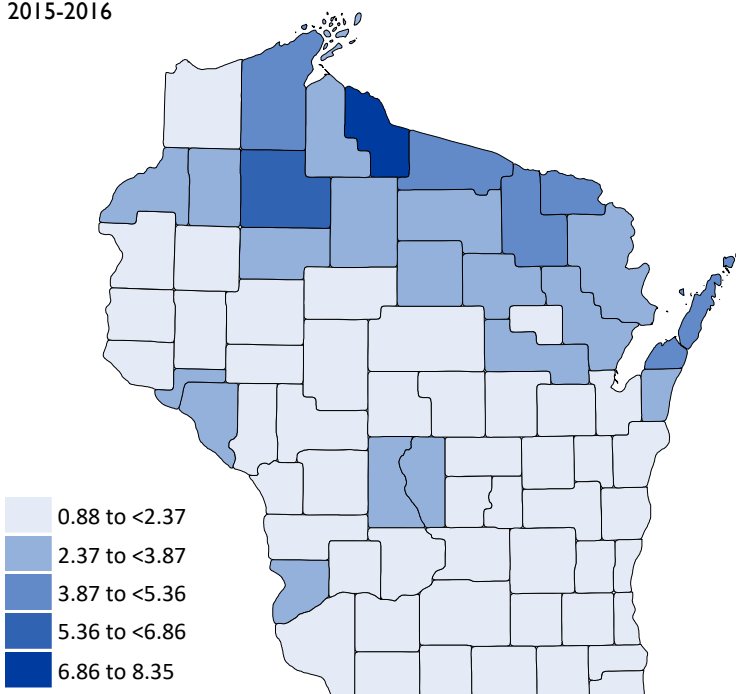
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

## ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



# 98

LICENSES IN  
ASHLAND COUNTY

# 16,948

TOTAL LICENSES IN  
WISCONSIN





# PRIVATE WATER QUALITY ASHLAND 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 displayed in this report. Users can find public water quality data on our data portal.

● **0.0%**

**NITRATE  
IN PRIVATE WELLS**  
PERCENT OF TEST RESULTS  
ABOVE EPA STANDARD  
OF 10 mg/L  
WISCONSIN: 11.0%

● **3.0%**

**ARSENIC  
IN PRIVATE WELLS**  
PERCENT OF TEST RESULTS  
ABOVE EPA STANDARD  
OF 10 µg/L  
WISCONSIN: 6.0%

● Above state value   ● At or below state value   ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS ASHLAND 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.

● **10.9**  
**CARBON MONOXIDE POISONING**  
 RATE OF ER VISITS RELATED TO CO POISONING PER 100,000  
 WISCONSIN: 7.9

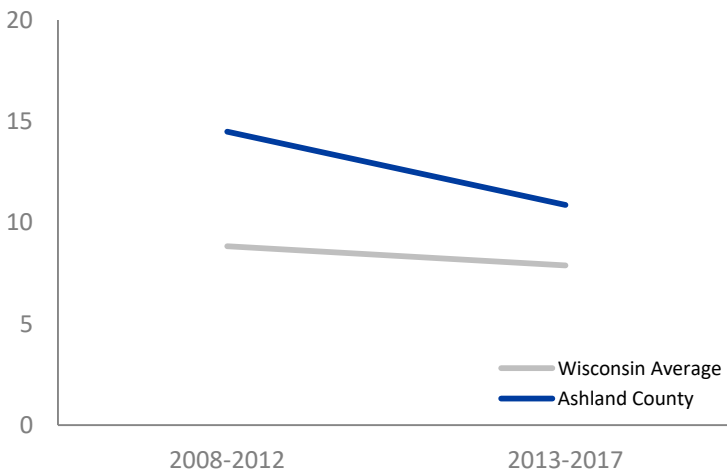
● **4.0%**  
**CHILDHOOD LEAD POISONING**  
 PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$   
 WISCONSIN: 5.0%

● **15.0%**  
**RADON**  
 PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$   
 WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

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

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



## 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter (µg/dL). The Centers for Disease Control and Prevention defines lead poisoning at or above 5 µg/dL.

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

## RADON

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

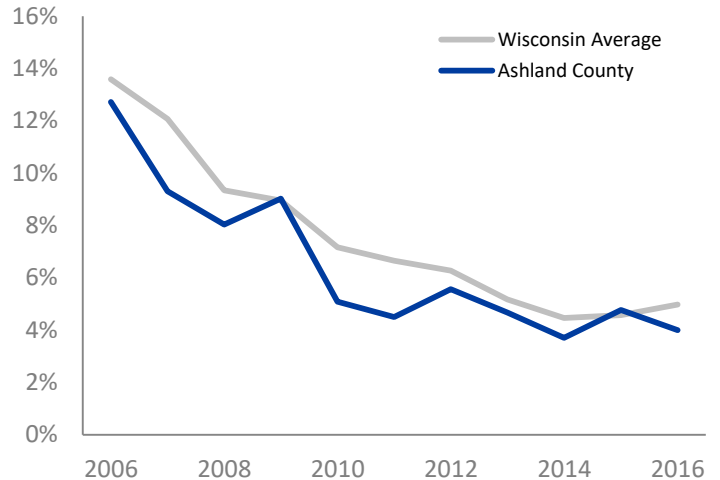
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

## CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD ≥5 µg/dL

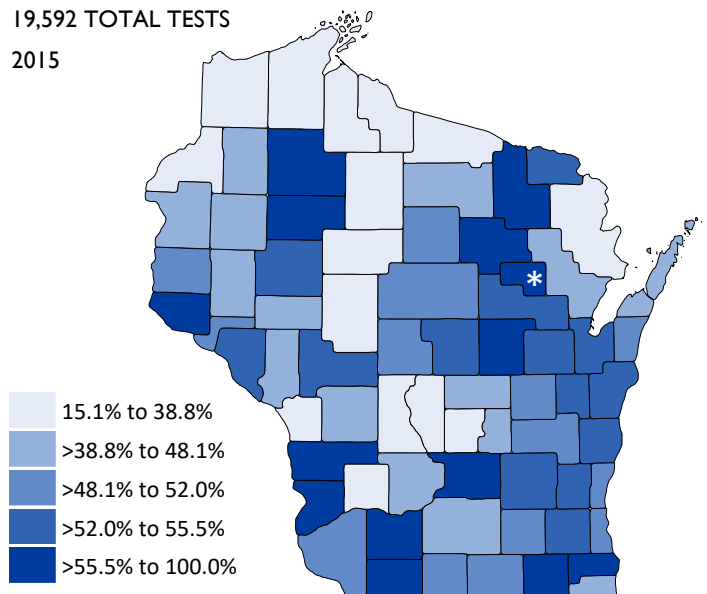


## RADON

PERCENT OF TESTS WITH RESULTS ≥4 pCi/L

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

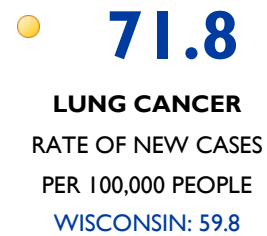
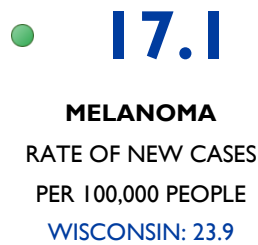
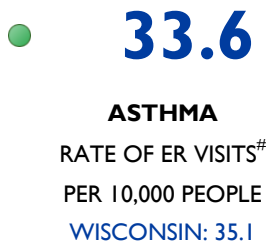




# HEALTH CONDITIONS ASHLAND COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.

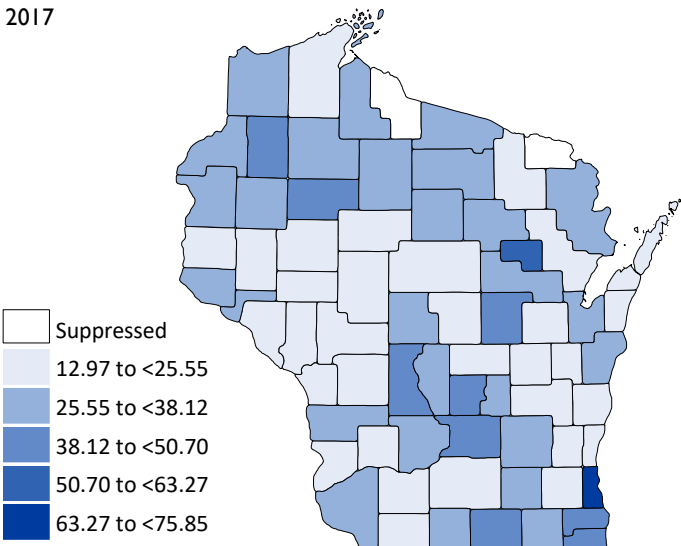


- Above state value
- At or below state value
- ^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



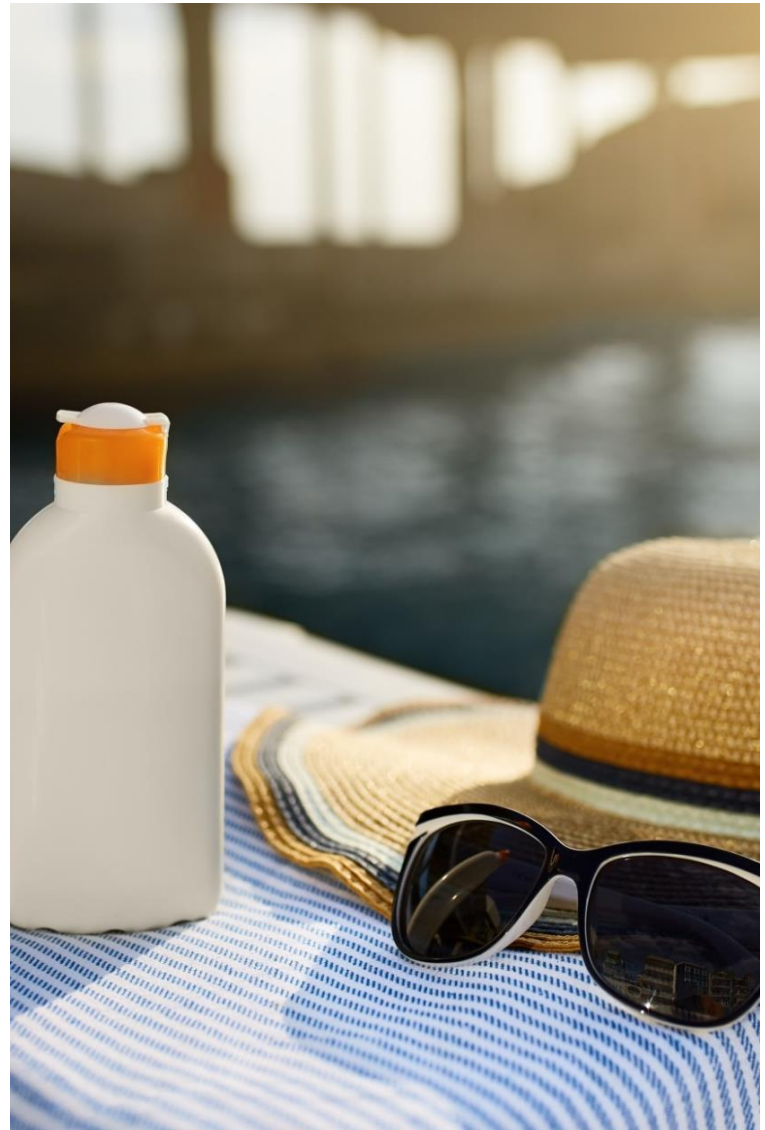
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

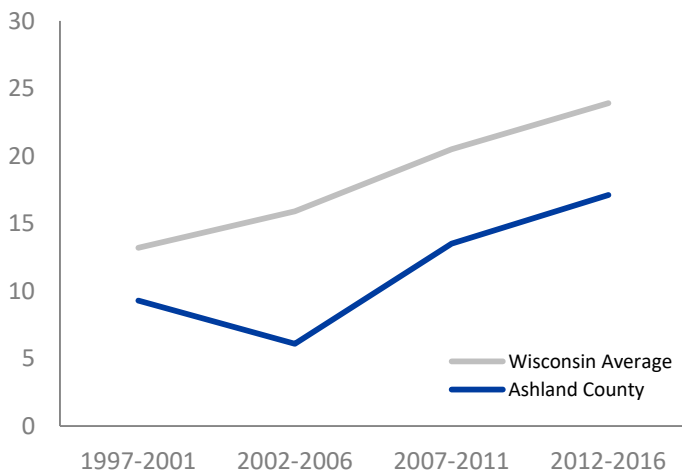
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



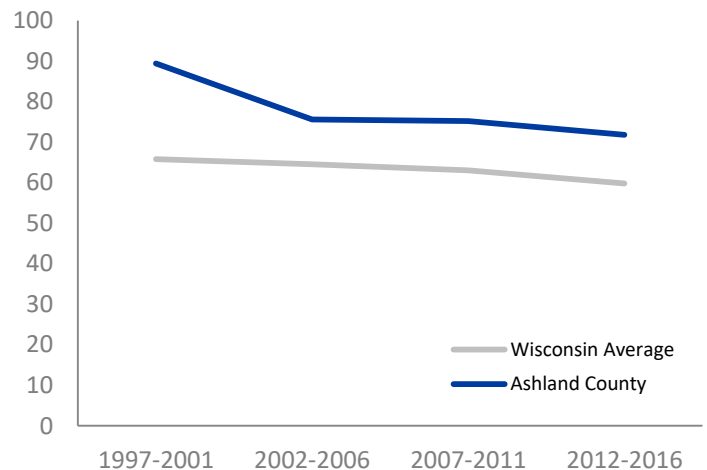
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE ASHLAND COUNTY

## BACKGROUND

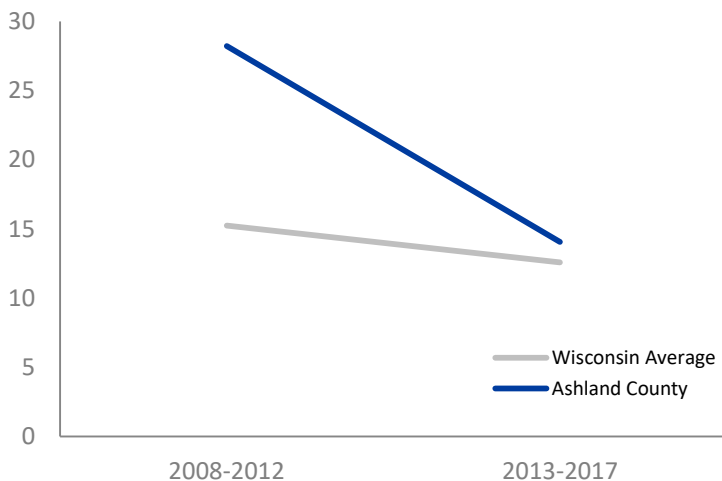
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **14.1**

**HEAT STRESS**  
RATE OF ER VISITS  
PER 100,000 PEOPLE  
WISCONSIN: 12.6

● **45.2**

**LYME DISEASE**  
RATE OF CASES  
PER 100,000 PEOPLE  
WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

## LYME DISEASE AT THE NATIONAL LEVEL

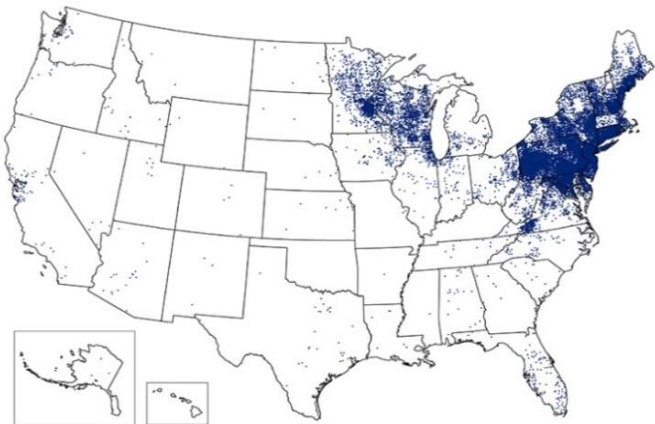
OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001



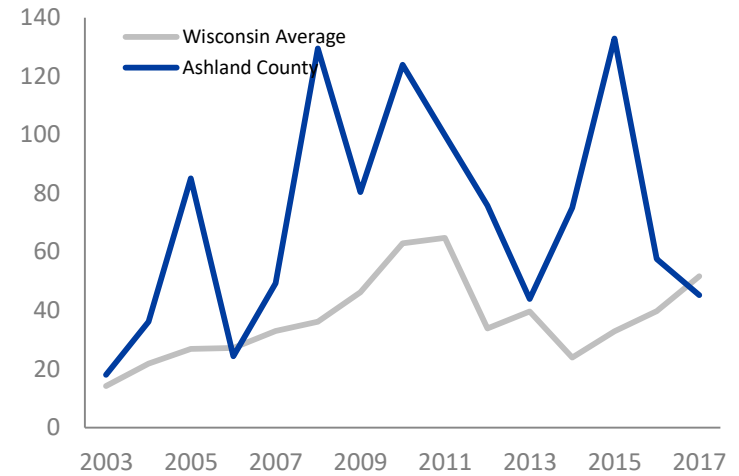
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

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

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

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

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

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

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Wisconsin Department of Health Services | Division of Public Health

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MAY 2019 | P-00719 (Rev. 05/2019)





# BARRON COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

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

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# BARRON COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

● 40.5% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

● 1.7 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

● 5.9% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

● 0.0% | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

● 12.6 | Rate of ER visits per 100,000 people  
Wisconsin: 7.9

### Childhood Lead Poisoning

● 3.3% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

● 46.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

● 27.1 | Rate of ER visits per 10,000 people#  
Wisconsin: 35.1

### Melanoma

● 27.2 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

● 55.8 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

● 20.8 | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

● 139.2 | Crude rate per 100,000 people  
Wisconsin: 51.7

● Above state value  
● At or below state value

\* Above state value preferred for this measure  
^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

[Data details on next page](#)



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Year displayed:** 2016

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

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

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

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

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

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

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

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

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH BARRON COUNTY

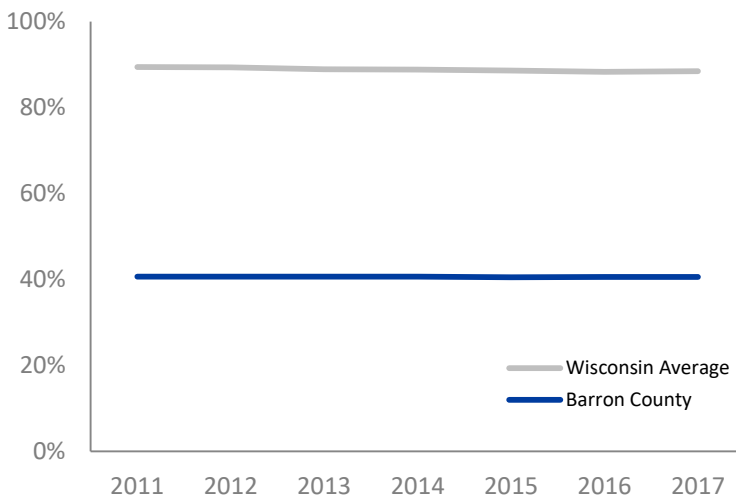
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **40.5%**

**FLUORIDE**  
PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
WISCONSIN: 88.4%

● **1.7**

**ALCOHOL OUTLET DENSITY**  
RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



### ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

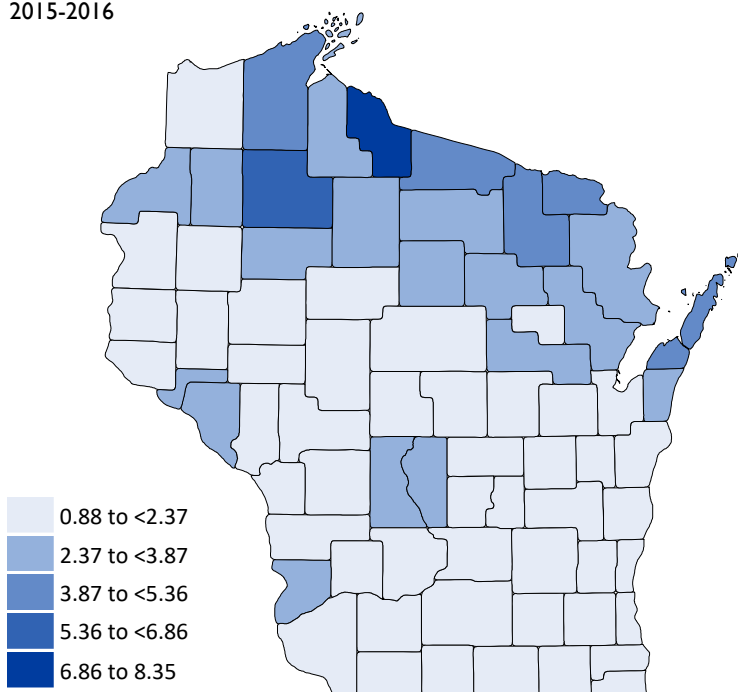
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

### ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



**158**  
LICENSES IN  
BARRON COUNTY

**16,948**  
TOTAL LICENSES IN  
WISCONSIN





# PRIVATE WATER QUALITY BARRON 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 displayed in this report. Users can find public water quality data on our data portal.

● **5.9%**

**NITRATE  
IN PRIVATE WELLS**  
PERCENT OF TEST RESULTS  
ABOVE EPA STANDARD  
OF 10 mg/L  
WISCONSIN: 11.0%

● **0.0%**

**ARSENIC  
IN PRIVATE WELLS**  
PERCENT OF TEST RESULTS  
ABOVE EPA STANDARD  
OF 10 µg/L  
WISCONSIN: 6.0%

● Above state value   ● At or below state value   ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS BARRON 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.

● **12.6**

**CARBON MONOXIDE POISONING**

RATE OF ER VISITS RELATED TO CO POISONING PER 100,000

WISCONSIN: 7.9

● **3.3%**

**CHILDHOOD LEAD POISONING**

PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$

WISCONSIN: 5.0%

● **46.0%**

**RADON**

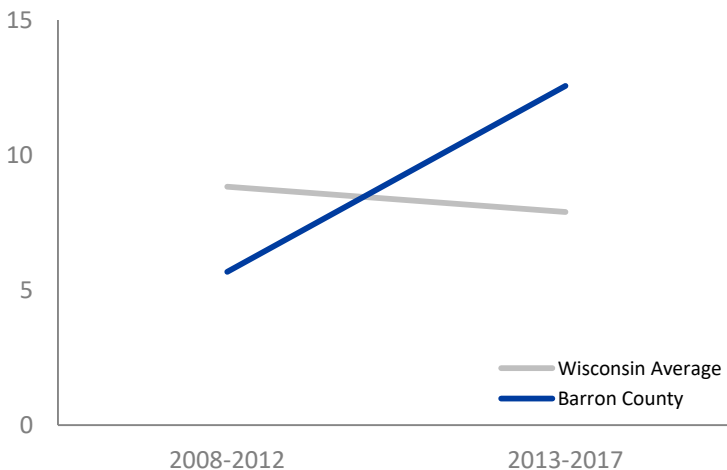
PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$

WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

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

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



## 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter (µg/dL). The Centers for Disease Control and Prevention defines lead poisoning at or above 5 µg/dL.

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

## RADON

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

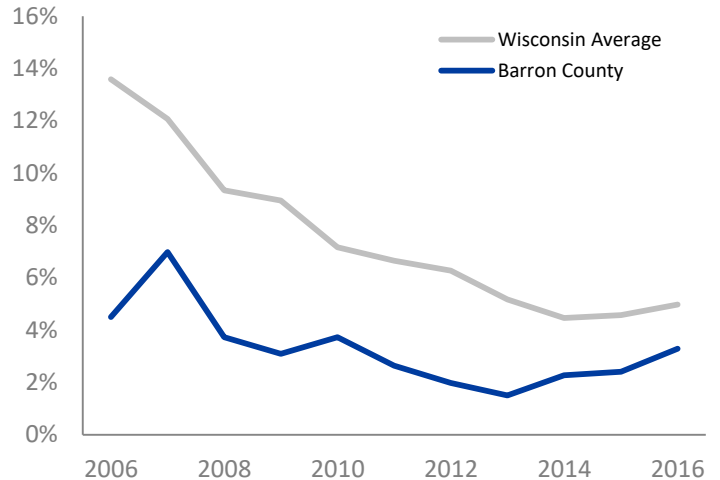
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

## CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD ≥5 µg/dL

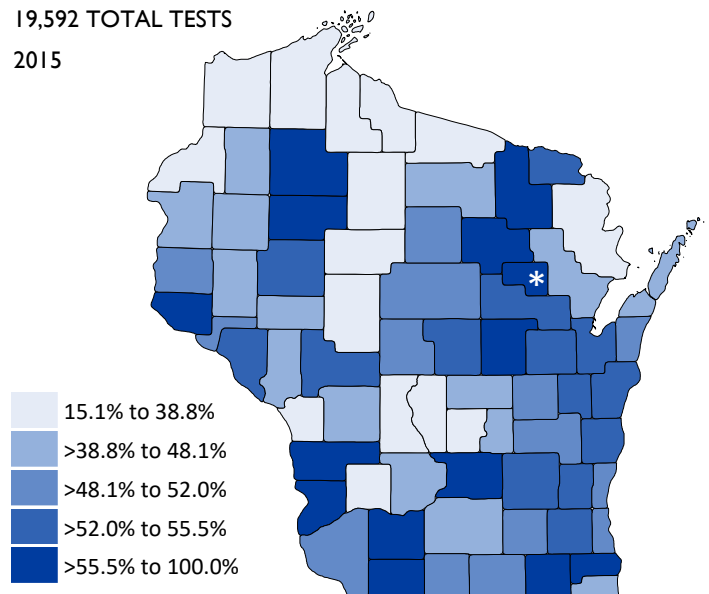


## RADON

PERCENT OF TESTS WITH RESULTS ≥4 pCi/L

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

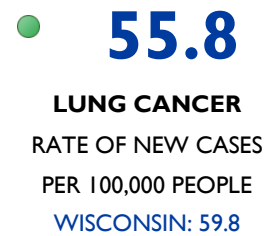
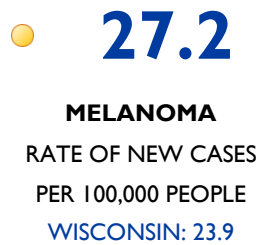
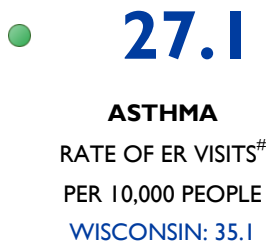




# HEALTH CONDITIONS BARRON COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.



● Above state value

● At or below state value

^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
 2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



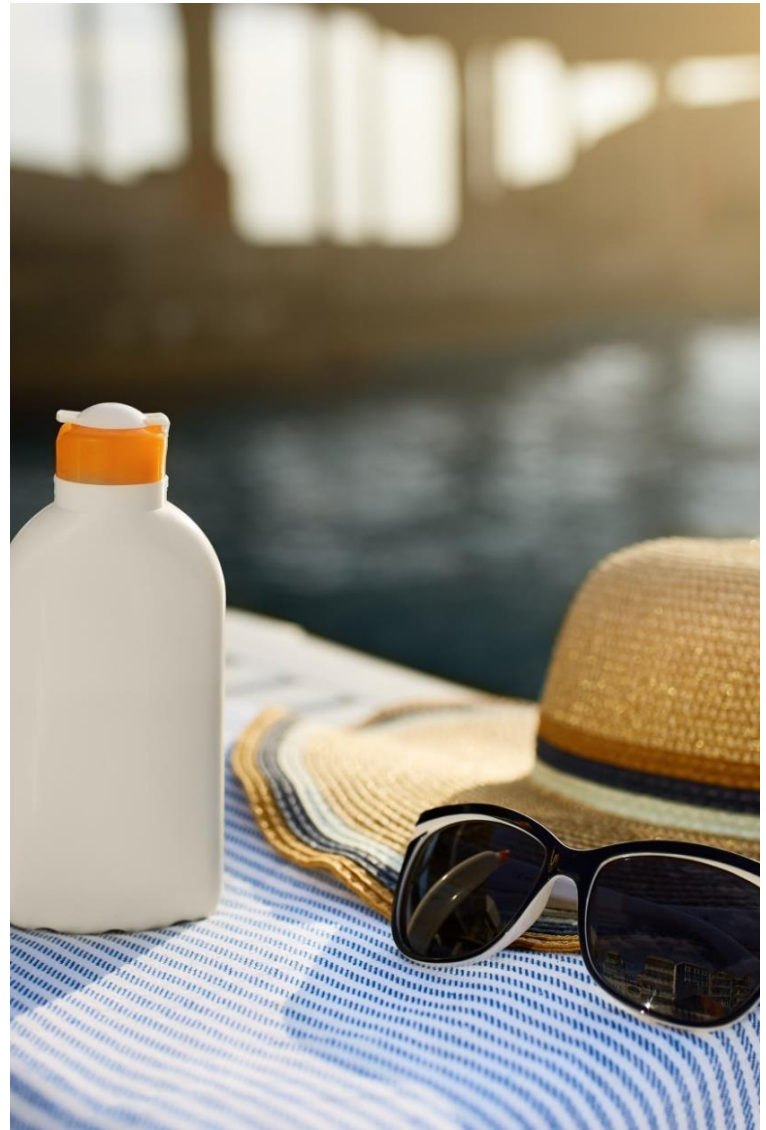
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

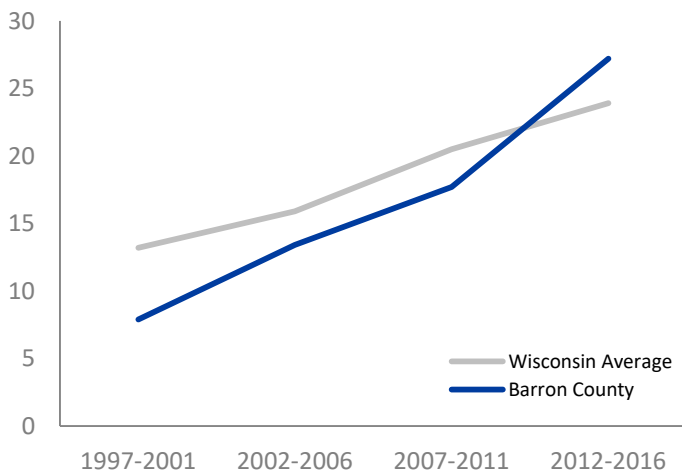
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



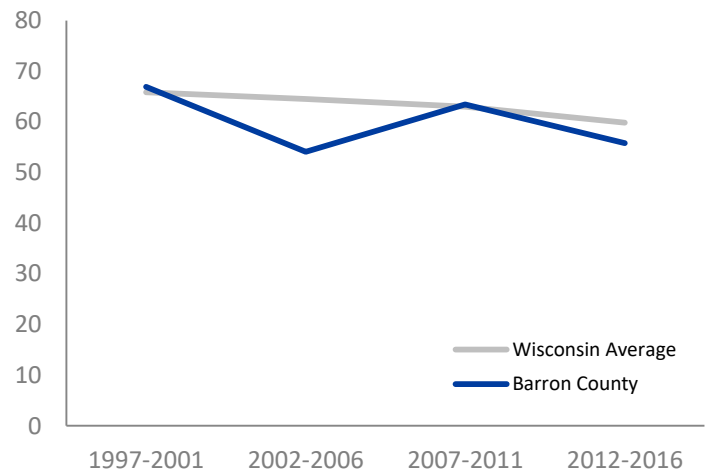
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE BARRON COUNTY

## BACKGROUND

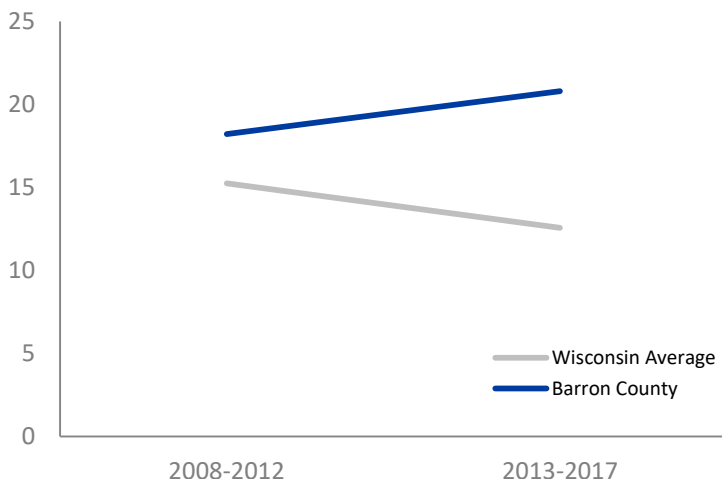
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **20.8**

**HEAT STRESS**  
RATE OF ER VISITS  
PER 100,000 PEOPLE  
WISCONSIN: 12.6

● **139.2**

**LYME DISEASE**  
RATE OF CASES  
PER 100,000 PEOPLE  
WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

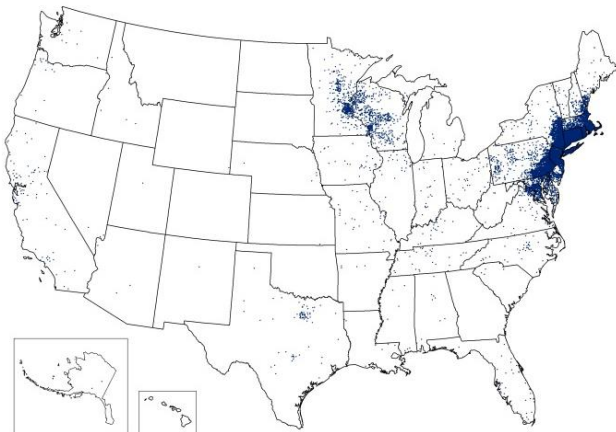
The criteria for reporting Lyme disease were revised again in 2012 to require reporting and follow-up only for cases with an erythema migrans (EM) rash. To compensate for this change, epidemiologists used a statistical method to estimate the true number of cases based on the number of total laboratory reports for each year since 2012.

## LYME DISEASE AT THE NATIONAL LEVEL

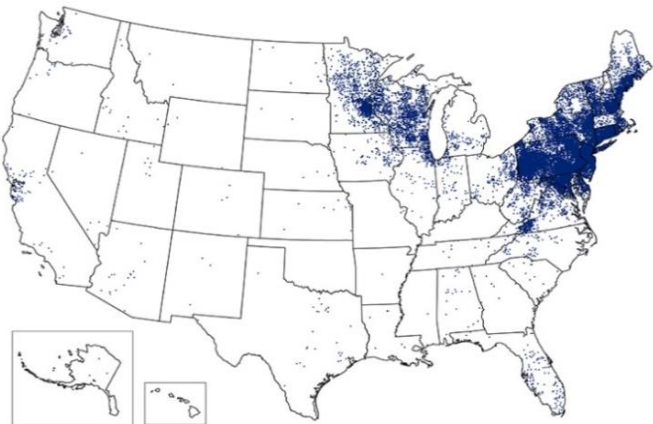
OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001



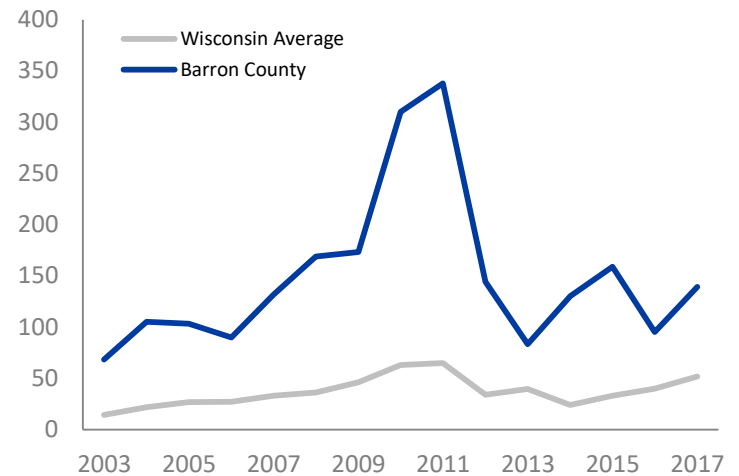
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

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

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

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

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

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

Bureau of Environmental and Occupational Health  
Wisconsin Department of Health Services | Division of Public Health

[dhstracking@wi.gov](mailto:dhstracking@wi.gov) | [dhs.wisconsin.gov/epht](https://dhs.wisconsin.gov/epht)  
MAY 2019 | P-00719 (Rev. 05/2019)





# **BAYFIELD COUNTY**

## **2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

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

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

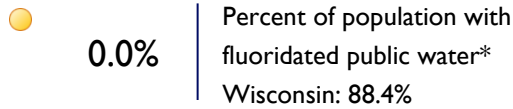
# BAYFIELD COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE

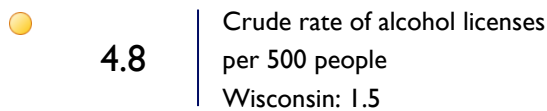


## COMMUNITY HEALTH

### Fluoride

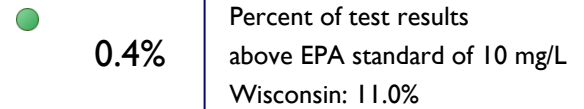


### Alcohol Outlet Density

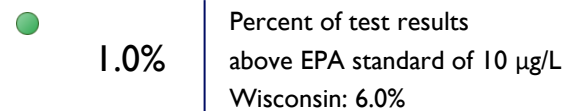


## PRIVATE WATER QUALITY

### Nitrate

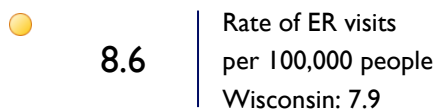


### Arsenic

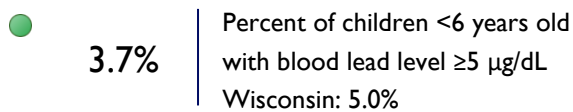


## HOME HAZARDS

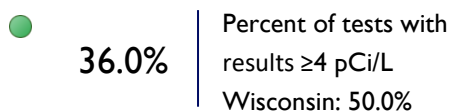
### Carbon Monoxide Poisoning



### Childhood Lead Poisoning

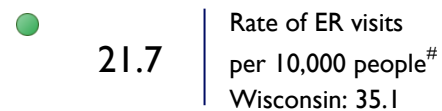


### Radon

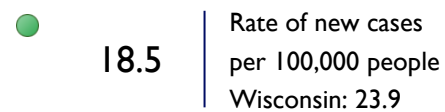


## HEALTH CONDITIONS

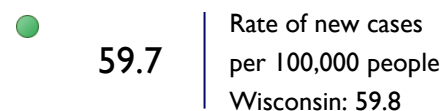
### Asthma



### Melanoma

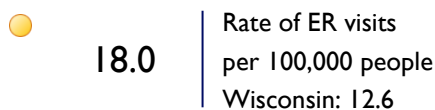


### Lung Cancer

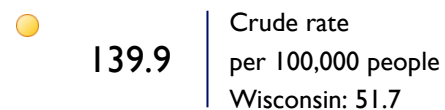


## CLIMATE

### Heat Stress



### Lyme Disease



- Above state value
- At or below state value

- \* Above state value preferred for this measure
- ^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

Data details on next page



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Year displayed:** 2016

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

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

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

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

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

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

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

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

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH BAYFIELD COUNTY

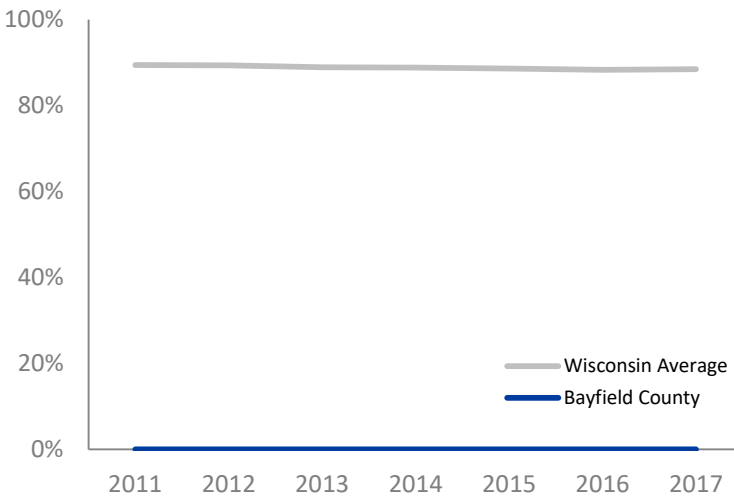
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **0.0%**  
**FLUORIDE**  
 PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
 WISCONSIN: 88.4%

● **4.8**  
**ALCOHOL OUTLET DENSITY**  
 RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
 WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
 ^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



## ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

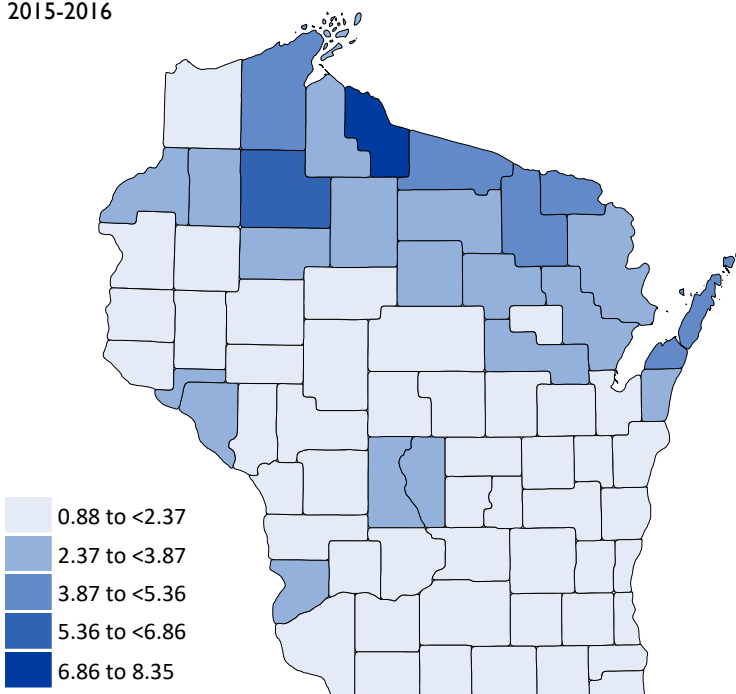
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

## ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



**144**  
LICENSES IN  
BAYFIELD COUNTY

**16,948**  
TOTAL LICENSES IN  
WISCONSIN





# PRIVATE WATER QUALITY BAYFIELD 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 displayed in this report. Users can find public water quality data on our data portal.

● **0.4%**

**NITRATE**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 mg/L  
**WISCONSIN: 11.0%**

● **1.0%**

**ARSENIC**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 µg/L  
**WISCONSIN: 6.0%**

● Above state value   ● At or below state value   ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
 1988 TO MARCH 2017



## 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 certain 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.





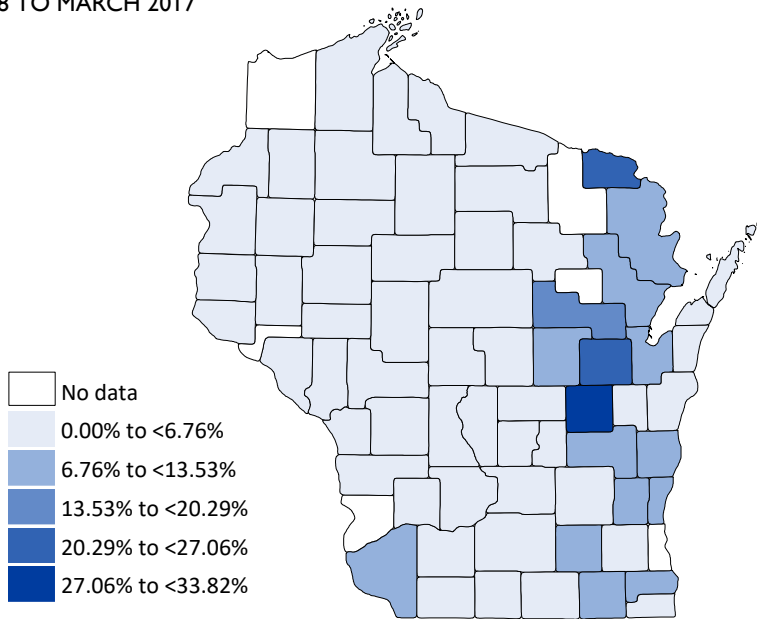
## ARSENIC IN PRIVATE WELLS

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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS BAYFIELD 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.

● **8.6**  
**CARBON MONOXIDE POISONING**  
 RATE OF ER VISITS RELATED TO CO POISONING PER 100,000  
 WISCONSIN: 7.9

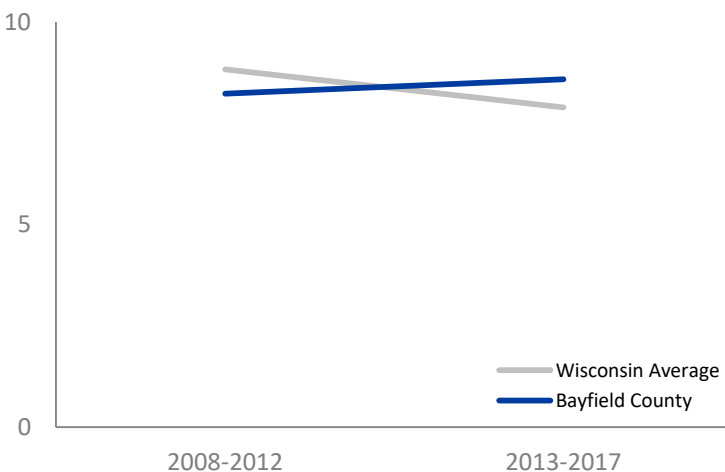
● **3.7%**  
**CHILDHOOD LEAD POISONING**  
 PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$   
 WISCONSIN: 5.0%

● **36.0%**  
**RADON**  
 PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$   
 WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

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

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



## 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter (µg/dL). The Centers for Disease Control and Prevention defines lead poisoning at or above 5 µg/dL.

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

## RADON

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

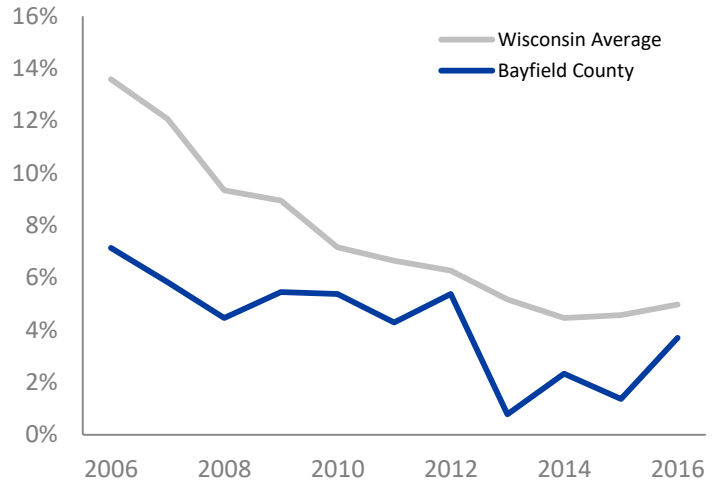
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

## CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD ≥5 µg/dL

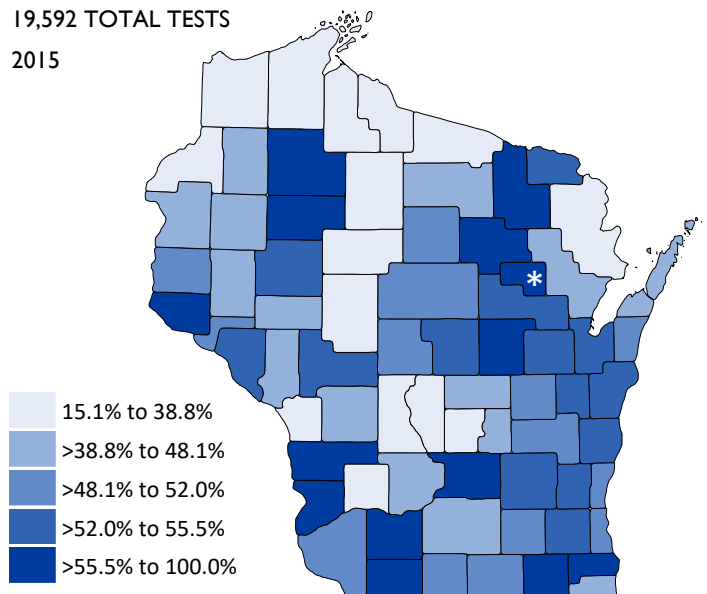


## RADON

PERCENT OF TESTS WITH RESULTS ≥4 pCi/L

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

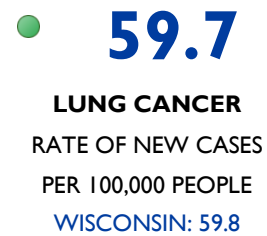
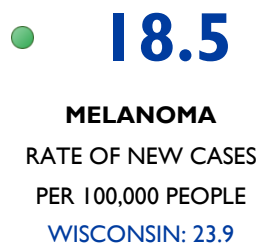
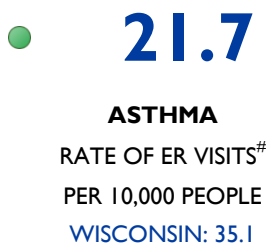




# HEALTH CONDITIONS BAYFIELD COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.



● Above state value

● At or below state value

^ Suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



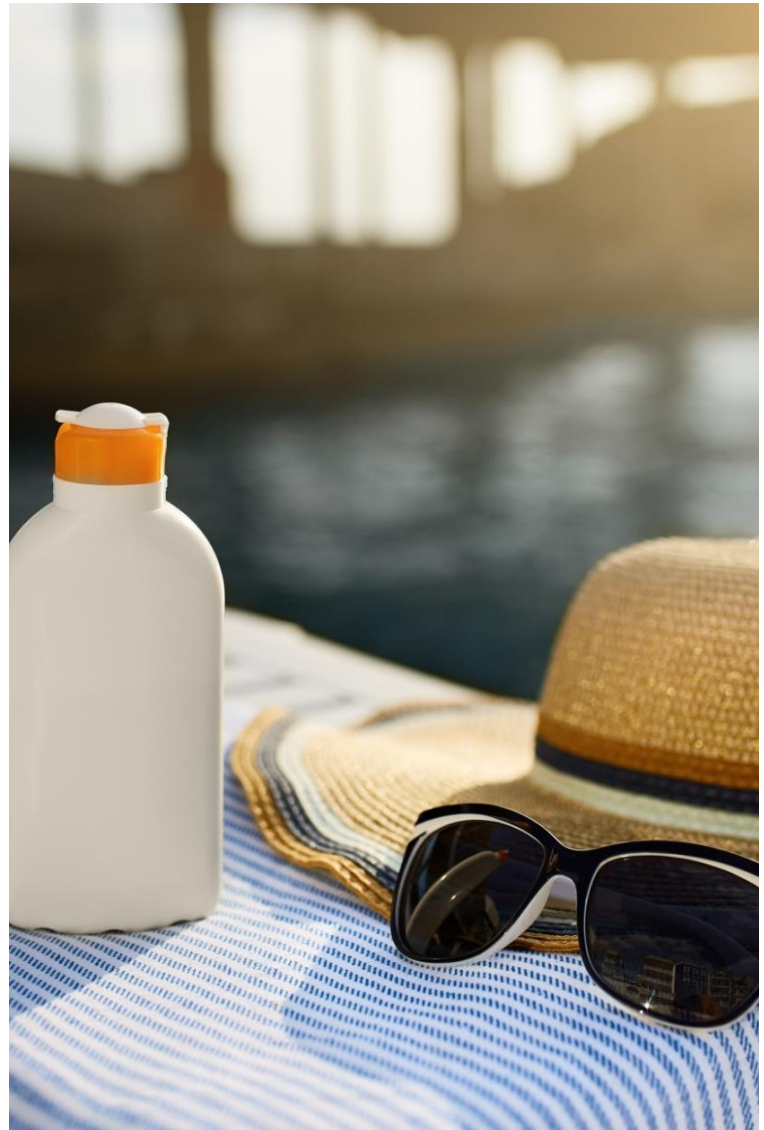
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

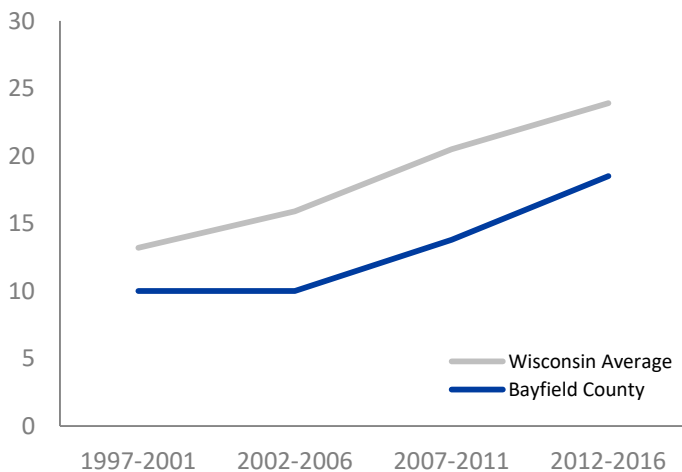
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



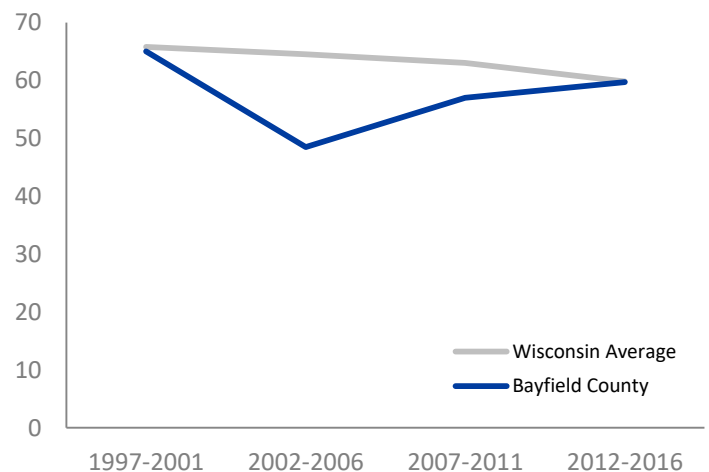
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE BAYFIELD COUNTY

## BACKGROUND

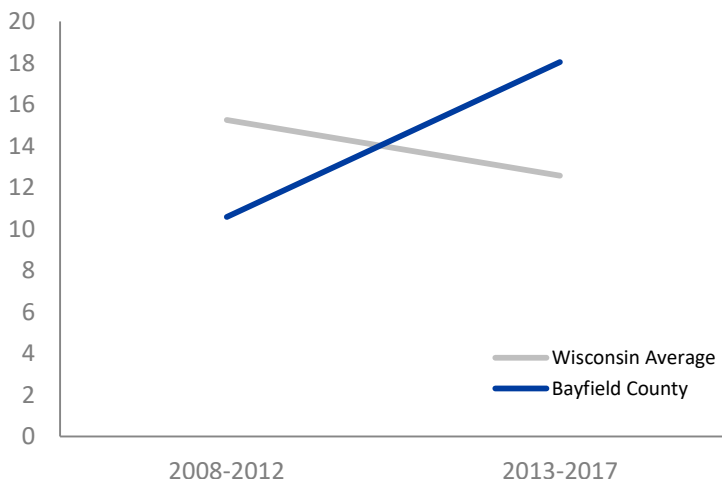
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **18.0**  
**HEAT STRESS**  
 RATE OF ER VISITS  
 PER 100,000 PEOPLE  
 WISCONSIN: 12.6

● **139.9**  
**LYME DISEASE**  
 RATE OF CASES  
 PER 100,000 PEOPLE  
 WISCONSIN: 51.7

● Above state value    ● At or below state value    ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

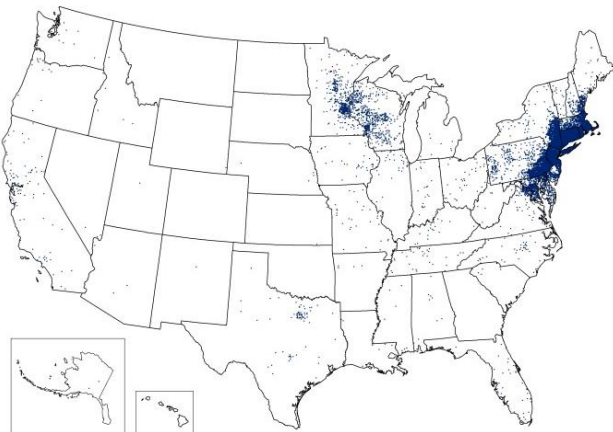
## LYME DISEASE AT THE NATIONAL LEVEL

OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001

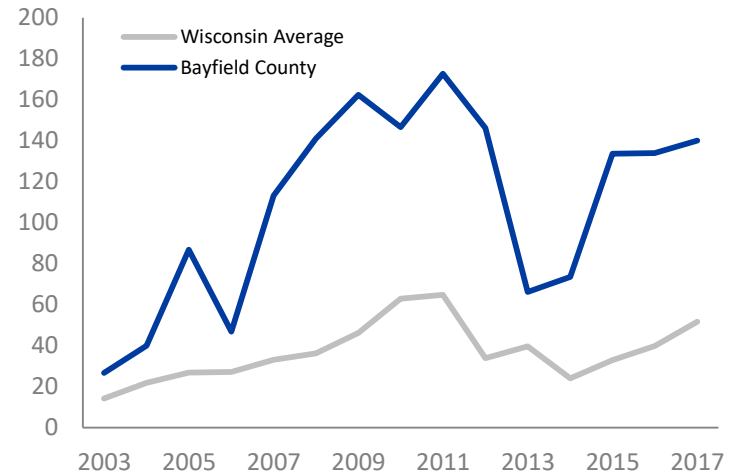
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

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

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

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

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

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

Bureau of Environmental and Occupational Health  
Wisconsin Department of Health Services | Division of Public Health

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MAY 2019 | P-00719 (Rev. 05/2019)





# BROWN COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

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

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

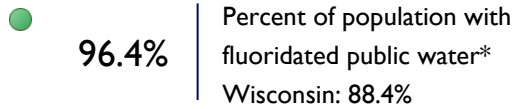
# BROWN COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE

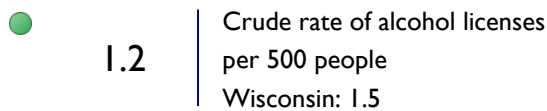


## COMMUNITY HEALTH

### Fluoride

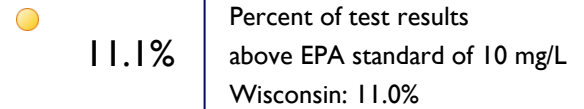


### Alcohol Outlet Density

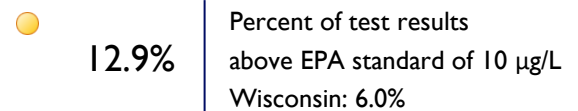


## PRIVATE WATER QUALITY

### Nitrate

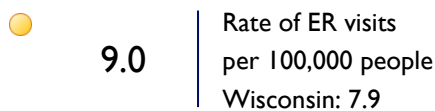


### Arsenic

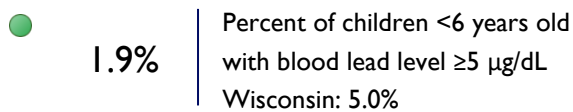


## HOME HAZARDS

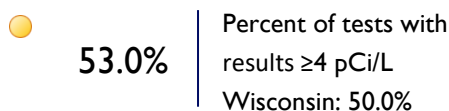
### Carbon Monoxide Poisoning



### Childhood Lead Poisoning

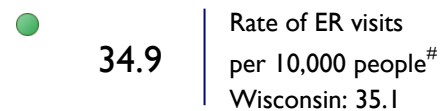


### Radon

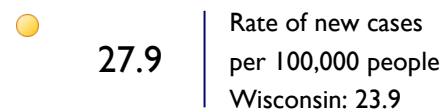


## HEALTH CONDITIONS

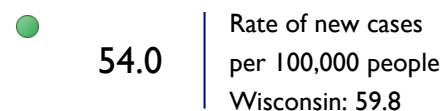
### Asthma



### Melanoma

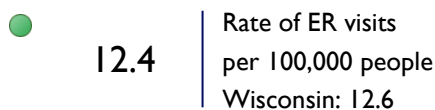


### Lung Cancer

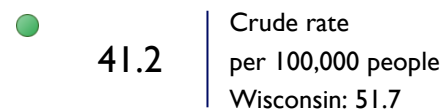


## CLIMATE

### Heat Stress



### Lyme Disease



- Above state value
- At or below state value

- \* Above state value preferred for this measure
- ^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

[Data details on next page](#)



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Year displayed:** 2016

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

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

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

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

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

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

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

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

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH BROWN COUNTY

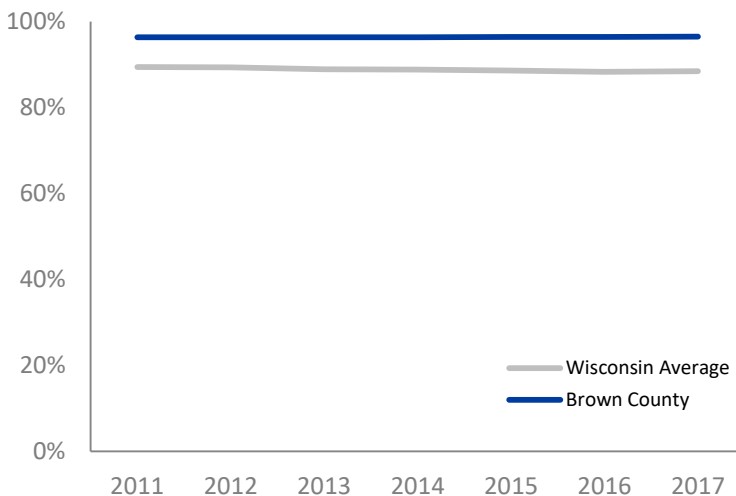
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **96.4%**

**FLUORIDE**  
PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
WISCONSIN: 88.4%

● **1.2**

**ALCOHOL OUTLET DENSITY**  
RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



## ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

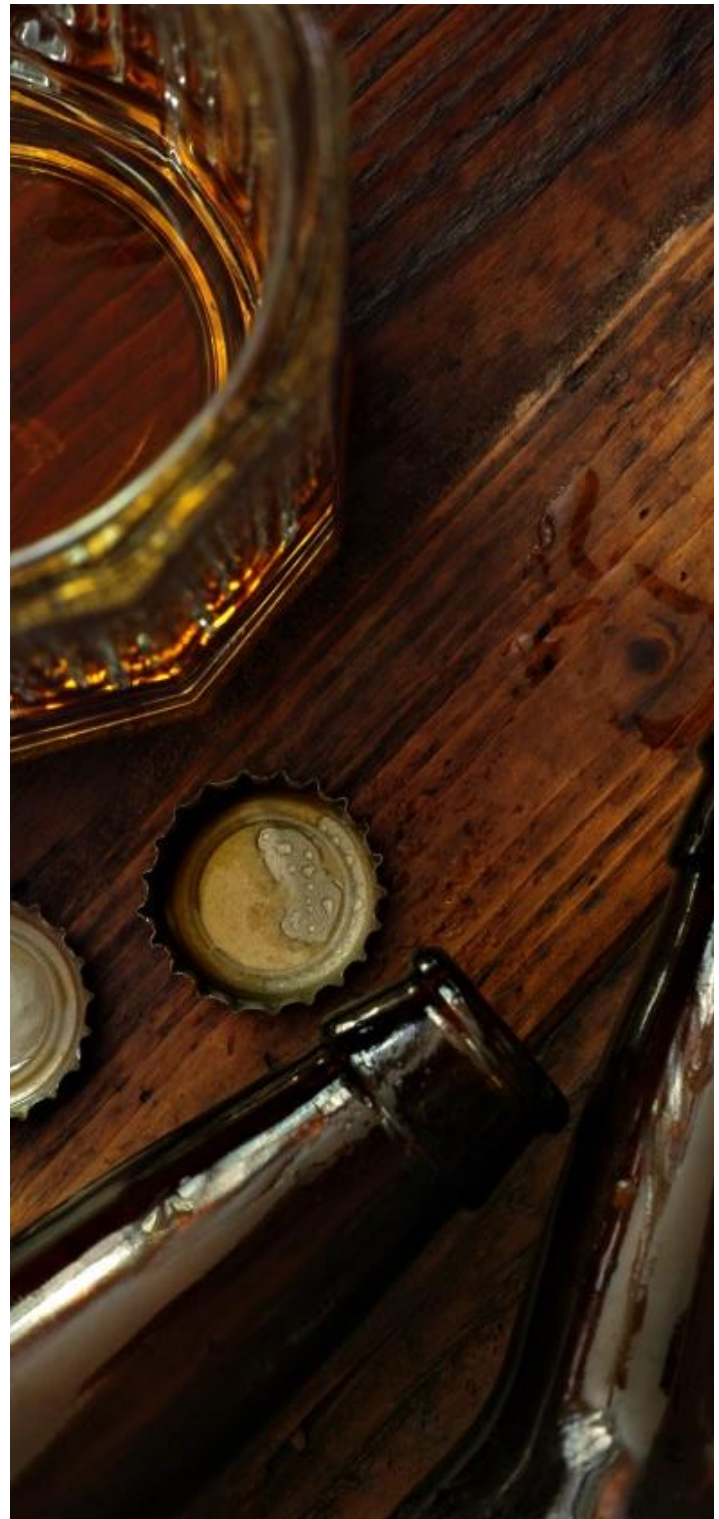
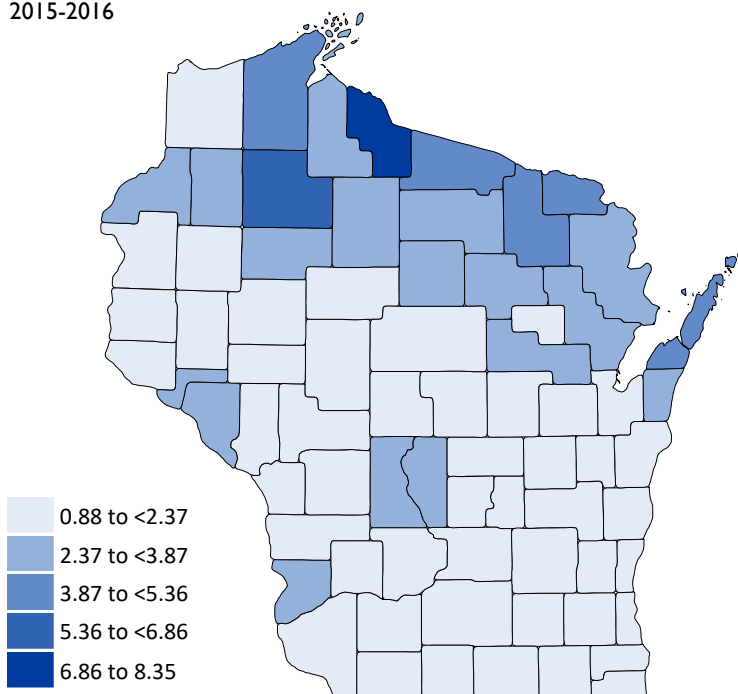
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

## ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



**621**  
LICENSES IN  
BROWN COUNTY

**16,948**  
TOTAL LICENSES IN  
WISCONSIN





# PRIVATE WATER QUALITY BROWN 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 displayed in this report. Users can find public water quality data on our data portal.

● **11.1%**

**NITRATE  
IN PRIVATE WELLS**  
PERCENT OF TEST RESULTS  
ABOVE EPA STANDARD  
OF 10 mg/L  
WISCONSIN: 11.0%

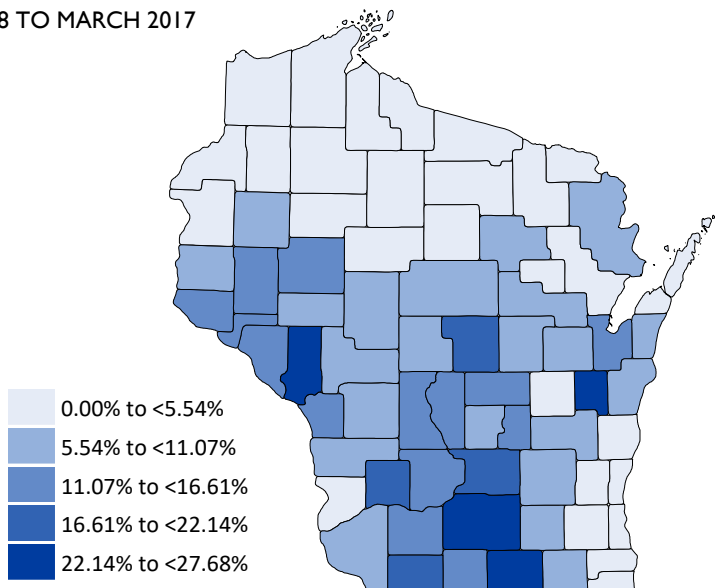
● **12.9%**

**ARSENIC  
IN PRIVATE WELLS**  
PERCENT OF TEST RESULTS  
ABOVE EPA STANDARD  
OF 10 µg/L  
WISCONSIN: 6.0%

● Above state value   ● At or below state value   ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS BROWN 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.

● **9.0**

**CARBON MONOXIDE POISONING**

RATE OF ER VISITS RELATED TO CO POISONING PER 100,000

WISCONSIN: 7.9

● **1.9%**

**CHILDHOOD LEAD POISONING**

PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$

WISCONSIN: 5.0%

● **53.0%**

**RADON**

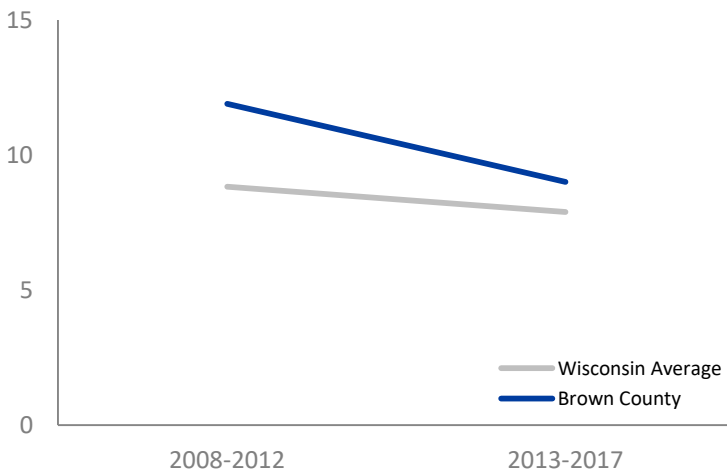
PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$

WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

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

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



## 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter (µg/dL). The Centers for Disease Control and Prevention defines lead poisoning at or above 5 µg/dL.

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

## RADON

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

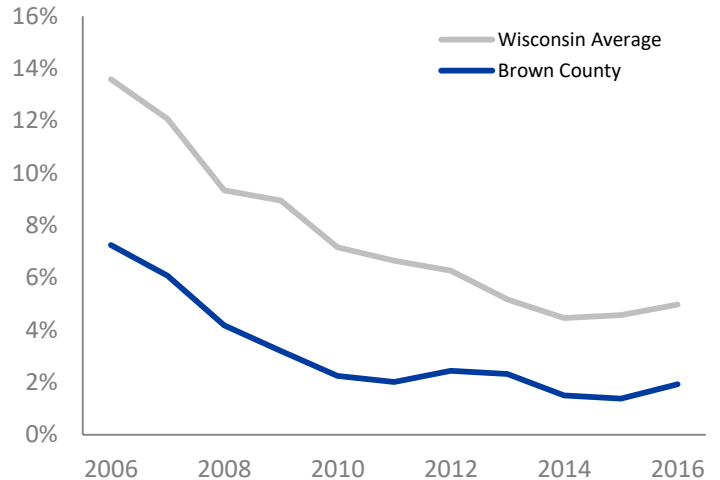
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

## CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD ≥5 µg/dL

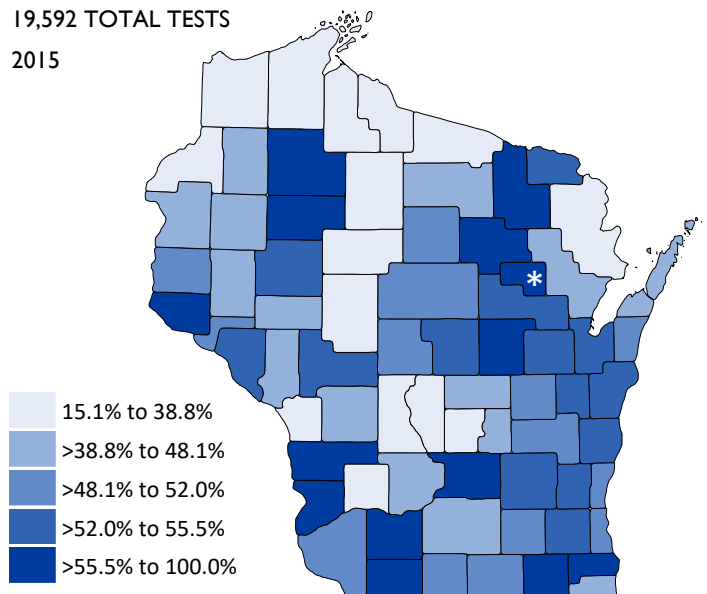


## RADON

PERCENT OF TESTS WITH RESULTS ≥4 pCi/L

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

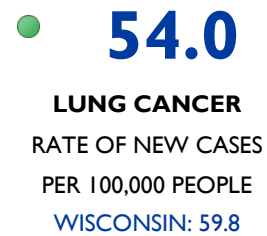
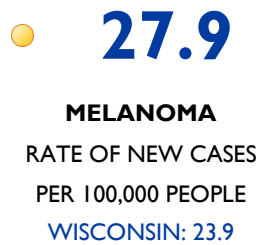
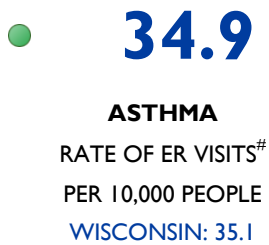




# HEALTH CONDITIONS BROWN COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.



● Above state value

● At or below state value

^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



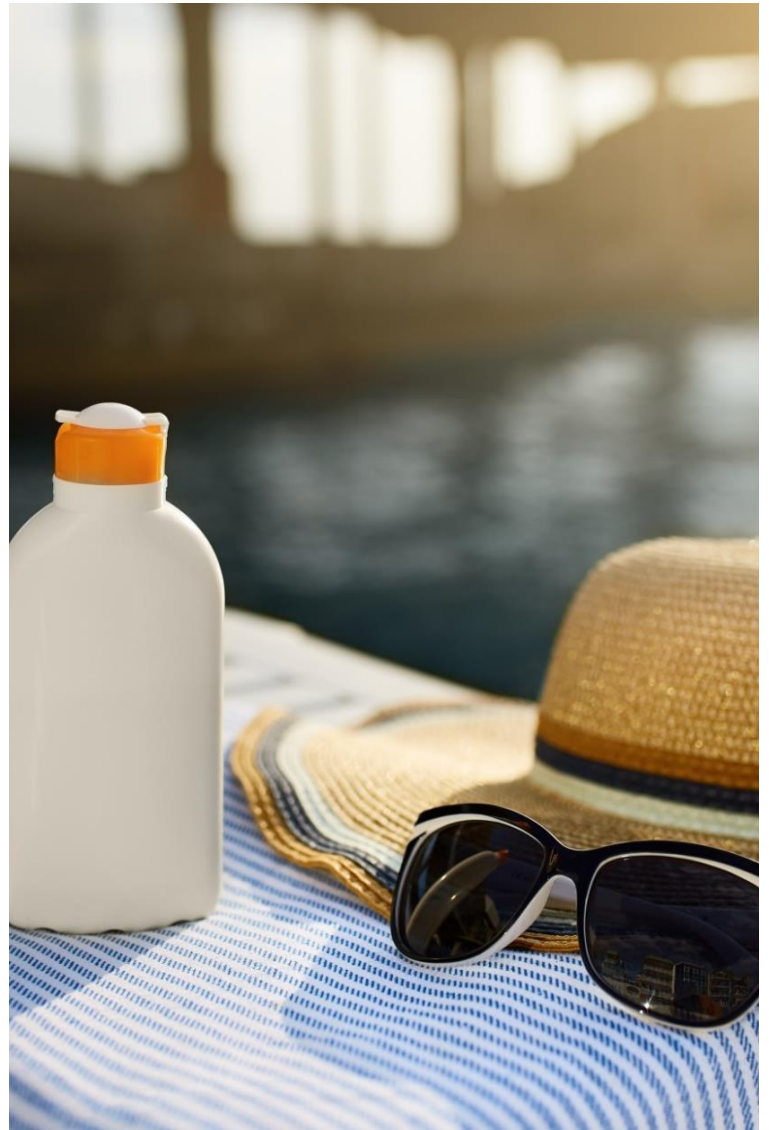
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

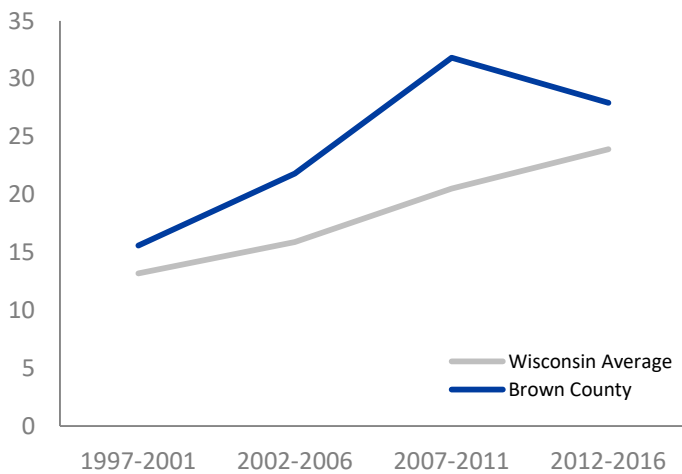
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



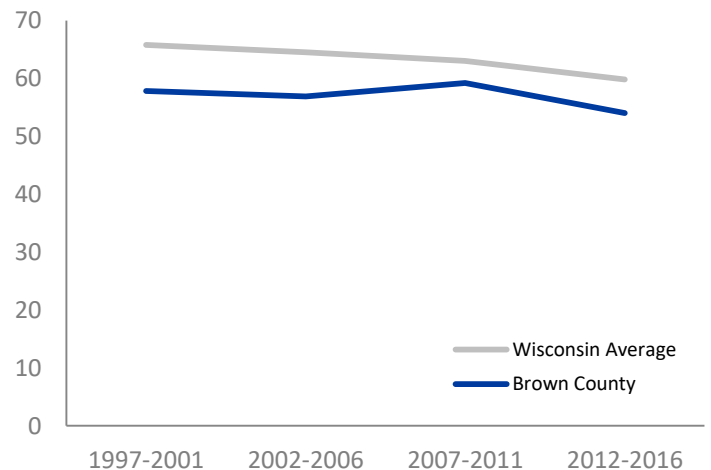
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE BROWN COUNTY

## BACKGROUND

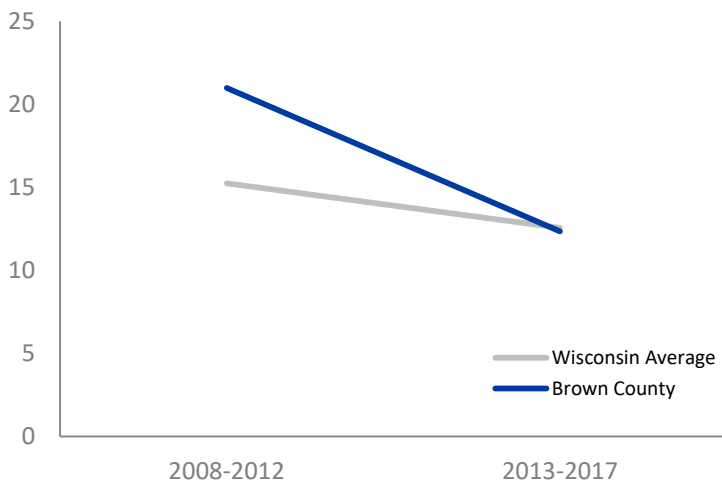
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● 12.4

**HEAT STRESS**  
RATE OF ER VISITS  
PER 100,000 PEOPLE  
WISCONSIN: 12.6

● 41.2

**LYME DISEASE**  
RATE OF CASES  
PER 100,000 PEOPLE  
WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

## LYME DISEASE AT THE NATIONAL LEVEL

OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001



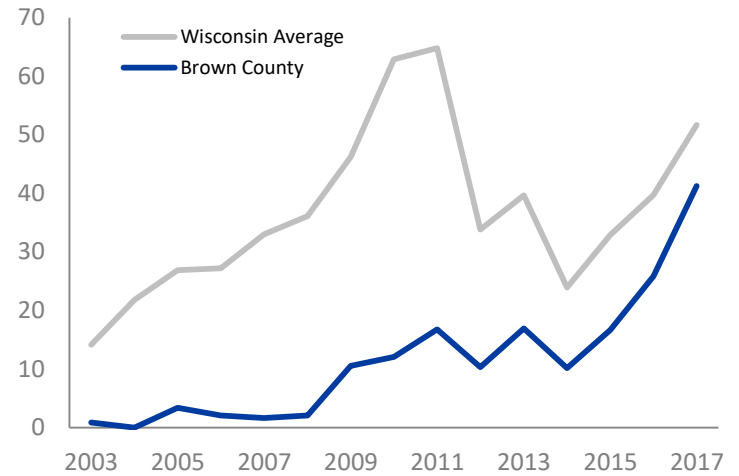
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

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

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

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

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

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

Bureau of Environmental and Occupational Health  
Wisconsin Department of Health Services | Division of Public Health

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MAY 2019 | P-00719 (Rev. 05/2019)





# **BUFFALO COUNTY**

## **2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

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

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

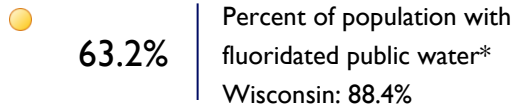
# BUFFALO COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE

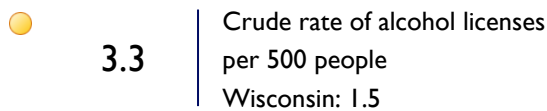


## COMMUNITY HEALTH

### Fluoride

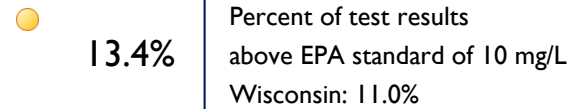


### Alcohol Outlet Density

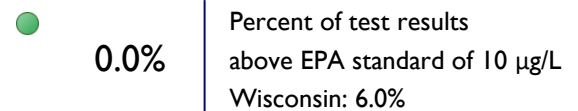


## PRIVATE WATER QUALITY

### Nitrate

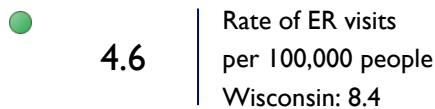


### Arsenic

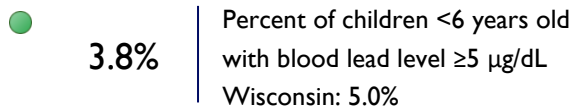


## HOME HAZARDS

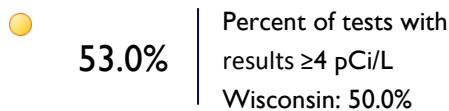
### Carbon Monoxide Poisoning



### Childhood Lead Poisoning

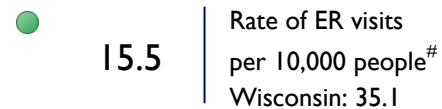


### Radon

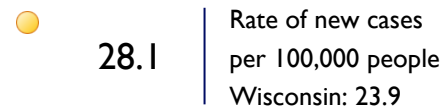


## HEALTH CONDITIONS

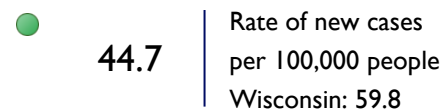
### Asthma



### Melanoma

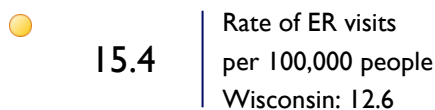


### Lung Cancer

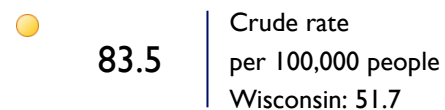


## CLIMATE

### Heat Stress



### Lyme Disease



- Above state value
- At or below state value

- \* Above state value preferred for this measure
- ^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

Data details on next page



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Year displayed:** 2016

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

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

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

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

**Years displayed:** 2008-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

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

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

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

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH BUFFALO COUNTY

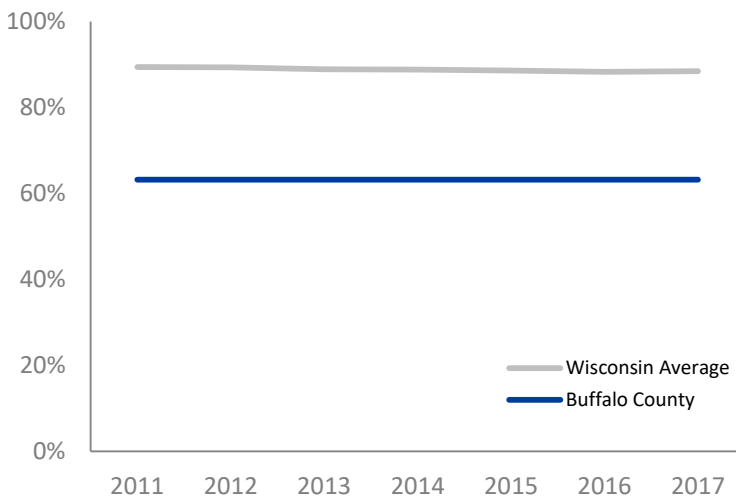
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **63.2%**

**FLUORIDE**  
PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
WISCONSIN: 88.4%

● **3.3**

**ALCOHOL OUTLET DENSITY**  
RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



### ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

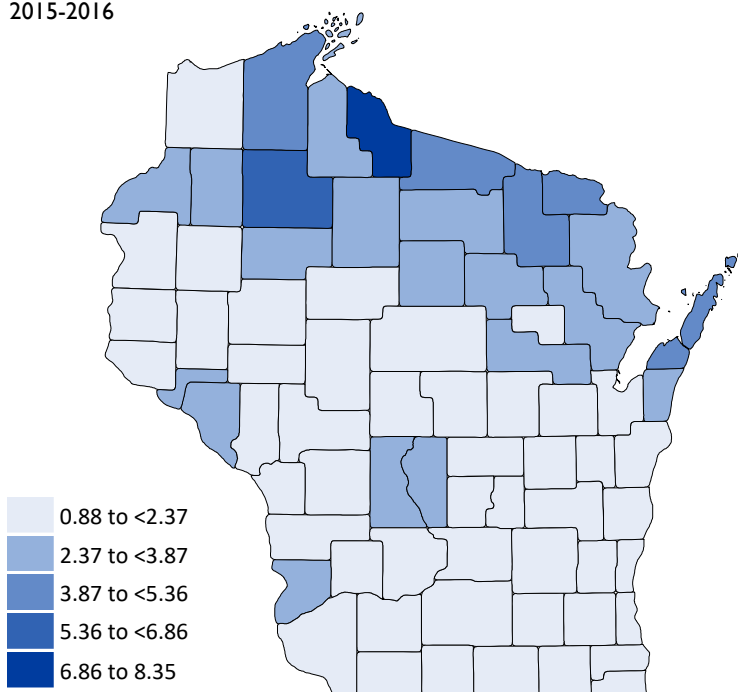
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

### ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



**88**  
LICENSES IN  
BUFFALO COUNTY

**16,948**  
TOTAL LICENSES IN  
WISCONSIN





# PRIVATE WATER QUALITY BUFFALO 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 displayed in this report. Users can find public water quality data on our data portal.

● **13.4%**

**NITRATE**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 mg/L  
**WISCONSIN: 11.0%**

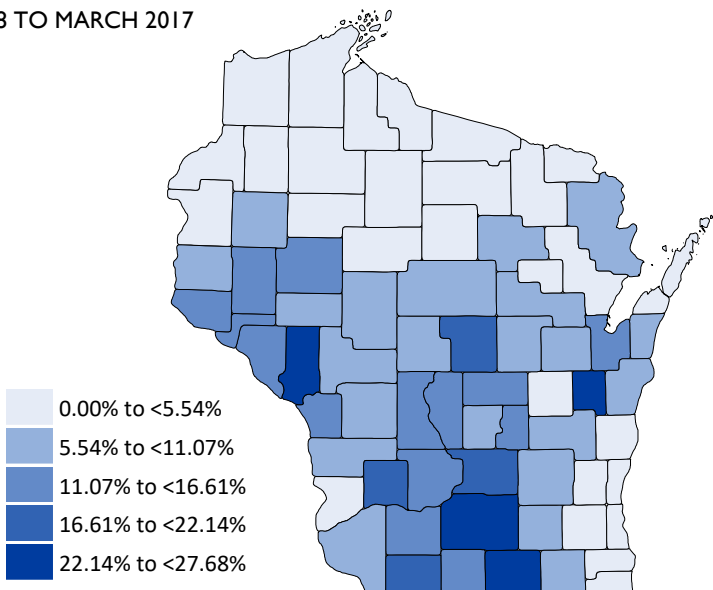
● **0.0%**

**ARSENIC**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 µg/L  
**WISCONSIN: 6.0%**

● Above state value   ● At or below state value   ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
 1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS BUFFALO 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.

● **4.6**  
**CARBON MONOXIDE POISONING**  
 RATE OF ER VISITS RELATED TO CO POISONING PER 100,000  
 WISCONSIN: 8.4

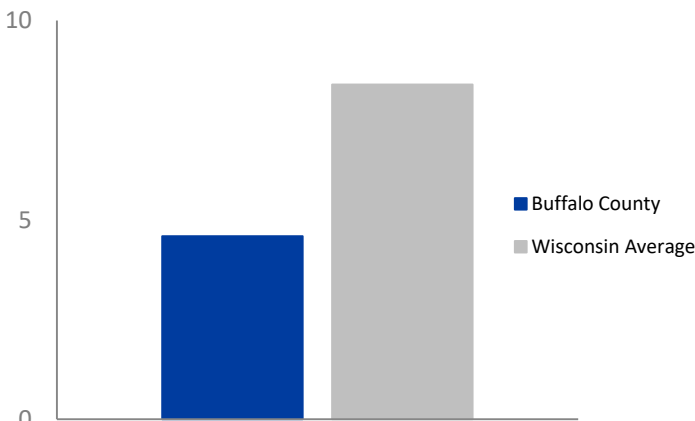
● **3.8%**  
**CHILDHOOD LEAD POISONING**  
 PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$   
 WISCONSIN: 5.0%

● **53.0%**  
**RADON**  
 PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$   
 WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE  
 2008-2017



## CARBON MONOXIDE POISONING

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

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



## 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter ( $\mu\text{g}/\text{dL}$ ). The Centers for Disease Control and Prevention defines lead poisoning at or above 5  $\mu\text{g}/\text{dL}$ .

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

## RADON

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

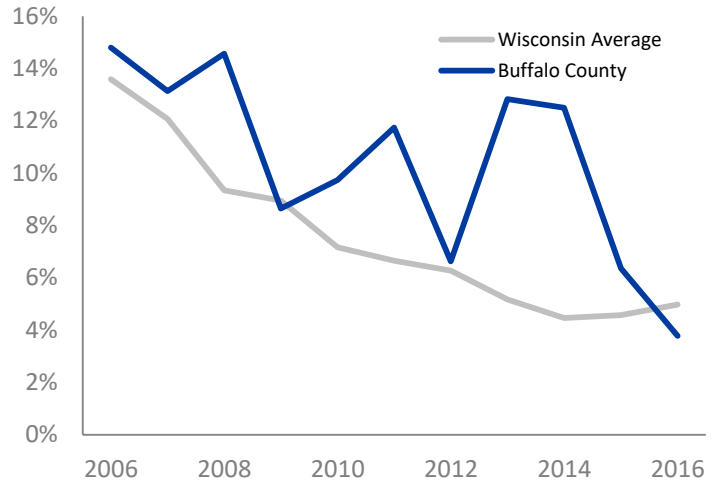
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

## CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g}/\text{dL}$

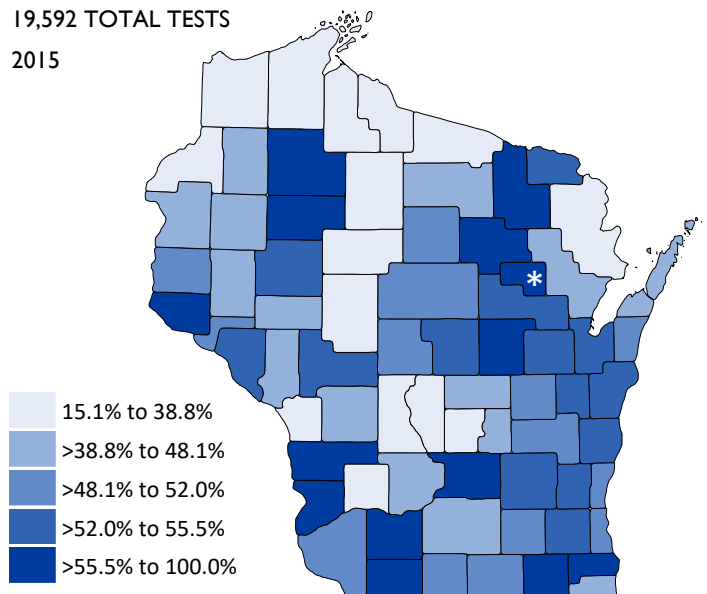


## RADON

PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi}/\text{L}$

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

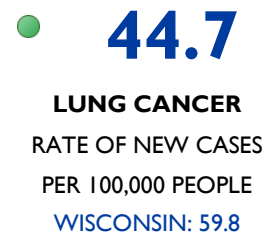
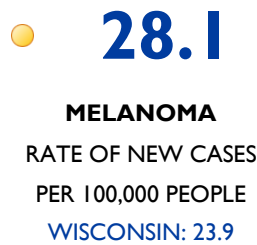
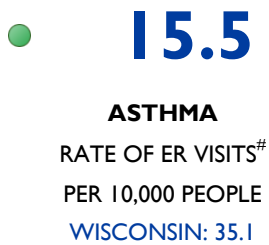




# HEALTH CONDITIONS BUFFALO COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.

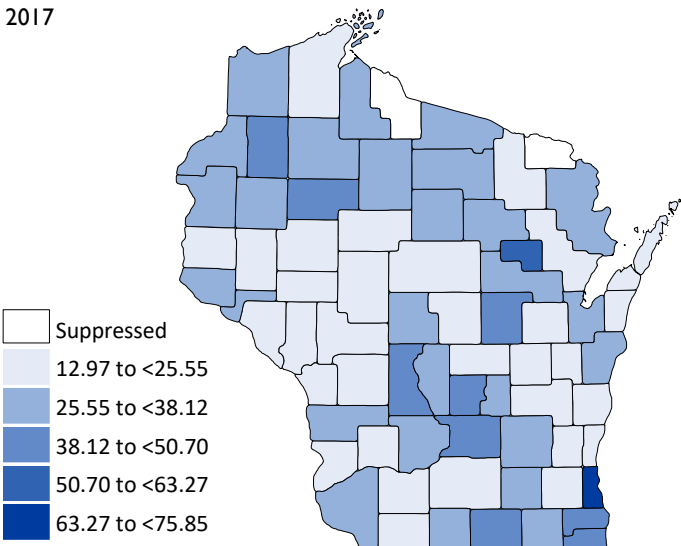


- Above state value
- At or below state value
- ^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
 2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



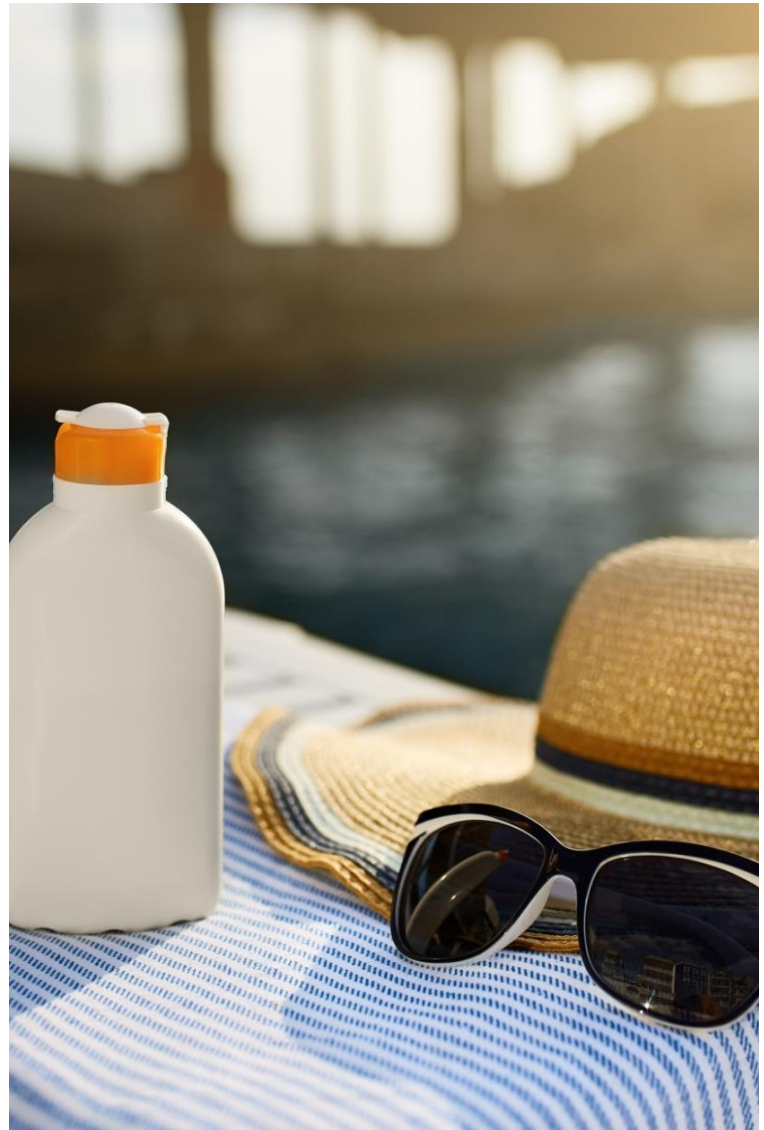
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

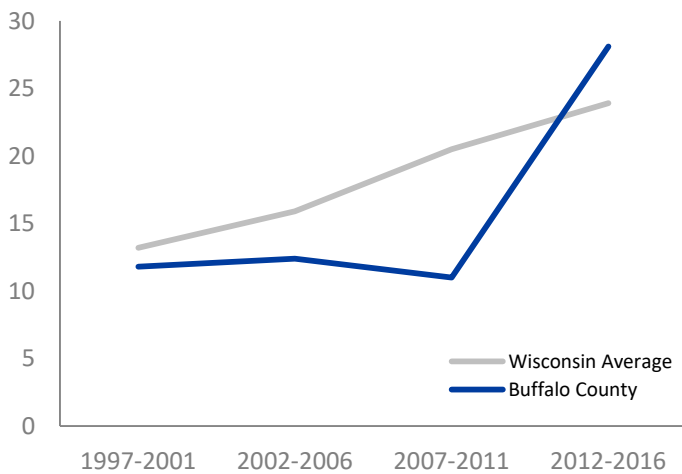
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



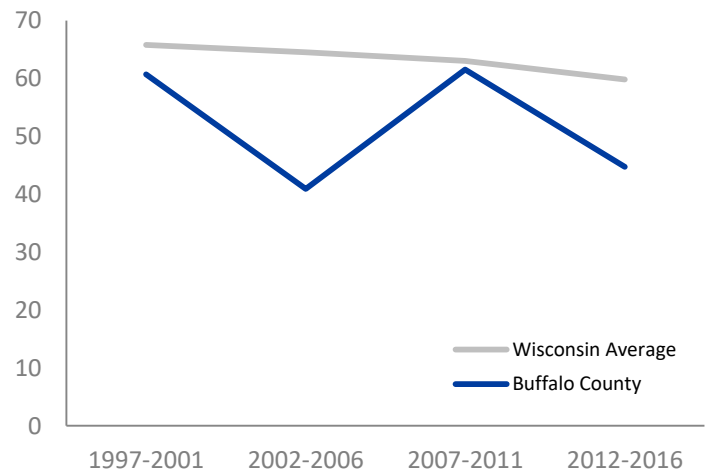
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE BUFFALO COUNTY

## BACKGROUND

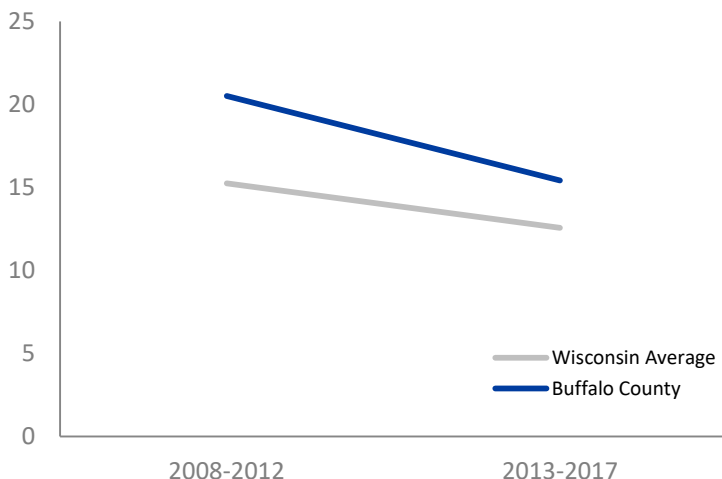
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **15.4**  
**HEAT STRESS**  
 RATE OF ER VISITS  
 PER 100,000 PEOPLE  
 WISCONSIN: 12.6

● **83.5**  
**LYME DISEASE**  
 RATE OF CASES  
 PER 100,000 PEOPLE  
 WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

## LYME DISEASE AT THE NATIONAL LEVEL

OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001



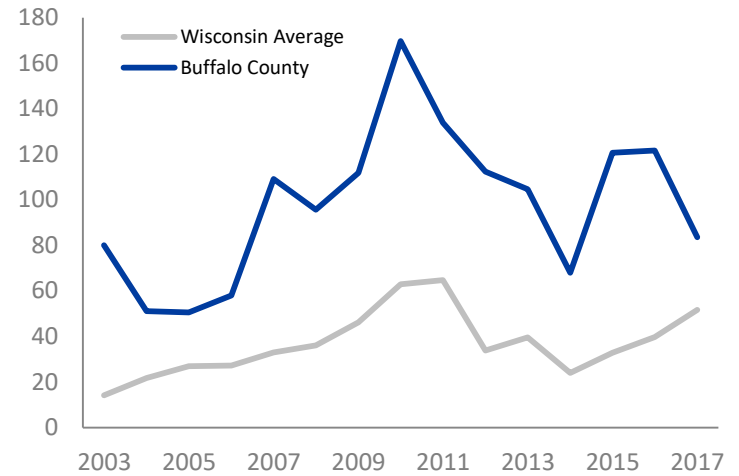
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population. For the majority of Profiles, these data were averaged over five years (2013-2017). For this county's Profile, that five-year average was suppressed. To eliminate the suppression in this Profile, these data were instead averaged over 10 years (2008-2017).

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

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

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

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

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

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

Bureau of Environmental and Occupational Health  
Wisconsin Department of Health Services | Division of Public Health

[dhstracking@wi.gov](mailto:dhstracking@wi.gov) | [dhs.wisconsin.gov/epht](https://dhs.wisconsin.gov/epht)  
MAY 2019 | P-00719 (Rev. 05/2019)





# BURNETT COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

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

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

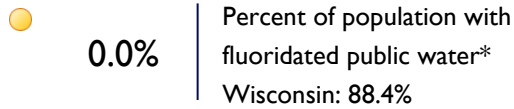
# BURNETT COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE

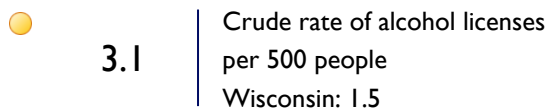


## COMMUNITY HEALTH

### Fluoride

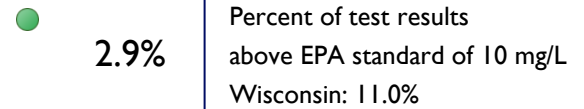


### Alcohol Outlet Density

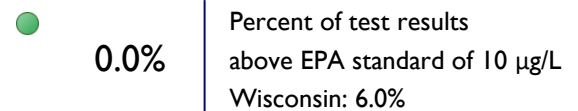


## PRIVATE WATER QUALITY

### Nitrate

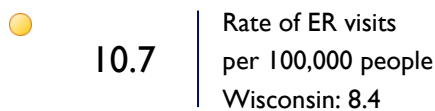


### Arsenic

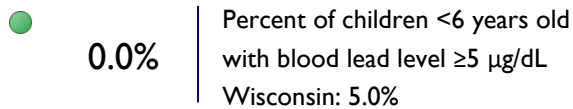


## HOME HAZARDS

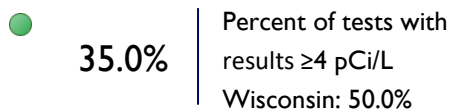
### Carbon Monoxide Poisoning



### Childhood Lead Poisoning

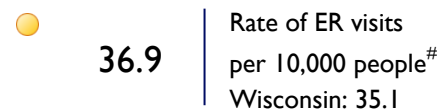


### Radon

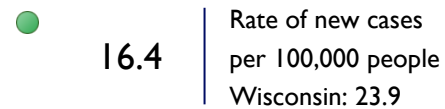


## HEALTH CONDITIONS

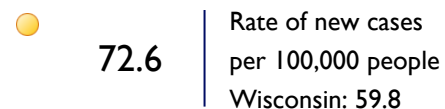
### Asthma



### Melanoma

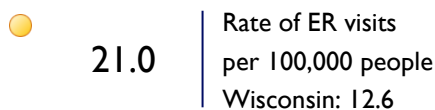


### Lung Cancer

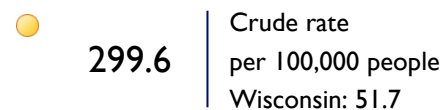


## CLIMATE

### Heat Stress



### Lyme Disease



- Above state value
- At or below state value

- \* Above state value preferred for this measure
- ^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

Data details on next page



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Year displayed:** 2016

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

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

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

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

**Years displayed:** 2008-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

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

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

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

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH BURNETT COUNTY

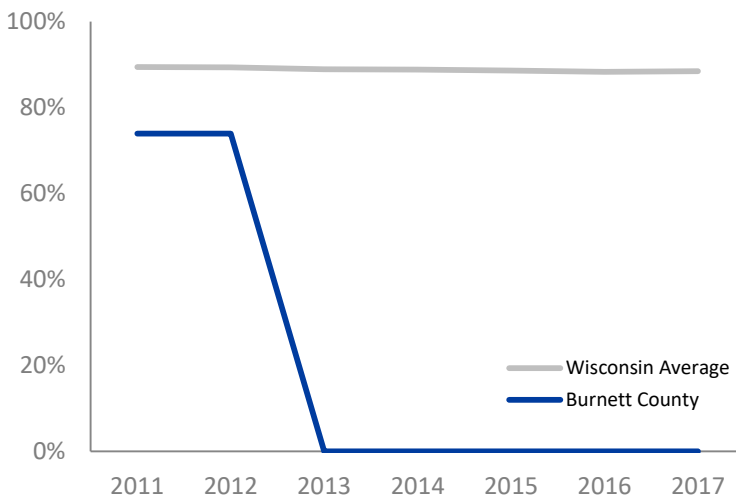
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **0.0%**  
**FLUORIDE**  
 PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
 WISCONSIN: 88.4%

● **3.1**  
**ALCOHOL OUTLET DENSITY**  
 RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
 WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
 ^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



### ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

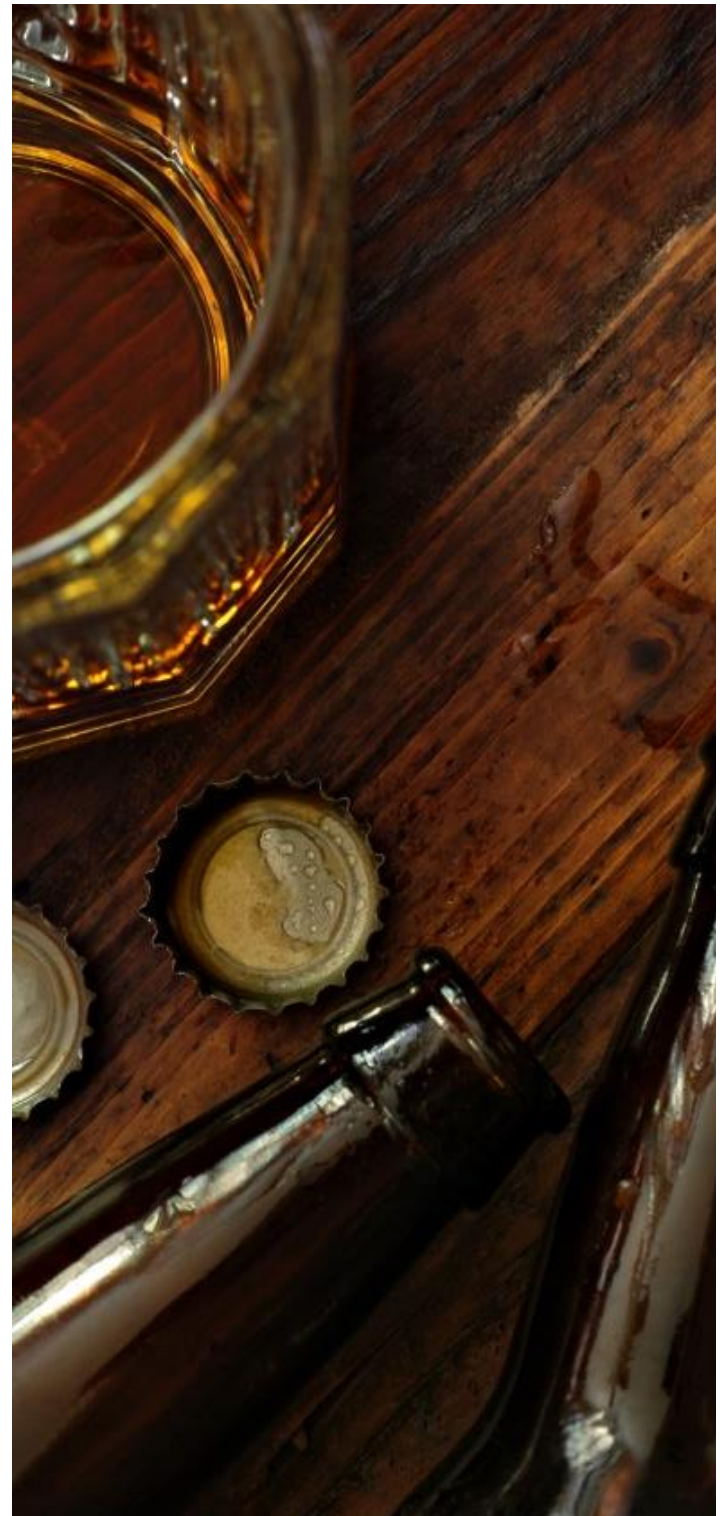
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

### ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



# 94

LICENSES IN  
BURNETT COUNTY

# 16,948

TOTAL LICENSES IN  
WISCONSIN





# PRIVATE WATER QUALITY BURNETT 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 displayed in this report. Users can find public water quality data on our data portal.

● **2.9%**

**NITRATE**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 mg/L  
**WISCONSIN: 11.0%**

● **0.0%**

**ARSENIC**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 µg/L  
**WISCONSIN: 6.0%**

● Above state value   ● At or below state value   ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
 1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS BURNETT 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.

● **10.7**

**CARBON MONOXIDE POISONING**

RATE OF ER VISITS RELATED TO CO POISONING PER 100,000

WISCONSIN: 8.4

● **0.0%**

**CHILDHOOD LEAD POISONING**

PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$

WISCONSIN: 5.0%

● **35.0%**

**RADON**

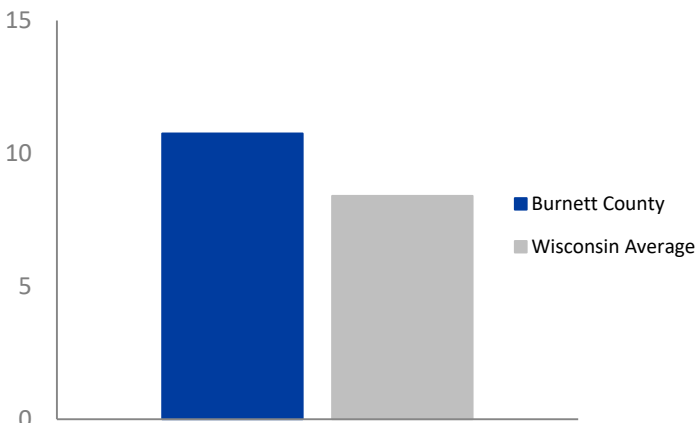
PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$

WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE  
2008-2017



## CARBON MONOXIDE POISONING

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

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



## 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter ( $\mu\text{g}/\text{dL}$ ). The Centers for Disease Control and Prevention defines lead poisoning at or above 5  $\mu\text{g}/\text{dL}$ .

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

## RADON

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

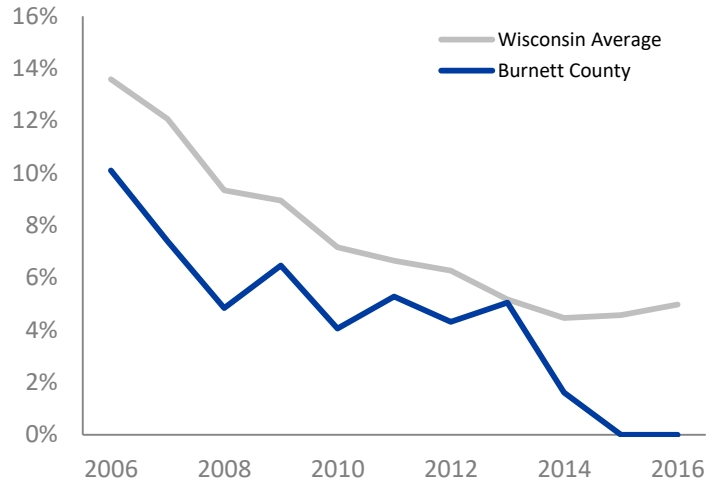
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

## CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g}/\text{dL}$

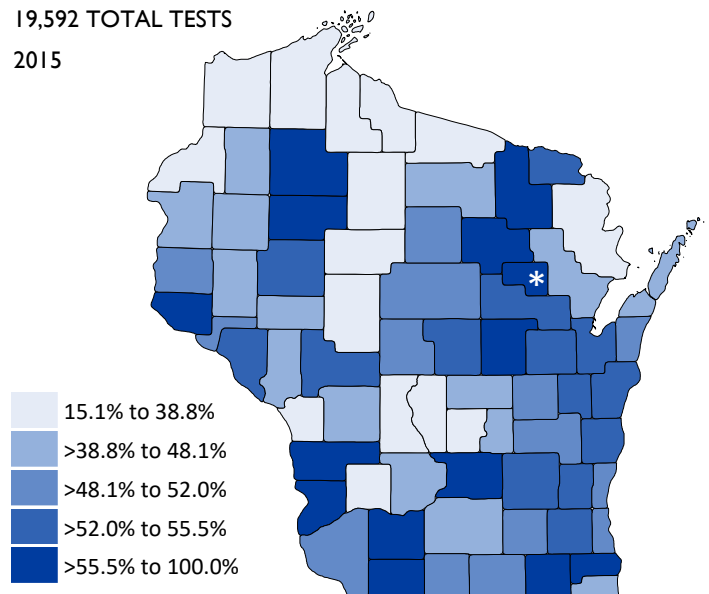


## RADON

PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi}/\text{L}$

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

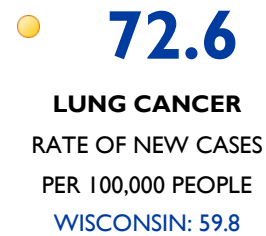
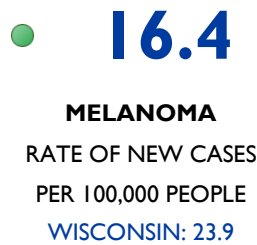
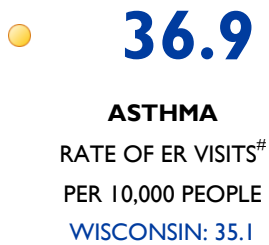




# HEALTH CONDITIONS BURNETT COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.



● Above state value

● At or below state value

^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



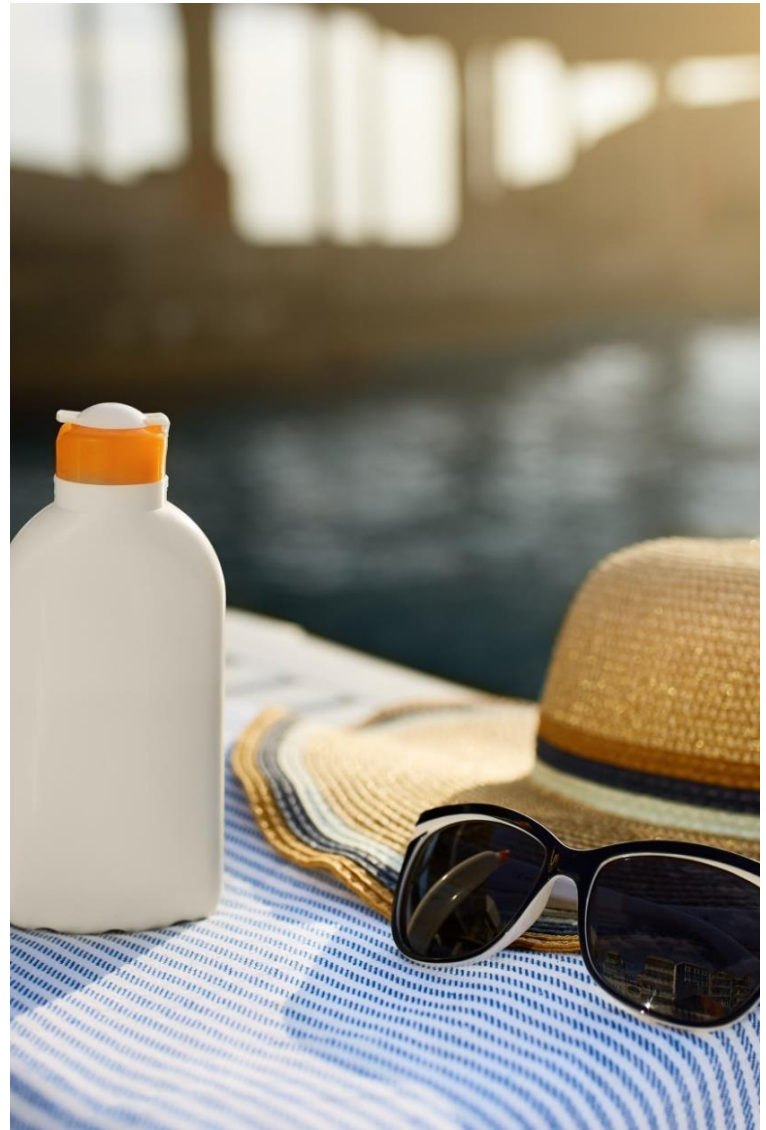
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

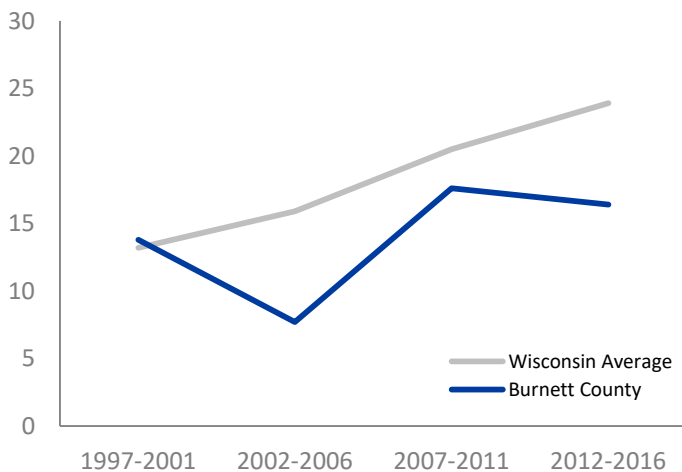
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



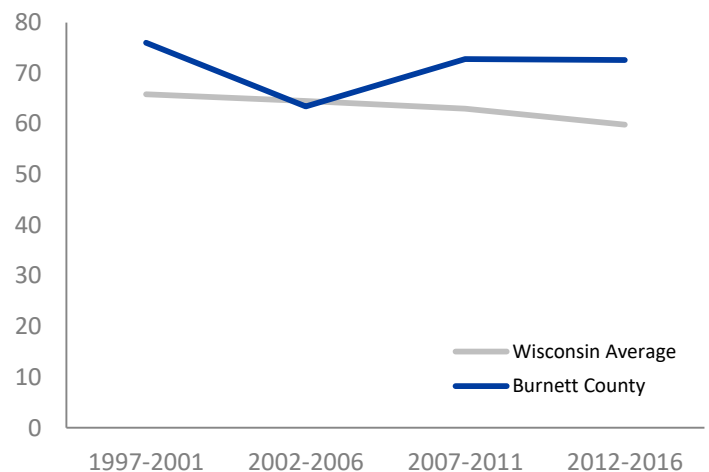
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE BURNETT COUNTY

## BACKGROUND

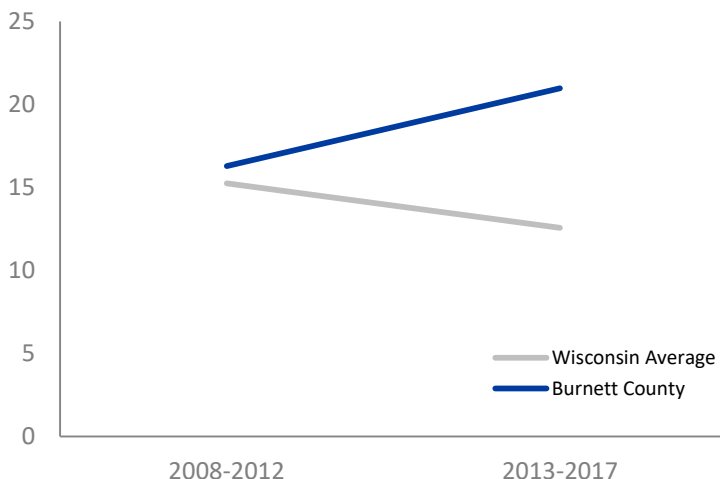
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **21.0**  
**HEAT STRESS**  
 RATE OF ER VISITS  
 PER 100,000 PEOPLE  
 WISCONSIN: 12.6

● **299.6**  
**LYME DISEASE**  
 RATE OF CASES  
 PER 100,000 PEOPLE  
 WISCONSIN: 51.7

● Above state value    ● At or below state value    ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

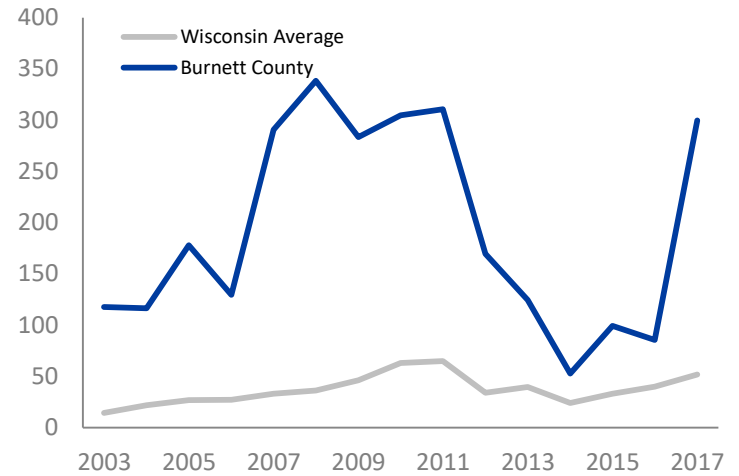
## INTERPRETING LYME DISEASE DATA

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.

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

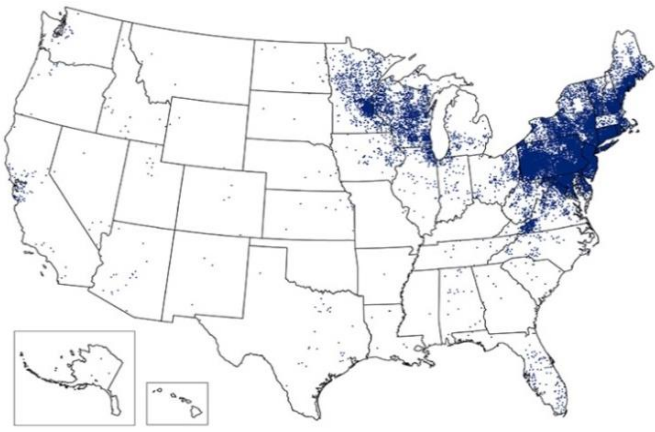
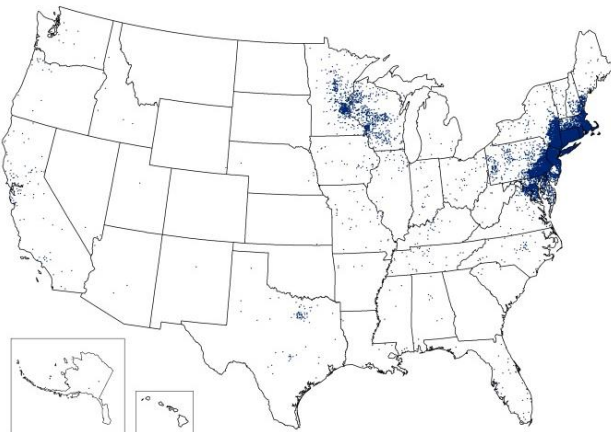
## LYME DISEASE AT THE NATIONAL LEVEL

### OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001

2017



Maps courtesy of Centers for Disease Control and Prevention

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population. For the majority of Profiles, these data were averaged over five years (2013-2017). For this county's Profile, that five-year average was suppressed. To eliminate the suppression in this Profile, these data were instead averaged over 10 years (2008-2017).

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

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

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

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

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

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



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Bureau of Environmental and Occupational Health  
Wisconsin Department of Health Services | Division of Public Health

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MAY 2019 | P-00719 (Rev. 05/2019)





# CALUMET COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

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

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# CALUMET COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

● 74.2% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

● 1.2 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

● 23.6% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

● 3.7% | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

● 3.1 | Rate of ER visits per 100,000 people  
Wisconsin: 7.9

### Childhood Lead Poisoning

● 0.0% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

● 54.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

● 16.9 | Rate of ER visits per 10,000 people<sup>#</sup>  
Wisconsin: 35.1

### Melanoma

● 30.3 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

● 42.4 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

● 14.1 | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

● 24.0 | Crude rate per 100,000 people  
Wisconsin: 51.7

● Above state value  
● At or below state value

\* Above state value preferred for this measure  
^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

[Data details on next page](#)



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Year displayed:** 2016

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

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

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

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

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

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

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

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

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH CALUMET COUNTY

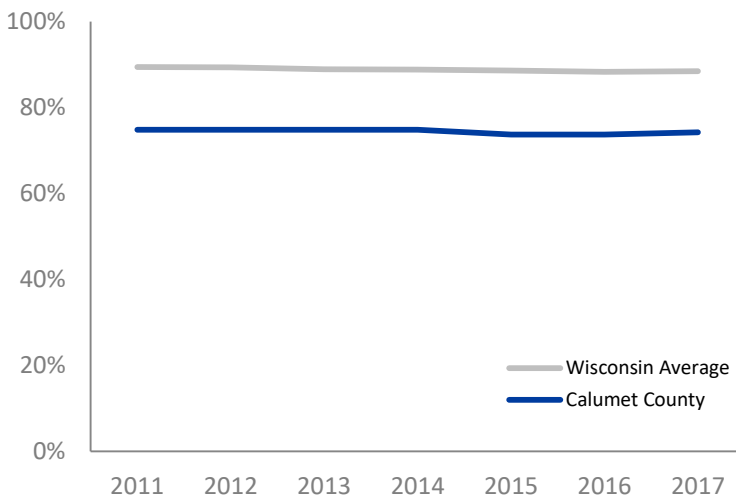
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **74.2%**

**FLUORIDE**  
PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
WISCONSIN: 88.4%

● **1.2**

**ALCOHOL OUTLET DENSITY**  
RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



### ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

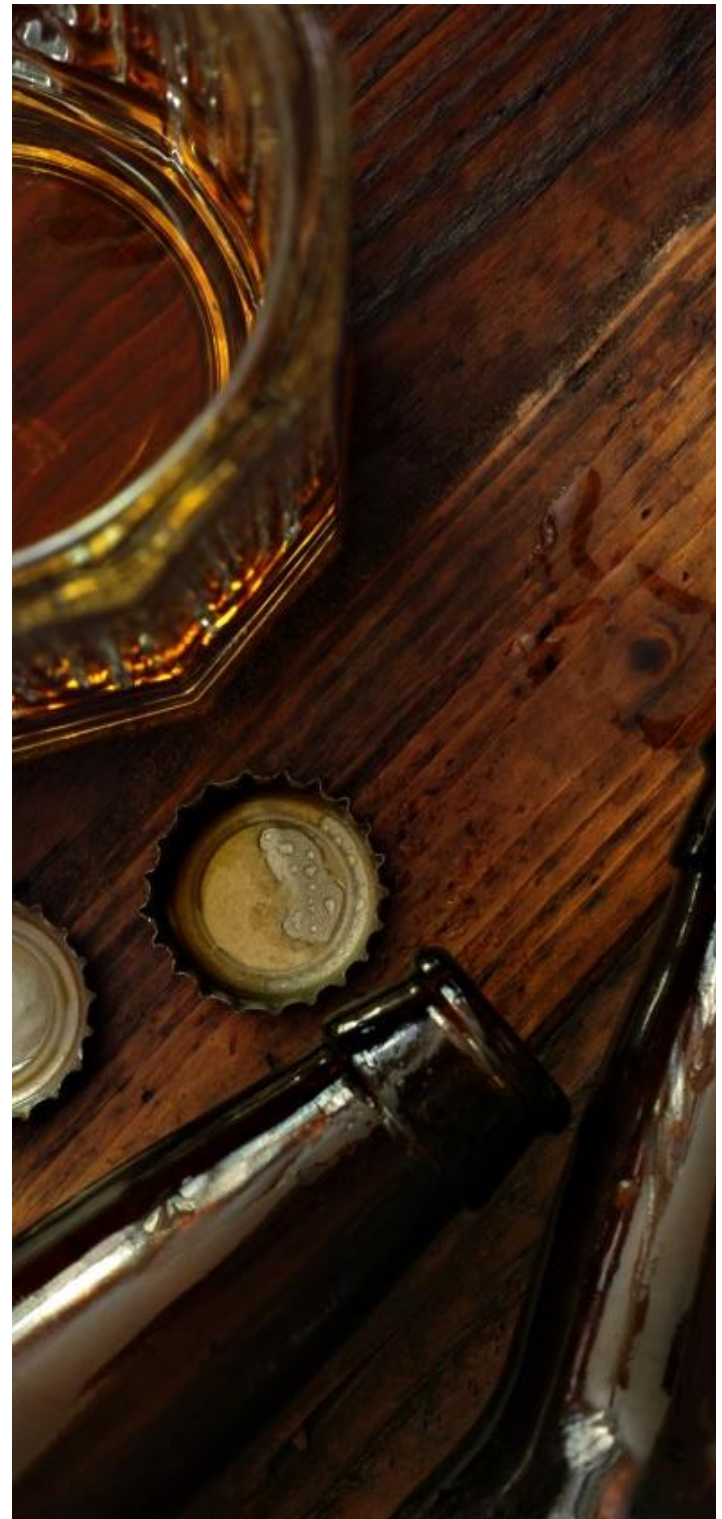
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

### ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



|                               |                                |
|-------------------------------|--------------------------------|
| <b>122</b>                    | <b>16,948</b>                  |
| LICENSES IN<br>CALUMET COUNTY | TOTAL LICENSES IN<br>WISCONSIN |





# PRIVATE WATER QUALITY CALUMET 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 displayed in this report. Users can find public water quality data on our data portal.

● **23.6%**

**NITRATE**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 mg/L  
**WISCONSIN: 11.0%**

● **3.7%**

**ARSENIC**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 µg/L  
**WISCONSIN: 6.0%**

● Above state value   ● At or below state value   ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
 1988 TO MARCH 2017



## 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 certain 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.





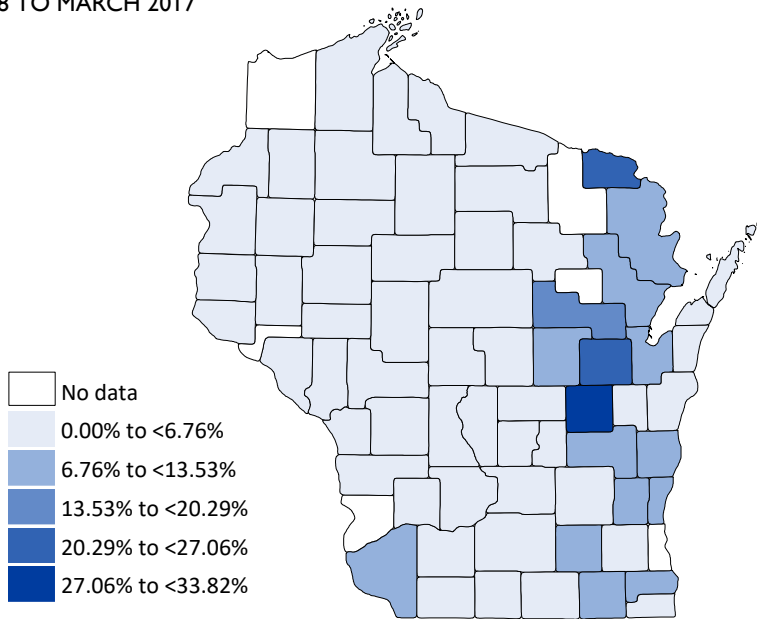
## ARSENIC IN PRIVATE WELLS

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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS CALUMET 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.

● **3.1**  
**CARBON MONOXIDE POISONING**  
 RATE OF ER VISITS RELATED TO CO POISONING PER 100,000  
 WISCONSIN: 7.9

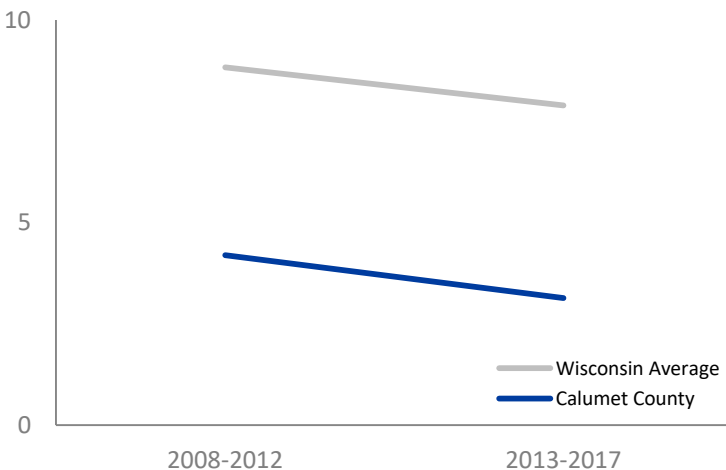
● **0.0%**  
**CHILDHOOD LEAD POISONING**  
 PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$   
 WISCONSIN: 5.0%

● **54.0%**  
**RADON**  
 PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$   
 WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

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

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



## 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter (µg/dL). The Centers for Disease Control and Prevention defines lead poisoning at or above 5 µg/dL.

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

## RADON

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

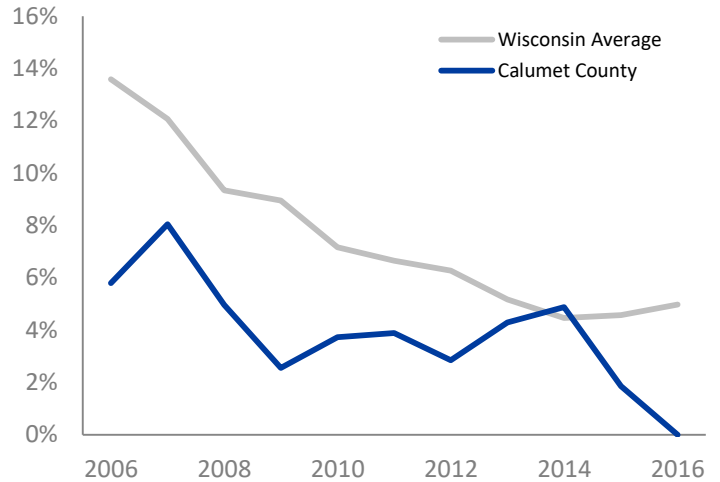
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

## CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD ≥5 µg/dL

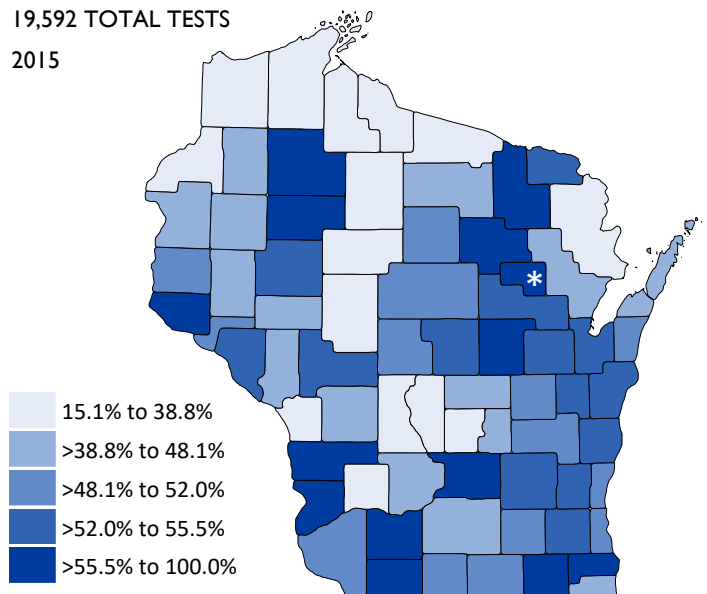


## RADON

PERCENT OF TESTS WITH RESULTS ≥4 pCi/L

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

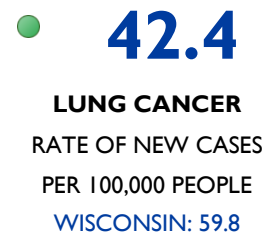
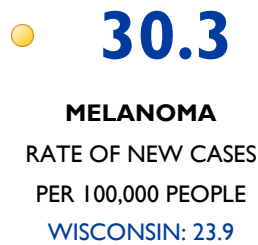
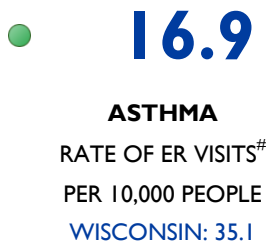




# HEALTH CONDITIONS CALUMET COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.



● Above state value

● At or below state value

^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



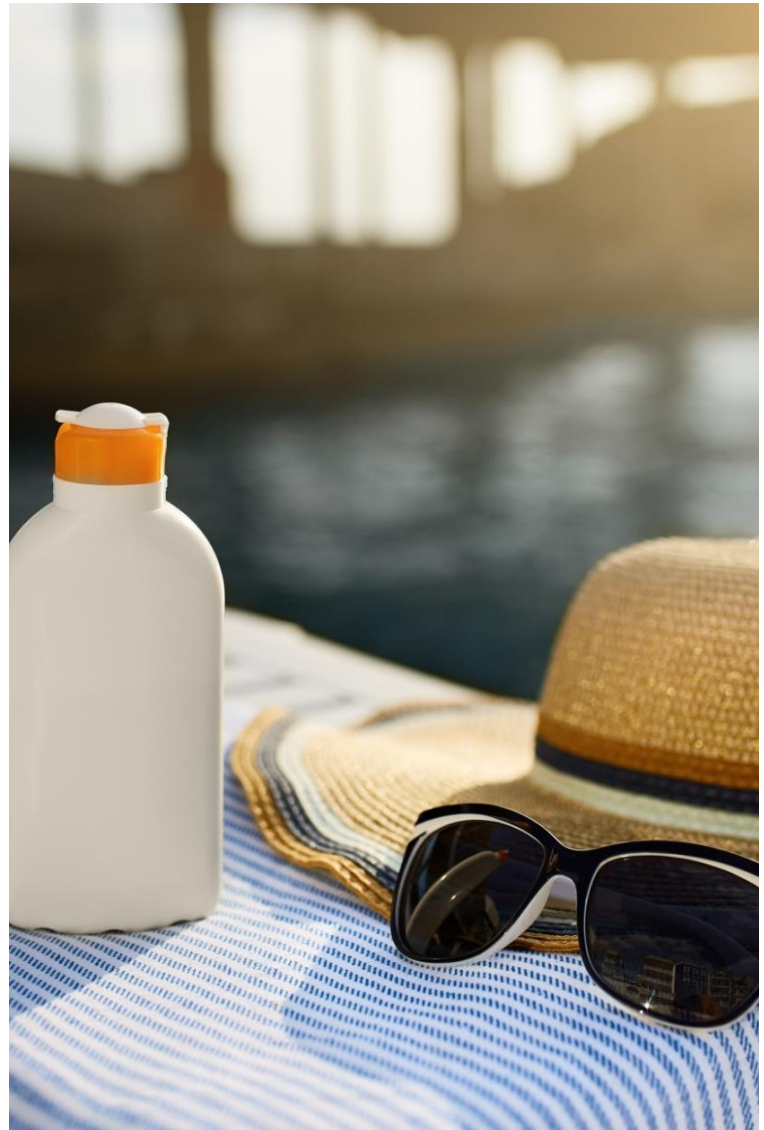
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

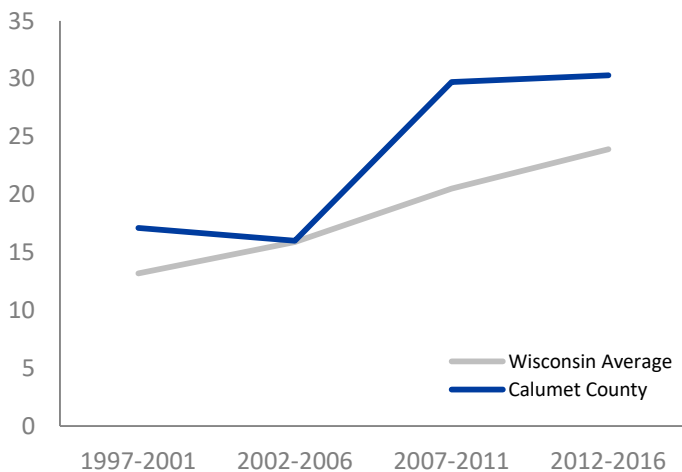
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



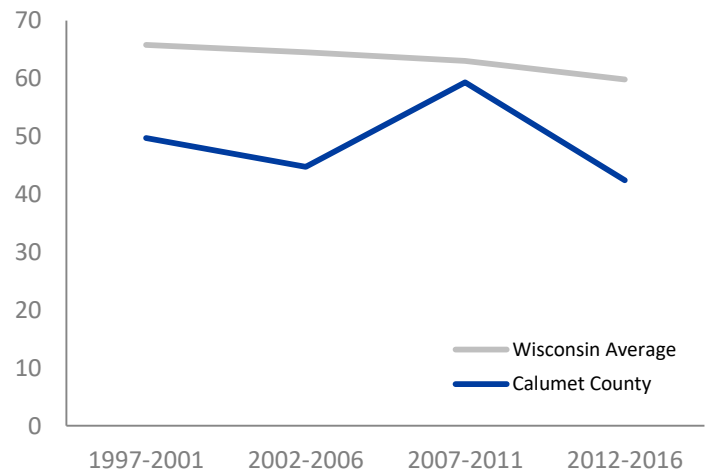
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE CALUMET COUNTY

## BACKGROUND

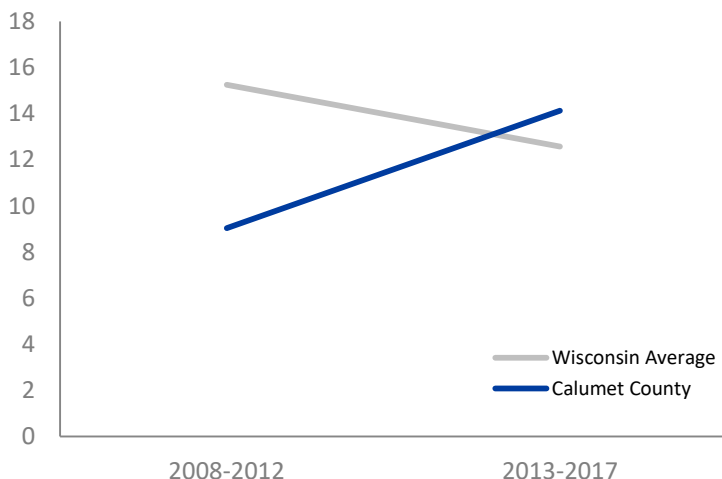
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **14.1**  
**HEAT STRESS**  
 RATE OF ER VISITS  
 PER 100,000 PEOPLE  
 WISCONSIN: 12.6

● **24.0**  
**LYME DISEASE**  
 RATE OF CASES  
 PER 100,000 PEOPLE  
 WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

## LYME DISEASE AT THE NATIONAL LEVEL

OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001



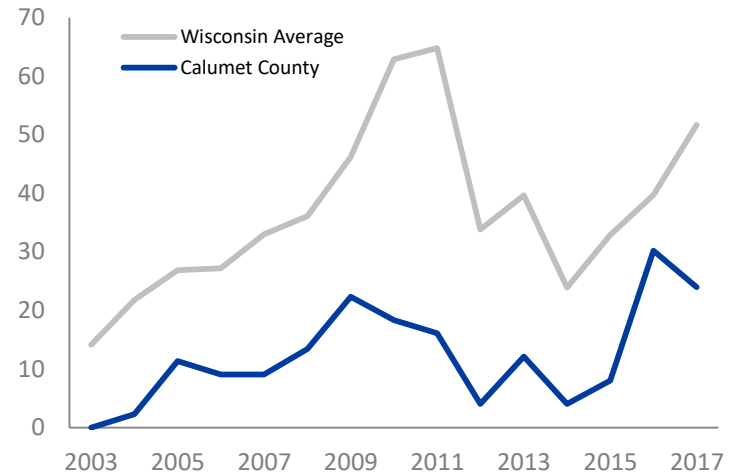
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

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

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

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

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

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

Bureau of Environmental and Occupational Health  
Wisconsin Department of Health Services | Division of Public Health

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MAY 2019 | P-00719 (Rev. 05/2019)





# CHIPPEWA COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

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

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

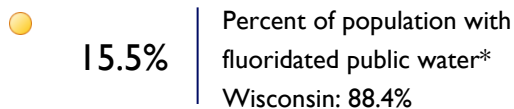
# CHIPPEWA COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE

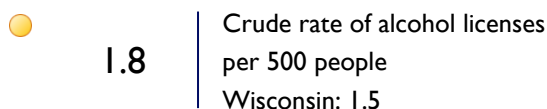


## COMMUNITY HEALTH

### Fluoride

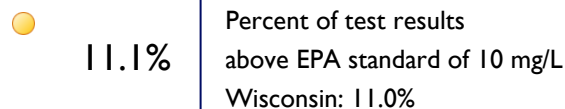


### Alcohol Outlet Density

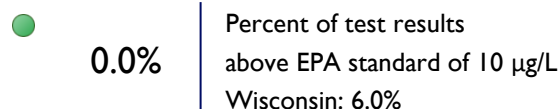


## PRIVATE WATER QUALITY

### Nitrate

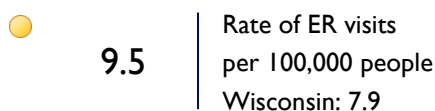


### Arsenic

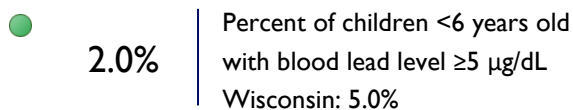


## HOME HAZARDS

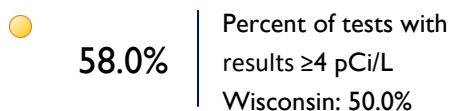
### Carbon Monoxide Poisoning



### Childhood Lead Poisoning

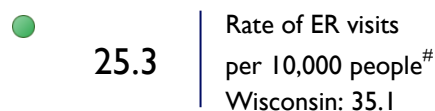


### Radon

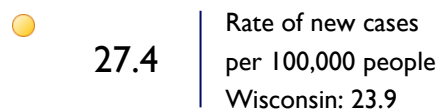


## HEALTH CONDITIONS

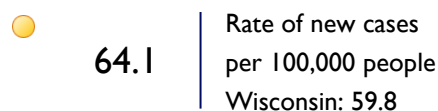
### Asthma



### Melanoma

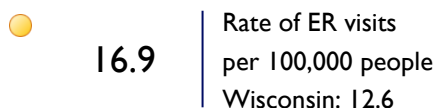


### Lung Cancer

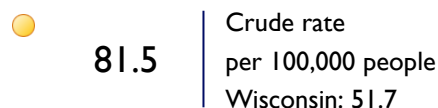


## CLIMATE

### Heat Stress



### Lyme Disease

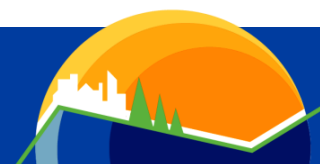


- Above state value
- At or below state value

- \* Above state value preferred for this measure
- ^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

Data details on next page



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Year displayed:** 2016

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

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

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

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

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

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

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

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

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH CHIPPEWA COUNTY

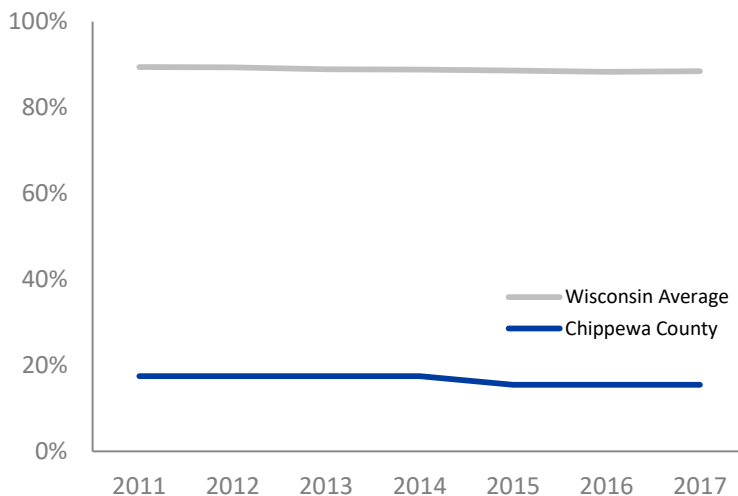
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **15.5%**  
**FLUORIDE**  
 PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
 WISCONSIN: 88.4%

● **1.8**  
**ALCOHOL OUTLET DENSITY**  
 RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
 WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
 ^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



### ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small 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 [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

### ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



# 228

LICENSES IN  
CHIPPEWA COUNTY

# 16,948

TOTAL LICENSES IN  
WISCONSIN





# PRIVATE WATER QUALITY CHIPPEWA 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 displayed in this report. Users can find public water quality data on our data portal.

● **11.1%**

**NITRATE**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 mg/L  
**WISCONSIN: 11.0%**

● **0.0%**

**ARSENIC**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 µg/L  
**WISCONSIN: 6.0%**

● Above state value   ● At or below state value   ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
 1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS CHIPPEWA 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.

● **9.5**  
**CARBON MONOXIDE POISONING**  
 RATE OF ER VISITS RELATED TO CO POISONING PER 100,000  
 WISCONSIN: 7.9

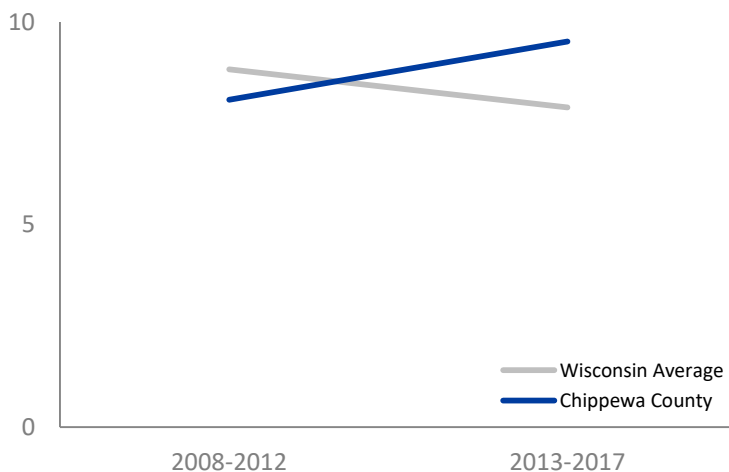
● **2.0%**  
**CHILDHOOD LEAD POISONING**  
 PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$   
 WISCONSIN: 5.0%

● **58.0%**  
**RADON**  
 PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$   
 WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

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

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



### 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter (µg/dL). The Centers for Disease Control and Prevention defines lead poisoning at or above 5 µg/dL.

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

### RADON

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

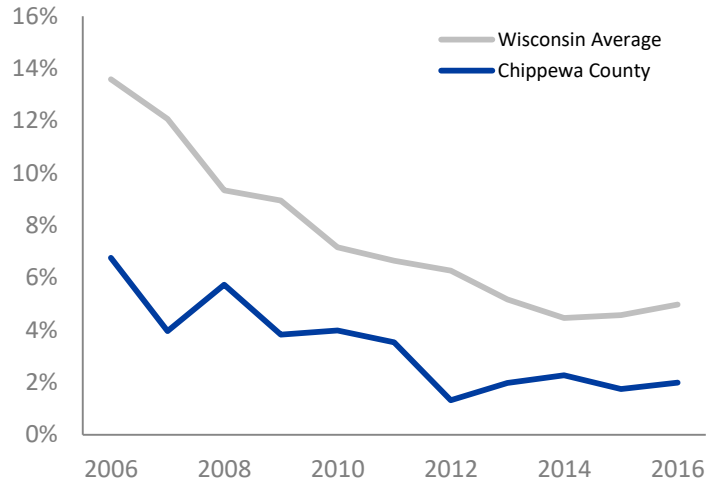
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

### CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD ≥5 µg/dL

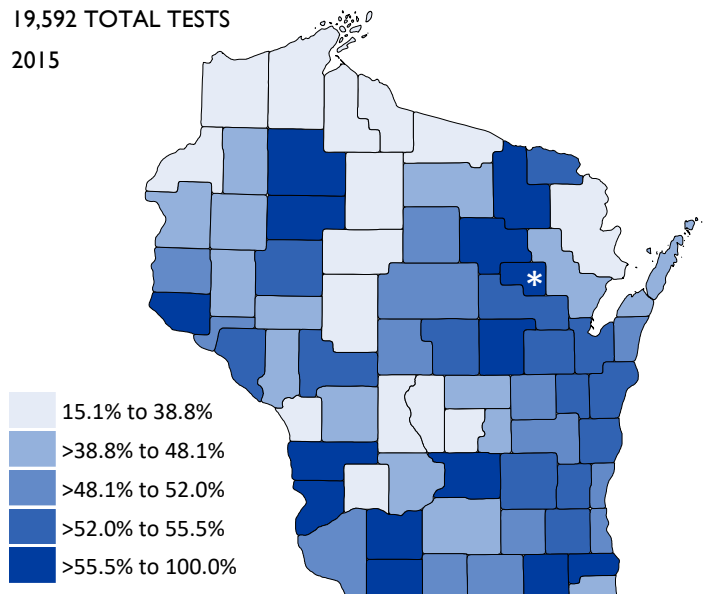


### RADON

PERCENT OF TESTS WITH RESULTS ≥4 pCi/L

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

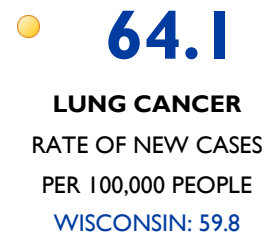
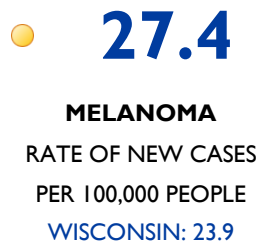
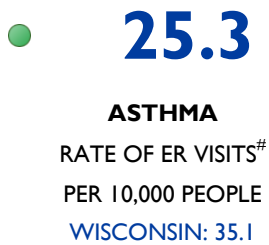




# HEALTH CONDITIONS CHIPPEWA COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.

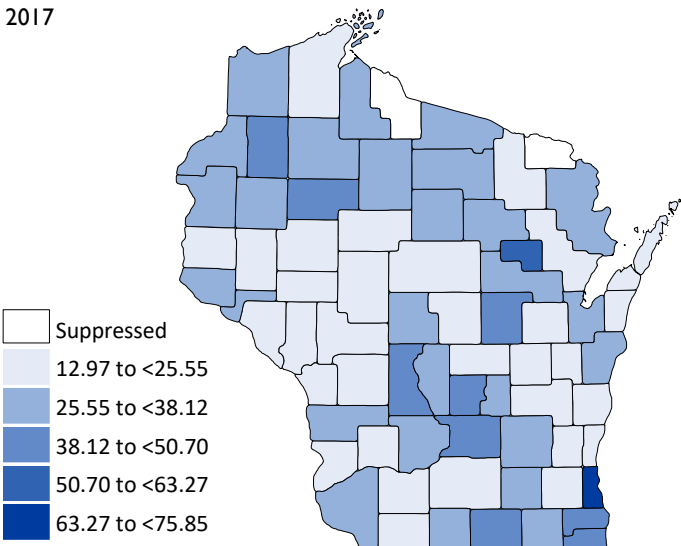


- Above state value
- At or below state value
- ^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



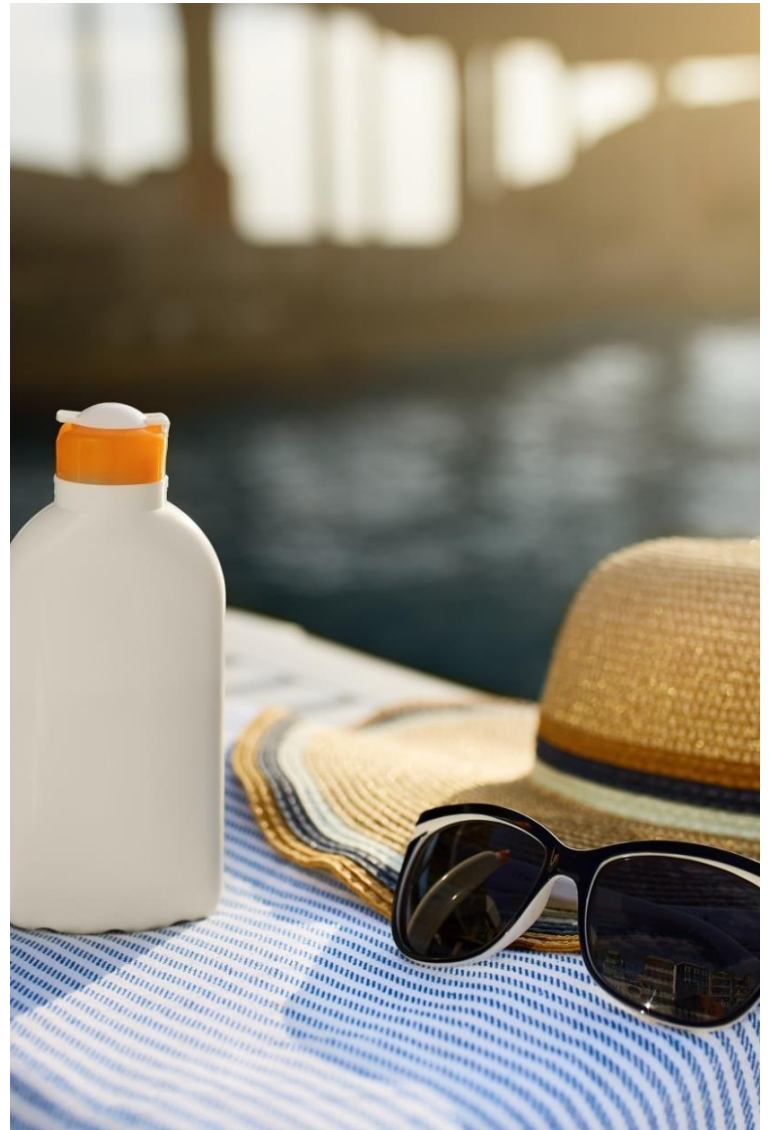
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

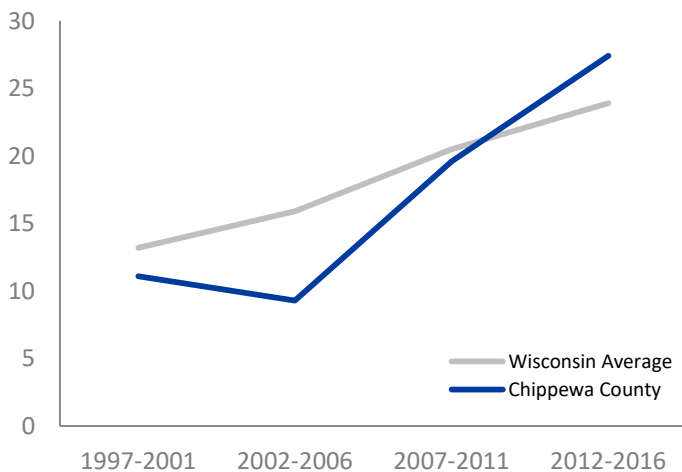
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



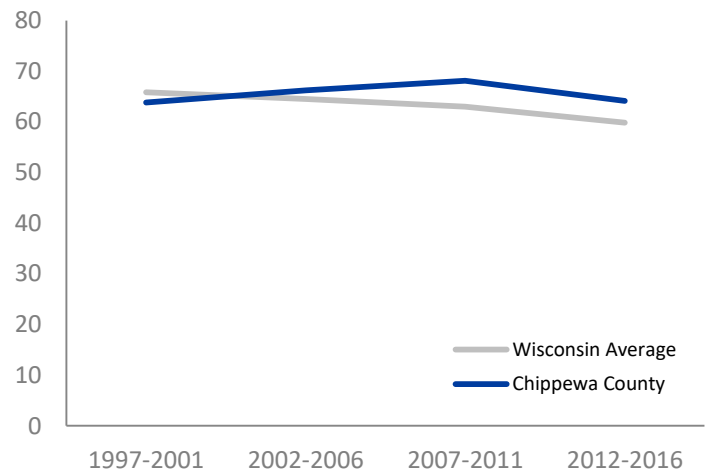
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE CHIPPEWA COUNTY

## BACKGROUND

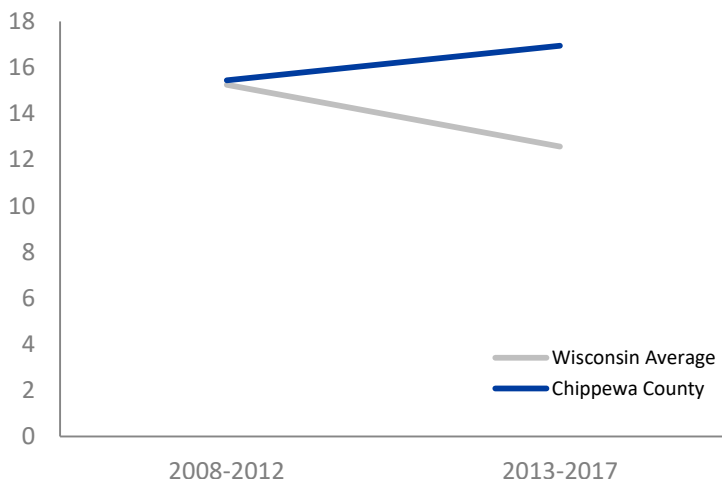
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **16.9**  
**HEAT STRESS**  
 RATE OF ER VISITS  
 PER 100,000 PEOPLE  
 WISCONSIN: 12.6

● **81.5**  
**LYME DISEASE**  
 RATE OF CASES  
 PER 100,000 PEOPLE  
 WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

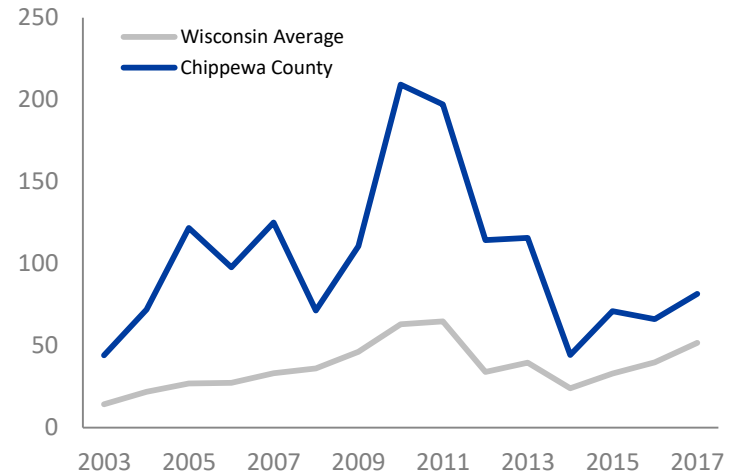
## INTERPRETING LYME DISEASE DATA

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.

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

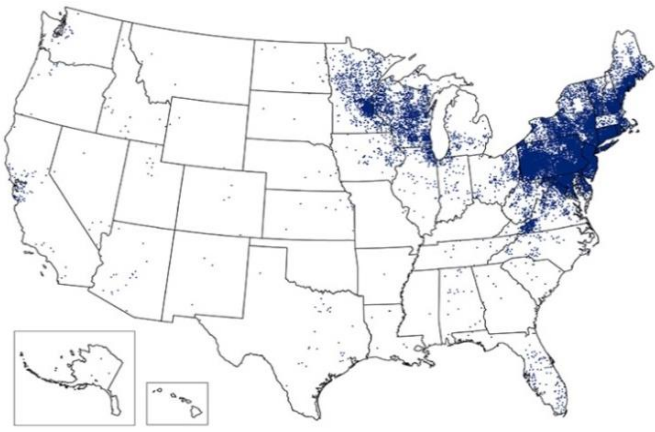
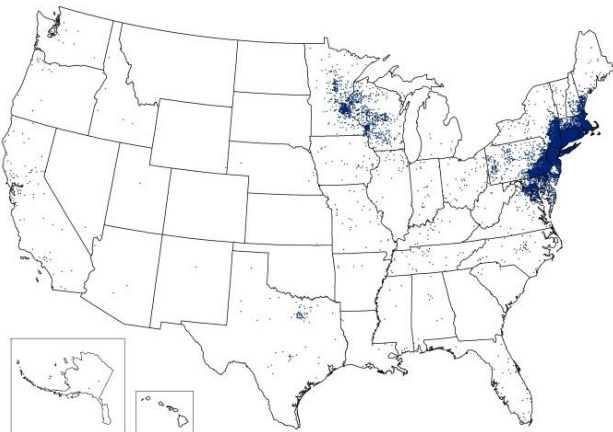
## LYME DISEASE AT THE NATIONAL LEVEL

OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001

2017



Maps courtesy of Centers for Disease Control and Prevention

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

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

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

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

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

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

Bureau of Environmental and Occupational Health  
Wisconsin Department of Health Services | Division of Public Health

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MAY 2019 | P-00719 (Rev. 05/2019)





# CLARK COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

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

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# CLARK COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

● 60.1% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

● 2.1 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

● 9.8% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

● 1.1% | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

● 9.0 | Rate of ER visits per 100,000 people  
Wisconsin: 7.9

### Childhood Lead Poisoning

● 2.9% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

● 35.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

● 14.3 | Rate of ER visits per 10,000 people<sup>#</sup>  
Wisconsin: 35.1

### Melanoma

● 20.9 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

● 48.9 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

● 11.1 | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

● 40.4 | Crude rate per 100,000 people  
Wisconsin: 51.7

● Above state value  
● At or below state value

\* Above state value preferred for this measure  
^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

[Data details on next page](#)



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Year displayed:** 2016

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

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

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

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

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

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

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

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

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH CLARK COUNTY

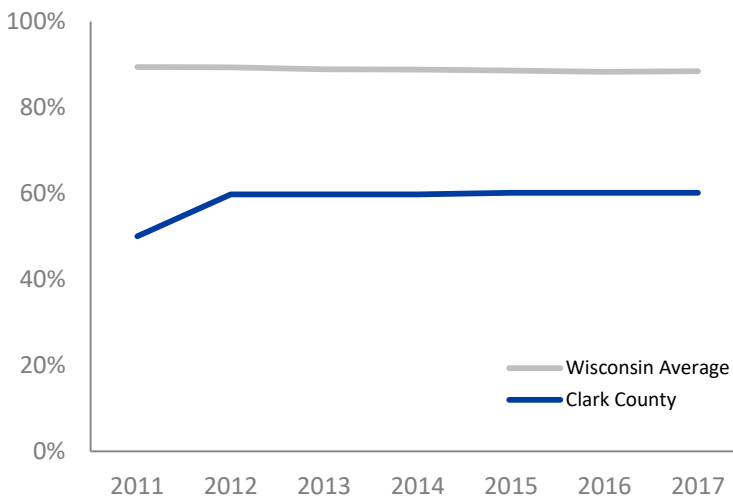
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **60.1%**

**FLUORIDE**  
PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
WISCONSIN: 88.4%

● **2.1**

**ALCOHOL OUTLET DENSITY**  
RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



### ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

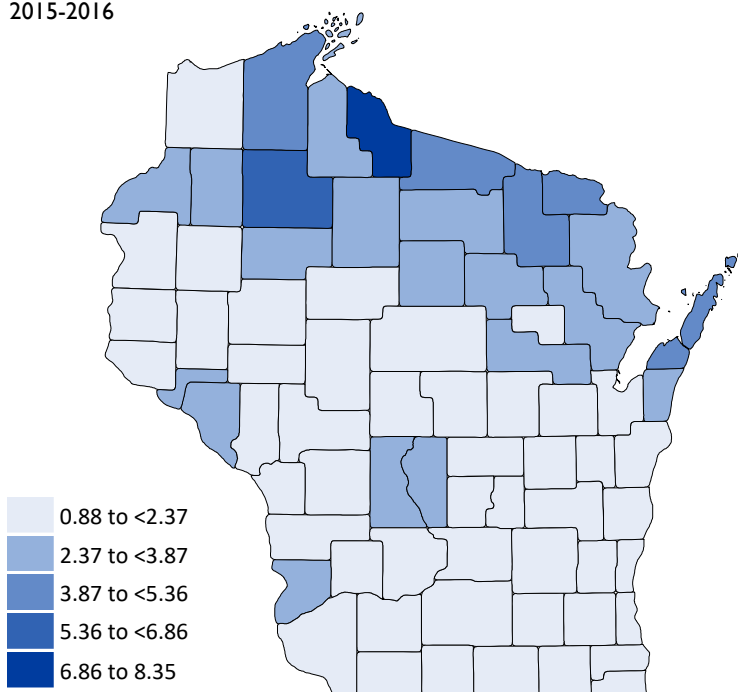
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

### ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



|                             |                                |
|-----------------------------|--------------------------------|
| <b>144</b>                  | <b>16,948</b>                  |
| LICENSES IN<br>CLARK COUNTY | TOTAL LICENSES IN<br>WISCONSIN |





# PRIVATE WATER QUALITY CLARK 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 displayed in this report. Users can find public water quality data on our data portal.

● **9.8%**

**NITRATE  
IN PRIVATE WELLS**  
PERCENT OF TEST RESULTS  
ABOVE EPA STANDARD  
OF 10 mg/L  
WISCONSIN: 11.0%

● **1.1%**

**ARSENIC  
IN PRIVATE WELLS**  
PERCENT OF TEST RESULTS  
ABOVE EPA STANDARD  
OF 10 µg/L  
WISCONSIN: 6.0%

● Above state value    ● At or below state value    ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS CLARK 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.

● **9.0**  
**CARBON MONOXIDE POISONING**  
 RATE OF ER VISITS RELATED TO CO POISONING PER 100,000  
 WISCONSIN: 7.9

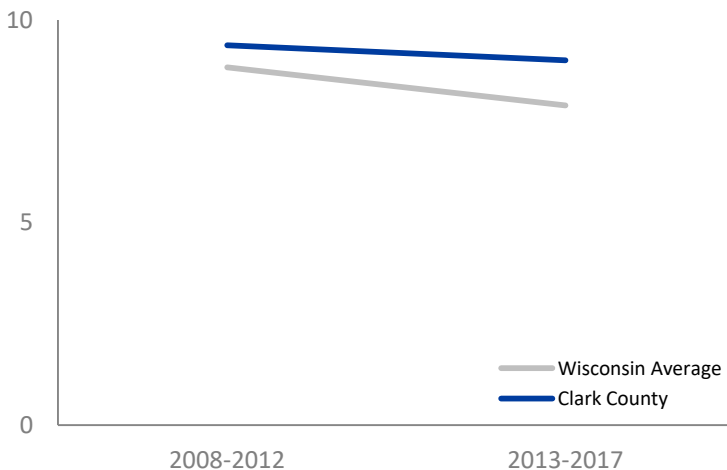
● **2.9%**  
**CHILDHOOD LEAD POISONING**  
 PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$   
 WISCONSIN: 5.0%

● **35.0%**  
**RADON**  
 PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$   
 WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

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

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



## 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter (µg/dL). The Centers for Disease Control and Prevention defines lead poisoning at or above 5 µg/dL.

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

## RADON

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

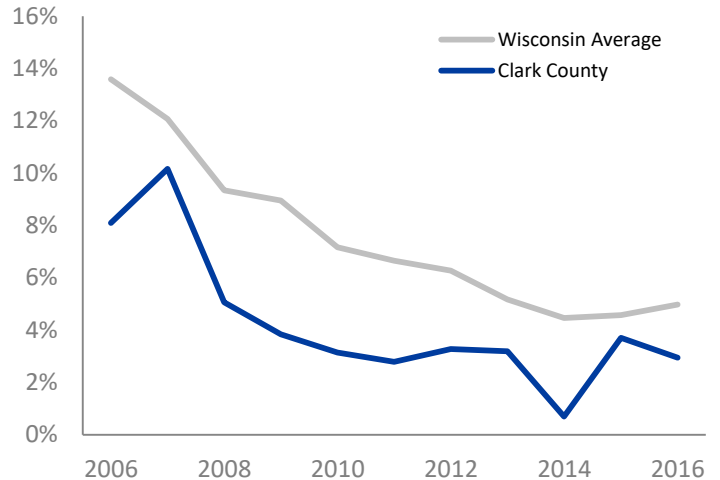
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

## CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD ≥5 µg/dL

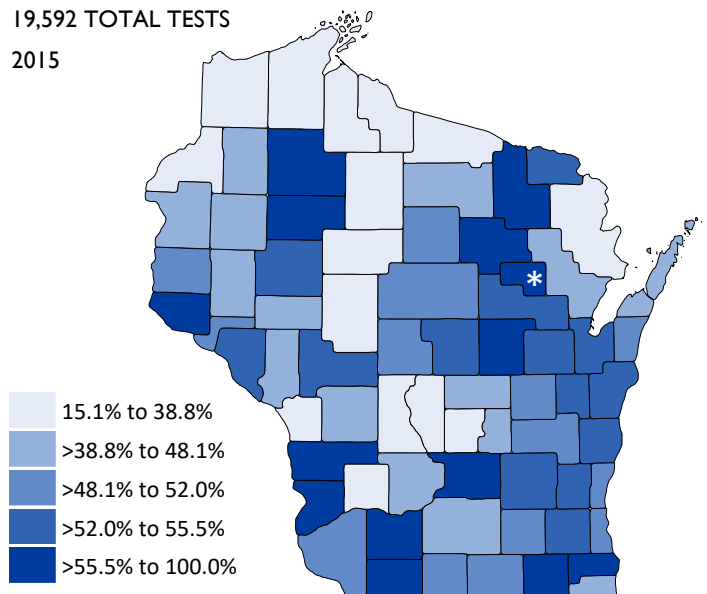


## RADON

PERCENT OF TESTS WITH RESULTS ≥4 pCi/L

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

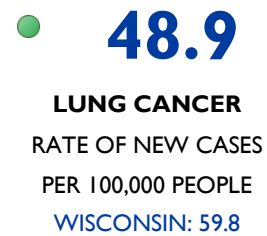
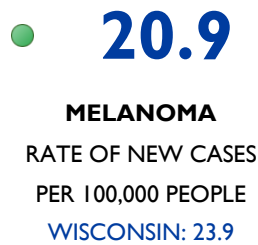
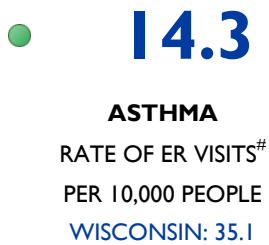




# HEALTH CONDITIONS CLARK COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.



● Above state value

● At or below state value

^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



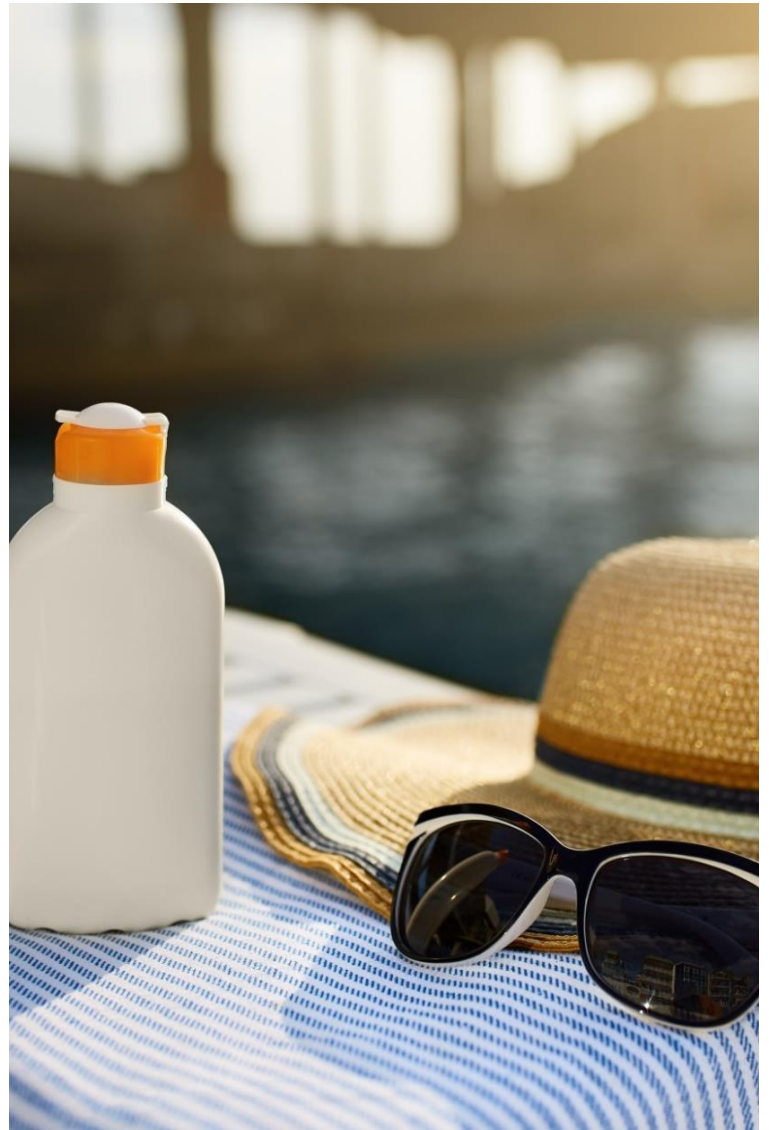
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

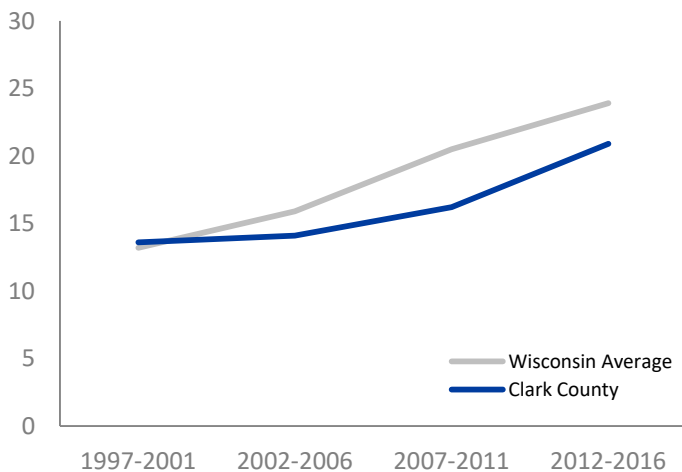
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



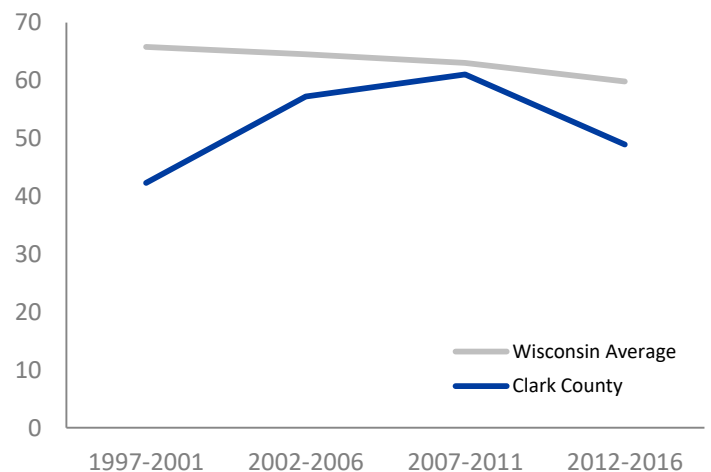
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE CLARK COUNTY

## BACKGROUND

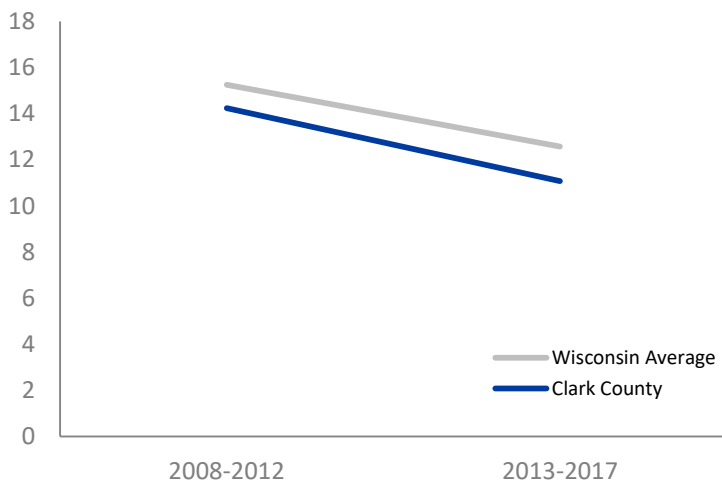
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● 11.1

**HEAT STRESS**  
RATE OF ER VISITS  
PER 100,000 PEOPLE  
WISCONSIN: 12.6

● 40.4

**LYME DISEASE**  
RATE OF CASES  
PER 100,000 PEOPLE  
WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

## LYME DISEASE AT THE NATIONAL LEVEL

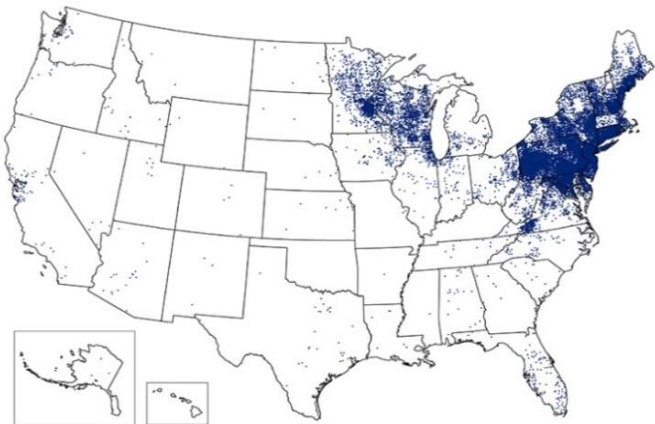
OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001



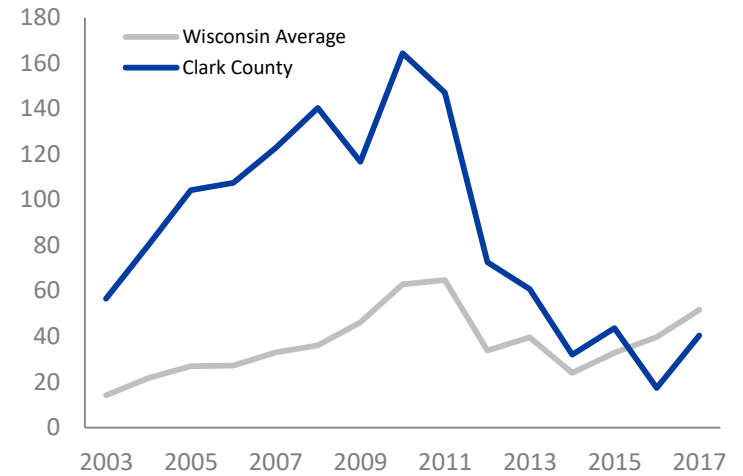
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

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

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

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

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

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

Bureau of Environmental and Occupational Health  
Wisconsin Department of Health Services | Division of Public Health

[dhstracking@wi.gov](mailto:dhstracking@wi.gov) | [dhs.wisconsin.gov/epht](https://dhs.wisconsin.gov/epht)  
MAY 2019 | P-00719 (Rev. 05/2019)





# COLUMBIA COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

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

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# COLUMBIA COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

● 78.3% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

● 1.8 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

● 21.2% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

● 3.1% | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

● 13.0 | Rate of ER visits per 100,000 people  
Wisconsin: 7.9

### Childhood Lead Poisoning

● 3.9% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

● 59.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

● 38.4 | Rate of ER visits per 10,000 people<sup>#</sup>  
Wisconsin: 35.1

### Melanoma

● 24.0 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

● 58.7 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

● 23.4 | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

● 101.3 | Crude rate per 100,000 people  
Wisconsin: 51.7

● Above state value  
● At or below state value

\* Above state value preferred for this measure  
^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

[Data details on next page](#)



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Year displayed:** 2016

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

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

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

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

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

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

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

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

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH COLUMBIA COUNTY

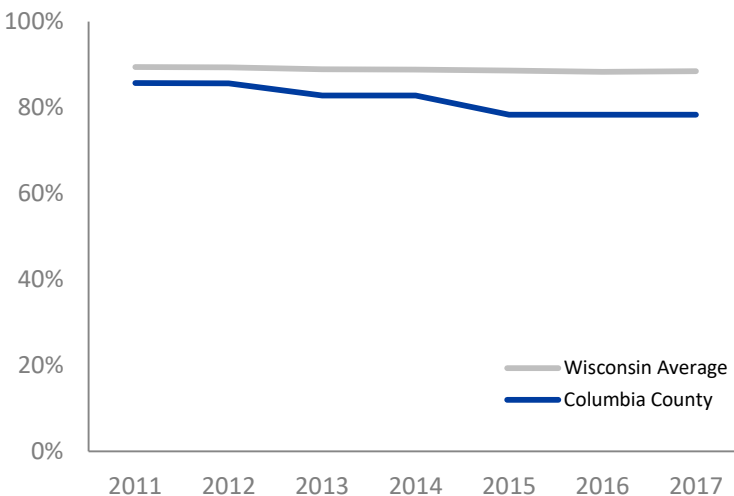
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **78.3%**

**FLUORIDE**  
PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
WISCONSIN: 88.4%

● **1.8**

**ALCOHOL OUTLET DENSITY**  
RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



### ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small 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 [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

### ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



**207**  
LICENSES IN  
COLUMBIA COUNTY

**16,948**  
TOTAL LICENSES IN  
WISCONSIN





# PRIVATE WATER QUALITY COLUMBIA 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 displayed in this report. Users can find public water quality data on our data portal.

● **21.2%**

**NITRATE**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 mg/L  
**WISCONSIN: 11.0%**

● **3.1%**

**ARSENIC**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 µg/L  
**WISCONSIN: 6.0%**

● Above state value   ● At or below state value   ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
 1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS COLUMBIA 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.

● **13.0**  
**CARBON MONOXIDE POISONING**  
 RATE OF ER VISITS RELATED TO CO POISONING PER 100,000  
 WISCONSIN: 7.9

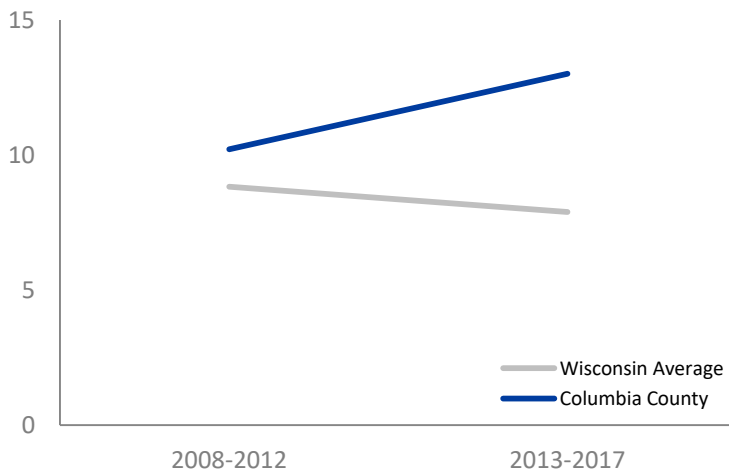
● **3.9%**  
**CHILDHOOD LEAD POISONING**  
 PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$   
 WISCONSIN: 5.0%

● **59.0%**  
**RADON**  
 PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$   
 WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

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

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



## 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter (µg/dL). The Centers for Disease Control and Prevention defines lead poisoning at or above 5 µg/dL.

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

## RADON

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

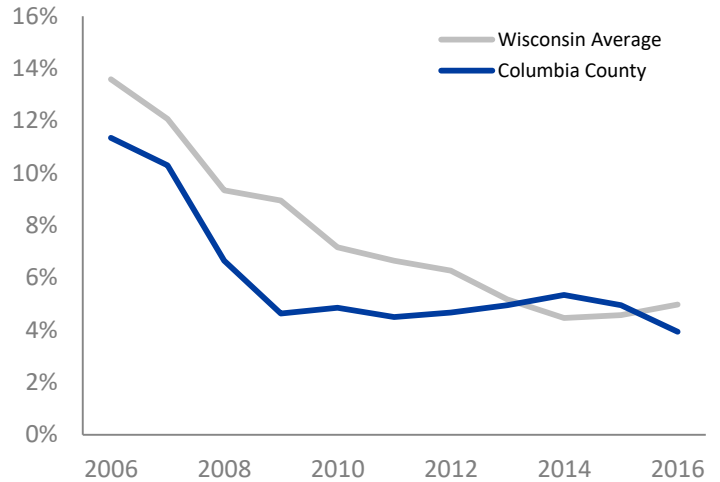
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

## CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD ≥5 µg/dL

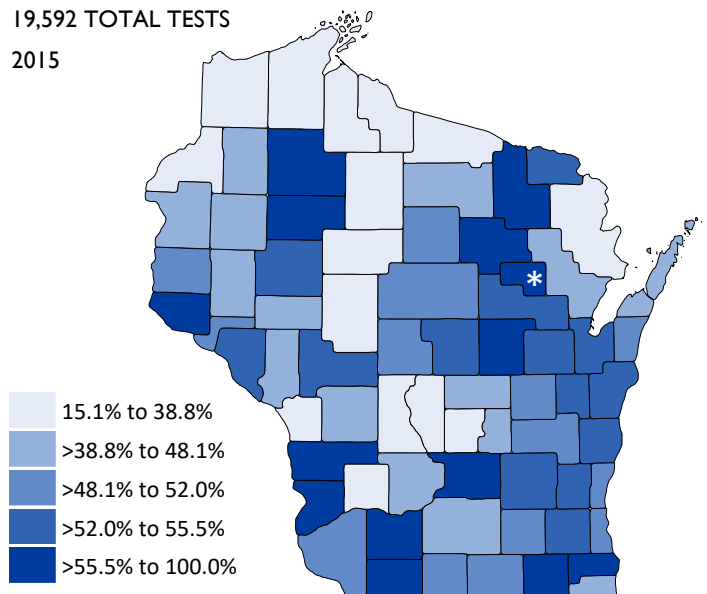


## RADON

PERCENT OF TESTS WITH RESULTS ≥4 pCi/L

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

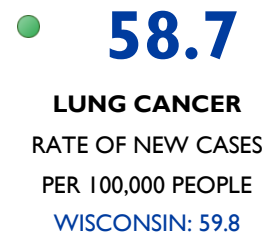
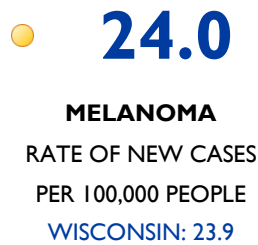
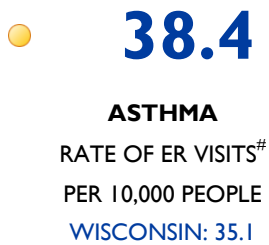




# HEALTH CONDITIONS COLUMBIA COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.



● Above state value

● At or below state value

^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



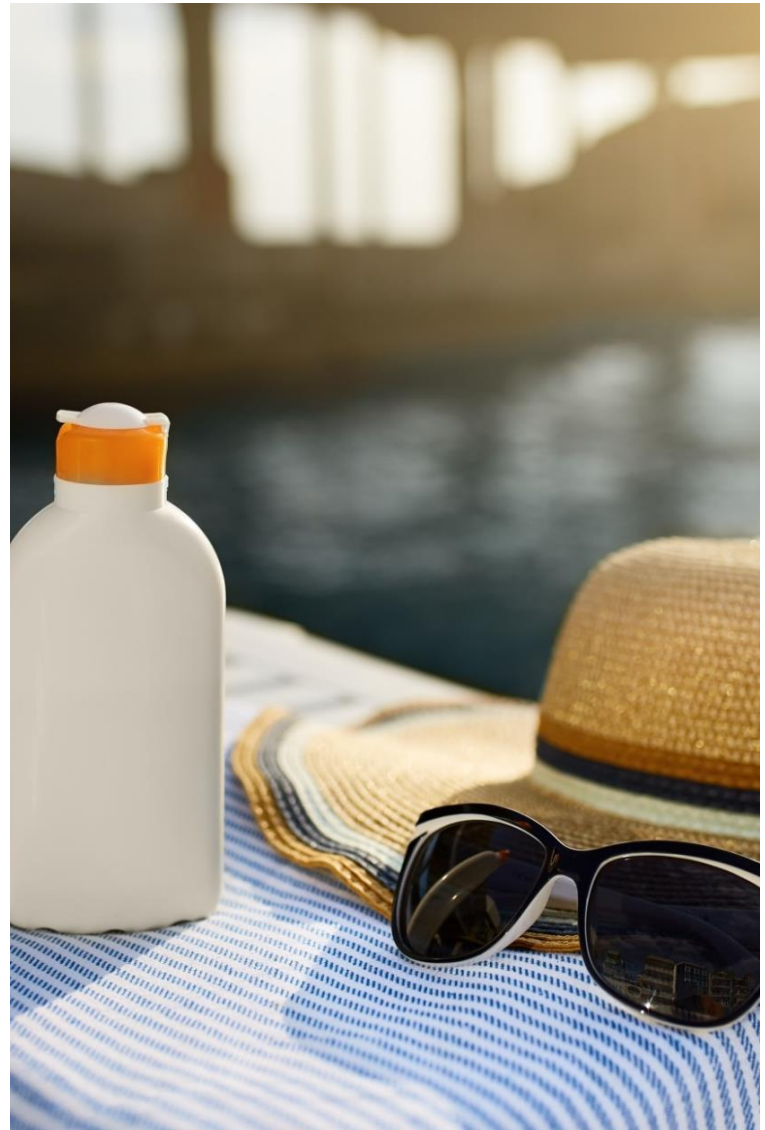
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

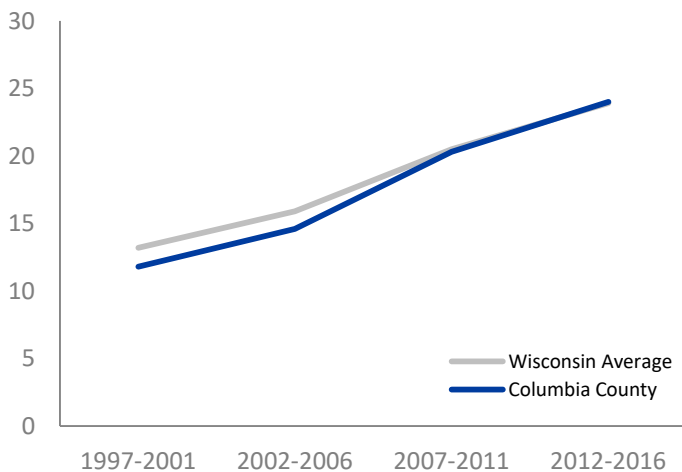
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



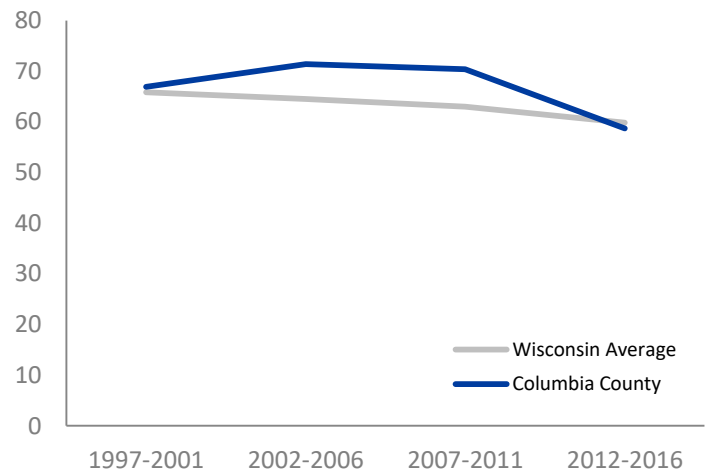
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE COLUMBIA COUNTY

## BACKGROUND

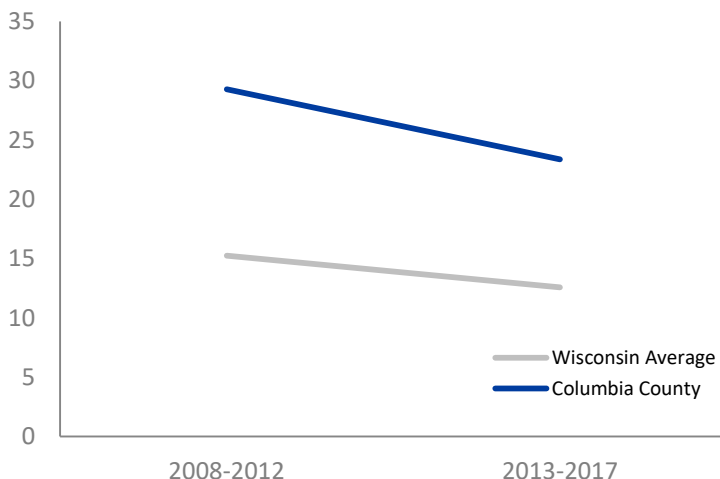
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **23.4**

**HEAT STRESS**  
RATE OF ER VISITS  
PER 100,000 PEOPLE  
WISCONSIN: 12.6

● **101.3**

**LYME DISEASE**  
RATE OF CASES  
PER 100,000 PEOPLE  
WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

## LYME DISEASE AT THE NATIONAL LEVEL

OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001



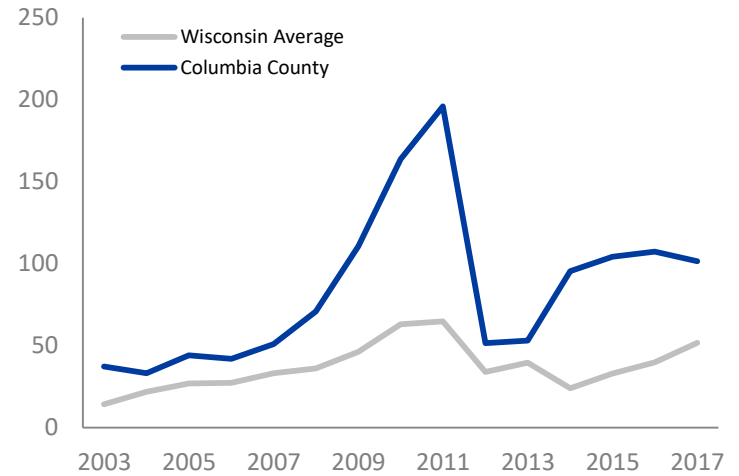
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

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

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

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

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

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

Bureau of Environmental and Occupational Health  
Wisconsin Department of Health Services | Division of Public Health

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MAY 2019 | P-00719 (Rev. 05/2019)





# CRAWFORD COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

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

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

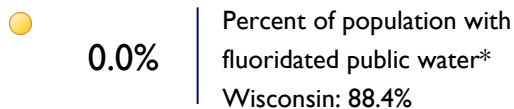
# CRAWFORD COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE

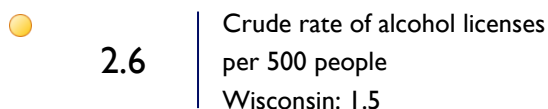


## COMMUNITY HEALTH

### Fluoride

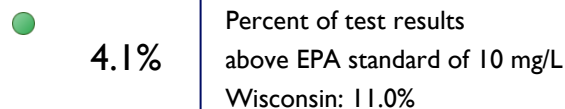


### Alcohol Outlet Density

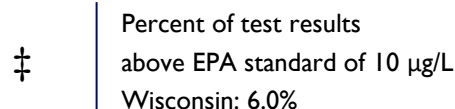


## PRIVATE WATER QUALITY

### Nitrate

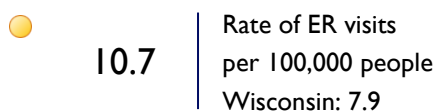


### Arsenic

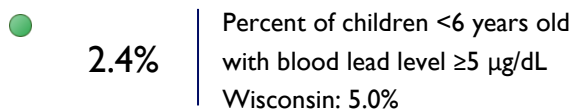


## HOME HAZARDS

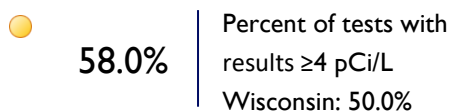
### Carbon Monoxide Poisoning



### Childhood Lead Poisoning

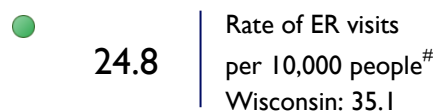


### Radon

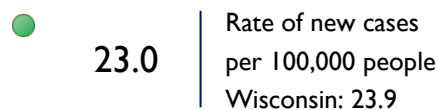


## HEALTH CONDITIONS

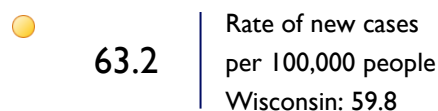
### Asthma



### Melanoma

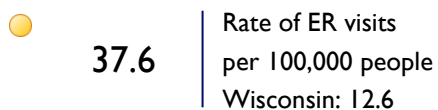


### Lung Cancer

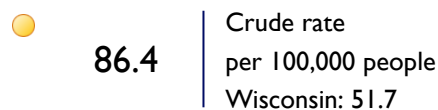


## CLIMATE

### Heat Stress



### Lyme Disease

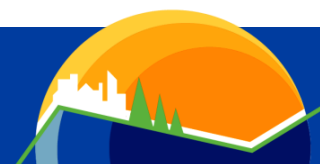


- Above state value
- At or below state value

- \* Above state value preferred for this measure
- ^ Data are suppressed
- ‡ No data

- # Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

Data details on next page



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Year displayed:** 2016

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

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

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

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

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

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

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

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

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH CRAWFORD COUNTY

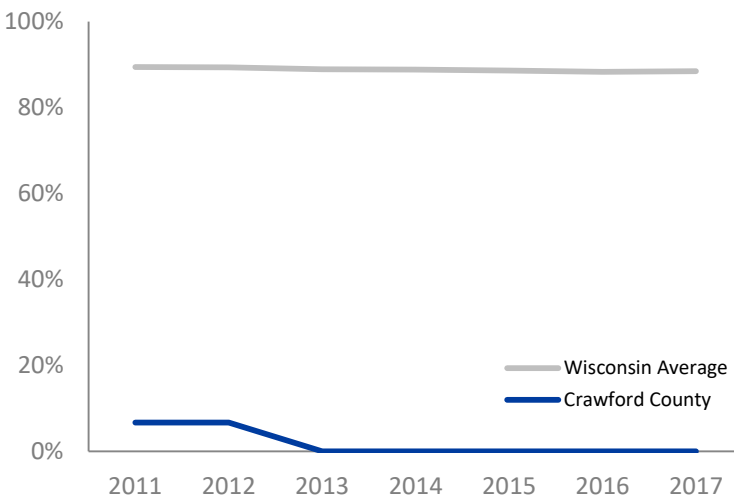
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **0.0%**  
**FLUORIDE**  
 PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
 WISCONSIN: 88.4%

● **2.6**  
**ALCOHOL OUTLET DENSITY**  
 RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
 WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
 ^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



### ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small 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 [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

### ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



# 84

LICENSES IN  
CRAWFORD COUNTY

# 16,948

TOTAL LICENSES IN  
WISCONSIN





# PRIVATE WATER QUALITY CRAWFORD 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 displayed in this report. Users can find public water quality data on our data portal.

● **4.1%**

**NITRATE**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 mg/L  
**WISCONSIN: 11.0%**

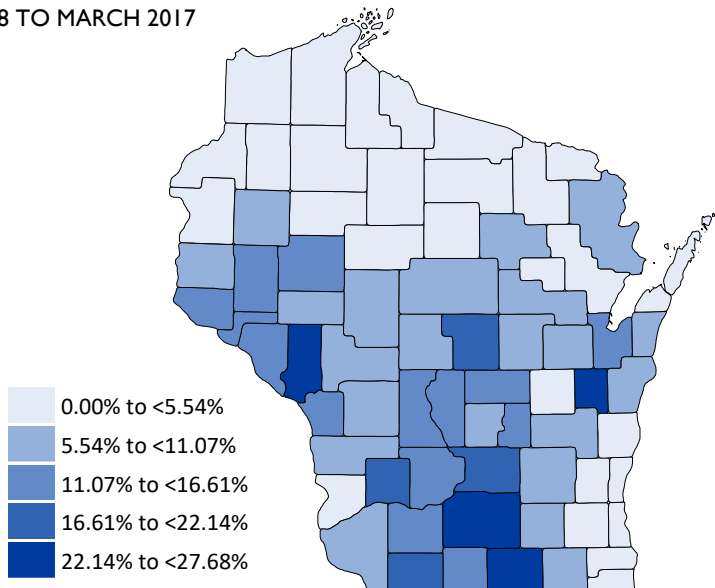


**ARSENIC**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 µg/L  
**WISCONSIN: 6.0%**

● Above state value   ● At or below state value   ^ Suppressed  
 ‡ No data

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
 1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS CRAWFORD 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.

● **10.7**  
**CARBON MONOXIDE POISONING**  
 RATE OF ER VISITS RELATED TO CO POISONING PER 100,000  
 WISCONSIN: 7.9

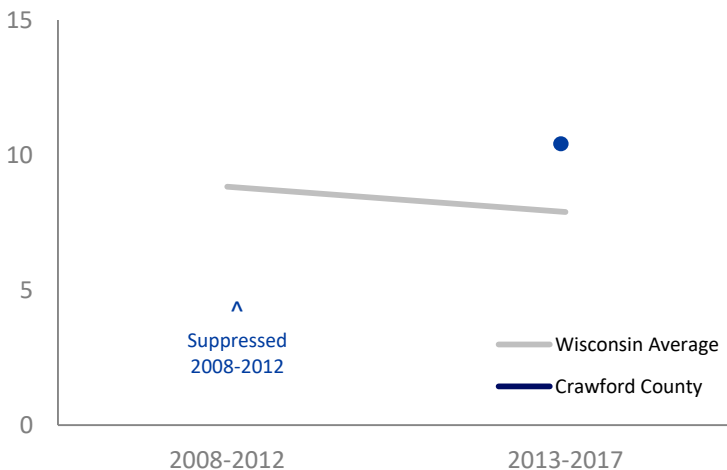
● **2.4%**  
**CHILDHOOD LEAD POISONING**  
 PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$   
 WISCONSIN: 5.0%

● **58.0%**  
**RADON**  
 PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$   
 WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

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

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



### 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter ( $\mu\text{g}/\text{dL}$ ). The Centers for Disease Control and Prevention defines lead poisoning at or above 5  $\mu\text{g}/\text{dL}$ .

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

### RADON

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

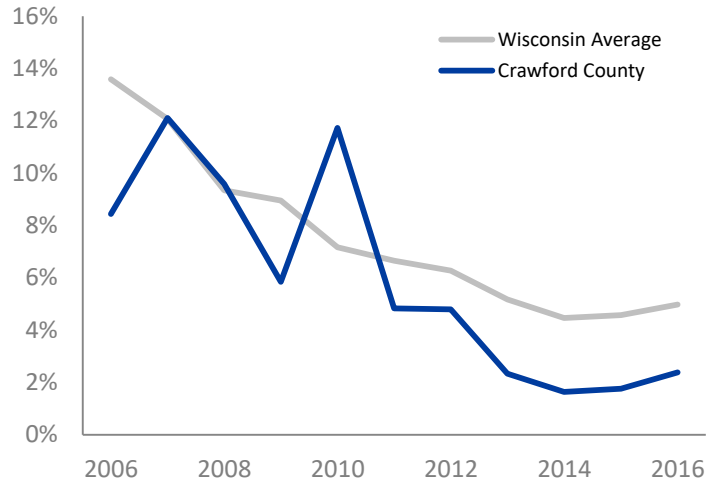
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

### CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g}/\text{dL}$

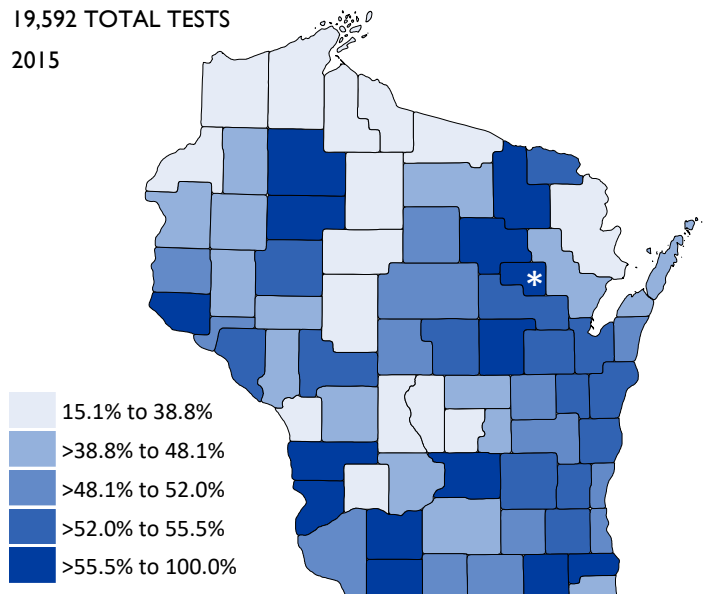


### RADON

PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

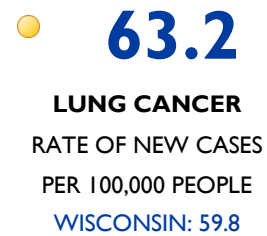
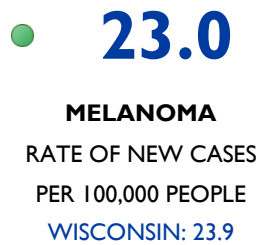
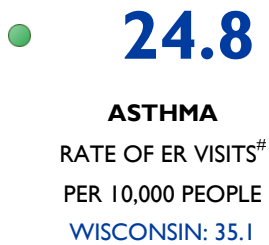




# HEALTH CONDITIONS CRAWFORD COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.

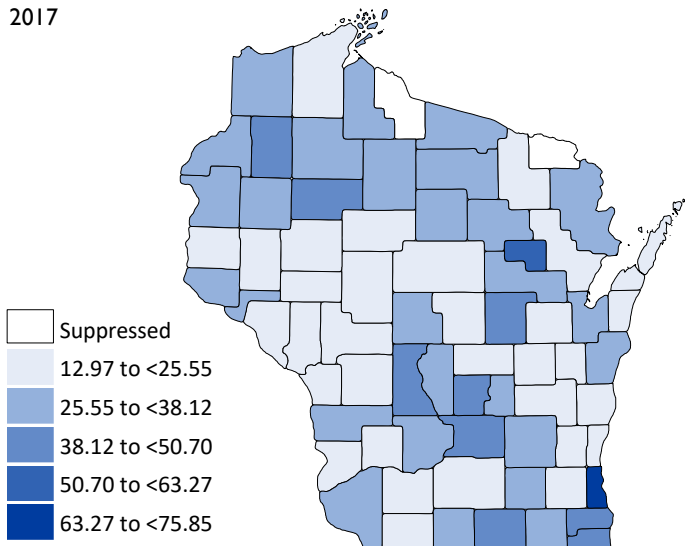


- Above state value
- At or below state value
- ^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



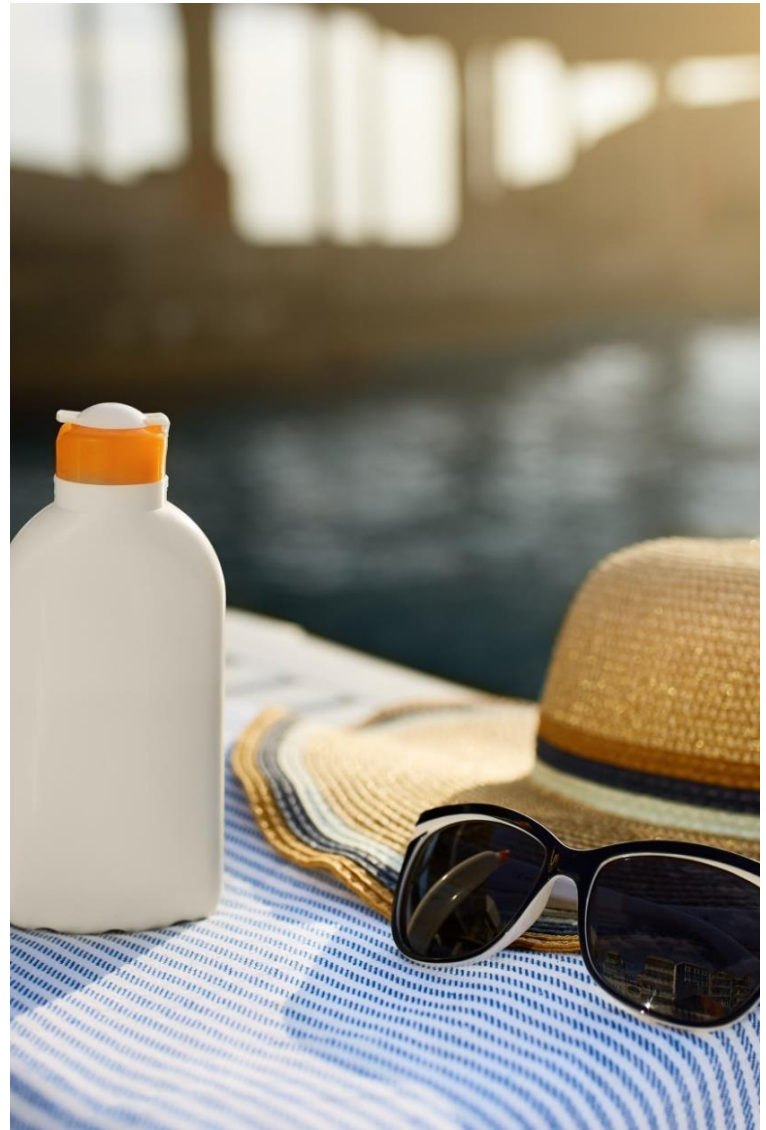
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

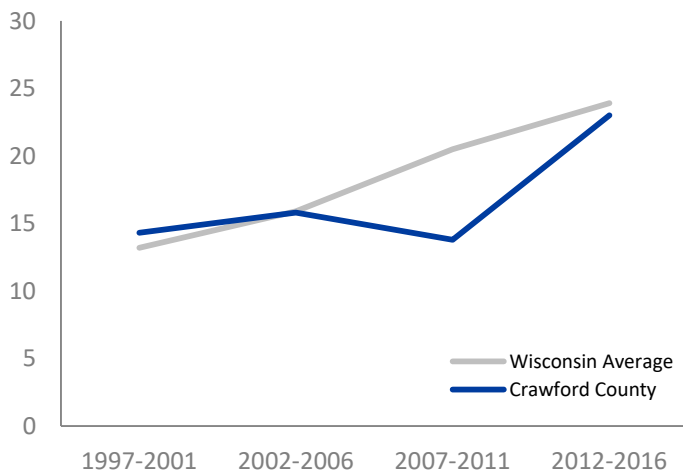
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



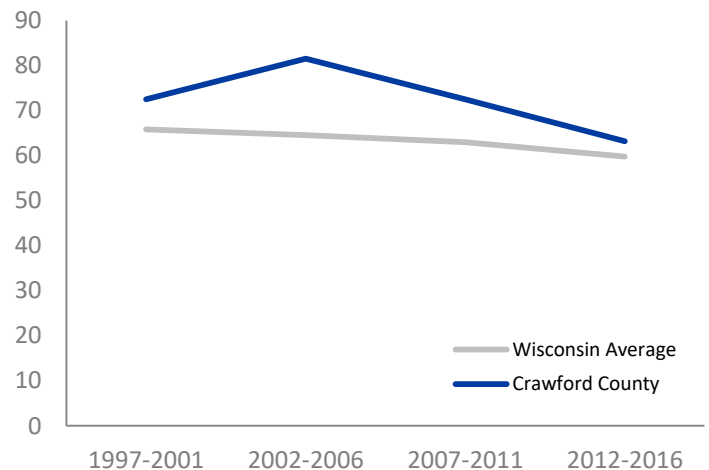
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE CRAWFORD COUNTY

## BACKGROUND

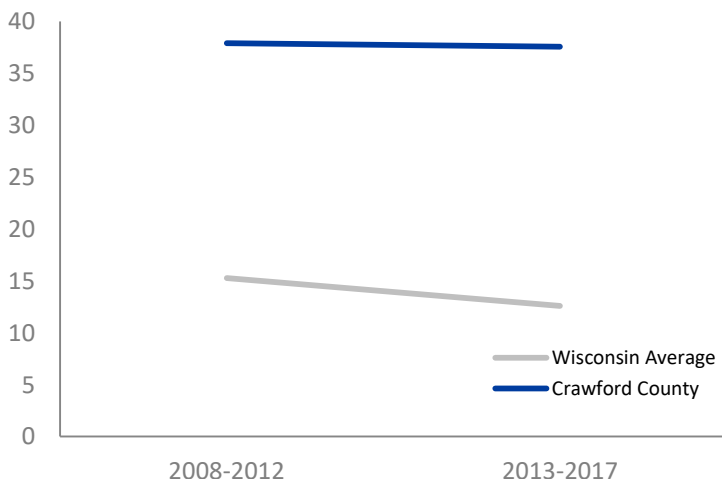
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **37.6**

**HEAT STRESS**  
RATE OF ER VISITS  
PER 100,000 PEOPLE  
WISCONSIN: 12.6

● **86.4**

**LYME DISEASE**  
RATE OF CASES  
PER 100,000 PEOPLE  
WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

## LYME DISEASE AT THE NATIONAL LEVEL

OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001



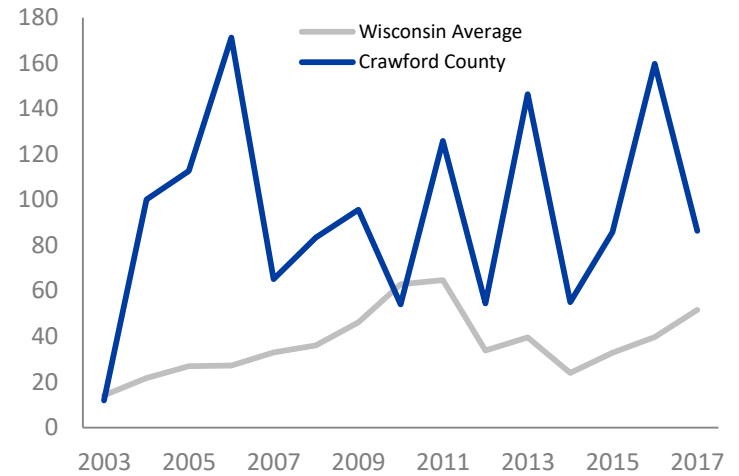
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

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

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

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

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

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

Bureau of Environmental and Occupational Health  
Wisconsin Department of Health Services | Division of Public Health

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MAY 2019 | P-00719 (Rev. 05/2019)





# DANE COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

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

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# DANE COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

● 98.7% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

● 1.1 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

● 22.2% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

● 0.6% | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

● 5.5 | Rate of ER visits per 100,000 people  
Wisconsin: 7.9

### Childhood Lead Poisoning

● 1.4% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

● 49.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

● 19.8 | Rate of ER visits per 10,000 people<sup>#</sup>  
Wisconsin: 35.1

### Melanoma

● 29.7 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

● 55.6 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

● 7.8 | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

● 33.0 | Crude rate per 100,000 people  
Wisconsin: 51.7

● Above state value  
● At or below state value

\* Above state value preferred for this measure  
^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

[Data details on next page](#)



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Year displayed:** 2016

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

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

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

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

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

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

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

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

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH DANE COUNTY

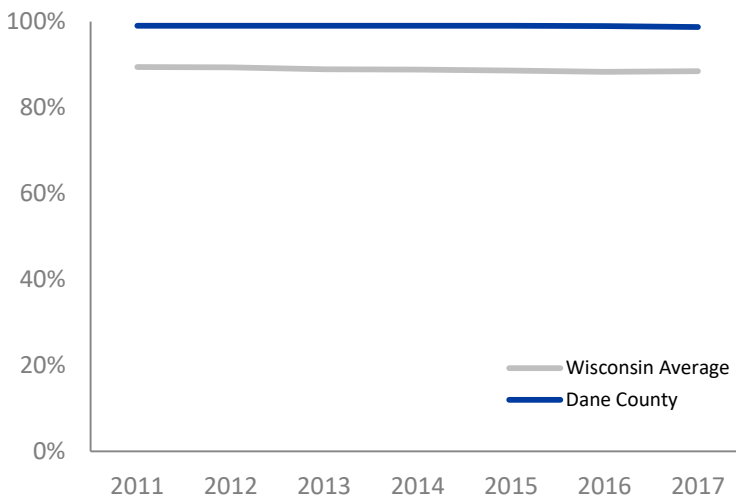
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **98.7%**

**FLUORIDE**  
PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
WISCONSIN: 88.4%

● **1.1**

**ALCOHOL OUTLET DENSITY**  
RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



## ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

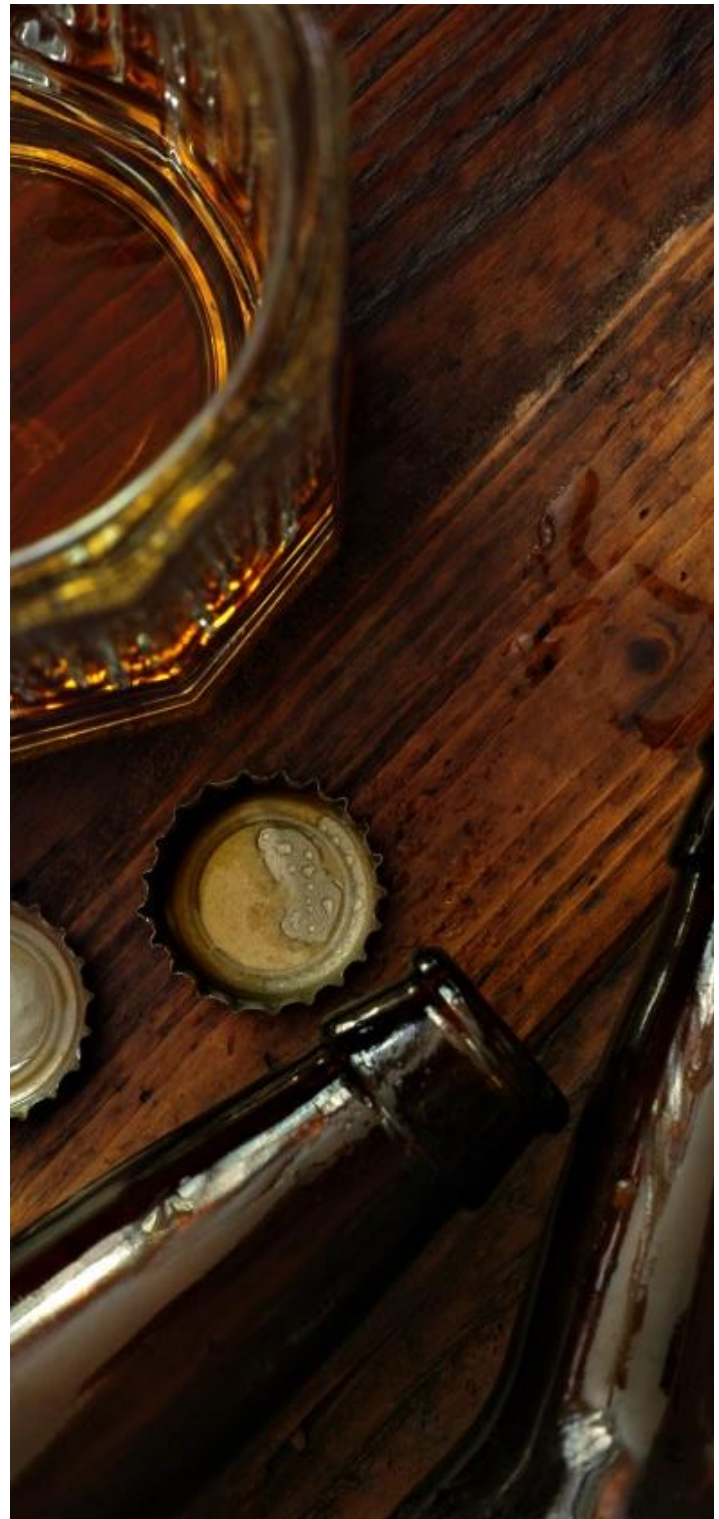
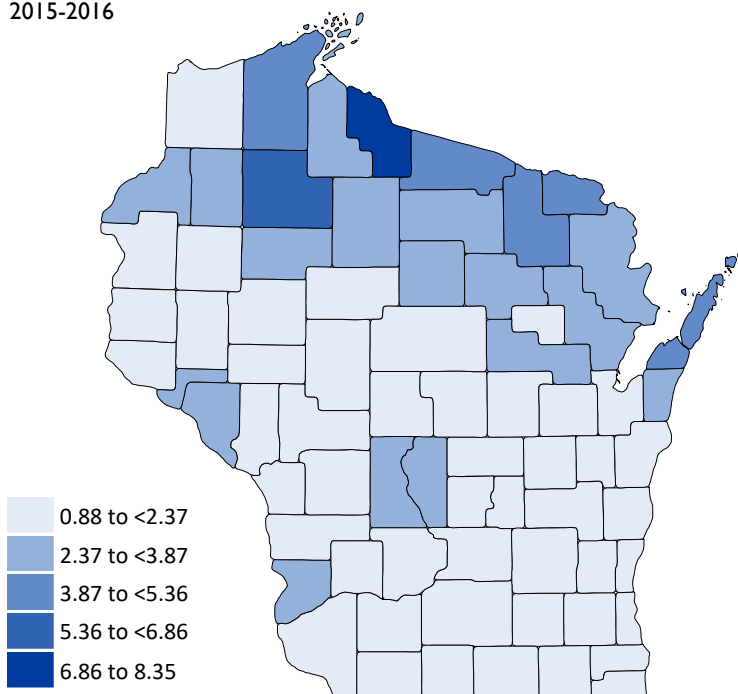
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

## ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



**1,197**  
LICENSES IN  
DANE COUNTY

**16,948**  
TOTAL LICENSES IN  
WISCONSIN





# PRIVATE WATER QUALITY DANE 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 displayed in this report. Users can find public water quality data on our data portal.

● **22.2%**

**NITRATE**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 mg/L  
**WISCONSIN: 11.0%**

● **0.6%**

**ARSENIC**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 µg/L  
**WISCONSIN: 6.0%**

● Above state value   ● At or below state value   ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
 1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS DANE 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.

● **5.5**  
**CARBON MONOXIDE POISONING**  
 RATE OF ER VISITS RELATED TO CO POISONING PER 100,000  
 WISCONSIN: 7.9

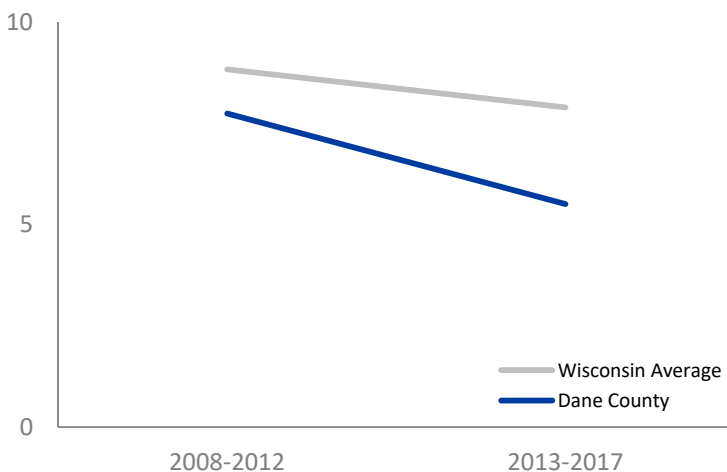
● **1.4%**  
**CHILDHOOD LEAD POISONING**  
 PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$   
 WISCONSIN: 5.0%

● **49.0%**  
**RADON**  
 PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$   
 WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

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

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



## 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter ( $\mu\text{g}/\text{dL}$ ). The Centers for Disease Control and Prevention defines lead poisoning at or above 5  $\mu\text{g}/\text{dL}$ .

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

## RADON

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

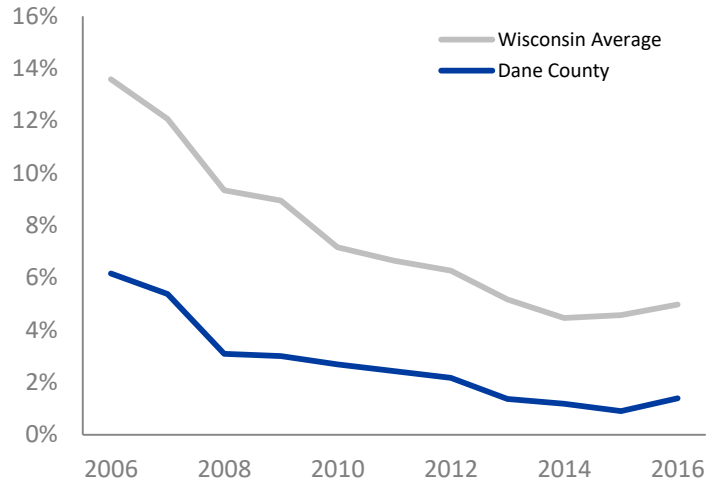
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

## CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g}/\text{dL}$

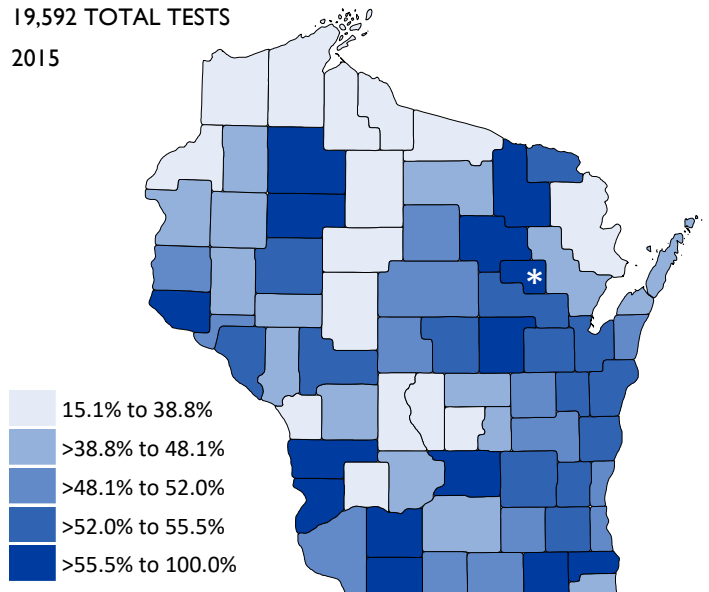


## RADON

PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

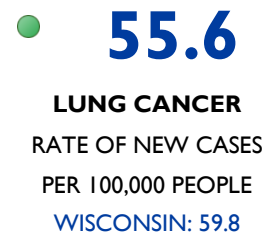
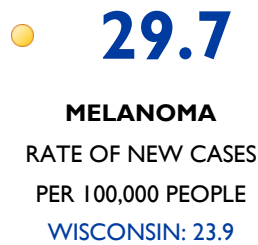
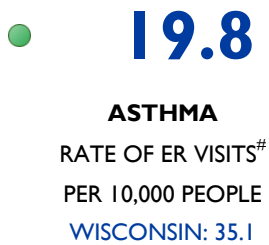




# HEALTH CONDITIONS DANE COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.



● Above state value

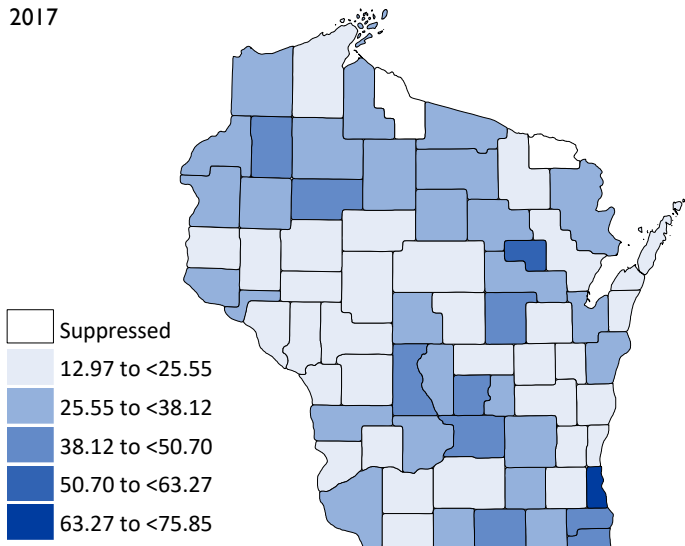
● At or below state value

^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



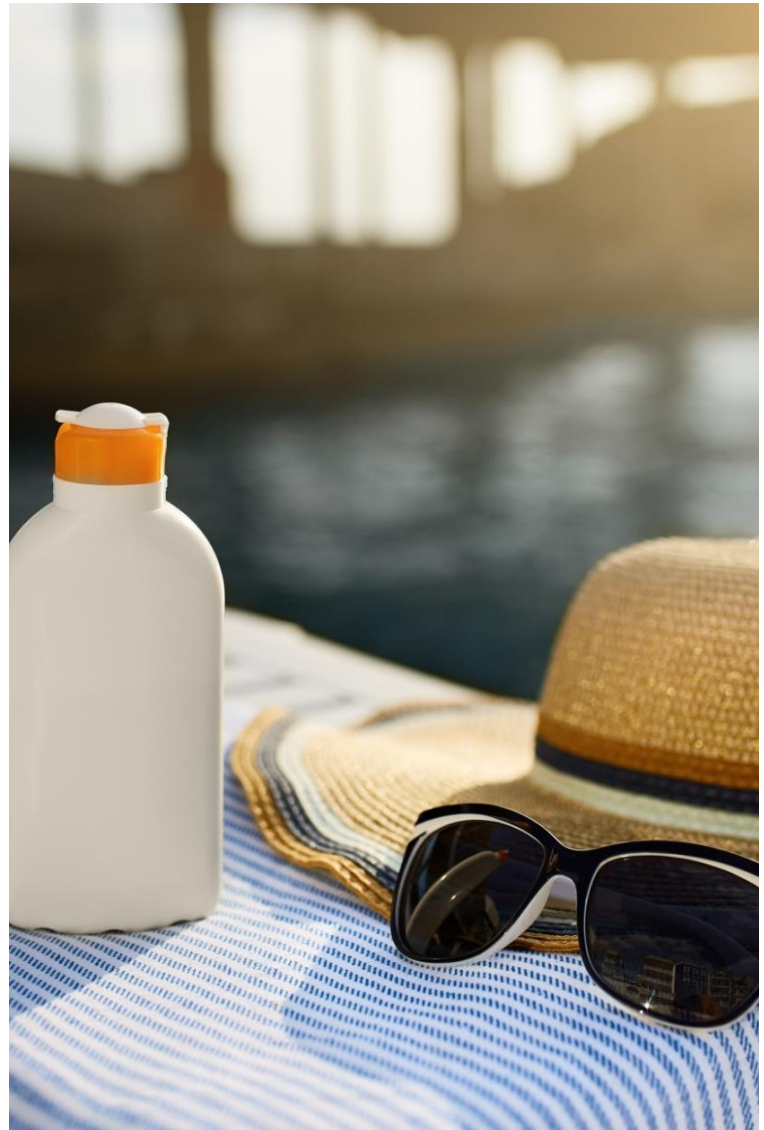
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

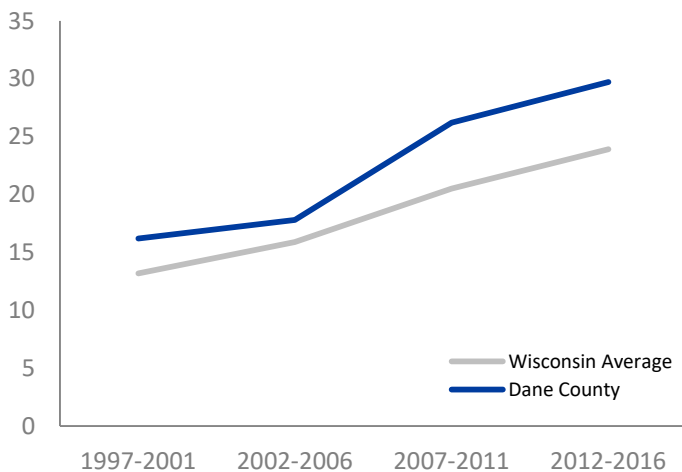
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



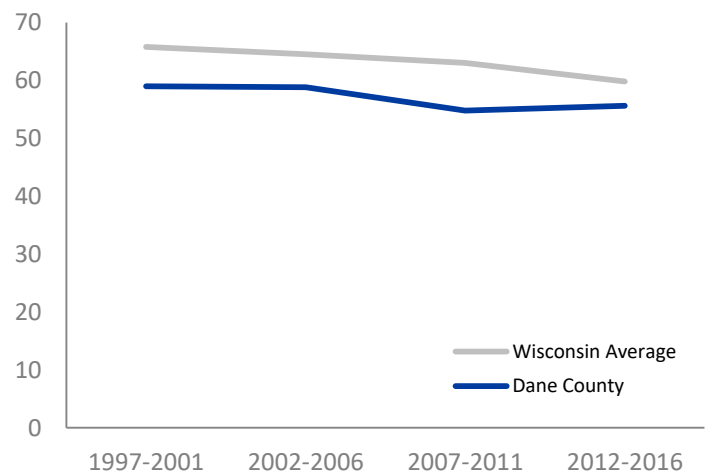
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE DANE COUNTY

## BACKGROUND

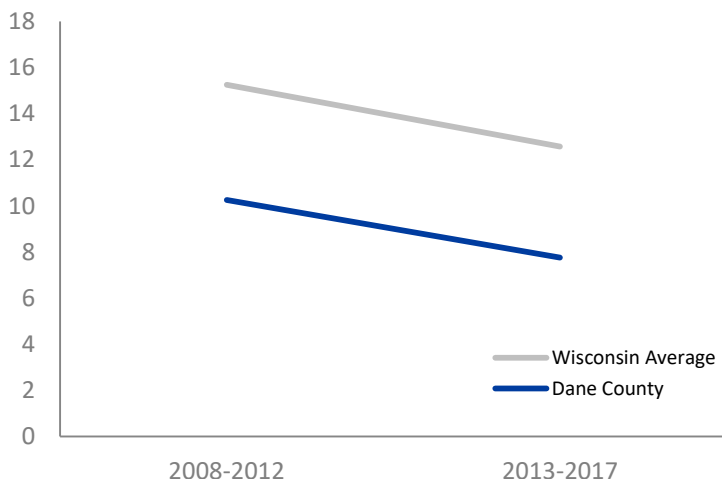
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● 7.8

**HEAT STRESS**  
RATE OF ER VISITS  
PER 100,000 PEOPLE  
WISCONSIN: 12.6

● 33.0

**LYME DISEASE**  
RATE OF CASES  
PER 100,000 PEOPLE  
WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

## LYME DISEASE AT THE NATIONAL LEVEL

OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001



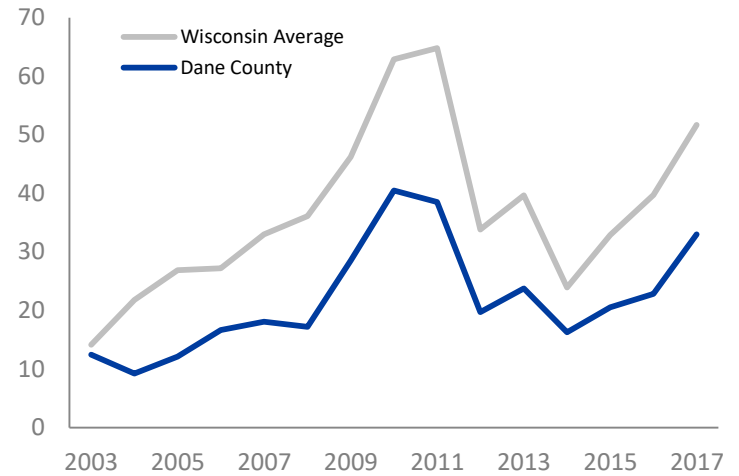
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

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

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

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

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

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

Bureau of Environmental and Occupational Health  
Wisconsin Department of Health Services | Division of Public Health

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MAY 2019 | P-00719 (Rev. 05/2019)





# DODGE COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

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

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# DODGE COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

● 70.0% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

● 1.5 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

● 8.6% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

● 3.8% | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

● 7.0 | Rate of ER visits per 100,000 people  
Wisconsin: 7.9

### Childhood Lead Poisoning

● 6.3% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

● 55.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

● 32.3 | Rate of ER visits per 10,000 people<sup>#</sup>  
Wisconsin: 35.1

### Melanoma

● 22.7 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

● 56.7 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

● 15.4 | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

● 26.2 | Crude rate per 100,000 people  
Wisconsin: 51.7

● Above state value  
● At or below state value

\* Above state value preferred for this measure  
^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

Data details on next page



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Year displayed:** 2016

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

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

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

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

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

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

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

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

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH DODGE COUNTY

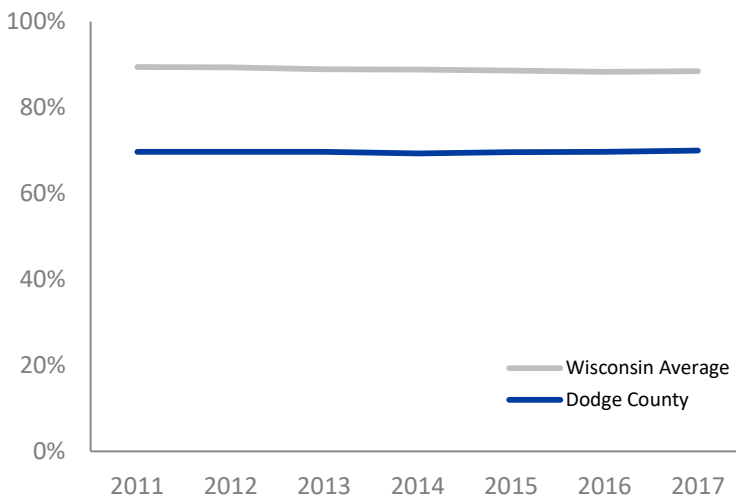
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **70.0%**

**FLUORIDE**  
PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
WISCONSIN: 88.4%

● **1.5**

**ALCOHOL OUTLET DENSITY**  
RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



### ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

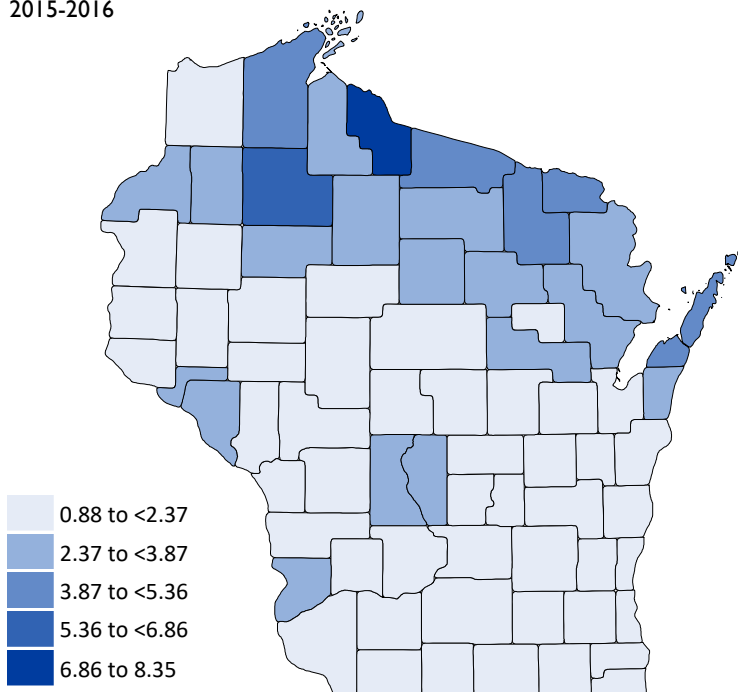
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

### ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



|                             |                                |
|-----------------------------|--------------------------------|
| <b>264</b>                  | <b>16,948</b>                  |
| LICENSES IN<br>DODGE COUNTY | TOTAL LICENSES IN<br>WISCONSIN |





# PRIVATE WATER QUALITY DODGE 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 displayed in this report. Users can find public water quality data on our data portal.

● **8.6%**

**NITRATE**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 mg/L  
**WISCONSIN: 11.0%**

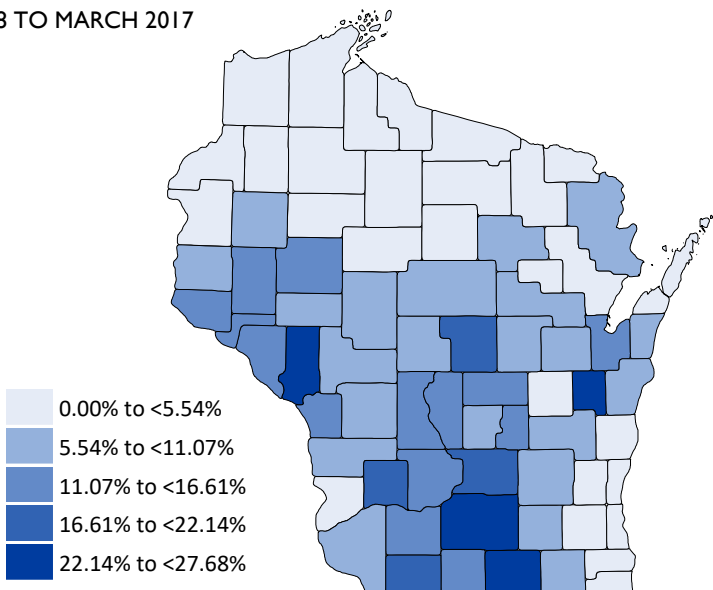
● **3.8%**

**ARSENIC**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 µg/L  
**WISCONSIN: 6.0%**

● Above state value    ● At or below state value    ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
 1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS

DODGE 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.

**7.0**

**CARBON MONOXIDE POISONING**

RATE OF ER VISITS RELATED TO CO POISONING PER 100,000

WISCONSIN: 7.9

**6.3%**

**CHILDHOOD LEAD POISONING**

PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$

WISCONSIN: 5.0%

**55.0%**

**RADON**

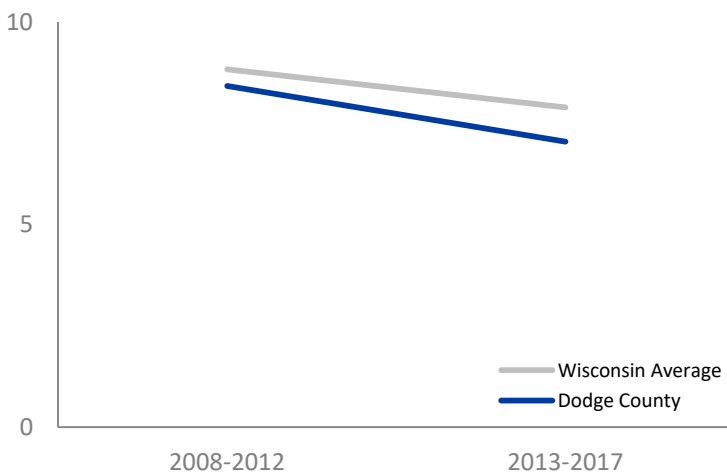
PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$

WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

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

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



### 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter (µg/dL). The Centers for Disease Control and Prevention defines lead poisoning at or above 5 µg/dL.

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

### RADON

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

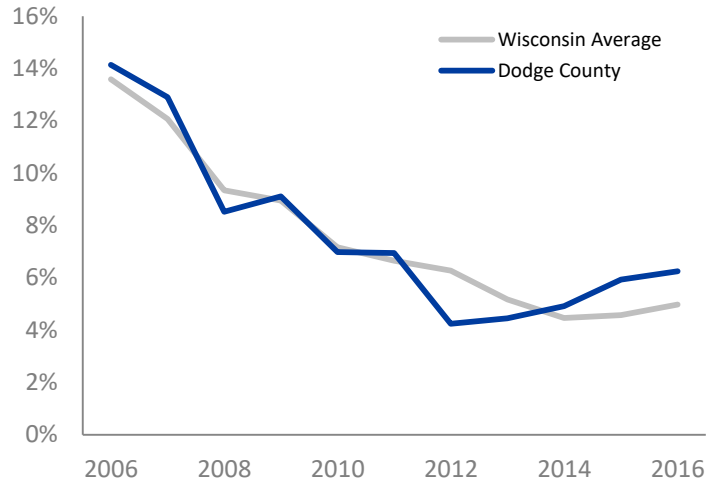
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

### CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD ≥5 µg/dL

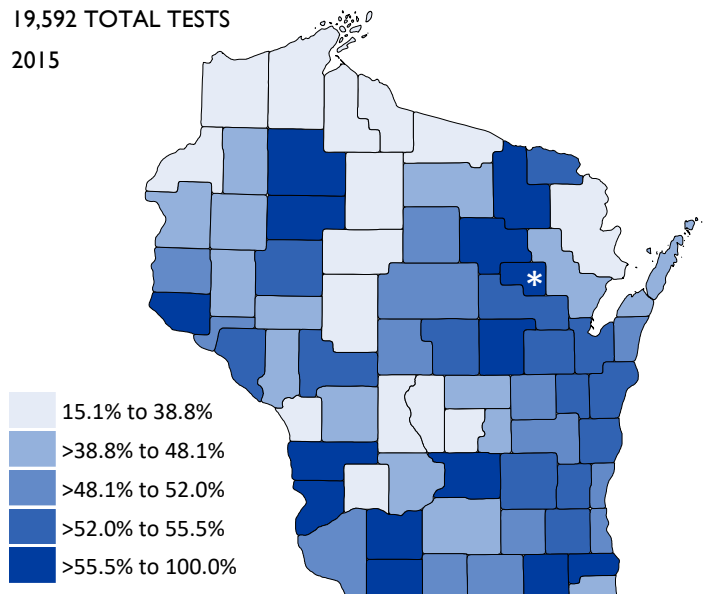


### RADON

PERCENT OF TESTS WITH RESULTS ≥4 pCi/L

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

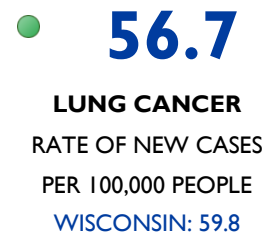
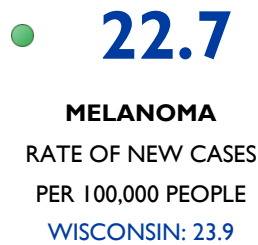
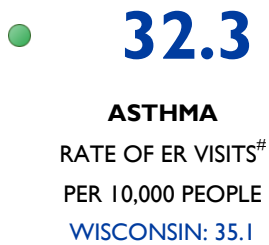




# HEALTH CONDITIONS DODGE COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.



● Above state value

● At or below state value

^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



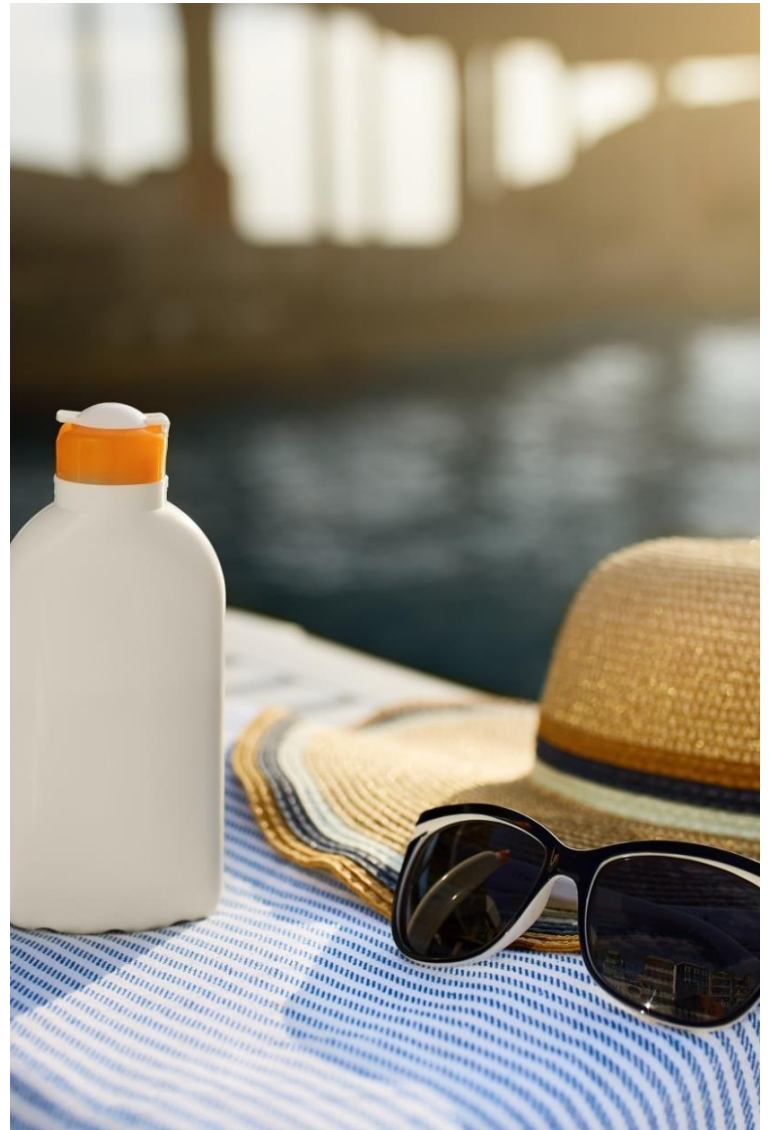
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

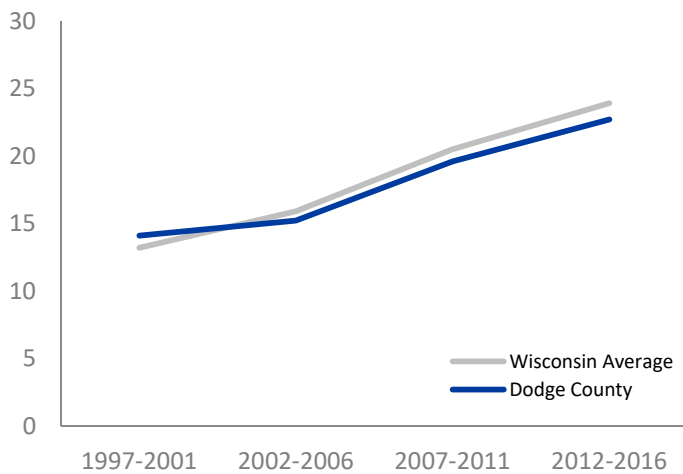
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



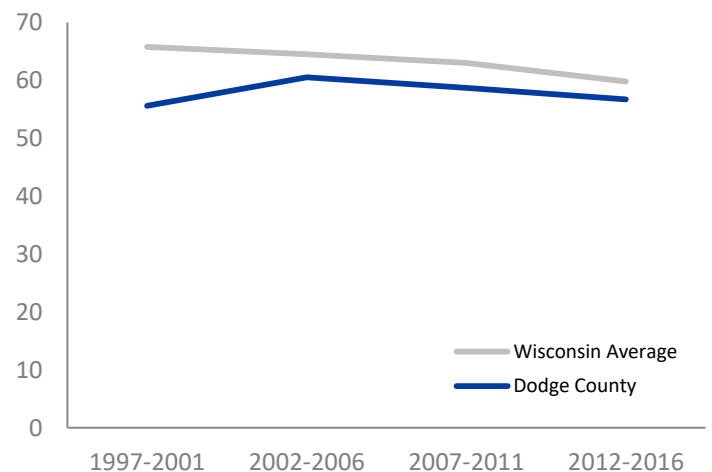
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE DODGE COUNTY

## BACKGROUND

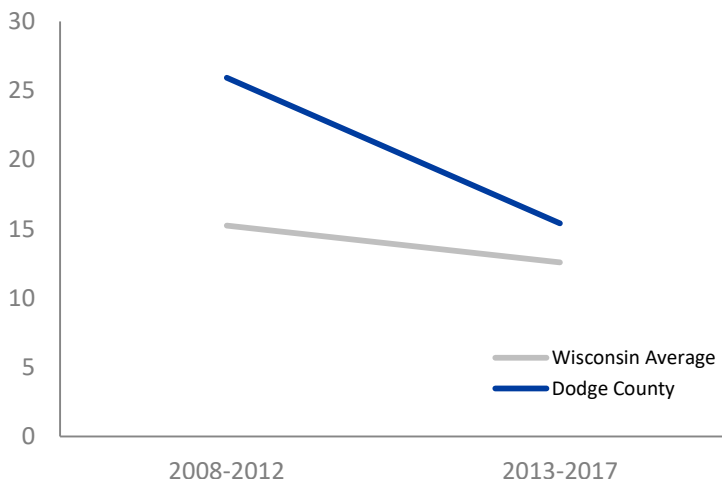
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **15.4**  
**HEAT STRESS**  
 RATE OF ER VISITS  
 PER 100,000 PEOPLE  
 WISCONSIN: 12.6

● **26.2**  
**LYME DISEASE**  
 RATE OF CASES  
 PER 100,000 PEOPLE  
 WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

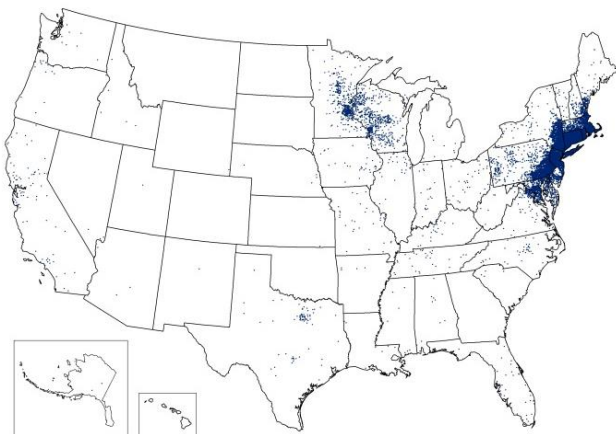
The criteria for reporting Lyme disease were revised again in 2012 to require reporting and follow-up only for cases with an erythema migrans (EM) rash. To compensate for this change, epidemiologists used a statistical method to estimate the true number of cases based on the number of total laboratory reports for each year since 2012.

## LYME DISEASE AT THE NATIONAL LEVEL

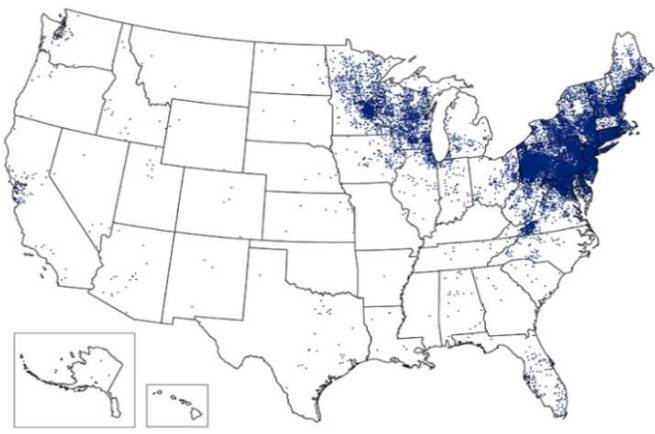
OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001



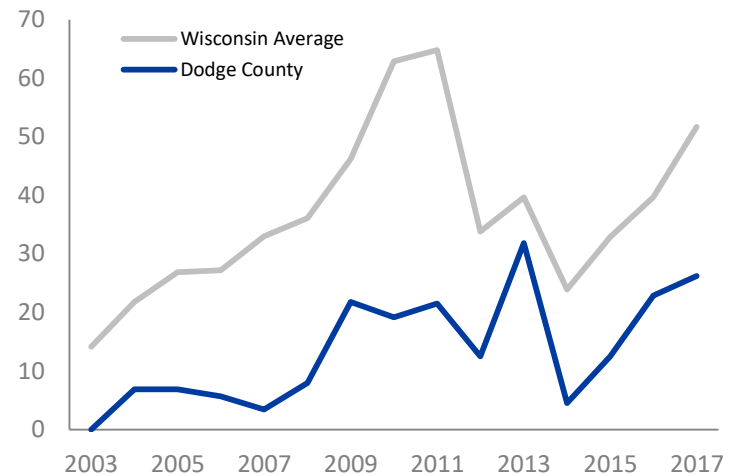
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

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

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

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

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

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

Bureau of Environmental and Occupational Health  
Wisconsin Department of Health Services | Division of Public Health

[dhstracking@wi.gov](mailto:dhstracking@wi.gov) | [dhs.wisconsin.gov/epht](https://dhs.wisconsin.gov/epht)  
MAY 2019 | P-00719 (Rev. 05/2019)





# DOOR COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

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

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# DOOR COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

● 88.5% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

● 4.7 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

● 2.3% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

● 2.9% | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

● 10.2 | Rate of ER visits per 100,000 people  
Wisconsin: 7.9

### Childhood Lead Poisoning

● 0.8% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

● 49.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

● 23.8 | Rate of ER visits per 10,000 people#  
Wisconsin: 35.1

### Melanoma

● 40.4 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

● 50.2 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

● 26.0 | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

● 98.2 | Crude rate per 100,000 people  
Wisconsin: 51.7

● Above state value  
● At or below state value

\* Above state value preferred for this measure  
^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

[Data details on next page](#)



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Year displayed:** 2016

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

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

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

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

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

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

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

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

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH DOOR COUNTY

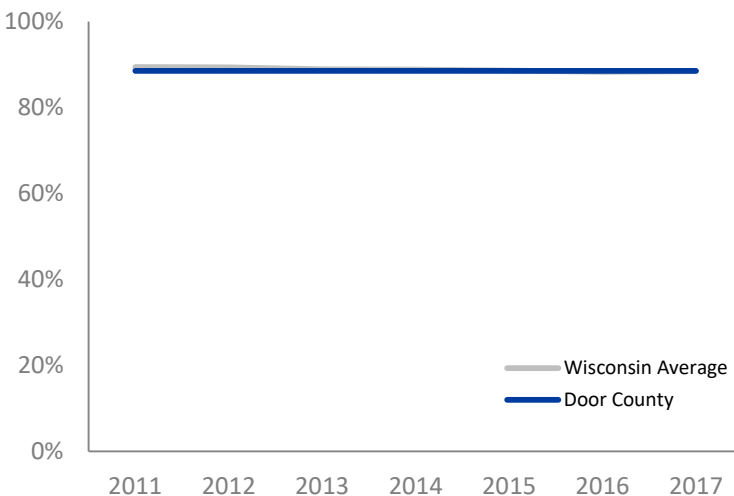
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **88.5%**  
**FLUORIDE**  
 PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
 WISCONSIN: 88.4%

● **4.7**  
**ALCOHOL OUTLET DENSITY**  
 RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
 WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
 ^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



## ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

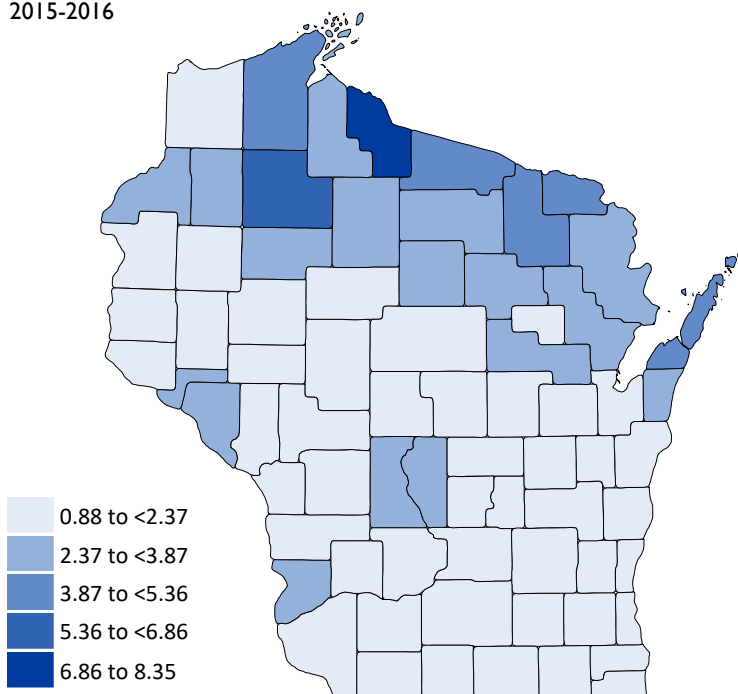
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

## ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



|                            |                                |
|----------------------------|--------------------------------|
| <b>257</b>                 | <b>16,948</b>                  |
| LICENSES IN<br>DOOR COUNTY | TOTAL LICENSES IN<br>WISCONSIN |





# PRIVATE WATER QUALITY DOOR 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 displayed in this report. Users can find public water quality data on our data portal.

● **2.3%**

**NITRATE**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 mg/L  
**WISCONSIN: 11.0%**

● **2.9%**

**ARSENIC**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 µg/L  
**WISCONSIN: 6.0%**

● Above state value    ● At or below state value    ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
 1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS DOOR 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.

● **10.2**  
**CARBON MONOXIDE POISONING**  
 RATE OF ER VISITS RELATED TO CO POISONING PER 100,000  
 WISCONSIN: 7.9

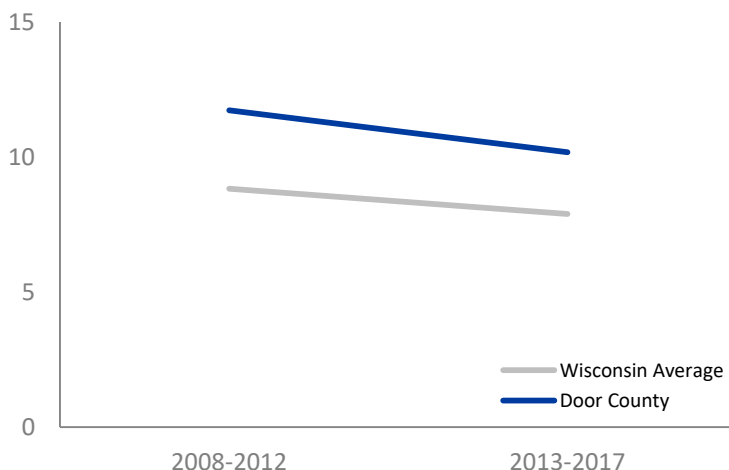
● **0.8%**  
**CHILDHOOD LEAD POISONING**  
 PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$   
 WISCONSIN: 5.0%

● **49.0%**  
**RADON**  
 PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$   
 WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

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

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



## 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter ( $\mu\text{g}/\text{dL}$ ). The Centers for Disease Control and Prevention defines lead poisoning at or above 5  $\mu\text{g}/\text{dL}$ .

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

## RADON

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

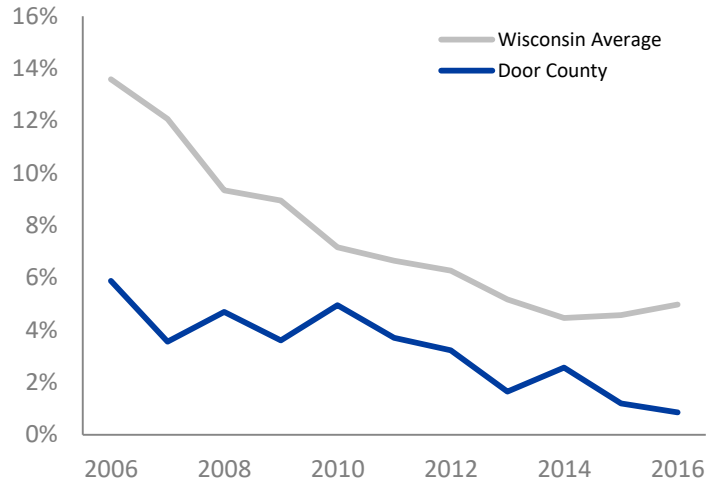
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

## CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g}/\text{dL}$

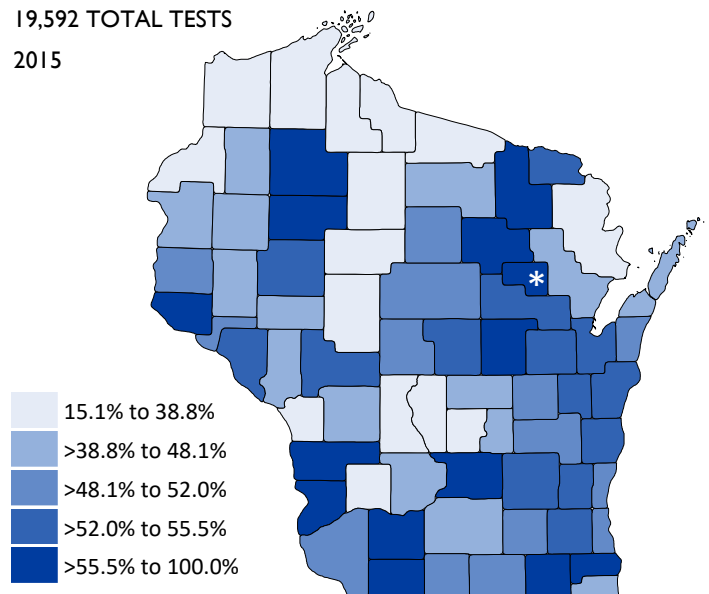


## RADON

PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi}/\text{L}$

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

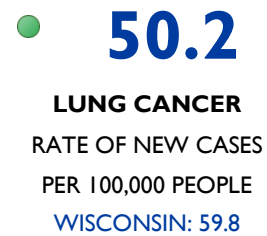
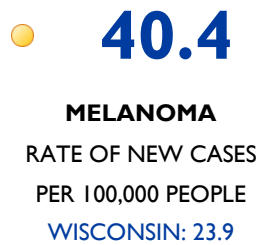
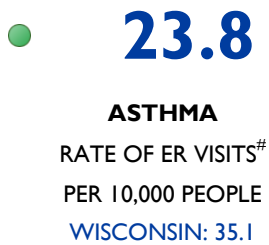




# HEALTH CONDITIONS DOOR COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.



● Above state value

● At or below state value

^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



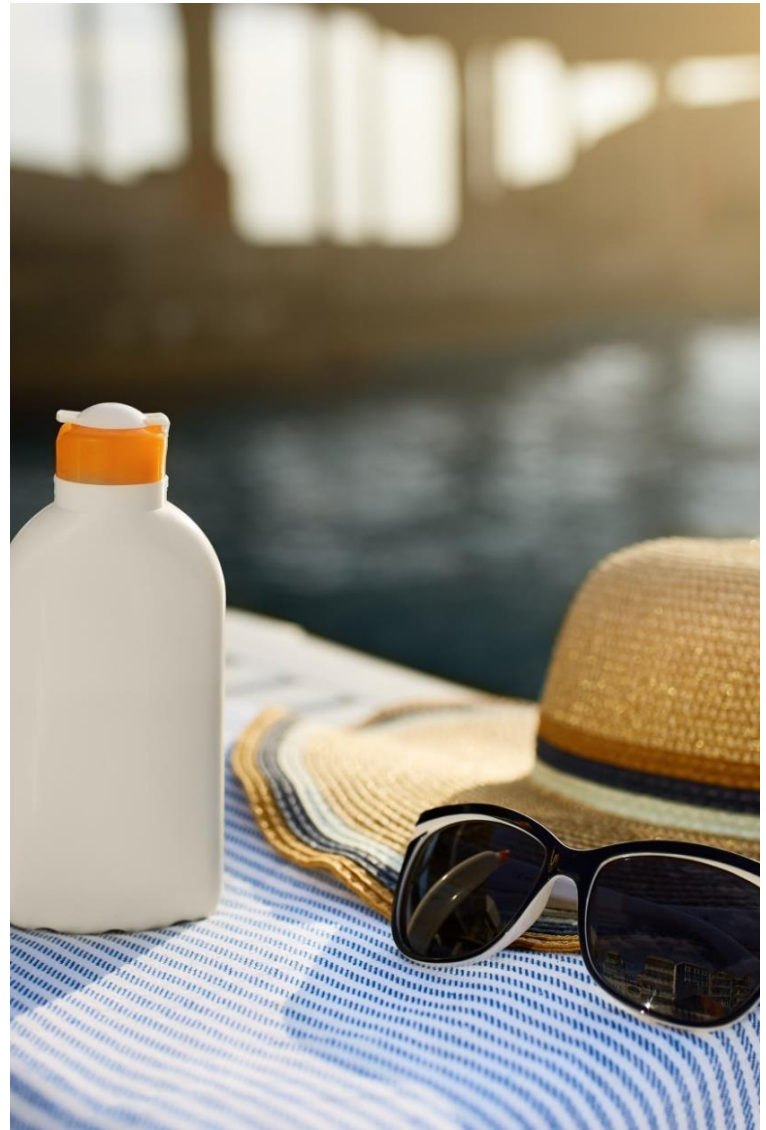
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

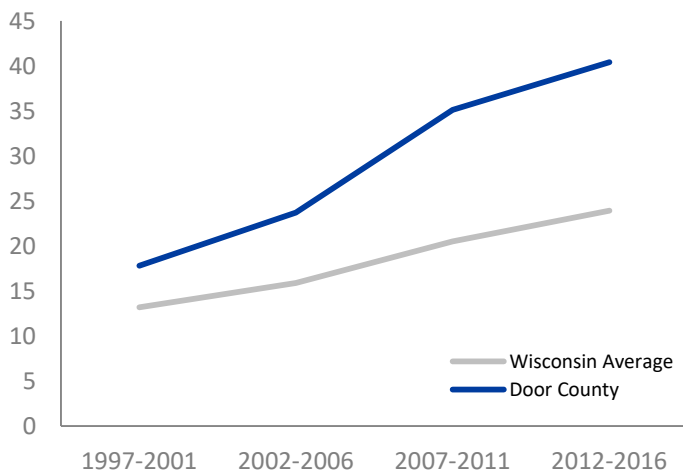
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



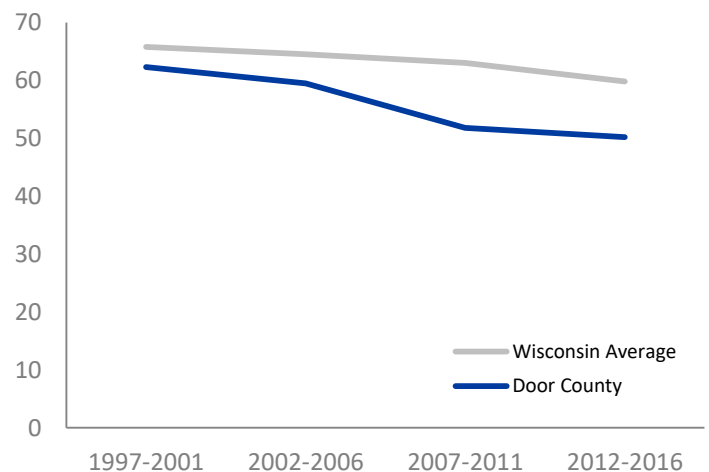
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE DOOR COUNTY

## BACKGROUND

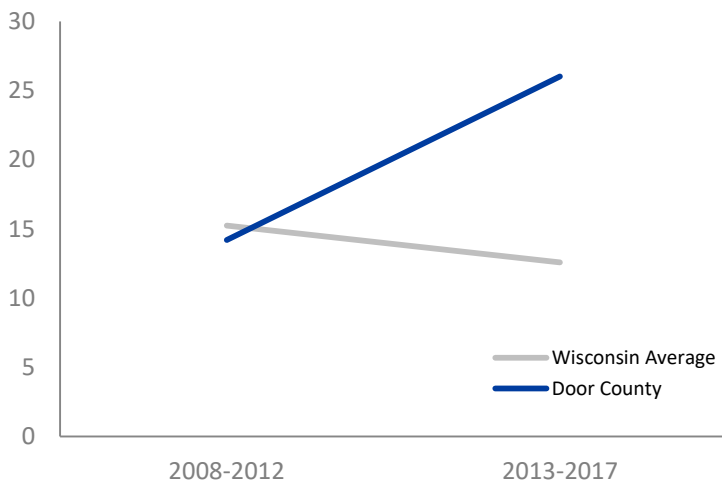
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **26.0**

**HEAT STRESS**  
RATE OF ER VISITS  
PER 100,000 PEOPLE  
WISCONSIN: 12.6

● **98.2**

**LYME DISEASE**  
RATE OF CASES  
PER 100,000 PEOPLE  
WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

## LYME DISEASE AT THE NATIONAL LEVEL

OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001



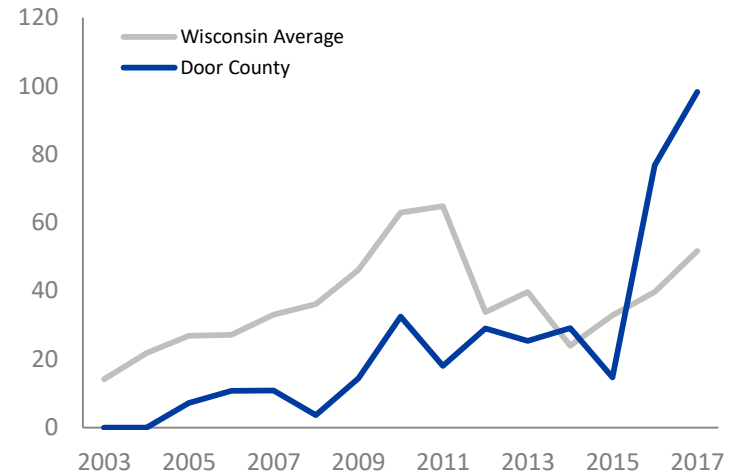
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

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

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

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

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

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

Bureau of Environmental and Occupational Health  
Wisconsin Department of Health Services | Division of Public Health

[dhstracking@wi.gov](mailto:dhstracking@wi.gov) | [dhs.wisconsin.gov/epht](https://dhs.wisconsin.gov/epht)  
MAY 2019 | P-00719 (Rev. 05/2019)





# DOUGLAS COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

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

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

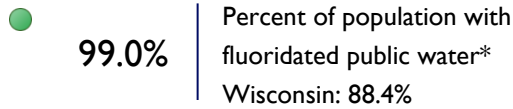
# DOUGLAS COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE

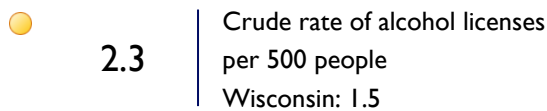


## COMMUNITY HEALTH

### Fluoride

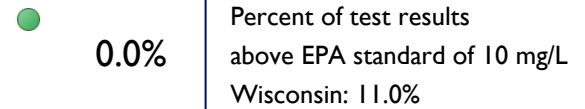


### Alcohol Outlet Density

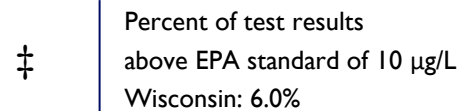


## PRIVATE WATER QUALITY

### Nitrate

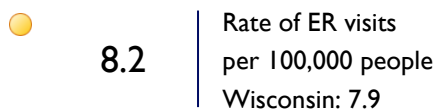


### Arsenic

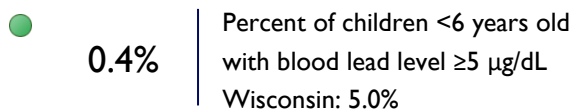


## HOME HAZARDS

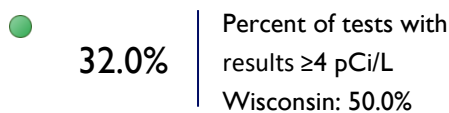
### Carbon Monoxide Poisoning



### Childhood Lead Poisoning

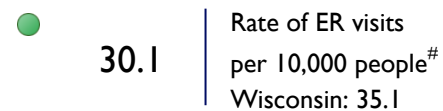


### Radon

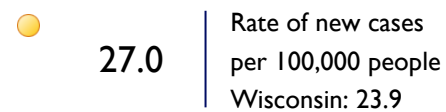


## HEALTH CONDITIONS

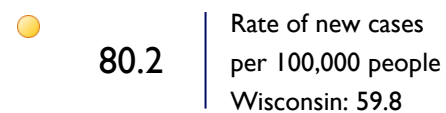
### Asthma



### Melanoma

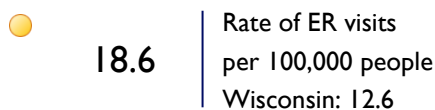


### Lung Cancer

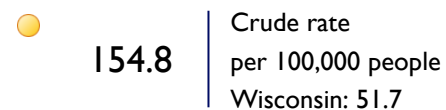


## CLIMATE

### Heat Stress



### Lyme Disease



- Above state value
- At or below state value

- \* Above state value preferred for this measure
- ^ Data are suppressed
- ‡ No data

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

Data details on next page



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Year displayed:** 2016

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

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

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

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

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

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

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

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

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH DOUGLAS COUNTY

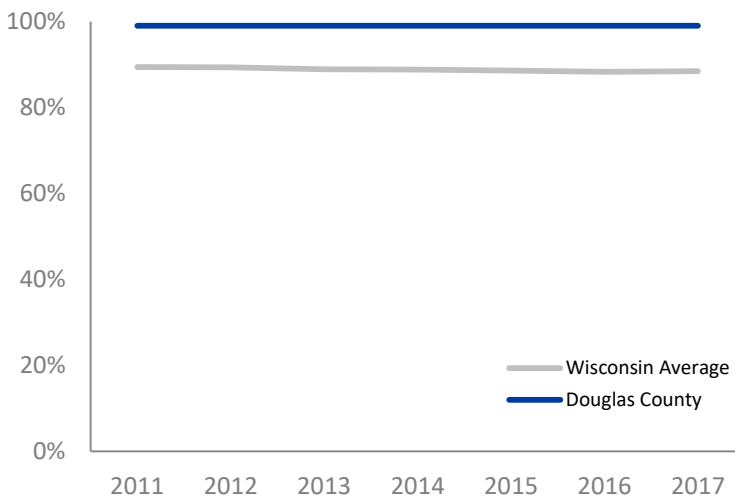
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **99.0%**

**FLUORIDE**  
PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
WISCONSIN: 88.4%

● **2.3**

**ALCOHOL OUTLET DENSITY**  
RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



### ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small 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 [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

### ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



# 197

LICENSES IN  
DOUGLAS COUNTY

# 16,948

TOTAL LICENSES IN  
WISCONSIN





# PRIVATE WATER QUALITY DOUGLAS 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 displayed in this report. Users can find public water quality data on our data portal.

● **0.0%**

**NITRATE  
IN PRIVATE WELLS**  
PERCENT OF TEST RESULTS  
ABOVE EPA STANDARD  
OF 10 mg/L  
WISCONSIN: 11.0%



**ARSENIC  
IN PRIVATE WELLS**  
PERCENT OF TEST RESULTS  
ABOVE EPA STANDARD  
OF 10 µg/L  
WISCONSIN: 6.0%

● Above state value   ● At or below state value   ^ Suppressed  
‡ No data

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS DOUGLAS 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.

● **8.2**  
**CARBON MONOXIDE POISONING**  
 RATE OF ER VISITS RELATED TO CO POISONING PER 100,000  
 WISCONSIN: 7.9

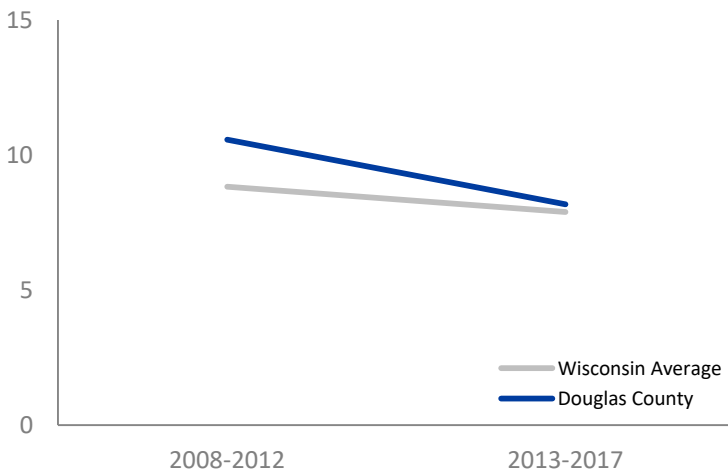
● **0.4%**  
**CHILDHOOD LEAD POISONING**  
 PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$   
 WISCONSIN: 5.0%

● **32.0%**  
**RADON**  
 PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$   
 WISCONSIN: 50.0%

● Above state value    ● At or below state value    ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

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

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



## 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter (µg/dL). The Centers for Disease Control and Prevention defines lead poisoning at or above 5 µg/dL.

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

## RADON

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

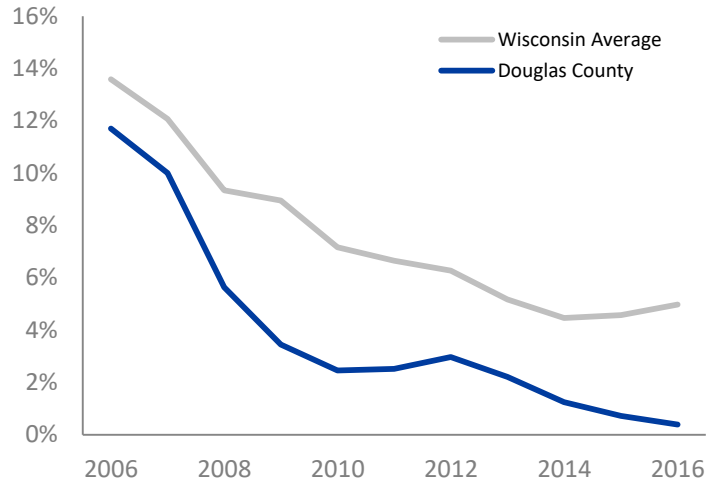
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

## CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD ≥5 µg/dL

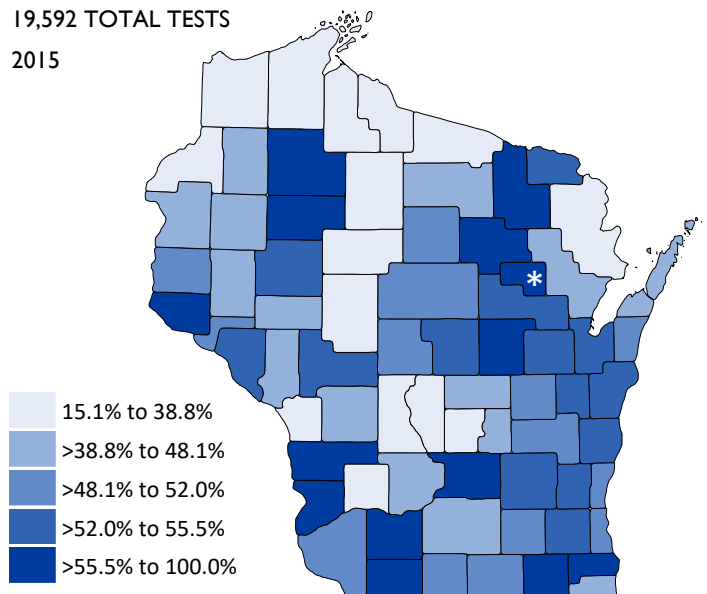


## RADON

PERCENT OF TESTS WITH RESULTS ≥4 pCi/L

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

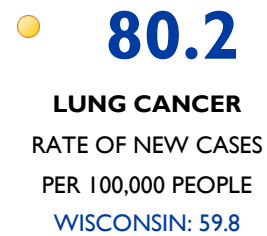
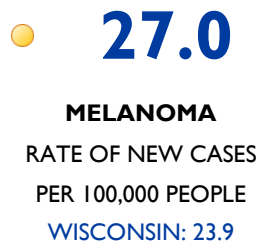
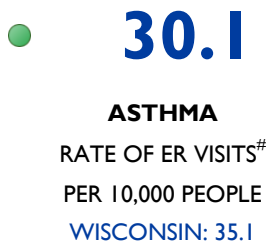




# HEALTH CONDITIONS DOUGLAS COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.

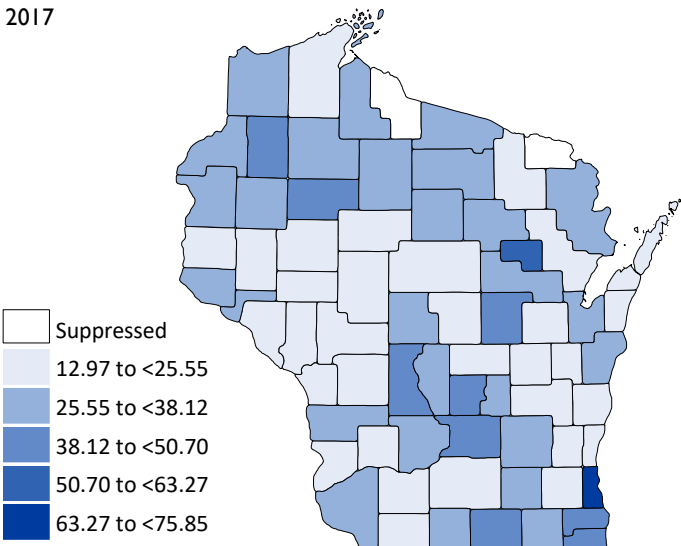


- Above state value
- At or below state value
- ^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



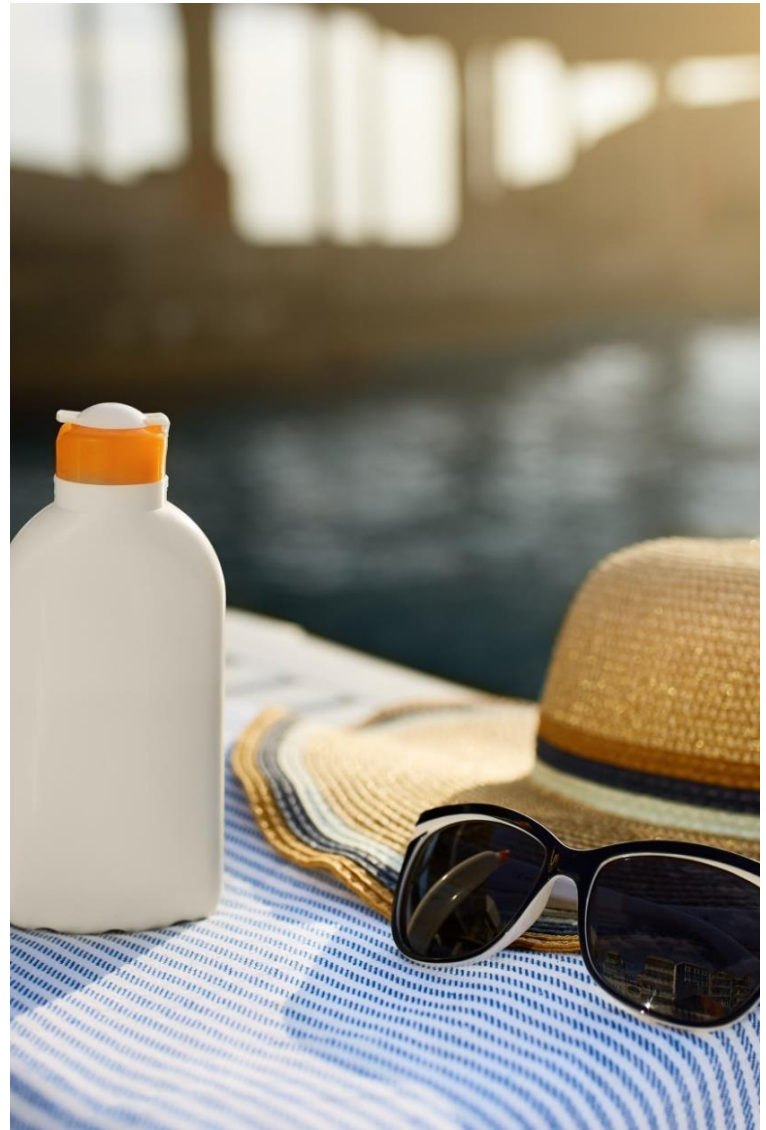
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

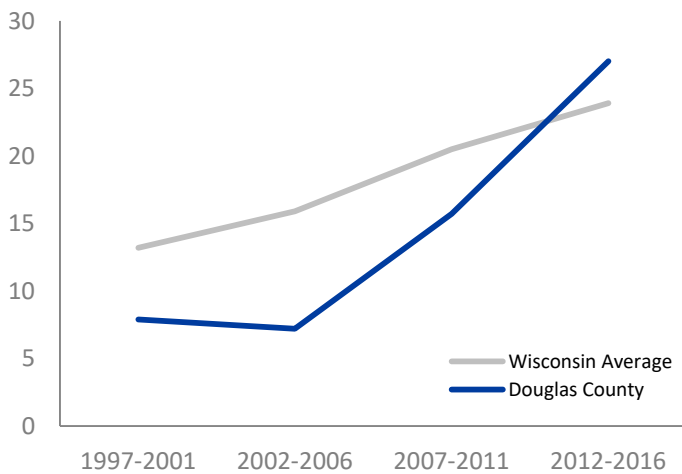
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



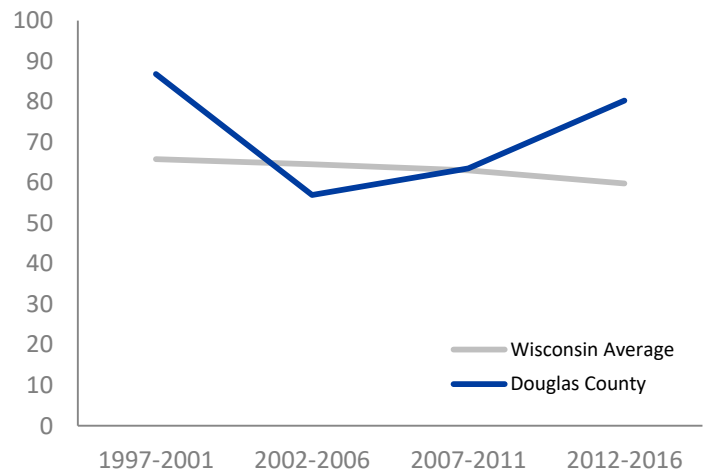
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE DOUGLAS COUNTY

## BACKGROUND

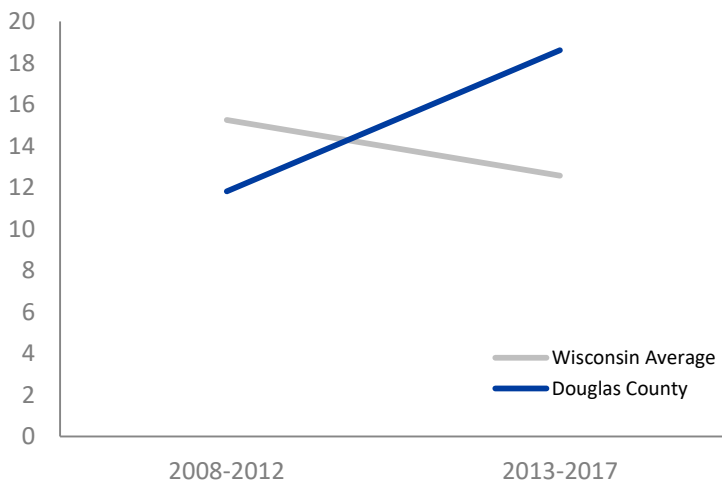
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **18.6**  
**HEAT STRESS**  
 RATE OF ER VISITS  
 PER 100,000 PEOPLE  
 WISCONSIN: 12.6

● **154.8**  
**LYME DISEASE**  
 RATE OF CASES  
 PER 100,000 PEOPLE  
 WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

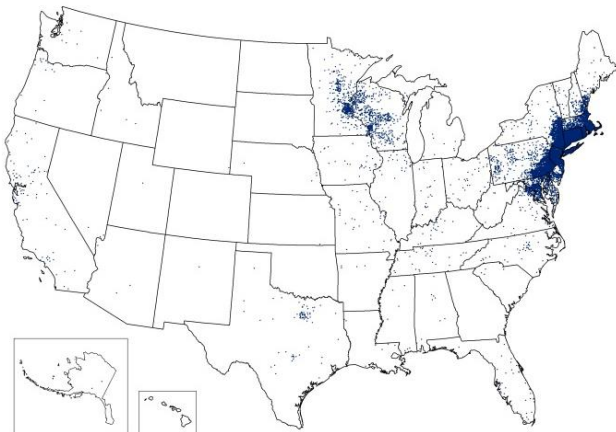
The criteria for reporting Lyme disease were revised again in 2012 to require reporting and follow-up only for cases with an erythema migrans (EM) rash. To compensate for this change, epidemiologists used a statistical method to estimate the true number of cases based on the number of total laboratory reports for each year since 2012.

## LYME DISEASE AT THE NATIONAL LEVEL

OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001



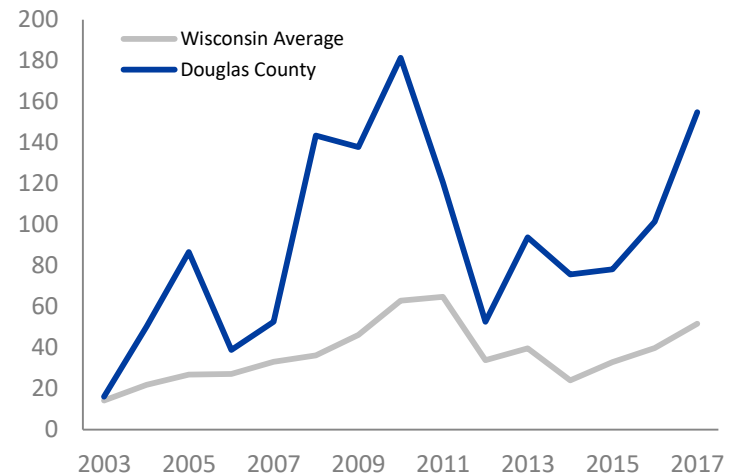
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

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

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

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

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

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

Bureau of Environmental and Occupational Health  
Wisconsin Department of Health Services | Division of Public Health

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MAY 2019 | P-00719 (Rev. 05/2019)





# DUNN COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

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

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# DUNN COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

● 79.4% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

● 1.2 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

● 16.2% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

● 1.8% | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

● 3.5 | Rate of ER visits per 100,000 people  
Wisconsin: 7.9

### Childhood Lead Poisoning

● 2.7% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

● 44.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

● 17.8 | Rate of ER visits per 10,000 people<sup>#</sup>  
Wisconsin: 35.1

### Melanoma

● 23.4 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

● 44.7 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

● 11.9 | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

● 109.6 | Crude rate per 100,000 people  
Wisconsin: 51.7

● Above state value  
● At or below state value

\* Above state value preferred for this measure  
^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

[Data details on next page](#)



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Year displayed:** 2016

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

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

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

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

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

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

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

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

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH DUNN COUNTY

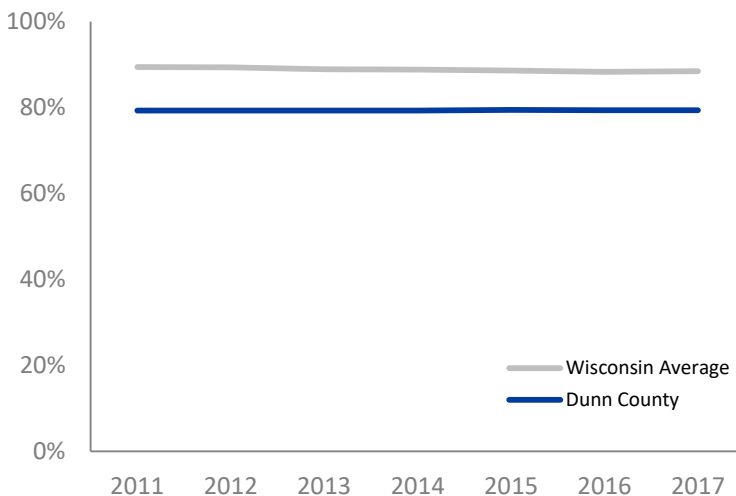
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **79.4%**

**FLUORIDE**  
PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
WISCONSIN: 88.4%

● Above state value

● **1.2**

**ALCOHOL OUTLET DENSITY**  
RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
WISCONSIN: 1.5

● At or below state value

\* Above state value preferred for this measure  
^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



## ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

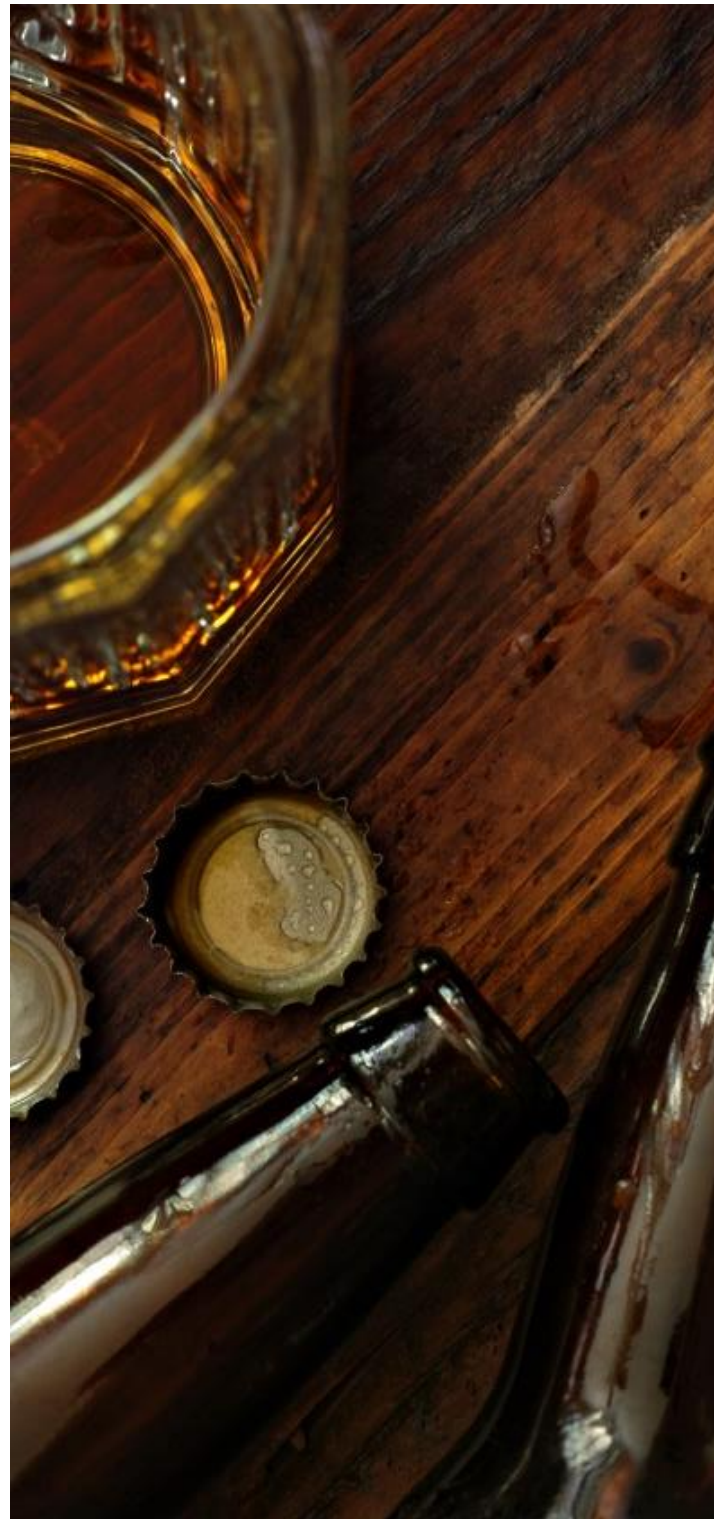
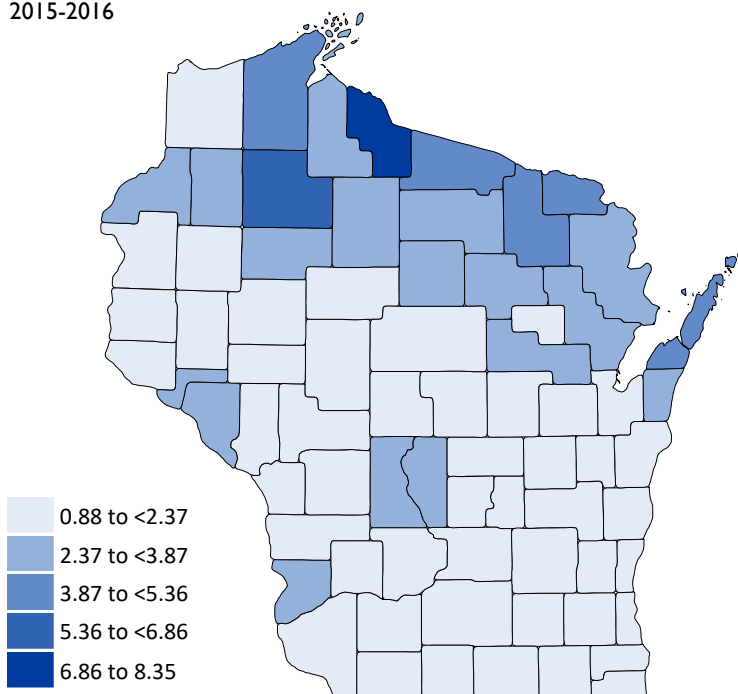
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

## ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



|                            |                                |
|----------------------------|--------------------------------|
| <b>110</b>                 | <b>16,948</b>                  |
| LICENSES IN<br>DUNN COUNTY | TOTAL LICENSES IN<br>WISCONSIN |





# PRIVATE WATER QUALITY DUNN 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 displayed in this report. Users can find public water quality data on our data portal.

● **16.2%**

**NITRATE**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 mg/L  
**WISCONSIN: 11.0%**

● **1.8%**

**ARSENIC**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 µg/L  
**WISCONSIN: 6.0%**

● Above state value   ● At or below state value   ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
 1988 TO MARCH 2017



## 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 certain 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.





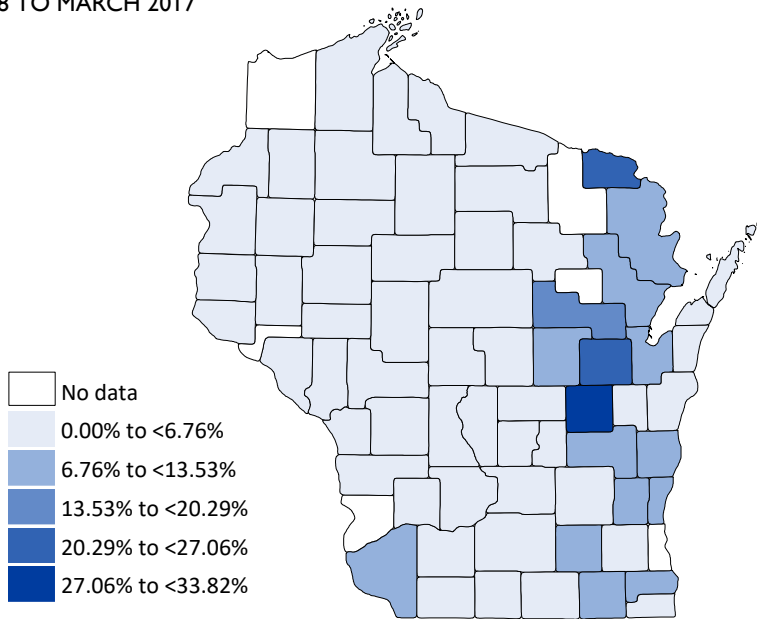
## ARSENIC IN PRIVATE WELLS

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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS DUNN 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.

● **3.5**  
**CARBON MONOXIDE POISONING**  
 RATE OF ER VISITS RELATED TO CO POISONING PER 100,000  
 WISCONSIN: 7.9

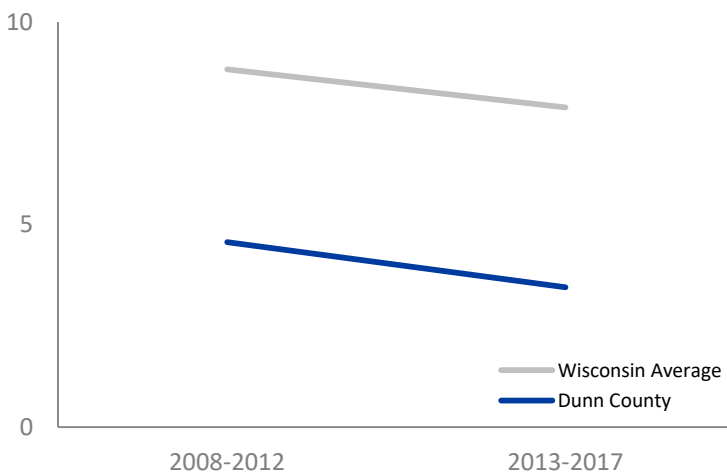
● **2.7%**  
**CHILDHOOD LEAD POISONING**  
 PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$   
 WISCONSIN: 5.0%

● **44.0%**  
**RADON**  
 PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$   
 WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

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

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



## 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter (µg/dL). The Centers for Disease Control and Prevention defines lead poisoning at or above 5 µg/dL.

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

## RADON

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

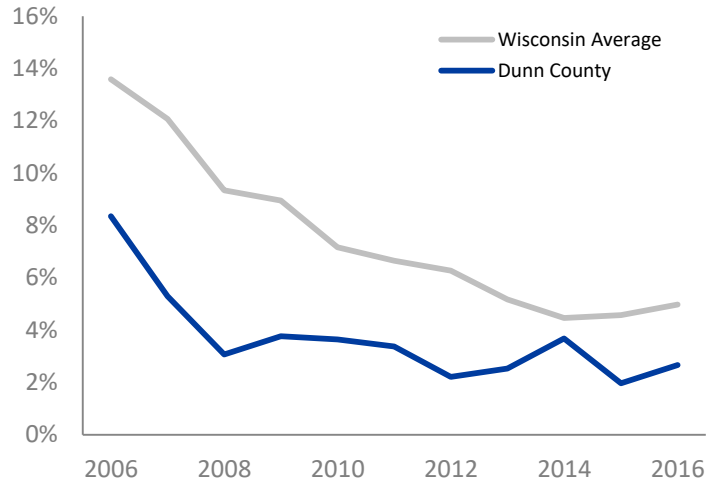
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

## CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD ≥5 µg/dL

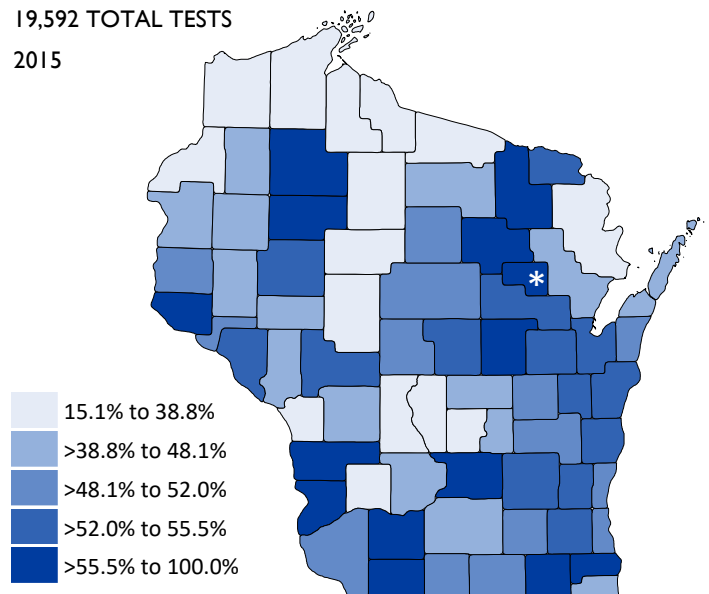


## RADON

PERCENT OF TESTS WITH RESULTS ≥4 pCi/L

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

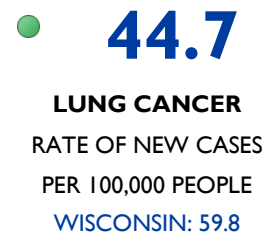
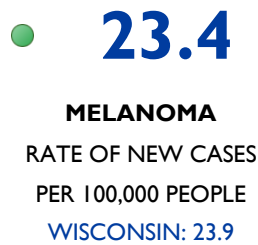
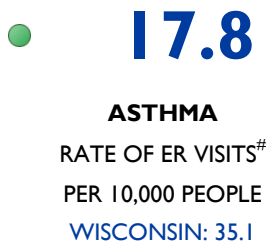




# HEALTH CONDITIONS DUNN COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.



● Above state value

● At or below state value

^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



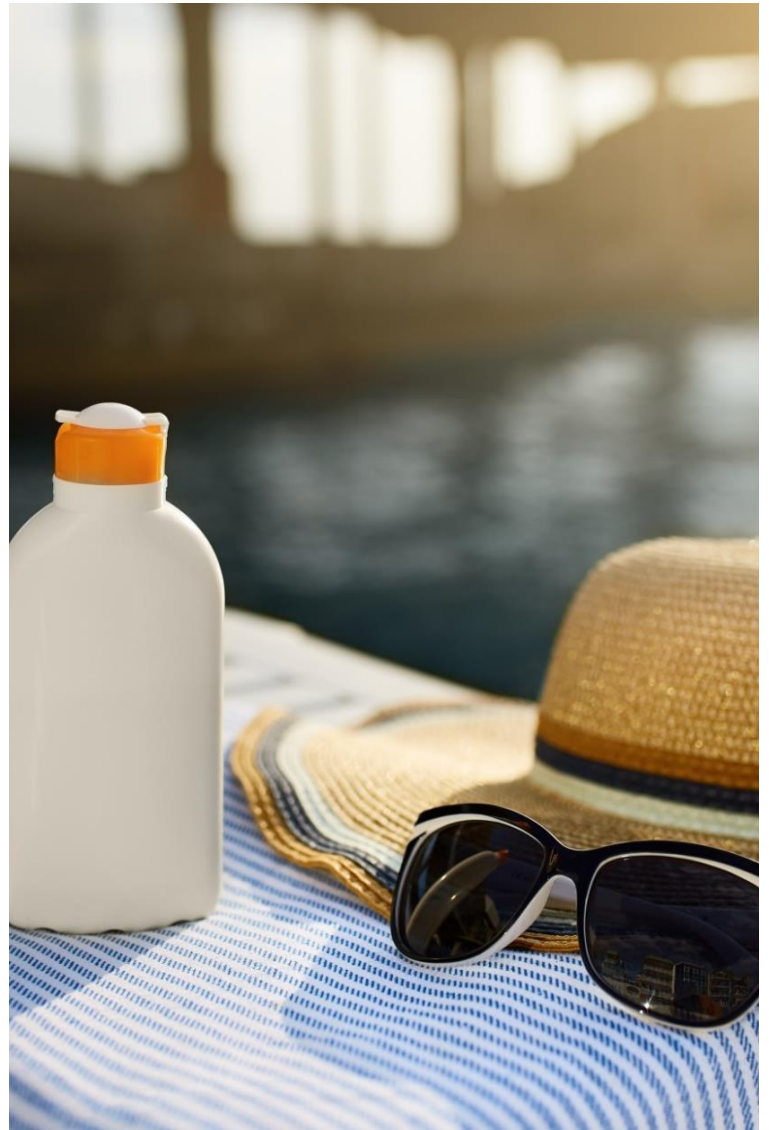
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

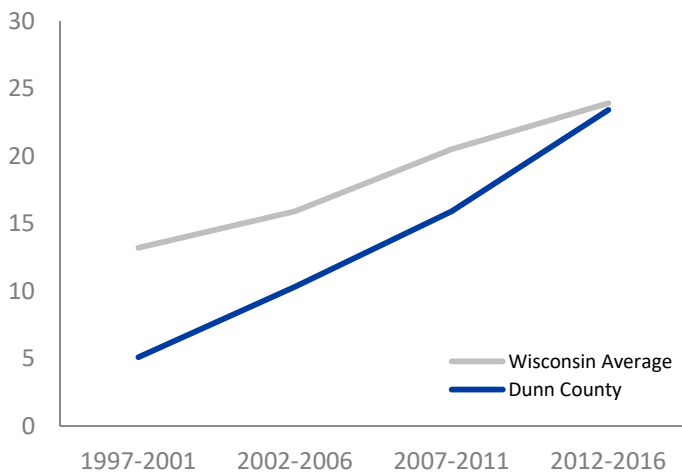
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



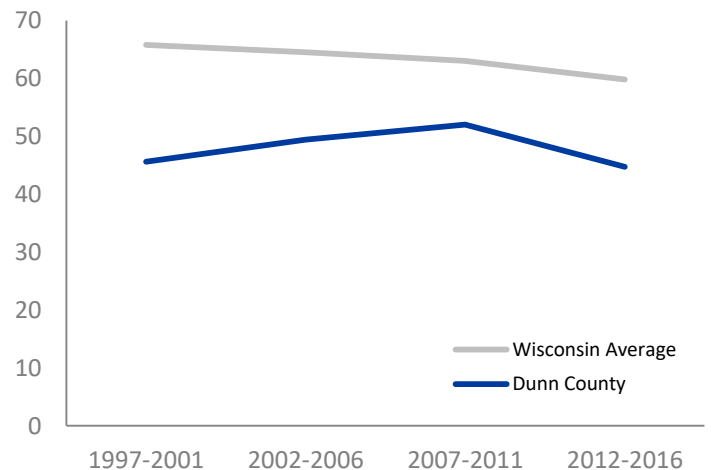
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE DUNN COUNTY

## BACKGROUND

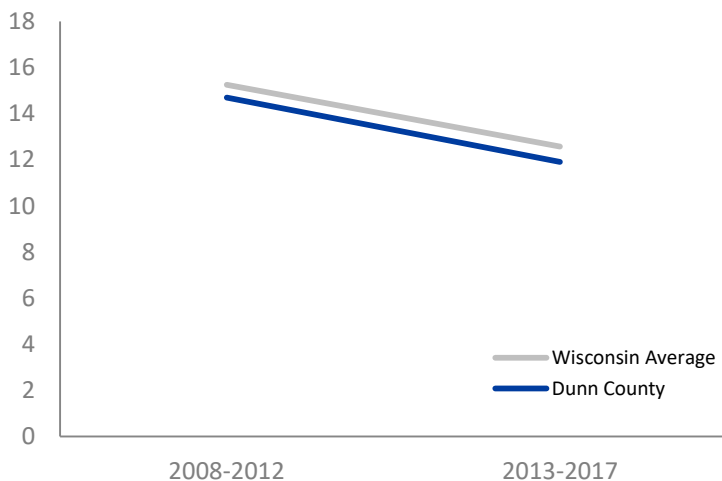
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **11.9**  
**HEAT STRESS**  
 RATE OF ER VISITS  
 PER 100,000 PEOPLE  
 WISCONSIN: 12.6

● **109.6**  
**LYME DISEASE**  
 RATE OF CASES  
 PER 100,000 PEOPLE  
 WISCONSIN: 51.7

● Above state value    ● At or below state value    ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

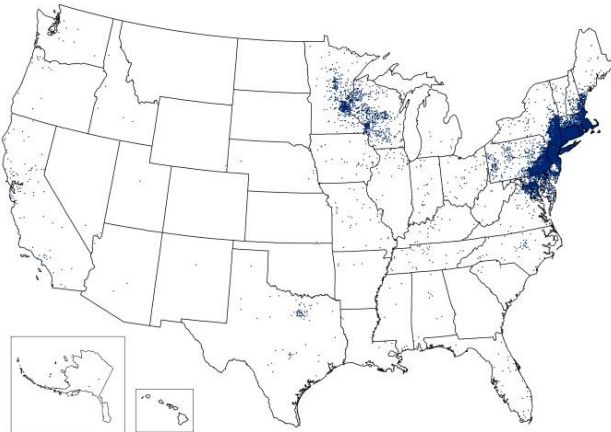
The criteria for reporting Lyme disease were revised again in 2012 to require reporting and follow-up only for cases with an erythema migrans (EM) rash. To compensate for this change, epidemiologists used a statistical method to estimate the true number of cases based on the number of total laboratory reports for each year since 2012.

## LYME DISEASE AT THE NATIONAL LEVEL

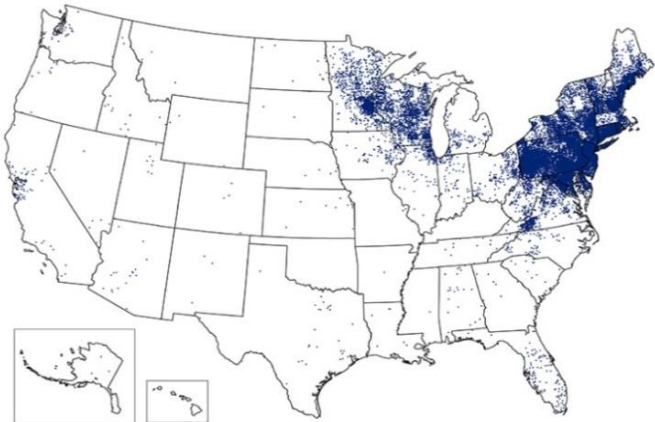
OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001



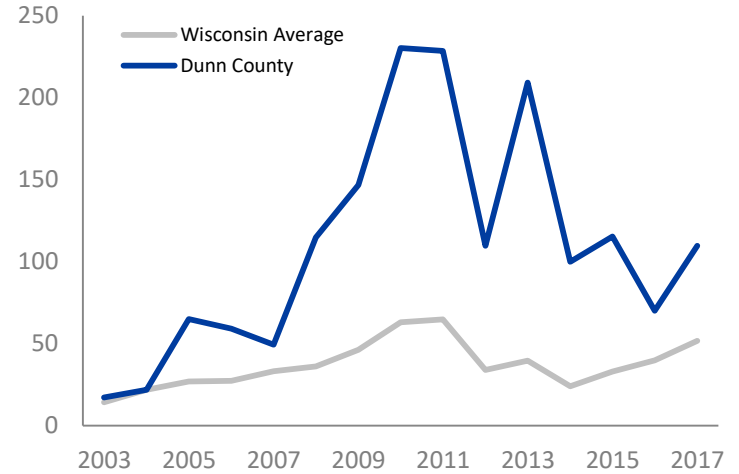
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

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

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

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

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

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

Bureau of Environmental and Occupational Health  
Wisconsin Department of Health Services | Division of Public Health

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MAY 2019 | P-00719 (Rev. 05/2019)





# EAU CLAIRE COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

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

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# EAU CLAIRE COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

● 83.7% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

● 1.1 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

● 5.9% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

● 0.0% | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

● 4.6 | Rate of ER visits per 100,000 people  
Wisconsin: 7.9

### Childhood Lead Poisoning

● 0.9% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

● 46.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

● 23.4 | Rate of ER visits per 10,000 people<sup>#</sup>  
Wisconsin: 35.1

### Melanoma

● 33.6 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

● 55.8 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

● 8.2 | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

● 57.9 | Crude rate per 100,000 people  
Wisconsin: 51.7

● Above state value  
● At or below state value

\* Above state value preferred for this measure  
^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

[Data details on next page](#)



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Year displayed:** 2016

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

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

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

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

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

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

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

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

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH EAU CLAIRE COUNTY

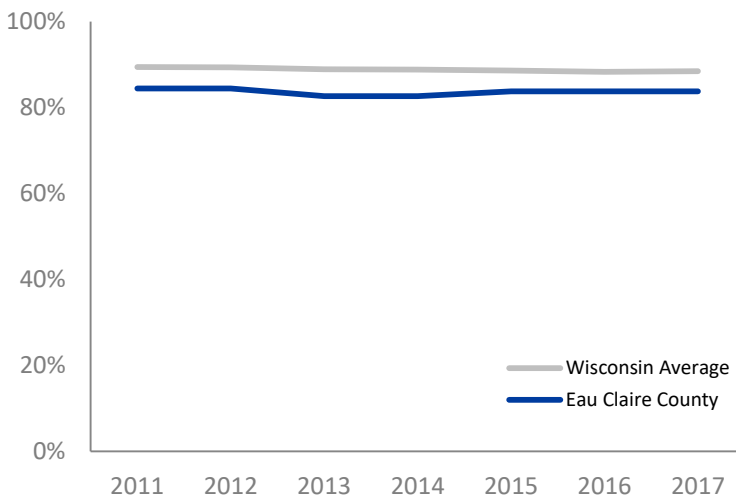
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **83.7%**

**FLUORIDE**  
PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
WISCONSIN: 88.4%

● **1.1**

**ALCOHOL OUTLET DENSITY**  
RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



## ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

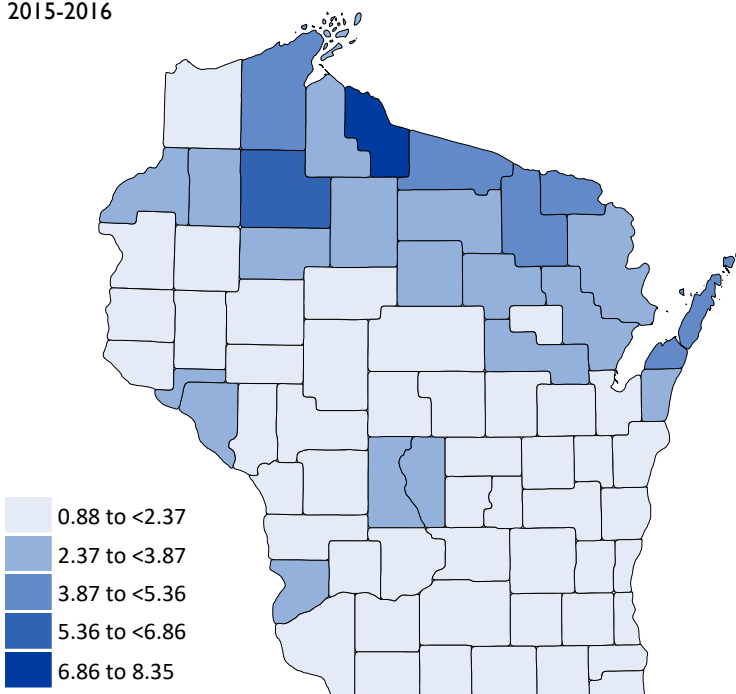
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

## ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



# 234

LICENSES IN  
EAU CLAIRE COUNTY

# 16,948

TOTAL LICENSES IN  
WISCONSIN





# PRIVATE WATER QUALITY EAU CLAIRE 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 displayed in this report. Users can find public water quality data on our data portal.

● **5.9%**

**NITRATE**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 mg/L  
**WISCONSIN: 11.0%**

● **0.0%**

**ARSENIC**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 µg/L  
**WISCONSIN: 6.0%**

● Above state value    ● At or below state value    ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
 1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS EAU CLAIRE 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.

● **4.6**  
**CARBON MONOXIDE POISONING**  
 RATE OF ER VISITS RELATED TO CO POISONING PER 100,000  
 WISCONSIN: 7.9

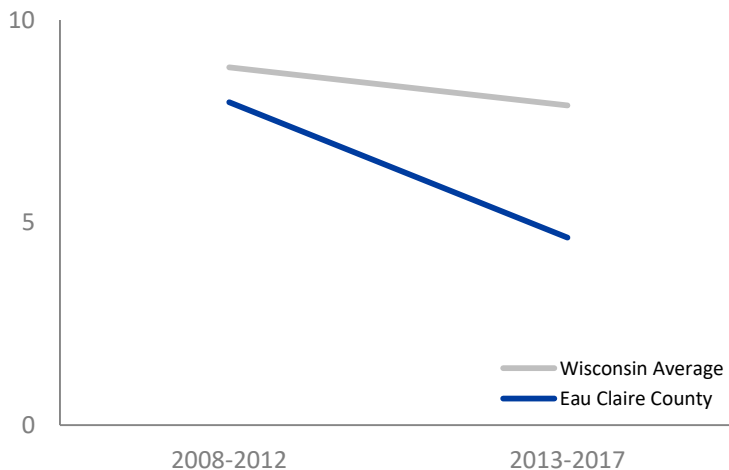
● **0.9%**  
**CHILDHOOD LEAD POISONING**  
 PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$   
 WISCONSIN: 5.0%

● **46.0%**  
**RADON**  
 PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$   
 WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

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

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



## 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter ( $\mu\text{g}/\text{dL}$ ). The Centers for Disease Control and Prevention defines lead poisoning at or above 5  $\mu\text{g}/\text{dL}$ .

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

## RADON

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

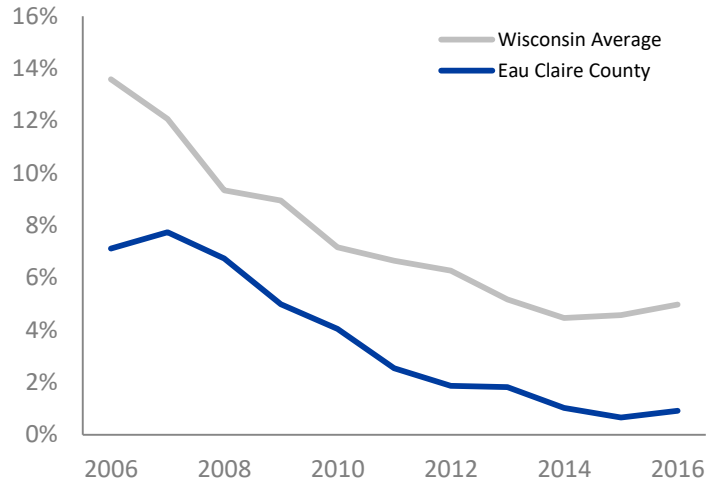
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

## CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g}/\text{dL}$

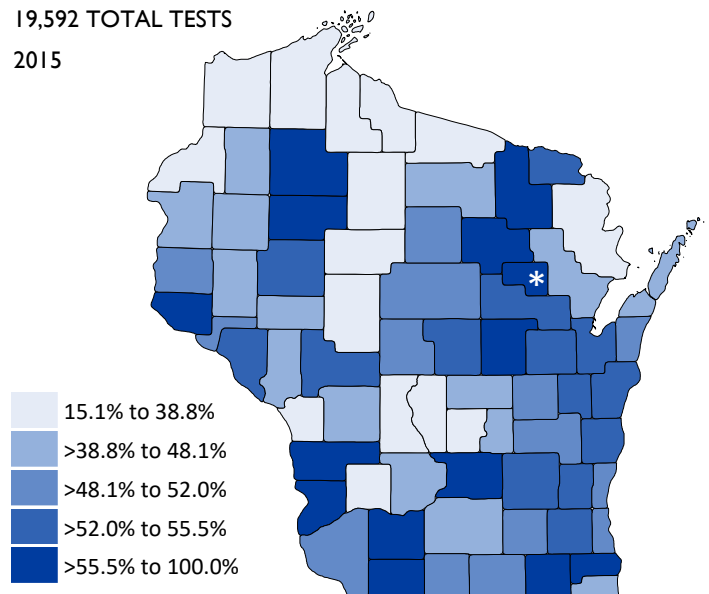


## RADON

PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi}/\text{L}$

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

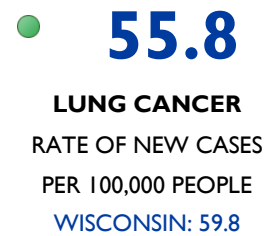
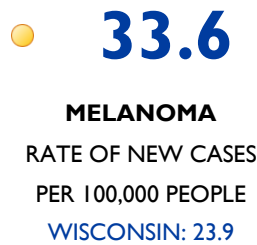
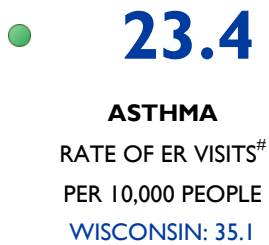




# HEALTH CONDITIONS EAU CLAIRE COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.



● Above state value

● At or below state value

^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



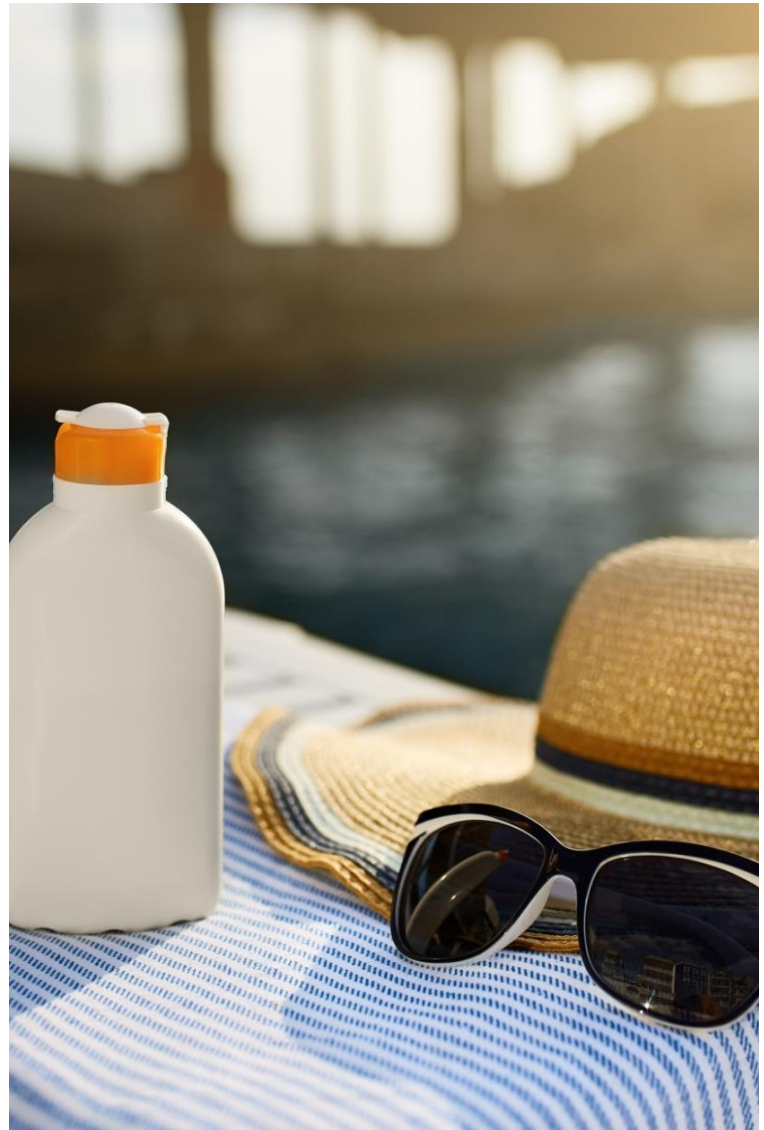
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

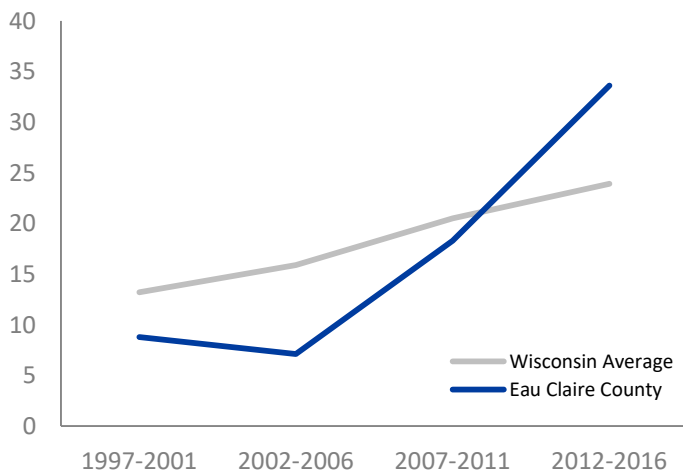
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



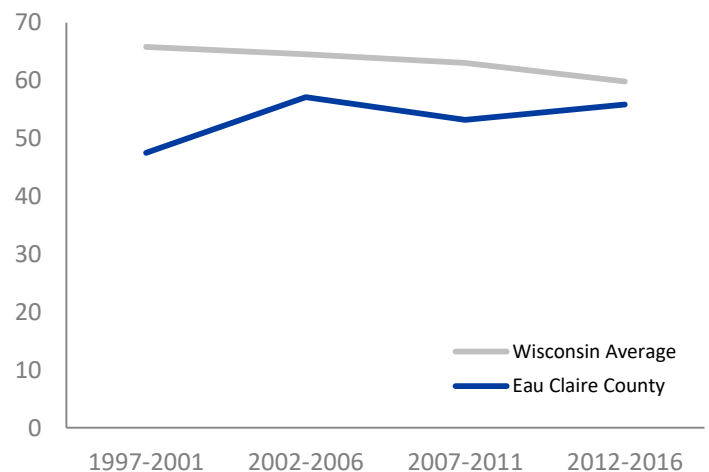
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE EAU CLAIRE COUNTY

## BACKGROUND

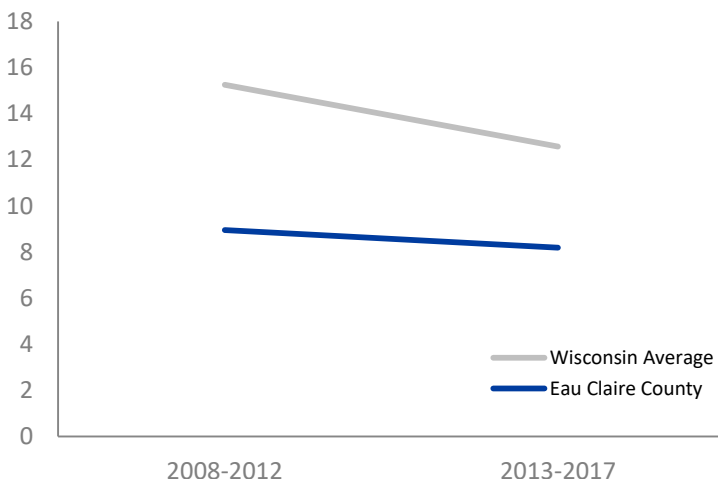
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **8.2**

**HEAT STRESS**  
RATE OF ER VISITS  
PER 100,000 PEOPLE  
WISCONSIN: 12.6

● **57.9**

**LYME DISEASE**  
RATE OF CASES  
PER 100,000 PEOPLE  
WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

## LYME DISEASE AT THE NATIONAL LEVEL

OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001



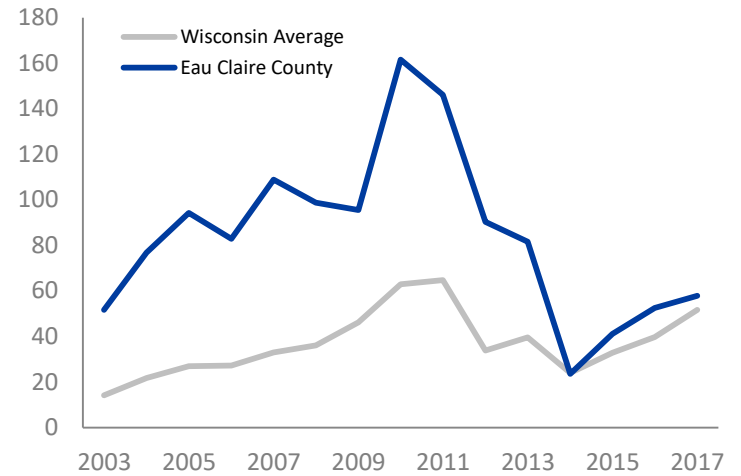
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

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

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

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

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

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

Bureau of Environmental and Occupational Health  
Wisconsin Department of Health Services | Division of Public Health

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MAY 2019 | P-00719 (Rev. 05/2019)





# FLORENCE COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

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

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# FLORENCE COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

● 100.0% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

● 5.2 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

● 2.7% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

● 26.9% | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

● 0.0 | Rate of ER visits per 100,000 people  
Wisconsin: 7.9

### Childhood Lead Poisoning

● 0.0% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

● 55.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

^ | Rate of ER visits per 10,000 people#  
Wisconsin: 35.1

### Melanoma

^ | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

● 63.3 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

● 0.0 | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

● 274.5 | Crude rate per 100,000 people  
Wisconsin: 51.7

● Above state value  
● At or below state value

\* Above state value preferred for this measure

^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

Data details on next page



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Year displayed:** 2016

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

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

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

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

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

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

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

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

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH FLORENCE COUNTY

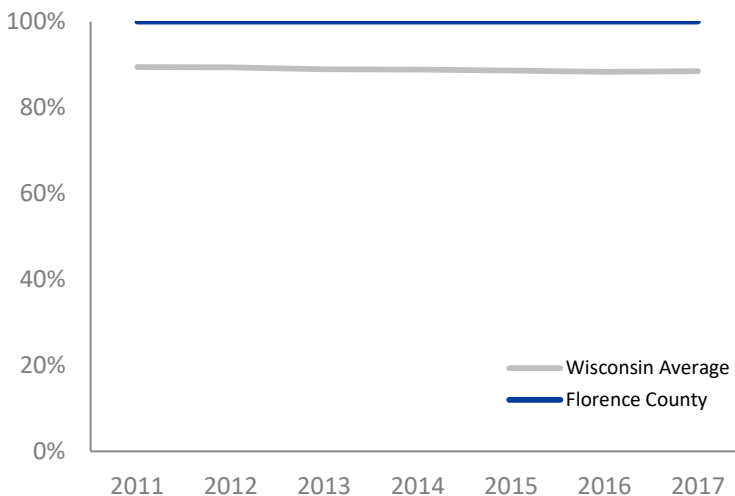
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **100.0%**

**FLUORIDE**  
PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
WISCONSIN: 88.4%

● **5.2**

**ALCOHOL OUTLET DENSITY**  
RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



### ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

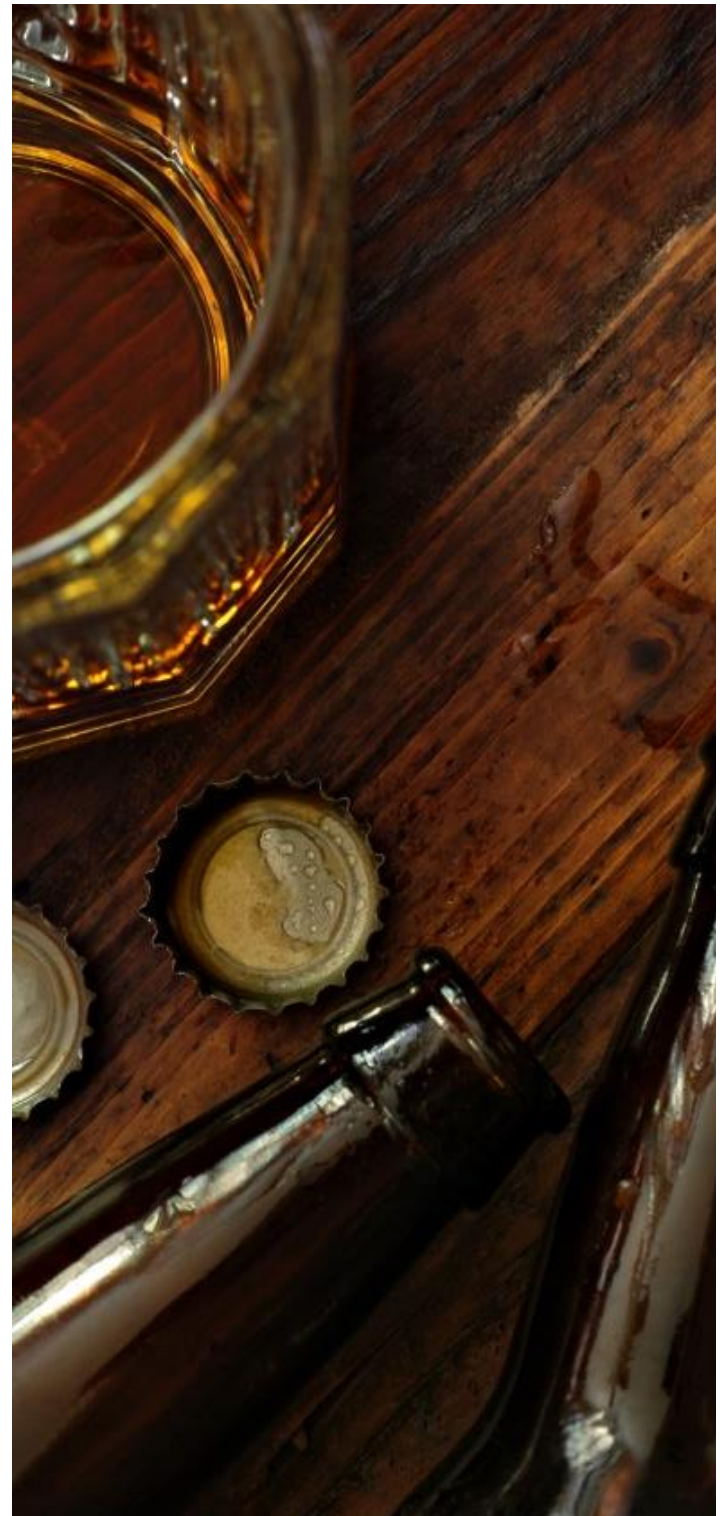
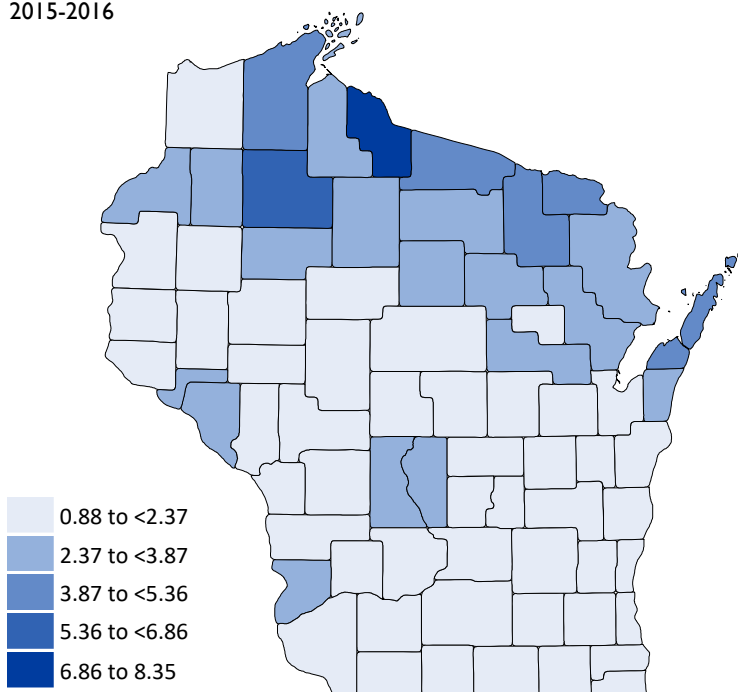
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

### ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



# 45

LICENSES IN  
FLORENCE COUNTY

# 16,948

TOTAL LICENSES IN  
WISCONSIN





# PRIVATE WATER QUALITY FLORENCE 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 displayed in this report. Users can find public water quality data on our data portal.

● **2.7%**

**NITRATE**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 mg/L  
**WISCONSIN: 11.0%**

● **26.9%**

**ARSENIC**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 µg/L  
**WISCONSIN: 6.0%**

● Above state value   ● At or below state value   ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
 1988 TO MARCH 2017



## 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 certain 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.





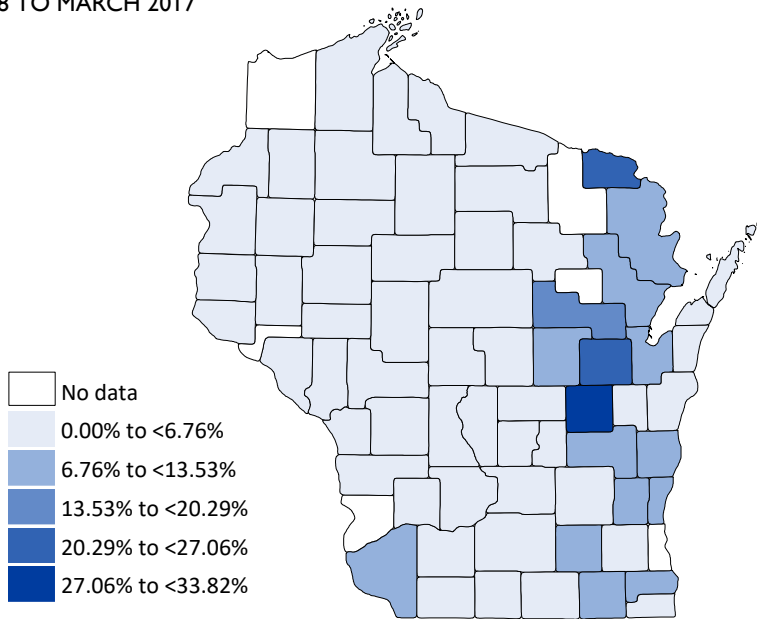
## ARSENIC IN PRIVATE WELLS

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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS FLORENCE 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.

● **0.0**  
**CARBON MONOXIDE POISONING**  
 RATE OF ER VISITS RELATED TO CO POISONING PER 100,000  
 WISCONSIN: 7.9

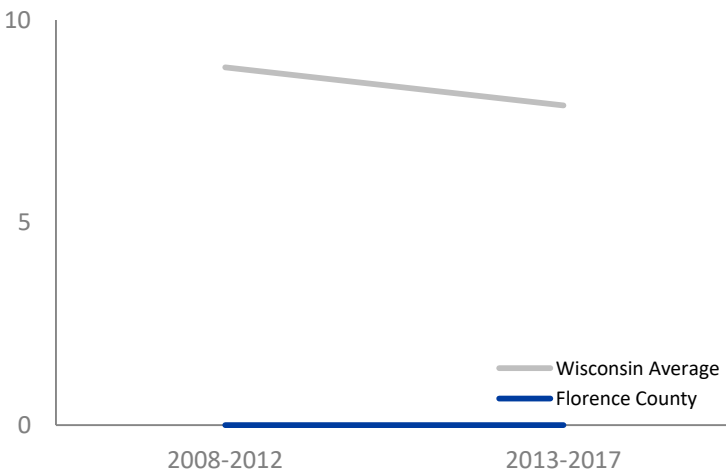
● **0.0%**  
**CHILDHOOD LEAD POISONING**  
 PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$   
 WISCONSIN: 5.0%

● **55.0%**  
**RADON**  
 PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$   
 WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

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

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



## 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter (µg/dL). The Centers for Disease Control and Prevention defines lead poisoning at or above 5 µg/dL.

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

## RADON

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

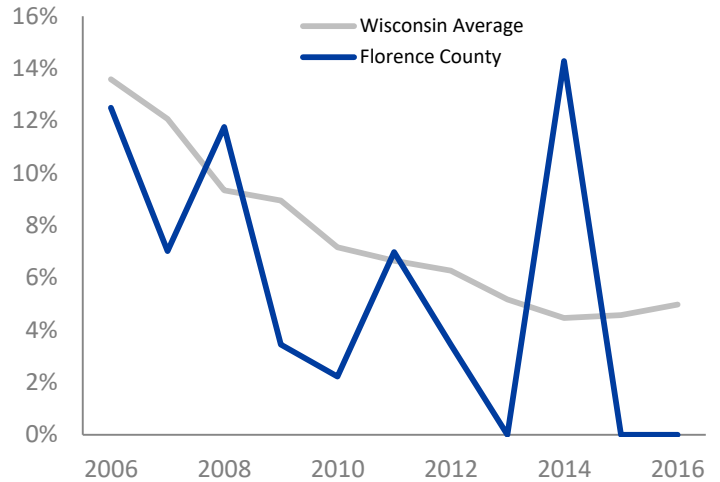
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

## CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD ≥5 µg/dL

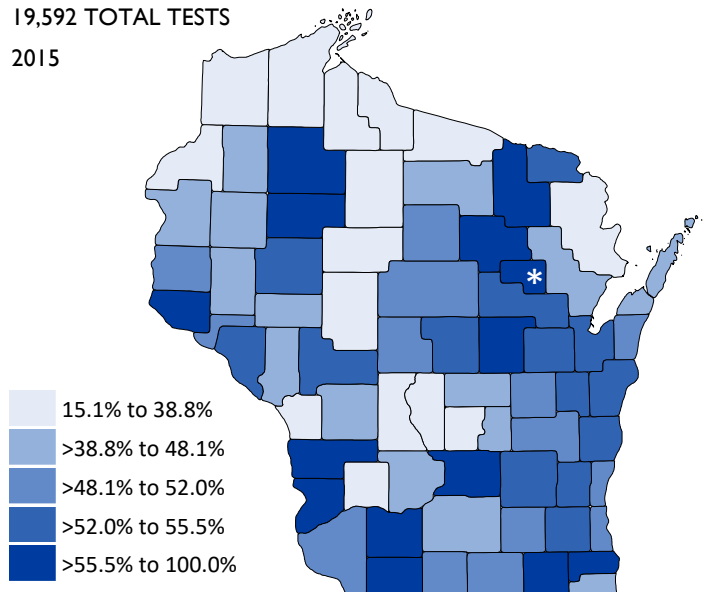


## RADON

PERCENT OF TESTS WITH RESULTS ≥4 pCi/L

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.





# HEALTH CONDITIONS FLORENCE COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.



**ASTHMA**  
RATE OF ER VISITS<sup>#</sup>  
PER 10,000 PEOPLE  
WISCONSIN: 35.1



**MELANOMA**  
RATE OF NEW CASES  
PER 100,000 PEOPLE  
WISCONSIN: 23.9



**63.3**

**LUNG CANCER**  
RATE OF NEW CASES  
PER 100,000 PEOPLE  
WISCONSIN: 59.8

● Above state value

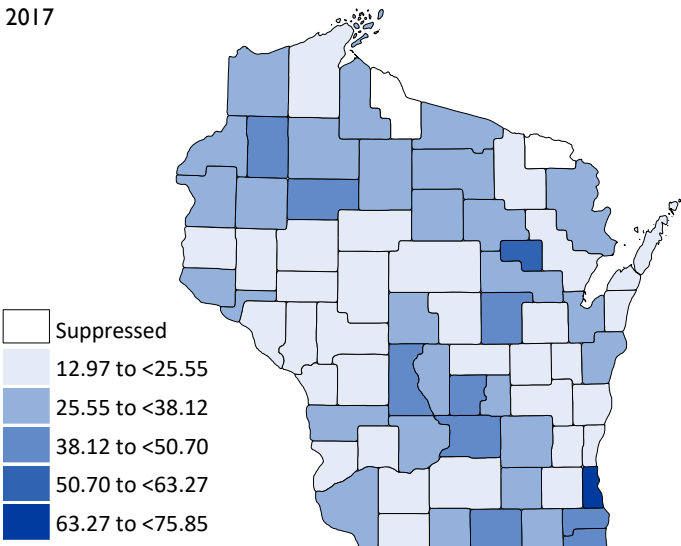
● At or below state value

^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



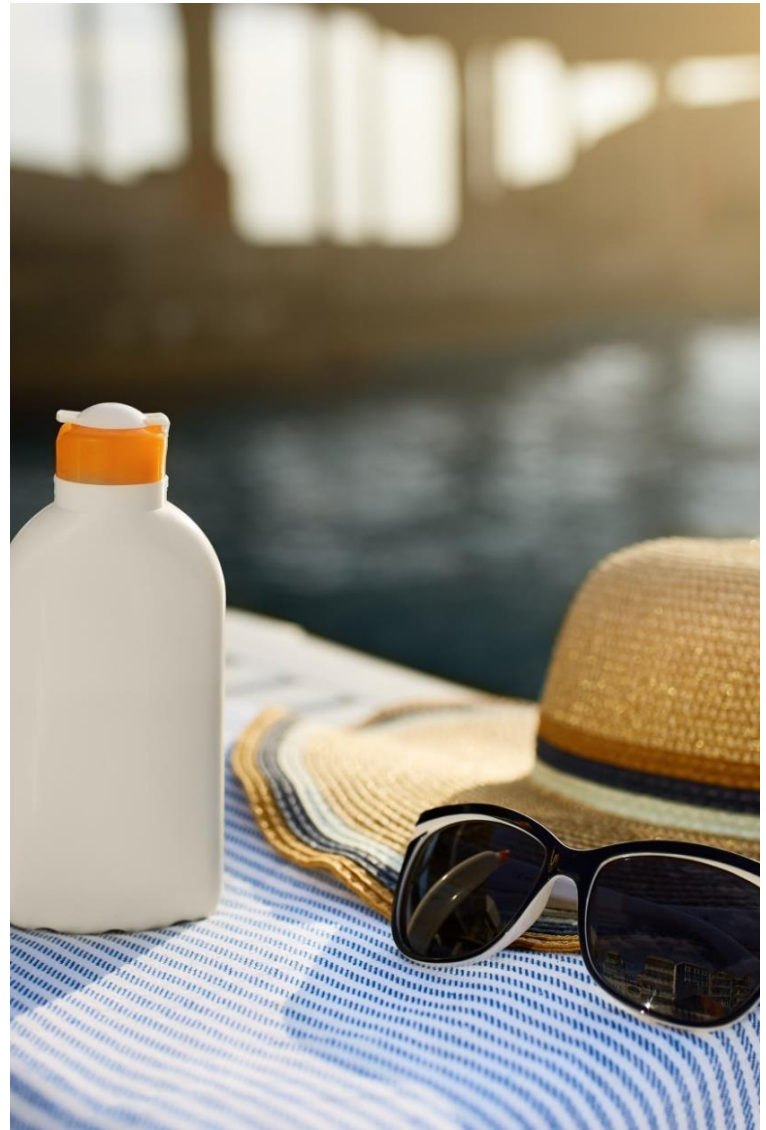
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

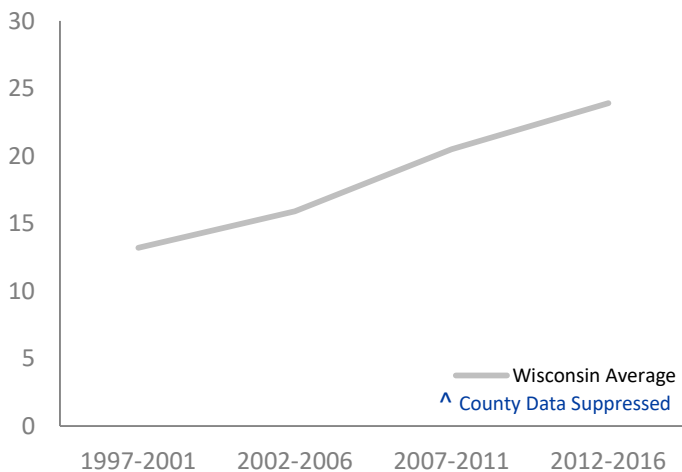
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



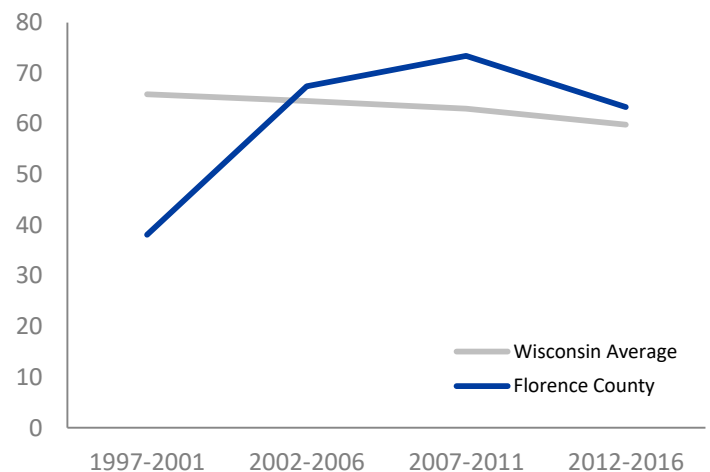
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE FLORENCE COUNTY

## BACKGROUND

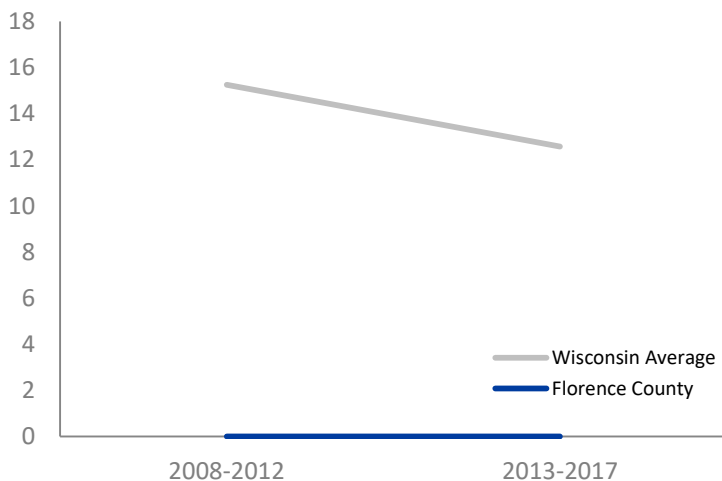
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● 0.0

**HEAT STRESS**  
RATE OF ER VISITS  
PER 100,000 PEOPLE  
WISCONSIN: 12.6

● 274.5

**LYME DISEASE**  
RATE OF CASES  
PER 100,000 PEOPLE  
WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

## LYME DISEASE AT THE NATIONAL LEVEL

OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001



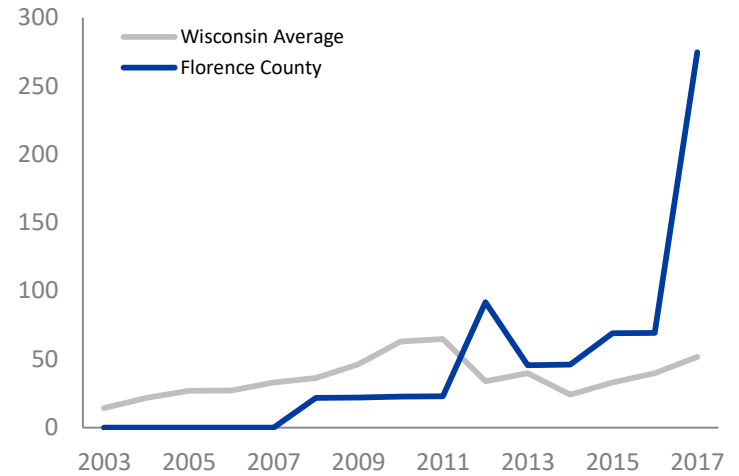
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

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

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

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

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

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

Bureau of Environmental and Occupational Health  
Wisconsin Department of Health Services | Division of Public Health

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MAY 2019 | P-00719 (Rev. 05/2019)





# FOND DU LAC COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

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

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# FOND DU LAC COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

● 88.9% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

● 1.5 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

● 7.8% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

● 6.9% | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

● 6.1 | Rate of ER visits per 100,000 people  
Wisconsin: 7.9

### Childhood Lead Poisoning

● 4.6% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

● 51.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

● 21.7 | Rate of ER visits per 10,000 people<sup>#</sup>  
Wisconsin: 35.1

### Melanoma

● 25.5 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

● 58.9 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

● 12.1 | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

● 28.3 | Crude rate per 100,000 people  
Wisconsin: 51.7

● Above state value  
● At or below state value

\* Above state value preferred for this measure  
^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

[Data details on next page](#)



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Year displayed:** 2016

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

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

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

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

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

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

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

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

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH FOND DU LAC COUNTY

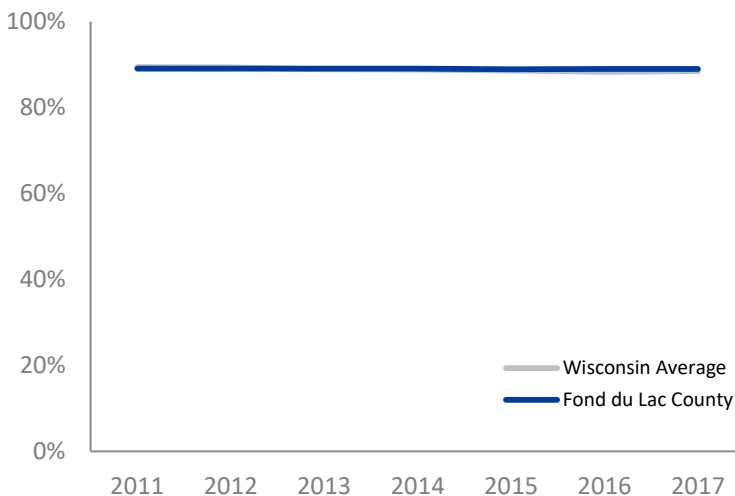
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **88.9%**

**FLUORIDE**  
PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
WISCONSIN: 88.4%

● **1.5**

**ALCOHOL OUTLET DENSITY**  
RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



## ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small 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 [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

## ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



# 297

LICENSES IN  
FOND DU LAC COUNTY

# 16,948

TOTAL LICENSES IN  
WISCONSIN





# PRIVATE WATER QUALITY FOND DU LAC 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 displayed in this report. Users can find public water quality data on our data portal.

● **7.8%**

**NITRATE  
IN PRIVATE WELLS**  
PERCENT OF TEST RESULTS  
ABOVE EPA STANDARD  
OF 10 mg/L  
WISCONSIN: 11.0%

● **6.9%**

**ARSENIC  
IN PRIVATE WELLS**  
PERCENT OF TEST RESULTS  
ABOVE EPA STANDARD  
OF 10 µg/L  
WISCONSIN: 6.0%

● Above state value    ● At or below state value    ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS FOND DU LAC 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.

● **6.1**  
**CARBON MONOXIDE POISONING**  
 RATE OF ER VISITS RELATED TO CO POISONING PER 100,000  
 WISCONSIN: 7.9

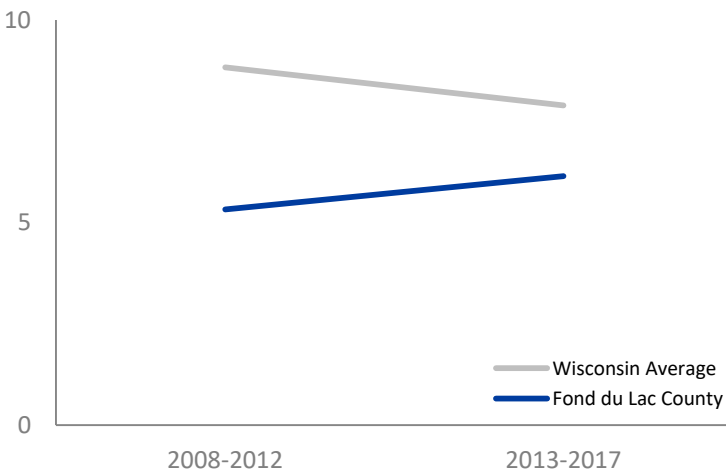
● **4.6%**  
**CHILDHOOD LEAD POISONING**  
 PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$   
 WISCONSIN: 5.0%

● **51.0%**  
**RADON**  
 PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$   
 WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

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

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



## 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter ( $\mu\text{g}/\text{dL}$ ). The Centers for Disease Control and Prevention defines lead poisoning at or above 5  $\mu\text{g}/\text{dL}$ .

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

## RADON

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

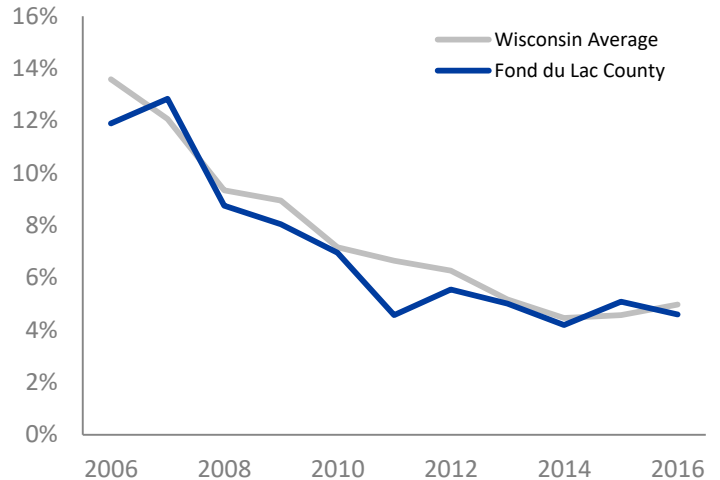
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

## CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g}/\text{dL}$

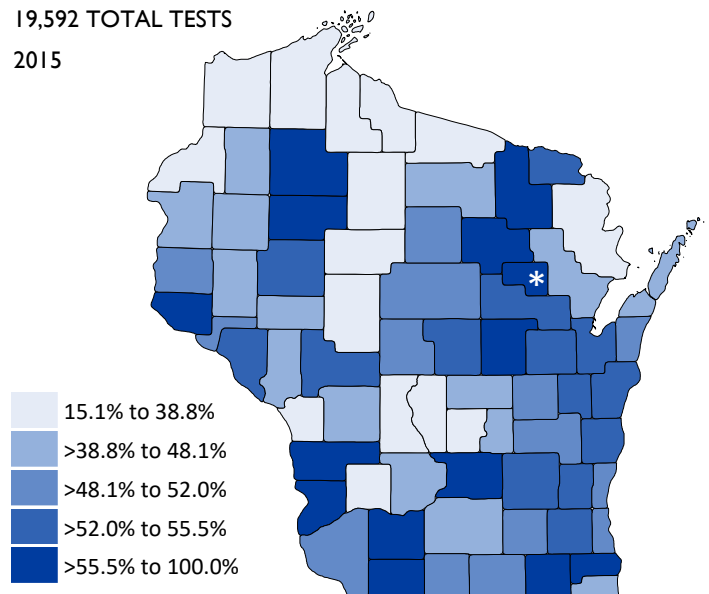


## RADON

PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

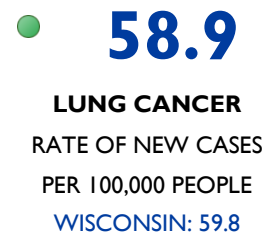
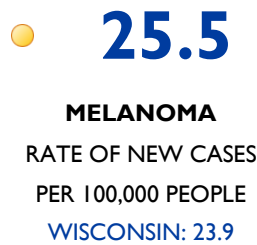
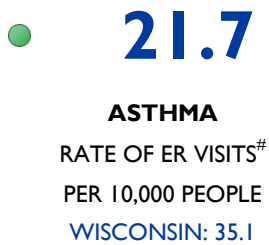




# HEALTH CONDITIONS FOND DU LAC COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.



● Above state value

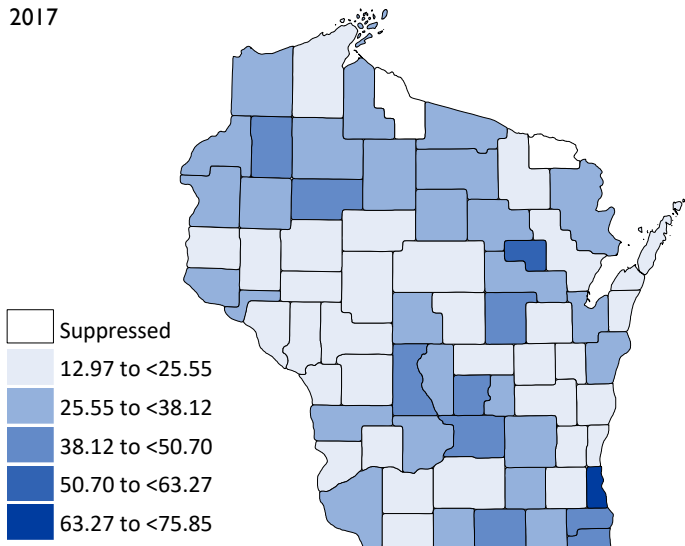
● At or below state value

^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



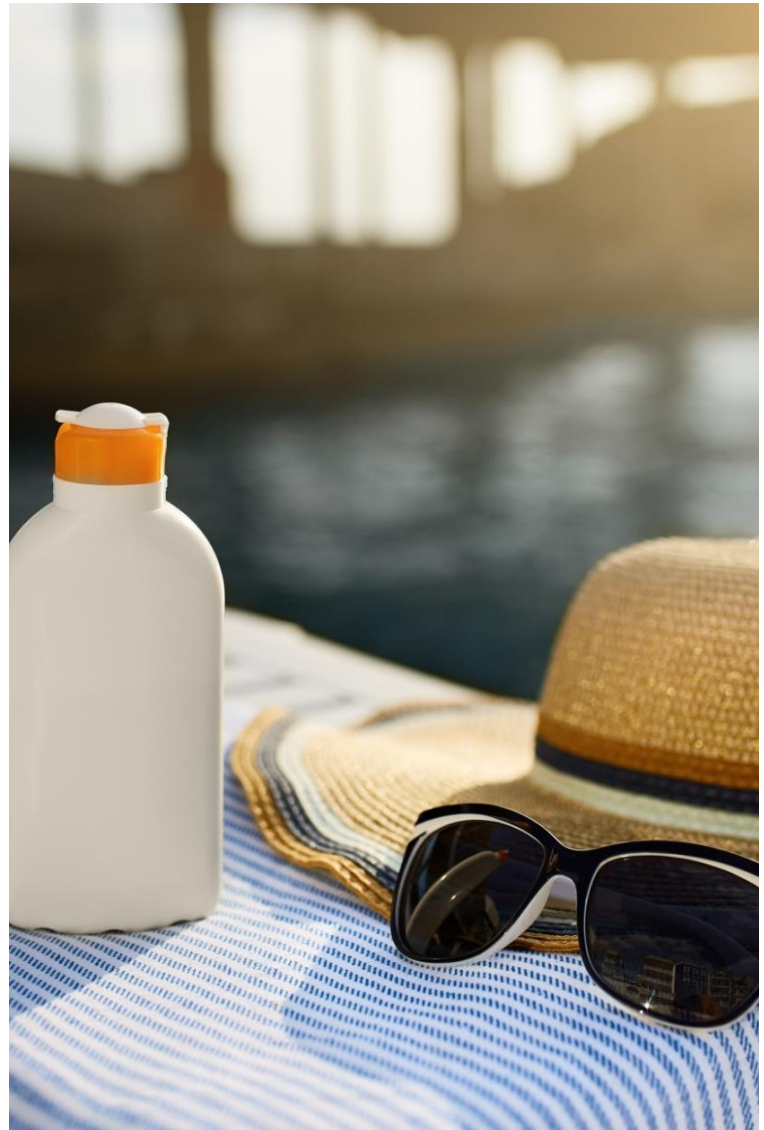
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

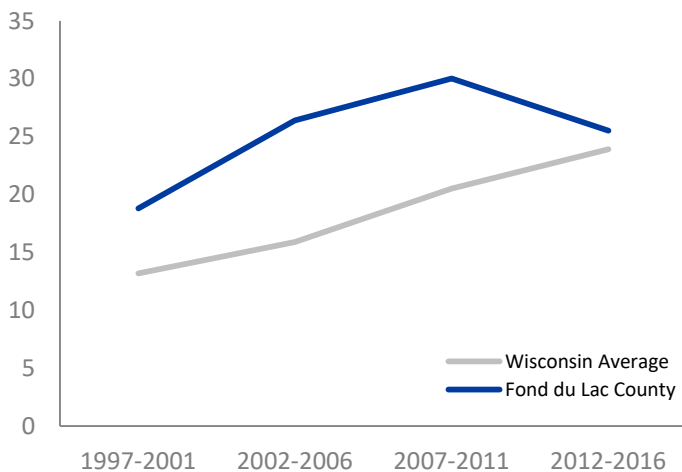
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



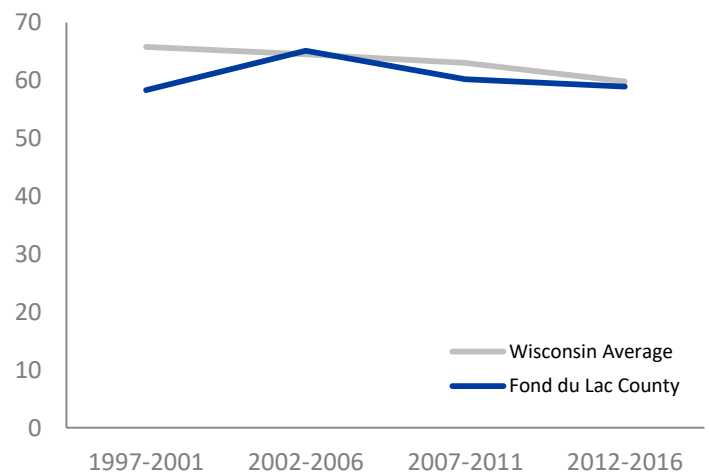
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE FOND DU LAC COUNTY

## BACKGROUND

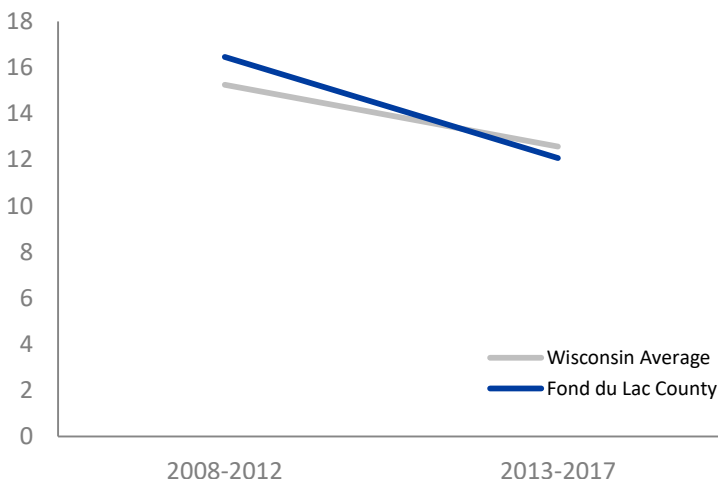
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● 12.1

**HEAT STRESS**  
RATE OF ER VISITS  
PER 100,000 PEOPLE  
WISCONSIN: 12.6

● 28.3

**LYME DISEASE**  
RATE OF CASES  
PER 100,000 PEOPLE  
WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

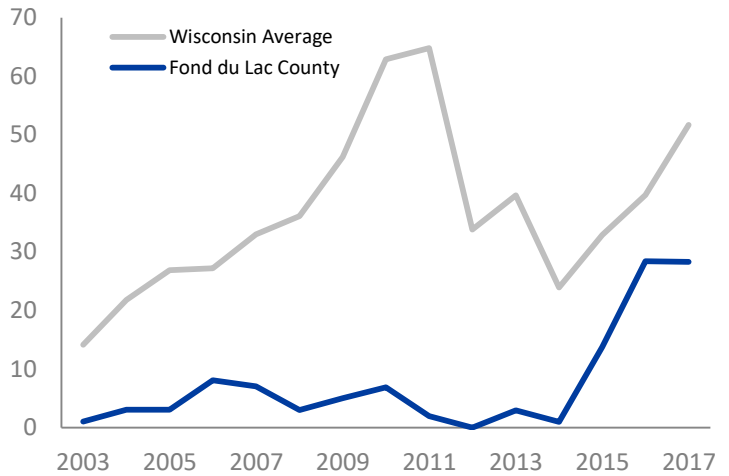
## INTERPRETING LYME DISEASE DATA

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.

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

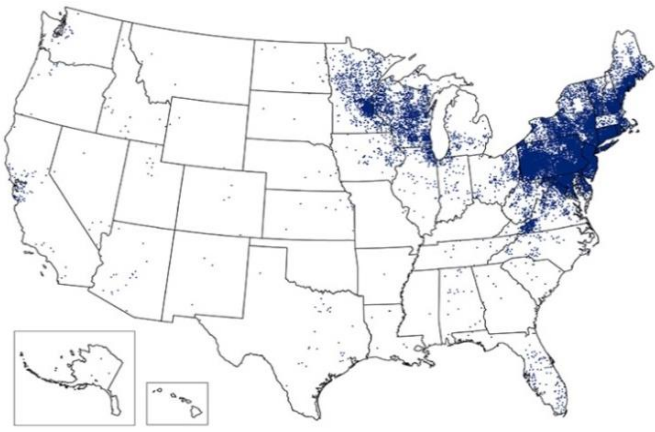
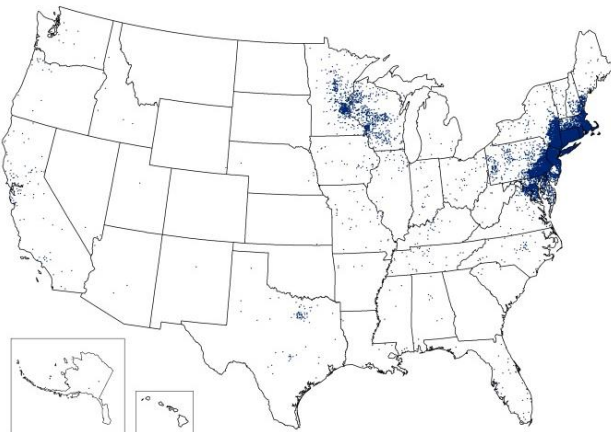
## LYME DISEASE AT THE NATIONAL LEVEL

OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001

2017



Maps courtesy of Centers for Disease Control and Prevention

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

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

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

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

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

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

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Wisconsin Department of Health Services | Division of Public Health

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MAY 2019 | P-00719 (Rev. 05/2019)





# FOREST COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

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

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# FOREST COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

● 0.0% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

● 4.3 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

● 1.2% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

‡ | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

● 6.6 | Rate of ER visits per 100,000 people  
Wisconsin: 8.4

### Childhood Lead Poisoning

● 0.0% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

● 59.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

● 22.2 | Rate of ER visits per 10,000 people#  
Wisconsin: 35.1

### Melanoma

● 8.8 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

● 82.7 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

^ | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

● 11.2 | Crude rate per 100,000 people  
Wisconsin: 51.7

- Above state value
- At or below state value

- \* Above state value preferred for this measure
- ^ Data are suppressed
- ‡ No data

- # Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

Data details on next page



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Year displayed:** 2016

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

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

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

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

**Years displayed:** 2008-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

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

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

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

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH FOREST COUNTY

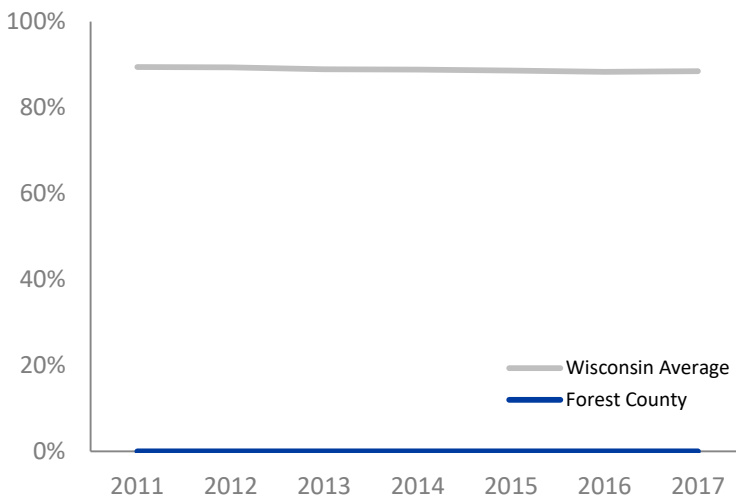
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **0.0%**  
**FLUORIDE**  
 PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
 WISCONSIN: 88.4%

● **4.3**  
**ALCOHOL OUTLET DENSITY**  
 RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
 WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
 ^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



## ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

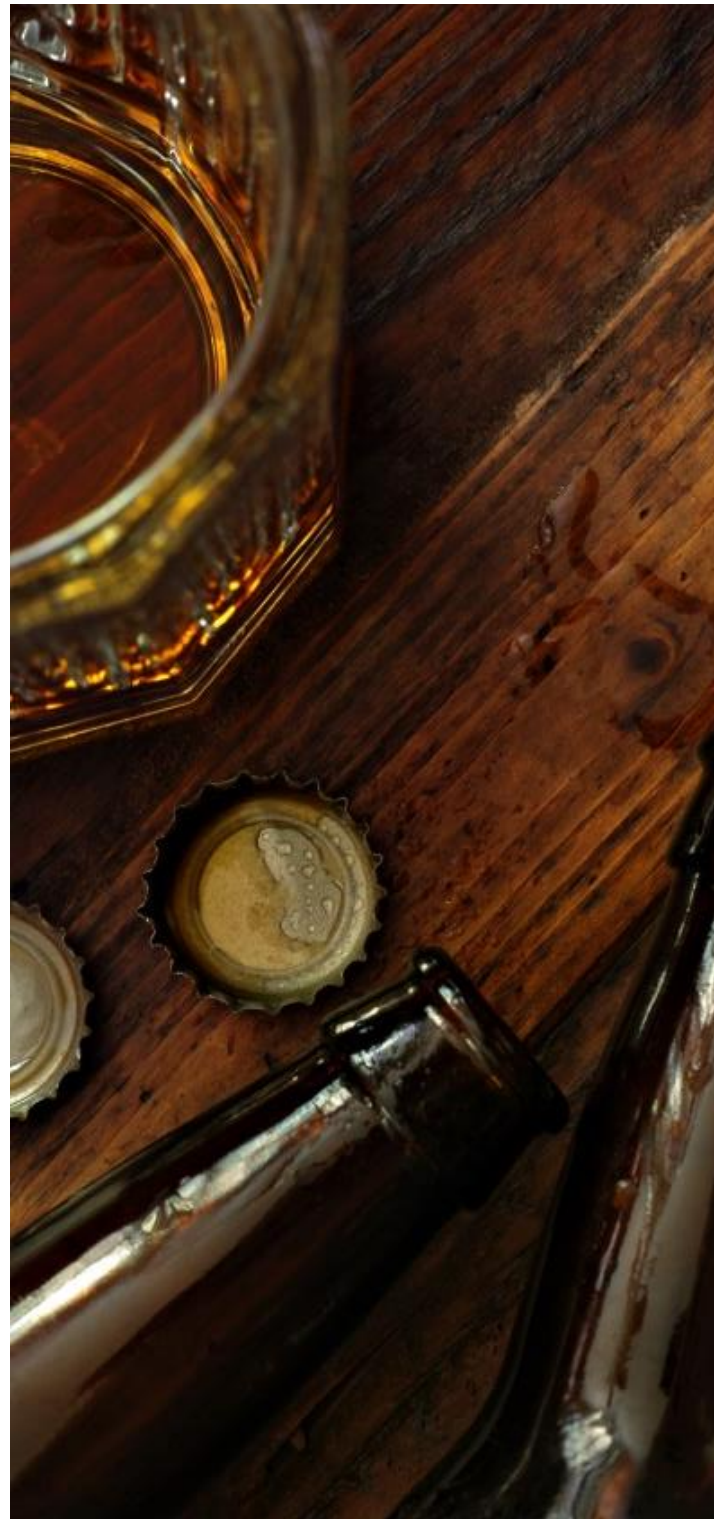
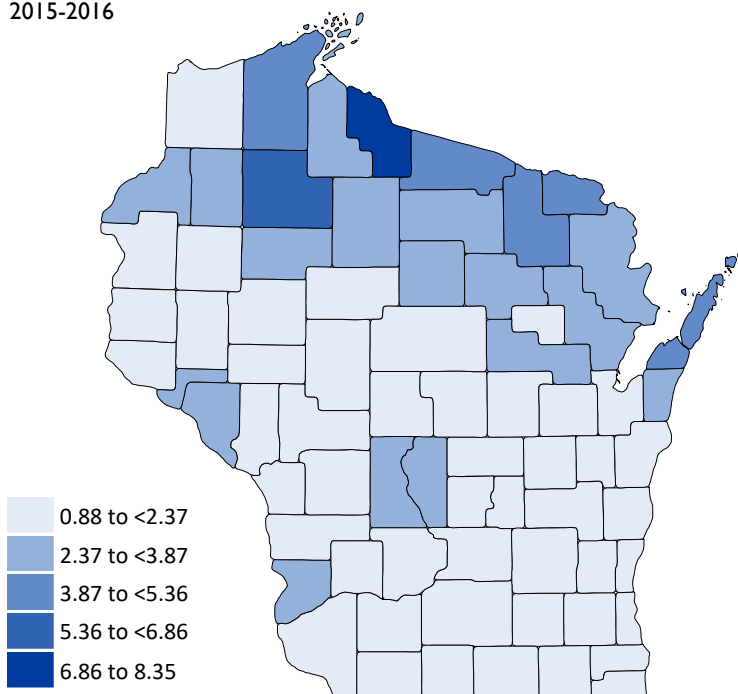
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

## ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



|                              |                                |
|------------------------------|--------------------------------|
| <b>77</b>                    | <b>16,948</b>                  |
| LICENSES IN<br>FOREST COUNTY | TOTAL LICENSES IN<br>WISCONSIN |





# PRIVATE WATER QUALITY FOREST 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 displayed in this report. Users can find public water quality data on our data portal.

● **1.2%**

**NITRATE  
IN PRIVATE WELLS**  
PERCENT OF TEST RESULTS  
ABOVE EPA STANDARD  
OF 10 mg/L  
WISCONSIN: 11.0%



**ARSENIC  
IN PRIVATE WELLS**  
PERCENT OF TEST RESULTS  
ABOVE EPA STANDARD  
OF 10 µg/L  
WISCONSIN: 6.0%

● Above state value   ● At or below state value   ^ Suppressed  
‡ No data

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS FOREST 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.

● **6.6**  
**CARBON MONOXIDE POISONING**  
 RATE OF ER VISITS RELATED TO CO POISONING PER 100,000  
 WISCONSIN: 8.4

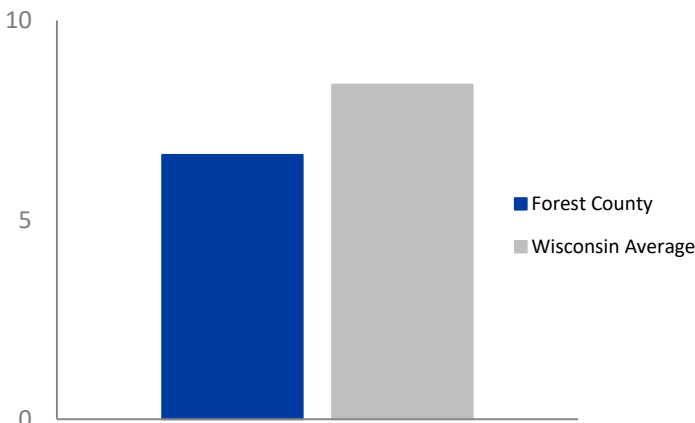
● **0.0%**  
**CHILDHOOD LEAD POISONING**  
 PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$   
 WISCONSIN: 5.0%

● **59.0%**  
**RADON**  
 PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$   
 WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE  
 2008-2017



## CARBON MONOXIDE POISONING

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

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



## 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter (µg/dL). The Centers for Disease Control and Prevention defines lead poisoning at or above 5 µg/dL.

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

## RADON

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

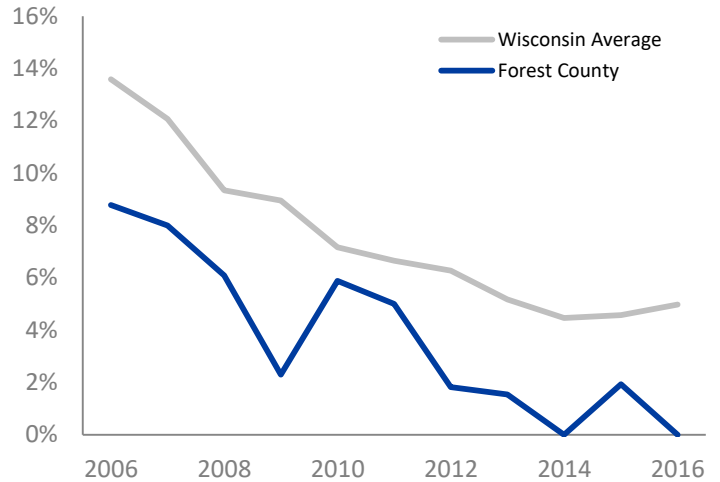
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

## CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD ≥5 µg/dL

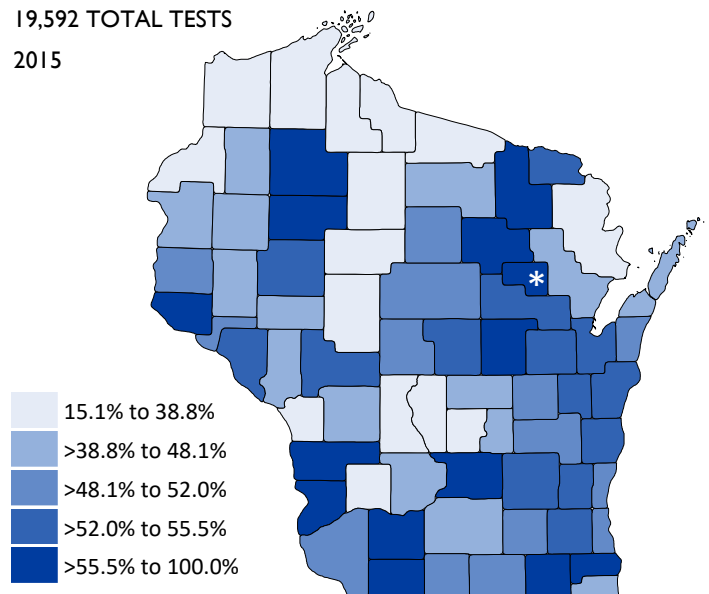


## RADON

PERCENT OF TESTS WITH RESULTS ≥4 pCi/L

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

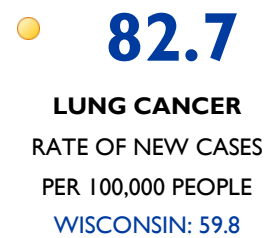
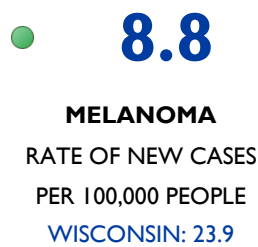
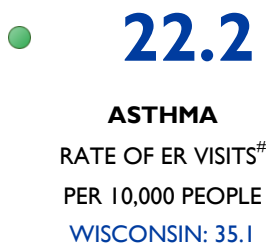




# HEALTH CONDITIONS FOREST COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.

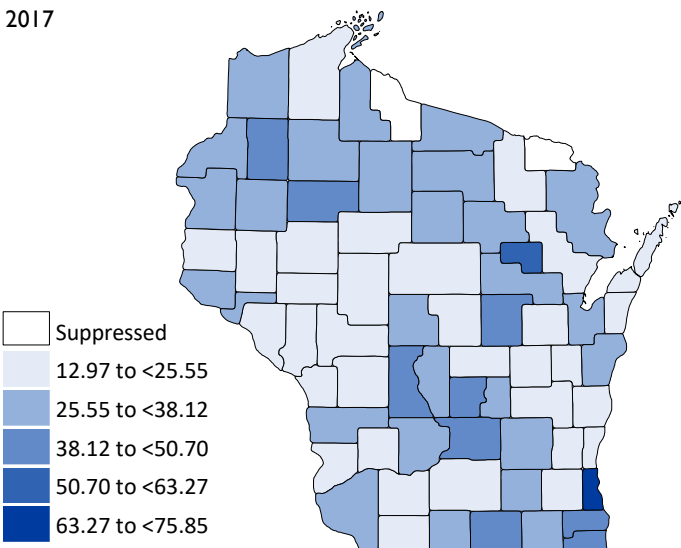


- Above state value
- At or below state value
- ^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



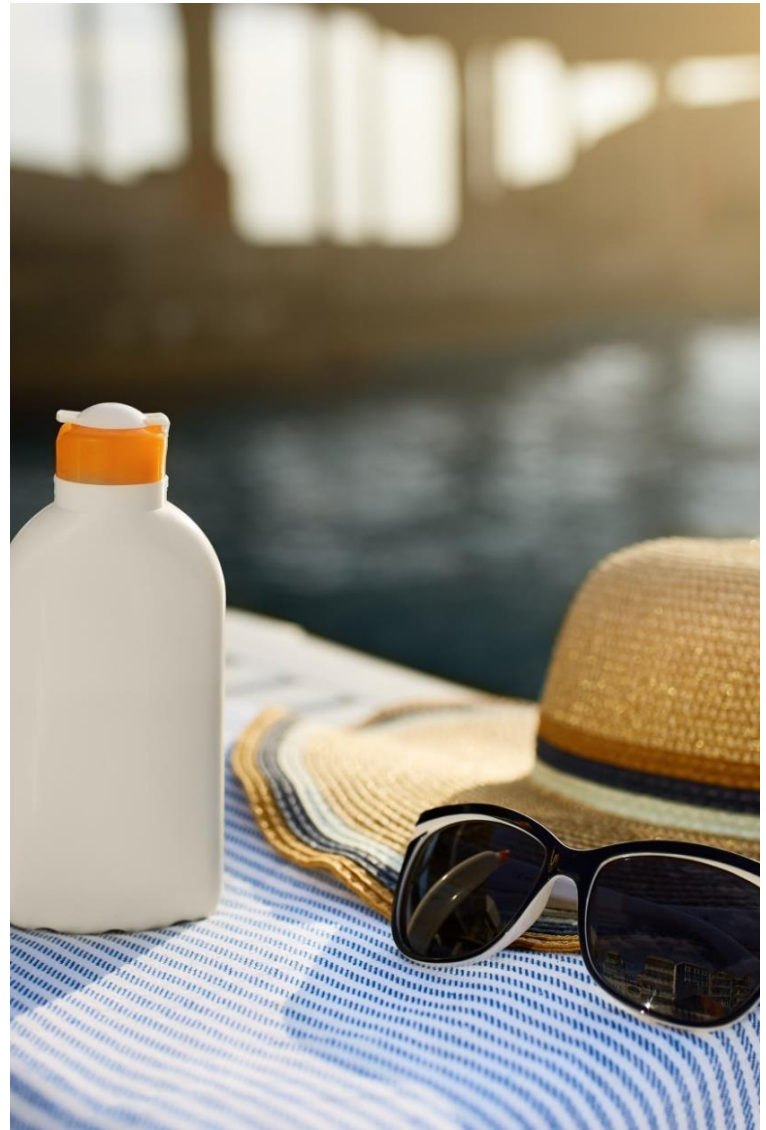
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

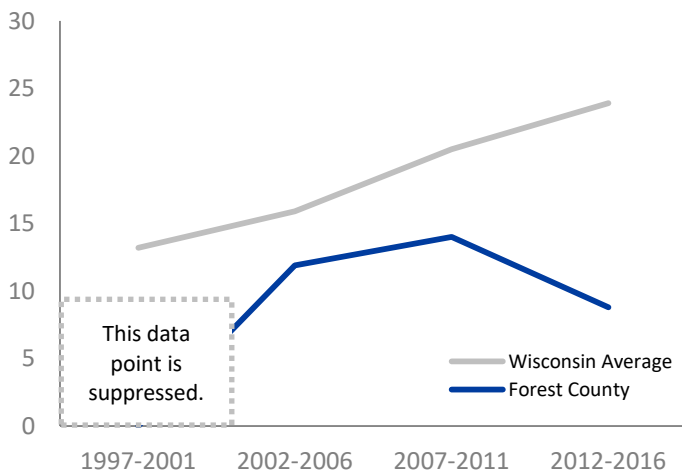
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



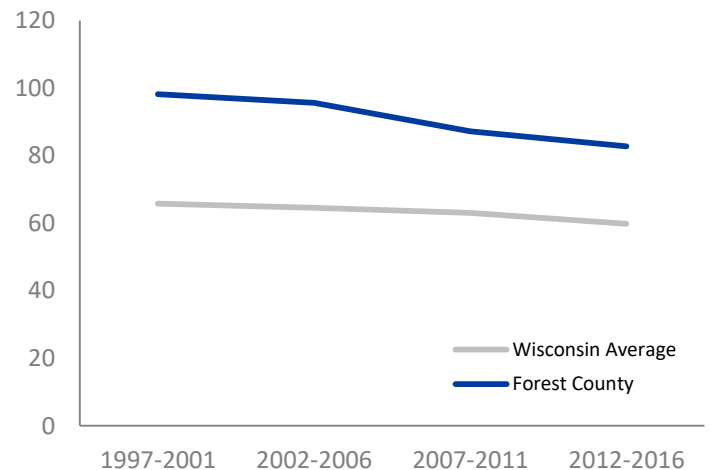
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE FOREST COUNTY

## BACKGROUND

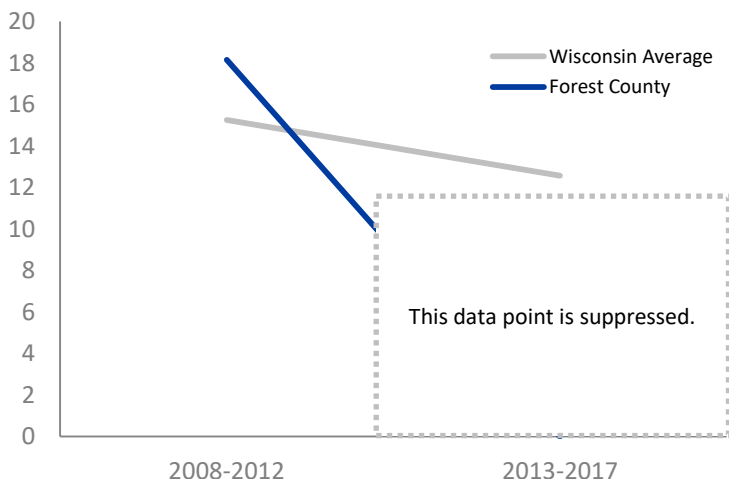
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



**HEAT STRESS**  
RATE OF ER VISITS  
PER 100,000 PEOPLE  
WISCONSIN: 12.6



**11.2**  
**LYME DISEASE**  
RATE OF CASES  
PER 100,000 PEOPLE  
WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

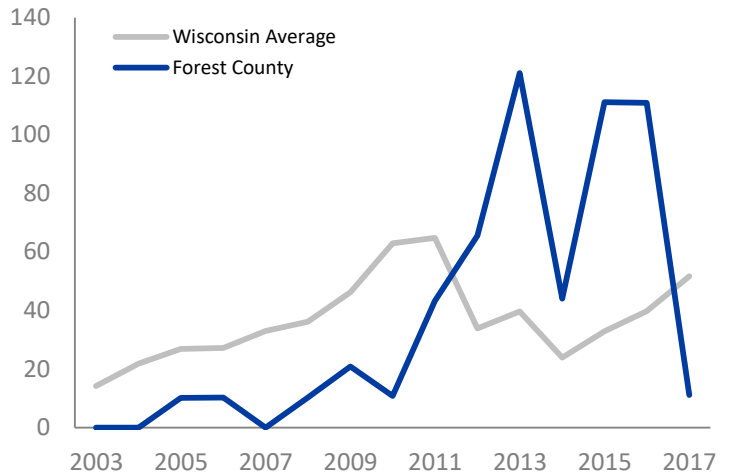
## INTERPRETING LYME DISEASE DATA

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.

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

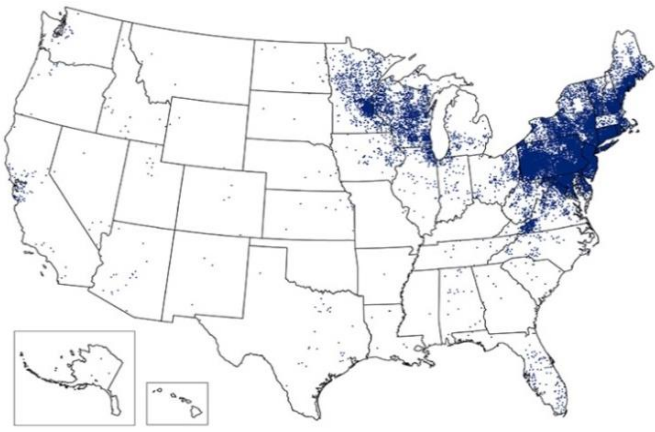
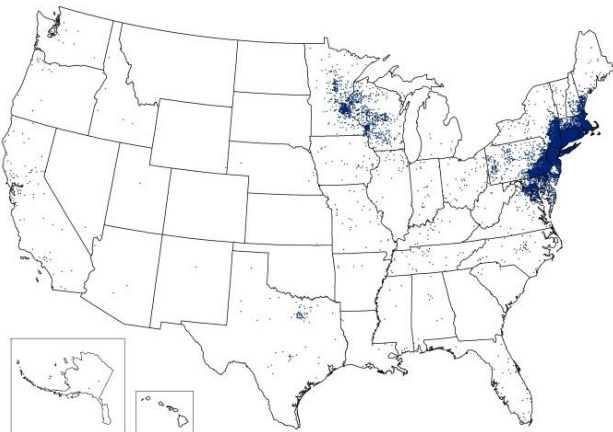
## LYME DISEASE AT THE NATIONAL LEVEL

OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001

2017



Maps courtesy of Centers for Disease Control and Prevention

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population. For the majority of Profiles, these data were averaged over five years (2013-2017). For this county's Profile, that five-year average was suppressed. To eliminate the suppression in this Profile, these data were instead averaged over 10 years (2008-2017).

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

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

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

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

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

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

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Wisconsin Department of Health Services | Division of Public Health

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MAY 2019 | P-00719 (Rev. 05/2019)





# GRANT COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

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

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# GRANT COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

● 85.4% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

● 1.9 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

● 8.0% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

● 13.2% | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

● 12.1 | Rate of ER visits per 100,000 people  
Wisconsin: 7.9

### Childhood Lead Poisoning

● 6.4% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

● 52.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

● 26.1 | Rate of ER visits per 10,000 people<sup>#</sup>  
Wisconsin: 35.1

### Melanoma

● 27.2 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

● 49.5 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

● 27.2 | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

● 57.7 | Crude rate per 100,000 people  
Wisconsin: 51.7

● Above state value  
● At or below state value

\* Above state value preferred for this measure  
^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

[Data details on next page](#)



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Year displayed:** 2016

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

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

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

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

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

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

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

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

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH GRANT COUNTY

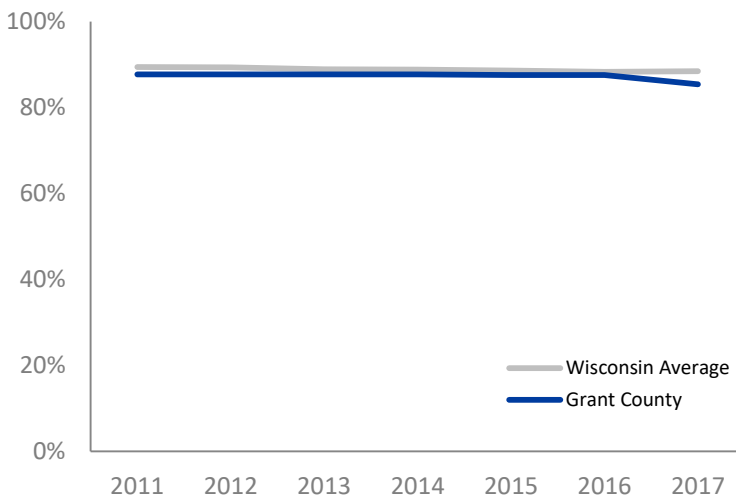
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **85.4%**

**FLUORIDE**  
PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
WISCONSIN: 88.4%

● **1.9**

**ALCOHOL OUTLET DENSITY**  
RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



## ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

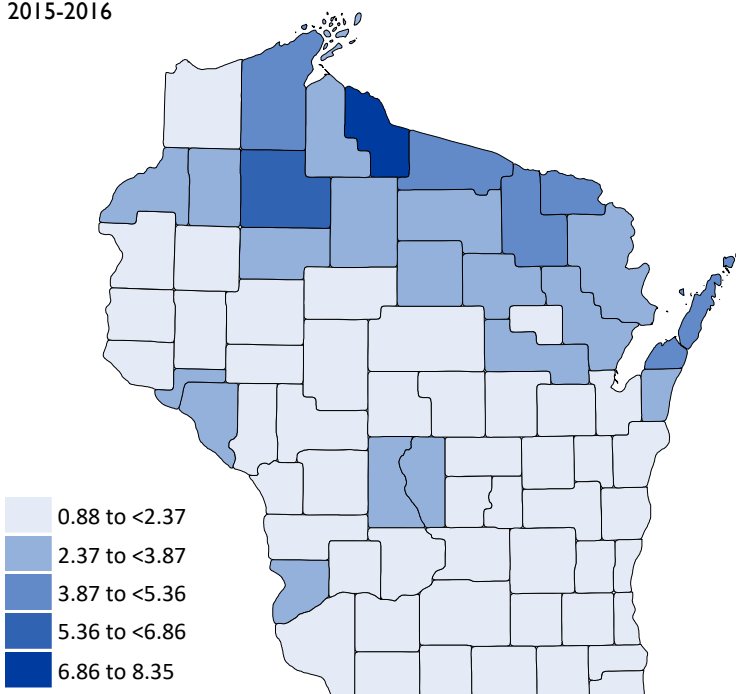
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

## ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



|                             |                                |
|-----------------------------|--------------------------------|
| <b>192</b>                  | <b>16,948</b>                  |
| LICENSES IN<br>GRANT COUNTY | TOTAL LICENSES IN<br>WISCONSIN |





# PRIVATE WATER QUALITY GRANT 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 displayed in this report. Users can find public water quality data on our data portal.

● **8.0%**

**NITRATE**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 mg/L  
**WISCONSIN: 11.0%**

● **13.2%**

**ARSENIC**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 µg/L  
**WISCONSIN: 6.0%**

● Above state value    ● At or below state value    ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
 1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS GRANT 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.

● **12.1**  
**CARBON MONOXIDE POISONING**  
 RATE OF ER VISITS RELATED TO CO POISONING PER 100,000  
 WISCONSIN: 7.9

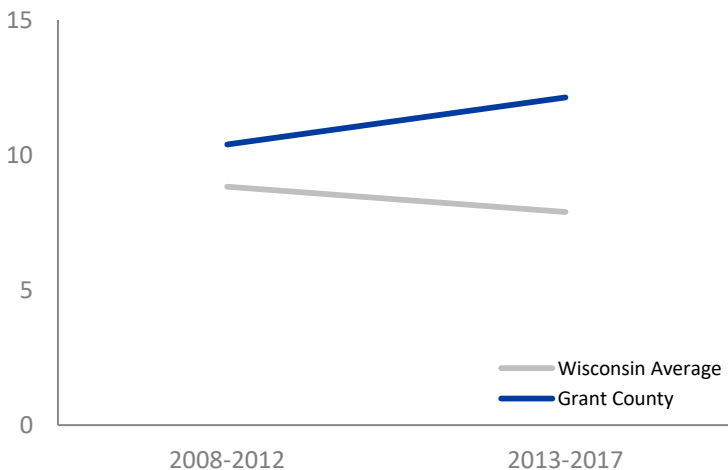
● **6.4%**  
**CHILDHOOD LEAD POISONING**  
 PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$   
 WISCONSIN: 5.0%

● **52.0%**  
**RADON**  
 PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$   
 WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

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

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



## 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter (µg/dL). The Centers for Disease Control and Prevention defines lead poisoning at or above 5 µg/dL.

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

## RADON

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

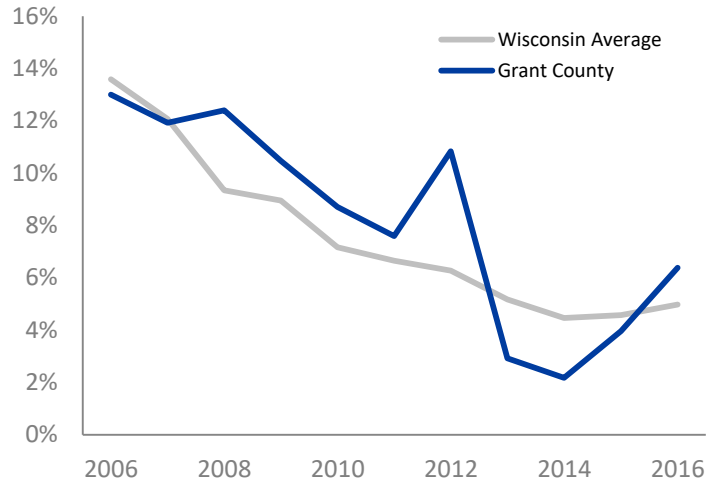
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

## CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD ≥5 µg/dL

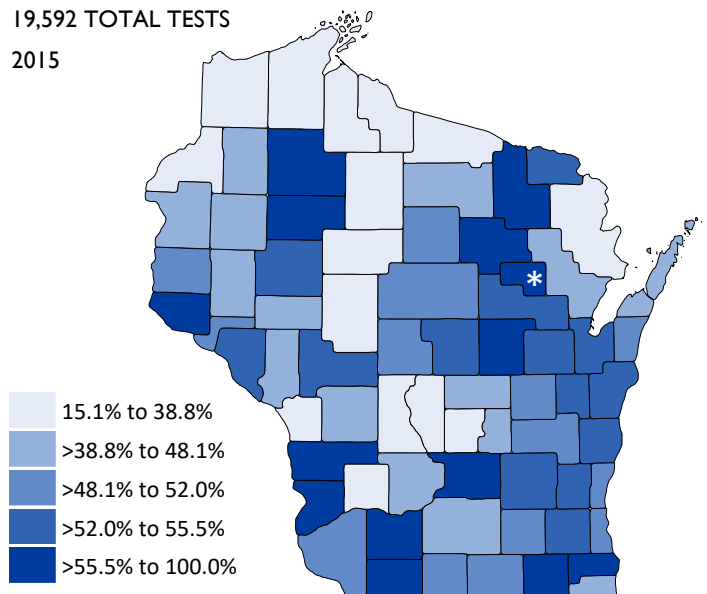


## RADON

PERCENT OF TESTS WITH RESULTS ≥4 pCi/L

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

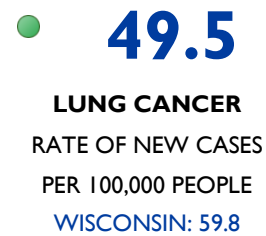
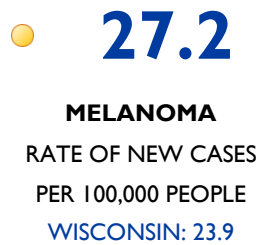
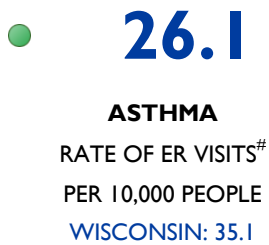




# HEALTH CONDITIONS GRANT COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.



● Above state value

● At or below state value

^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



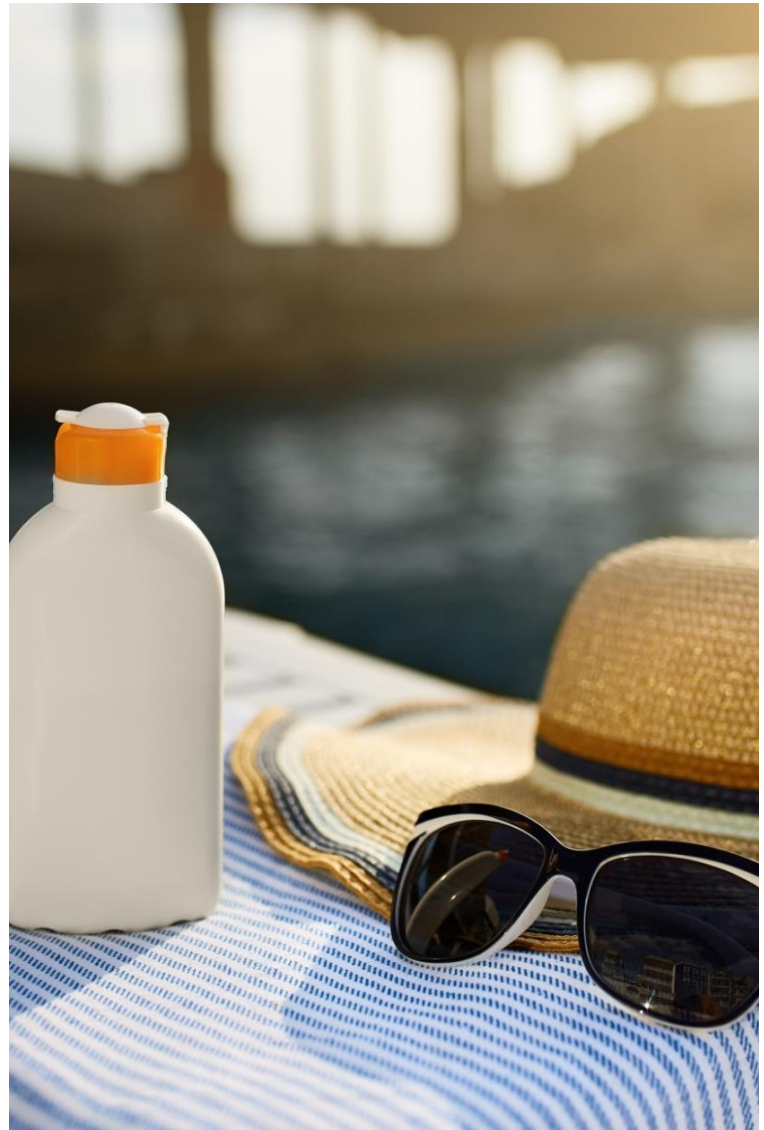
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

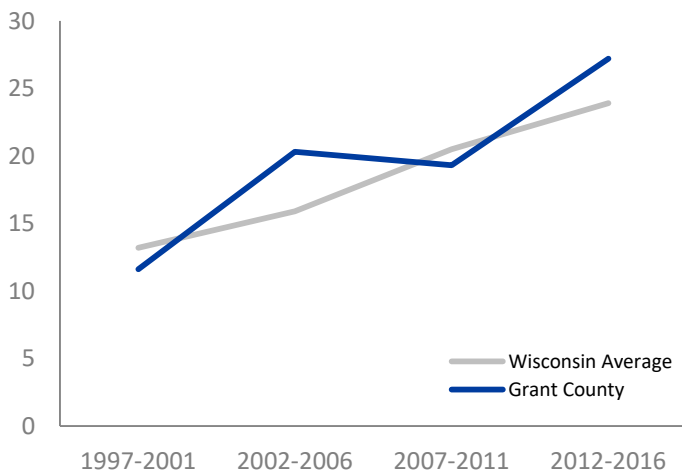
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



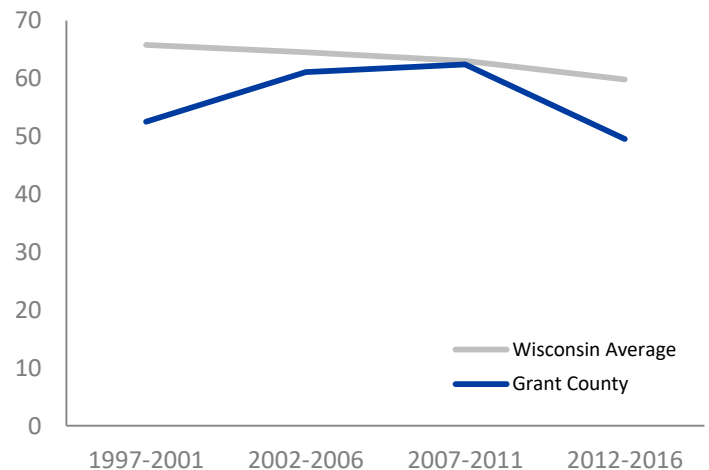
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE GRANT COUNTY

## BACKGROUND

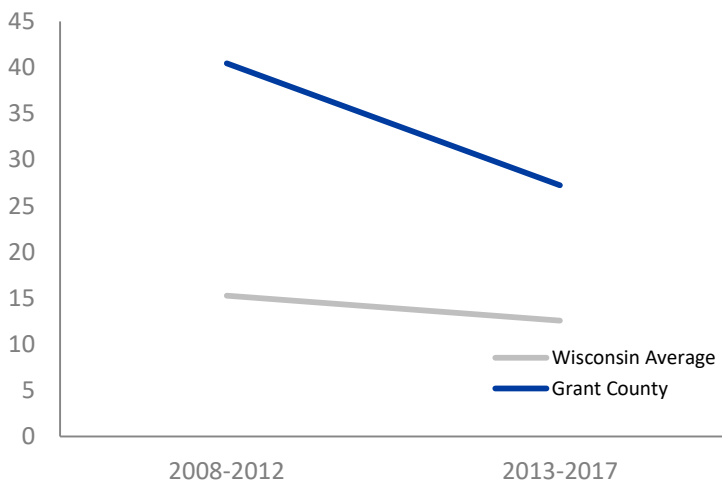
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **27.2**  
**HEAT STRESS**  
 RATE OF ER VISITS  
 PER 100,000 PEOPLE  
 WISCONSIN: 12.6

● **57.7**  
**LYME DISEASE**  
 RATE OF CASES  
 PER 100,000 PEOPLE  
 WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

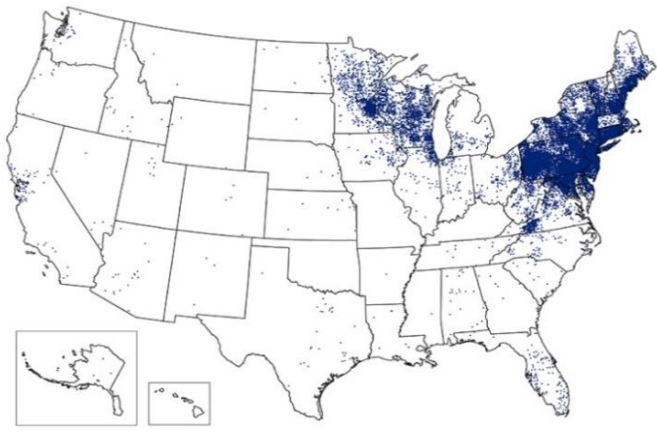
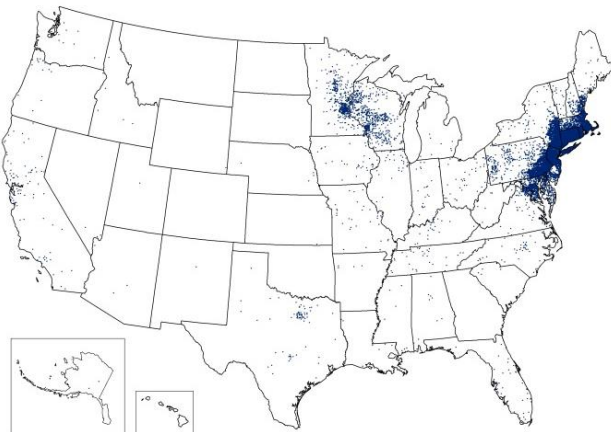
## LYME DISEASE AT THE NATIONAL LEVEL

OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001

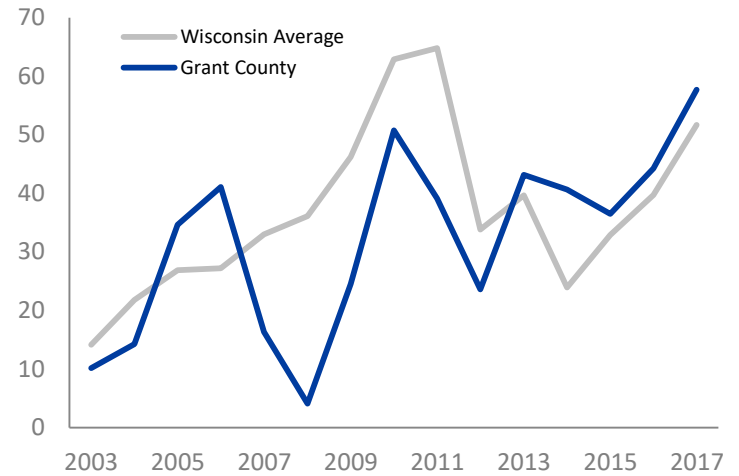
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

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

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

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

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

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

Bureau of Environmental and Occupational Health  
Wisconsin Department of Health Services | Division of Public Health

[dhstracking@wi.gov](mailto:dhstracking@wi.gov) | [dhs.wisconsin.gov/epht](https://dhs.wisconsin.gov/epht)  
MAY 2019 | P-00719 (Rev. 05/2019)





# GREEN COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

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

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# GREEN COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

● 96.9% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

● 1.6 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

● 16.6% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

● 3.2% | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

● 4.6 | Rate of ER visits per 100,000 people  
Wisconsin: 7.9

### Childhood Lead Poisoning

● 4.0% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

● 54.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

● 27.5 | Rate of ER visits per 10,000 people<sup>#</sup>  
Wisconsin: 35.1

### Melanoma

● 25.1 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

● 59.7 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

● 19.6 | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

● 29.9 | Crude rate per 100,000 people  
Wisconsin: 51.7

● Above state value  
● At or below state value

\* Above state value preferred for this measure  
^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

Data details on next page



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Year displayed:** 2016

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

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

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

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

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

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

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

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

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH GREEN COUNTY

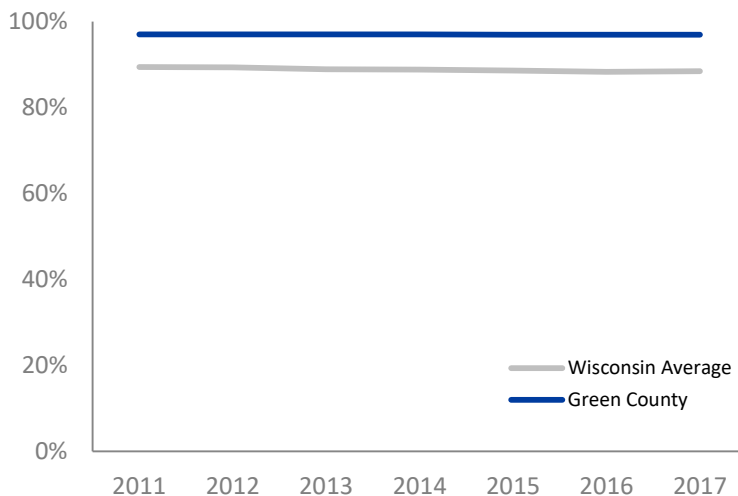
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **96.9%**

**FLUORIDE**  
PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
WISCONSIN: 88.4%

● **1.6**

**ALCOHOL OUTLET DENSITY**  
RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



### ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small 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 [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

### ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



|                             |                                |
|-----------------------------|--------------------------------|
| <b>117</b>                  | <b>16,948</b>                  |
| LICENSES IN<br>GREEN COUNTY | TOTAL LICENSES IN<br>WISCONSIN |





# PRIVATE WATER QUALITY GREEN 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 displayed in this report. Users can find public water quality data on our data portal.

● **16.6%**

**NITRATE**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 mg/L  
**WISCONSIN: 11.0%**

● **3.2%**

**ARSENIC**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 µg/L  
**WISCONSIN: 6.0%**

● Above state value   ● At or below state value   ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
 1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS GREEN 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.

● **4.6**  
**CARBON MONOXIDE POISONING**  
 RATE OF ER VISITS RELATED TO CO POISONING PER 100,000  
 WISCONSIN: 7.9

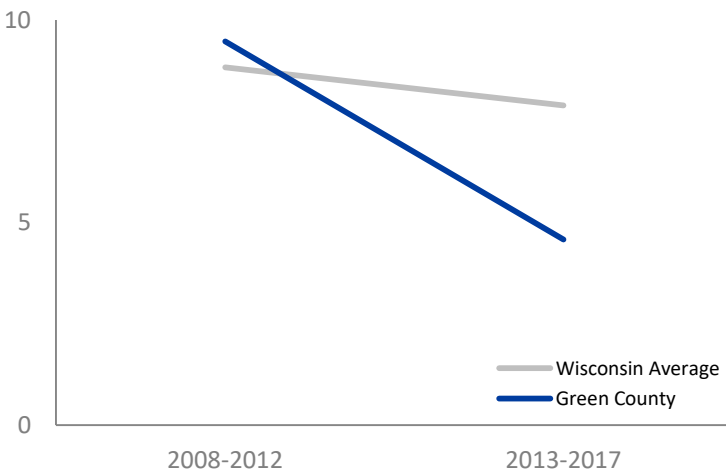
● **4.0%**  
**CHILDHOOD LEAD POISONING**  
 PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$   
 WISCONSIN: 5.0%

● **54.0%**  
**RADON**  
 PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$   
 WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

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

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



## 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter (µg/dL). The Centers for Disease Control and Prevention defines lead poisoning at or above 5 µg/dL.

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

## RADON

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

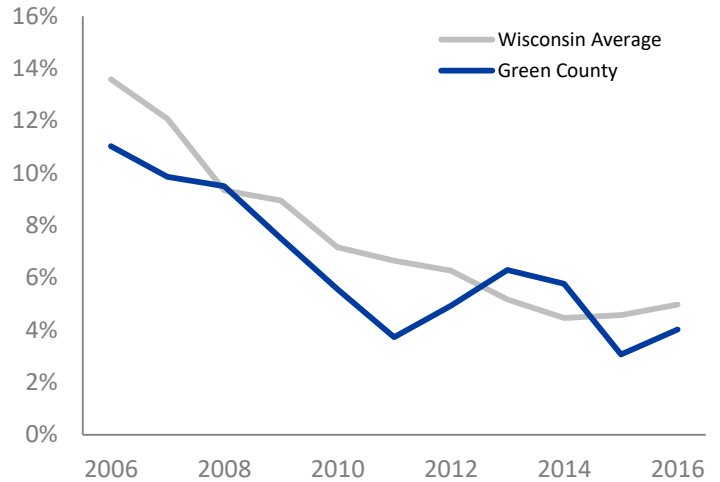
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

## CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD ≥5 µg/dL

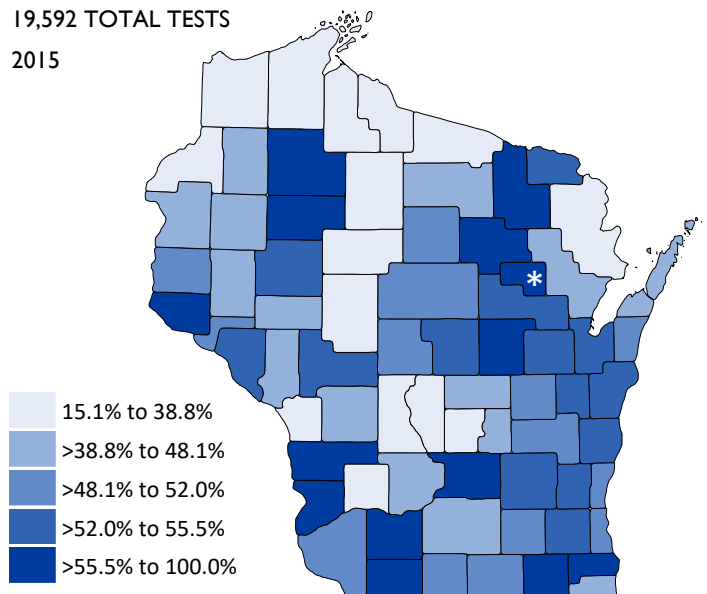


## RADON

PERCENT OF TESTS WITH RESULTS ≥4 pCi/L

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

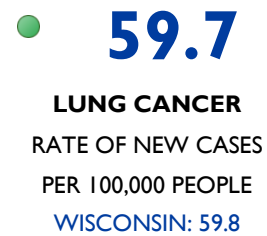
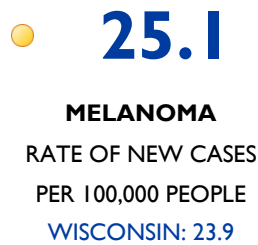
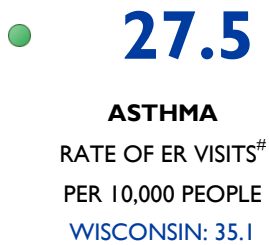




# HEALTH CONDITIONS GREEN COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.



● Above state value

● At or below state value

^ Suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
 2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

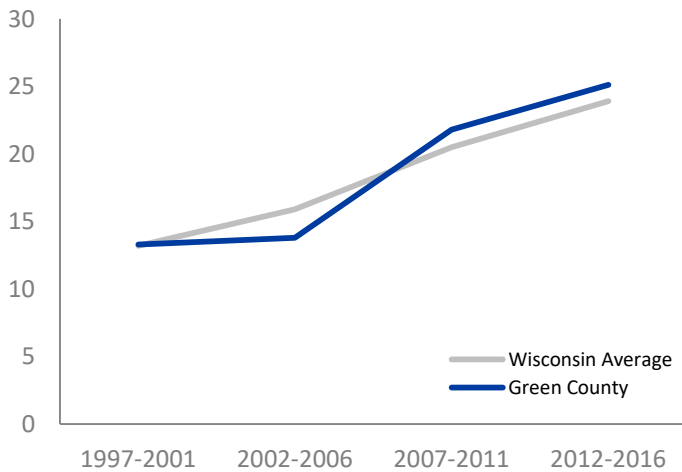
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



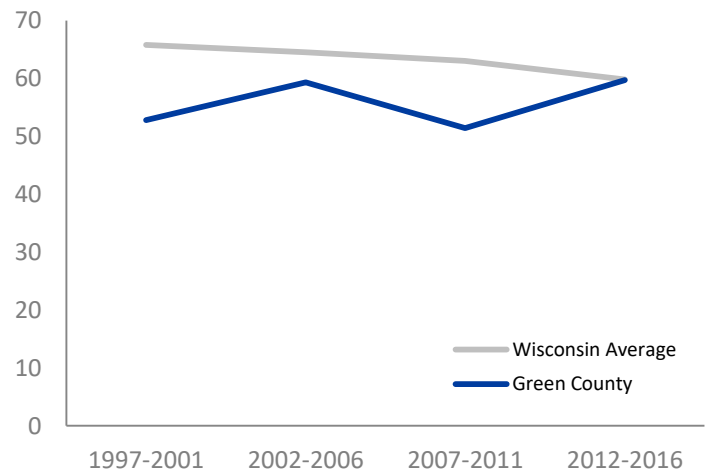
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE GREEN COUNTY

## BACKGROUND

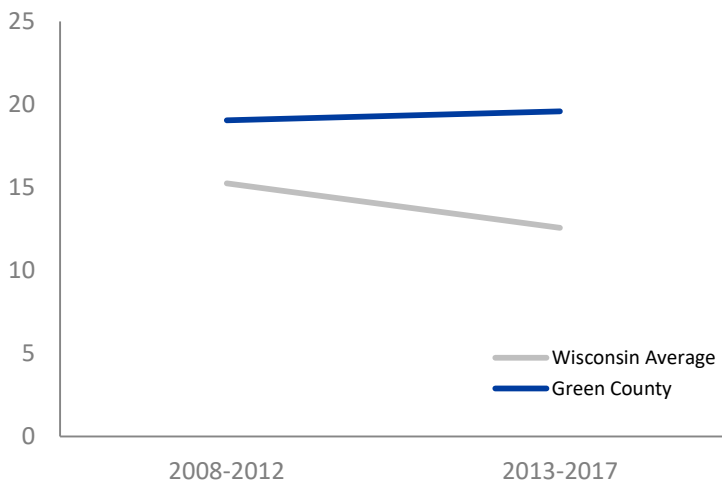
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **19.6**  
**HEAT STRESS**  
 RATE OF ER VISITS  
 PER 100,000 PEOPLE  
 WISCONSIN: 12.6

● **29.9**  
**LYME DISEASE**  
 RATE OF CASES  
 PER 100,000 PEOPLE  
 WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

## LYME DISEASE AT THE NATIONAL LEVEL

OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001



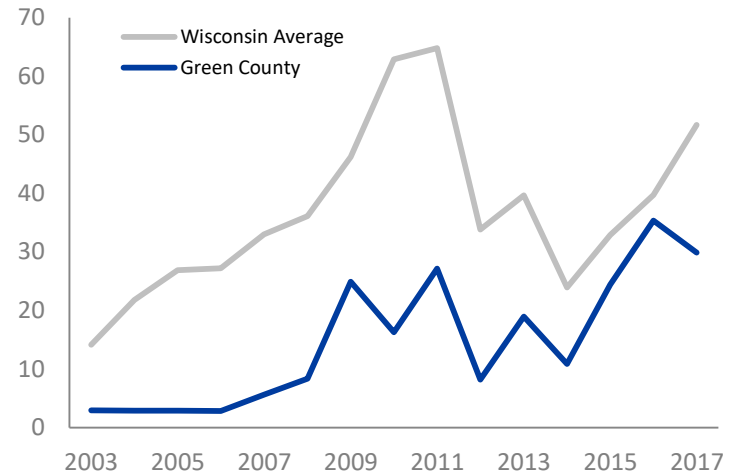
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

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

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

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

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

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

Bureau of Environmental and Occupational Health  
Wisconsin Department of Health Services | Division of Public Health

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MAY 2019 | P-00719 (Rev. 05/2019)





# GREEN LAKE COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

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

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# GREEN LAKE COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

● 56.0% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

● 2.2 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

● 14.5% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

● 1.1% | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

● 12.4 | Rate of ER visits per 100,000 people  
Wisconsin: 8.4

### Childhood Lead Poisoning

● 8.0% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

● 40.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

● 26.1 | Rate of ER visits per 10,000 people<sup>#</sup>  
Wisconsin: 35.1

### Melanoma

● 26.8 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

● 56.7 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

● 17.1 | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

● 101.3 | Crude rate per 100,000 people  
Wisconsin: 51.7

● Above state value  
● At or below state value

\* Above state value preferred for this measure  
^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

Data details on next page



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Year displayed:** 2016

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

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

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

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

**Years displayed:** 2008-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

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

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

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

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH GREEN LAKE COUNTY

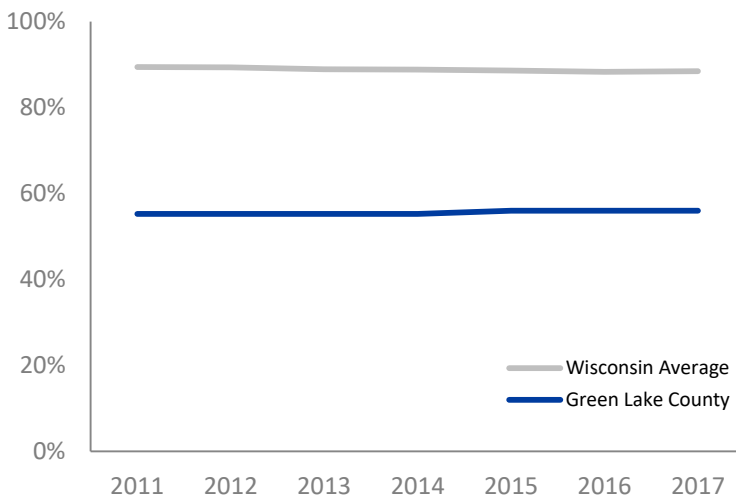
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **56.0%**

**FLUORIDE**  
PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
WISCONSIN: 88.4%

● **2.2**

**ALCOHOL OUTLET DENSITY**  
RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



## ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

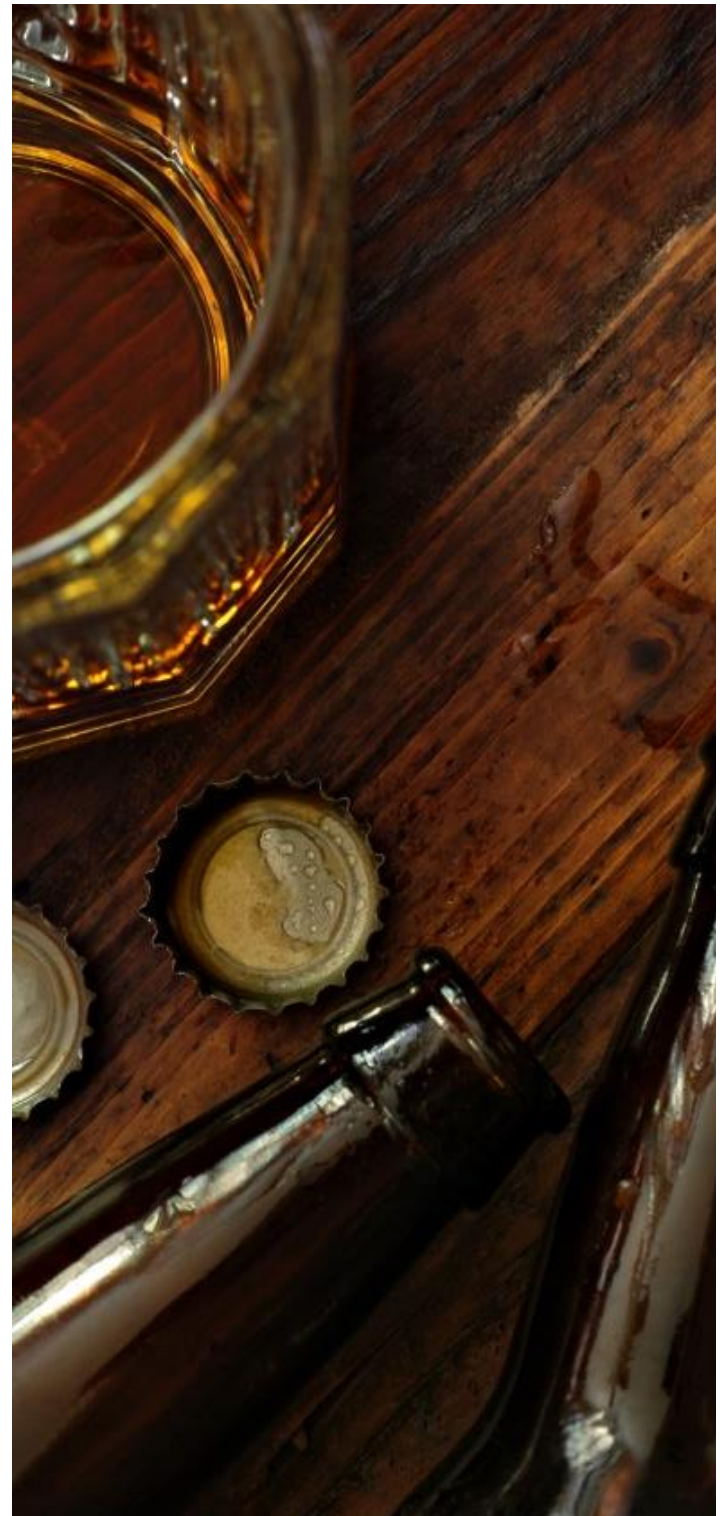
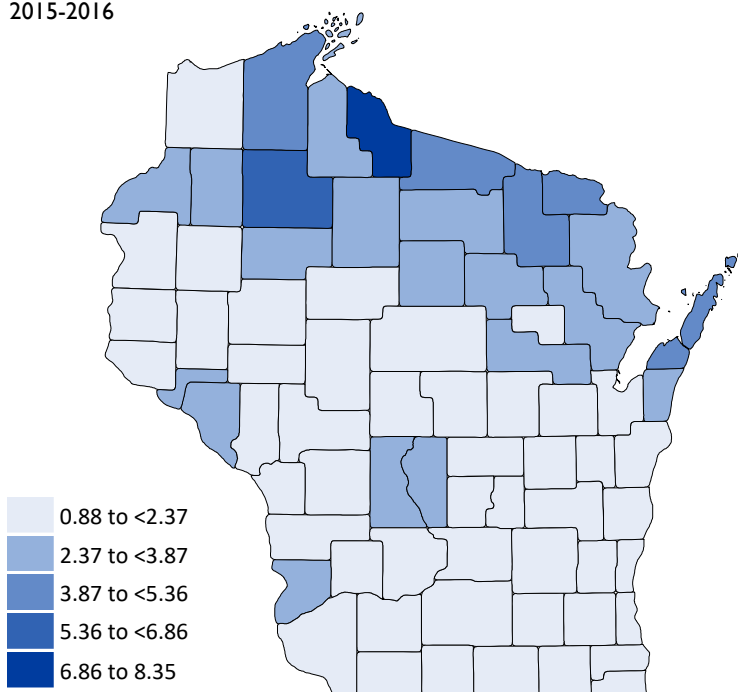
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

## ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



# 82

LICENSES IN  
GREEN LAKE COUNTY

# 16,948

TOTAL LICENSES IN  
WISCONSIN





# PRIVATE WATER QUALITY GREEN LAKE 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 displayed in this report. Users can find public water quality data on our data portal.

● **14.5%**

**NITRATE**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 mg/L  
**WISCONSIN: 11.0%**

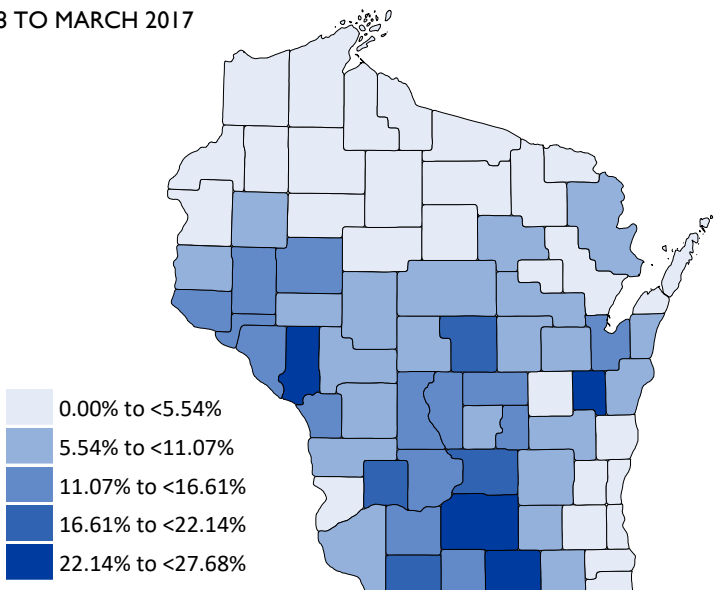
● **1.1%**

**ARSENIC**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 µg/L  
**WISCONSIN: 6.0%**

● Above state value   ● At or below state value   ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
 1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS GREEN LAKE 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.

● **12.4**

**CARBON MONOXIDE POISONING**

RATE OF ER VISITS RELATED TO CO POISONING PER 100,000

WISCONSIN: 8.4

● **8.0%**

**CHILDHOOD LEAD POISONING**

PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$

WISCONSIN: 5.0%

● **40.0%**

**RADON**

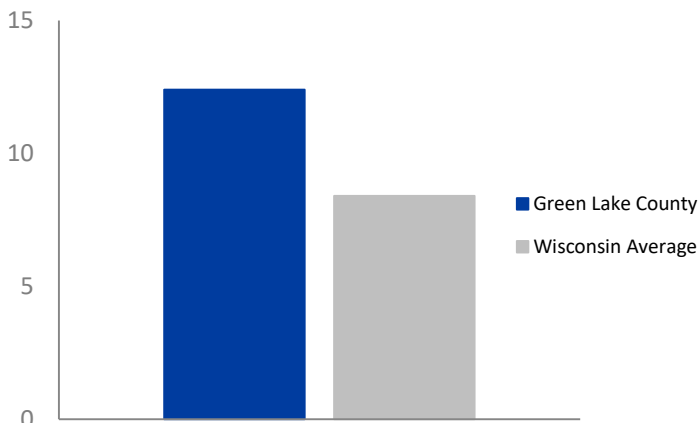
PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$

WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE  
2008-2017



## CARBON MONOXIDE POISONING

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

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



### 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter ( $\mu\text{g}/\text{dL}$ ). The Centers for Disease Control and Prevention defines lead poisoning at or above 5  $\mu\text{g}/\text{dL}$ .

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

### RADON

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

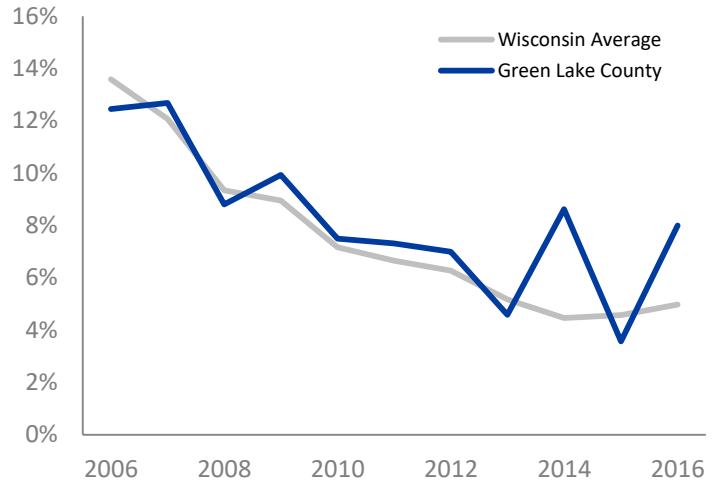
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

### CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g}/\text{dL}$

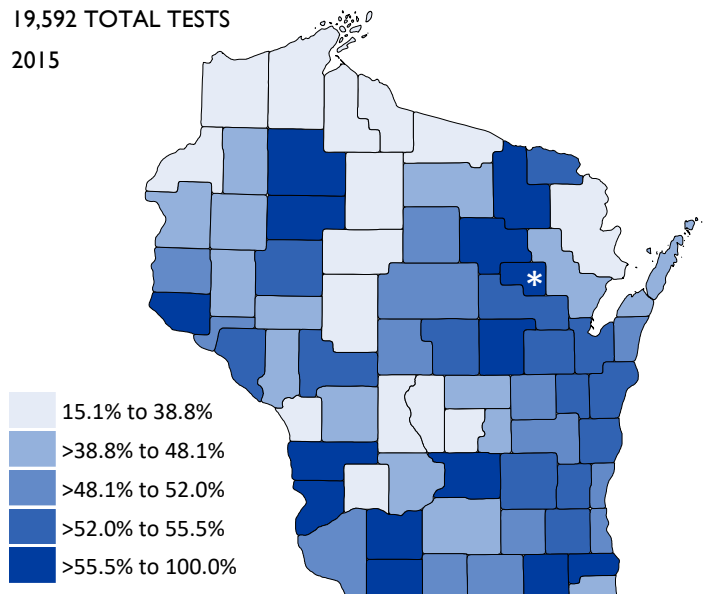


### RADON

PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

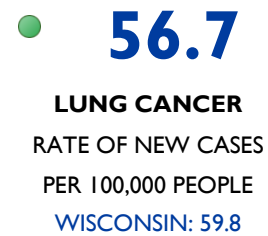
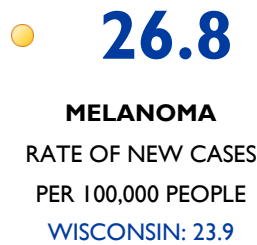
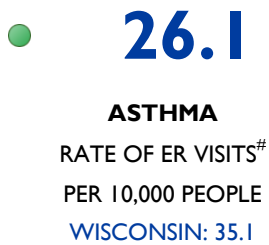




# HEALTH CONDITIONS GREEN LAKE COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.



● Above state value

● At or below state value

^ Suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
 2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



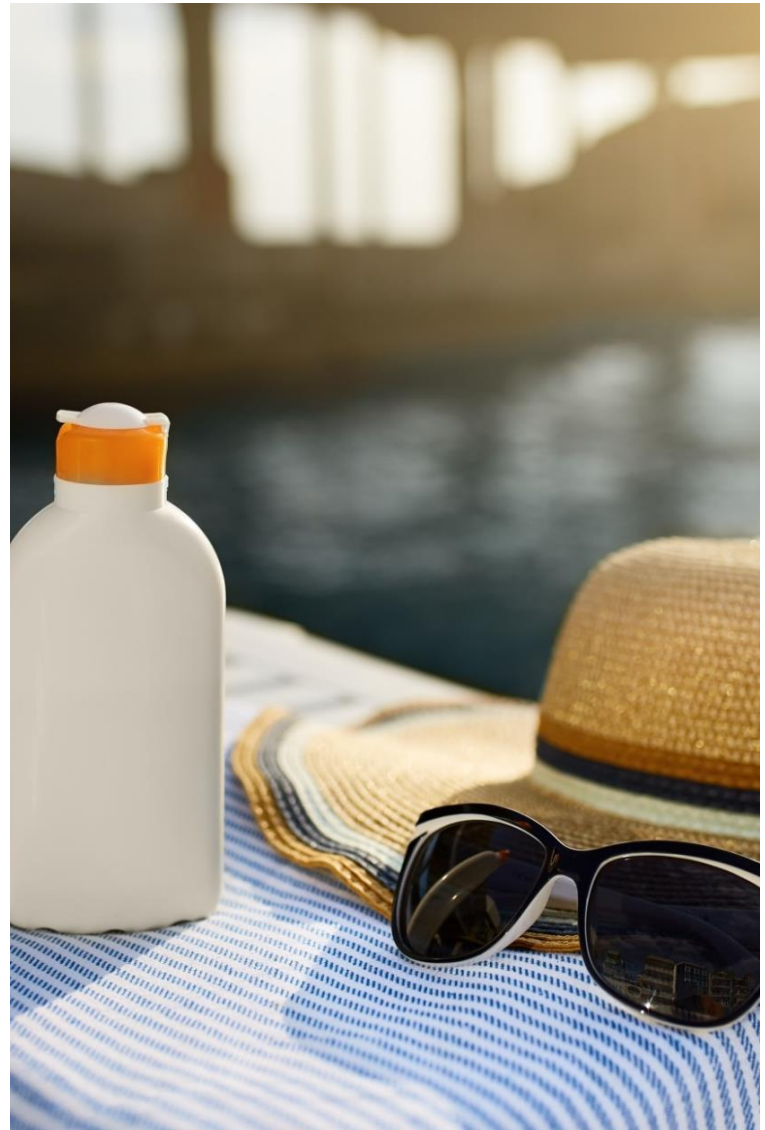
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

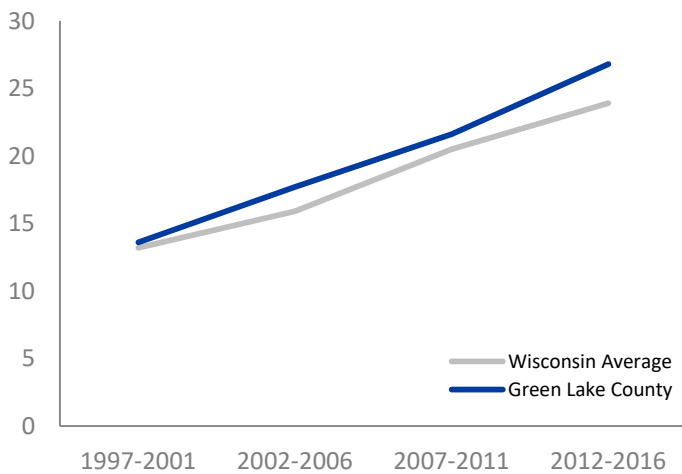
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



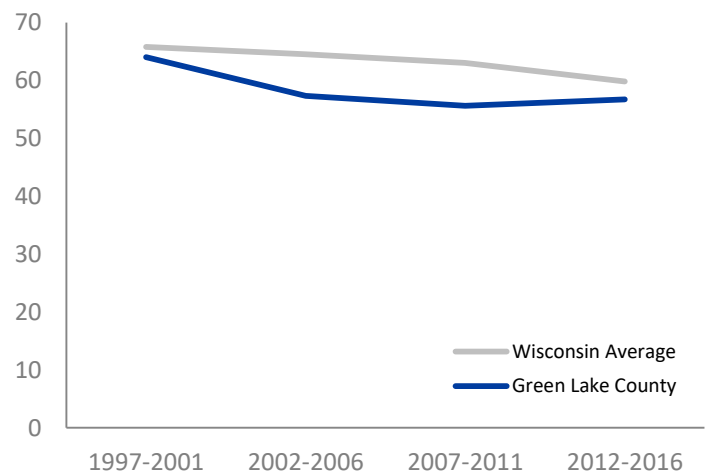
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE GREEN LAKE COUNTY

## BACKGROUND

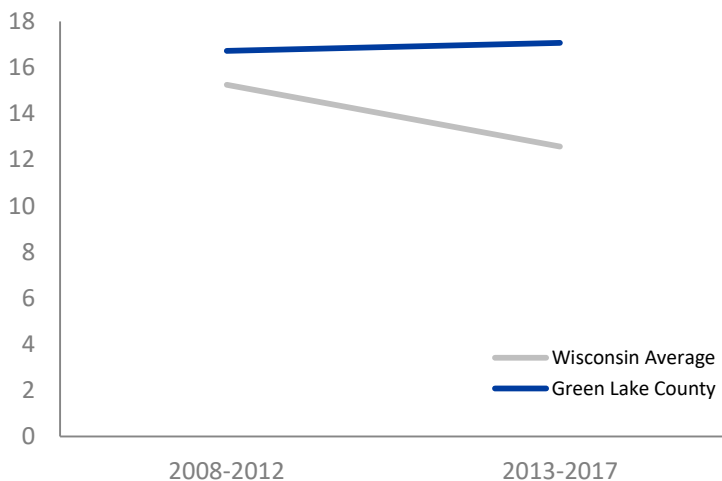
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **17.1**  
**HEAT STRESS**  
 RATE OF ER VISITS  
 PER 100,000 PEOPLE  
 WISCONSIN: 12.6

● **101.3**  
**LYME DISEASE**  
 RATE OF CASES  
 PER 100,000 PEOPLE  
 WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

## LYME DISEASE AT THE NATIONAL LEVEL

OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001



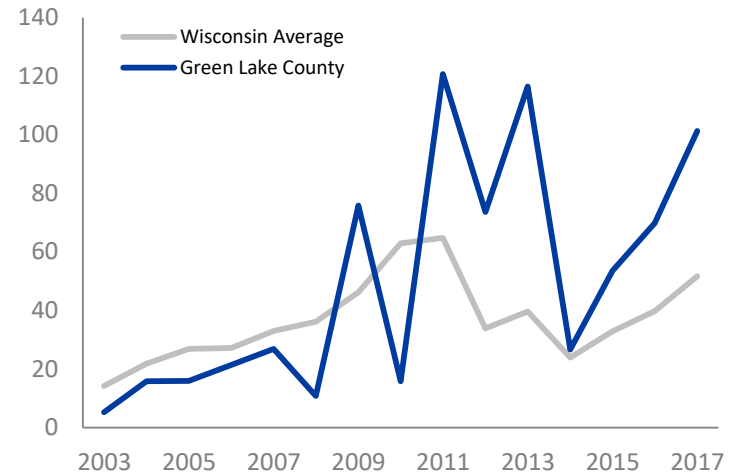
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population. For the majority of Profiles, these data were averaged over five years (2013-2017). For this county's Profile, that five-year average was suppressed. To eliminate the suppression in this Profile, these data were instead averaged over 10 years (2008-2017).

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

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

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

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

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

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

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Wisconsin Department of Health Services | Division of Public Health

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MAY 2019 | P-00719 (Rev. 05/2019)





# IOWA COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

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

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# IOWA COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

● 73.7% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

● 2.3 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

● 12.4% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

● 3.0% | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

● 6.7 | Rate of ER visits per 100,000 people  
Wisconsin: 7.9

### Childhood Lead Poisoning

● 5.2% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

● 62.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

● 17.8 | Rate of ER visits per 10,000 people<sup>#</sup>  
Wisconsin: 35.1

### Melanoma

● 25.9 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

● 59.8 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

● 17.8 | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

● 63.3 | Crude rate per 100,000 people  
Wisconsin: 51.7

● Above state value  
● At or below state value

\* Above state value preferred for this measure  
^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

[Data details on next page](#)



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Year displayed:** 2016

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

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

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

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

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

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

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

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

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH IOWA COUNTY

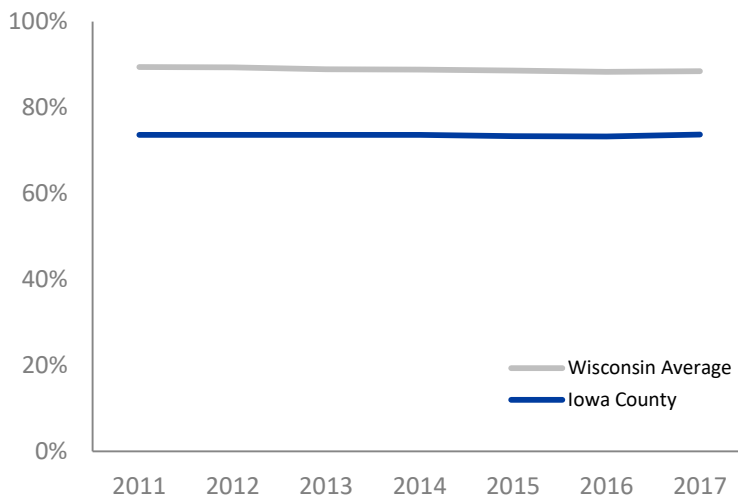
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **73.7%**

**FLUORIDE**  
PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
WISCONSIN: 88.4%

● **2.3**

**ALCOHOL OUTLET DENSITY**  
RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



## ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

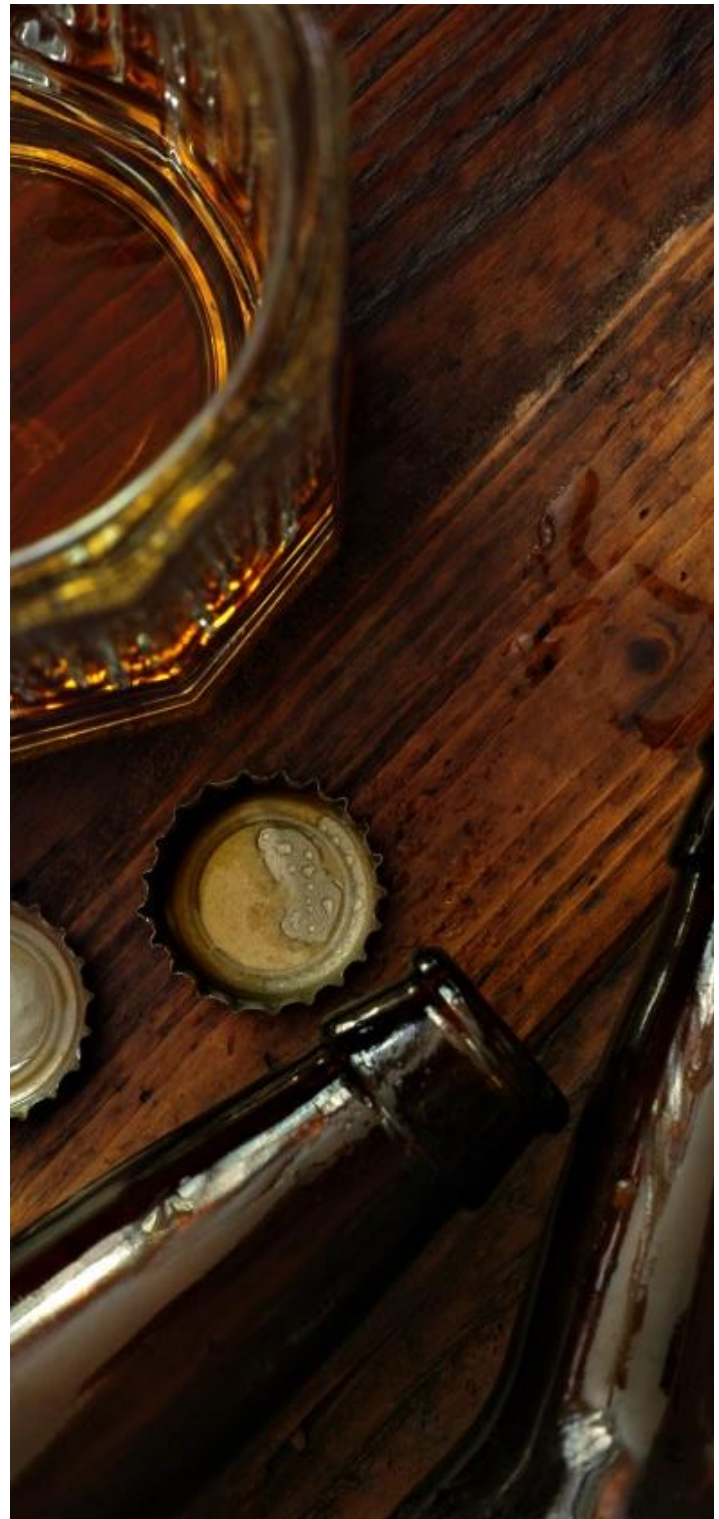
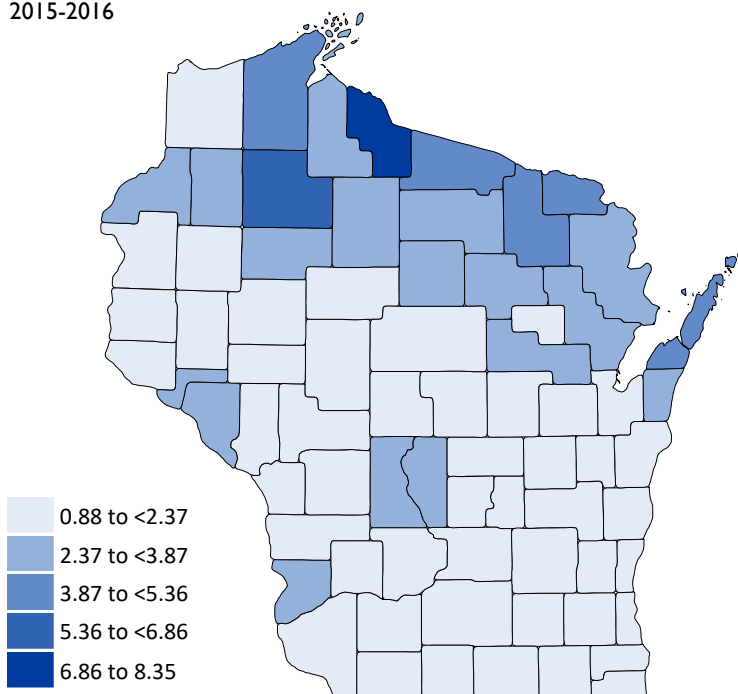
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

## ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



|                            |                                |
|----------------------------|--------------------------------|
| <b>109</b>                 | <b>16,948</b>                  |
| LICENSES IN<br>IOWA COUNTY | TOTAL LICENSES IN<br>WISCONSIN |





# PRIVATE WATER QUALITY IOWA 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 displayed in this report. Users can find public water quality data on our data portal.

● **12.4%**

**NITRATE**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 mg/L  
**WISCONSIN: 11.0%**

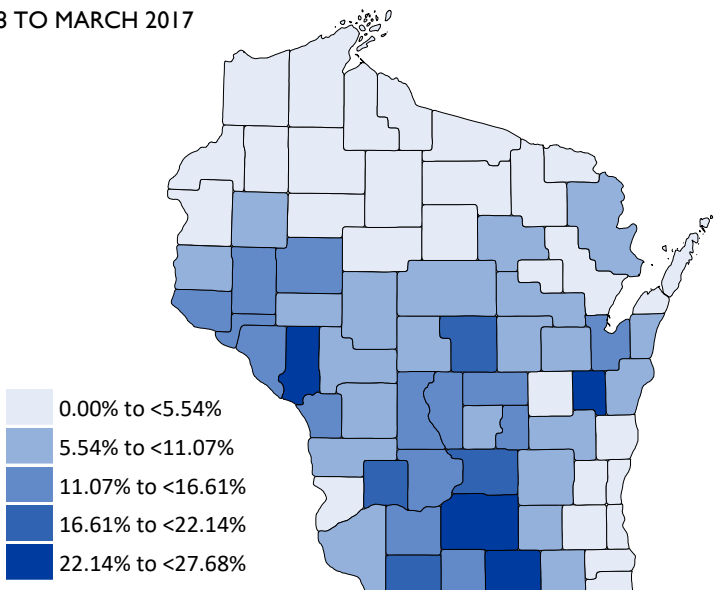
● **3.0%**

**ARSENIC**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 µg/L  
**WISCONSIN: 6.0%**

● Above state value   ● At or below state value   ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
 1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS IOWA 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.

● **6.7**  
**CARBON MONOXIDE POISONING**  
 RATE OF ER VISITS RELATED TO CO POISONING PER 100,000  
 WISCONSIN: 7.9

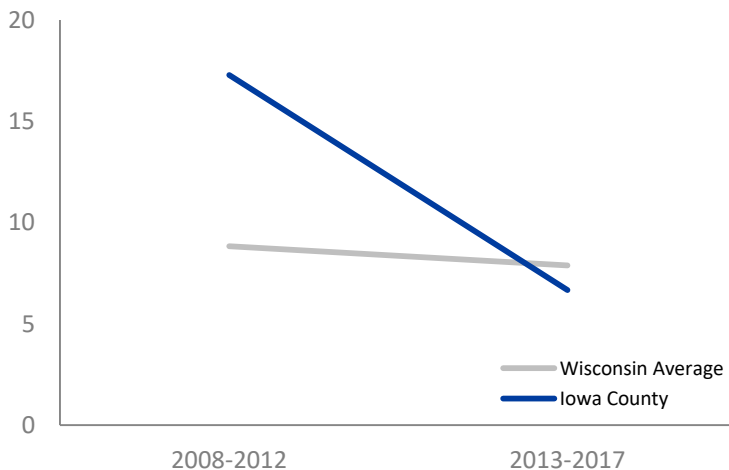
● **5.2%**  
**CHILDHOOD LEAD POISONING**  
 PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$   
 WISCONSIN: 5.0%

● **62.0%**  
**RADON**  
 PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$   
 WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

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

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



## 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter (µg/dL). The Centers for Disease Control and Prevention defines lead poisoning at or above 5 µg/dL.

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

## RADON

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

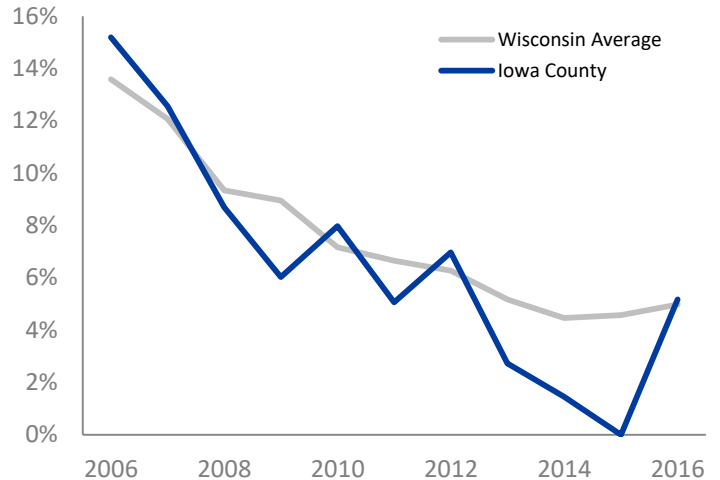
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

## CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD ≥5 µg/dL

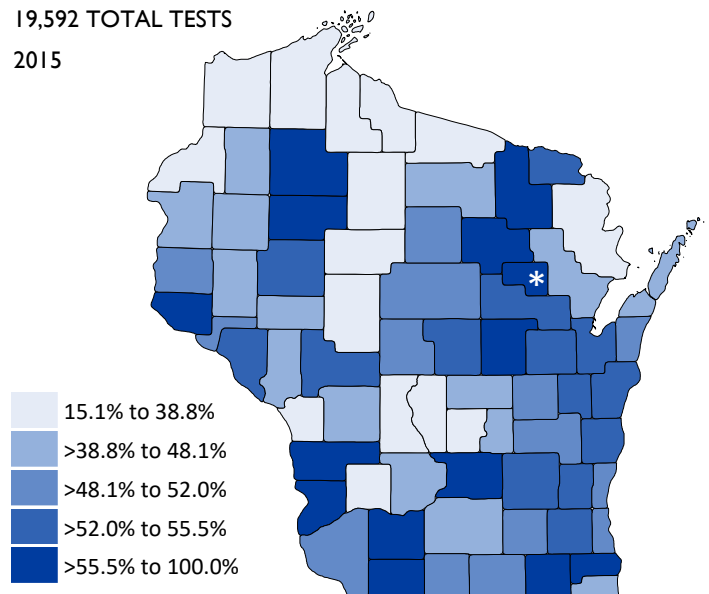


## RADON

PERCENT OF TESTS WITH RESULTS ≥4 pCi/L

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

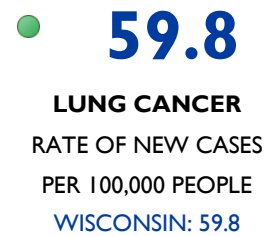
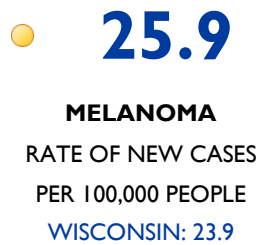
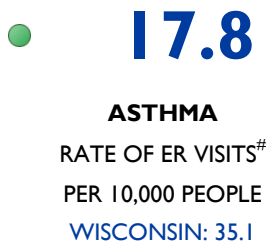




# HEALTH CONDITIONS IOWA COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.



● Above state value

● At or below state value

^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



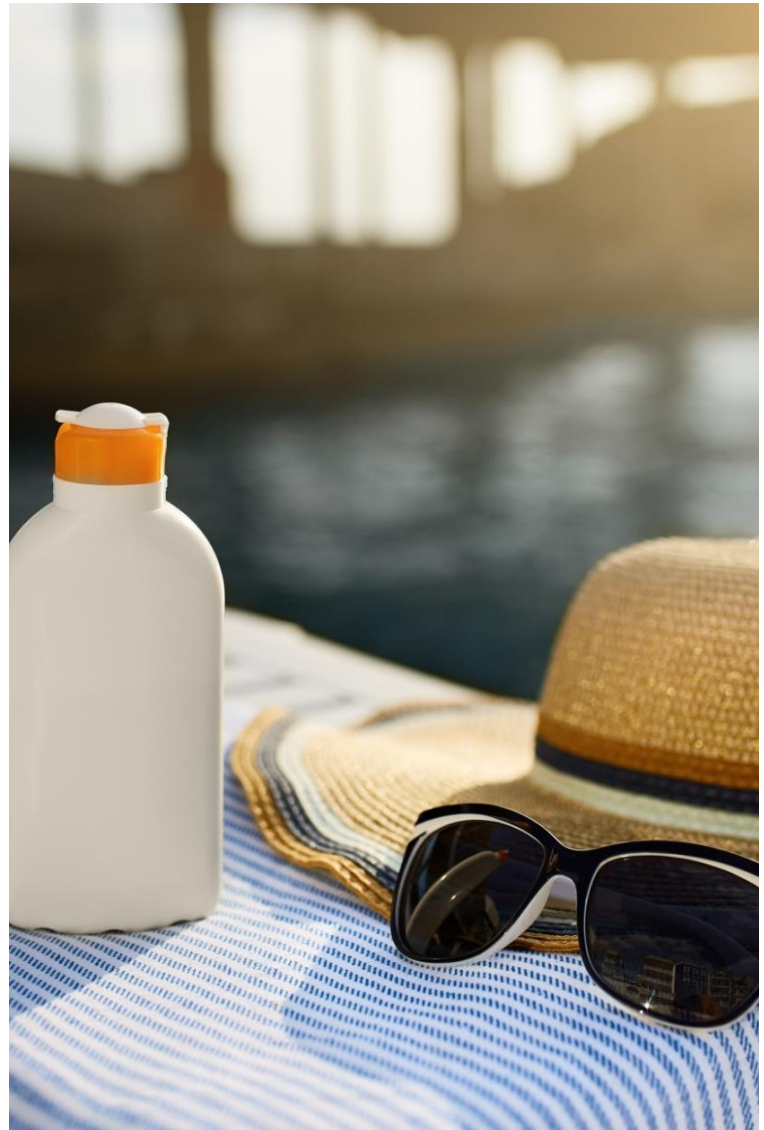
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

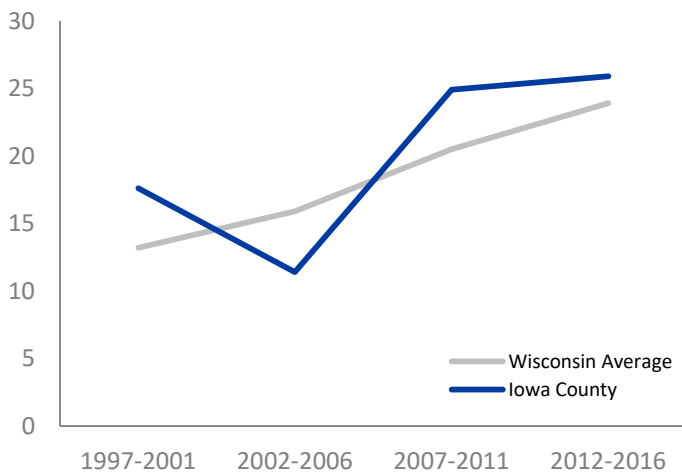
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



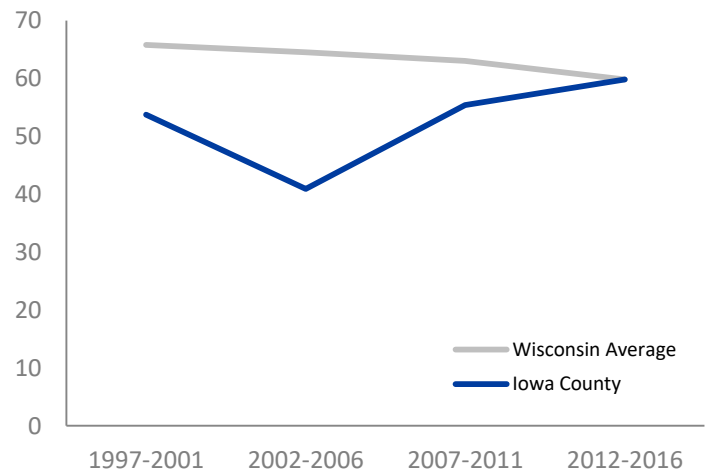
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE IOWA COUNTY

## BACKGROUND

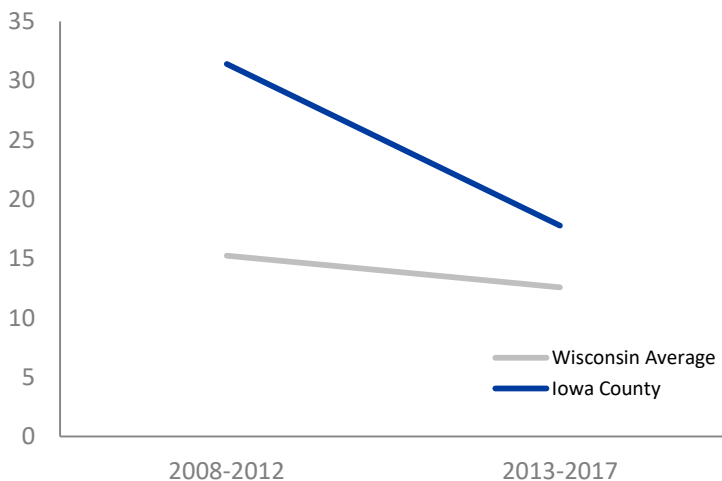
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **17.8**  
**HEAT STRESS**  
 RATE OF ER VISITS  
 PER 100,000 PEOPLE  
 WISCONSIN: 12.6

● **63.3**  
**LYME DISEASE**  
 RATE OF CASES  
 PER 100,000 PEOPLE  
 WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

## LYME DISEASE AT THE NATIONAL LEVEL

OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001



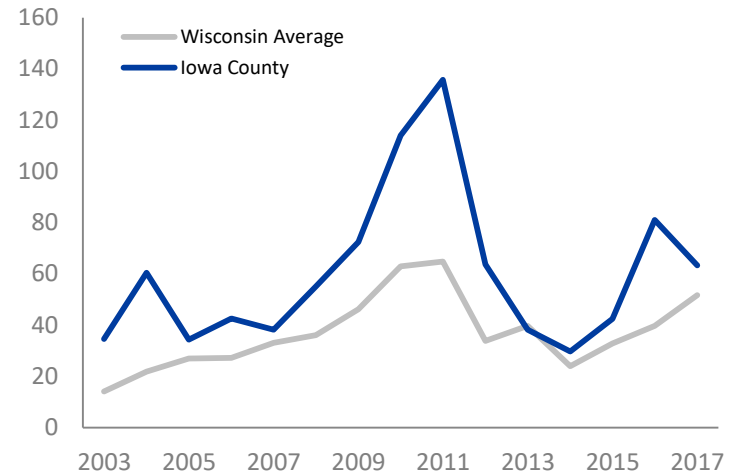
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

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

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

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

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

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

Bureau of Environmental and Occupational Health  
Wisconsin Department of Health Services | Division of Public Health

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MAY 2019 | P-00719 (Rev. 05/2019)





# IRON COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

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

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# IRON COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

● 0.0% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

● 8.4 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

● 0.5% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

● 0.0% | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

● 0.0 | Rate of ER visits per 100,000 people  
Wisconsin: 7.9

### Childhood Lead Poisoning

● 0.0% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

● 33.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

^ | Rate of ER visits per 10,000 people#  
Wisconsin: 35.1

### Melanoma

● 12.4 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

● 73.2 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

^ | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

● 0.0 | Crude rate per 100,000 people  
Wisconsin: 51.7

● Above state value  
● At or below state value

\* Above state value preferred for this measure  
^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

[Data details on next page](#)



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services  
**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

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

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

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point  
**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services  
**Year displayed:** 2016

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

**Source:** Radon and Indoor Air Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services  
**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services  
**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services  
**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services  
**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH IRON COUNTY

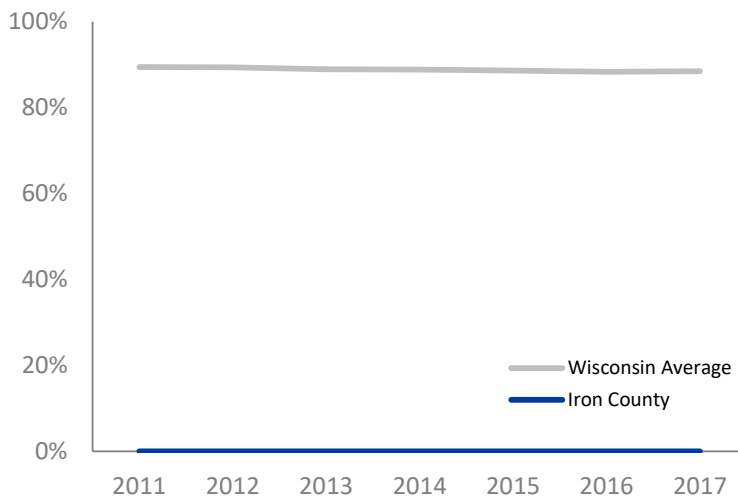
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **0.0%**  
**FLUORIDE**  
 PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
 WISCONSIN: 88.4%

● **8.4**  
**ALCOHOL OUTLET DENSITY**  
 RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
 WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
 ^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



## ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

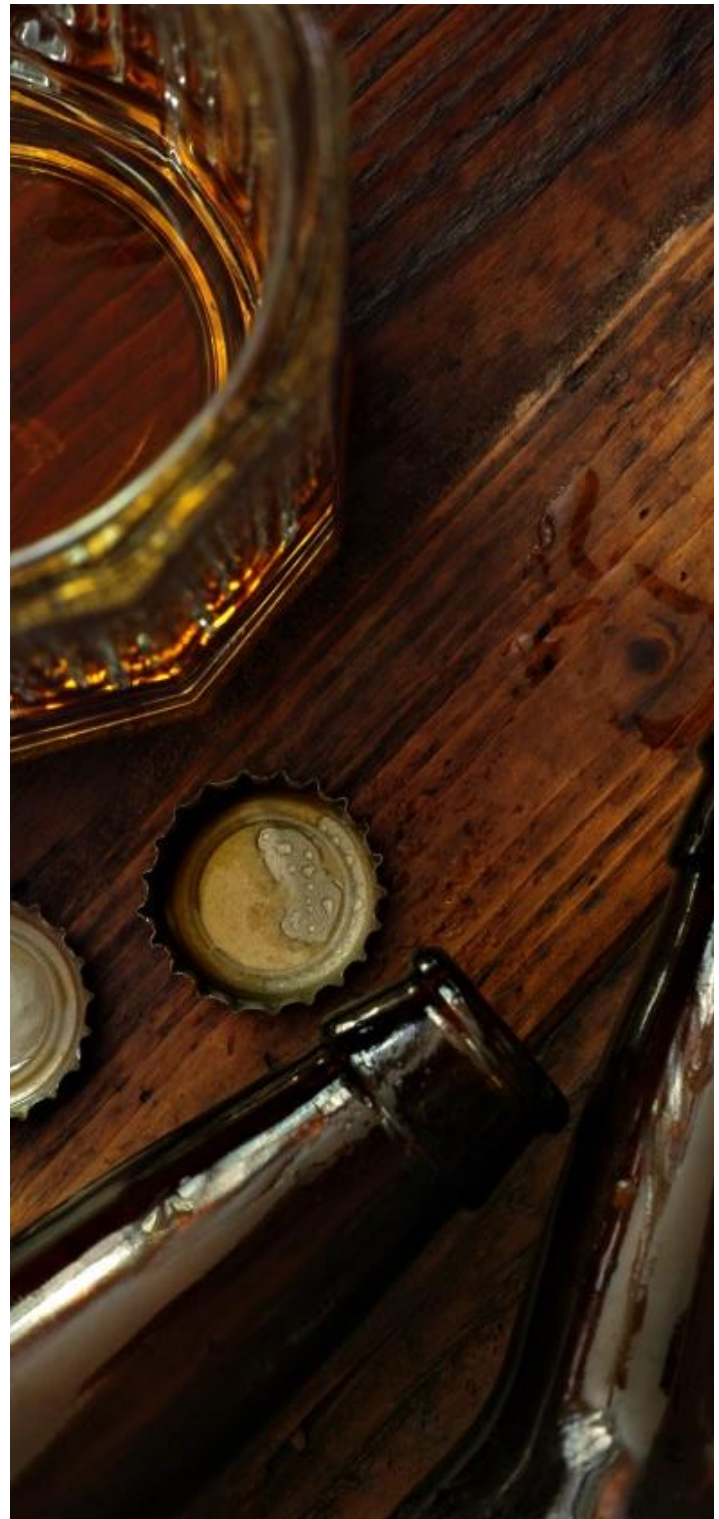
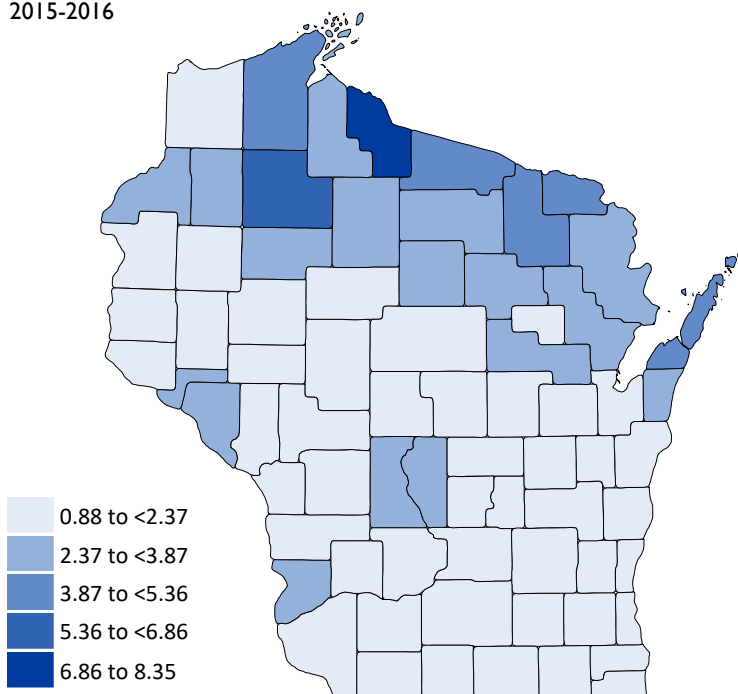
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

## ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



# 95

LICENSES IN  
IRON COUNTY

# 16,948

TOTAL LICENSES IN  
WISCONSIN





# PRIVATE WATER QUALITY IRON 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 displayed in this report. Users can find public water quality data on our data portal.

● **0.5%**

**NITRATE**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 mg/L  
**WISCONSIN: 11.0%**

● **0.0%**

**ARSENIC**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 µg/L  
**WISCONSIN: 6.0%**

● Above state value   ● At or below state value   ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
 1988 TO MARCH 2017



## 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 certain 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.





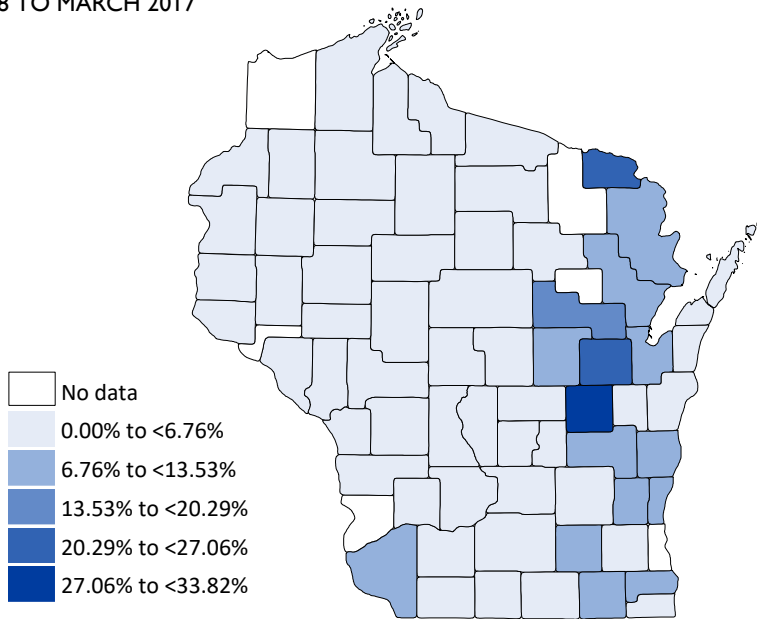
## ARSENIC IN PRIVATE WELLS

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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS IRON 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.

● **0.0**  
**CARBON MONOXIDE POISONING**  
 RATE OF ER VISITS RELATED TO CO POISONING PER 100,000  
 WISCONSIN: 7.9

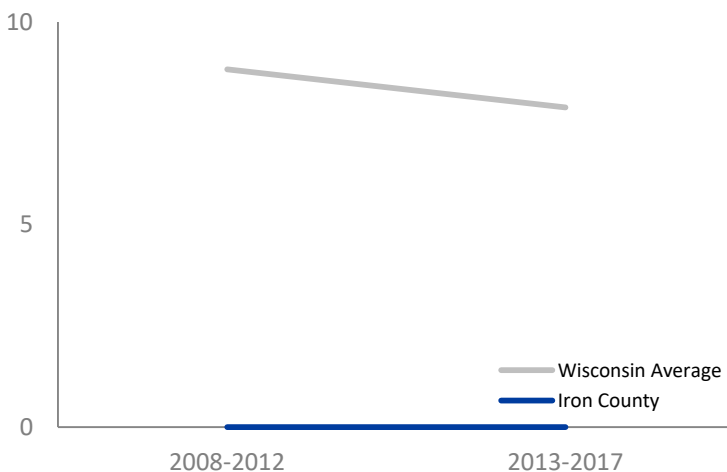
● **0.0%**  
**CHILDHOOD LEAD POISONING**  
 PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$   
 WISCONSIN: 5.0%

● **33.0%**  
**RADON**  
 PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$   
 WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

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

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



## 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter ( $\mu\text{g}/\text{dL}$ ). The Centers for Disease Control and Prevention defines lead poisoning at or above 5  $\mu\text{g}/\text{dL}$ .

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

## RADON

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

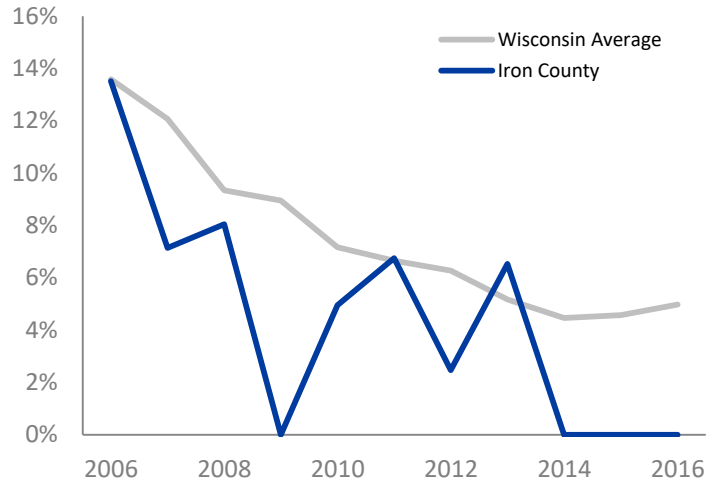
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

## CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g}/\text{dL}$

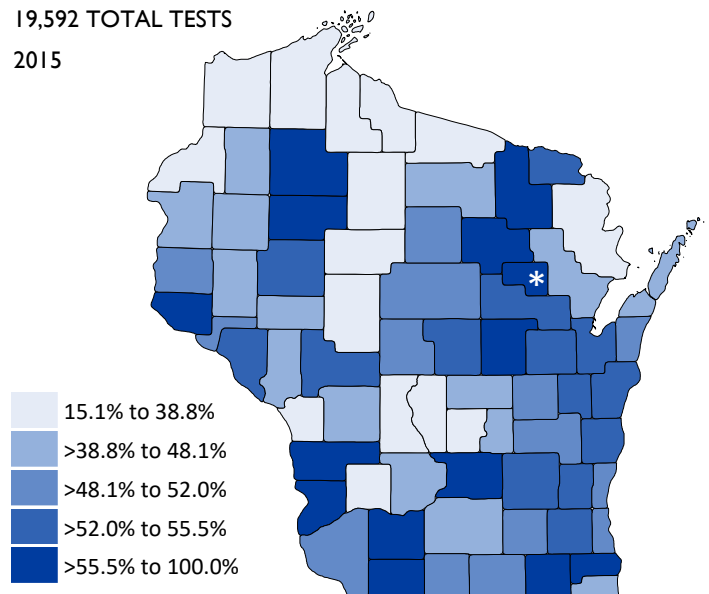


## RADON

PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.





# HEALTH CONDITIONS IRON COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.



**ASTHMA**  
RATE OF ER VISITS<sup>#</sup>  
PER 10,000 PEOPLE  
WISCONSIN: 35.1



**12.4**

**MELANOMA**  
RATE OF NEW CASES  
PER 100,000 PEOPLE  
WISCONSIN: 23.9



**73.2**

**LUNG CANCER**  
RATE OF NEW CASES  
PER 100,000 PEOPLE  
WISCONSIN: 59.8

● Above state value

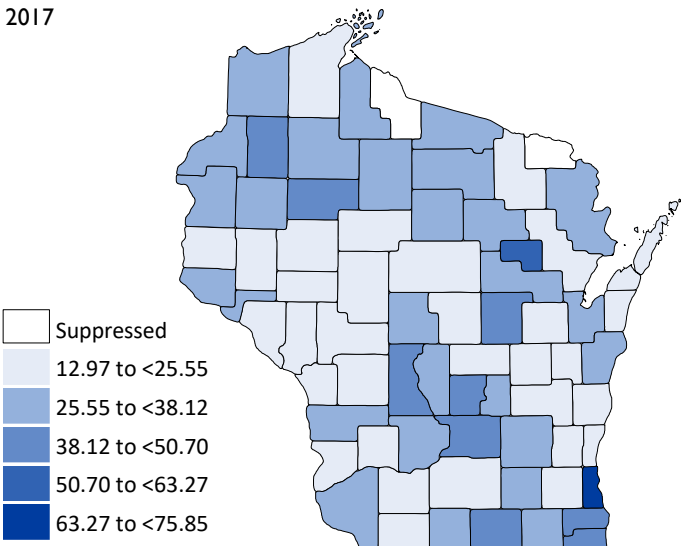
● At or below state value

^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



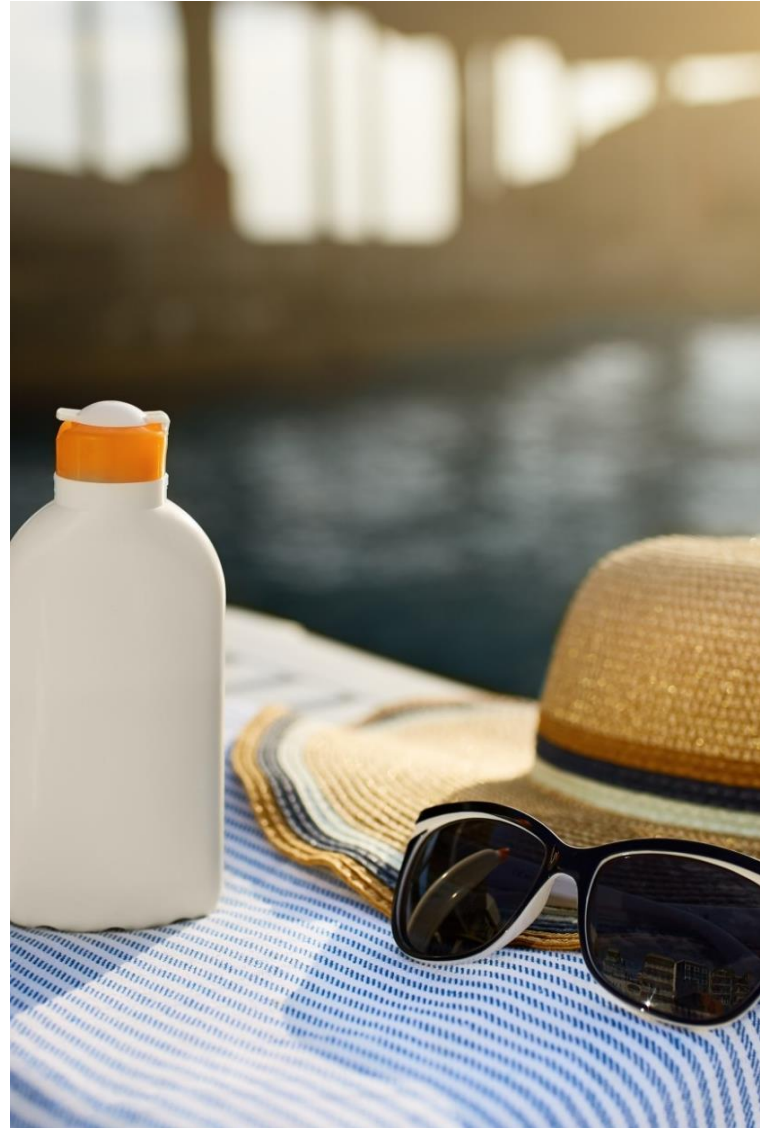
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

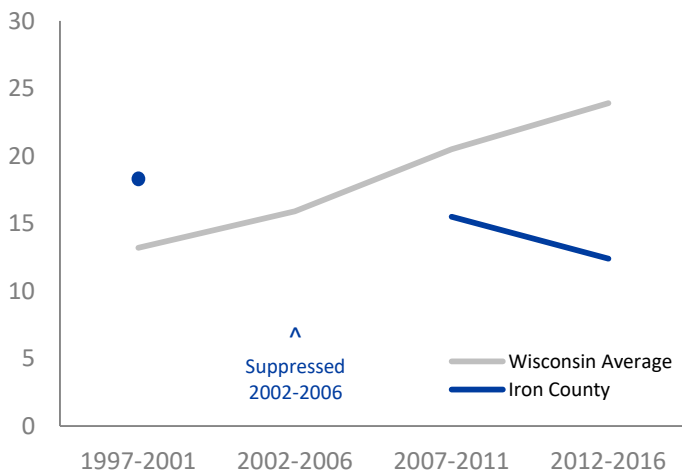
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



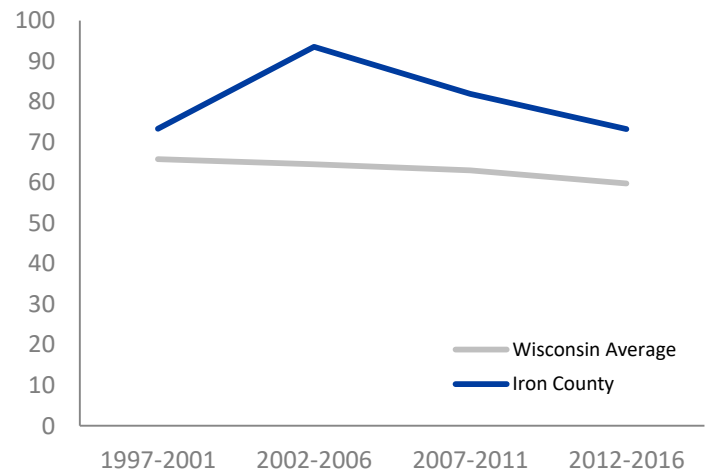
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE IRON COUNTY

## BACKGROUND

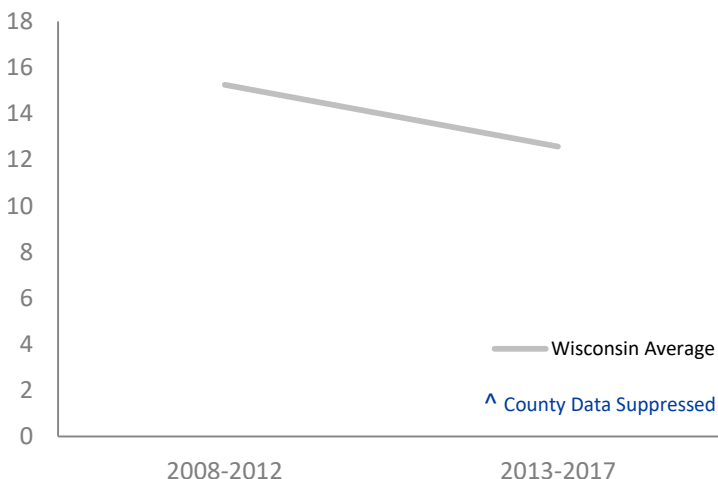
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



**HEAT STRESS**  
RATE OF ER VISITS  
PER 100,000 PEOPLE  
WISCONSIN: 12.6



**LYME DISEASE**  
RATE OF CASES  
PER 100,000 PEOPLE  
WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

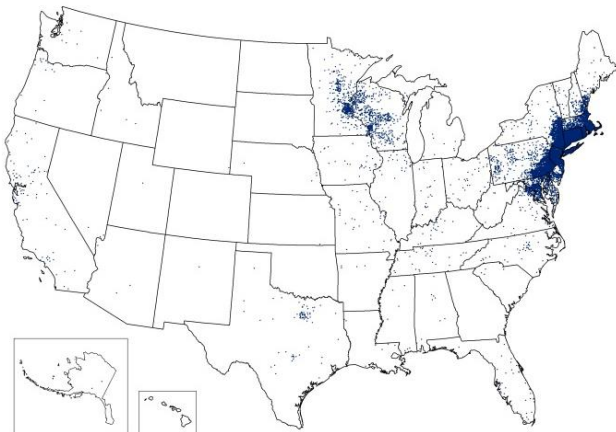
The criteria for reporting Lyme disease were revised again in 2012 to require reporting and follow-up only for cases with an erythema migrans (EM) rash. To compensate for this change, epidemiologists used a statistical method to estimate the true number of cases based on the number of total laboratory reports for each year since 2012.

## LYME DISEASE AT THE NATIONAL LEVEL

OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001



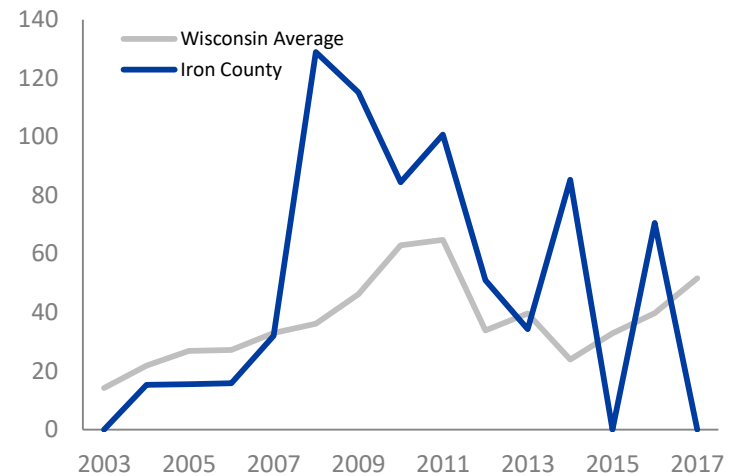
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

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

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

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

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

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

Bureau of Environmental and Occupational Health  
Wisconsin Department of Health Services | Division of Public Health

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MAY 2019 | P-00719 (Rev. 05/2019)





# JACKSON COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

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

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# JACKSON COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

● 40.5% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

● 2.3 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

● 9.5% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

● 0.0% | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

● 14.4 | Rate of ER visits per 100,000 people  
Wisconsin: 7.9

### Childhood Lead Poisoning

● 0.0% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

● 52.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

● 15.1 | Rate of ER visits per 10,000 people<sup>#</sup>  
Wisconsin: 35.1

### Melanoma

● 17.3 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

● 48.5 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

● 20.5 | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

● 209.5 | Crude rate per 100,000 people  
Wisconsin: 51.7

● Above state value  
● At or below state value

\* Above state value preferred for this measure  
^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

[Data details on next page](#)



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Year displayed:** 2016

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

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

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

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

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

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

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

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

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH JACKSON COUNTY

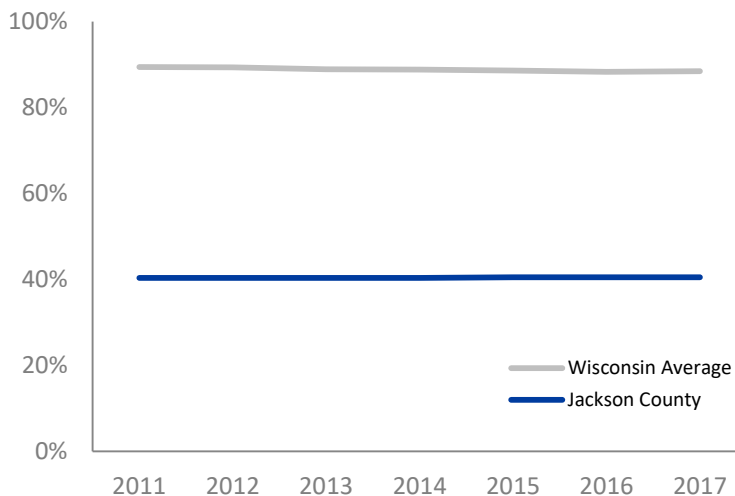
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **40.5%**

**FLUORIDE**  
PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
WISCONSIN: 88.4%

● Above state value

● **2.3**

**ALCOHOL OUTLET DENSITY**  
RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
WISCONSIN: 1.5

● At or below state value

\* Above state value preferred for this measure  
^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



## ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

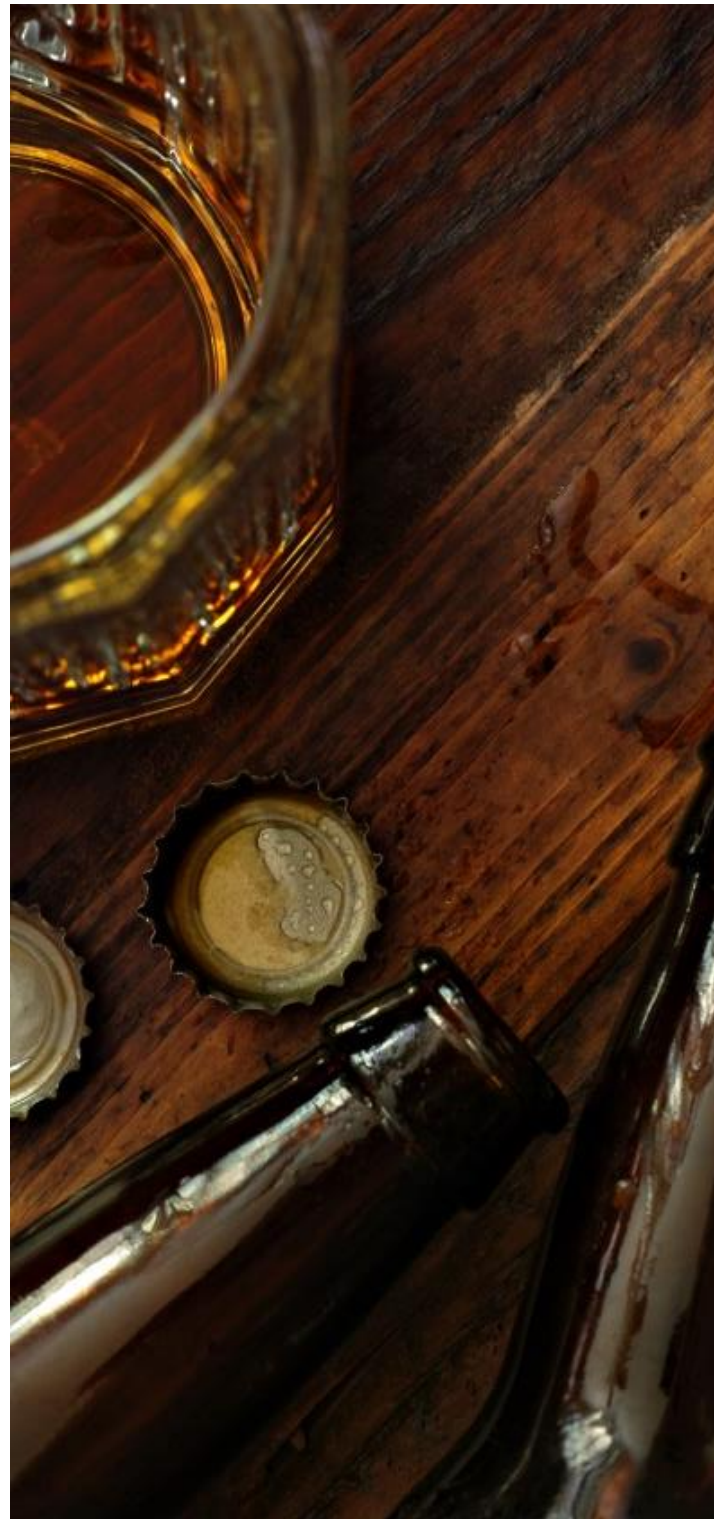
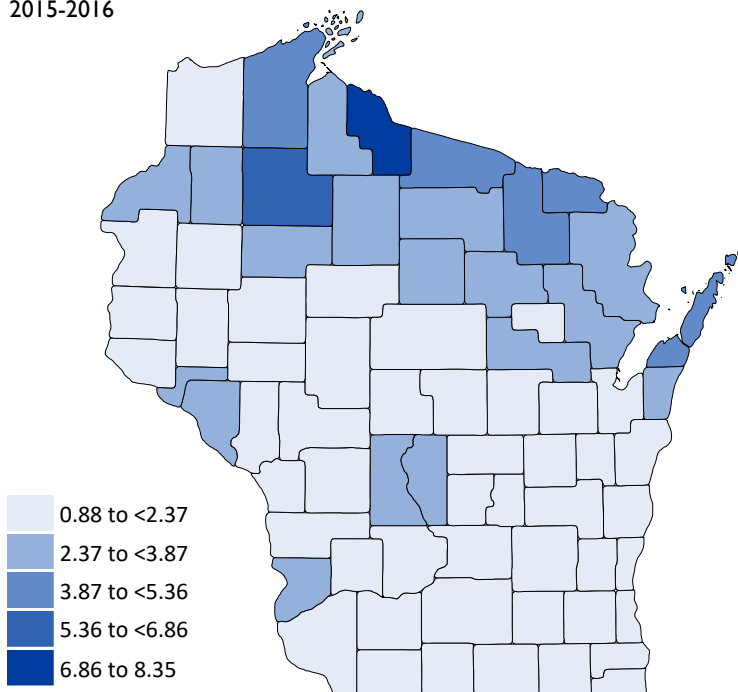
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

## ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



# 93

LICENSES IN JACKSON COUNTY

# 16,948

TOTAL LICENSES IN WISCONSIN





# PRIVATE WATER QUALITY JACKSON 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 displayed in this report. Users can find public water quality data on our data portal.

● **9.5%**

**NITRATE**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 mg/L  
**WISCONSIN: 11.0%**

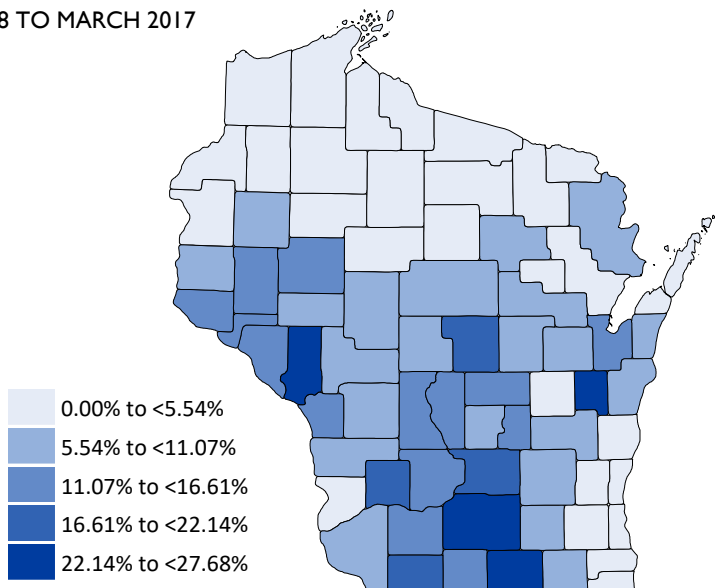
● **0.0%**

**ARSENIC**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 µg/L  
**WISCONSIN: 6.0%**

● Above state value    ● At or below state value    ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
 1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS JACKSON 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.

● **14.4**  
**CARBON MONOXIDE POISONING**  
 RATE OF ER VISITS RELATED TO CO POISONING PER 100,000  
 WISCONSIN: 7.9

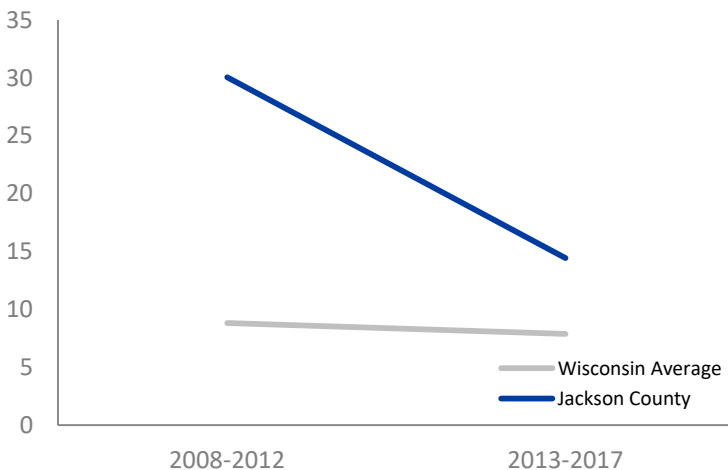
● **0.0%**  
**CHILDHOOD LEAD POISONING**  
 PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$   
 WISCONSIN: 5.0%

● **52.0%**  
**RADON**  
 PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$   
 WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

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

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



## 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter (µg/dL). The Centers for Disease Control and Prevention defines lead poisoning at or above 5 µg/dL.

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

## RADON

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

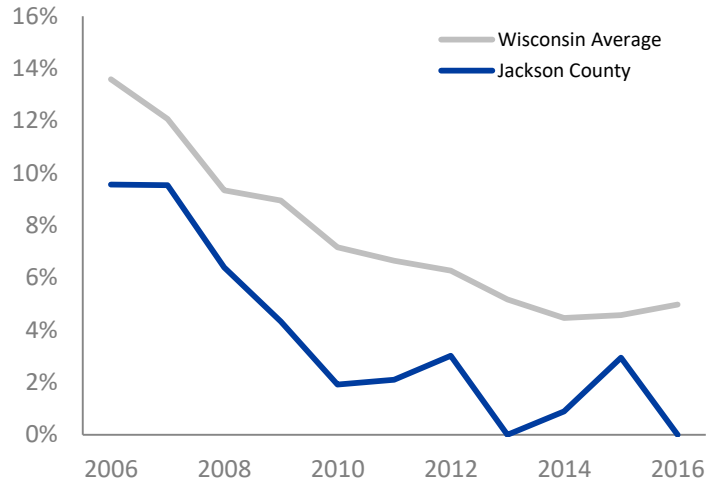
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

## CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD ≥5 µg/dL

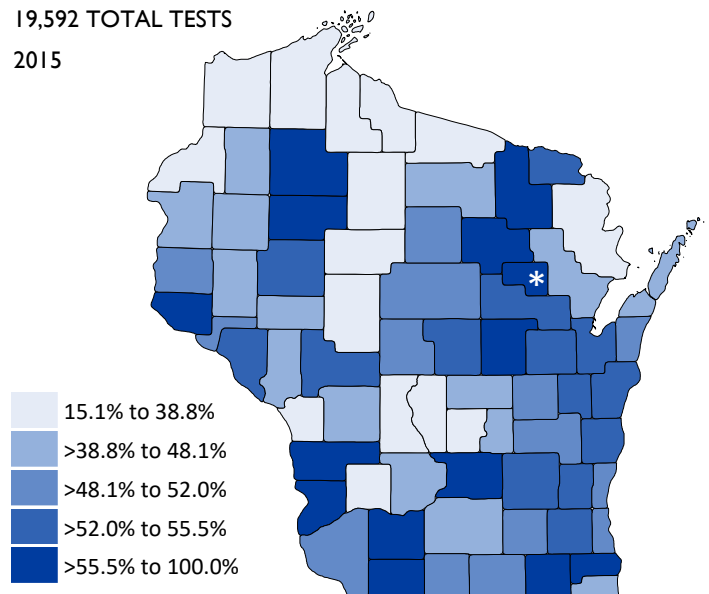


## RADON

PERCENT OF TESTS WITH RESULTS ≥4 pCi/L

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

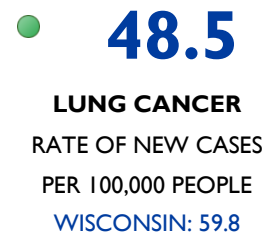
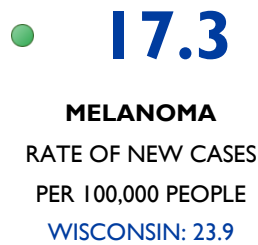
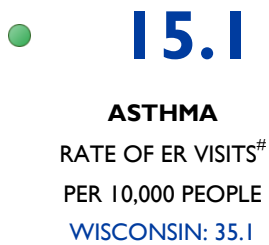




# HEALTH CONDITIONS JACKSON COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.



● Above state value

● At or below state value

^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



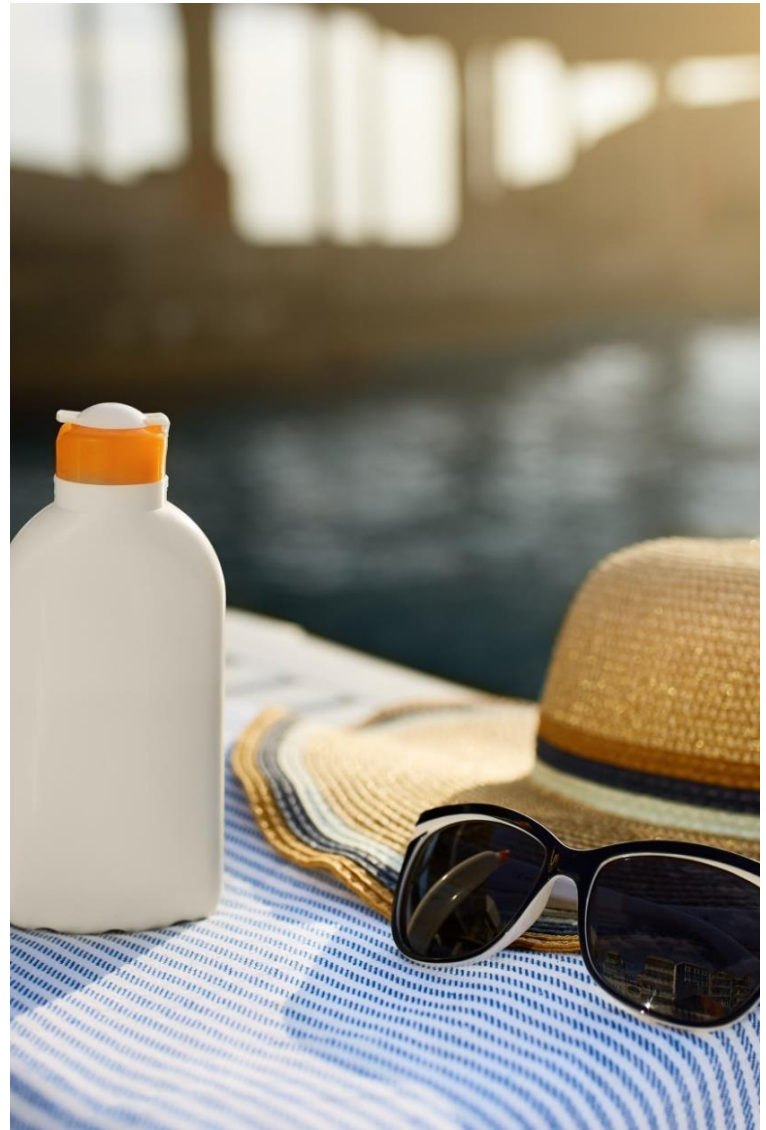
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

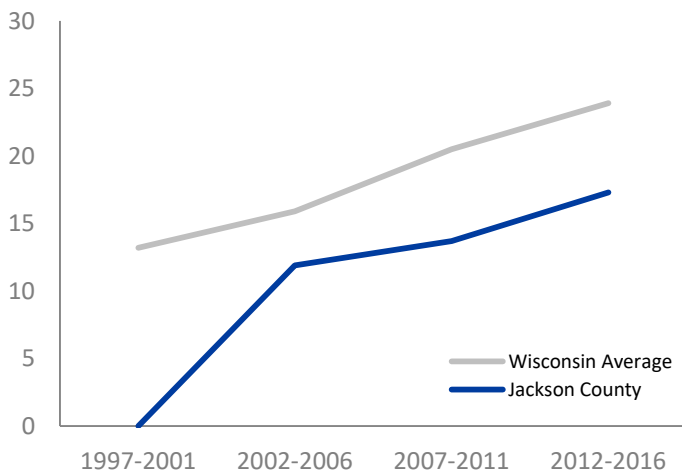
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



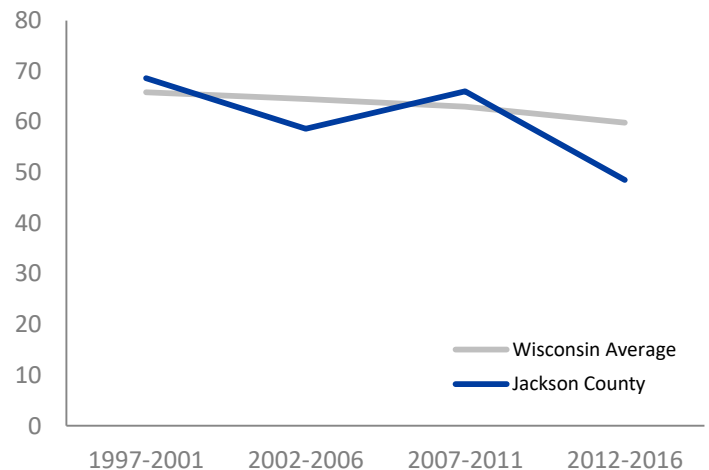
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE JACKSON COUNTY

## BACKGROUND

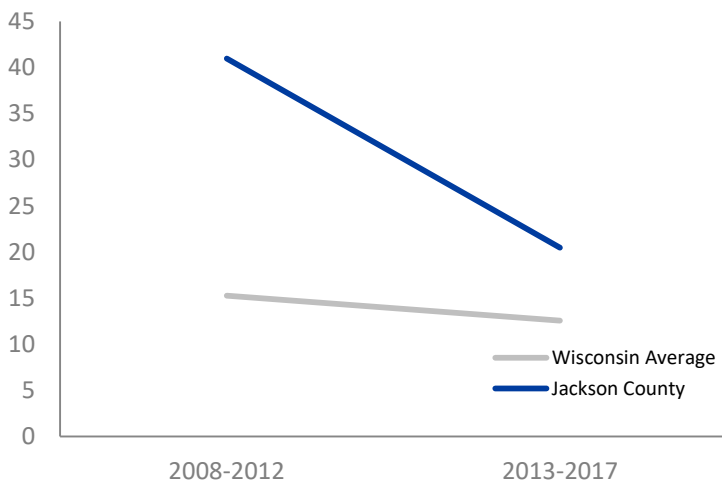
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **20.5**  
**HEAT STRESS**  
 RATE OF ER VISITS  
 PER 100,000 PEOPLE  
 WISCONSIN: 12.6

● **209.5**  
**LYME DISEASE**  
 RATE OF CASES  
 PER 100,000 PEOPLE  
 WISCONSIN: 51.7

● Above state value    ● At or below state value    ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

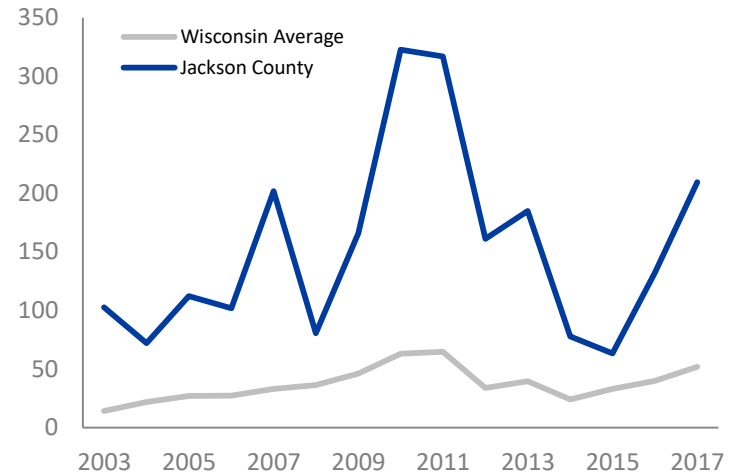
## INTERPRETING LYME DISEASE DATA

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.

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

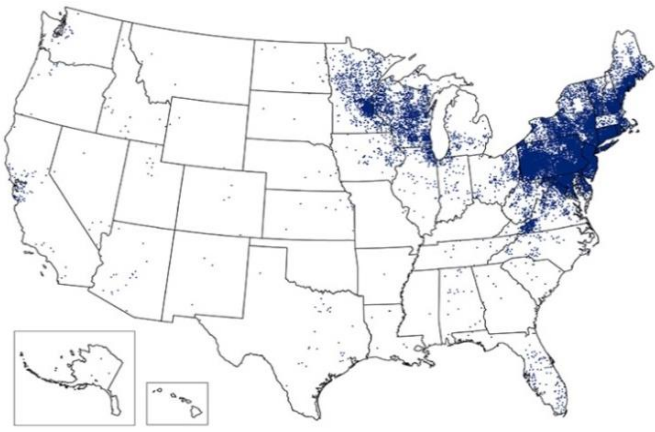
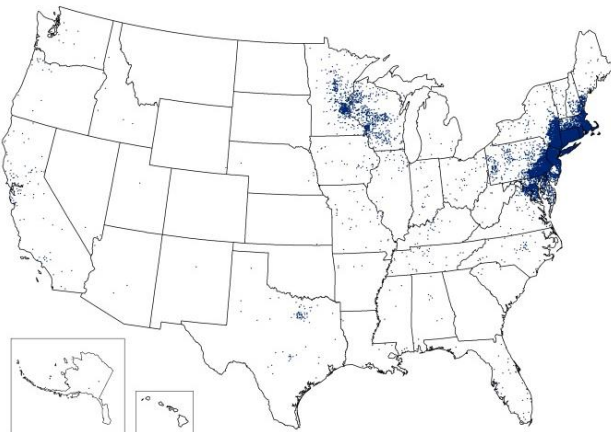
## LYME DISEASE AT THE NATIONAL LEVEL

OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001

2017



Maps courtesy of Centers for Disease Control and Prevention

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

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

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

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

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

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

Bureau of Environmental and Occupational Health  
Wisconsin Department of Health Services | Division of Public Health

[dhstracking@wi.gov](mailto:dhstracking@wi.gov) | [dhs.wisconsin.gov/epht](https://dhs.wisconsin.gov/epht)  
MAY 2019 | P-00719 (Rev. 05/2019)





# JEFFERSON COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

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

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# JEFFERSON COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

● 88.4% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

● 1.6 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

● 9.4% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

● 8.9% | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

● 6.0 | Rate of ER visits per 100,000 people  
Wisconsin: 7.9

### Childhood Lead Poisoning

● 6.5% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

● 53.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

● 27.5 | Rate of ER visits per 10,000 people<sup>#</sup>  
Wisconsin: 35.1

### Melanoma

● 21.2 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

● 55.0 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

● 12.8 | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

● 25.9 | Crude rate per 100,000 people  
Wisconsin: 51.7

● Above state value  
● At or below state value

\* Above state value preferred for this measure  
^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

[Data details on next page](#)



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Year displayed:** 2016

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

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

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

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

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

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

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

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

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH JEFFERSON COUNTY

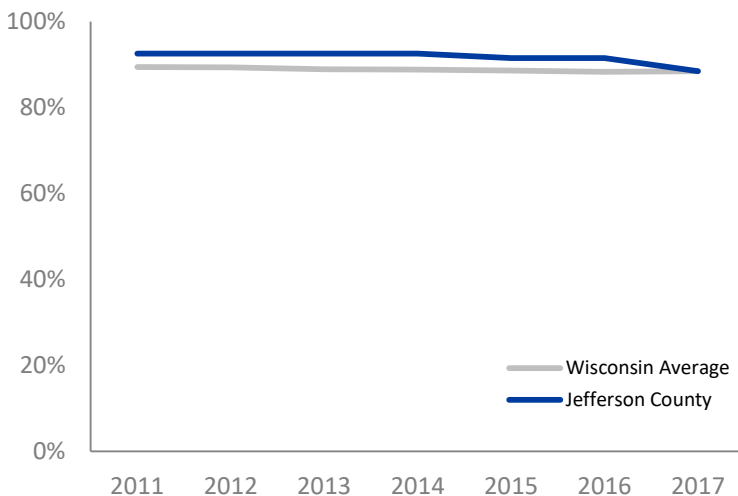
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **88.4%**

**FLUORIDE**  
PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
WISCONSIN: 88.4%

● **1.6**

**ALCOHOL OUTLET DENSITY**  
RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



## ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

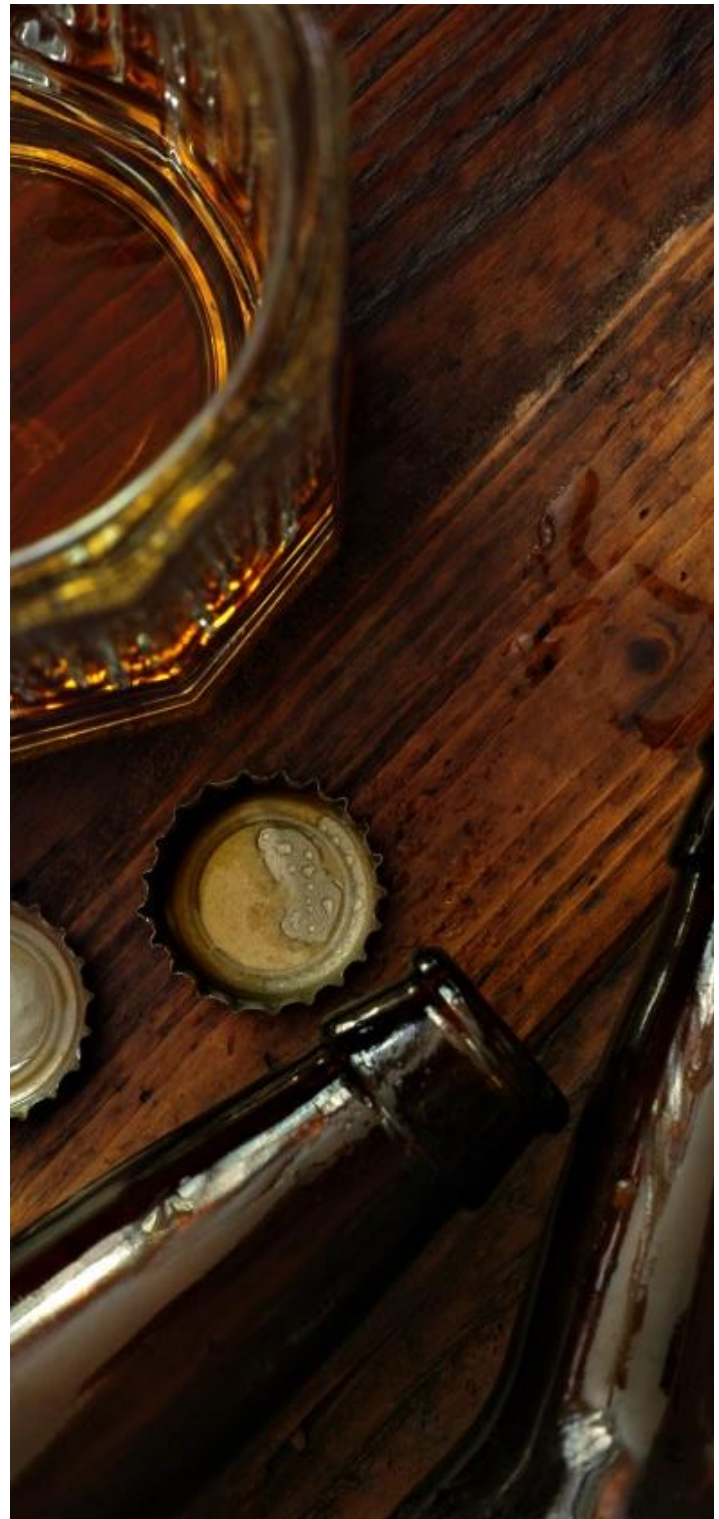
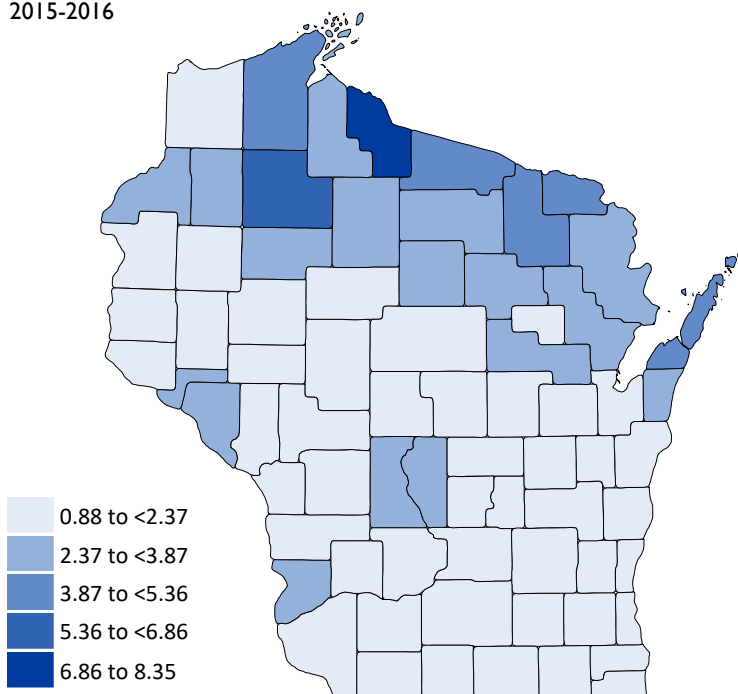
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

## ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



# 267

LICENSES IN  
JEFFERSON COUNTY

# 16,948

TOTAL LICENSES IN  
WISCONSIN





# PRIVATE WATER QUALITY JEFFERSON 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 displayed in this report. Users can find public water quality data on our data portal.

● **9.4%**

**NITRATE**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 mg/L  
**WISCONSIN: 11.0%**

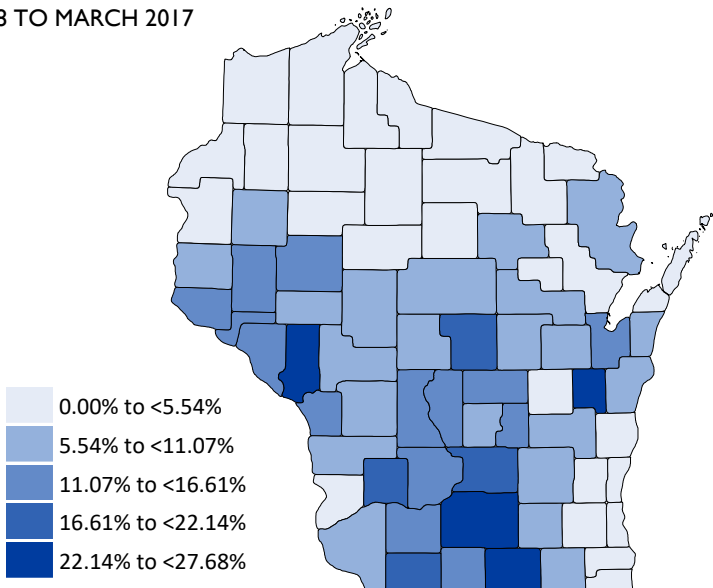
● **8.9%**

**ARSENIC**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 µg/L  
**WISCONSIN: 6.0%**

● Above state value    ● At or below state value    ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
 1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS

## JEFFERSON 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.

**6.0**

**CARBON MONOXIDE POISONING**

RATE OF ER VISITS RELATED TO CO POISONING PER 100,000

WISCONSIN: 7.9

**6.5%**

**CHILDHOOD LEAD POISONING**

PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$

WISCONSIN: 5.0%

**53.0%**

**RADON**

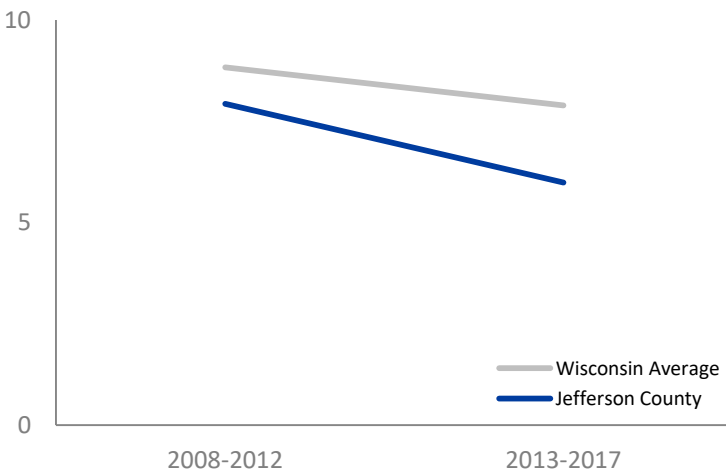
PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$

WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

### CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



### CARBON MONOXIDE POISONING

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

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



### 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter ( $\mu\text{g}/\text{dL}$ ). The Centers for Disease Control and Prevention defines lead poisoning at or above 5  $\mu\text{g}/\text{dL}$ .

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

### RADON

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

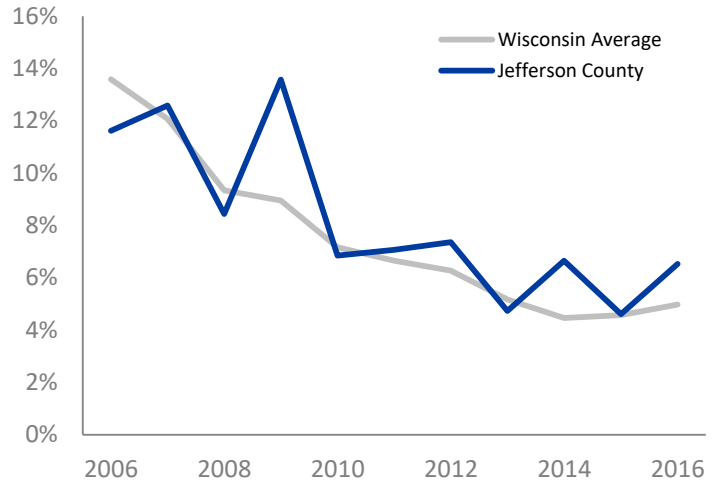
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

### CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g}/\text{dL}$

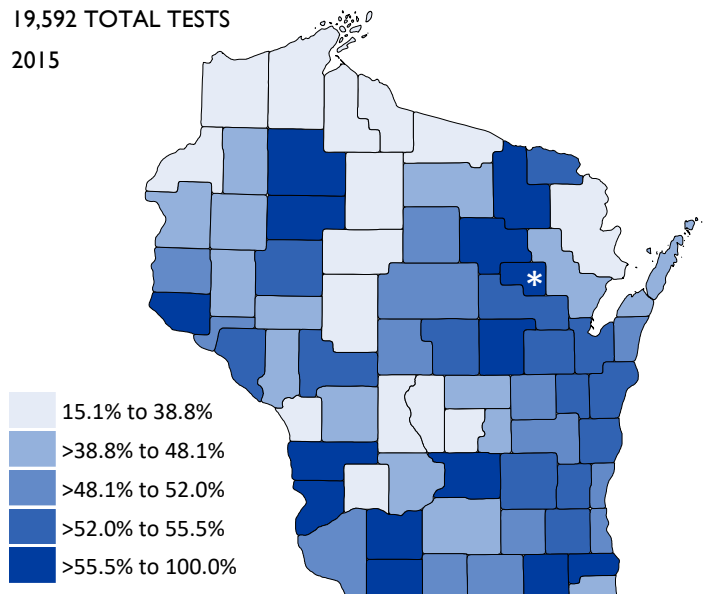


### RADON

PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

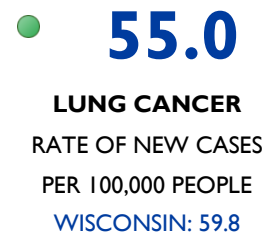
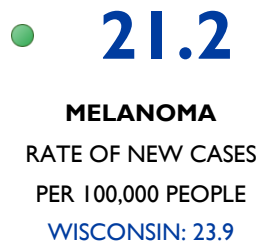
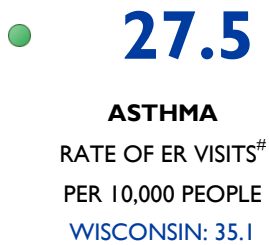




# HEALTH CONDITIONS JEFFERSON COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.



● Above state value

● At or below state value

^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



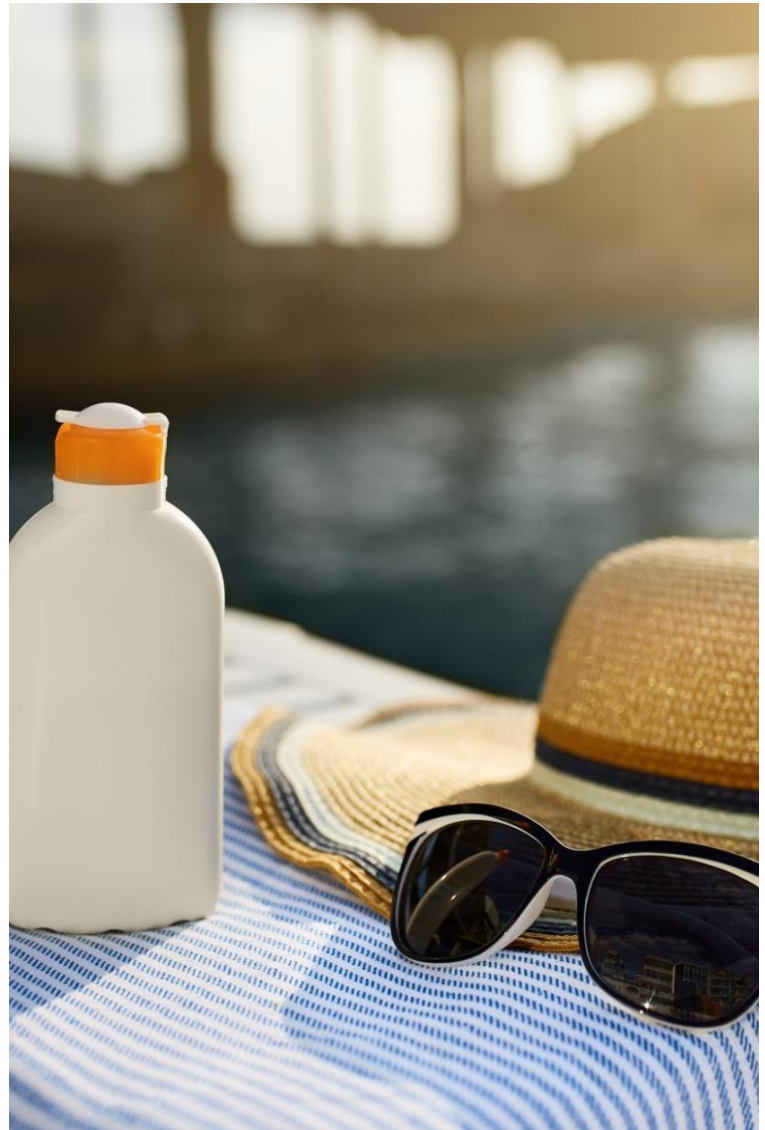
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

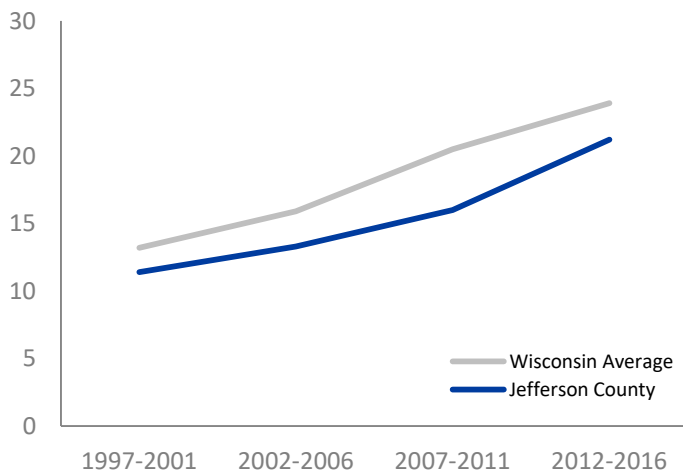
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



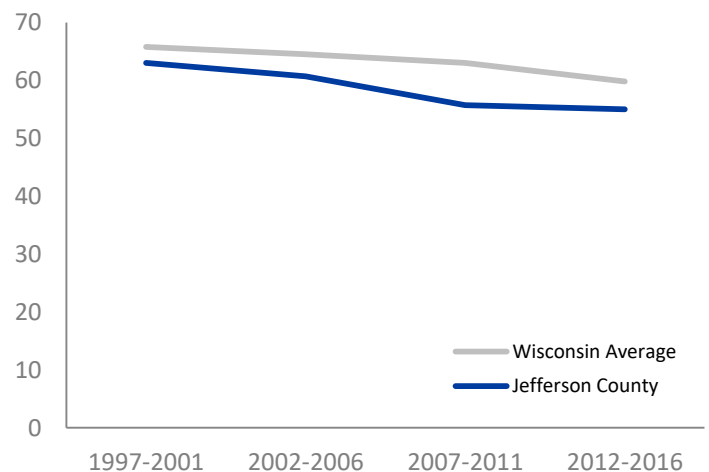
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE JEFFERSON COUNTY

## BACKGROUND

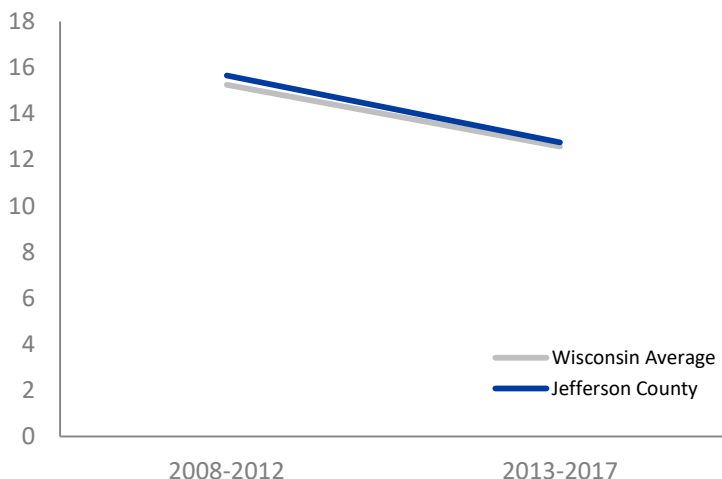
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **12.8**

**HEAT STRESS**  
RATE OF ER VISITS  
PER 100,000 PEOPLE  
WISCONSIN: 12.6

● **25.9**

**LYME DISEASE**  
RATE OF CASES  
PER 100,000 PEOPLE  
WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

## LYME DISEASE AT THE NATIONAL LEVEL

OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001



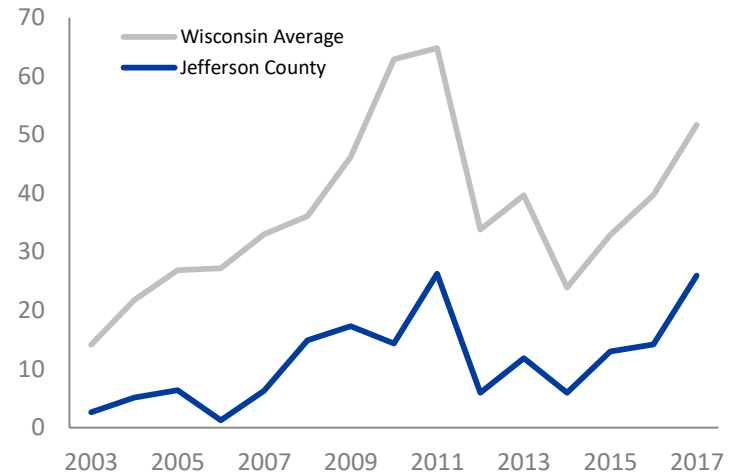
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

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

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

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

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

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

Bureau of Environmental and Occupational Health  
Wisconsin Department of Health Services | Division of Public Health

[dhstracking@wi.gov](mailto:dhstracking@wi.gov) | [dhs.wisconsin.gov/epht](https://dhs.wisconsin.gov/epht)  
MAY 2019 | P-00719 (Rev. 05/2019)





# JUNEAU COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

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

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# JUNEAU COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

● 54.9% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

● 2.6 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

● 11.6% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

● 0.0% | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

● 15.6 | Rate of ER visits per 100,000 people  
Wisconsin: 7.9

### Childhood Lead Poisoning

● 2.8% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

● 25.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

● 42.9 | Rate of ER visits per 10,000 people<sup>#</sup>  
Wisconsin: 35.1

### Melanoma

● 25.6 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

● 73.9 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

● 30.4 | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

● 240.8 | Crude rate per 100,000 people  
Wisconsin: 51.7

● Above state value  
● At or below state value

\* Above state value preferred for this measure  
^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

[Data details on next page](#)



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Year displayed:** 2016

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

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

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

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

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

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

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

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

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH JUNEAU COUNTY

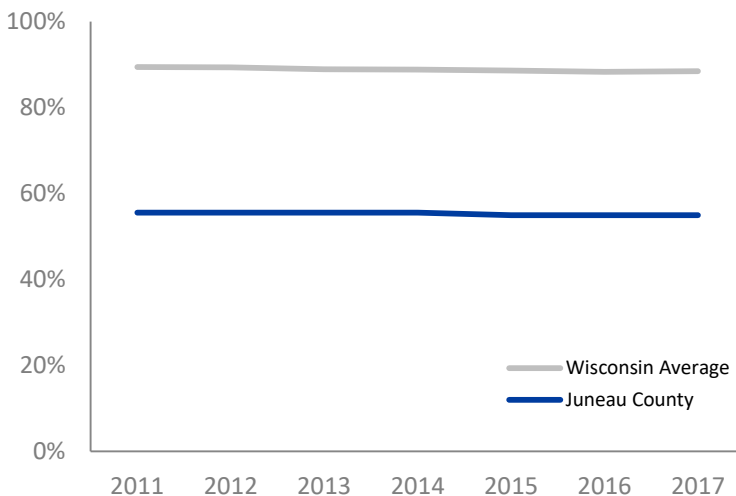
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **54.9%**

**FLUORIDE**  
PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
WISCONSIN: 88.4%

● **2.6**

**ALCOHOL OUTLET DENSITY**  
RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



## ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

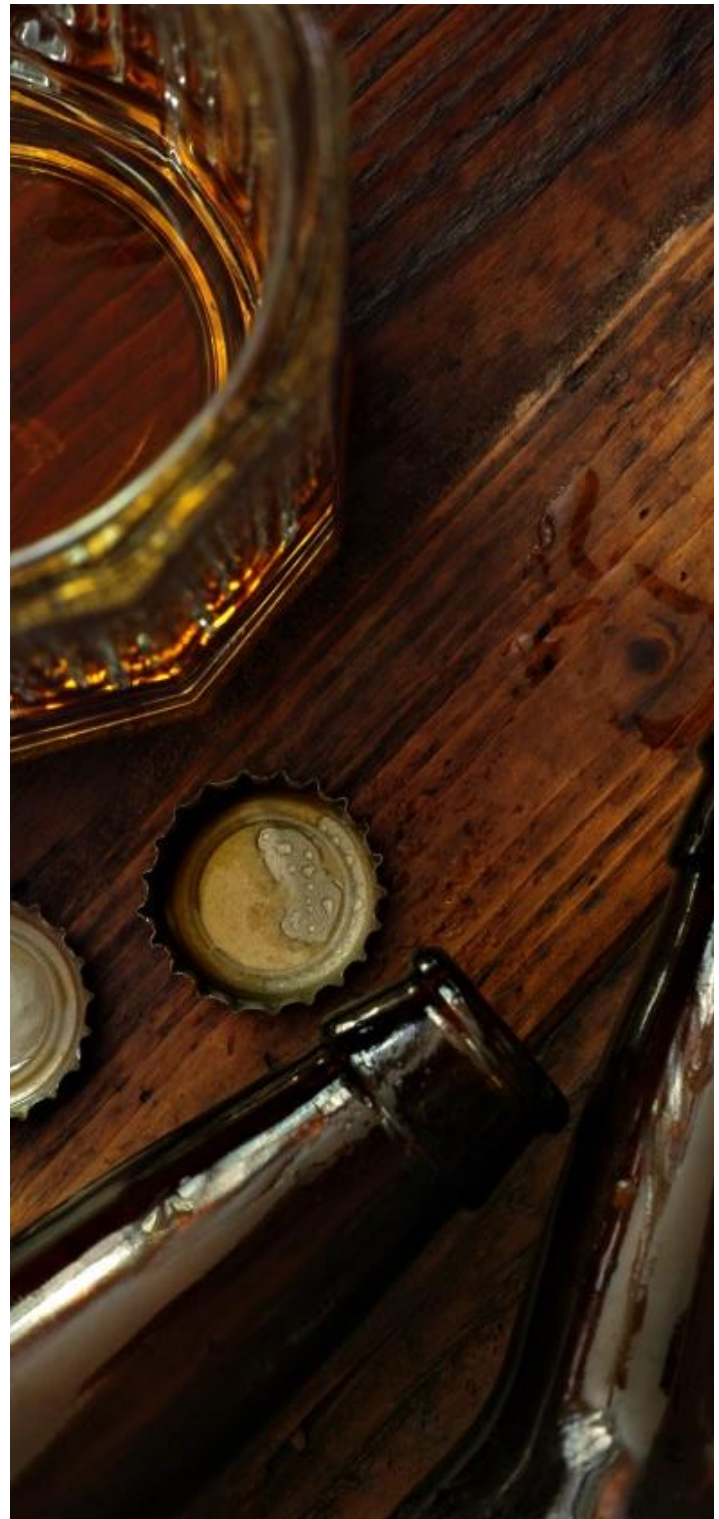
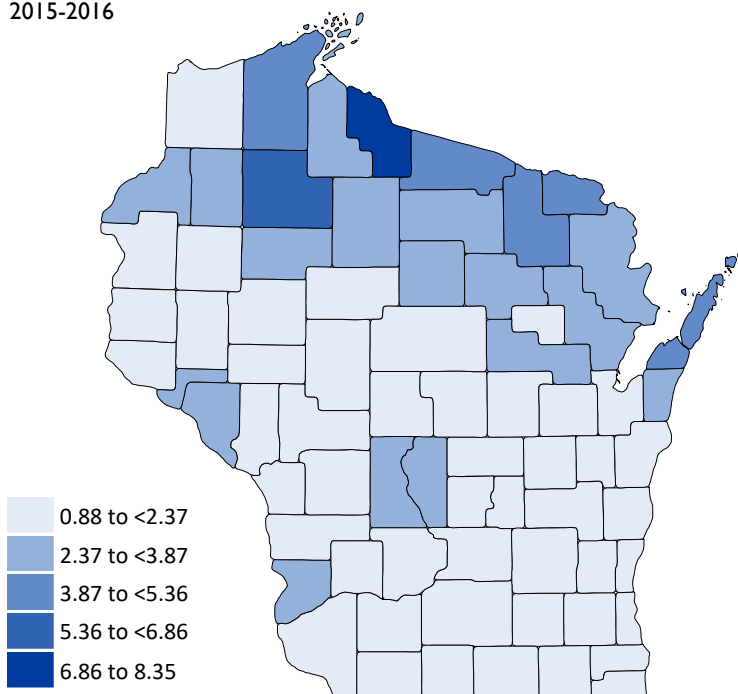
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

## ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



|                              |                                |
|------------------------------|--------------------------------|
| <b>136</b>                   | <b>16,948</b>                  |
| LICENSES IN<br>JUNEAU COUNTY | TOTAL LICENSES IN<br>WISCONSIN |





# PRIVATE WATER QUALITY JUNEAU 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 displayed in this report. Users can find public water quality data on our data portal.

● **11.6%**

**NITRATE**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 mg/L  
**WISCONSIN: 11.0%**

● **0.0%**

**ARSENIC**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 µg/L  
**WISCONSIN: 6.0%**

● Above state value   ● At or below state value   ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
 1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS JUNEAU 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.

● **15.6**

**CARBON MONOXIDE POISONING**

RATE OF ER VISITS RELATED TO CO POISONING PER 100,000

WISCONSIN: 7.9

● **2.8%**

**CHILDHOOD LEAD POISONING**

PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$

WISCONSIN: 5.0%

● **25.0%**

**RADON**

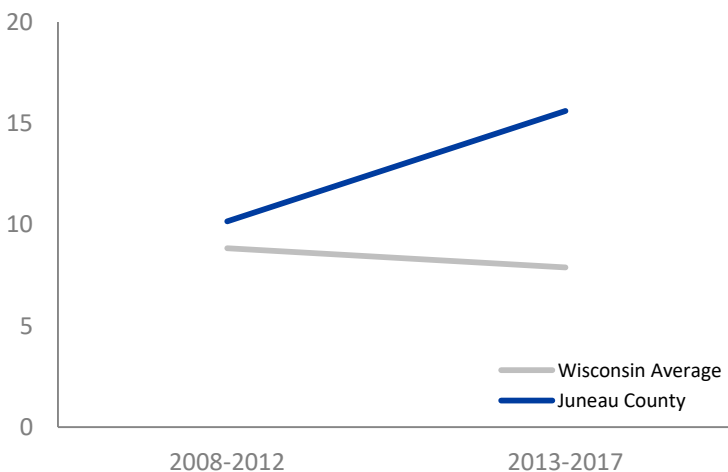
PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$

WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

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

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



## 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter ( $\mu\text{g}/\text{dL}$ ). The Centers for Disease Control and Prevention defines lead poisoning at or above 5  $\mu\text{g}/\text{dL}$ .

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

## RADON

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

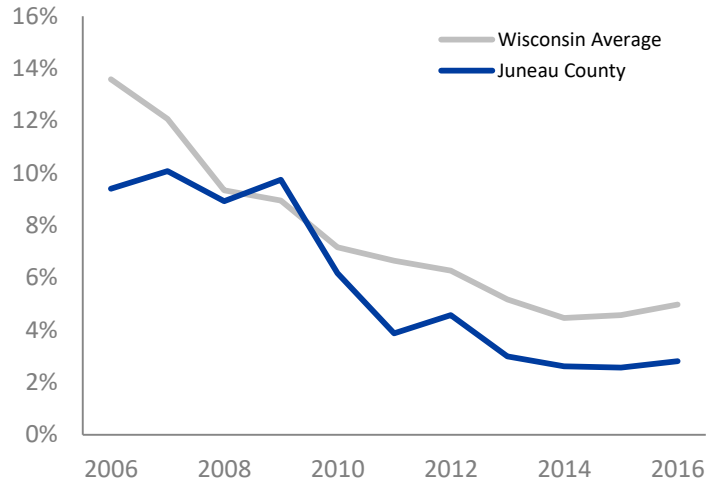
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

## CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g}/\text{dL}$

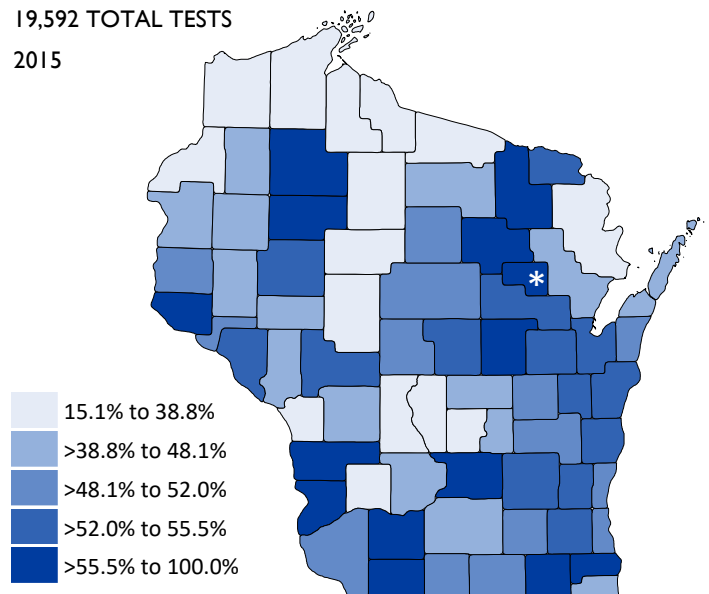


## RADON

PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi}/\text{L}$

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

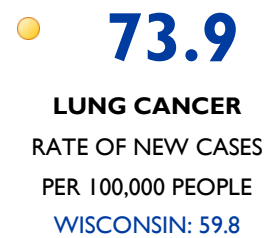
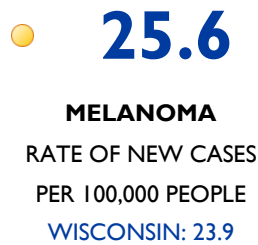
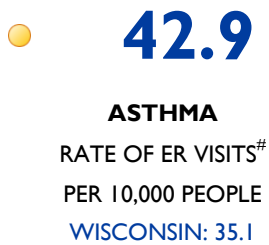




# HEALTH CONDITIONS JUNEAU COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.



● Above state value

● At or below state value

^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



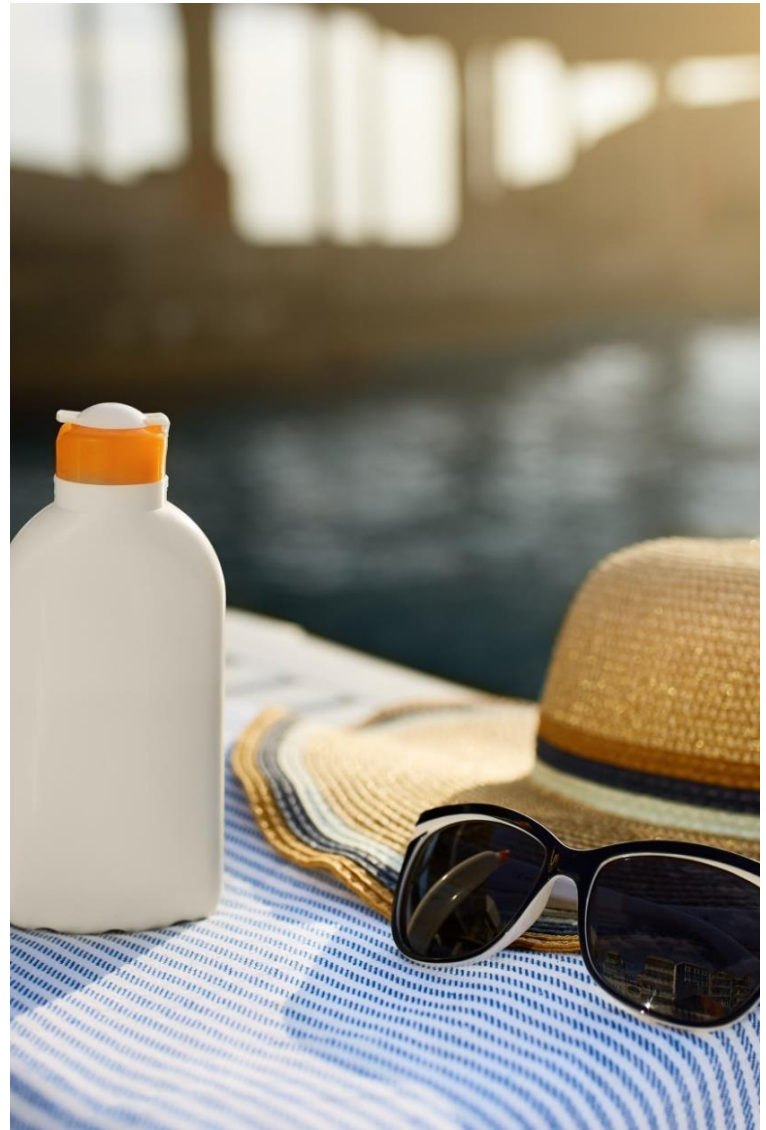
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

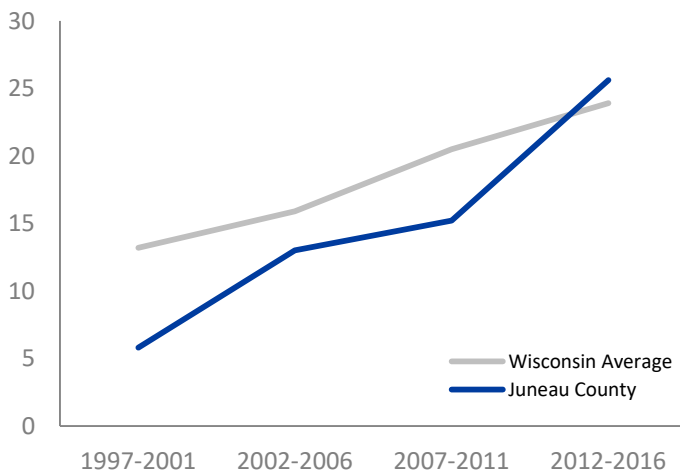
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



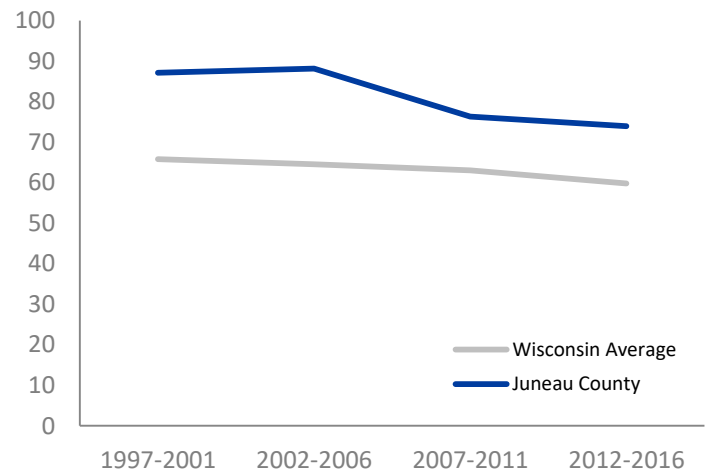
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE JUNEAU COUNTY

## BACKGROUND

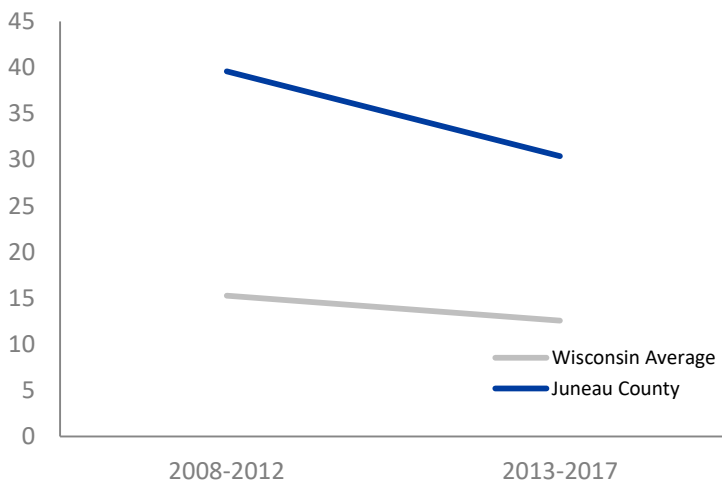
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **30.4**

**HEAT STRESS**  
RATE OF ER VISITS  
PER 100,000 PEOPLE  
WISCONSIN: 12.6

● **240.8**

**LYME DISEASE**  
RATE OF CASES  
PER 100,000 PEOPLE  
WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

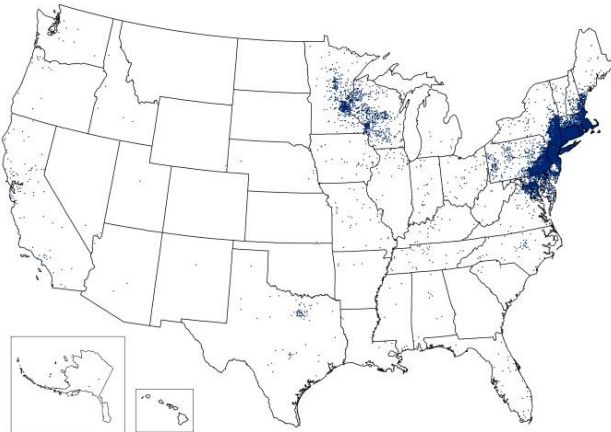
The criteria for reporting Lyme disease were revised again in 2012 to require reporting and follow-up only for cases with an erythema migrans (EM) rash. To compensate for this change, epidemiologists used a statistical method to estimate the true number of cases based on the number of total laboratory reports for each year since 2012.

## LYME DISEASE AT THE NATIONAL LEVEL

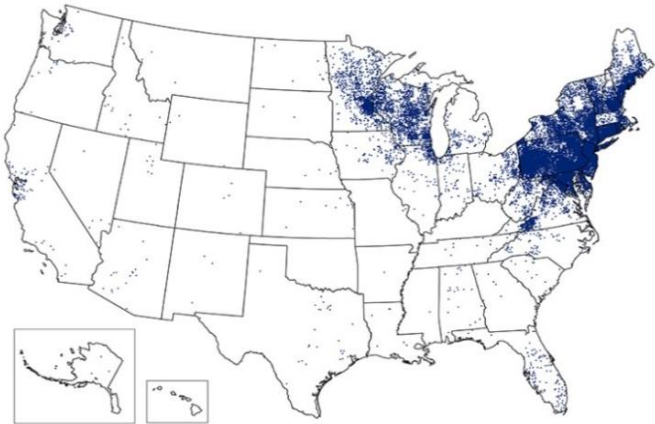
OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001



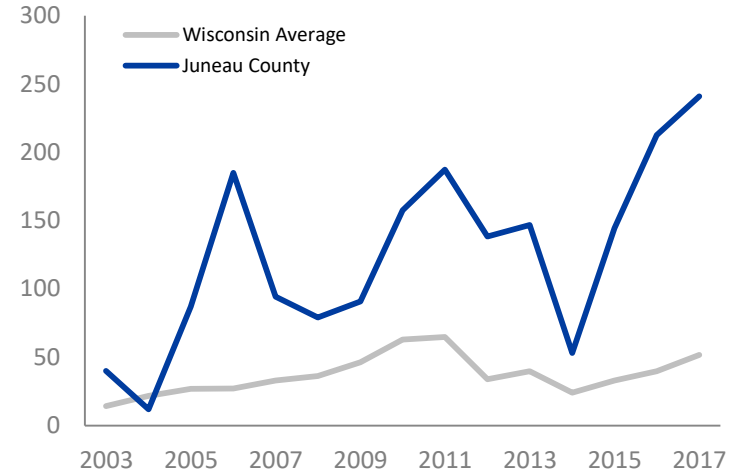
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

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

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

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

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

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

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Wisconsin Department of Health Services | Division of Public Health

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MAY 2019 | P-00719 (Rev. 05/2019)





# KENOSHA COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

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

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# KENOSHA COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

● 98.3% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

● 1.1 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

● 3.8% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

● 0.0% | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

● 5.1 | Rate of ER visits per 100,000 people  
Wisconsin: 7.9

### Childhood Lead Poisoning

● 4.3% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

● 49.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

● 48.5 | Rate of ER visits per 10,000 people<sup>#</sup>  
Wisconsin: 35.1

### Melanoma

● 19.1 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

● 71.8 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

● 10.4 | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

● 8.3 | Crude rate per 100,000 people  
Wisconsin: 51.7

● Above state value  
● At or below state value

\* Above state value preferred for this measure  
^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

[Data details on next page](#)



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Year displayed:** 2016

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

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

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

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

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

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

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

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

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH KENOSHA COUNTY

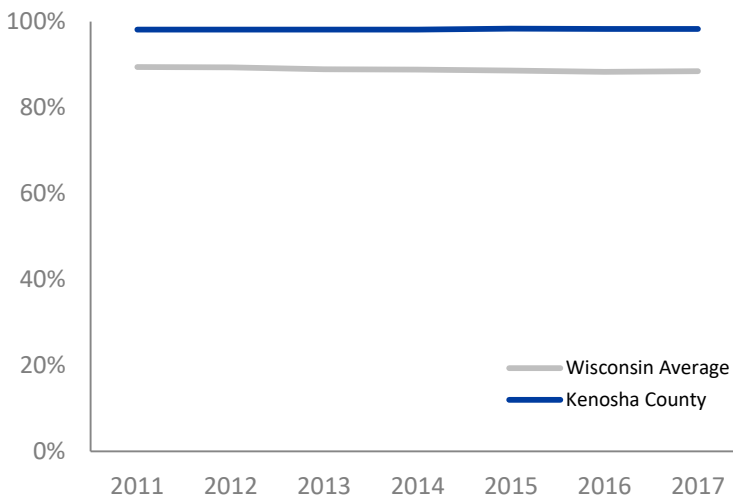
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **98.3%**

**FLUORIDE**  
PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
WISCONSIN: 88.4%

● **1.1**

**ALCOHOL OUTLET DENSITY**  
RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



## ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

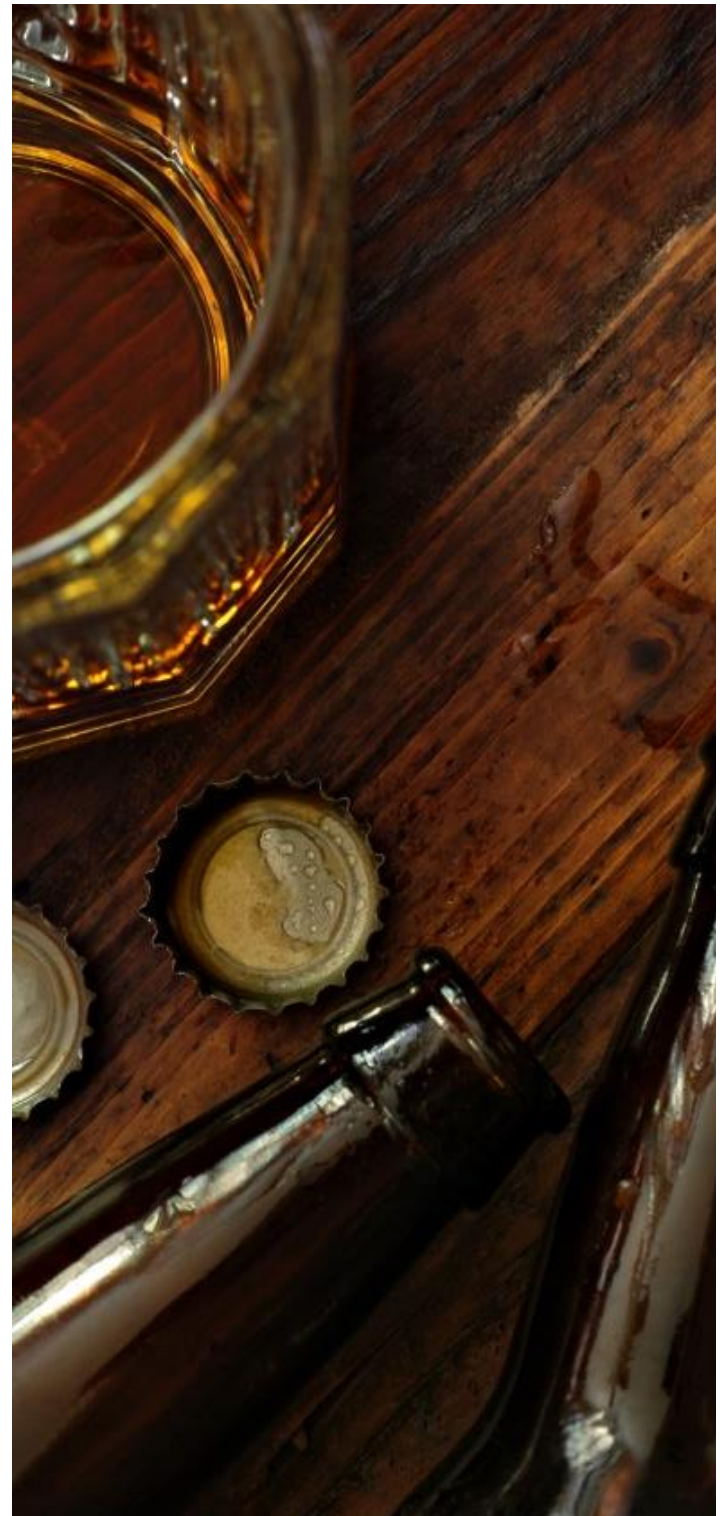
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

## ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



# 370

LICENSES IN  
KENOSHA COUNTY

# 16,948

TOTAL LICENSES IN  
WISCONSIN





# PRIVATE WATER QUALITY KENOSHA 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 displayed in this report. Users can find public water quality data on our data portal.

● **3.8%**

**NITRATE**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 mg/L  
**WISCONSIN: 11.0%**

● **0.0%**

**ARSENIC**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 µg/L  
**WISCONSIN: 6.0%**

● Above state value    ● At or below state value    ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
 1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS KENOSHA 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.

● **5.1**  
**CARBON MONOXIDE POISONING**  
 RATE OF ER VISITS RELATED TO CO POISONING PER 100,000  
 WISCONSIN: 7.9

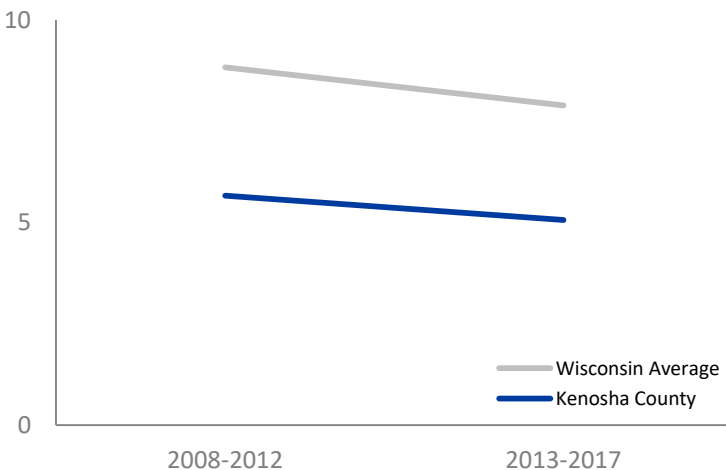
● **4.3%**  
**CHILDHOOD LEAD POISONING**  
 PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$   
 WISCONSIN: 5.0%

● **49.0%**  
**RADON**  
 PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$   
 WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

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

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



## 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter ( $\mu\text{g}/\text{dL}$ ). The Centers for Disease Control and Prevention defines lead poisoning at or above 5  $\mu\text{g}/\text{dL}$ .

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

## RADON

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

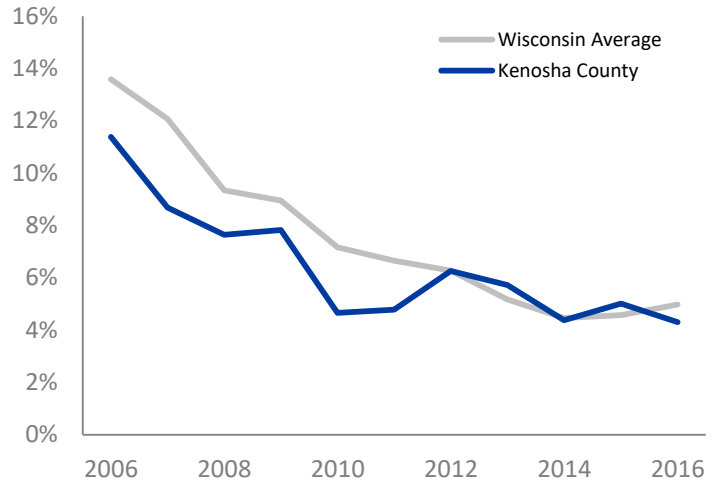
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

## CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g}/\text{dL}$

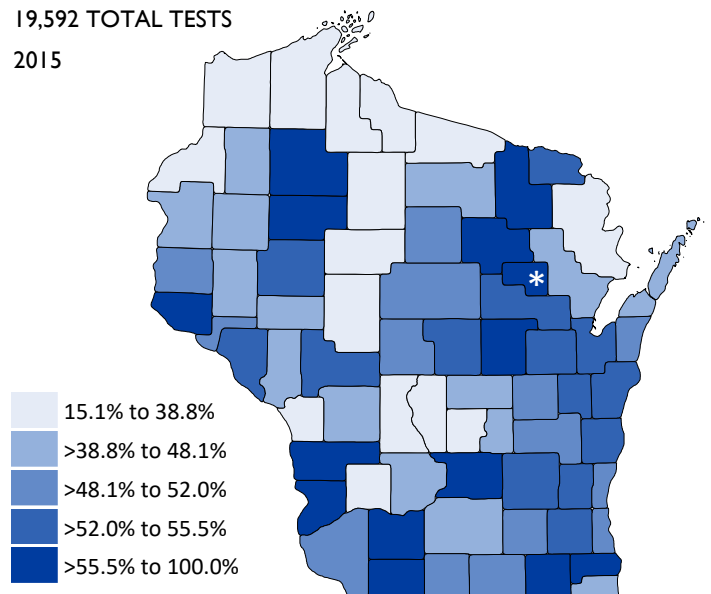


## RADON

PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi}/\text{L}$

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

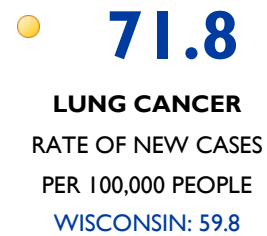
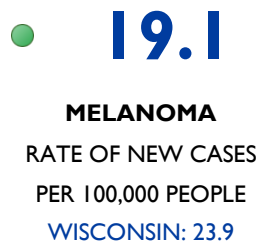
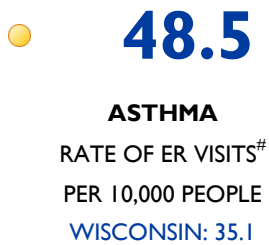




# HEALTH CONDITIONS KENOSHA COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.



● Above state value

● At or below state value

^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



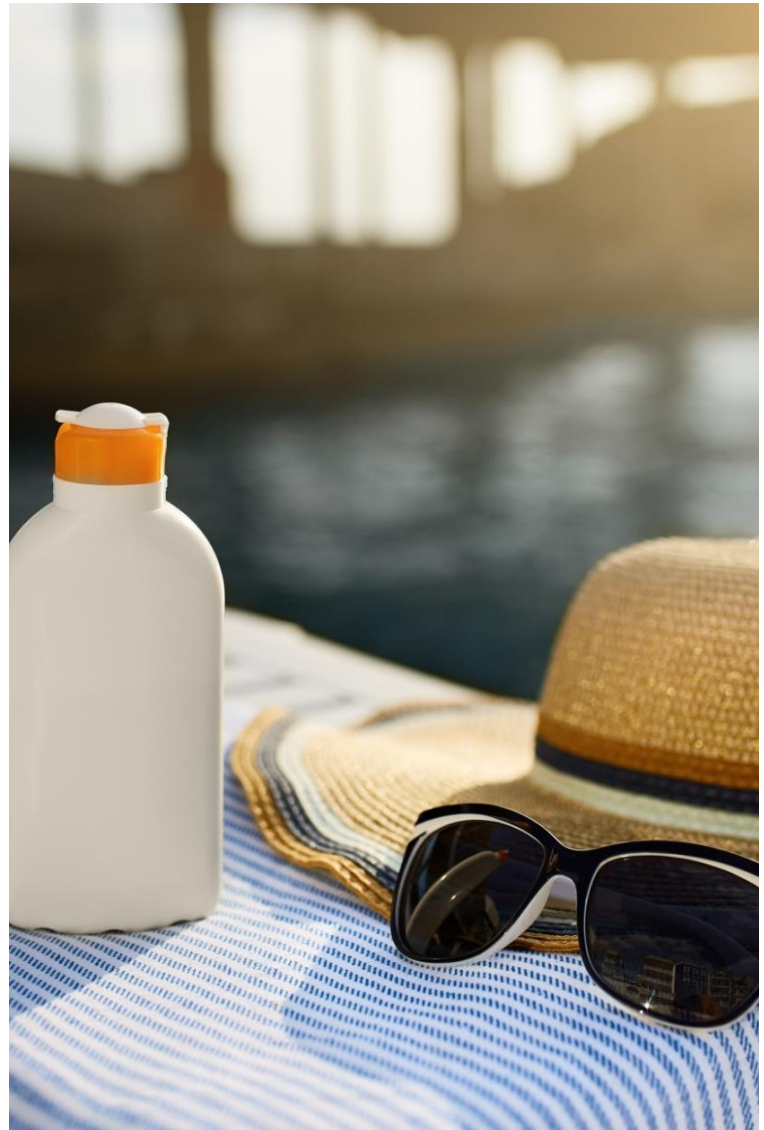
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

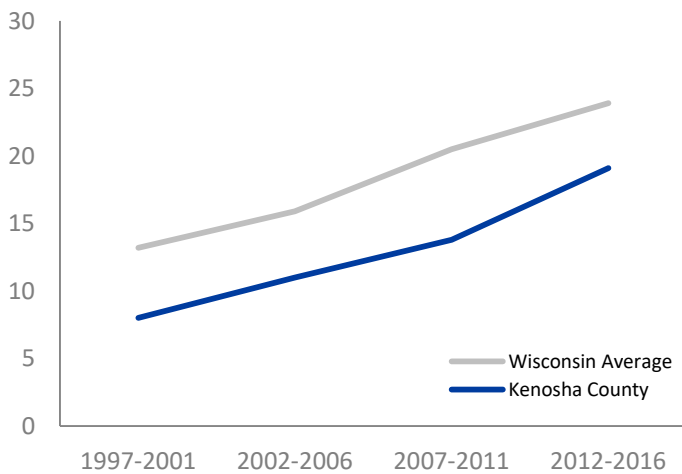
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



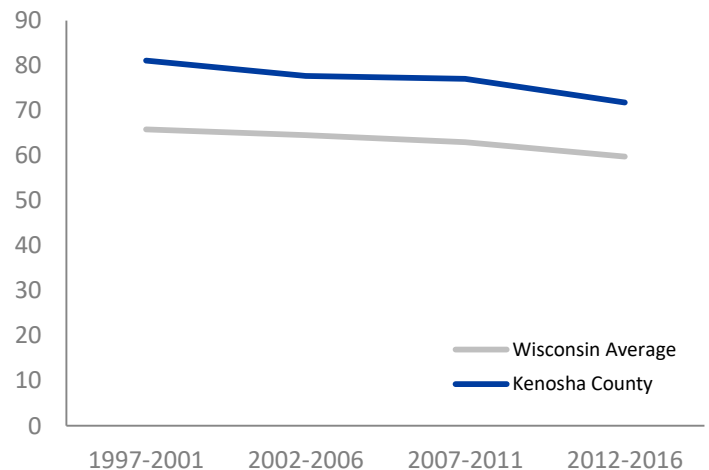
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE KENOSHA COUNTY

## BACKGROUND

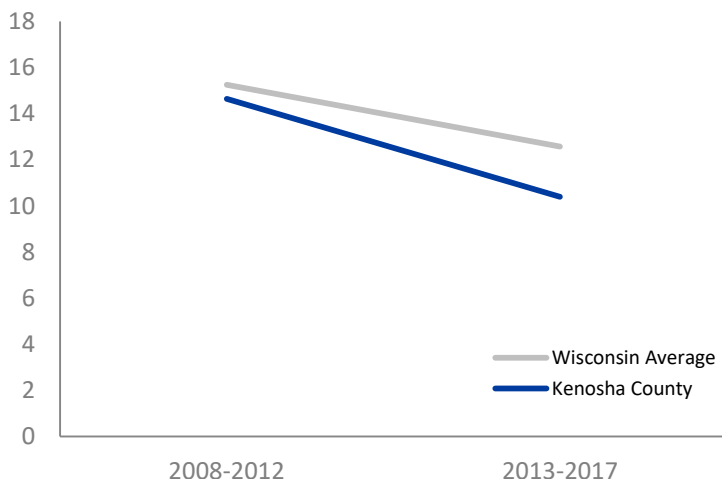
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **10.4**

**HEAT STRESS**  
RATE OF ER VISITS  
PER 100,000 PEOPLE  
WISCONSIN: 12.6

● **8.3**

**LYME DISEASE**  
RATE OF CASES  
PER 100,000 PEOPLE  
WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

## LYME DISEASE AT THE NATIONAL LEVEL

OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001



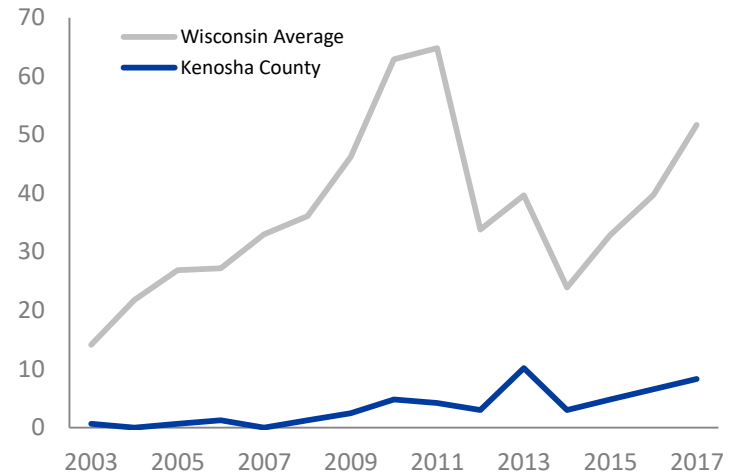
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

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

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

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

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

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

Bureau of Environmental and Occupational Health  
Wisconsin Department of Health Services | Division of Public Health

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MAY 2019 | P-00719 (Rev. 05/2019)





# KEWAUNEE COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

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

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# KEWAUNEE COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

● 100.0% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

● 2.4 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

● 10.7% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

● 2.7% | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

● 18.8 | Rate of ER visits per 100,000 people  
Wisconsin: 7.9

### Childhood Lead Poisoning

● 1.4% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

● 50.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

● 18.5 | Rate of ER visits per 10,000 people#  
Wisconsin: 35.1

### Melanoma

● 22.9 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

● 50.0 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

● 12.5 | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

● 58.7 | Crude rate per 100,000 people  
Wisconsin: 51.7

● Above state value  
● At or below state value

\* Above state value preferred for this measure  
^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

[Data details on next page](#)



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Year displayed:** 2016

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

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

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

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

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

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

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

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

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH KEWAUNEE COUNTY

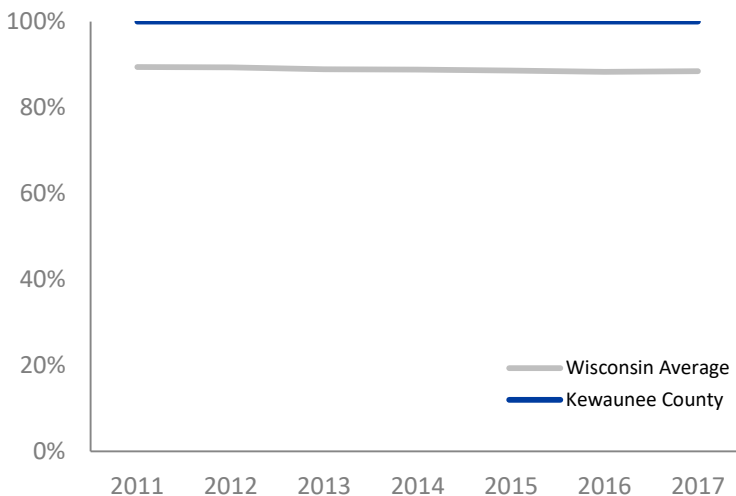
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **100.0%**

**FLUORIDE**  
PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
WISCONSIN: 88.4%

● **2.4**

**ALCOHOL OUTLET DENSITY**  
RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



### ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

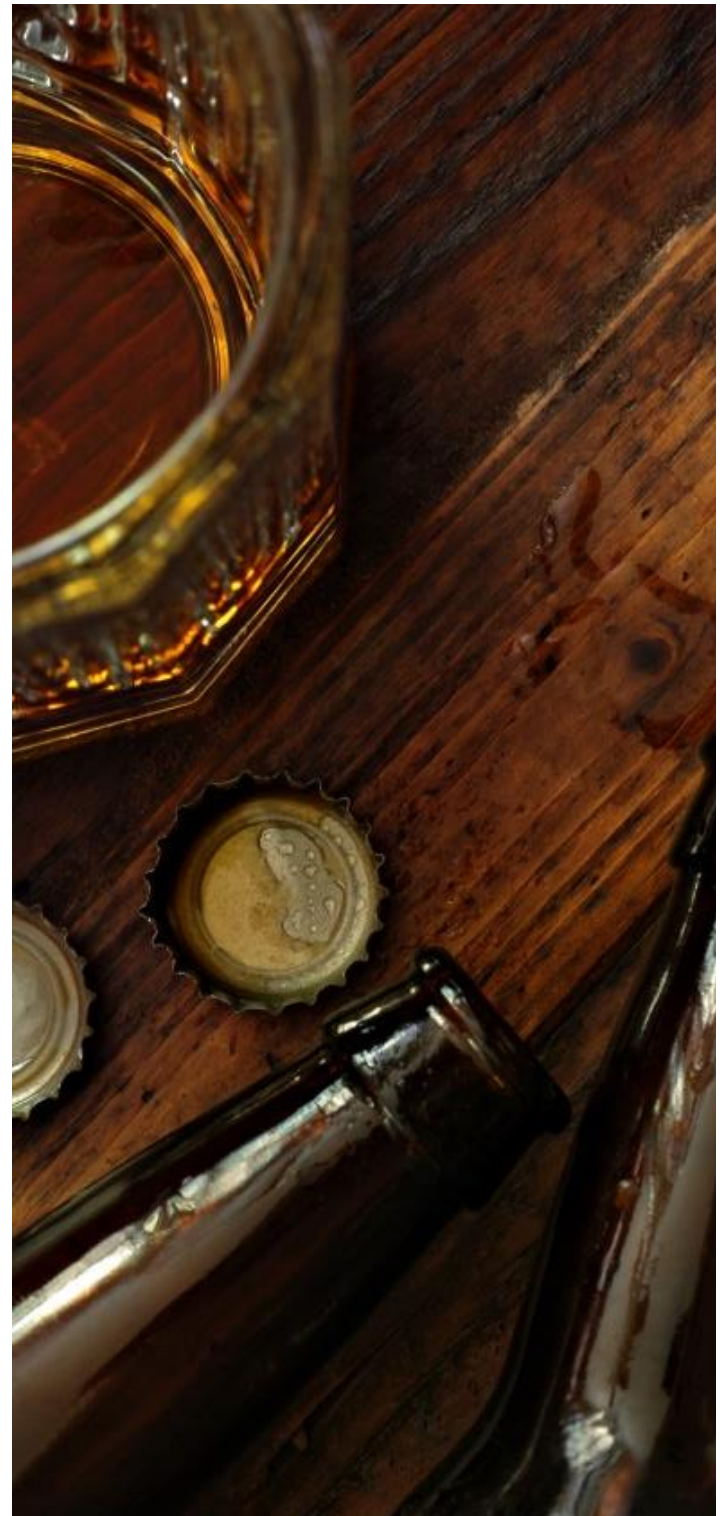
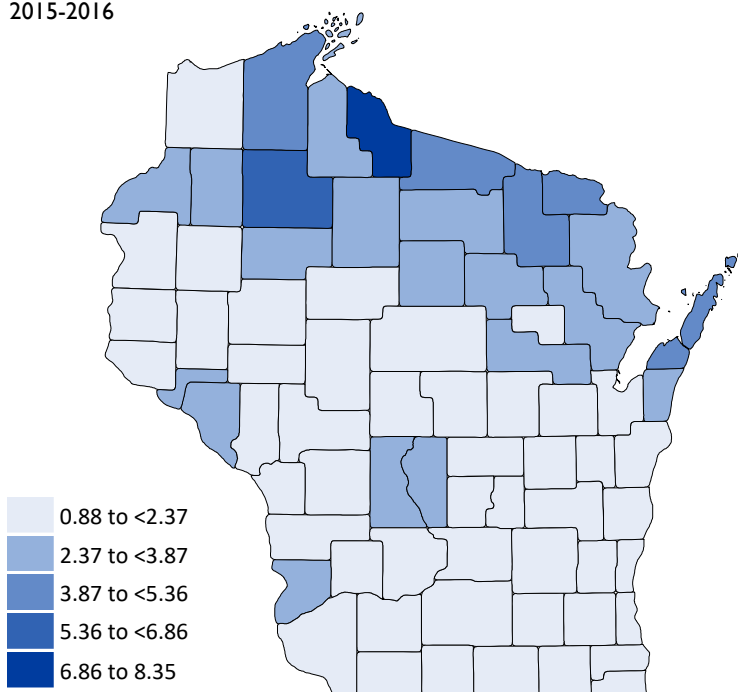
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

### ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



# 99

LICENSES IN  
KEWAUNEE COUNTY

# 16,948

TOTAL LICENSES IN  
WISCONSIN





# PRIVATE WATER QUALITY KEWAUNEE 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 displayed in this report. Users can find public water quality data on our data portal.

● **10.7%**

**NITRATE**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 mg/L  
**WISCONSIN: 11.0%**

● **2.7%**

**ARSENIC**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 µg/L  
**WISCONSIN: 6.0%**

● Above state value    ● At or below state value    ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
 1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS KEWAUNEE 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.

● **18.8**  
**CARBON MONOXIDE POISONING**  
 RATE OF ER VISITS RELATED TO CO POISONING PER 100,000  
 WISCONSIN: 7.9

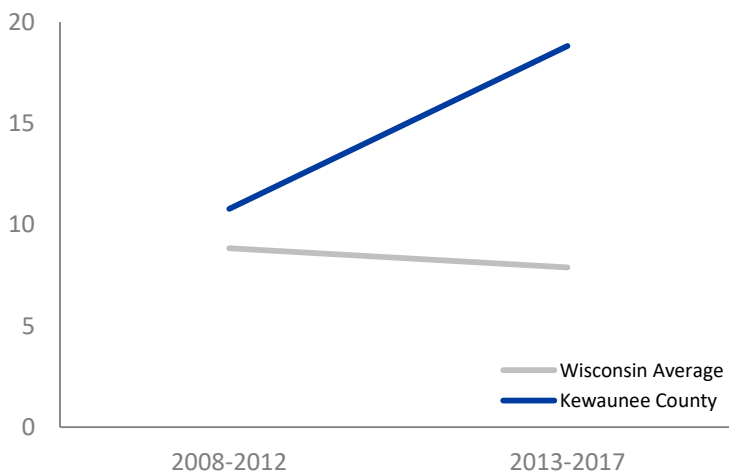
● **1.4%**  
**CHILDHOOD LEAD POISONING**  
 PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$   
 WISCONSIN: 5.0%

● **50.0%**  
**RADON**  
 PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$   
 WISCONSIN: 50.0%

● Above state value    ● At or below state value    ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

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

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



### 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter (µg/dL). The Centers for Disease Control and Prevention defines lead poisoning at or above 5 µg/dL.

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

### RADON

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

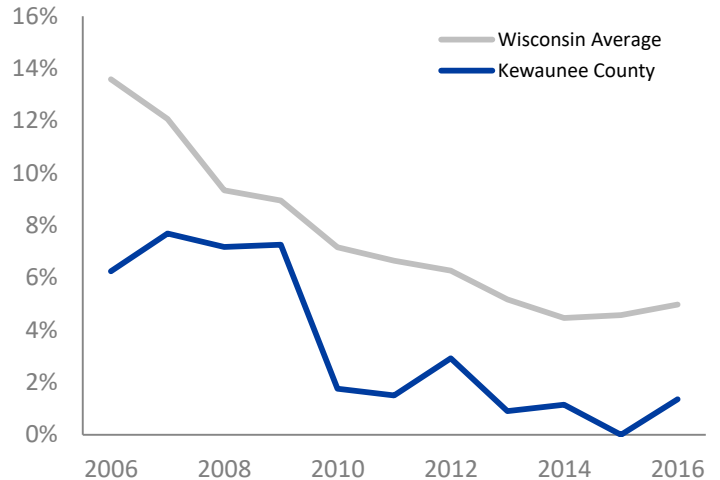
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

### CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD ≥5 µg/dL

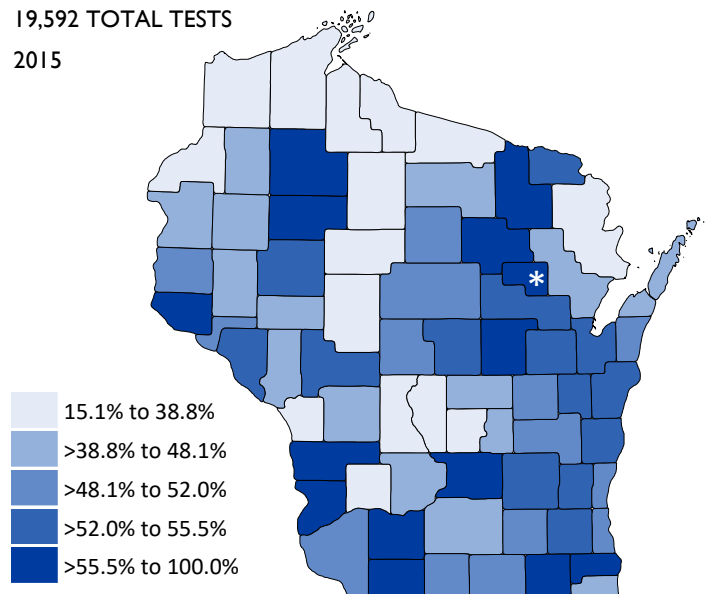


### RADON

PERCENT OF TESTS WITH RESULTS ≥4 pCi/L

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

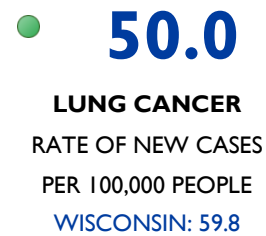
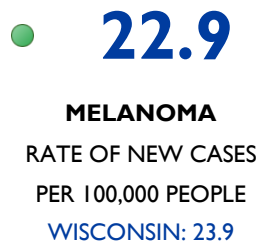
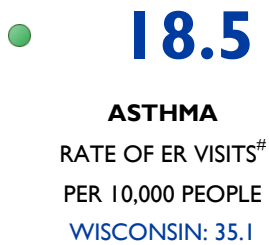




# HEALTH CONDITIONS KEWAUNEE COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.



● Above state value

● At or below state value

^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



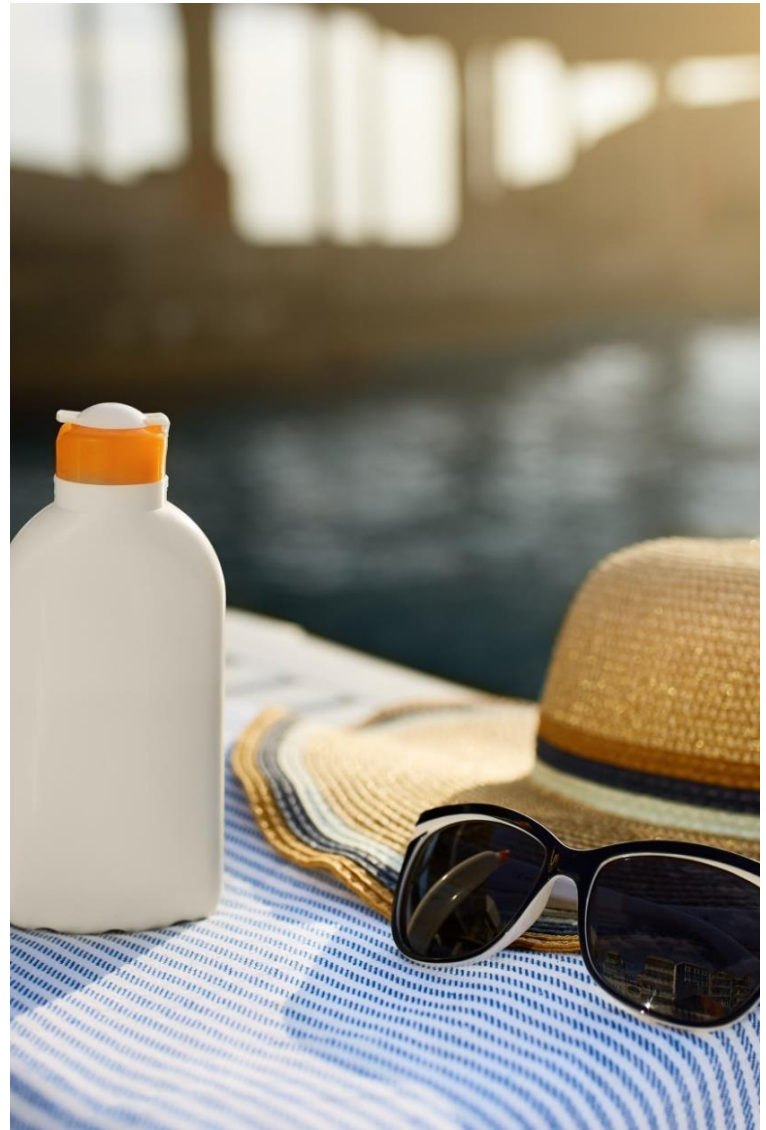
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

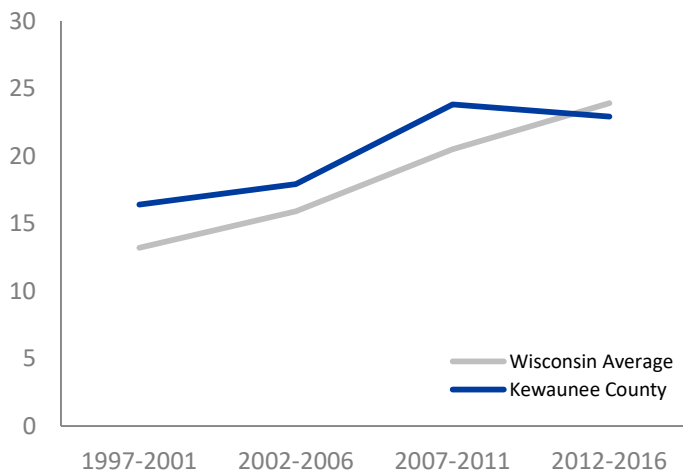
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



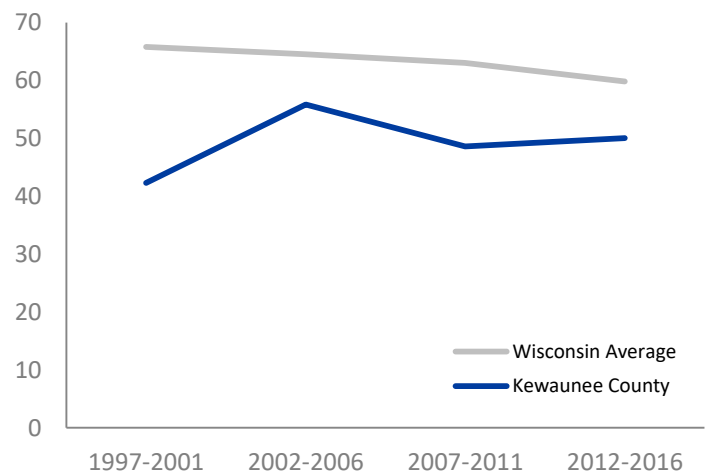
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE KEWAUNEE COUNTY

## BACKGROUND

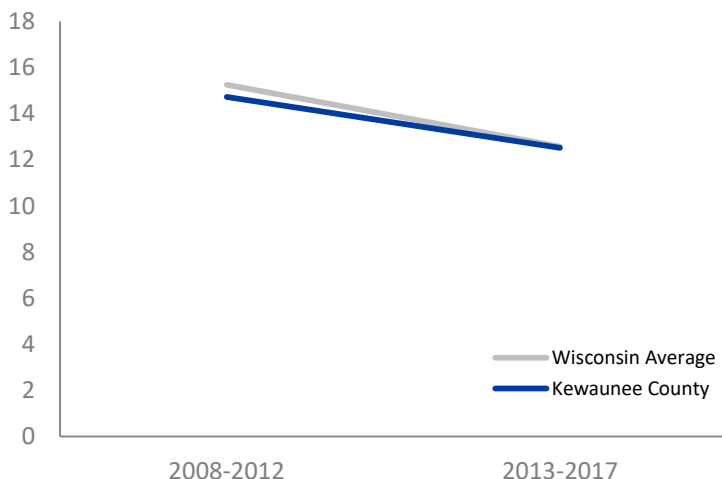
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **12.5**  
**HEAT STRESS**  
 RATE OF ER VISITS  
 PER 100,000 PEOPLE  
 WISCONSIN: 12.6

● **58.7**  
**LYME DISEASE**  
 RATE OF CASES  
 PER 100,000 PEOPLE  
 WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

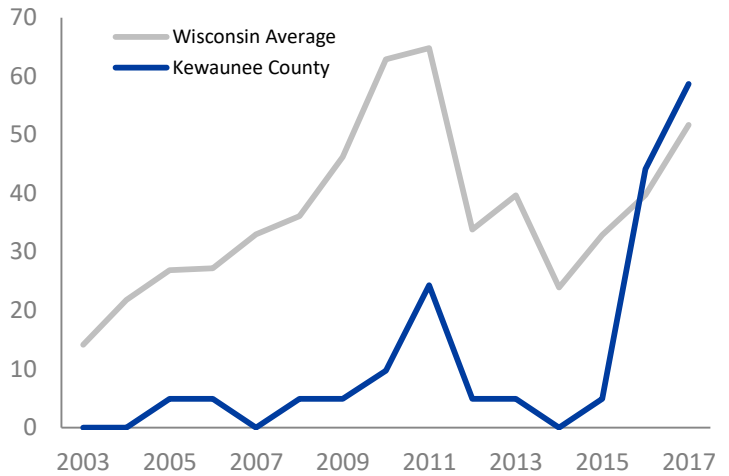
## INTERPRETING LYME DISEASE DATA

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.

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

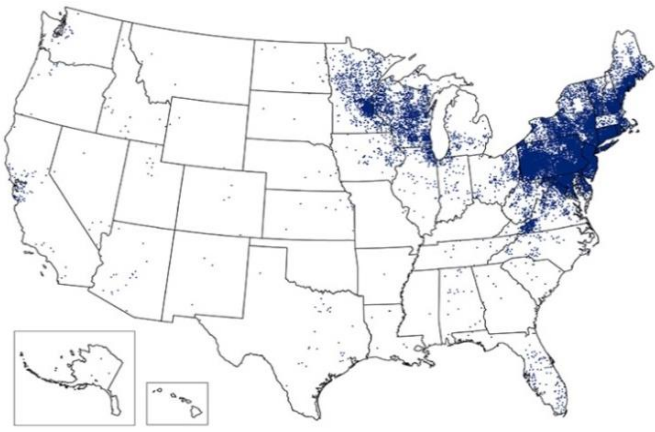
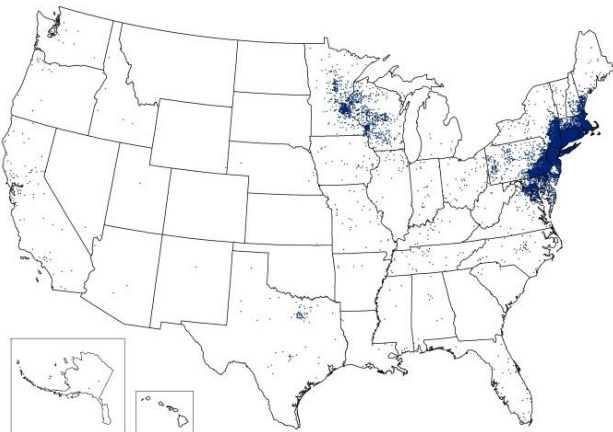
## LYME DISEASE AT THE NATIONAL LEVEL

OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001

2017



Maps courtesy of Centers for Disease Control and Prevention

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

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

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

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

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

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

Bureau of Environmental and Occupational Health  
Wisconsin Department of Health Services | Division of Public Health

[dhstracking@wi.gov](mailto:dhstracking@wi.gov) | [dhs.wisconsin.gov/epht](https://dhs.wisconsin.gov/epht)  
MAY 2019 | P-00719 (Rev. 05/2019)





# LA CROSSE COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

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

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# LA CROSSE COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

● 94.9% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

● 1.3 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

● 13.9% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

● 2.6% | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

● 4.1 | Rate of ER visits per 100,000 people  
Wisconsin: 7.9

### Childhood Lead Poisoning

● 2.0% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

● 36.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

● 21.2 | Rate of ER visits per 10,000 people<sup>#</sup>  
Wisconsin: 35.1

### Melanoma

● 25.0 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

● 54.6 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

● 13.7 | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

● 35.5 | Crude rate per 100,000 people  
Wisconsin: 51.7

● Above state value  
● At or below state value

\* Above state value preferred for this measure  
^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

[Data details on next page](#)



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Year displayed:** 2016

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

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

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

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

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

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

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

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

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH LA CROSSE COUNTY

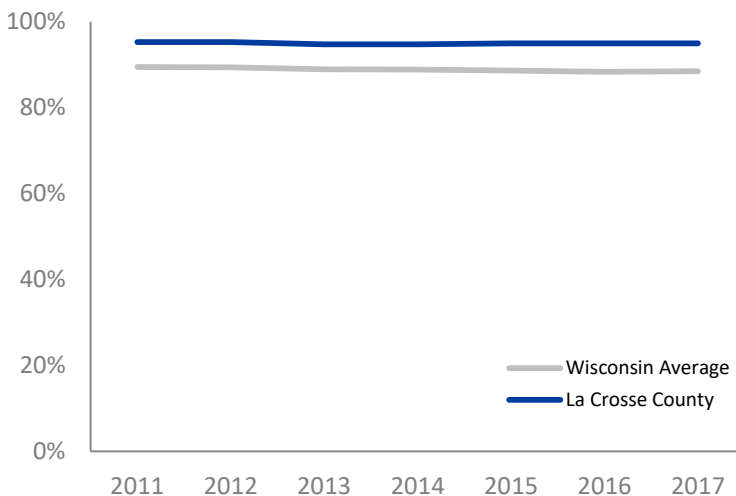
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **94.9%**

**FLUORIDE**  
PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
WISCONSIN: 88.4%

● **1.3**

**ALCOHOL OUTLET DENSITY**  
RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



## ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

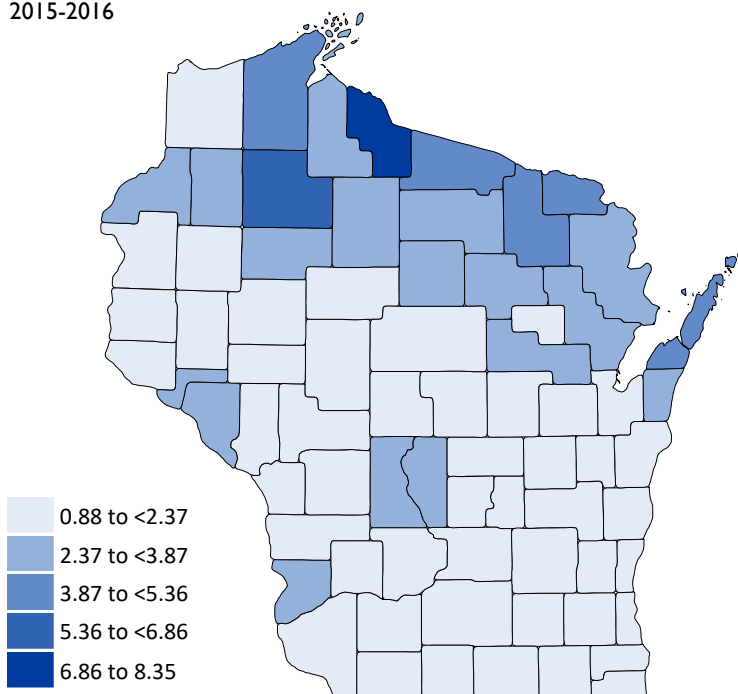
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

## ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



# 309

LICENSES IN  
LA CROSSE COUNTY

# 16,948

TOTAL LICENSES IN  
WISCONSIN





# PRIVATE WATER QUALITY LA CROSSE 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 displayed in this report. Users can find public water quality data on our data portal.

● **13.9%**

**NITRATE**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 mg/L  
**WISCONSIN: 11.0%**

● **2.6%**

**ARSENIC**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 µg/L  
**WISCONSIN: 6.0%**

● Above state value   ● At or below state value   ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
 1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS LA CROSSE 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.

● **4.1**  
**CARBON MONOXIDE POISONING**  
 RATE OF ER VISITS RELATED TO CO POISONING PER 100,000  
 WISCONSIN: 7.9

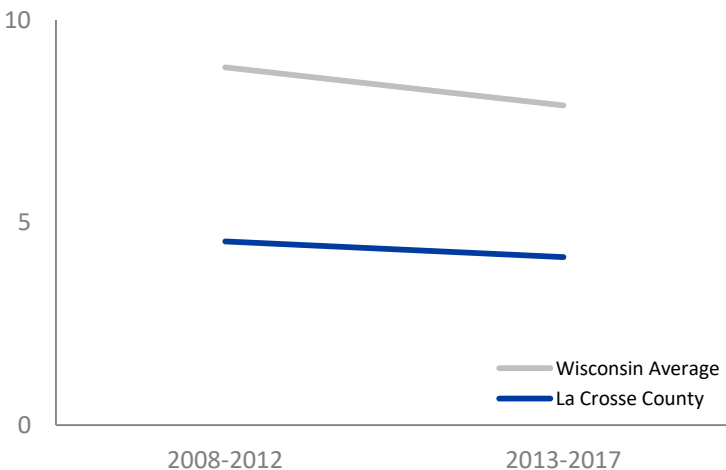
● **2.0%**  
**CHILDHOOD LEAD POISONING**  
 PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$   
 WISCONSIN: 5.0%

● **36.0%**  
**RADON**  
 PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$   
 WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

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

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



## 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter (µg/dL). The Centers for Disease Control and Prevention defines lead poisoning at or above 5 µg/dL.

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

## RADON

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

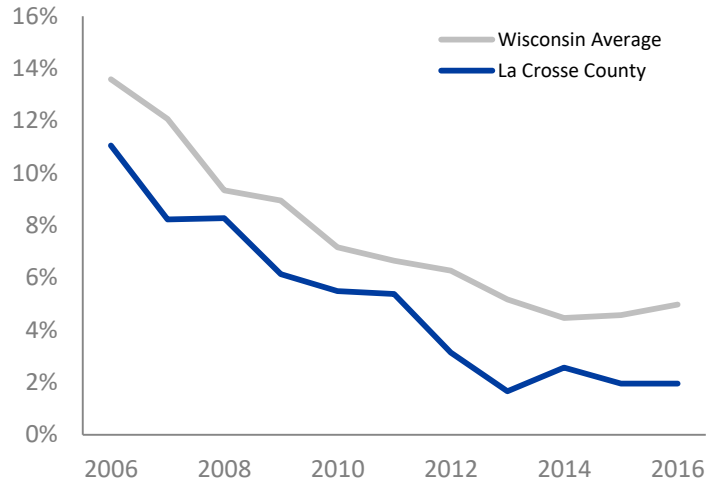
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

## CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD ≥5 µg/dL

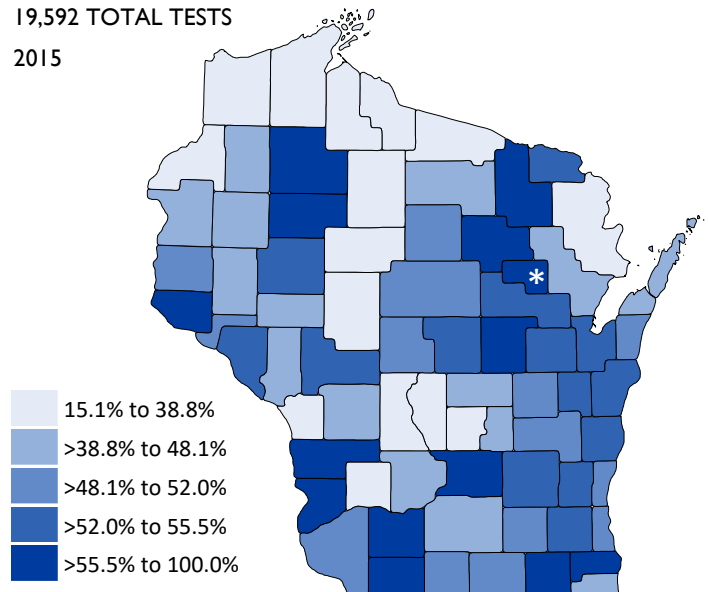


## RADON

PERCENT OF TESTS WITH RESULTS ≥4 pCi/L

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

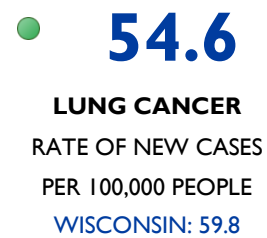
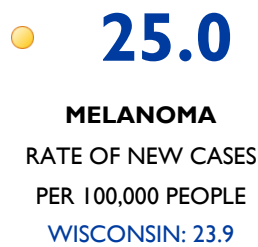
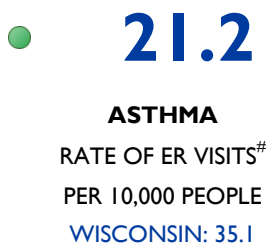




# HEALTH CONDITIONS LA CROSSE COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.



● Above state value

● At or below state value

^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



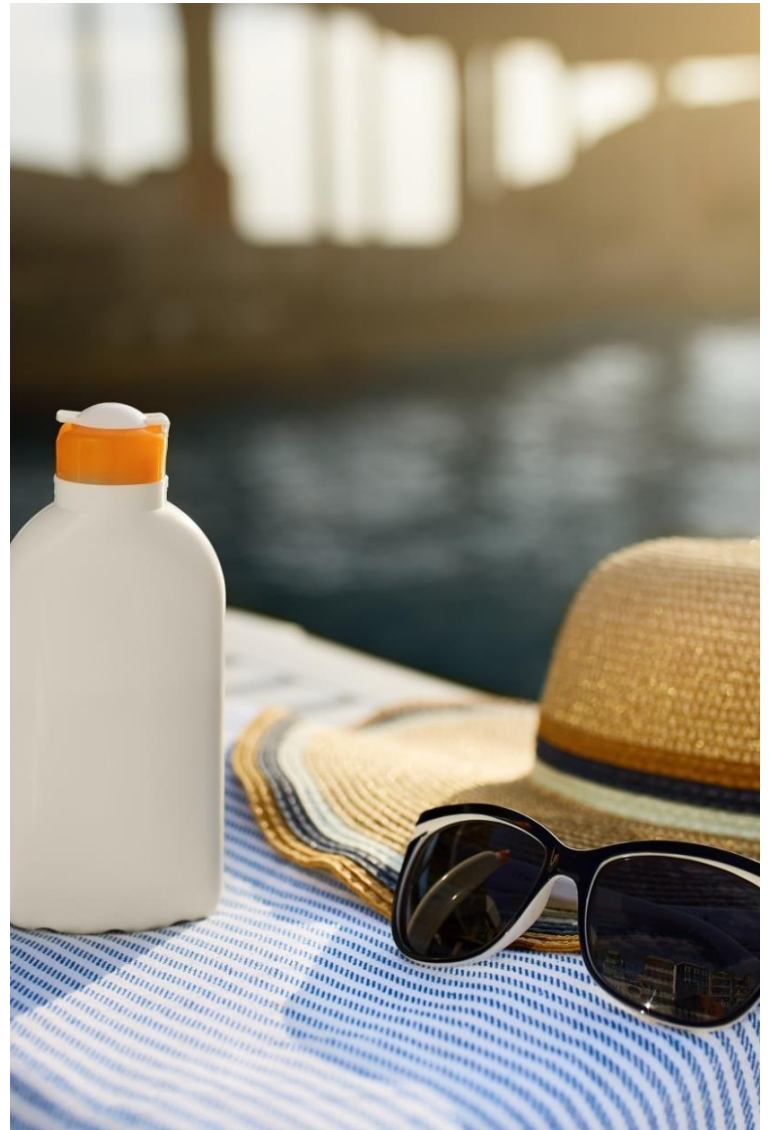
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

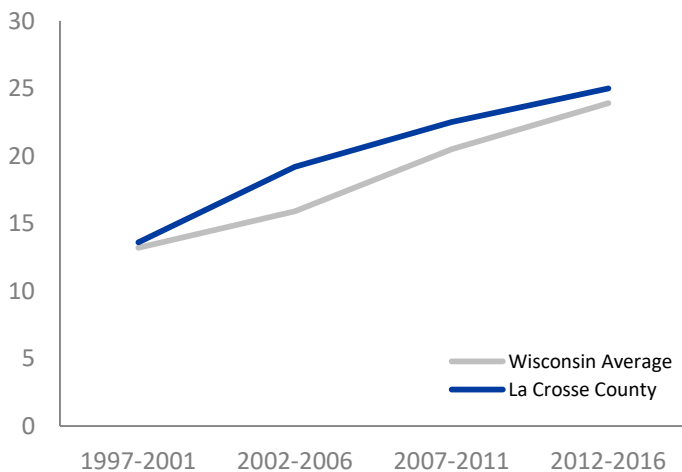
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



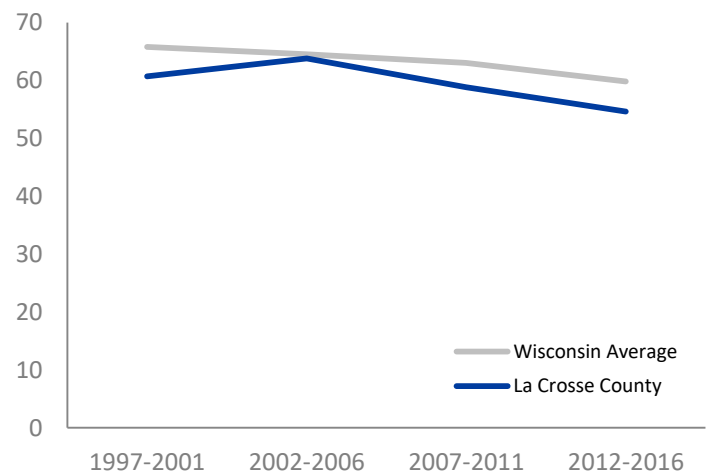
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE LA CROSSE COUNTY

## BACKGROUND

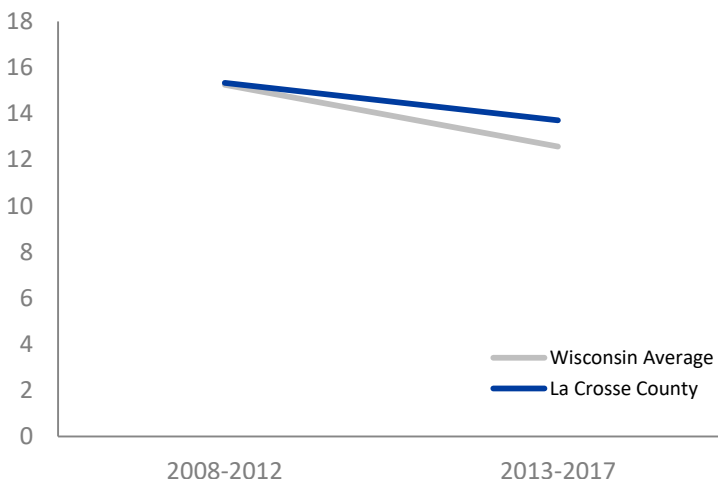
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **13.7**  
**HEAT STRESS**  
 RATE OF ER VISITS  
 PER 100,000 PEOPLE  
 WISCONSIN: 12.6

● **35.5**  
**LYME DISEASE**  
 RATE OF CASES  
 PER 100,000 PEOPLE  
 WISCONSIN: 51.7

● Above state value    ● At or below state value    ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

## LYME DISEASE AT THE NATIONAL LEVEL

OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001



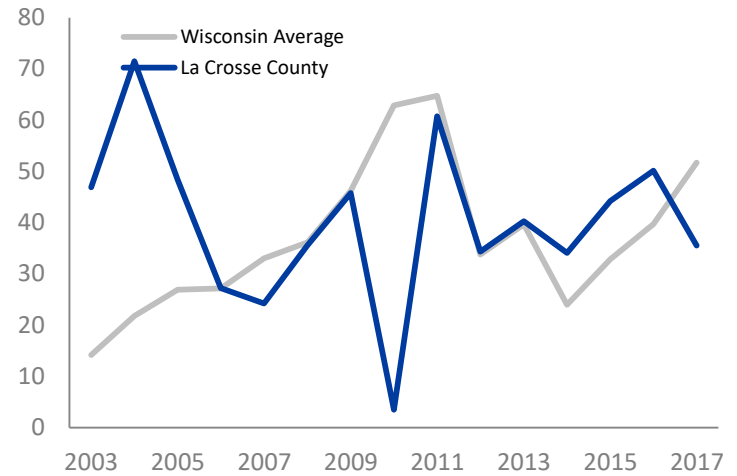
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

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

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

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

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

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

Bureau of Environmental and Occupational Health  
Wisconsin Department of Health Services | Division of Public Health

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MAY 2019 | P-00719 (Rev. 05/2019)





# LAFAYETTE COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

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

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# LAFAYETTE COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

● 68.7% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

● 2.3 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

● 17.0% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

● 2.5% | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

● 9.4 | Rate of ER visits per 100,000 people  
Wisconsin: 7.9

### Childhood Lead Poisoning

● 5.6% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

● 62.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

● 23.1 | Rate of ER visits per 10,000 people<sup>#</sup>  
Wisconsin: 35.1

### Melanoma

● 18.6 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

● 49.8 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

● 15.1 | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

● 17.9 | Crude rate per 100,000 people  
Wisconsin: 51.7

● Above state value  
● At or below state value

\* Above state value preferred for this measure  
^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

[Data details on next page](#)



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Year displayed:** 2016

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

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

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

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

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

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

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

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

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH LAFAYETTE COUNTY

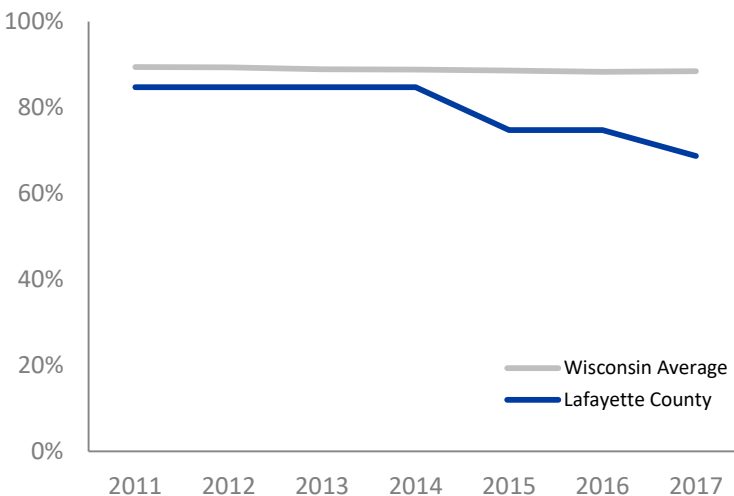
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **68.7%**

**FLUORIDE**  
PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
WISCONSIN: 88.4%

● **2.3**

**ALCOHOL OUTLET DENSITY**  
RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



### ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

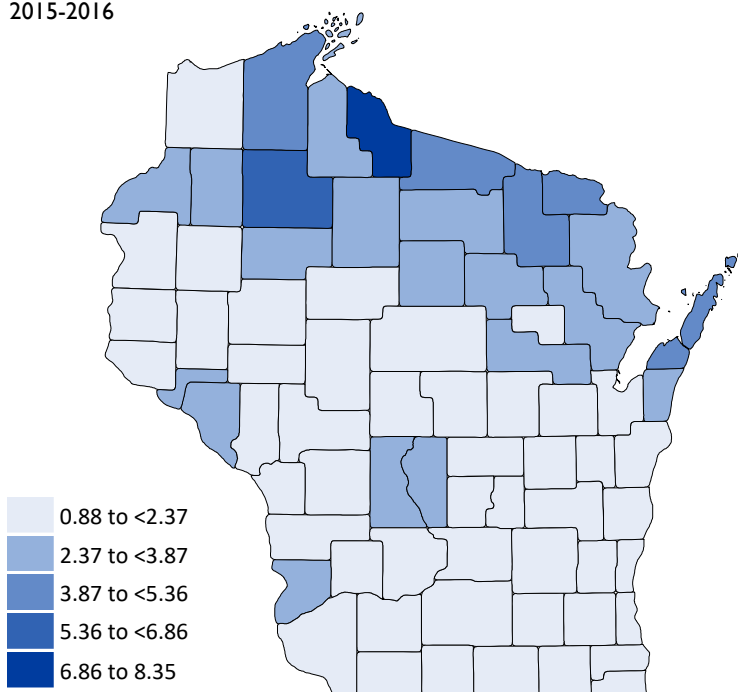
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

### ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



# 77

LICENSES IN  
LAFAYETTE COUNTY

# 16,948

TOTAL LICENSES IN  
WISCONSIN





# PRIVATE WATER QUALITY LAFAYETTE 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 displayed in this report. Users can find public water quality data on our data portal.

● **17.0%**

**NITRATE**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 mg/L  
**WISCONSIN: 11.0%**

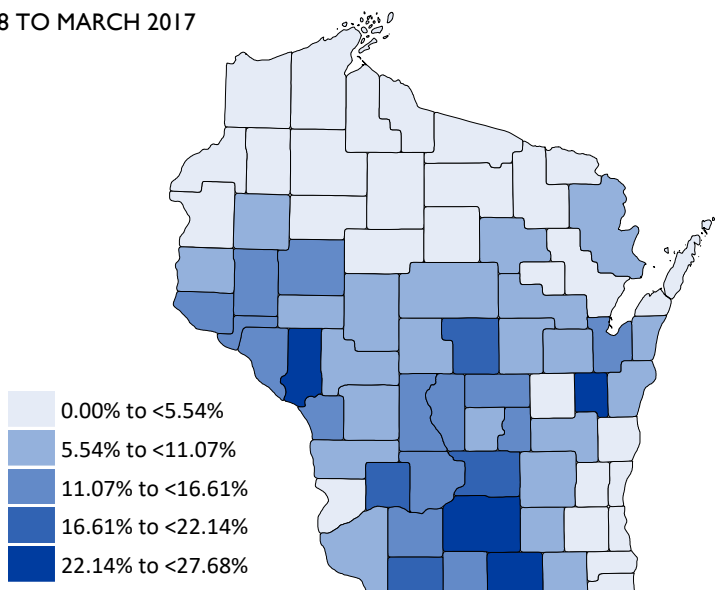
● **2.5%**

**ARSENIC**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 µg/L  
**WISCONSIN: 6.0%**

● Above state value   ● At or below state value   ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
 1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS LAFAYETTE 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.

● **9.4**  
**CARBON MONOXIDE POISONING**  
 RATE OF ER VISITS RELATED TO CO POISONING PER 100,000  
 WISCONSIN: 7.9

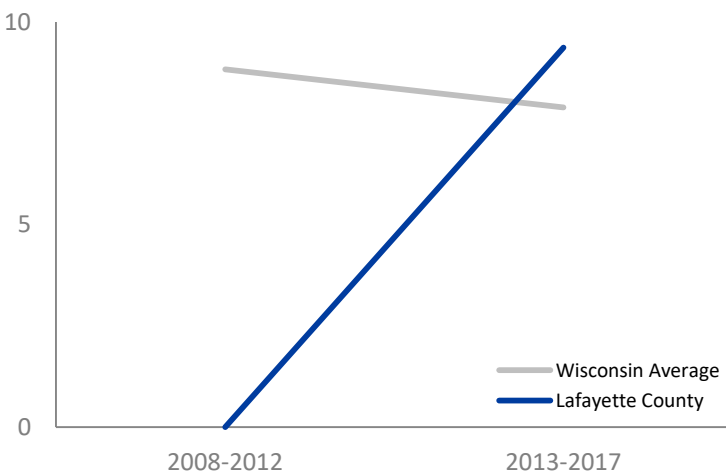
● **5.6%**  
**CHILDHOOD LEAD POISONING**  
 PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$   
 WISCONSIN: 5.0%

● **62.0%**  
**RADON**  
 PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$   
 WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

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

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



## 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter (µg/dL). The Centers for Disease Control and Prevention defines lead poisoning at or above 5 µg/dL.

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

## RADON

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

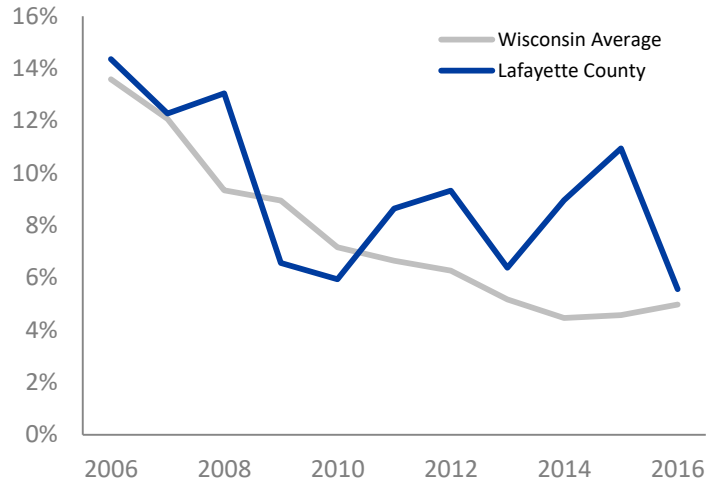
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

## CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD ≥5 µg/dL

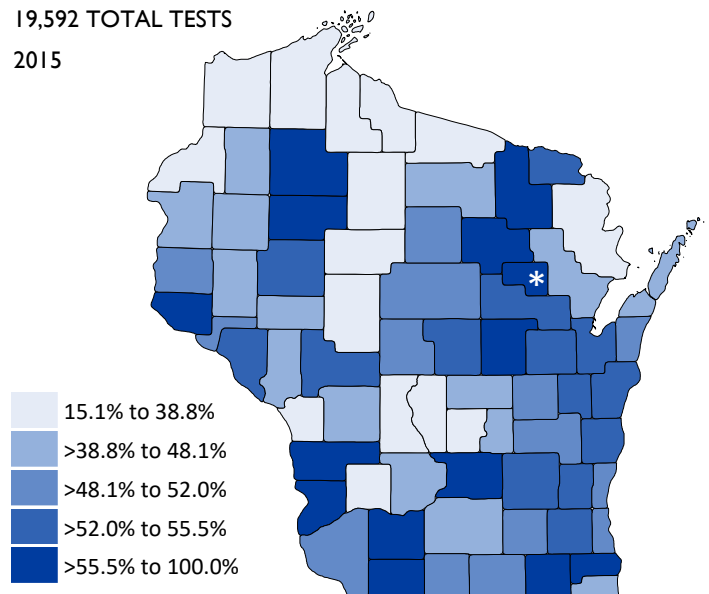


## RADON

PERCENT OF TESTS WITH RESULTS ≥4 pCi/L

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

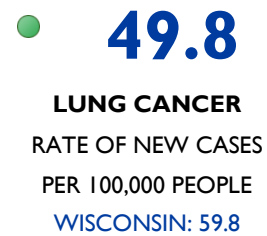
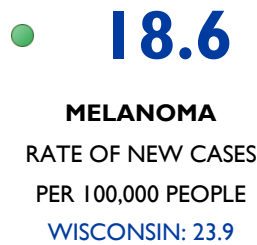
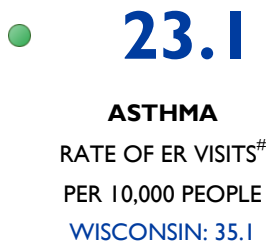




# HEALTH CONDITIONS LAFAYETTE COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.



● Above state value

● At or below state value

^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



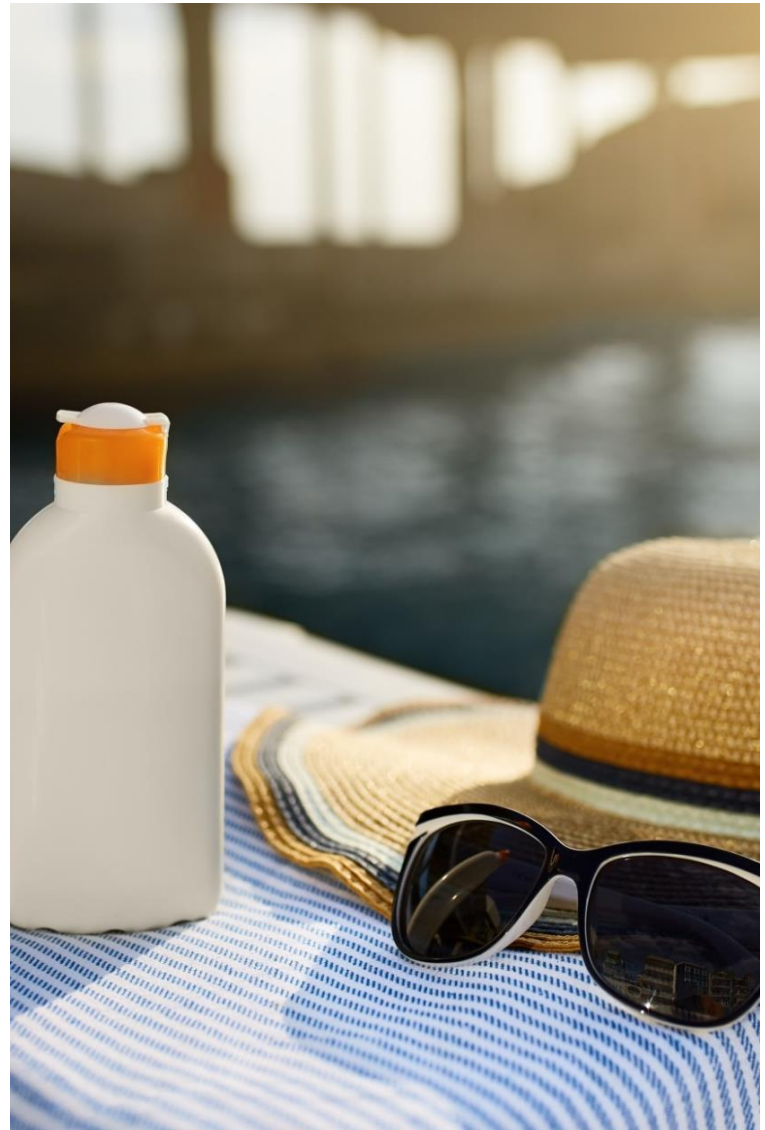
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

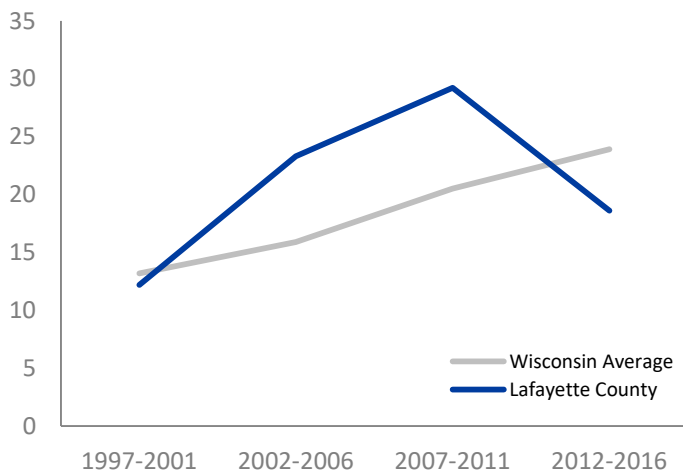
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



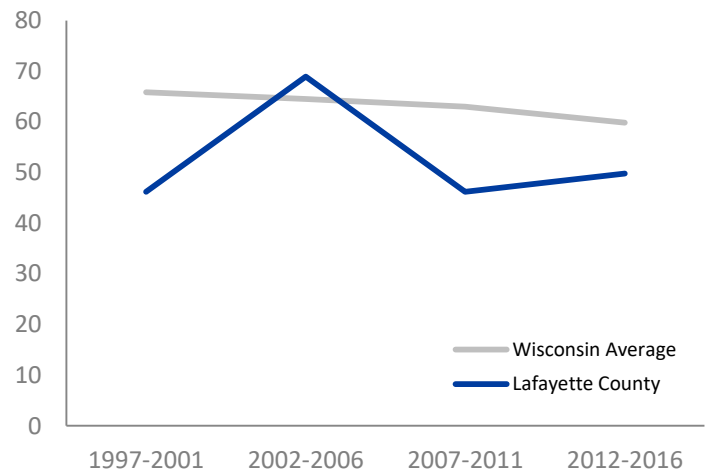
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE LAFAYETTE COUNTY

## BACKGROUND

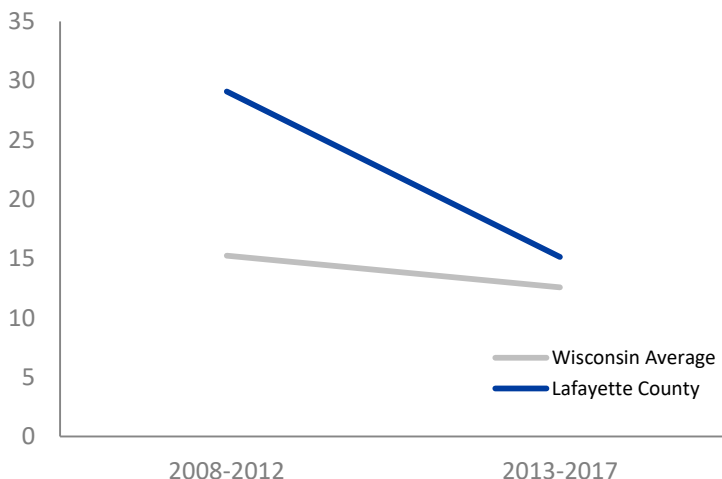
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **15.1**  
**HEAT STRESS**  
 RATE OF ER VISITS  
 PER 100,000 PEOPLE  
 WISCONSIN: 12.6

● **17.9**  
**LYME DISEASE**  
 RATE OF CASES  
 PER 100,000 PEOPLE  
 WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

## LYME DISEASE AT THE NATIONAL LEVEL

OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001



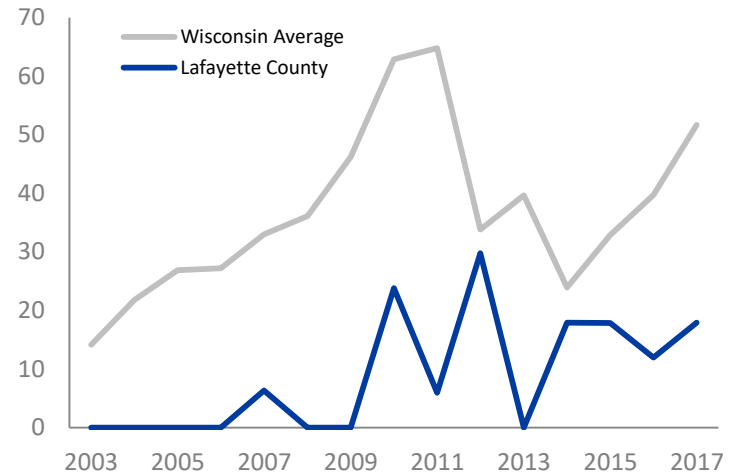
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

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

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

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

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

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

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Wisconsin Department of Health Services | Division of Public Health

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MAY 2019 | P-00719 (Rev. 05/2019)





# LANGLADE COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

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

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# LANGLADE COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

● 91.5% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

● 2.9 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

● 6.9% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

● 0.0% | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

● 8.9 | Rate of ER visits per 100,000 people  
Wisconsin: 8.4

### Childhood Lead Poisoning

● 3.0% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

● 62.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

● 28.9 | Rate of ER visits per 10,000 people<sup>#</sup>  
Wisconsin: 35.1

### Melanoma

● 16.7 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

● 69.8 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

● 18.4 | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

● 67.9 | Crude rate per 100,000 people  
Wisconsin: 51.7

● Above state value  
● At or below state value

\* Above state value preferred for this measure  
^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

Data details on next page



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Year displayed:** 2016

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

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

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

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

**Years displayed:** 2008-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

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

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

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

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH LANGLADE COUNTY

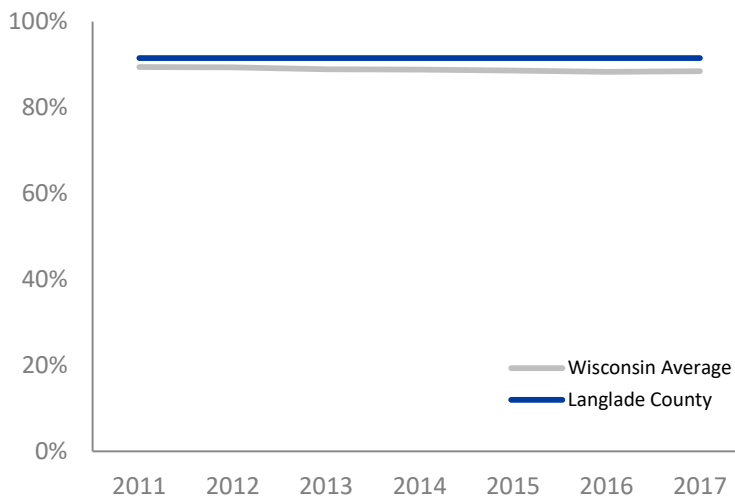
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **91.5%**

**FLUORIDE**  
PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
WISCONSIN: 88.4%

● **2.9**

**ALCOHOL OUTLET DENSITY**  
RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



## ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

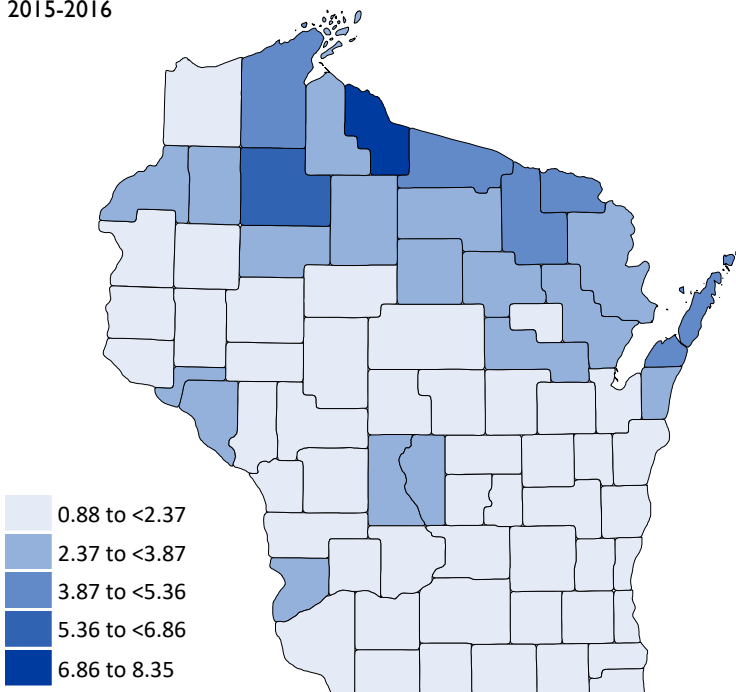
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

## ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



|                                |                                |
|--------------------------------|--------------------------------|
| <b>112</b>                     | <b>16,948</b>                  |
| LICENSES IN<br>LANGLADE COUNTY | TOTAL LICENSES IN<br>WISCONSIN |





# PRIVATE WATER QUALITY LANGLADE 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 displayed in this report. Users can find public water quality data on our data portal.

● **6.9%**

**NITRATE  
IN PRIVATE WELLS**  
PERCENT OF TEST RESULTS  
ABOVE EPA STANDARD  
OF 10 mg/L  
**WISCONSIN: 11.0%**

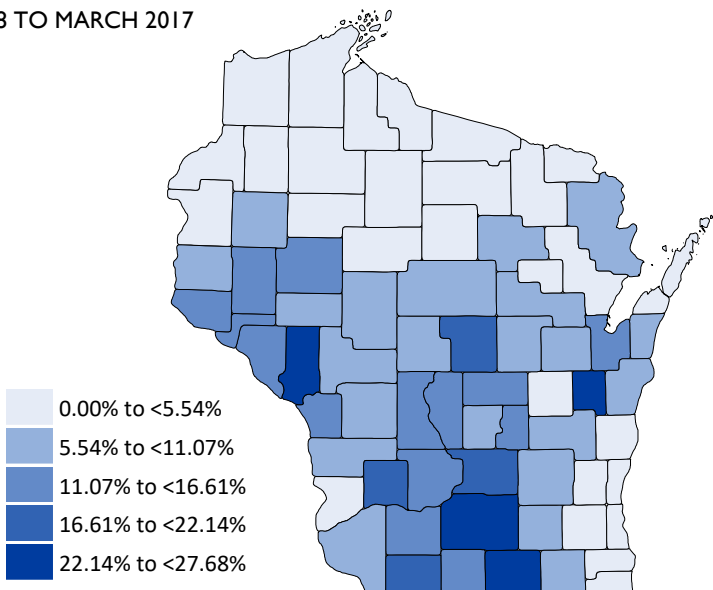
● **0.0%**

**ARSENIC  
IN PRIVATE WELLS**  
PERCENT OF TEST RESULTS  
ABOVE EPA STANDARD  
OF 10 µg/L  
**WISCONSIN: 6.0%**

● Above state value   ● At or below state value   ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS LANGLADE 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.

● **8.9**  
**CARBON MONOXIDE POISONING**  
 RATE OF ER VISITS RELATED TO CO POISONING PER 100,000  
 WISCONSIN: 8.4

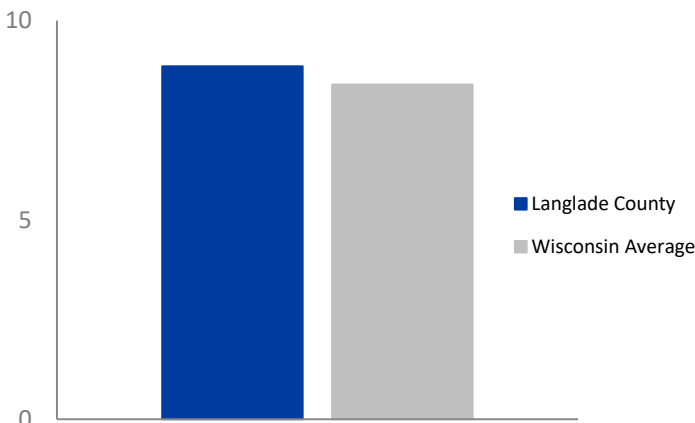
● **3.0%**  
**CHILDHOOD LEAD POISONING**  
 PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$   
 WISCONSIN: 5.0%

● **62.0%**  
**RADON**  
 PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$   
 WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE  
 2008-2017



## CARBON MONOXIDE POISONING

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

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



## 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter (µg/dL). The Centers for Disease Control and Prevention defines lead poisoning at or above 5 µg/dL.

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

## RADON

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

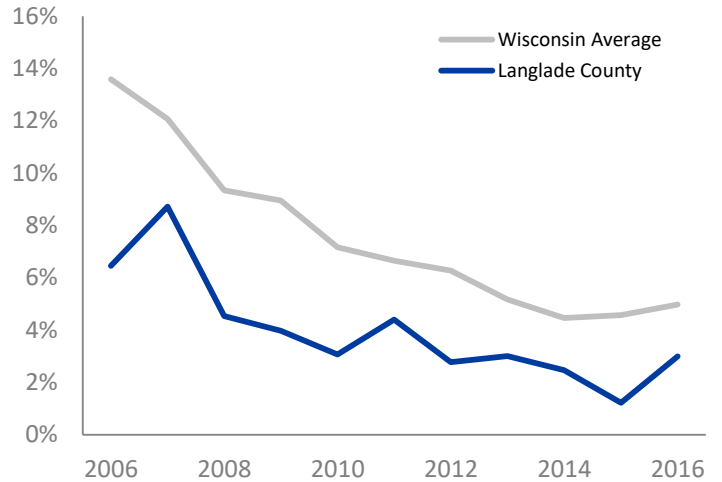
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

## CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD ≥5 µg/dL

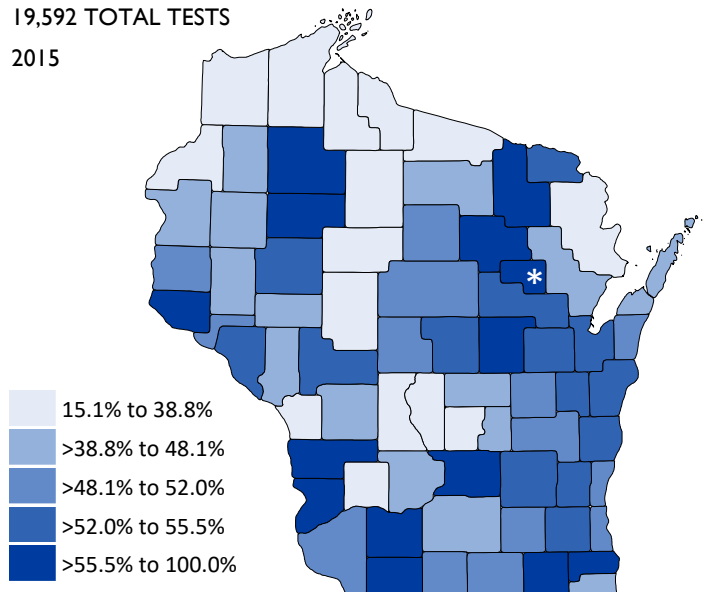


## RADON

PERCENT OF TESTS WITH RESULTS ≥4 pCi/L

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

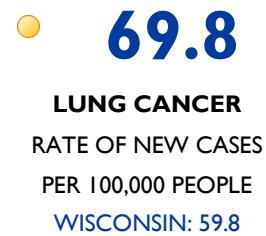
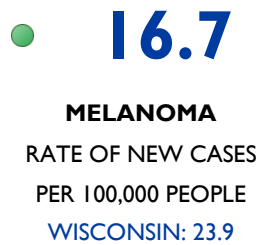
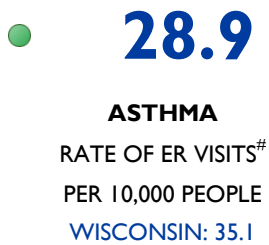




# HEALTH CONDITIONS LANGLADE COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.

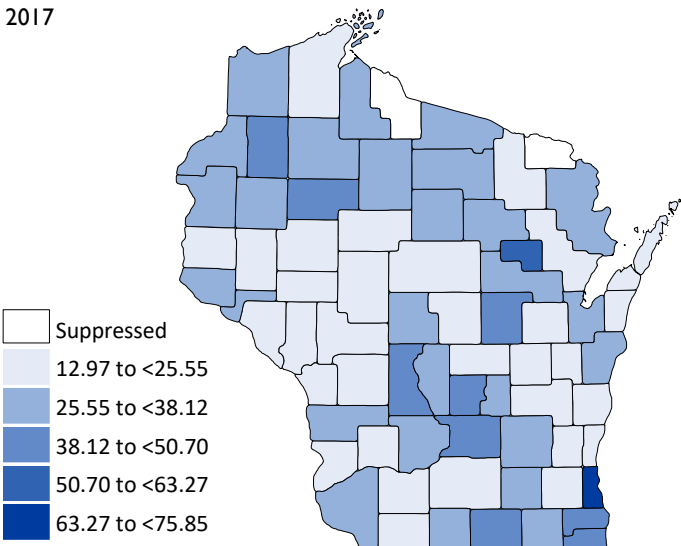


- Above state value
- At or below state value
- ^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



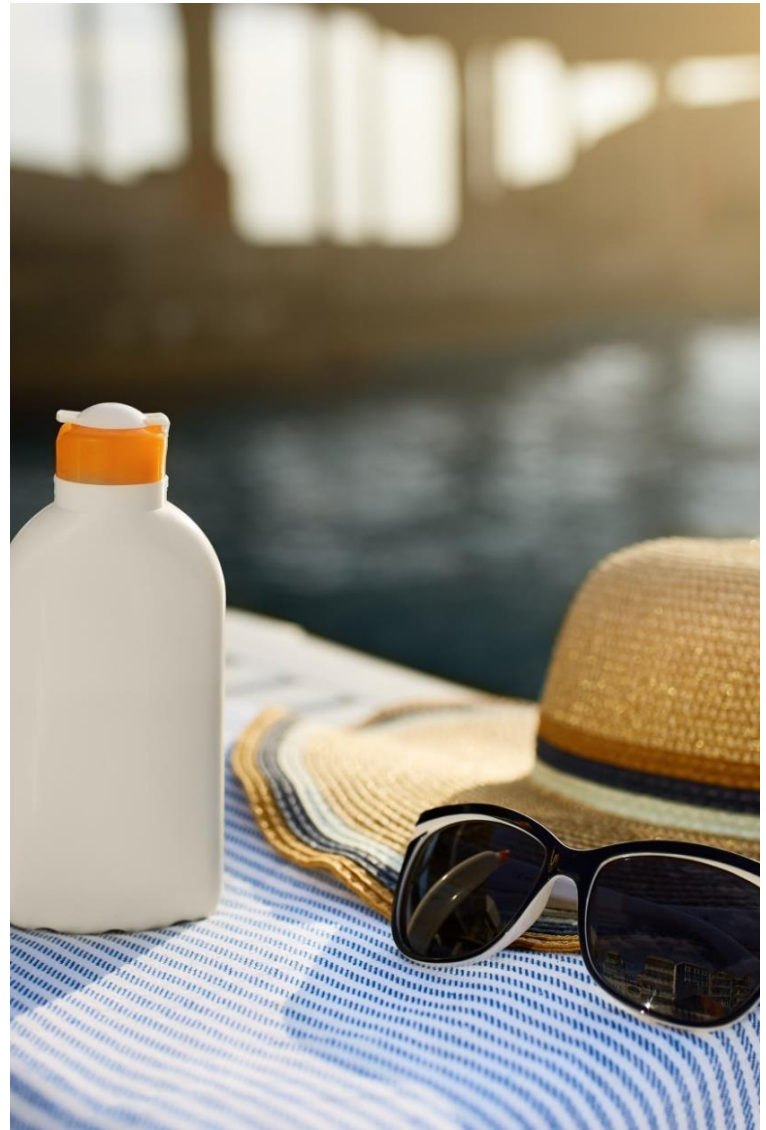
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

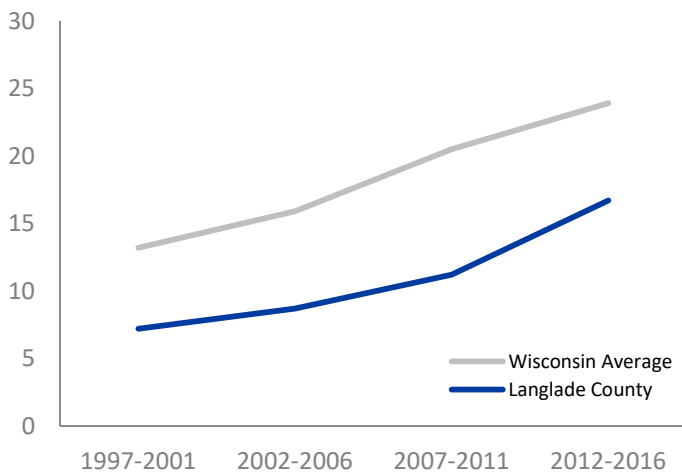
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



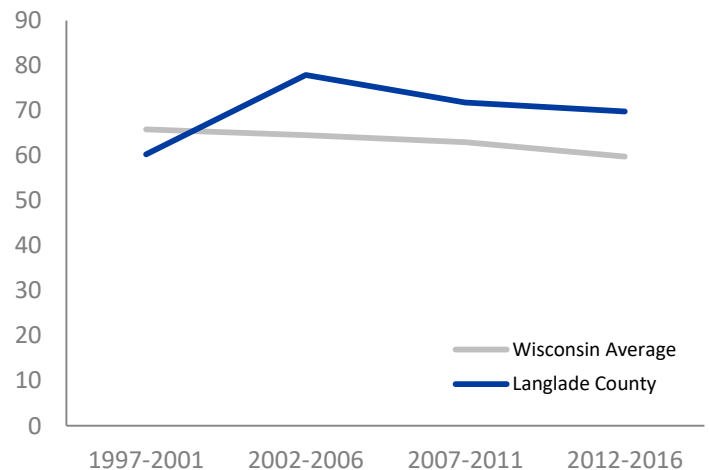
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE LANGLADE COUNTY

## BACKGROUND

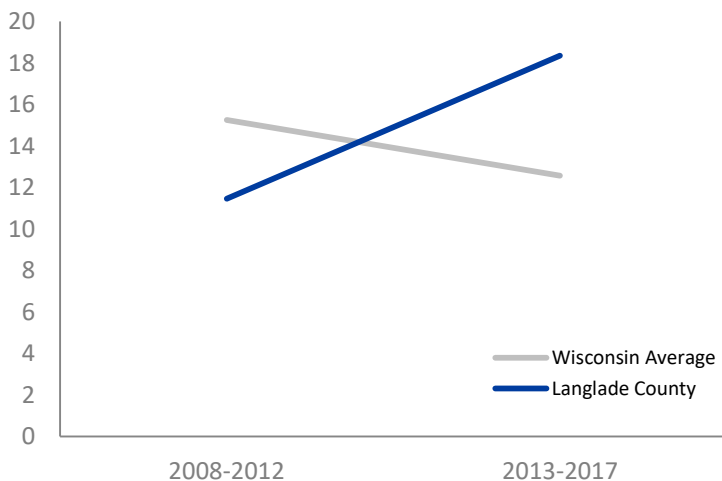
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **18.4**  
**HEAT STRESS**  
 RATE OF ER VISITS  
 PER 100,000 PEOPLE  
 WISCONSIN: 12.6

● **67.9**  
**LYME DISEASE**  
 RATE OF CASES  
 PER 100,000 PEOPLE  
 WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

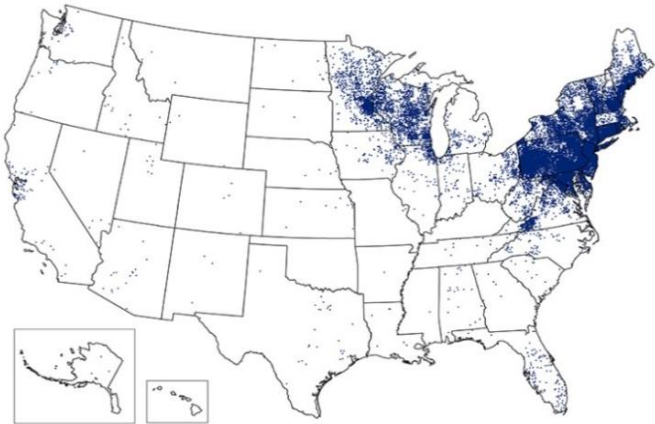
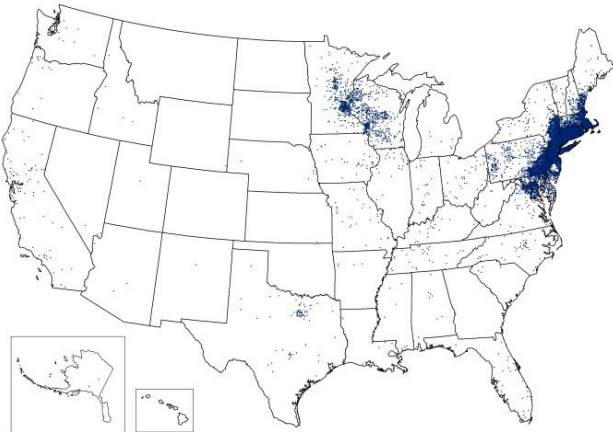
## LYME DISEASE AT THE NATIONAL LEVEL

OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001

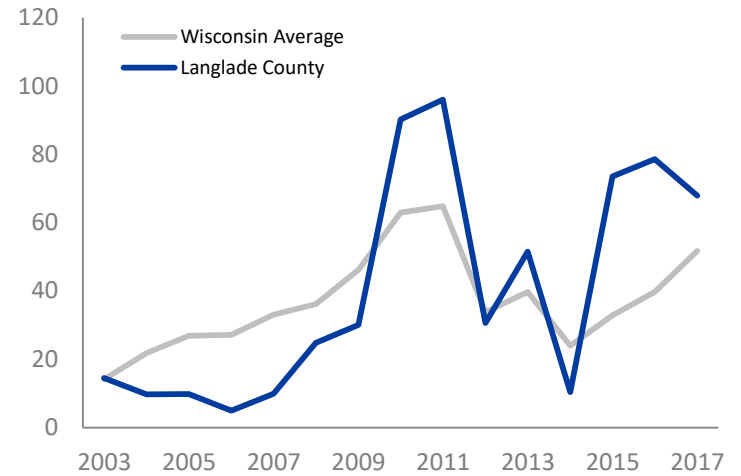
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population. For the majority of Profiles, these data were averaged over five years (2013-2017). For this county's Profile, that five-year average was suppressed. To eliminate the suppression in this Profile, these data were instead averaged over 10 years (2008-2017).

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

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

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

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

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

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

Bureau of Environmental and Occupational Health  
Wisconsin Department of Health Services | Division of Public Health

[dhstracking@wi.gov](mailto:dhstracking@wi.gov) | [dhs.wisconsin.gov/epht](https://dhs.wisconsin.gov/epht)  
MAY 2019 | P-00719 (Rev. 05/2019)





# LINCOLN COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

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

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# LINCOLN COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

● 94.4% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

● 2.7 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

● 2.5% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

● 6.6% | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

● 19.0 | Rate of ER visits per 100,000 people  
Wisconsin: 7.9

### Childhood Lead Poisoning

● 4.0% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

● 52.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

● 33.4 | Rate of ER visits per 10,000 people<sup>#</sup>  
Wisconsin: 35.1

### Melanoma

● 14.6 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

● 63.7 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

● 18.1 | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

● 136.5 | Crude rate per 100,000 people  
Wisconsin: 51.7

● Above state value  
● At or below state value

\* Above state value preferred for this measure  
^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

[Data details on next page](#)



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services  
**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

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

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

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point  
**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services  
**Year displayed:** 2016

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

**Source:** Radon and Indoor Air Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services  
**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services  
**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services  
**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services  
**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH LINCOLN COUNTY

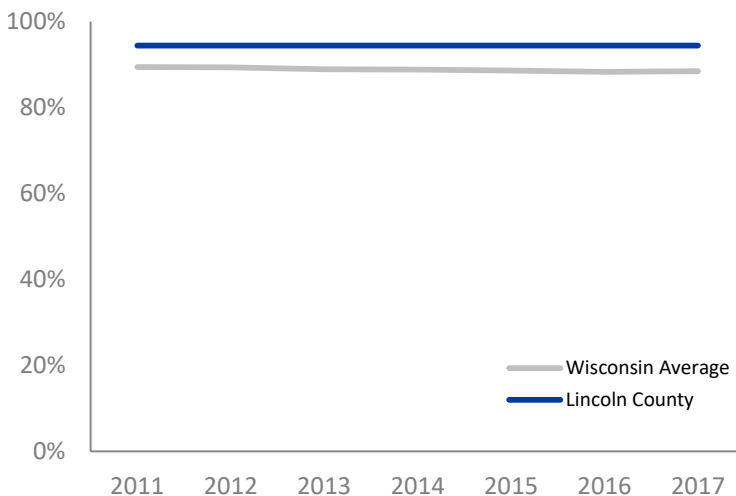
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **94.4%**  
**FLUORIDE**  
 PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
 WISCONSIN: 88.4%

● **2.7**  
**ALCOHOL OUTLET DENSITY**  
 RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
 WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
 ^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



## ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

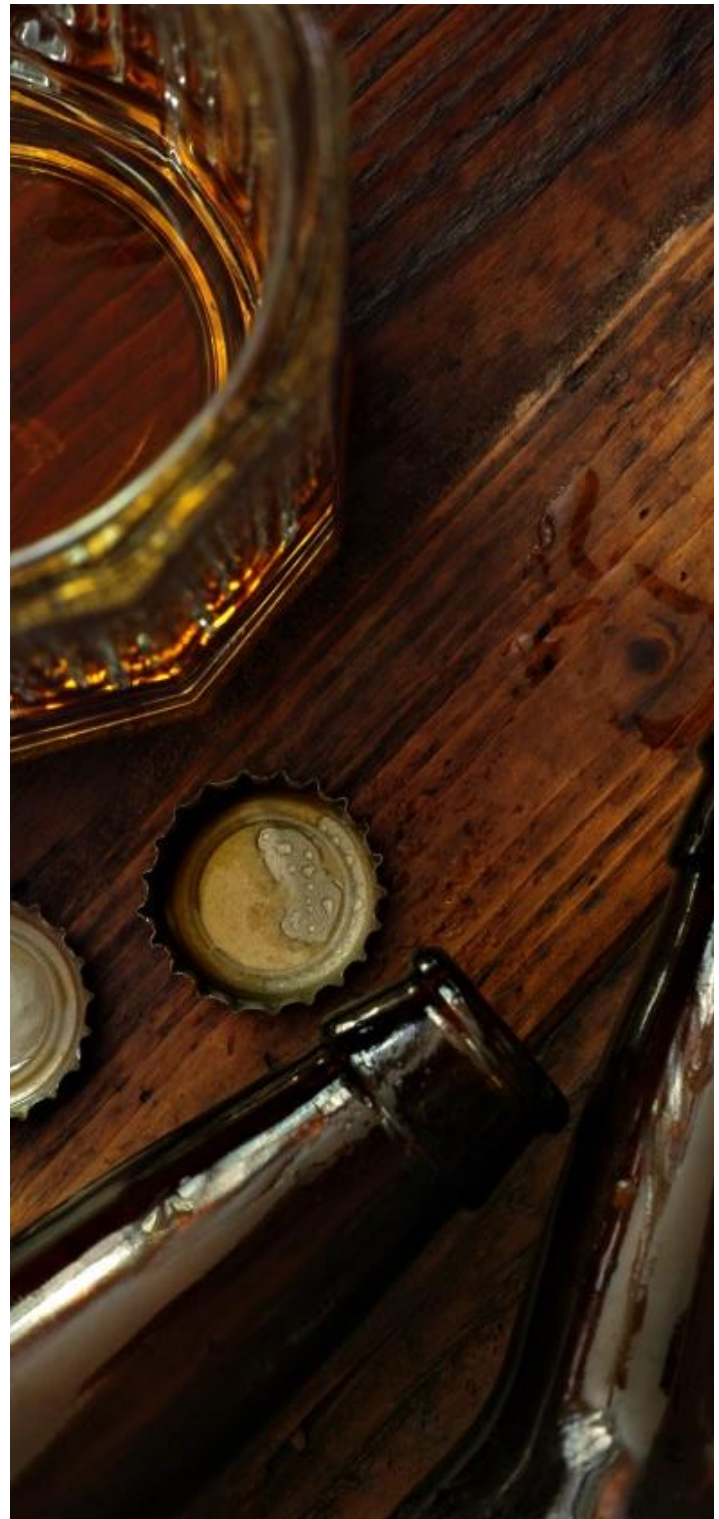
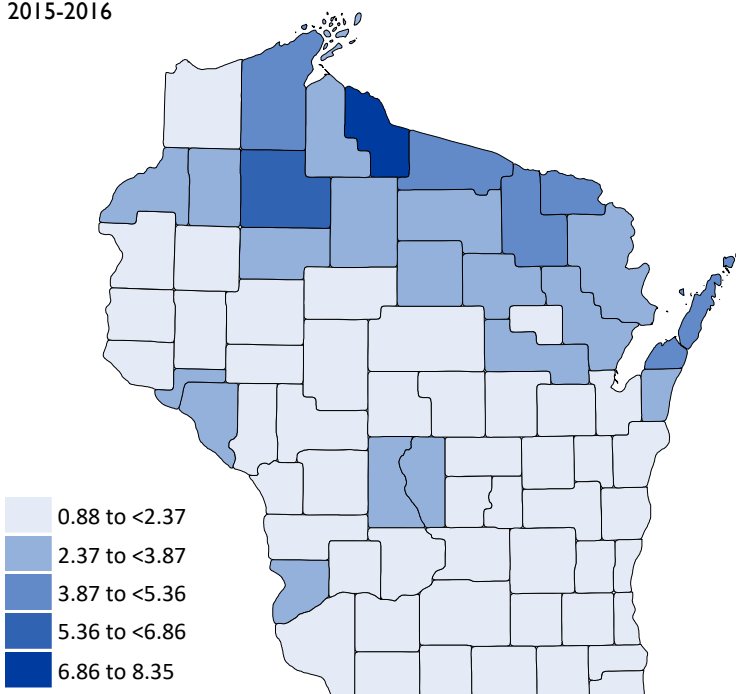
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

## ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



|                               |                                |
|-------------------------------|--------------------------------|
| <b>150</b>                    | <b>16,948</b>                  |
| LICENSES IN<br>LINCOLN COUNTY | TOTAL LICENSES IN<br>WISCONSIN |





# PRIVATE WATER QUALITY LINCOLN 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 displayed in this report. Users can find public water quality data on our data portal.

● **2.5%**

**NITRATE**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 mg/L  
**WISCONSIN: 11.0%**

● **6.6%**

**ARSENIC**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 µg/L  
**WISCONSIN: 6.0%**

● Above state value    ● At or below state value    ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
 1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS LINCOLN 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.

● **19.0**  
**CARBON MONOXIDE POISONING**  
 RATE OF ER VISITS RELATED TO CO POISONING PER 100,000  
 WISCONSIN: 7.9

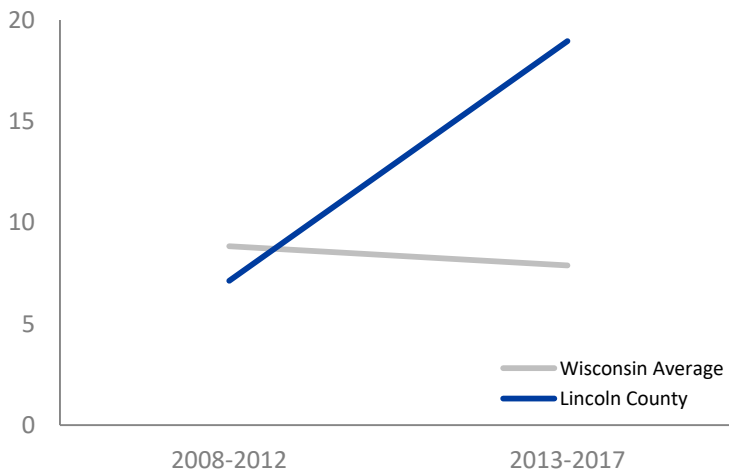
● **4.0%**  
**CHILDHOOD LEAD POISONING**  
 PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$   
 WISCONSIN: 5.0%

● **52.0%**  
**RADON**  
 PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$   
 WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

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

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



## 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter ( $\mu\text{g}/\text{dL}$ ). The Centers for Disease Control and Prevention defines lead poisoning at or above 5  $\mu\text{g}/\text{dL}$ .

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

## RADON

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

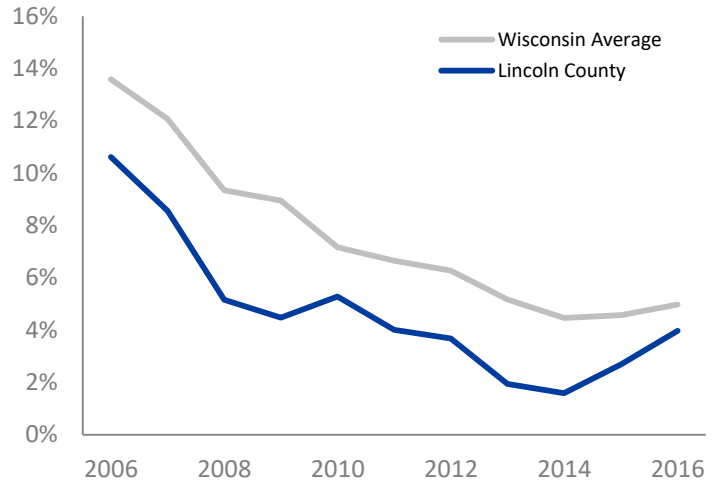
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

## CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g}/\text{dL}$

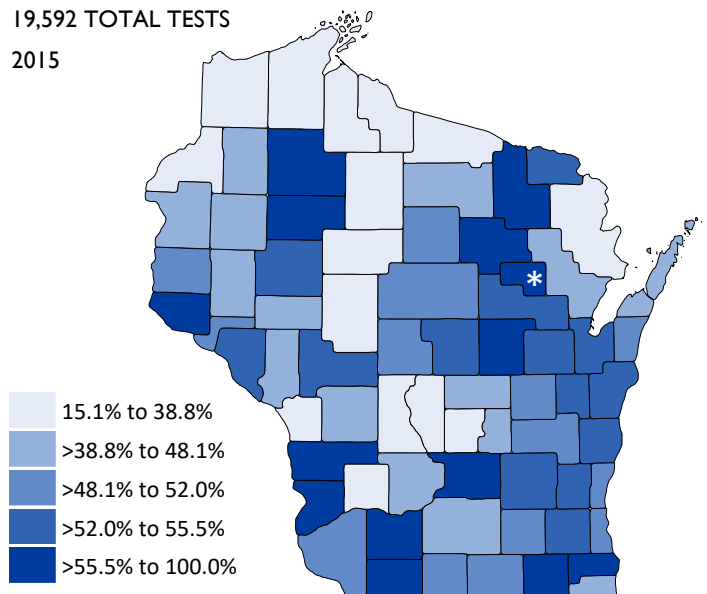


## RADON

PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi}/\text{L}$

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

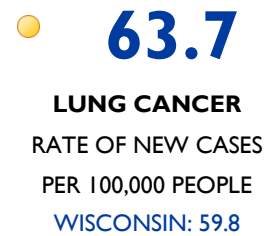
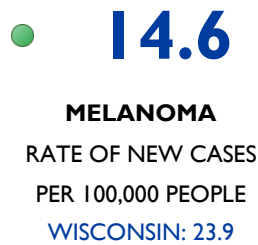
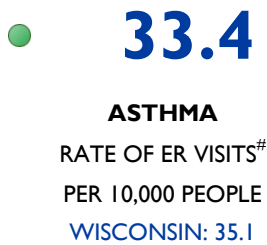




# HEALTH CONDITIONS LINCOLN COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.

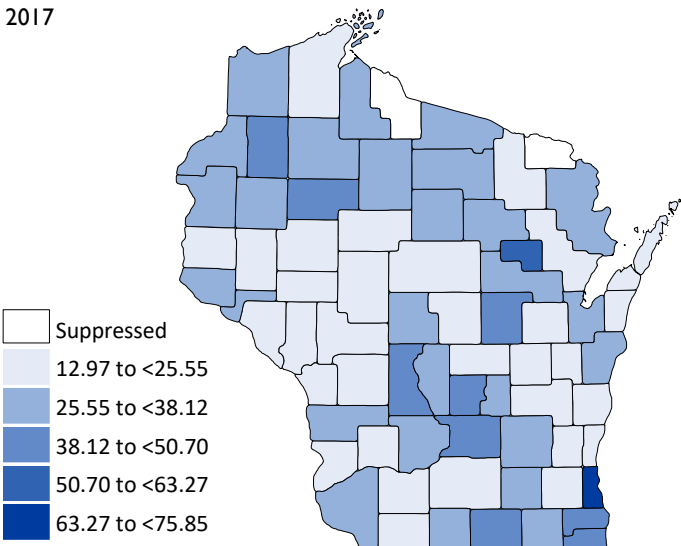


- Above state value
- At or below state value
- ^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



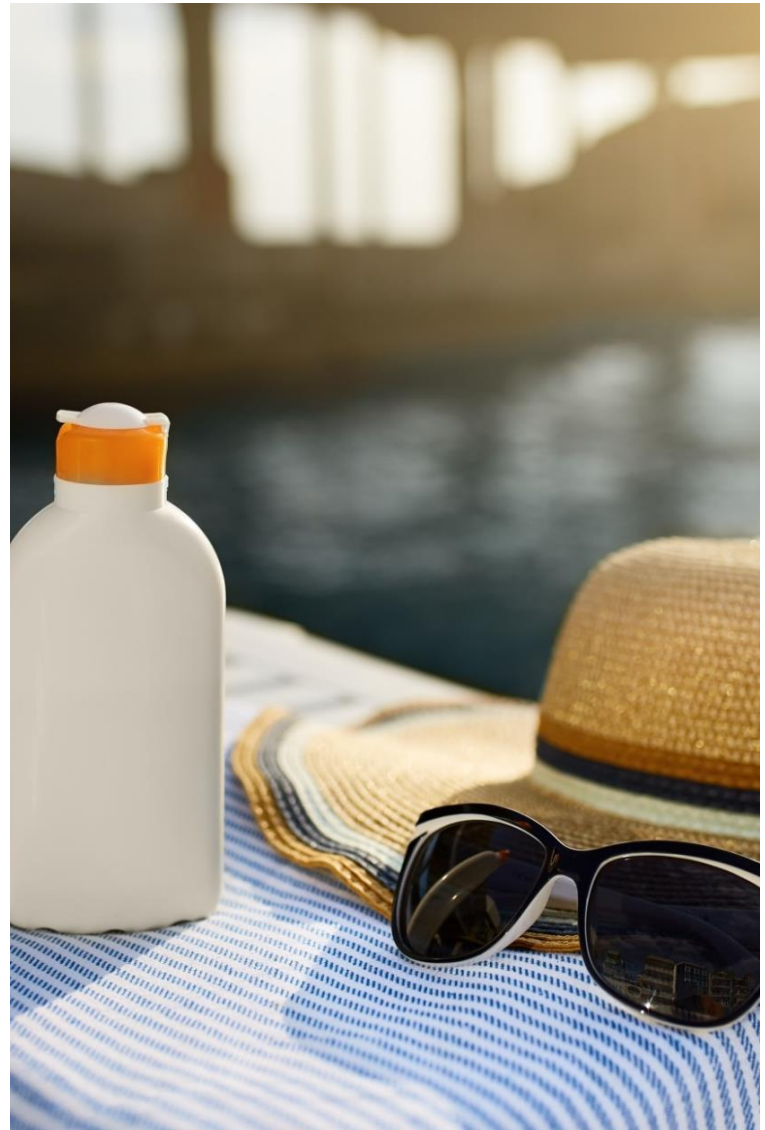
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

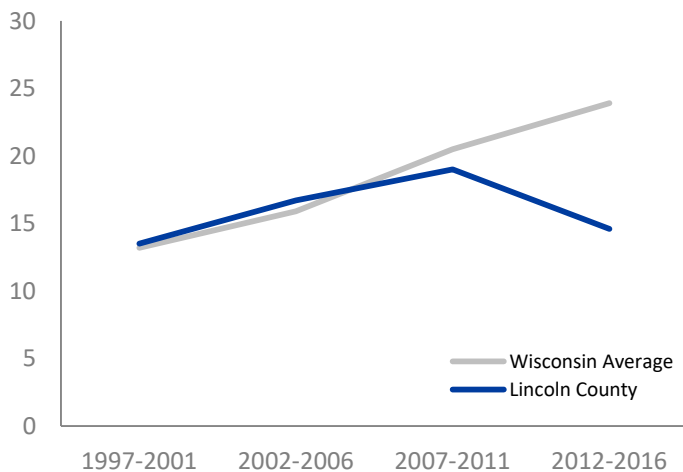
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



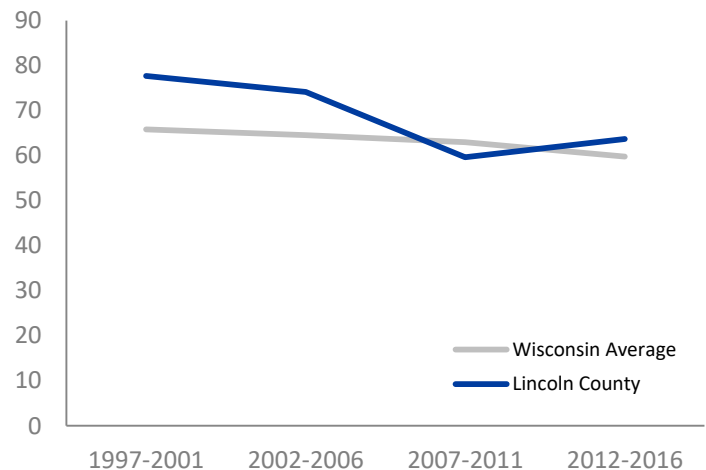
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE LINCOLN COUNTY

## BACKGROUND

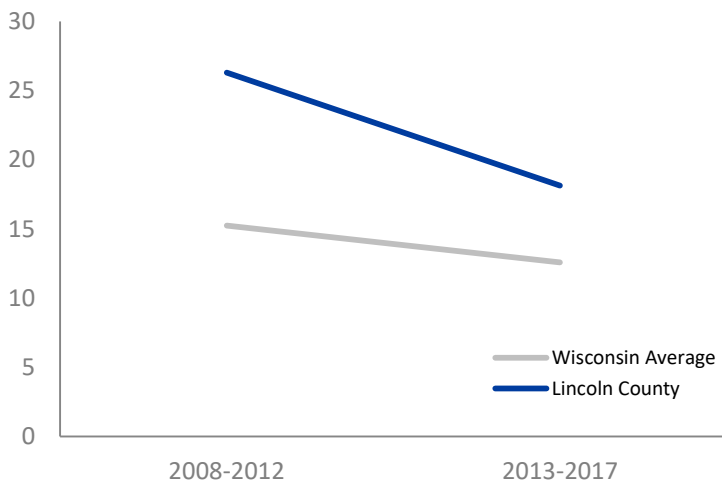
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **18.1**  
**HEAT STRESS**  
 RATE OF ER VISITS  
 PER 100,000 PEOPLE  
 WISCONSIN: 12.6

● **136.5**  
**LYME DISEASE**  
 RATE OF CASES  
 PER 100,000 PEOPLE  
 WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

## LYME DISEASE AT THE NATIONAL LEVEL

OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001



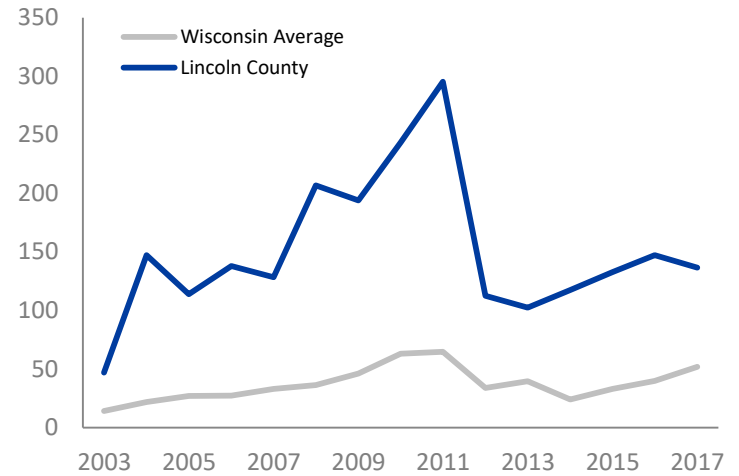
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

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

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

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

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

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

Bureau of Environmental and Occupational Health  
Wisconsin Department of Health Services | Division of Public Health

[dhstracking@wi.gov](mailto:dhstracking@wi.gov) | [dhs.wisconsin.gov/epht](https://dhs.wisconsin.gov/epht)  
MAY 2019 | P-00719 (Rev. 05/2019)





# MANITOWOC COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

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

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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 | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

● 86.1% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

● 1.7 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

● 9.9% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

● 3.5% | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

● 11.7 | Rate of ER visits per 100,000 people  
Wisconsin: 7.9

### Childhood Lead Poisoning

● 5.6% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

● 52.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

● 31.7 | Rate of ER visits per 10,000 people<sup>#</sup>  
Wisconsin: 35.1

### Melanoma

● 31.9 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

● 57.2 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

● 21.7 | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

● 7.6 | Crude rate per 100,000 people  
Wisconsin: 51.7

● Above state value  
● At or below state value

\* Above state value preferred for this measure  
^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

[Data details on next page](#)



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Year displayed:** 2016

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

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

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

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

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

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

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

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

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH MANITOWOC COUNTY

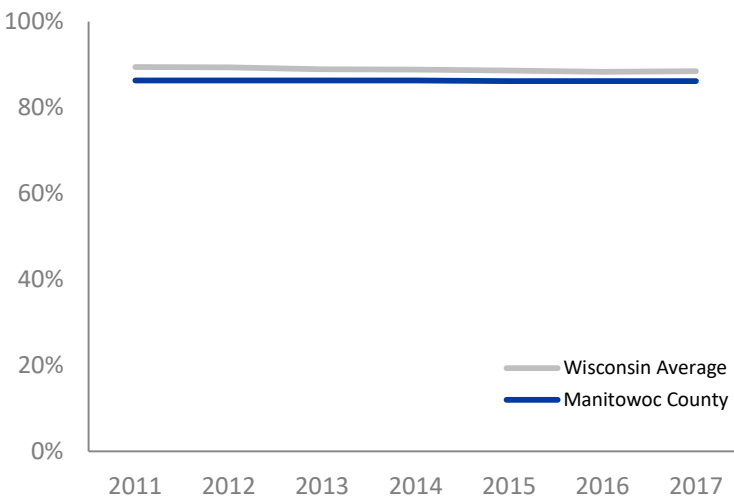
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **86.1%**

**FLUORIDE**  
PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
WISCONSIN: 88.4%

● **1.7**

**ALCOHOL OUTLET DENSITY**  
RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



## ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

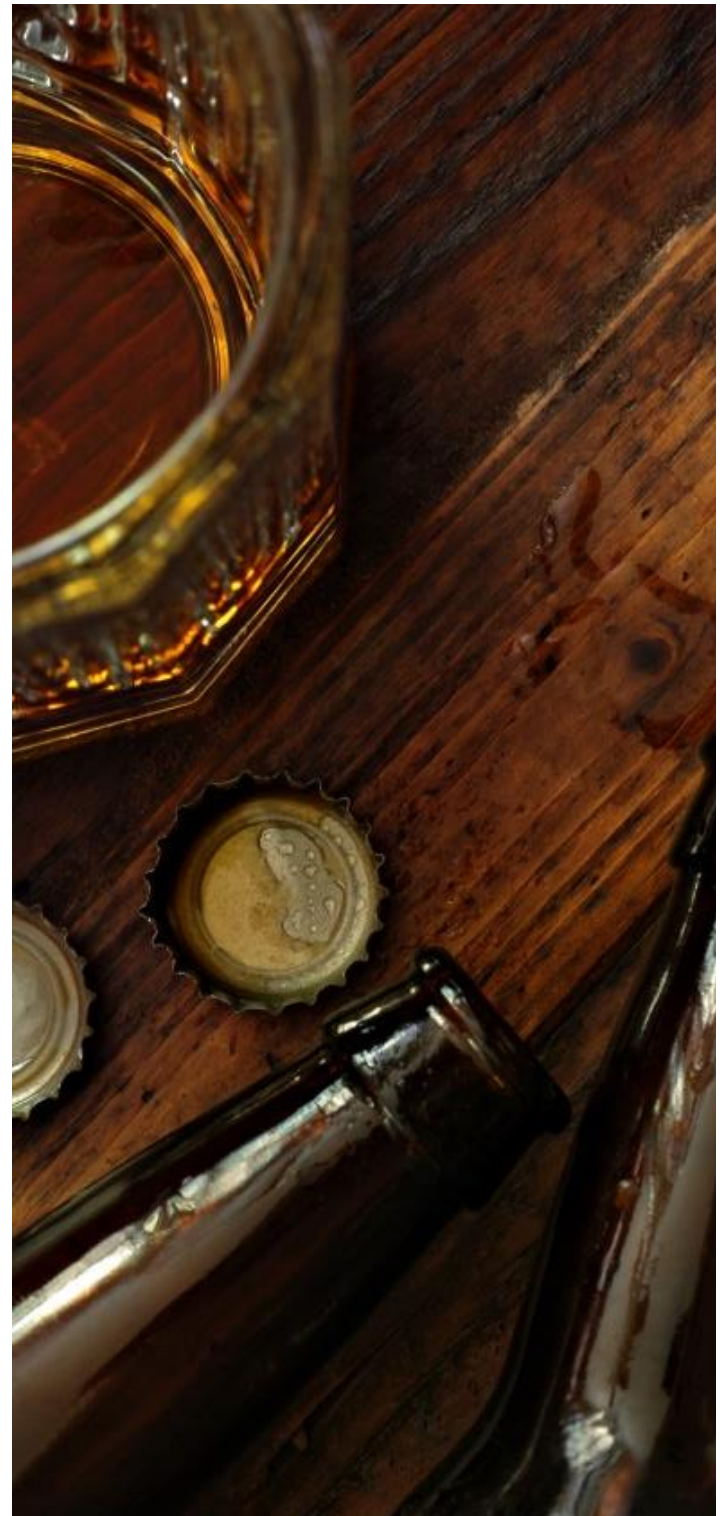
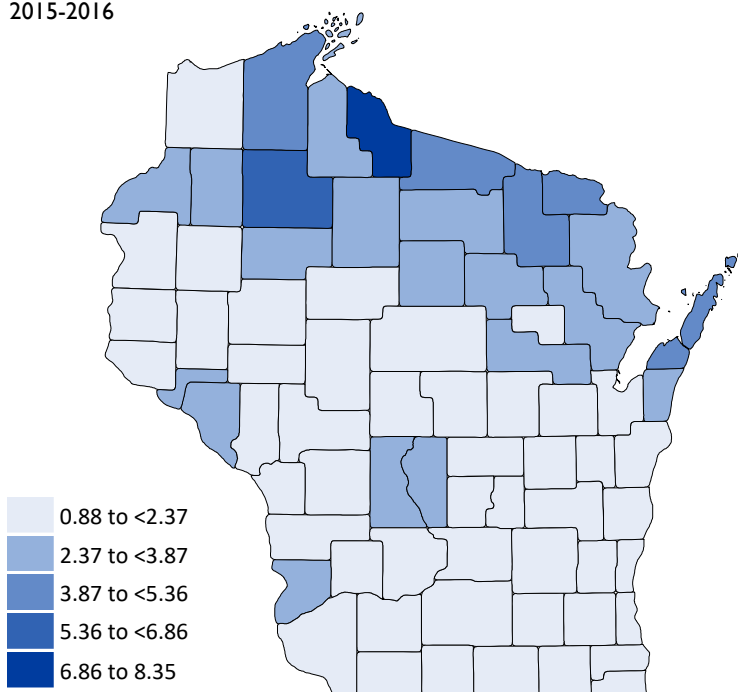
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

## ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



# 273

LICENSES IN  
MANITOWOC COUNTY

# 16,948

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 displayed in this report. Users can find public water quality data on our data portal.

● **9.9%**

**NITRATE**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 mg/L  
**WISCONSIN: 11.0%**

● **3.5%**

**ARSENIC**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 µg/L  
**WISCONSIN: 6.0%**

● Above state value    ● At or below state value    ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
 1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# 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.

● **11.7**  
**CARBON MONOXIDE POISONING**  
 RATE OF ER VISITS RELATED TO CO POISONING PER 100,000  
 WISCONSIN: 7.9

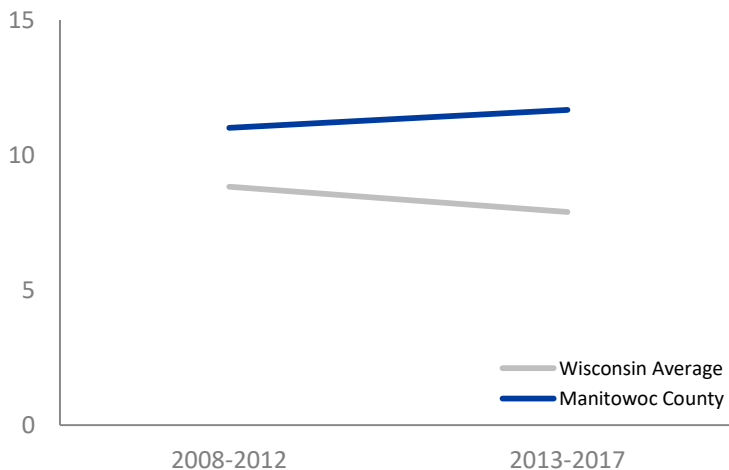
● **5.6%**  
**CHILDHOOD LEAD POISONING**  
 PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$   
 WISCONSIN: 5.0%

● **52.0%**  
**RADON**  
 PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$   
 WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

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

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



## 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter ( $\mu\text{g}/\text{dL}$ ). The Centers for Disease Control and Prevention defines lead poisoning at or above 5  $\mu\text{g}/\text{dL}$ .

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

## RADON

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

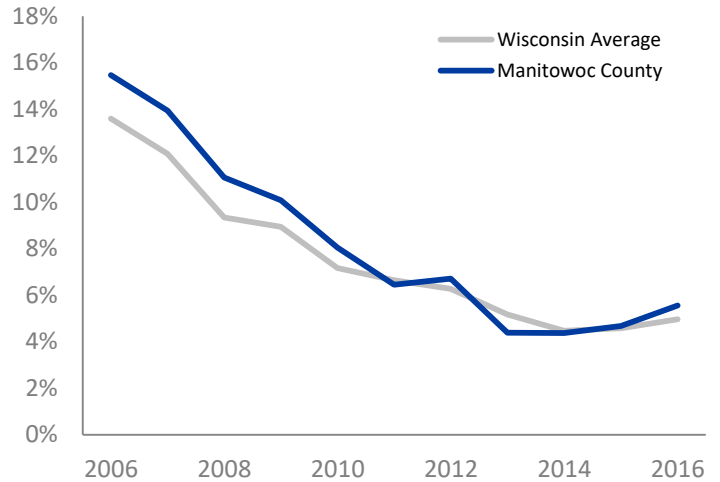
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

## CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g}/\text{dL}$

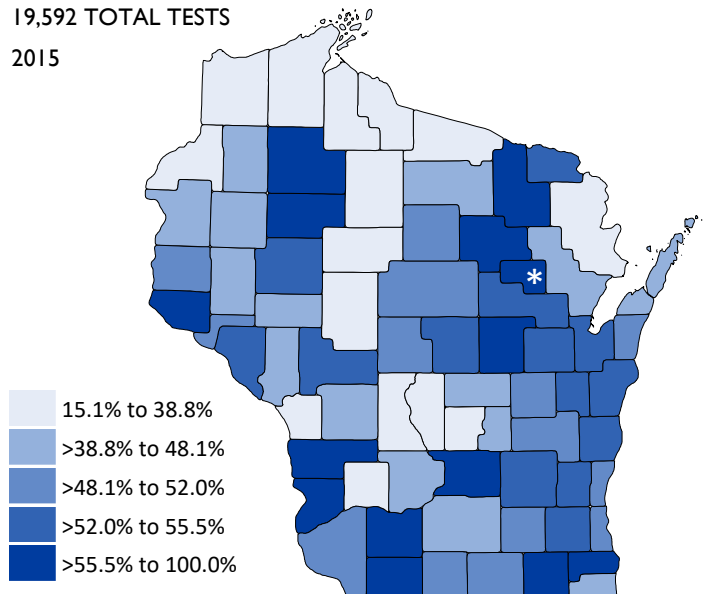


## RADON

PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

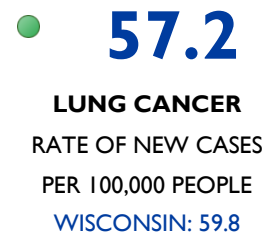
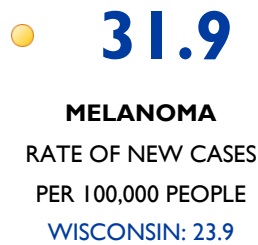
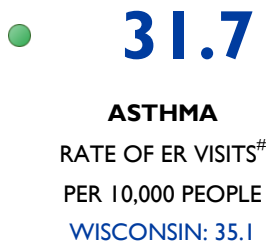




# HEALTH CONDITIONS MANITOWOC COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.



● Above state value

● At or below state value

^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



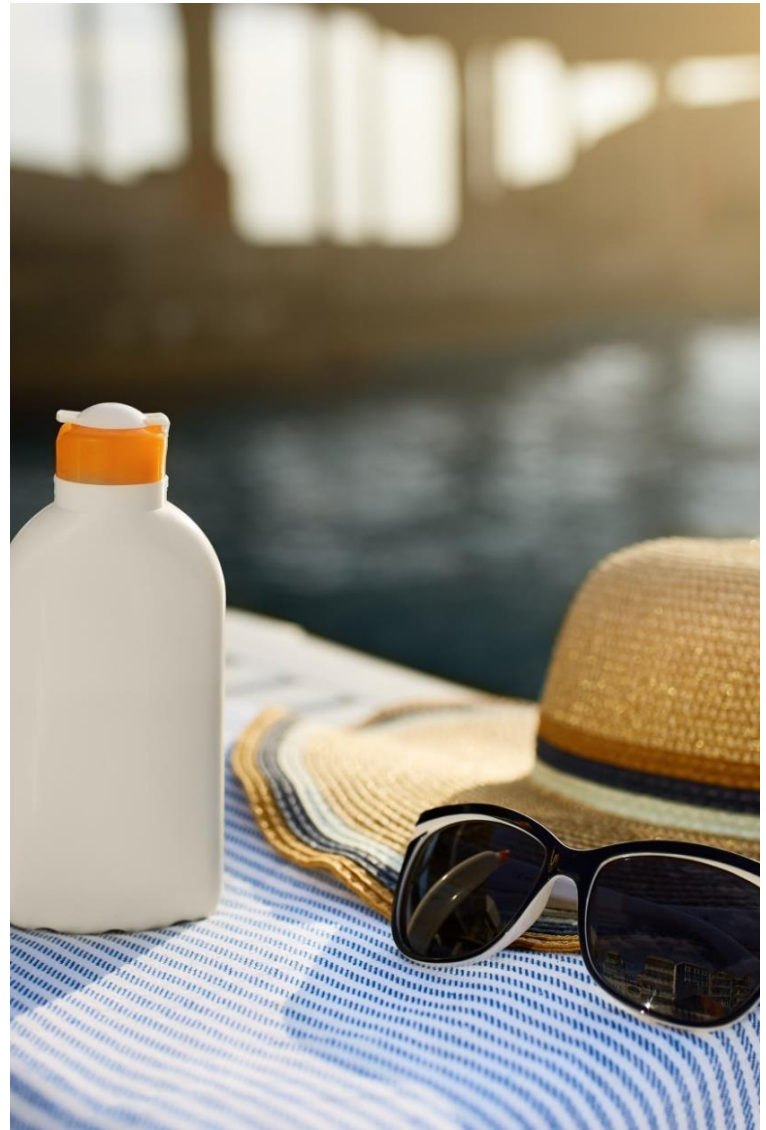
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

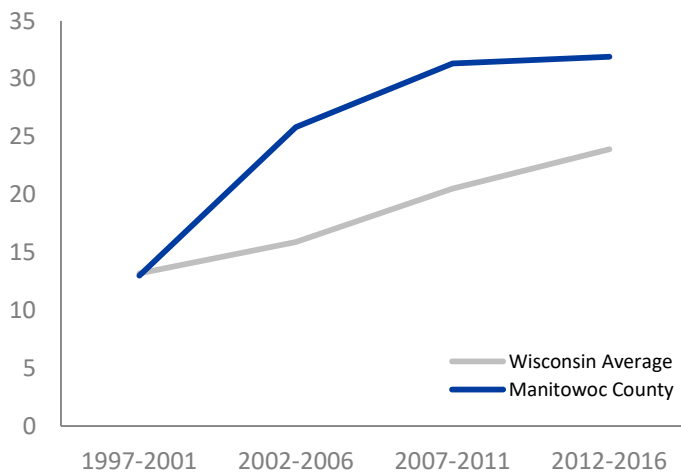
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



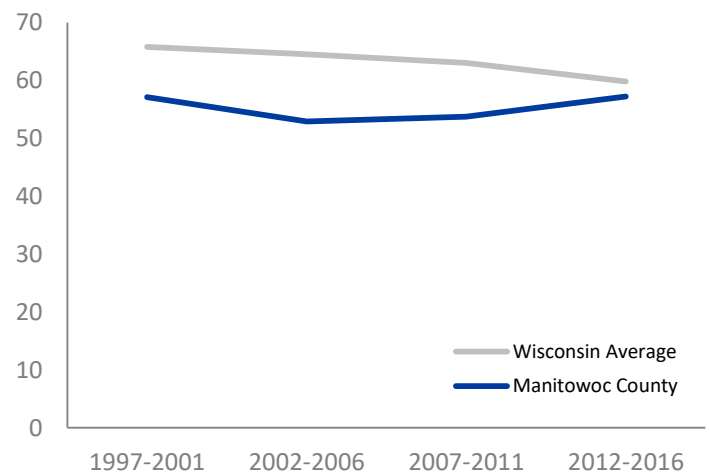
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE MANITOWOC COUNTY

## BACKGROUND

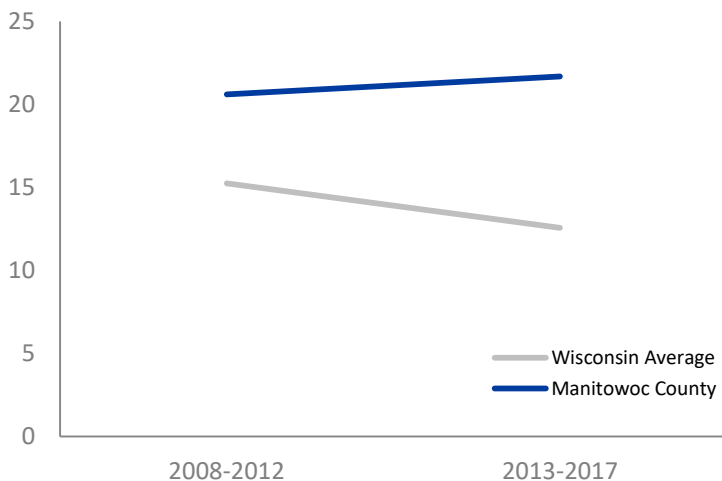
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **21.7**  
**HEAT STRESS**  
 RATE OF ER VISITS  
 PER 100,000 PEOPLE  
 WISCONSIN: 12.6

● **7.6**  
**LYME DISEASE**  
 RATE OF CASES  
 PER 100,000 PEOPLE  
 WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

## LYME DISEASE AT THE NATIONAL LEVEL

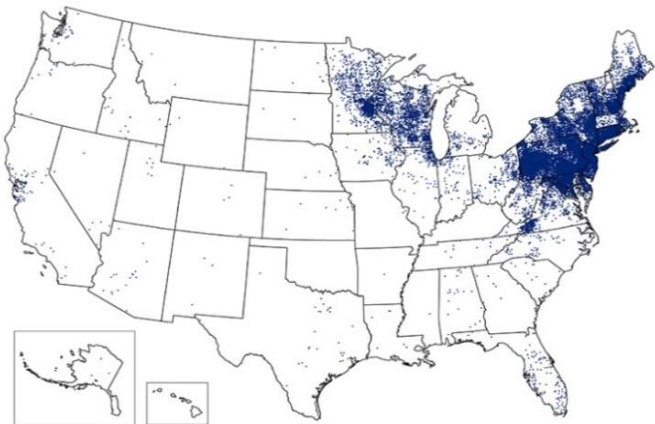
OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001



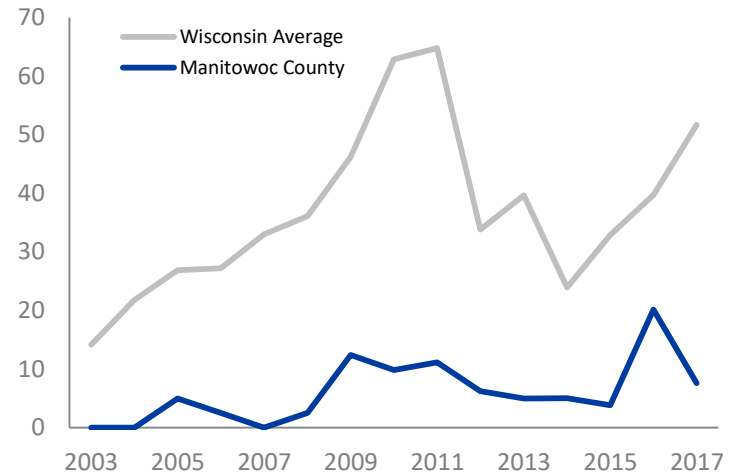
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

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

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

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

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

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

Bureau of Environmental and Occupational Health  
Wisconsin Department of Health Services | Division of Public Health

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MAY 2019 | P-00719 (Rev. 05/2019)





# MARATHON COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

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

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# MARATHON COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

● 92.2% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

● 1.4 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

● 9.2% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

● 2.6% | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

● 9.5 | Rate of ER visits per 100,000 people  
Wisconsin: 7.9

### Childhood Lead Poisoning

● 3.5% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

● 51.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

● 16.9 | Rate of ER visits per 10,000 people<sup>#</sup>  
Wisconsin: 35.1

### Melanoma

● 27.0 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

● 51.9 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

● 11.4 | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

● 66.3 | Crude rate per 100,000 people  
Wisconsin: 51.7

● Above state value  
● At or below state value

\* Above state value preferred for this measure  
^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

[Data details on next page](#)



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Year displayed:** 2016

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

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

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

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

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

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

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

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

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH MARATHON COUNTY

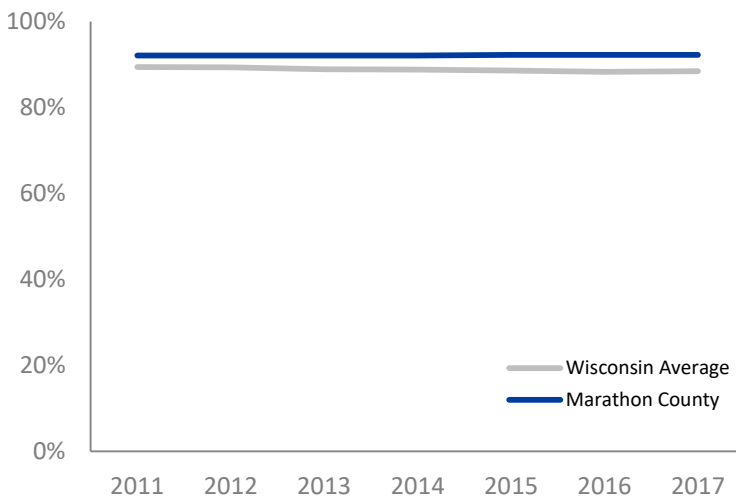
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **92.2%**

**FLUORIDE**  
PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
WISCONSIN: 88.4%

● **1.4**

**ALCOHOL OUTLET DENSITY**  
RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



### ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

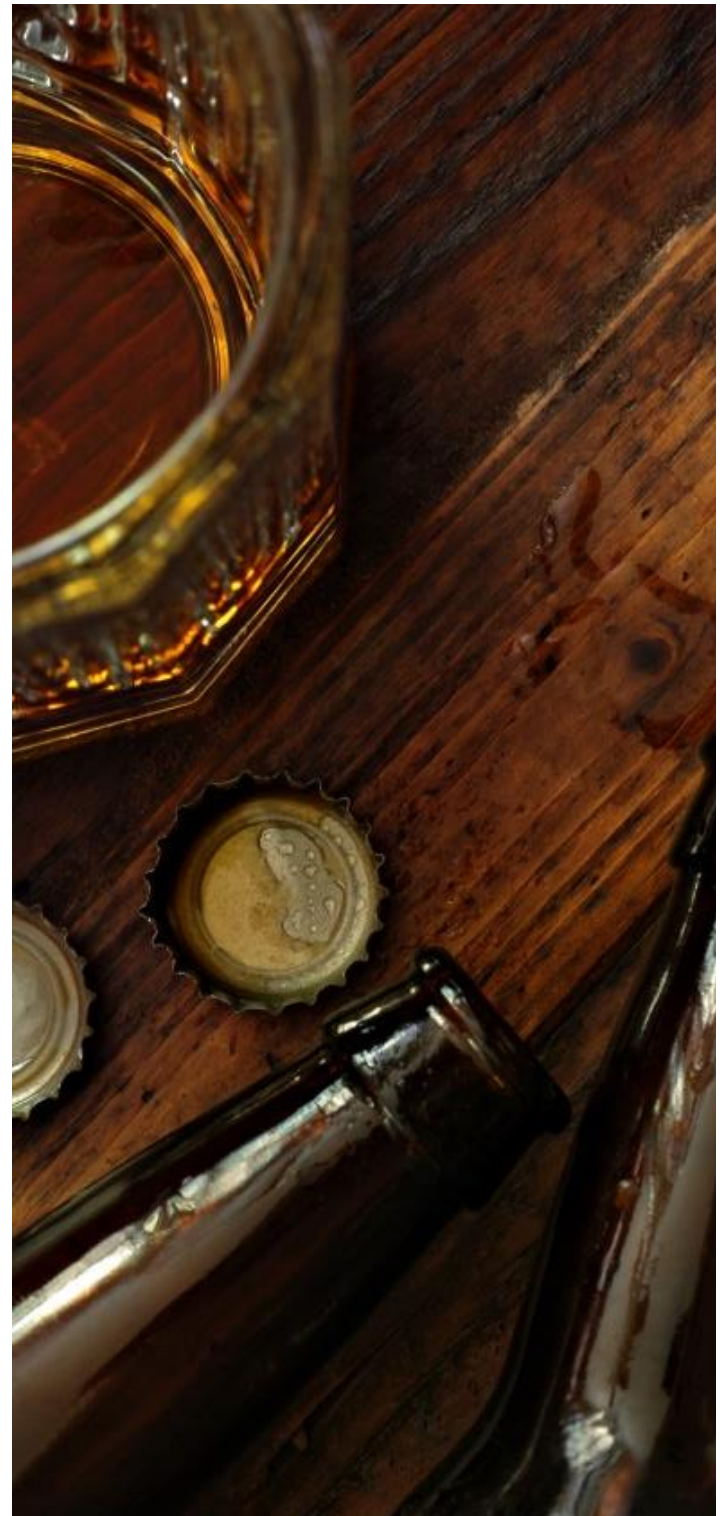
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

### ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



# 386

LICENSES IN  
MARATHON COUNTY

# 16,948

TOTAL LICENSES IN  
WISCONSIN





# PRIVATE WATER QUALITY MARATHON 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 displayed in this report. Users can find public water quality data on our data portal.

● **9.2%**

**NITRATE**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 mg/L  
**WISCONSIN: 11.0%**

● **2.6%**

**ARSENIC**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 µg/L  
**WISCONSIN: 6.0%**

● Above state value    ● At or below state value    ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
 1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS MARATHON 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.

● **9.5**  
**CARBON MONOXIDE POISONING**  
 RATE OF ER VISITS RELATED TO CO POISONING PER 100,000  
 WISCONSIN: 7.9

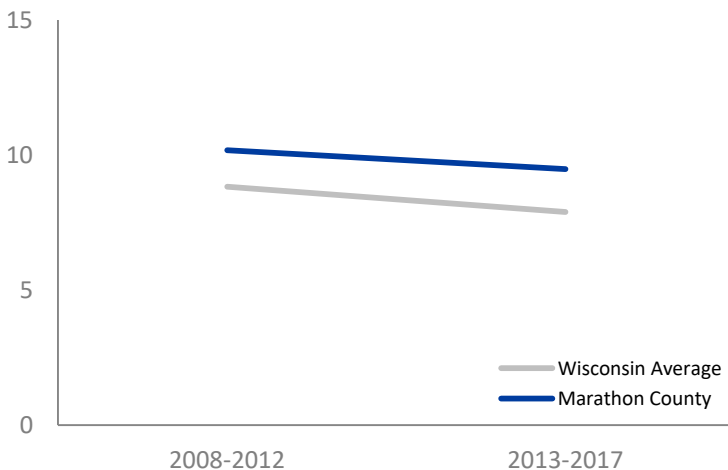
● **3.5%**  
**CHILDHOOD LEAD POISONING**  
 PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$   
 WISCONSIN: 5.0%

● **51.0%**  
**RADON**  
 PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$   
 WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

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

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



## 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter (µg/dL). The Centers for Disease Control and Prevention defines lead poisoning at or above 5 µg/dL.

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

## RADON

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

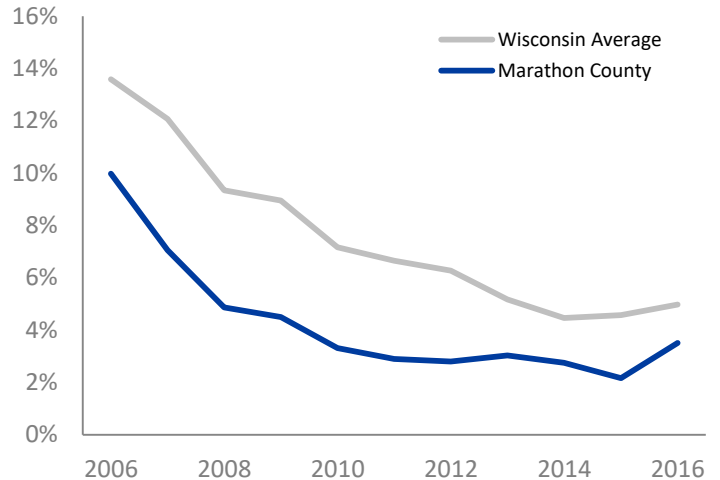
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

## CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD ≥5 µg/dL

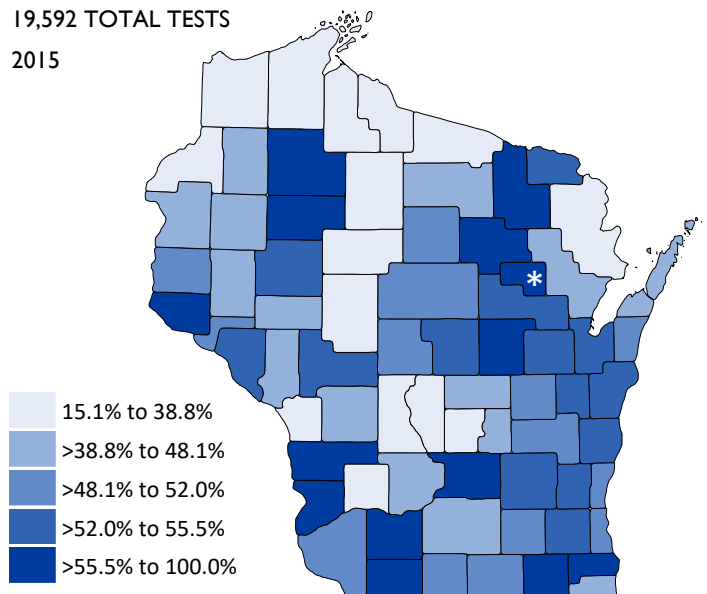


## RADON

PERCENT OF TESTS WITH RESULTS ≥4 pCi/L

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

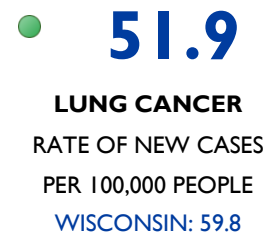
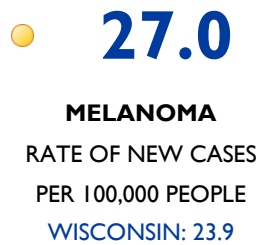
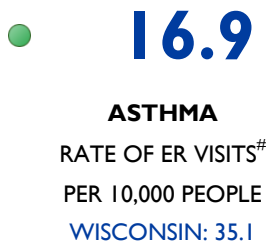




# HEALTH CONDITIONS MARATHON COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.



● Above state value

● At or below state value

^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



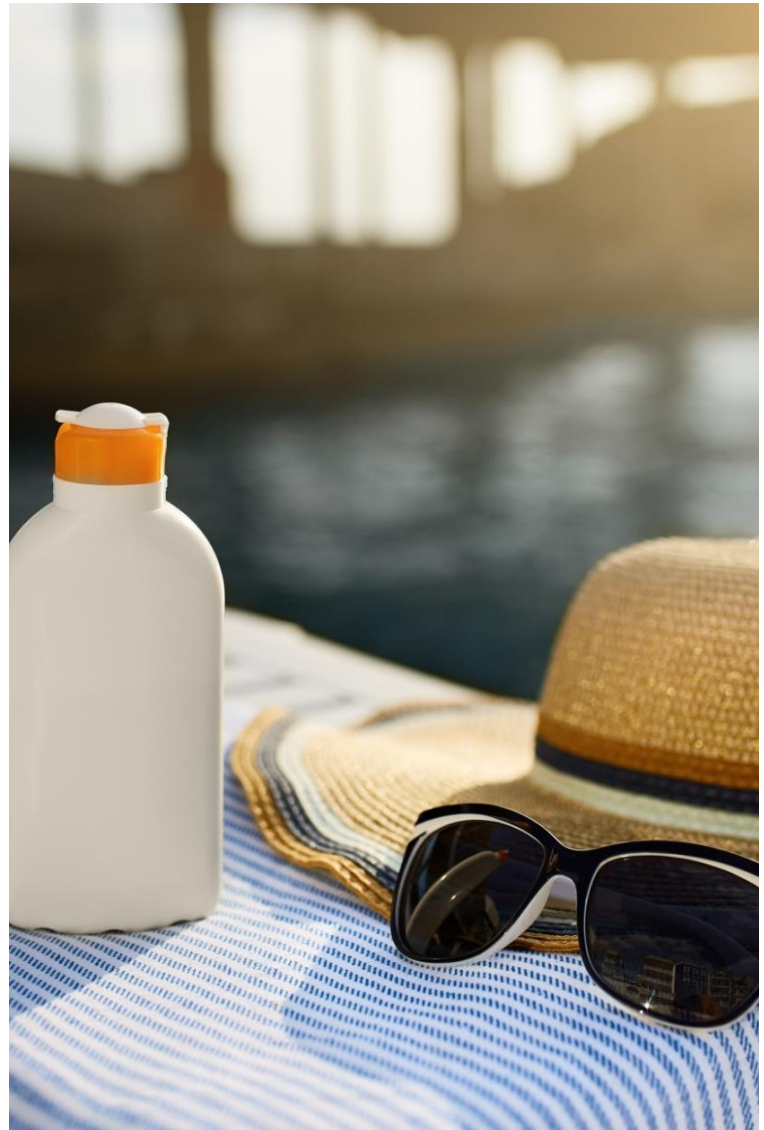
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

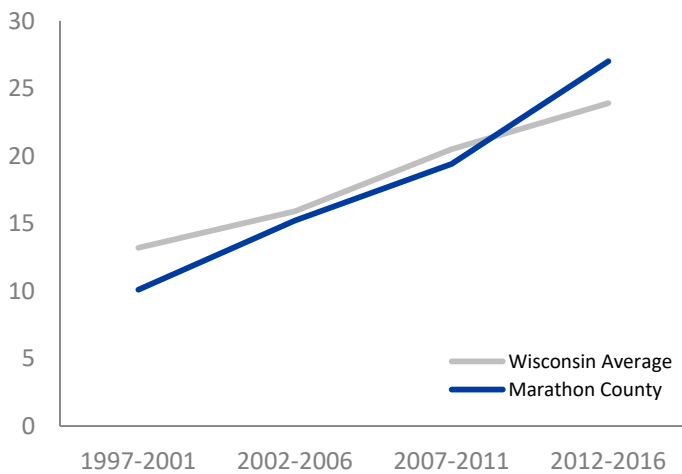
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



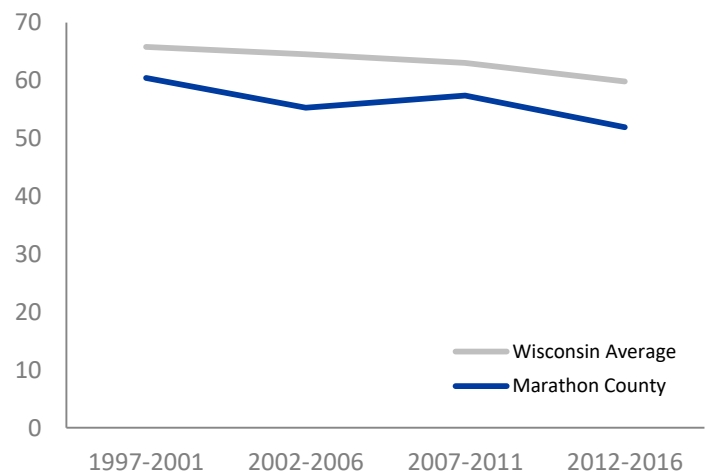
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE MARATHON COUNTY

## BACKGROUND

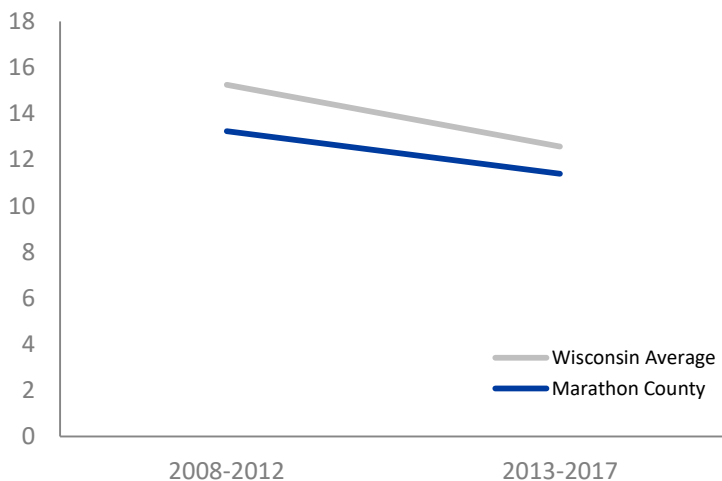
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **11.4**  
**HEAT STRESS**  
 RATE OF ER VISITS  
 PER 100,000 PEOPLE  
 WISCONSIN: 12.6

● **66.3**  
**LYME DISEASE**  
 RATE OF CASES  
 PER 100,000 PEOPLE  
 WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

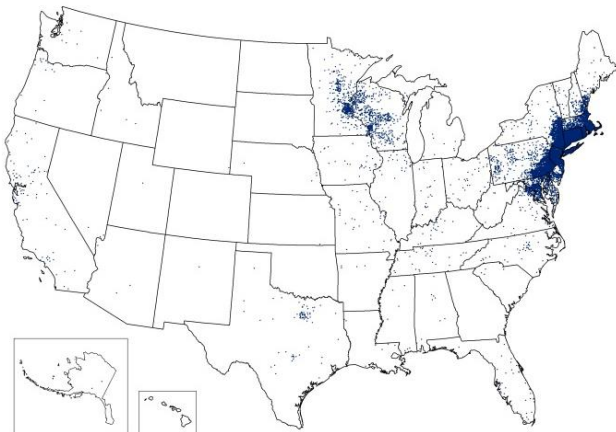
The criteria for reporting Lyme disease were revised again in 2012 to require reporting and follow-up only for cases with an erythema migrans (EM) rash. To compensate for this change, epidemiologists used a statistical method to estimate the true number of cases based on the number of total laboratory reports for each year since 2012.

## LYME DISEASE AT THE NATIONAL LEVEL

OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001



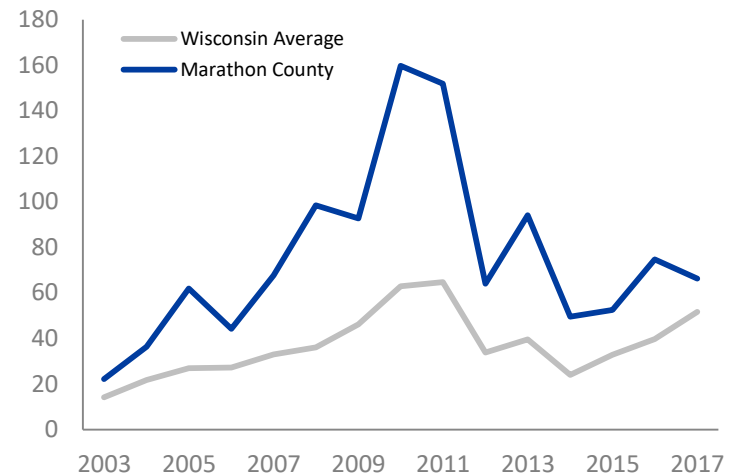
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

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

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

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

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

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

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

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

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

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

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

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

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Wisconsin Department of Health Services | Division of Public Health

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MAY 2019 | P-00719 (Rev. 05/2019)





# MARINETTE COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

Tracking data and resources can help you and your team develop rationale for funding requests. These data can help justify existing programs and show where work needs to be done.

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# MARINETTE COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

● 81.2% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

● 2.7 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

● 6.5% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

● 13.0% | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

● 12.5 | Rate of ER visits per 100,000 people  
Wisconsin: 7.9

### Childhood Lead Poisoning

● 4.2% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

● 29.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

● 26.2 | Rate of ER visits per 10,000 people#  
Wisconsin: 35.1

### Melanoma

● 21.8 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

● 69.8 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

● 27.8 | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

● 287.8 | Crude rate per 100,000 people  
Wisconsin: 51.7

● Above state value  
● At or below state value

\* Above state value preferred for this measure  
^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

[Data details on next page](#)



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2016

**Radon:** Percent of tests with results above EPA standard of 4 pCi/L

**Source:** Radon and Indoor Air Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH MARINETTE COUNTY

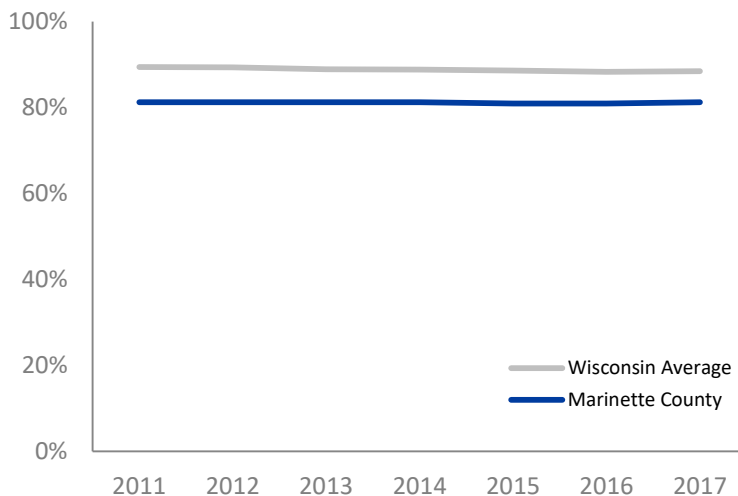
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **81.2%**

**FLUORIDE**  
PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
WISCONSIN: 88.4%

● **2.7**

**ALCOHOL OUTLET DENSITY**  
RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



### ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

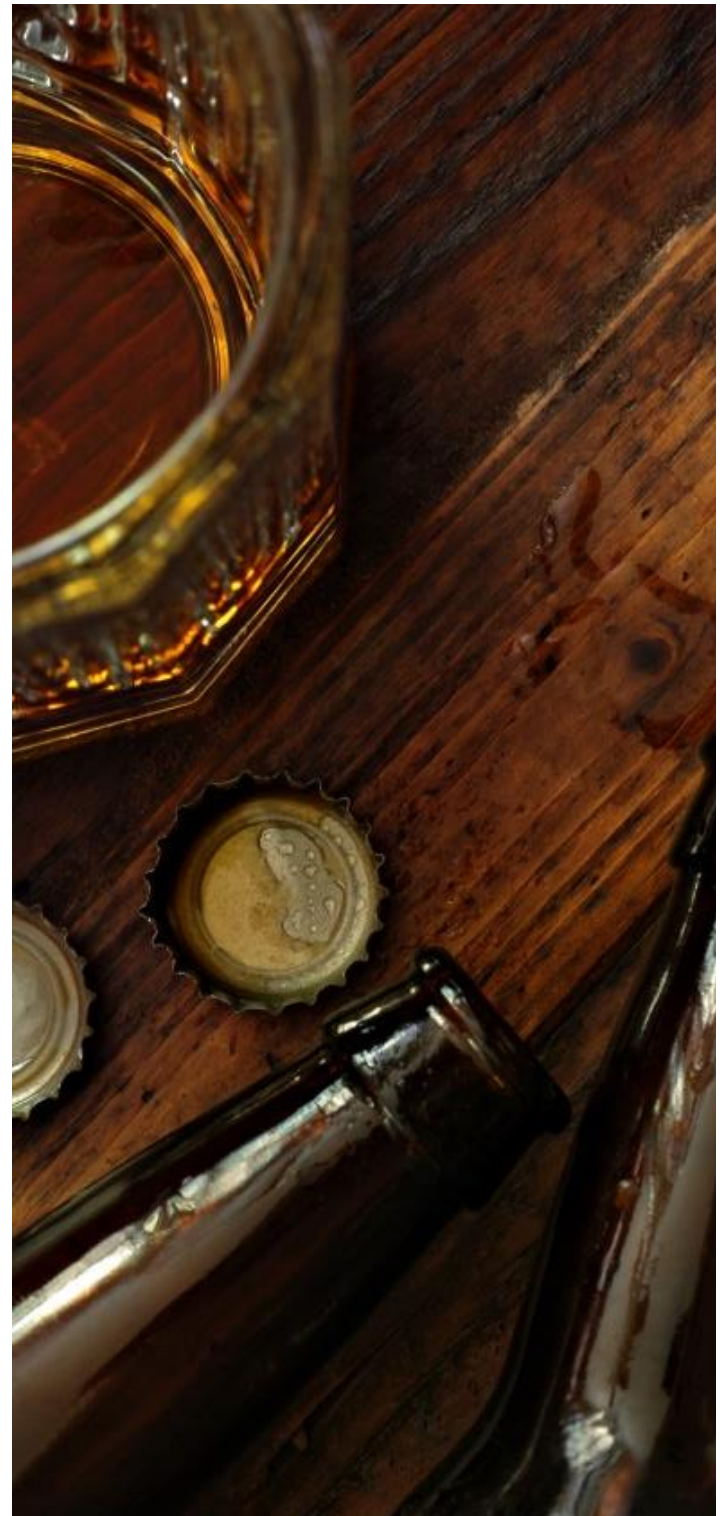
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

### ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



# 222

LICENSES IN  
MARINETTE COUNTY

# 16,948

TOTAL LICENSES IN  
WISCONSIN





# PRIVATE WATER QUALITY MARINETTE 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 displayed in this report. Users can find public water quality data on our data portal.

● **6.5%**

**NITRATE  
IN PRIVATE WELLS**  
PERCENT OF TEST RESULTS  
ABOVE EPA STANDARD  
OF 10 mg/L  
WISCONSIN: 11.0%

● **13.0%**

**ARSENIC  
IN PRIVATE WELLS**  
PERCENT OF TEST RESULTS  
ABOVE EPA STANDARD  
OF 10 µg/L  
WISCONSIN: 6.0%

● Above state value    ● At or below state value    ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS MARINETTE 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.

● **12.5**

**CARBON MONOXIDE POISONING**

RATE OF ER VISITS RELATED TO CO POISONING PER 100,000

WISCONSIN: 7.9

● **4.2%**

**CHILDHOOD LEAD POISONING**

PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$

WISCONSIN: 5.0%

● **29.0%**

**RADON**

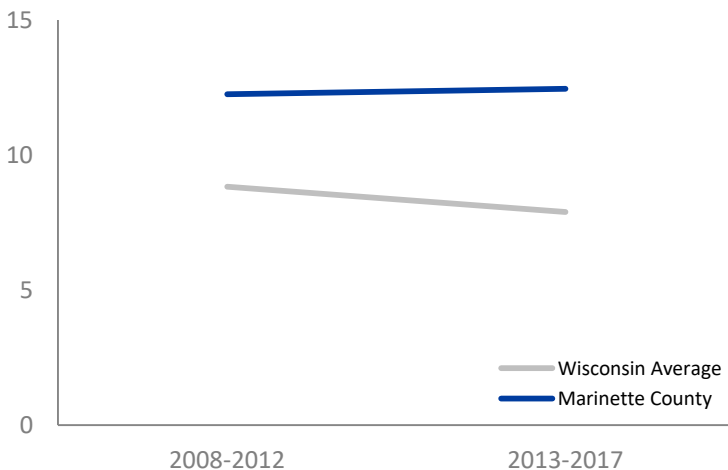
PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$

WISCONSIN: 50.0%

● Above state value    ● At or below state value    ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

Carbon monoxide (CO) poisoning prevents oxygen from getting to the body, which can damage tissue and even cause death.

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



### 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter ( $\mu\text{g}/\text{dL}$ ). The Centers for Disease Control and Prevention defines lead poisoning at or above 5  $\mu\text{g}/\text{dL}$ .

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

### RADON

Radon is a naturally occurring gas that is radioactive and can cause lung cancer. Radon can leak into homes and other buildings through cracks in the foundation.

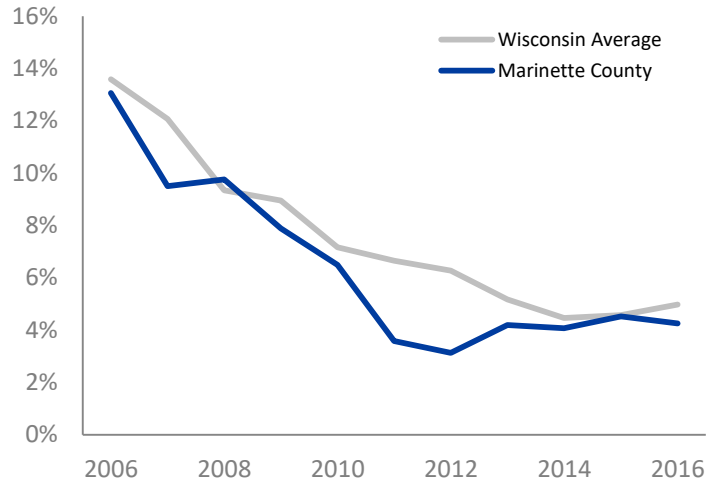
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

### CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g}/\text{dL}$

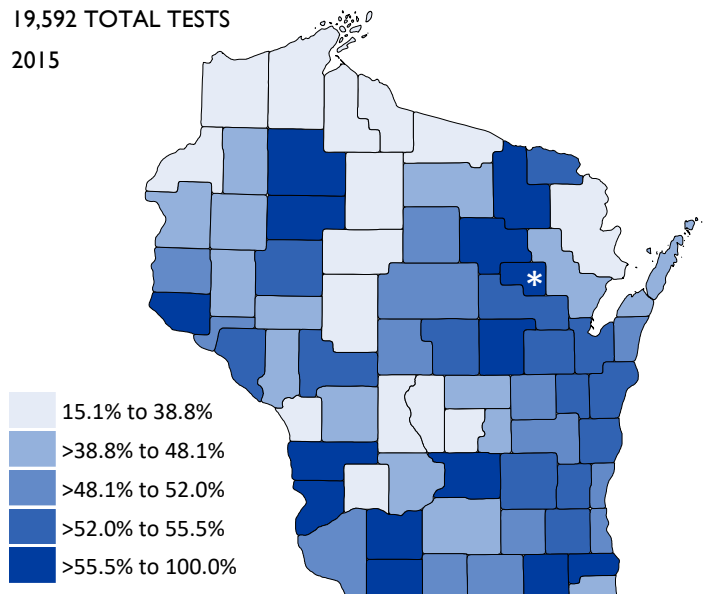


### RADON

PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi}/\text{L}$

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

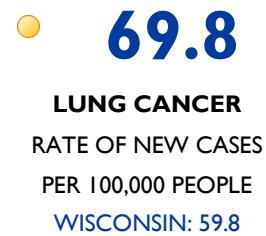
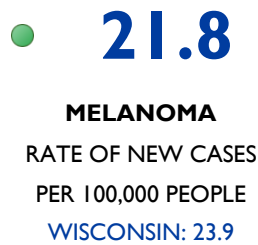
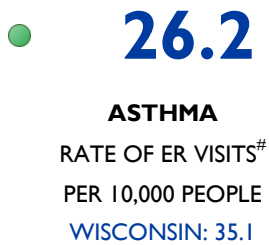




# HEALTH CONDITIONS MARINETTE COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.

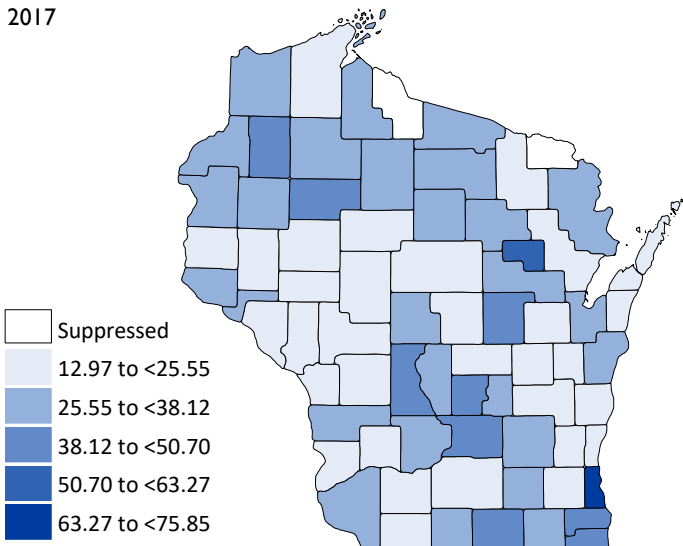


- Above state value
- At or below state value
- ^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

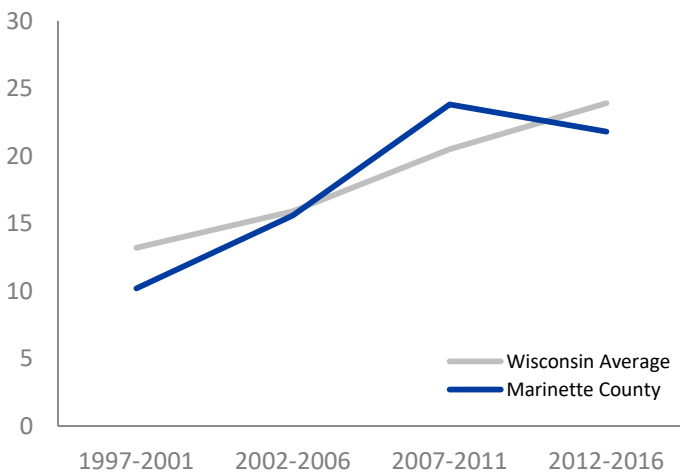
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



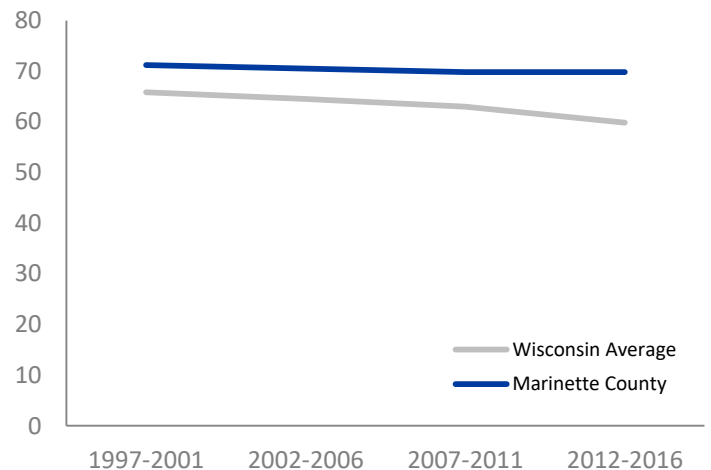
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE MARINETTE COUNTY

## BACKGROUND

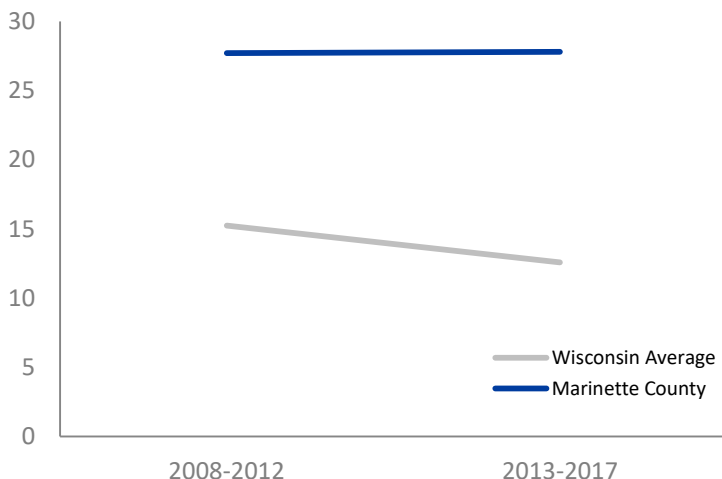
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **27.8**

**HEAT STRESS**  
RATE OF ER VISITS  
PER 100,000 PEOPLE  
WISCONSIN: 12.6

● **287.8**

**LYME DISEASE**  
RATE OF CASES  
PER 100,000 PEOPLE  
WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

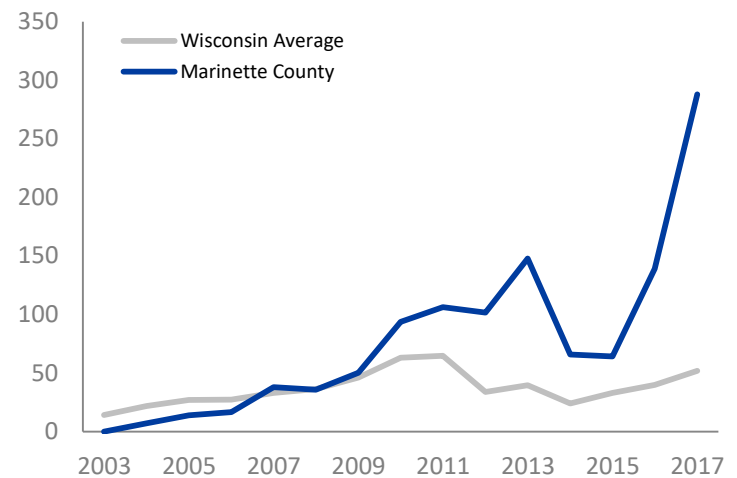
## INTERPRETING LYME DISEASE DATA

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.

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

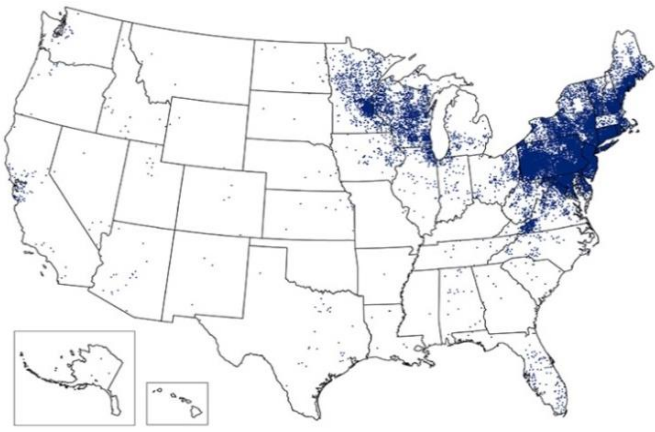
## LYME DISEASE AT THE NATIONAL LEVEL

OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001

2017



Maps courtesy of Centers for Disease Control and Prevention

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results for nitrate that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results for arsenic that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Wisconsin Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

**Asthma:** Rate of emergency room visits related to asthma, age-adjusted per 10,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



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Wisconsin Department of Health Services | Division of Public Health

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MAY 2019 | P-00719 (Rev. 05/2019)





# MARQUETTE COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

Tracking data and resources can help you and your team develop rationale for funding requests. These data can help justify existing programs and show where work needs to be done.

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# MARQUETTE COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

0.0% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

2.4 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

8.3% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

2.6% | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

8.6 | Rate of ER visits per 100,000 people  
Wisconsin: 8.4

### Childhood Lead Poisoning

2.0% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

22.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

50.1 | Rate of ER visits per 10,000 people<sup>#</sup>  
Wisconsin: 35.1

### Melanoma

21.4 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

77.1 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

28.2 | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

503.0 | Crude rate per 100,000 people  
Wisconsin: 51.7

● Above state value  
● At or below state value

\* Above state value preferred for this measure  
^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

[Data details on next page](#)



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2016

**Radon:** Percent of tests with results above EPA standard of 4 pCi/L

**Source:** Radon and Indoor Air Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH MARQUETTE COUNTY

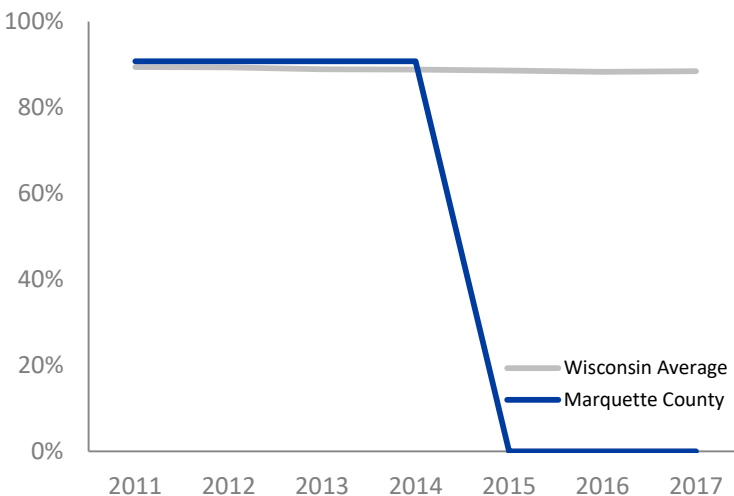
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **0.0%**  
**FLUORIDE**  
 PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
 WISCONSIN: 88.4%

● **2.4**  
**ALCOHOL OUTLET DENSITY**  
 RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
 WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
 ^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



### ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small 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 [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

### ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



# 71

LICENSES IN  
MARQUETTE COUNTY

# 16,948

TOTAL LICENSES IN  
WISCONSIN





# PRIVATE WATER QUALITY MARQUETTE 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 displayed in this report. Users can find public water quality data on our data portal.

● **8.3%**

**NITRATE**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 mg/L  
**WISCONSIN: 11.0%**

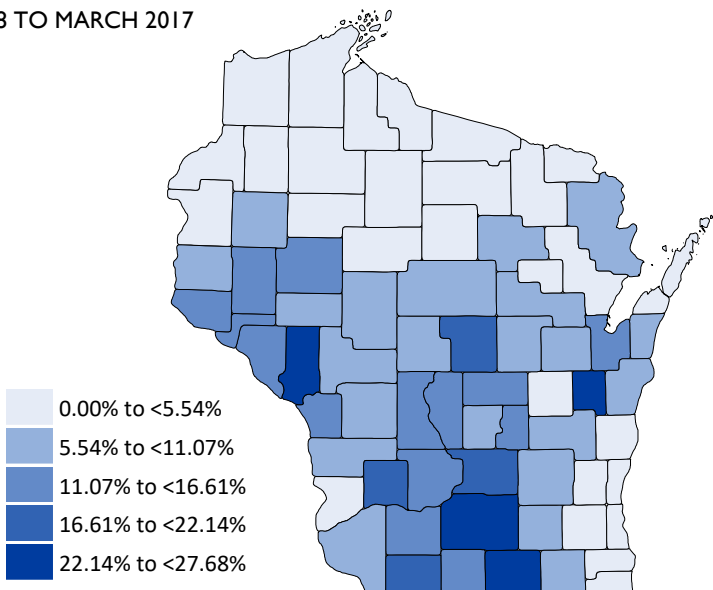
● **2.6%**

**ARSENIC**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 µg/L  
**WISCONSIN: 6.0%**

● Above state value    ● At or below state value    ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
 1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS MARQUETTE 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.

● **8.6**

**CARBON MONOXIDE POISONING**

RATE OF ER VISITS RELATED TO CO POISONING PER 100,000

WISCONSIN: 8.4

● **2.0%**

**CHILDHOOD LEAD POISONING**

PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$

WISCONSIN: 5.0%

● **22.0%**

**RADON**

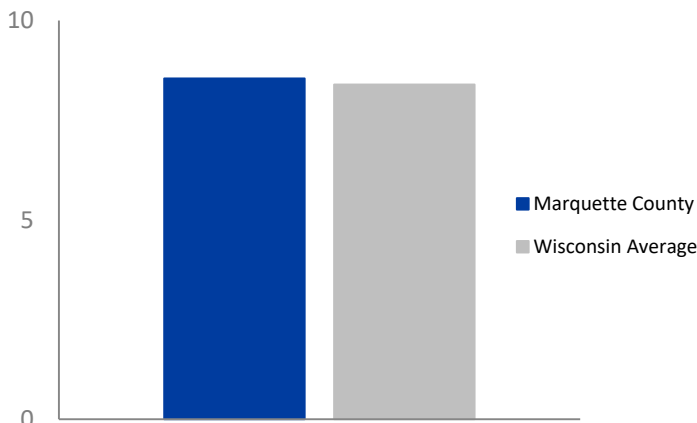
PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$

WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE  
2008-2017



## CARBON MONOXIDE POISONING

Carbon monoxide (CO) poisoning prevents oxygen from getting to the body, which can damage tissue and even cause death.

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



### 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter ( $\mu\text{g}/\text{dL}$ ). The Centers for Disease Control and Prevention defines lead poisoning at or above 5  $\mu\text{g}/\text{dL}$ .

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

### RADON

Radon is a naturally occurring gas that is radioactive and can cause lung cancer. Radon can leak into homes and other buildings through cracks in the foundation.

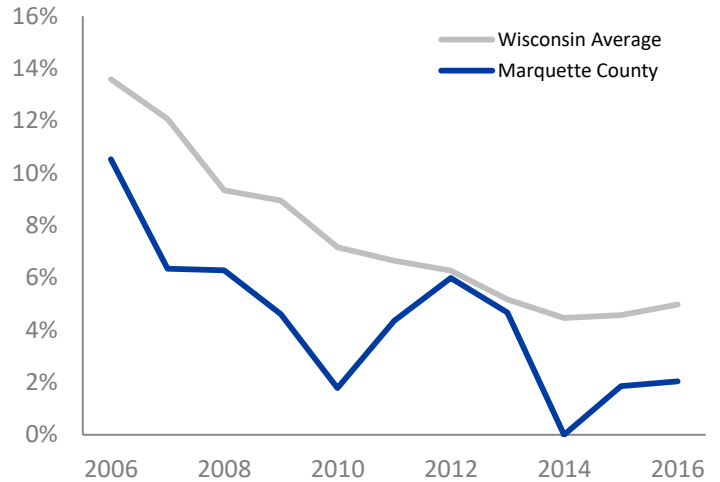
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

### CHILDHOOD LEAD POISONING

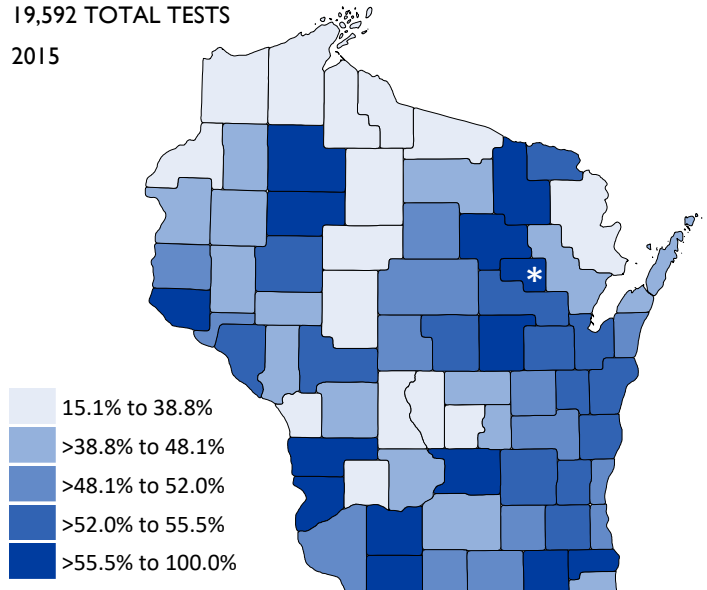
PERCENT OF TESTED CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g}/\text{dL}$



### RADON

PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi}/\text{L}$

19,592 TOTAL TESTS  
2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

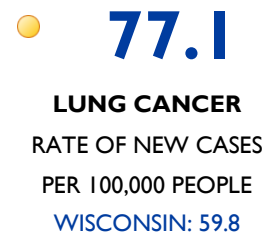
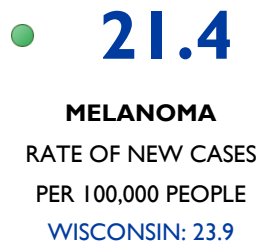
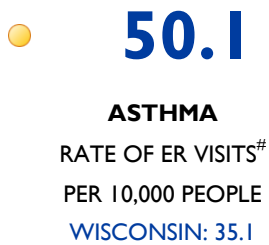




# HEALTH CONDITIONS MARQUETTE COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.



● Above state value

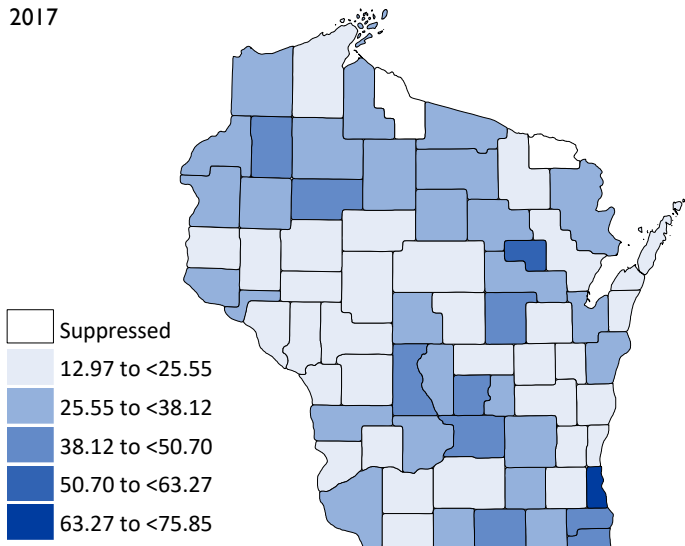
● At or below state value

^ Suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
 2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



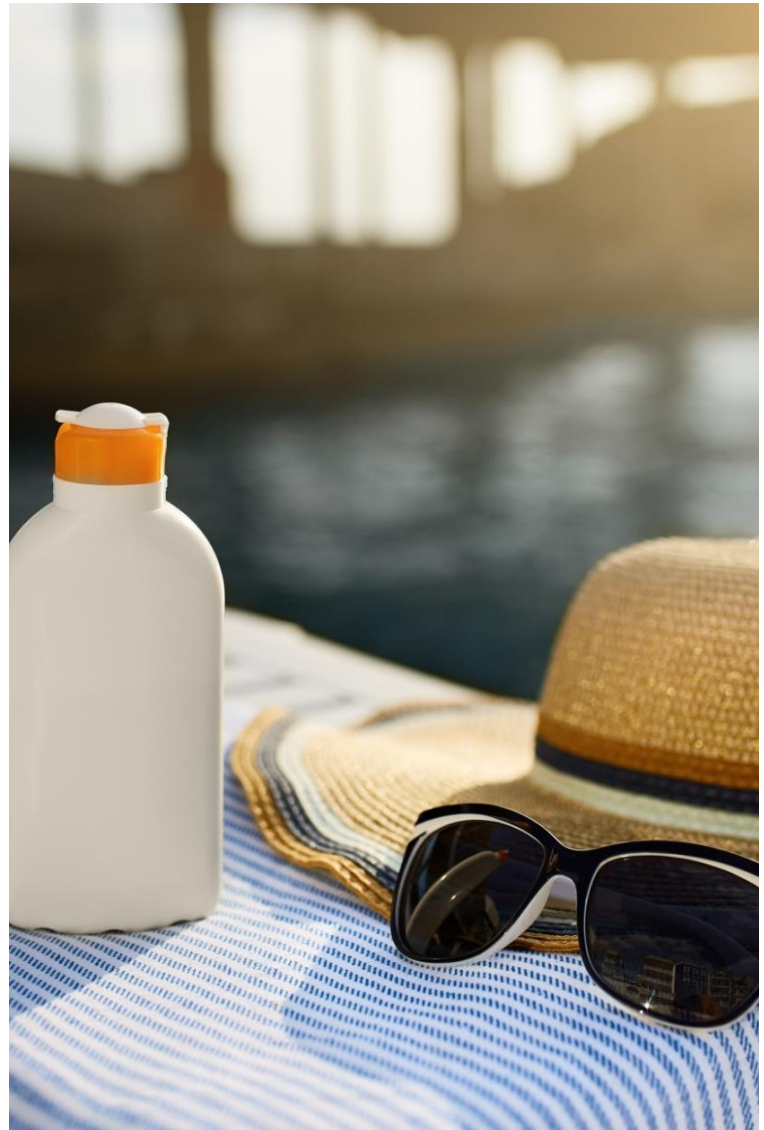
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

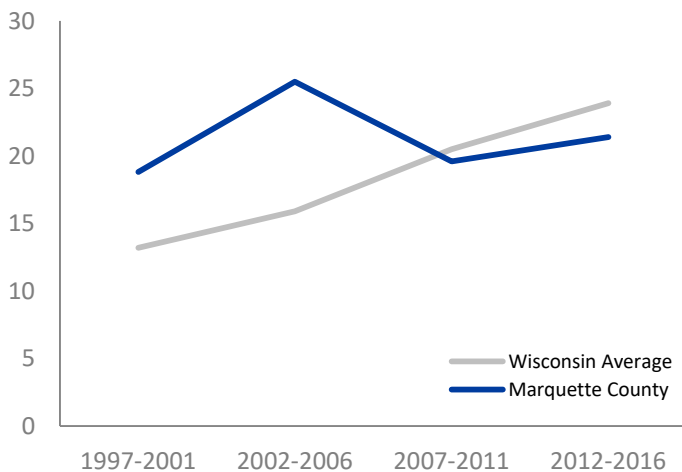
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



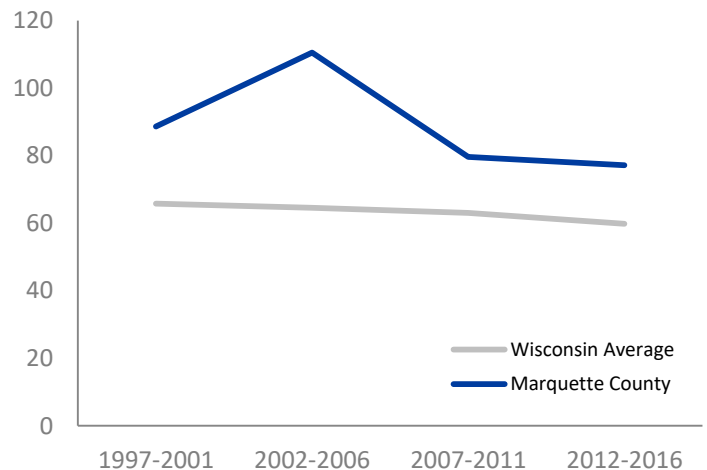
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE MARQUETTE COUNTY

## BACKGROUND

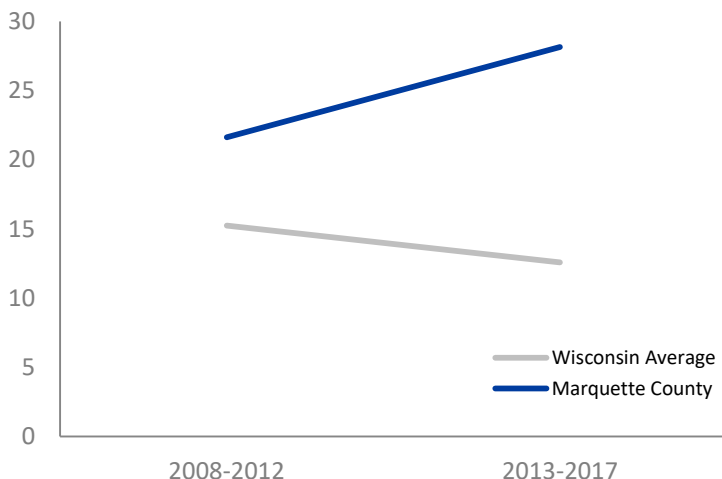
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **28.2**

**HEAT STRESS**  
RATE OF ER VISITS  
PER 100,000 PEOPLE  
WISCONSIN: 12.6

● **503.0**

**LYME DISEASE**  
RATE OF CASES  
PER 100,000 PEOPLE  
WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

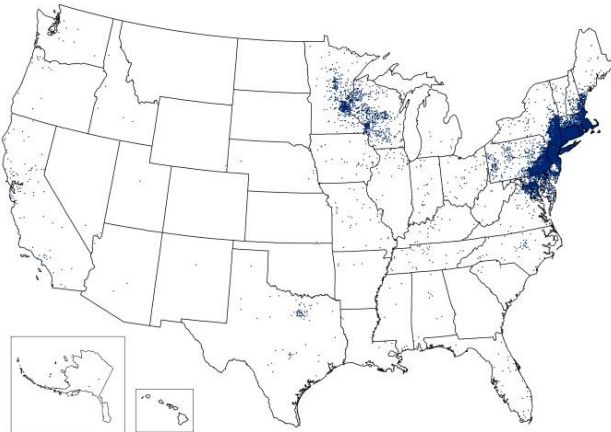
The criteria for reporting Lyme disease were revised again in 2012 to require reporting and follow-up only for cases with an erythema migrans (EM) rash. To compensate for this change, epidemiologists used a statistical method to estimate the true number of cases based on the number of total laboratory reports for each year since 2012.

## LYME DISEASE AT THE NATIONAL LEVEL

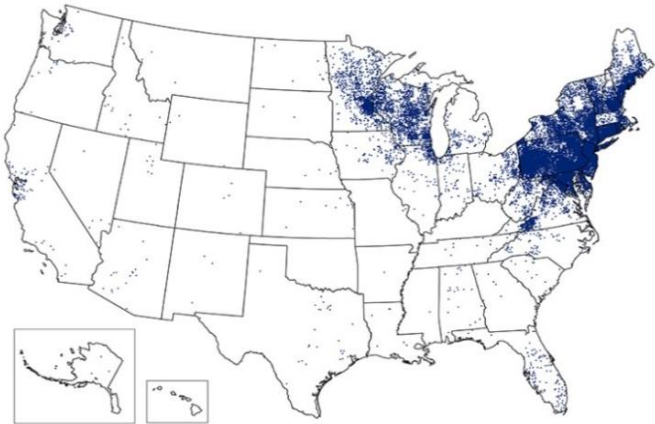
OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001



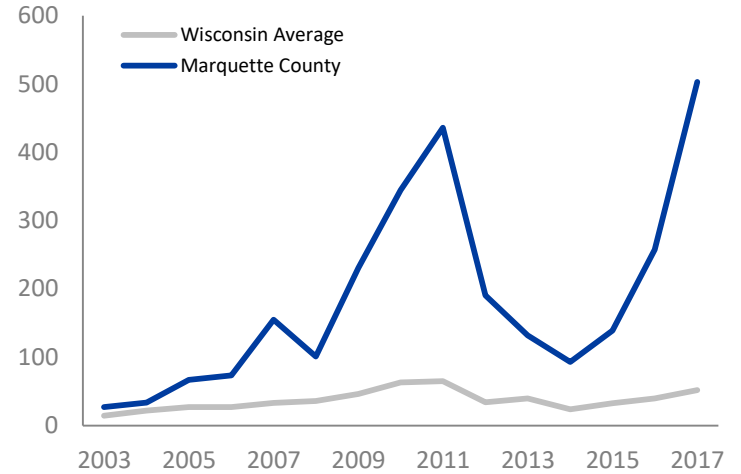
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results for nitrate that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results for arsenic that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population. For the majority of Profiles, these data were averaged over five years (2013-2017). For this county's Profile, that five-year average was suppressed. To eliminate the suppression in this Profile, these data were instead averaged over 10 years (2008-2017).

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Wisconsin Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

**Asthma:** Rate of emergency room visits related to asthma, age-adjusted per 10,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

Bureau of Environmental and Occupational Health  
Wisconsin Department of Health Services | Division of Public Health

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MAY 2019 | P-00719 (Rev. 05/2019)





# MENOMINEE COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

Tracking data and resources can help you and your team develop rationale for funding requests. These data can help justify existing programs and show where work needs to be done.

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# MENOMINEE COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride



Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density



0.9

Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate



1.6%

Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic



Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning



66.6

Rate of ER visits per 100,000 people  
Wisconsin: 7.9

### Childhood Lead Poisoning



4.6%

Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon



100.0%

Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma



58.0

Rate of ER visits per 10,000 people<sup>#</sup>  
Wisconsin: 35.1

### Melanoma



Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer



78.1

Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress



40.8

Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease



195.0

Crude rate per 100,000 people  
Wisconsin: 51.7

- Above state value
- At or below state value

- \* Above state value preferred for this measure
- ^ Data are suppressed
- ‡ No data

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

Data details on next page



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2016

**Radon:** Percent of tests with results above EPA standard of 4 pCi/L

**Source:** Radon and Indoor Air Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH MENOMINEE COUNTY

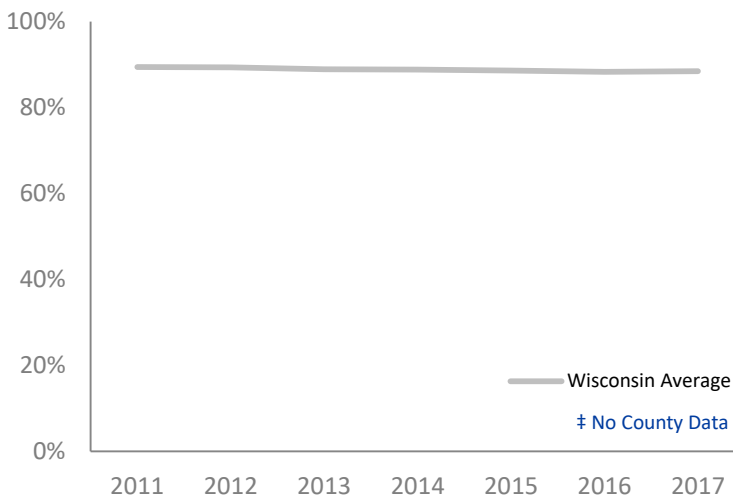
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



**FLUORIDE**  
PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
WISCONSIN: 88.4%



**0.9**

**ALCOHOL OUTLET DENSITY**  
RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
^ Suppressed  
‡ No data

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



### ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

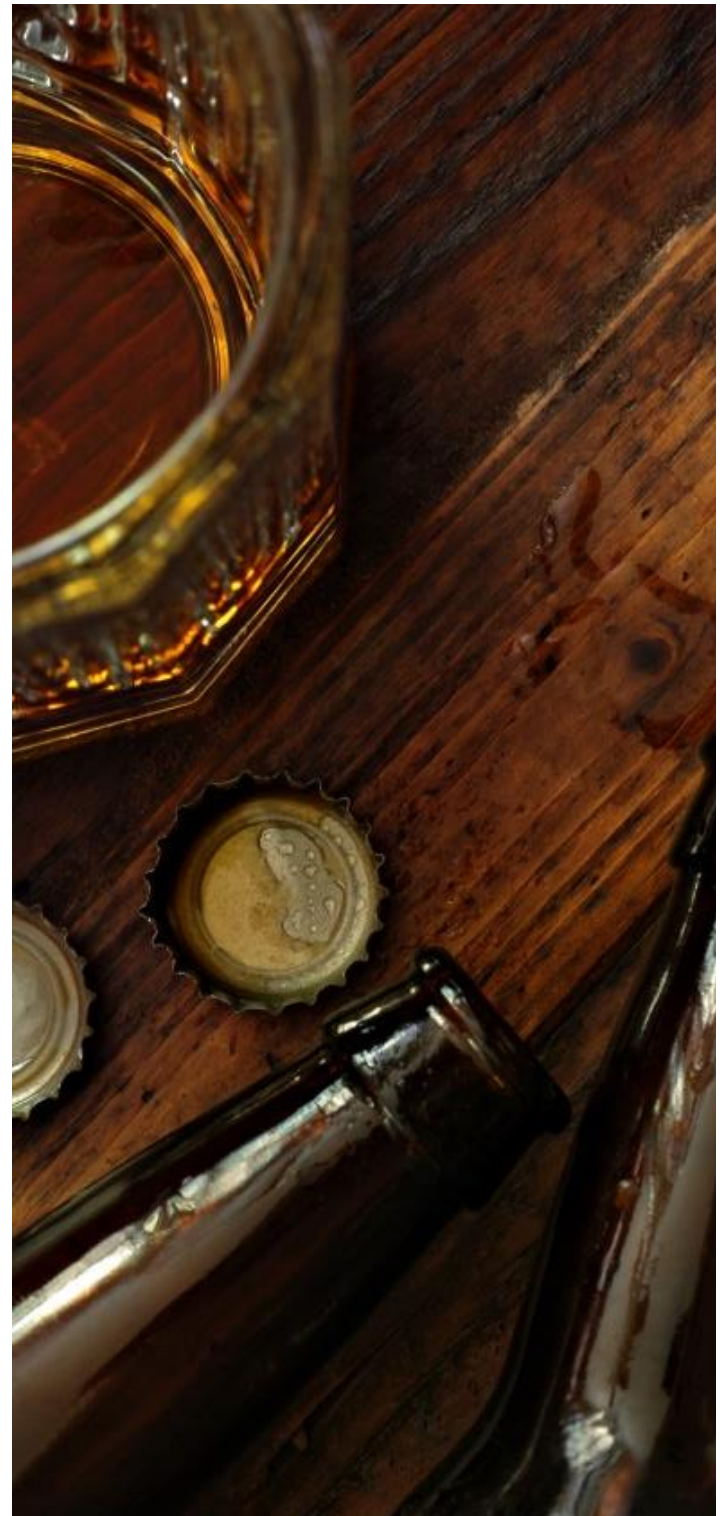
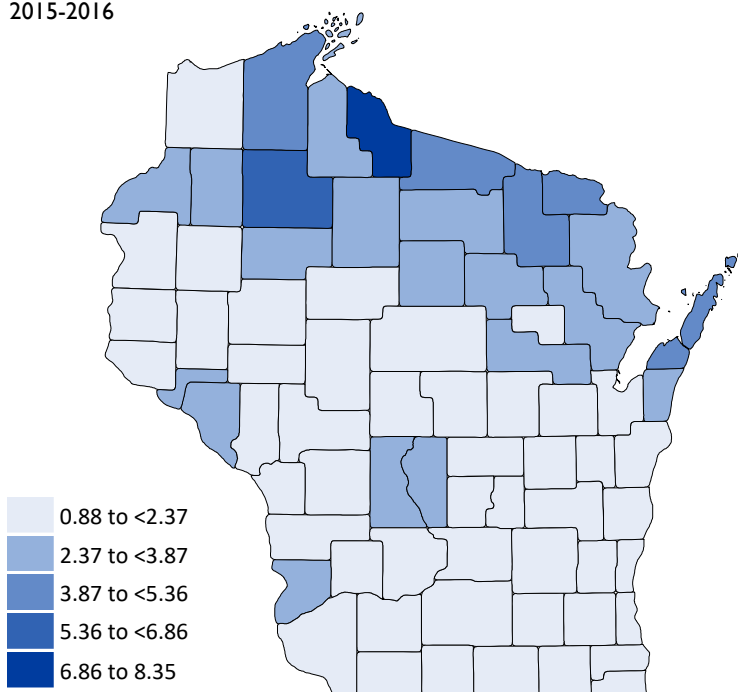
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

### ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



# 8

LICENSES IN  
MENOMINEE COUNTY

# 16,948

TOTAL LICENSES IN  
WISCONSIN





# PRIVATE WATER QUALITY MENOMINEE 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 displayed in this report. Users can find public water quality data on our data portal.

● **1.6%**

**NITRATE  
IN PRIVATE WELLS**  
PERCENT OF TEST RESULTS  
ABOVE EPA STANDARD  
OF 10 mg/L  
WISCONSIN: 11.0%



**ARSENIC  
IN PRIVATE WELLS**  
PERCENT OF TEST RESULTS  
ABOVE EPA STANDARD  
OF 10 µg/L  
WISCONSIN: 6.0%

● Above state value   ● At or below state value   ^ Suppressed  
# No data

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS MENOMINEE 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.

● **66.6**  
**CARBON MONOXIDE POISONING**  
 RATE OF ER VISITS RELATED TO CO POISONING PER 100,000  
 WISCONSIN: 7.9

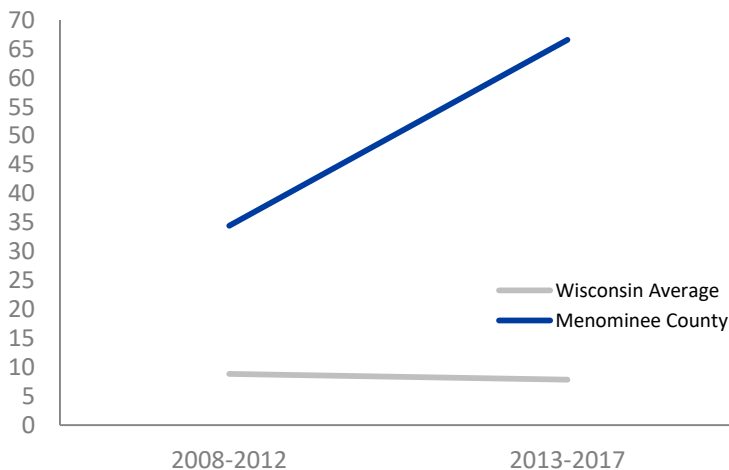
● **4.6%**  
**CHILDHOOD LEAD POISONING**  
 PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$   
 WISCONSIN: 5.0%

● **100.0%**  
**RADON**  
 PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$   
 WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

Carbon monoxide (CO) poisoning prevents oxygen from getting to the body, which can damage tissue and even cause death.

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



## 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter ( $\mu\text{g}/\text{dL}$ ). The Centers for Disease Control and Prevention defines lead poisoning at or above 5  $\mu\text{g}/\text{dL}$ .

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

## RADON

Radon is a naturally occurring gas that is radioactive and can cause lung cancer. Radon can leak into homes and other buildings through cracks in the foundation.

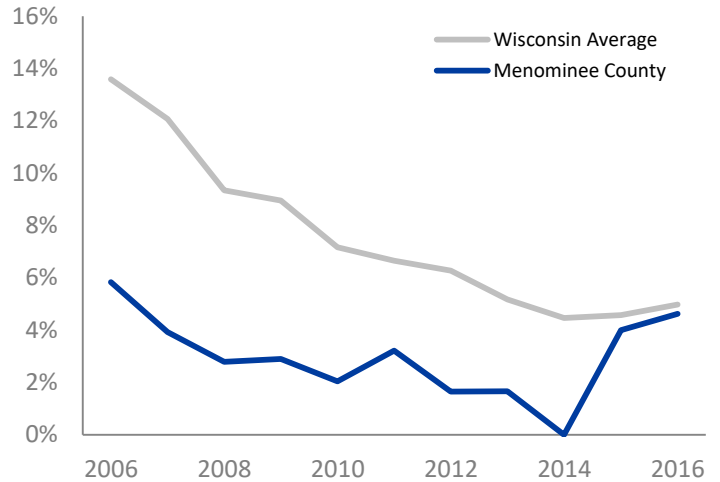
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

## CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g}/\text{dL}$

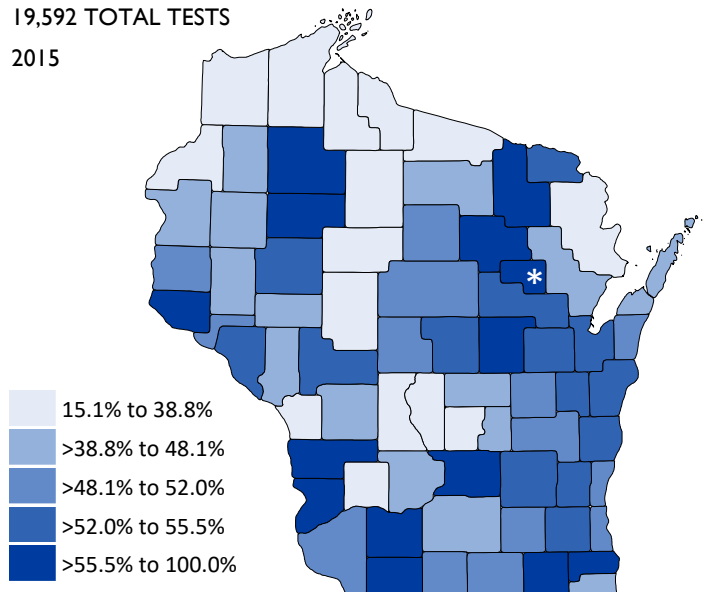


## RADON

PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi}/\text{L}$

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

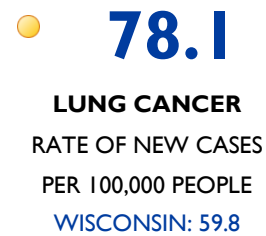
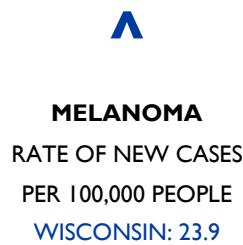
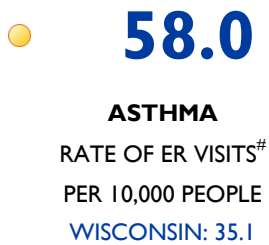




# HEALTH CONDITIONS MENOMINEE COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.

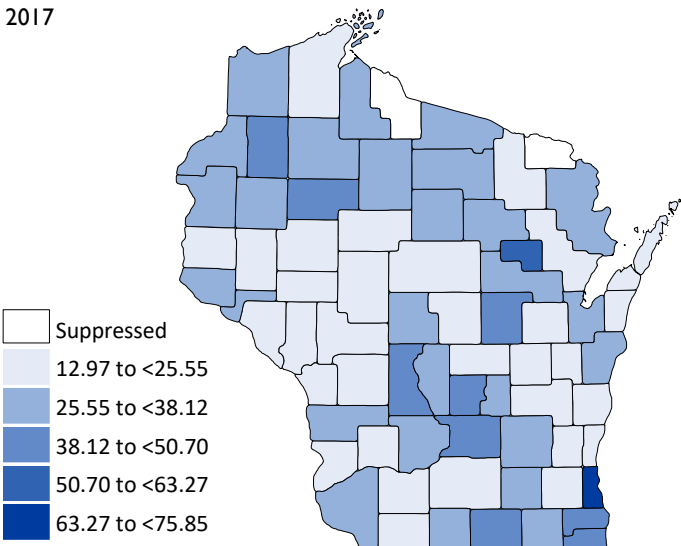


- Above state value
- At or below state value
- ^ Suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



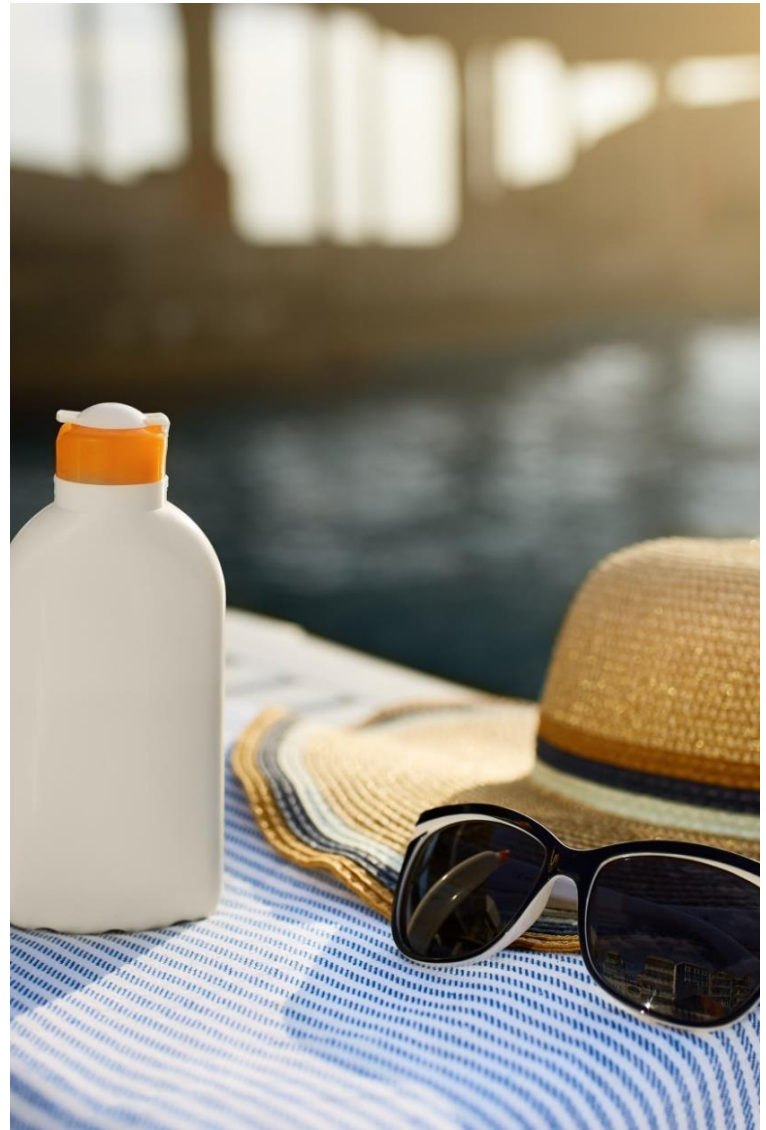
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

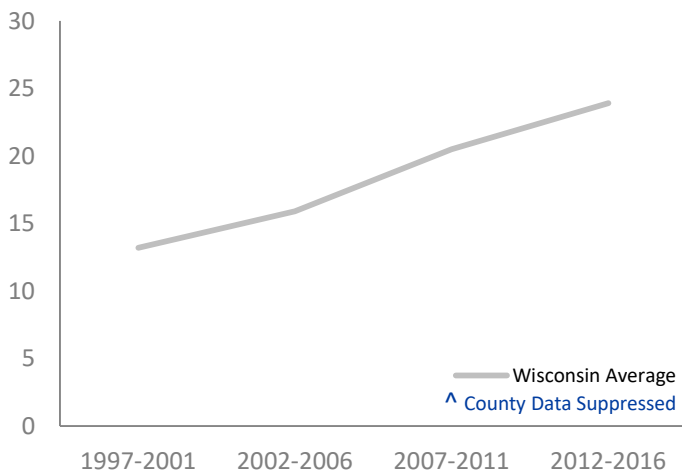
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



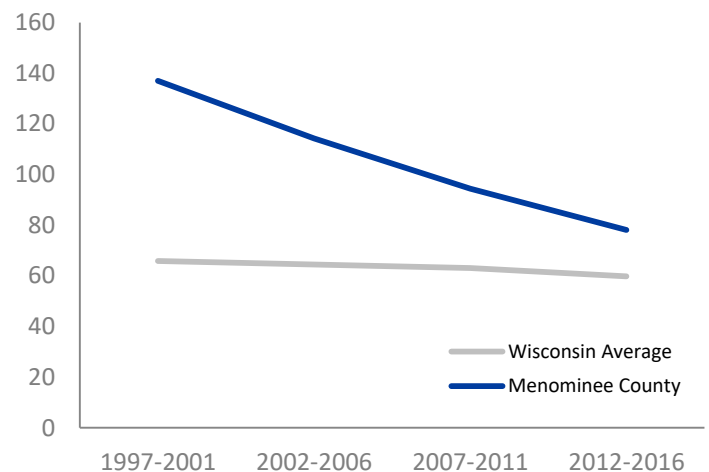
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE MENOMINEE COUNTY

## BACKGROUND

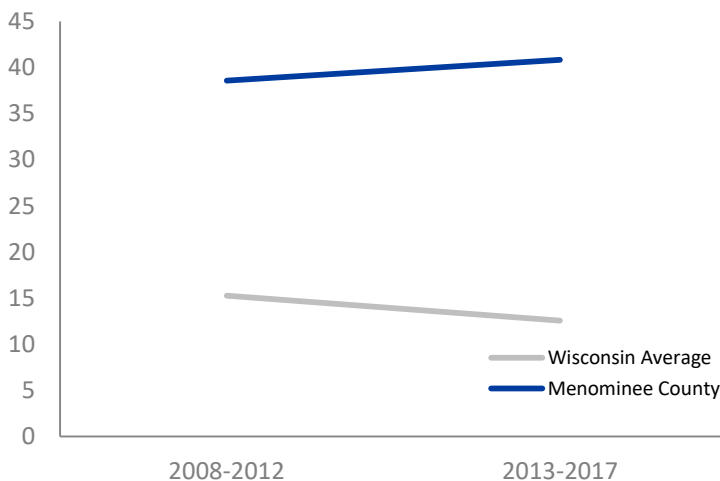
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **40.8**

**HEAT STRESS**  
RATE OF ER VISITS  
PER 100,000 PEOPLE  
WISCONSIN: 12.6

● **195.0**

**LYME DISEASE**  
RATE OF CASES  
PER 100,000 PEOPLE  
WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

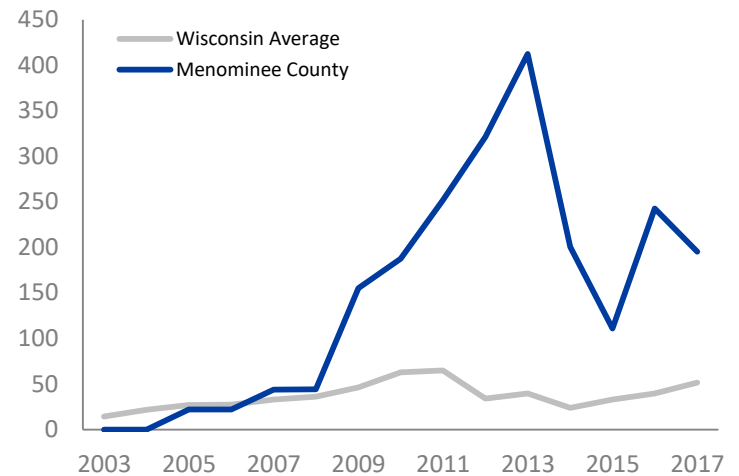
## INTERPRETING LYME DISEASE DATA

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.

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

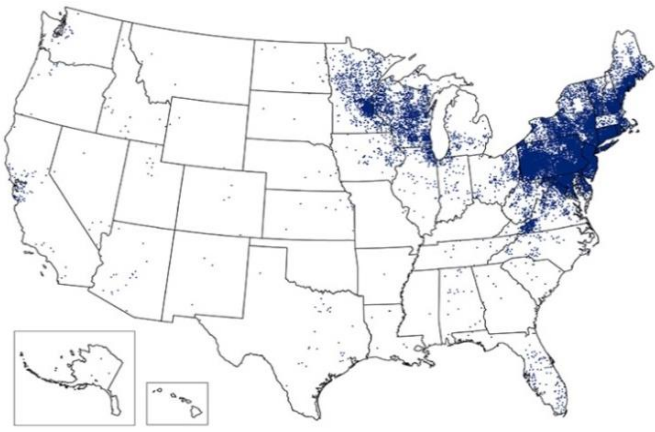
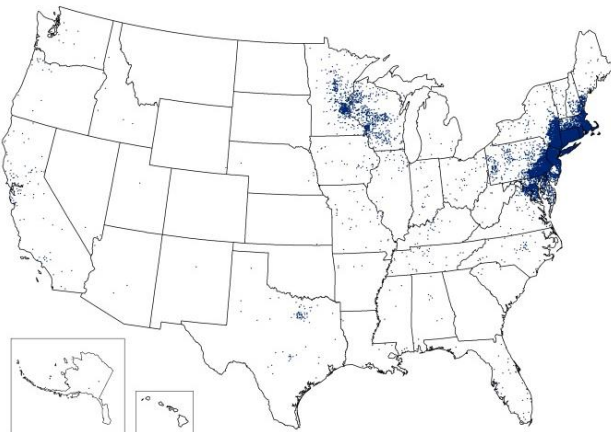
## LYME DISEASE AT THE NATIONAL LEVEL

OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001

2017



Maps courtesy of Centers for Disease Control and Prevention

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results for nitrate that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results for arsenic that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Wisconsin Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

**Asthma:** Rate of emergency room visits related to asthma, age-adjusted per 10,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

Bureau of Environmental and Occupational Health  
Wisconsin Department of Health Services | Division of Public Health

[dhstracking@wi.gov](mailto:dhstracking@wi.gov) | [dhs.wisconsin.gov/epht](https://dhs.wisconsin.gov/epht)  
MAY 2019 | P-00719 (Rev. 05/2019)





# MILWAUKEE COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

Tracking data and resources can help you and your team develop rationale for funding requests. These data can help justify existing programs and show where work needs to be done.

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# MILWAUKEE COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

● 100.0% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

● 1.0 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

● 0.0% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

‡ | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

● 8.1 | Rate of ER visits per 100,000 people  
Wisconsin: 7.9

### Childhood Lead Poisoning

● 10.1% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

● 51.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

● 75.9 | Rate of ER visits per 10,000 people#  
Wisconsin: 35.1

### Melanoma

● 15.2 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

● 69.1 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

● 8.2 | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

● 5.7 | Crude rate per 100,000 people  
Wisconsin: 51.7

- Above state value
- At or below state value

- \* Above state value preferred for this measure
- ^ Data are suppressed
- ‡ No data

- # Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

Data details on next page



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services  
**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point  
**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services  
**Year displayed:** 2016

**Radon:** Percent of tests with results above EPA standard of 4 pCi/L

**Source:** Radon and Indoor Air Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services  
**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services  
**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services  
**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services  
**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH MILWAUKEE COUNTY

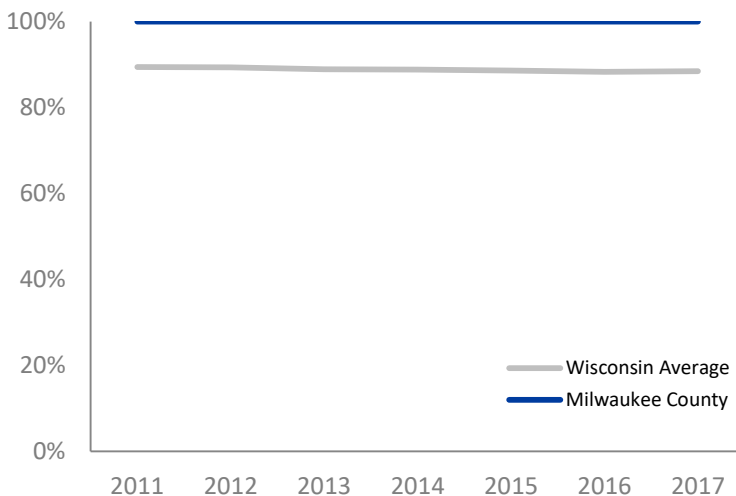
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **100.0%**

**FLUORIDE**  
PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
WISCONSIN: 88.4%

● **1.0**

**ALCOHOL OUTLET DENSITY**  
RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



## ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

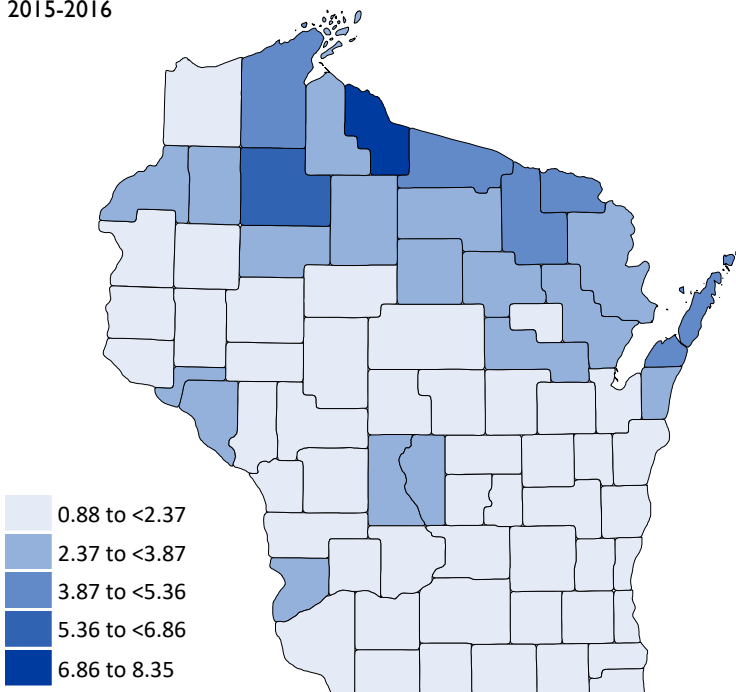
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

## ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



|                                 |                                |
|---------------------------------|--------------------------------|
| <b>1,876</b>                    | <b>16,948</b>                  |
| LICENSES IN<br>MILWAUKEE COUNTY | TOTAL LICENSES IN<br>WISCONSIN |





# PRIVATE WATER QUALITY MILWAUKEE 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 displayed in this report. Users can find public water quality data on our data portal.

● **0.0%**

**NITRATE  
IN PRIVATE WELLS**  
PERCENT OF TEST RESULTS  
ABOVE EPA STANDARD  
OF 10 mg/L  
WISCONSIN: 11.0%



**ARSENIC  
IN PRIVATE WELLS**  
PERCENT OF TEST RESULTS  
ABOVE EPA STANDARD  
OF 10 µg/L  
WISCONSIN: 6.0%

● Above state value   ● At or below state value   ^ Suppressed  
# No data

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS MILWAUKEE 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.

● **8.1**  
**CARBON MONOXIDE POISONING**  
 RATE OF ER VISITS RELATED TO CO POISONING PER 100,000  
 WISCONSIN: 7.9

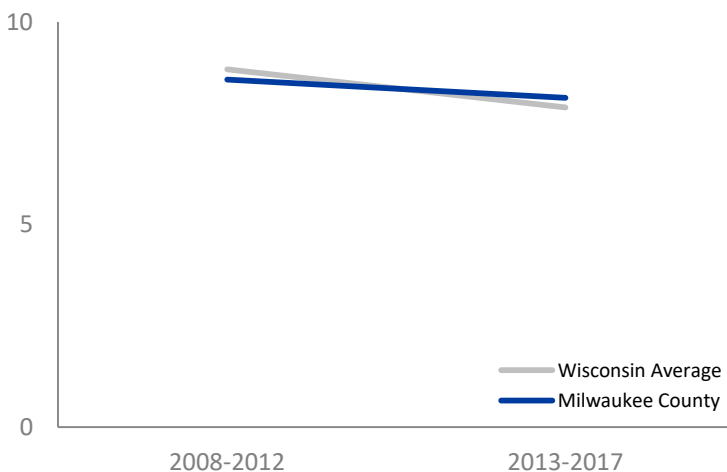
● **10.1%**  
**CHILDHOOD LEAD POISONING**  
 PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$   
 WISCONSIN: 5.0%

● **51.0%**  
**RADON**  
 PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$   
 WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

Carbon monoxide (CO) poisoning prevents oxygen from getting to the body, which can damage tissue and even cause death.

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



### 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter ( $\mu\text{g}/\text{dL}$ ). The Centers for Disease Control and Prevention defines lead poisoning at or above 5  $\mu\text{g}/\text{dL}$ .

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

### RADON

Radon is a naturally occurring gas that is radioactive and can cause lung cancer. Radon can leak into homes and other buildings through cracks in the foundation.

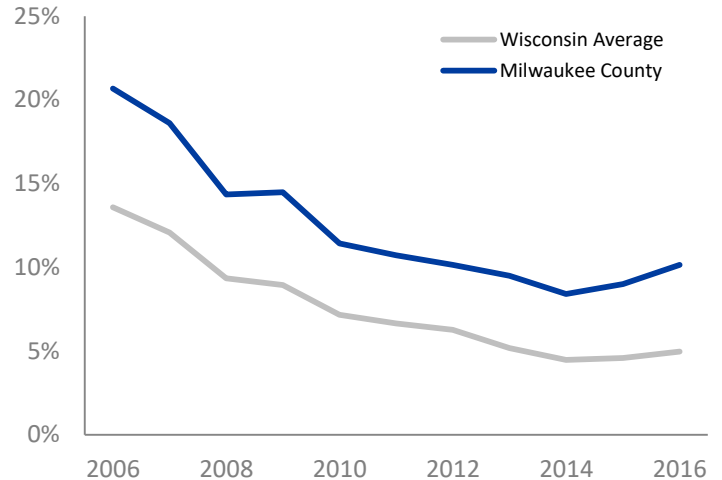
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

### CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g}/\text{dL}$

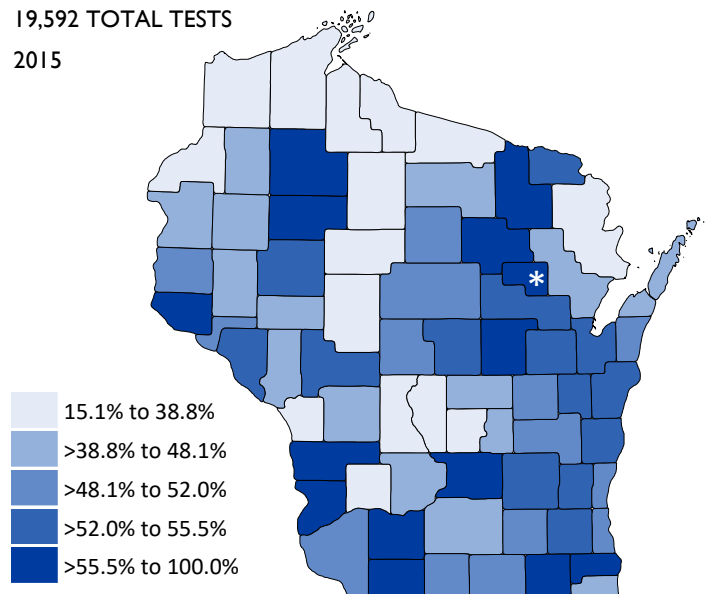


### RADON

PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi}/\text{L}$

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

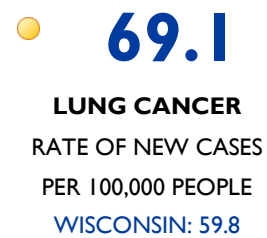
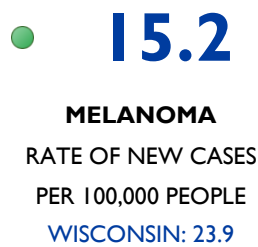
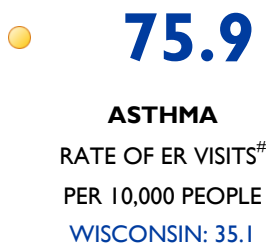




# HEALTH CONDITIONS MILWAUKEE COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.



● Above state value

● At or below state value

^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



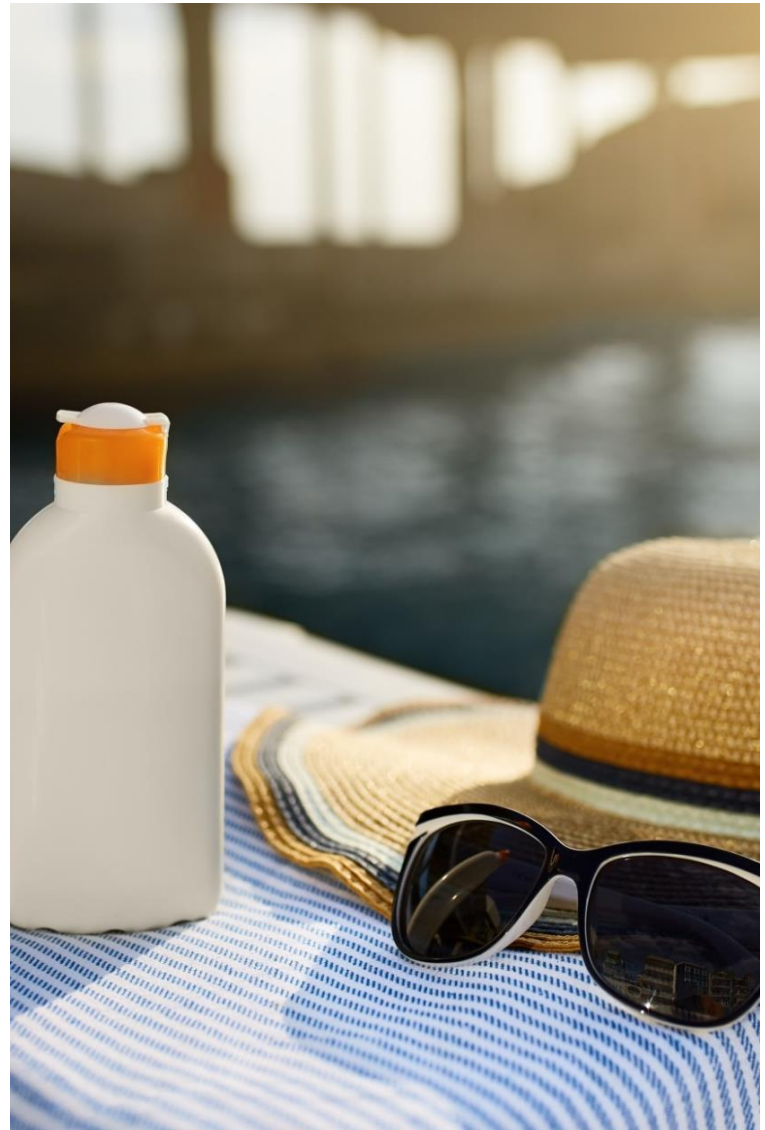
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

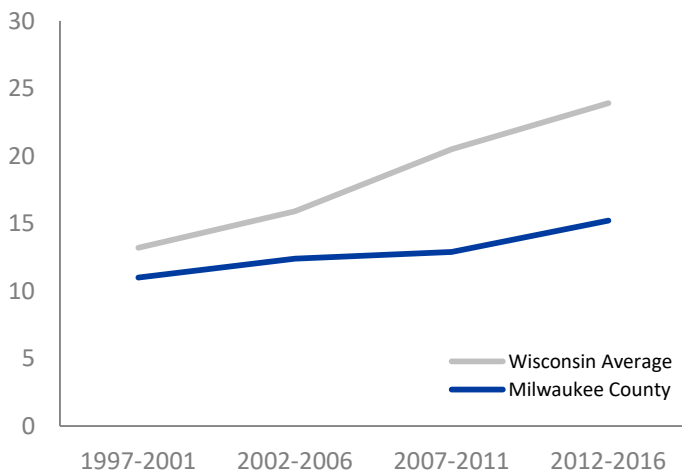
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



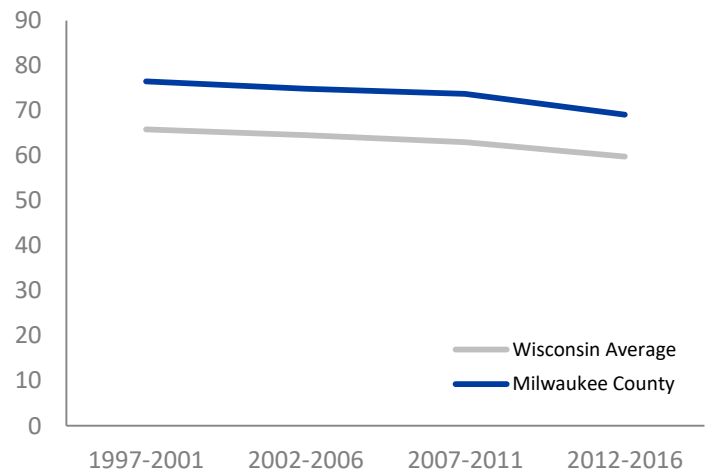
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE MILWAUKEE COUNTY

## BACKGROUND

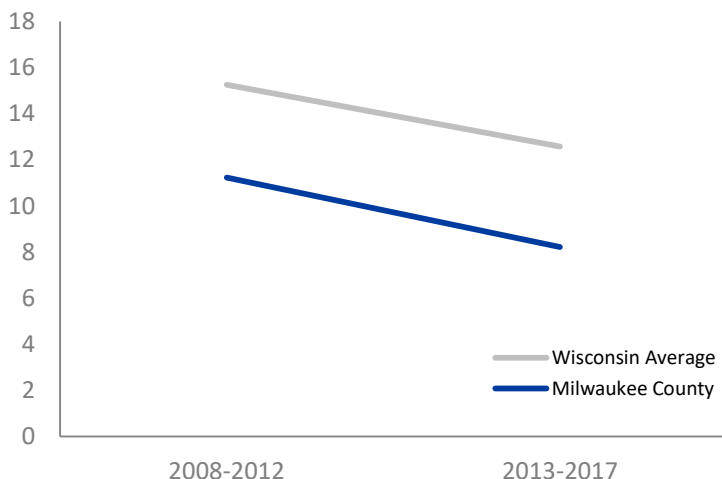
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **8.2**

**HEAT STRESS**  
RATE OF ER VISITS  
PER 100,000 PEOPLE  
WISCONSIN: 12.6

● **5.7**

**LYME DISEASE**  
RATE OF CASES  
PER 100,000 PEOPLE  
WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

## LYME DISEASE AT THE NATIONAL LEVEL

OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001



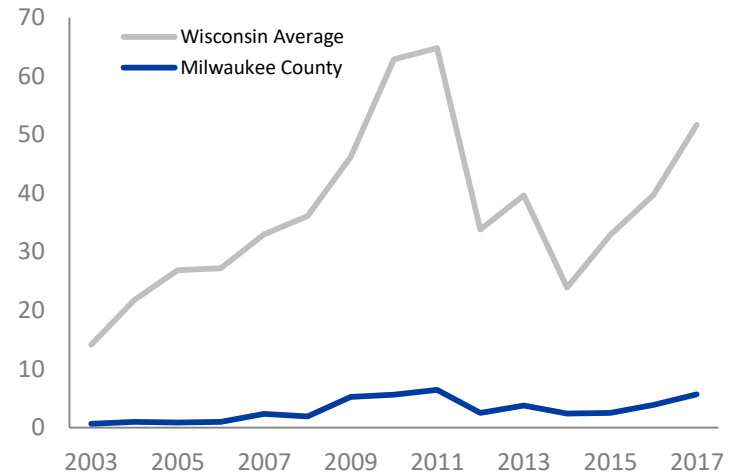
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results for nitrate that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results for arsenic that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Wisconsin Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

**Asthma:** Rate of emergency room visits related to asthma, age-adjusted per 10,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

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Wisconsin Department of Health Services | Division of Public Health

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MAY 2019 | P-00719 (Rev. 05/2019)





# MONROE COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

Tracking data and resources can help you and your team develop rationale for funding requests. These data can help justify existing programs and show where work needs to be done.

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# MONROE COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

● 37.3% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

● 1.6 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

● 10.7% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

● 0.7% | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

● 12.4 | Rate of ER visits per 100,000 people  
Wisconsin: 7.9

### Childhood Lead Poisoning

● 3.7% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

● 41.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

● 23.7 | Rate of ER visits per 10,000 people#  
Wisconsin: 35.1

### Melanoma

● 23.0 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

● 76.0 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

● 34.6 | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

● 109.6 | Crude rate per 100,000 people  
Wisconsin: 51.7

● Above state value  
● At or below state value

\* Above state value preferred for this measure  
^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

[Data details on next page](#)



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services  
**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point  
**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services  
**Year displayed:** 2016

**Radon:** Percent of tests with results above EPA standard of 4 pCi/L

**Source:** Radon and Indoor Air Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services  
**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services  
**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services  
**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services  
**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH MONROE COUNTY

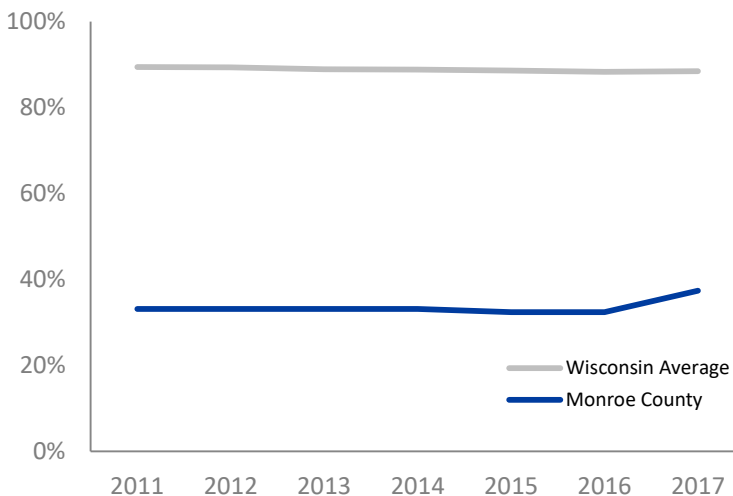
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **37.3%**

**FLUORIDE**  
PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
WISCONSIN: 88.4%

● **1.6**

**ALCOHOL OUTLET DENSITY**  
RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



## ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

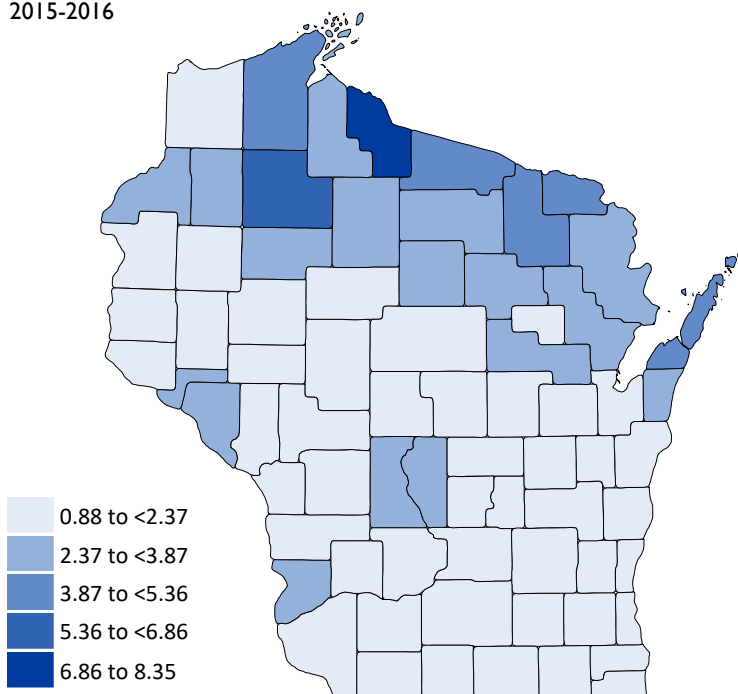
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

## ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



**145**  
LICENSES IN  
MONROE COUNTY

**16,948**  
TOTAL LICENSES IN  
WISCONSIN





# PRIVATE WATER QUALITY MONROE 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 displayed in this report. Users can find public water quality data on our data portal.

● **10.7%**

**NITRATE**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 mg/L  
**WISCONSIN: 11.0%**

● **0.7%**

**ARSENIC**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 µg/L  
**WISCONSIN: 6.0%**

● Above state value    ● At or below state value    ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
 1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS MONROE 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.

● **12.4**  
**CARBON MONOXIDE POISONING**  
 RATE OF ER VISITS RELATED TO CO POISONING PER 100,000  
 WISCONSIN: 7.9

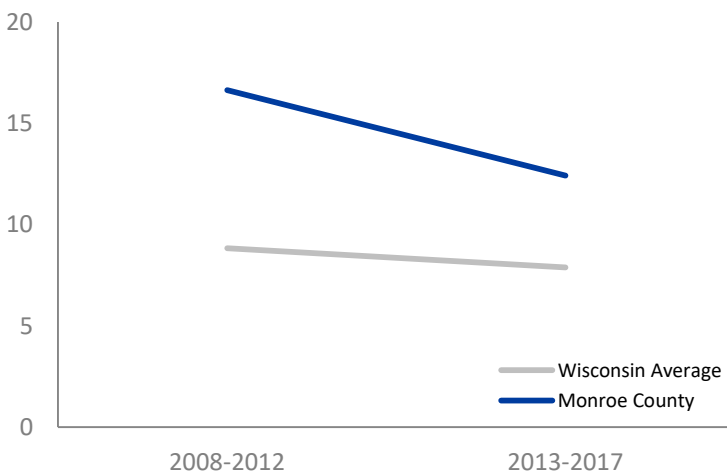
● **3.7%**  
**CHILDHOOD LEAD POISONING**  
 PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$   
 WISCONSIN: 5.0%

● **41.0%**  
**RADON**  
 PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$   
 WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

Carbon monoxide (CO) poisoning prevents oxygen from getting to the body, which can damage tissue and even cause death.

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



## 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter ( $\mu\text{g}/\text{dL}$ ). The Centers for Disease Control and Prevention defines lead poisoning at or above 5  $\mu\text{g}/\text{dL}$ .

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

## RADON

Radon is a naturally occurring gas that is radioactive and can cause lung cancer. Radon can leak into homes and other buildings through cracks in the foundation.

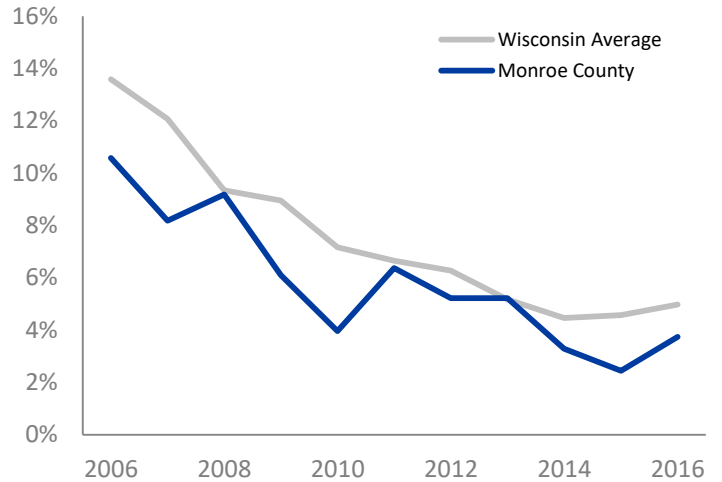
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

## CHILDHOOD LEAD POISONING

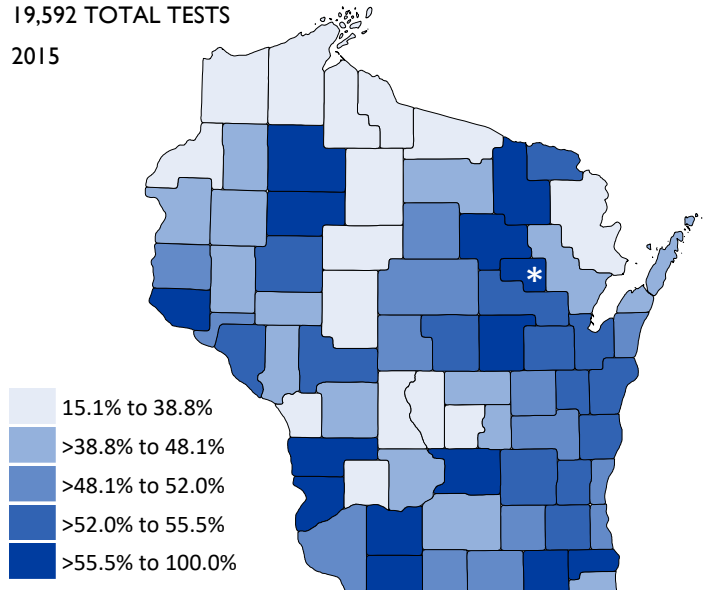
PERCENT OF TESTED CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g}/\text{dL}$



## RADON

PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi}/\text{L}$

19,592 TOTAL TESTS  
2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

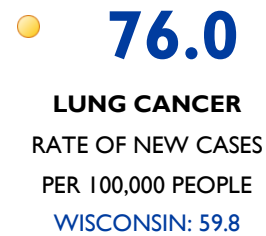
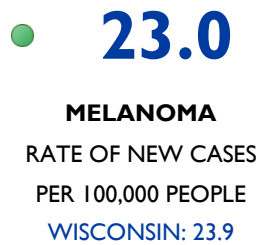
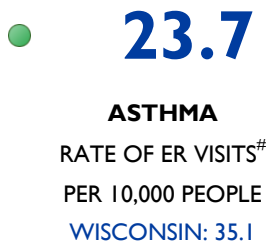




# HEALTH CONDITIONS MONROE COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.

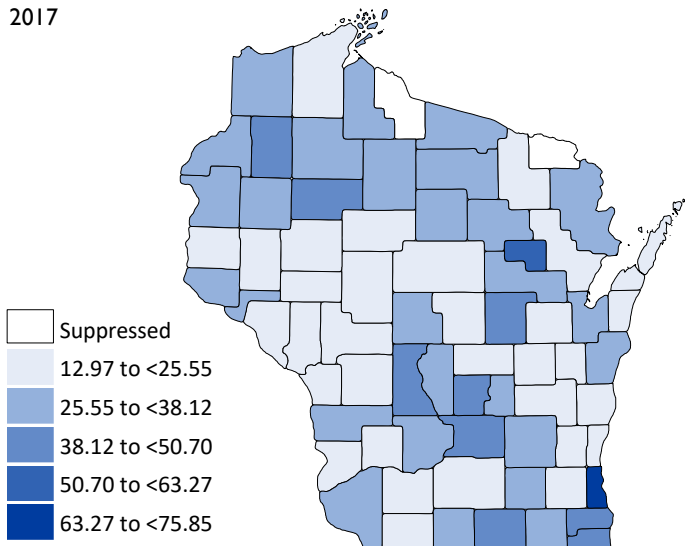


- Above state value
- At or below state value
- ^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

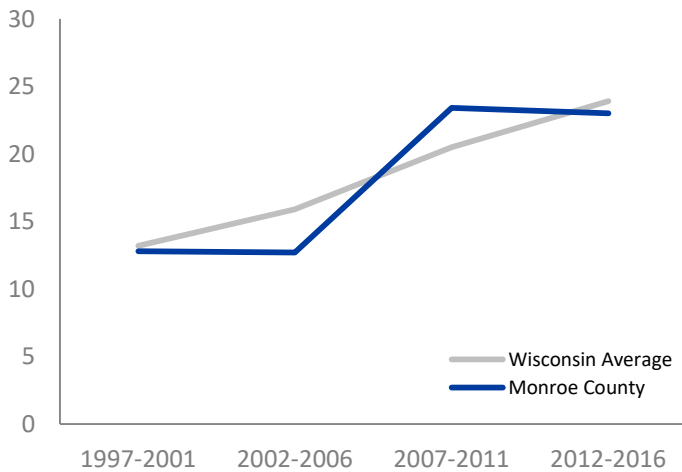
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



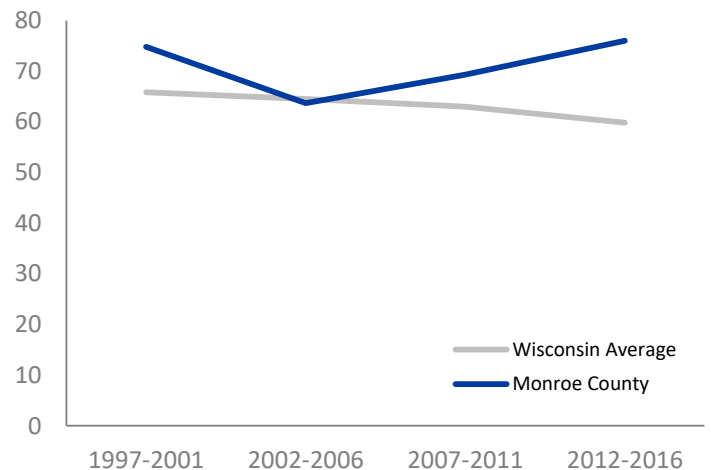
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE MONROE COUNTY

## BACKGROUND

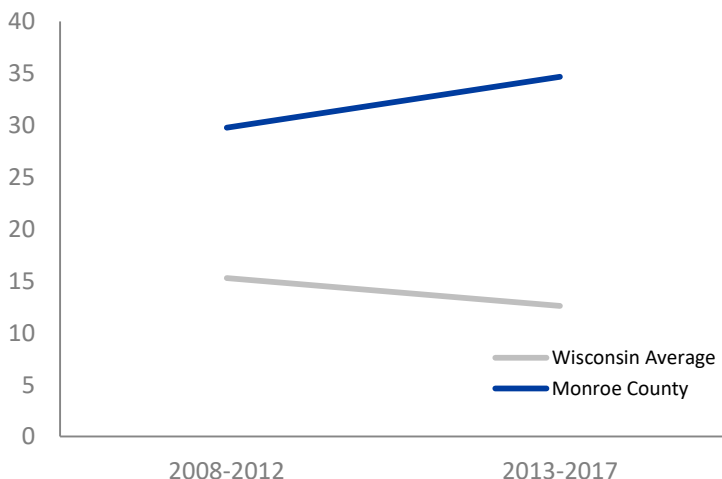
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **34.6**

**HEAT STRESS**  
RATE OF ER VISITS  
PER 100,000 PEOPLE  
WISCONSIN: 12.6

● **109.6**

**LYME DISEASE**  
RATE OF CASES  
PER 100,000 PEOPLE  
WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

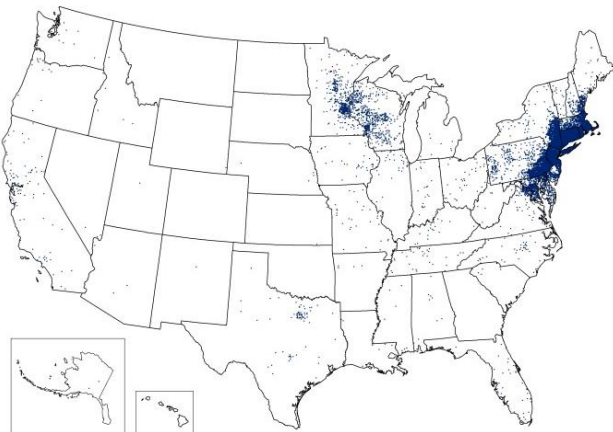
## LYME DISEASE AT THE NATIONAL LEVEL

OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001

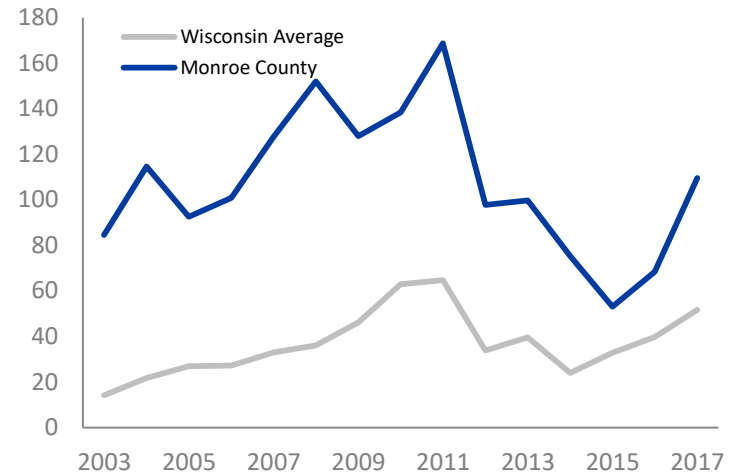
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results for nitrate that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results for arsenic that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Wisconsin Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

**Asthma:** Rate of emergency room visits related to asthma, age-adjusted per 10,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

Bureau of Environmental and Occupational Health  
Wisconsin Department of Health Services | Division of Public Health

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MAY 2019 | P-00719 (Rev. 05/2019)





# OCONTO COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

Tracking data and resources can help you and your team develop rationale for funding requests. These data can help justify existing programs and show where work needs to be done.

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# OCONTO COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

● 46.0% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

● 2.5 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

● 2.3% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

● 6.9% | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

● 9.3 | Rate of ER visits per 100,000 people  
Wisconsin: 7.9

### Childhood Lead Poisoning

● 0.8% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

● 49.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

● 21.1 | Rate of ER visits per 10,000 people<sup>#</sup>  
Wisconsin: 35.1

### Melanoma

● 27.1 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

● 64.6 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

● 12.1 | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

● 170.4 | Crude rate per 100,000 people  
Wisconsin: 51.7

● Above state value  
● At or below state value

\* Above state value preferred for this measure  
^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

[Data details on next page](#)



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2016

**Radon:** Percent of tests with results above EPA standard of 4 pCi/L

**Source:** Radon and Indoor Air Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH OCONTO COUNTY

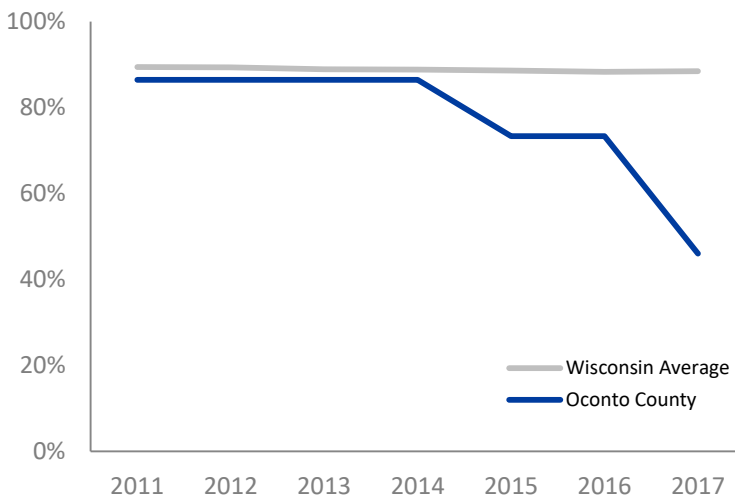
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **46.0%**

**FLUORIDE**  
PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
WISCONSIN: 88.4%

● **2.5**

**ALCOHOL OUTLET DENSITY**  
RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



## ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

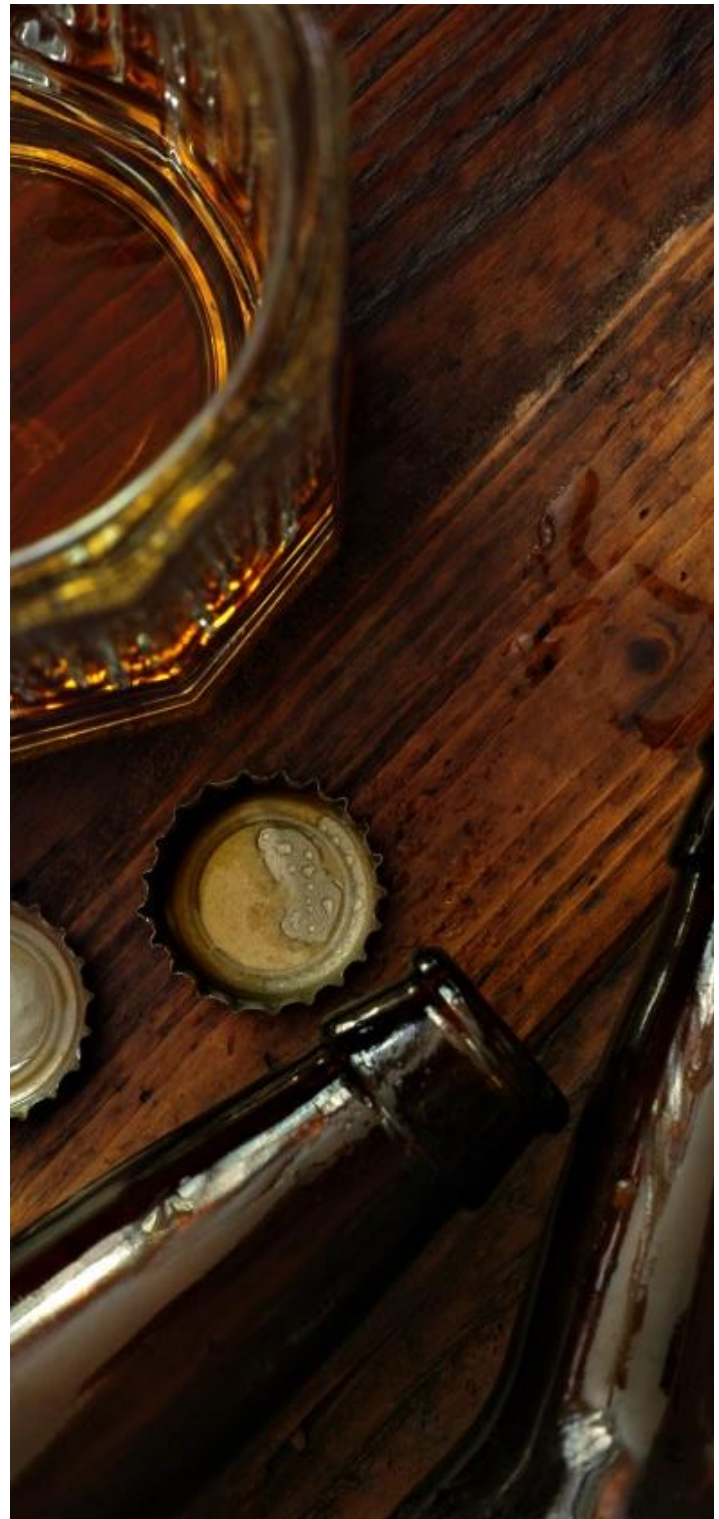
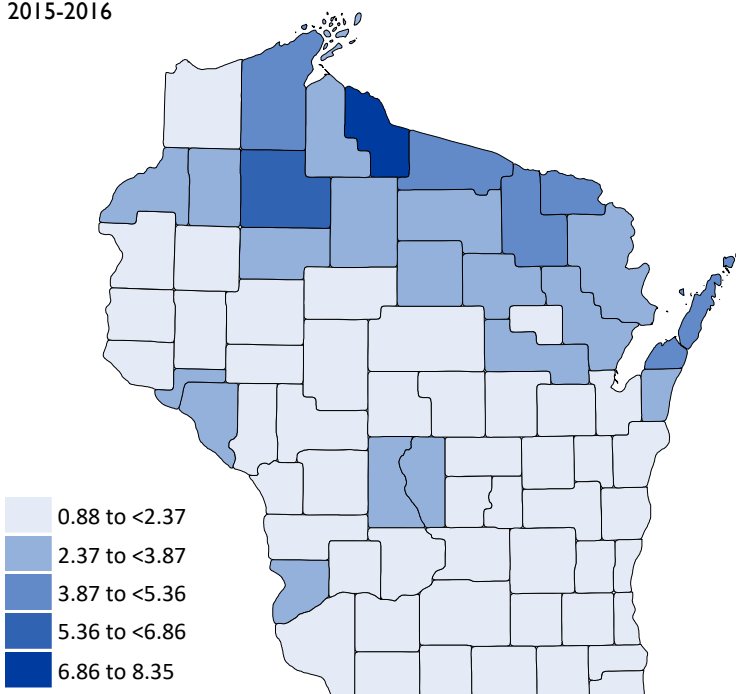
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

## ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



|                              |                                |
|------------------------------|--------------------------------|
| <b>184</b>                   | <b>16,948</b>                  |
| LICENSES IN<br>OCONTO COUNTY | TOTAL LICENSES IN<br>WISCONSIN |





# PRIVATE WATER QUALITY OCONTO 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 displayed in this report. Users can find public water quality data on our data portal.

● **2.3%**

**NITRATE**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 mg/L  
**WISCONSIN: 11.0%**

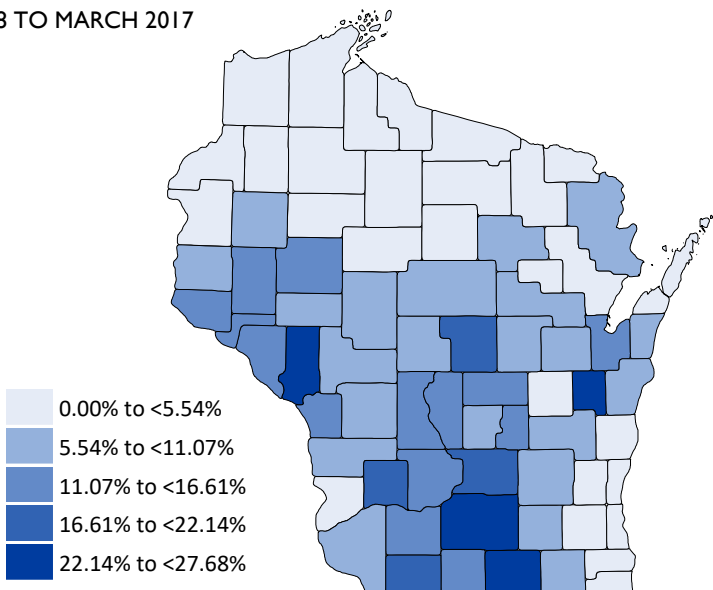
● **6.9%**

**ARSENIC**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 µg/L  
**WISCONSIN: 6.0%**

● Above state value    ● At or below state value    ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
 1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS OCONTO 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.

● **9.3**  
**CARBON MONOXIDE POISONING**  
 RATE OF ER VISITS RELATED TO CO POISONING PER 100,000  
 WISCONSIN: 7.9

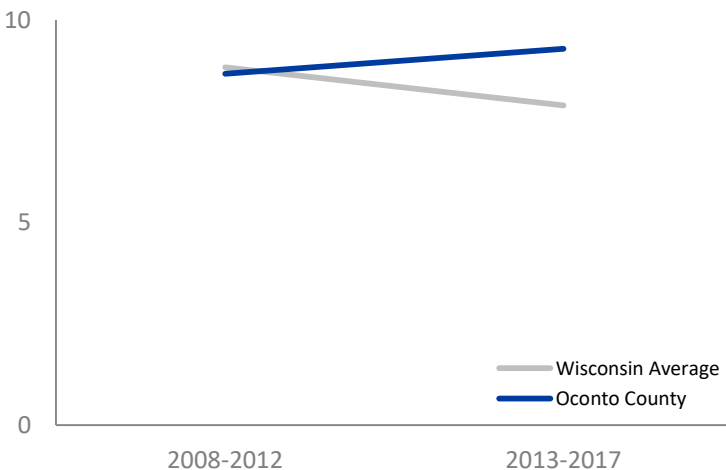
● **0.8%**  
**CHILDHOOD LEAD POISONING**  
 PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$   
 WISCONSIN: 5.0%

● **49.0%**  
**RADON**  
 PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$   
 WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

Carbon monoxide (CO) poisoning prevents oxygen from getting to the body, which can damage tissue and even cause death.

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



## 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter ( $\mu\text{g}/\text{dL}$ ). The Centers for Disease Control and Prevention defines lead poisoning at or above 5  $\mu\text{g}/\text{dL}$ .

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

## RADON

Radon is a naturally occurring gas that is radioactive and can cause lung cancer. Radon can leak into homes and other buildings through cracks in the foundation.

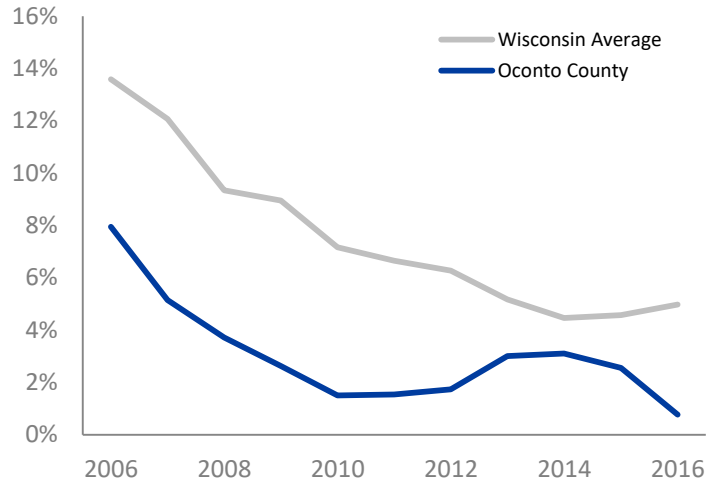
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

## CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g}/\text{dL}$

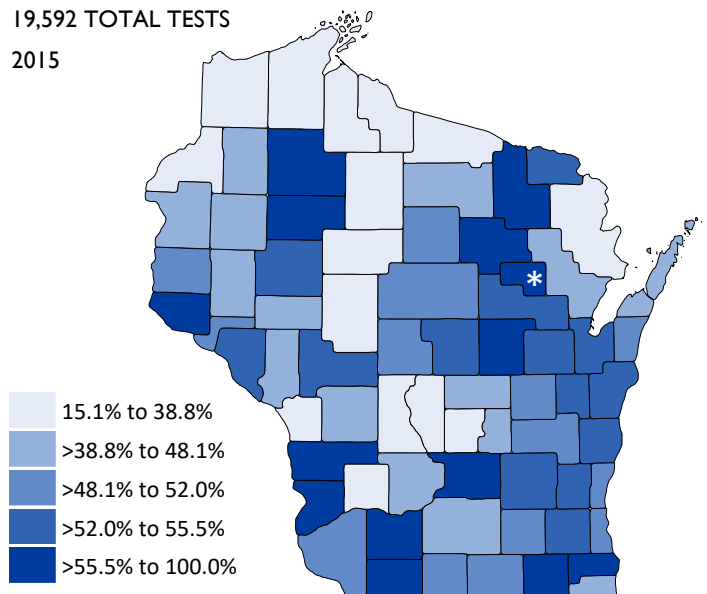


## RADON

PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi}/\text{L}$

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

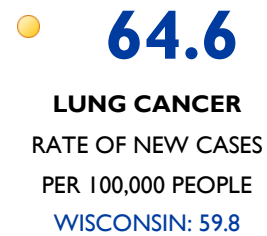
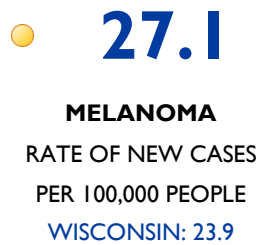
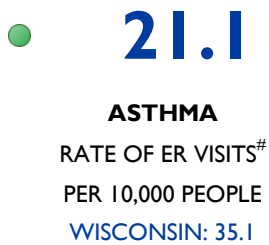




# HEALTH CONDITIONS OCONTO COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.

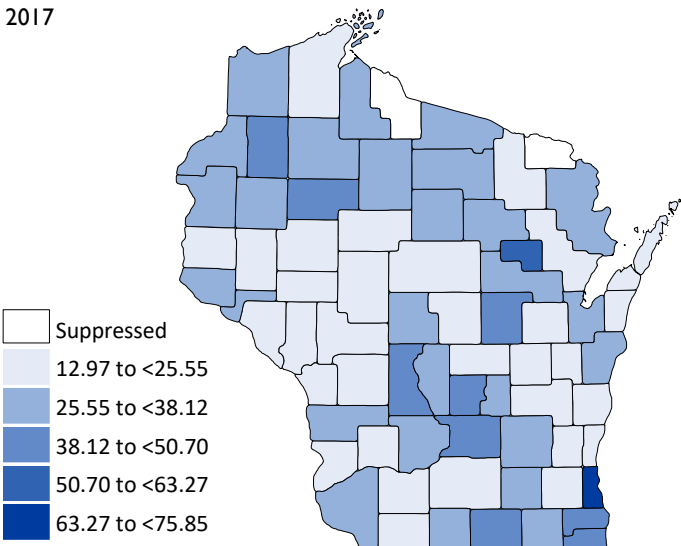


- Above state value
- At or below state value
- ^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



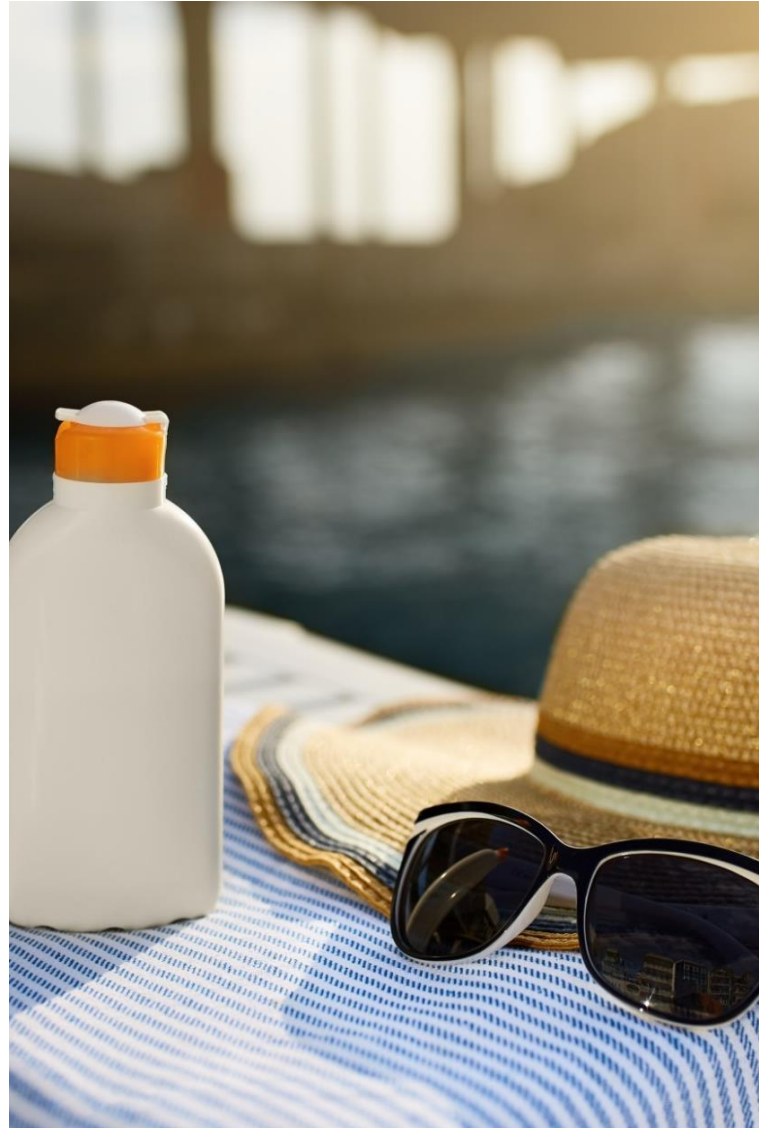
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

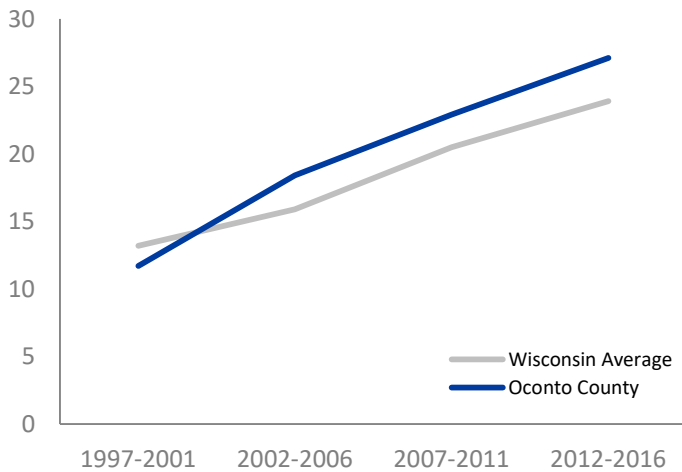
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



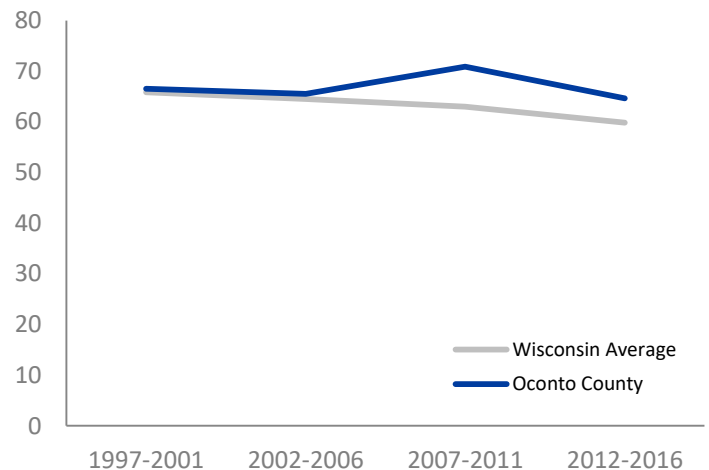
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE OCONTO COUNTY

## BACKGROUND

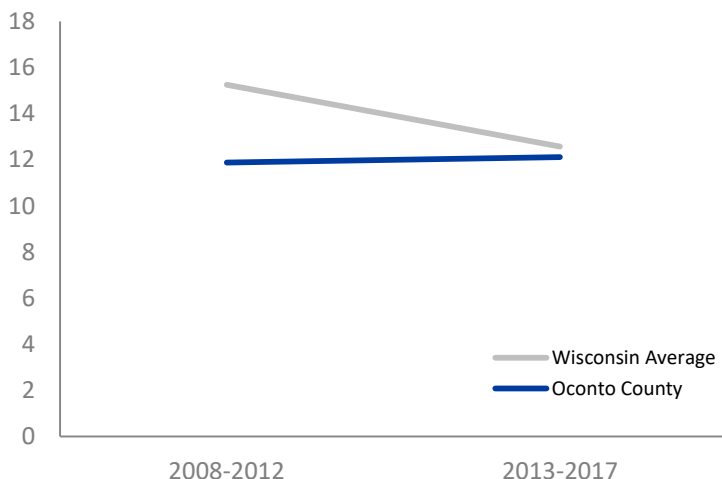
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **12.1**

**HEAT STRESS**  
RATE OF ER VISITS  
PER 100,000 PEOPLE  
WISCONSIN: 12.6

● **170.4**

**LYME DISEASE**  
RATE OF CASES  
PER 100,000 PEOPLE  
WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

## LYME DISEASE AT THE NATIONAL LEVEL

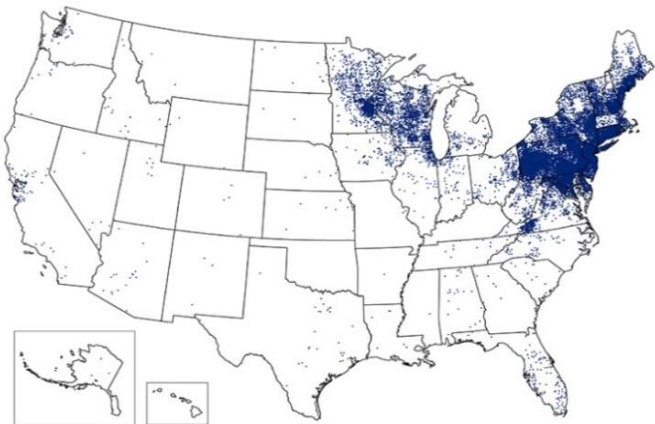
OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001



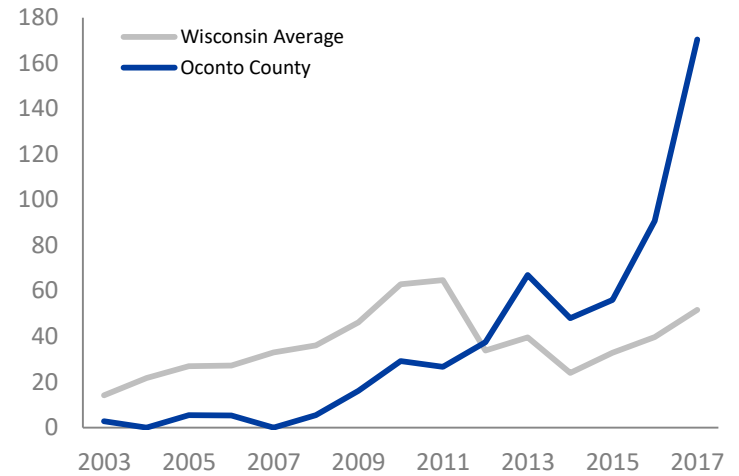
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results for nitrate that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results for arsenic that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Wisconsin Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

**Asthma:** Rate of emergency room visits related to asthma, age-adjusted per 10,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

Bureau of Environmental and Occupational Health  
Wisconsin Department of Health Services | Division of Public Health

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MAY 2019 | P-00719 (Rev. 05/2019)





# ONEIDA COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

Tracking data and resources can help you and your team develop rationale for funding requests. These data can help justify existing programs and show where work needs to be done.

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# ONEIDA COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

● 66.5% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

● 3.5 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

● 3.4% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

● 0.0% | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

● 15.5 | Rate of ER visits per 100,000 people  
Wisconsin: 7.9

### Childhood Lead Poisoning

● 1.1% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

● 43.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

● 37.9 | Rate of ER visits per 10,000 people#  
Wisconsin: 35.1

### Melanoma

● 19.9 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

● 74.6 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

● 16.0 | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

● 181.5 | Crude rate per 100,000 people  
Wisconsin: 51.7

● Above state value  
● At or below state value

\* Above state value preferred for this measure  
^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

[Data details on next page](#)



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services  
**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point  
**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services  
**Year displayed:** 2016

**Radon:** Percent of tests with results above EPA standard of 4 pCi/L

**Source:** Radon and Indoor Air Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services  
**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services  
**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services  
**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services  
**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH ONEIDA COUNTY

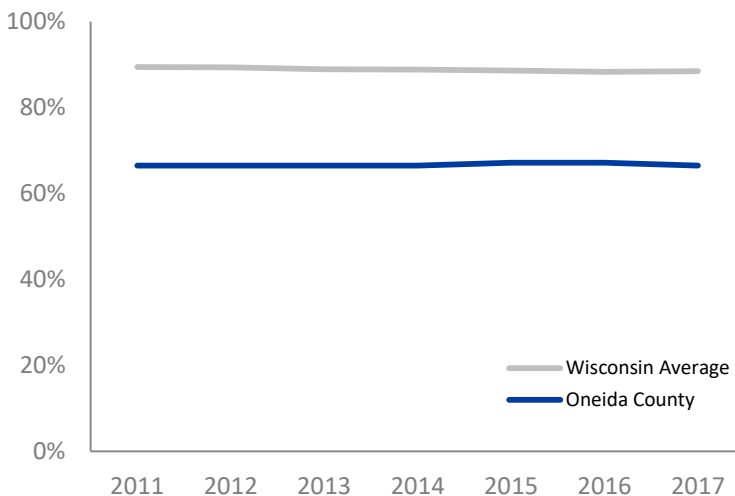
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **66.5%**  
**FLUORIDE**  
 PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
 WISCONSIN: 88.4%

● **3.5**  
**ALCOHOL OUTLET DENSITY**  
 RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
 WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
 ^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



## ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

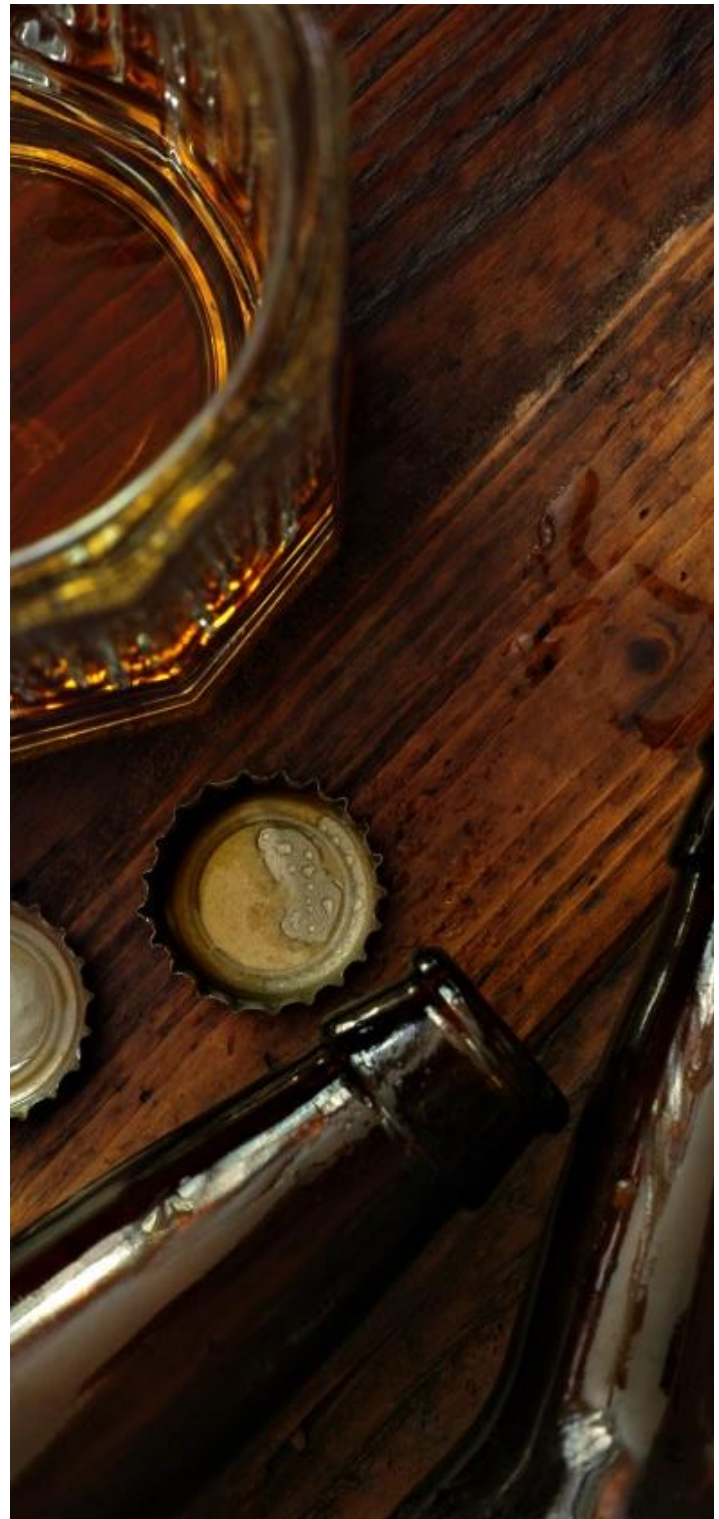
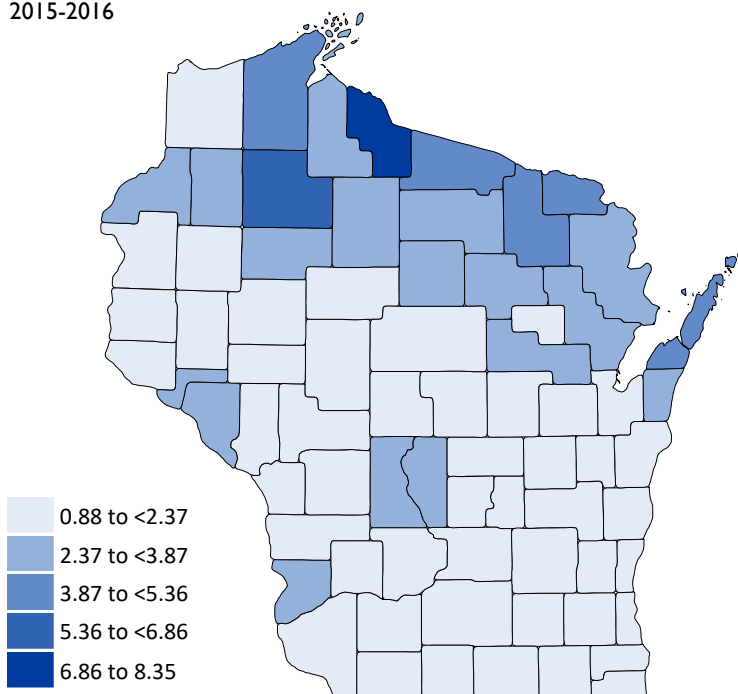
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

## ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



**245**  
LICENSES IN  
ONEIDA COUNTY

**16,948**  
TOTAL LICENSES IN  
WISCONSIN





# PRIVATE WATER QUALITY ONEIDA 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 displayed in this report. Users can find public water quality data on our data portal.

● **3.4%**

**NITRATE**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 mg/L  
**WISCONSIN: 11.0%**

● **0.0%**

**ARSENIC**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 µg/L  
**WISCONSIN: 6.0%**

● Above state value    ● At or below state value    ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
 1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS ONEIDA 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.

● **15.5**  
**CARBON MONOXIDE POISONING**  
 RATE OF ER VISITS RELATED TO CO POISONING PER 100,000  
 WISCONSIN: 7.9

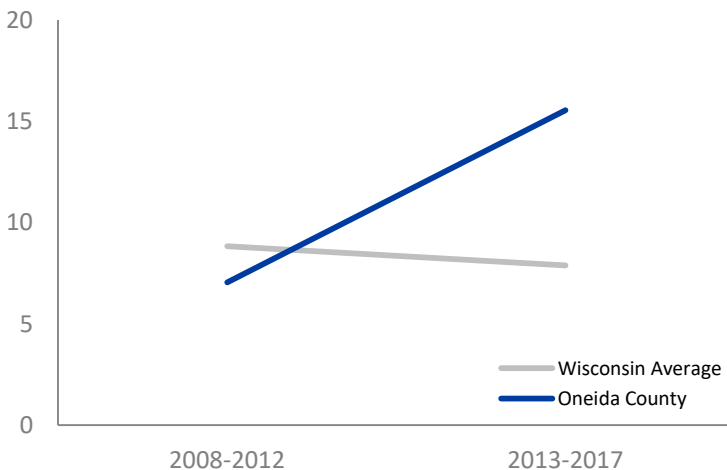
● **1.1%**  
**CHILDHOOD LEAD POISONING**  
 PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$   
 WISCONSIN: 5.0%

● **43.0%**  
**RADON**  
 PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$   
 WISCONSIN: 50.0%

● Above state value    ● At or below state value    ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

Carbon monoxide (CO) poisoning prevents oxygen from getting to the body, which can damage tissue and even cause death.

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



## 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter ( $\mu\text{g}/\text{dL}$ ). The Centers for Disease Control and Prevention defines lead poisoning at or above 5  $\mu\text{g}/\text{dL}$ .

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

## RADON

Radon is a naturally occurring gas that is radioactive and can cause lung cancer. Radon can leak into homes and other buildings through cracks in the foundation.

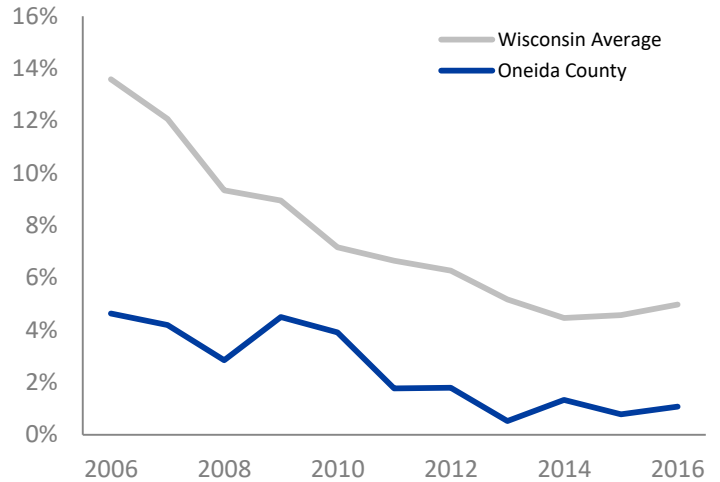
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

## CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g}/\text{dL}$

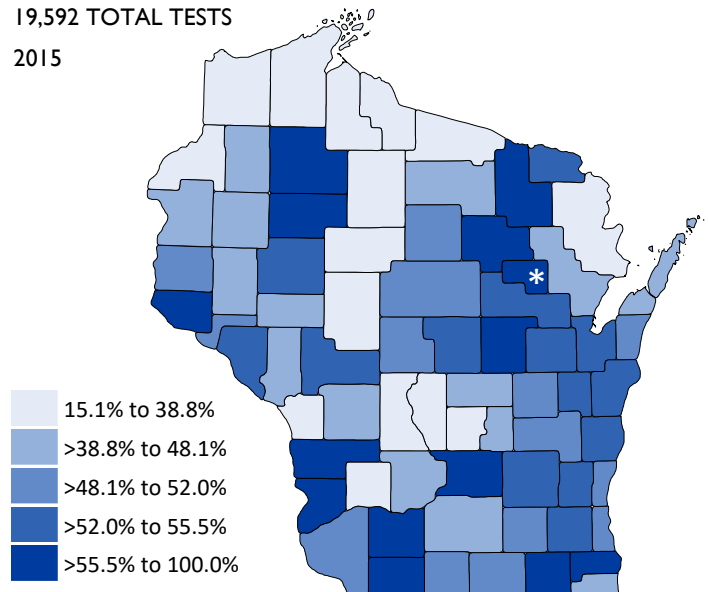


## RADON

PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi}/\text{L}$

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

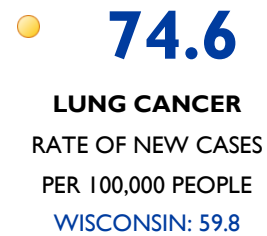
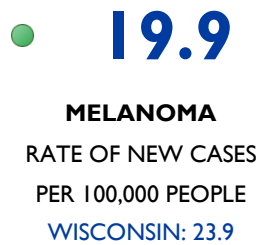
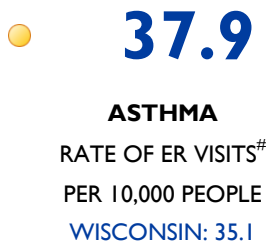




# HEALTH CONDITIONS ONEIDA COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.



● Above state value

● At or below state value

^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



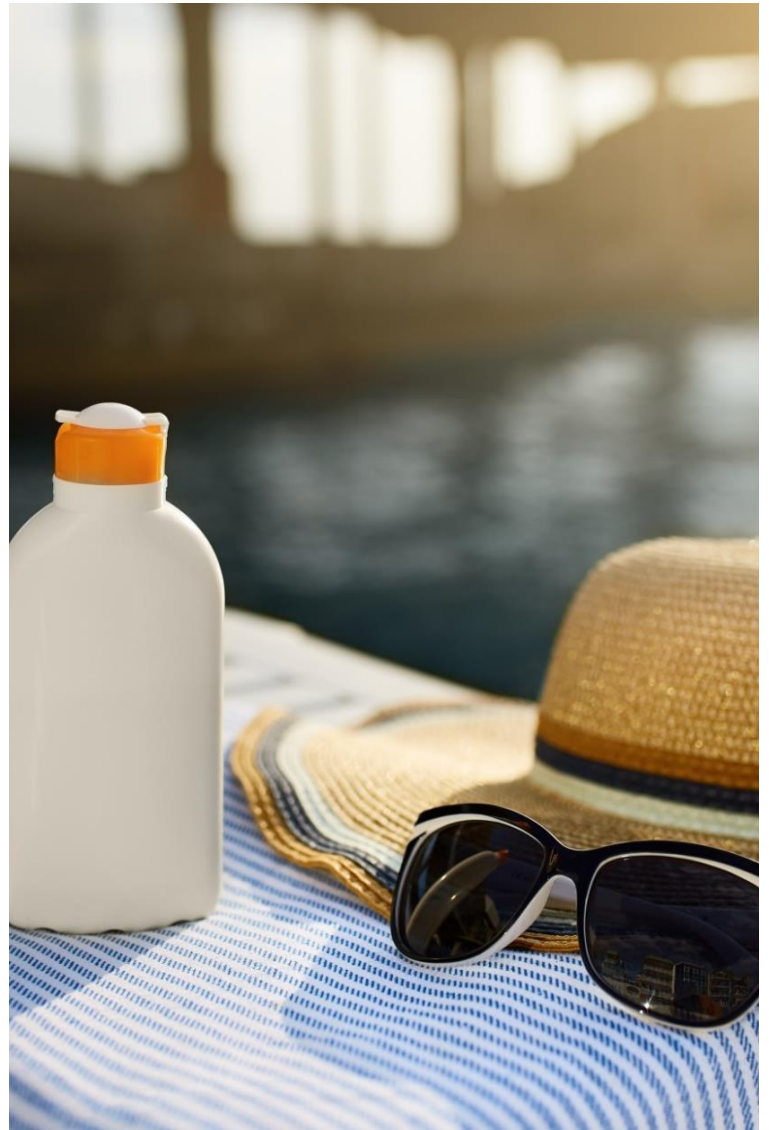
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

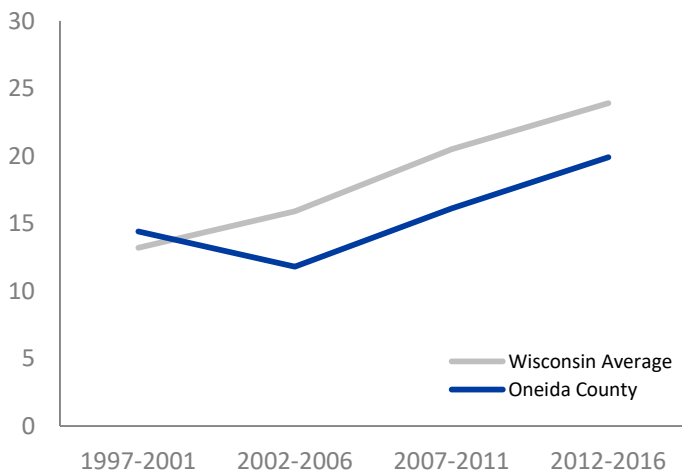
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



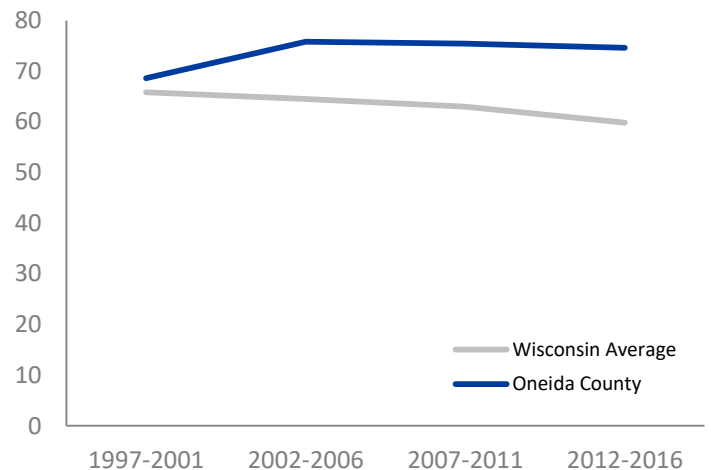
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE ONEIDA COUNTY

## BACKGROUND

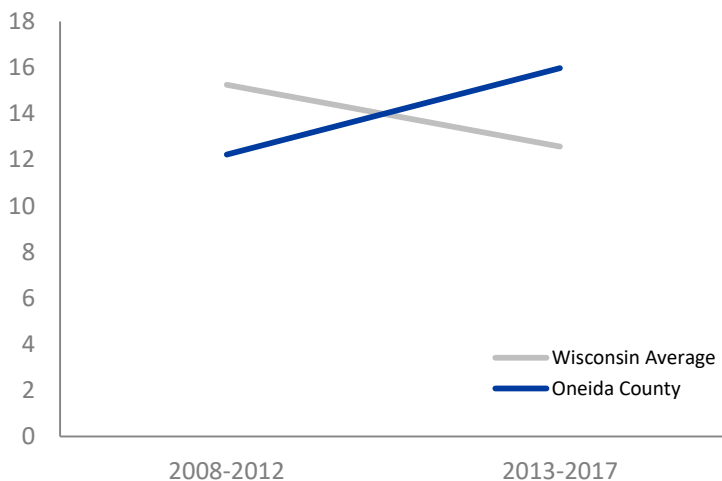
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **16.0**  
**HEAT STRESS**  
 RATE OF ER VISITS  
 PER 100,000 PEOPLE  
 WISCONSIN: 12.6

● **181.5**  
**LYME DISEASE**  
 RATE OF CASES  
 PER 100,000 PEOPLE  
 WISCONSIN: 51.7

● Above state value    ● At or below state value    ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

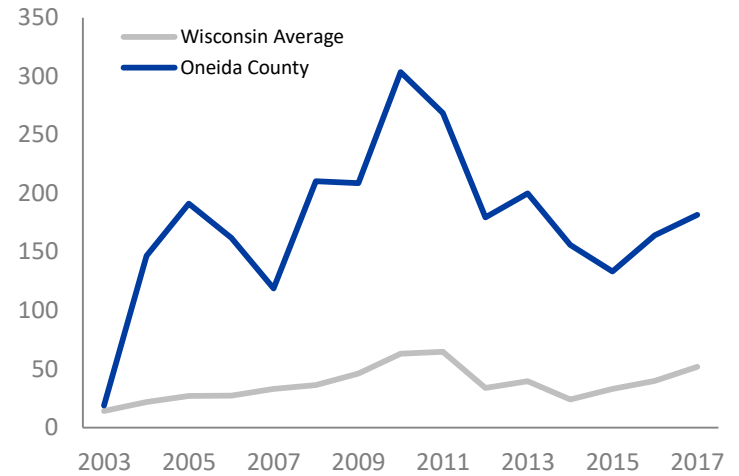
## INTERPRETING LYME DISEASE DATA

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.

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

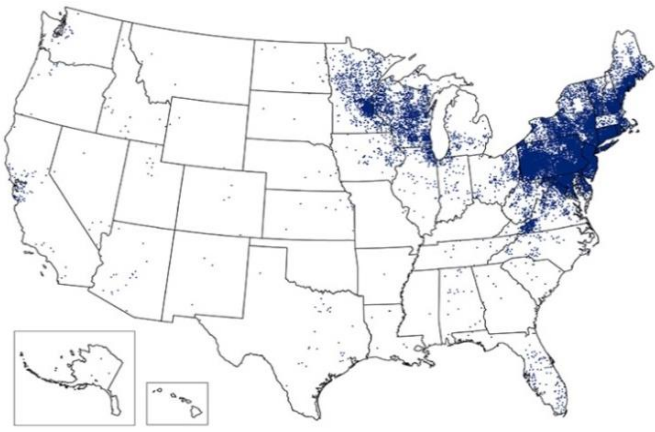
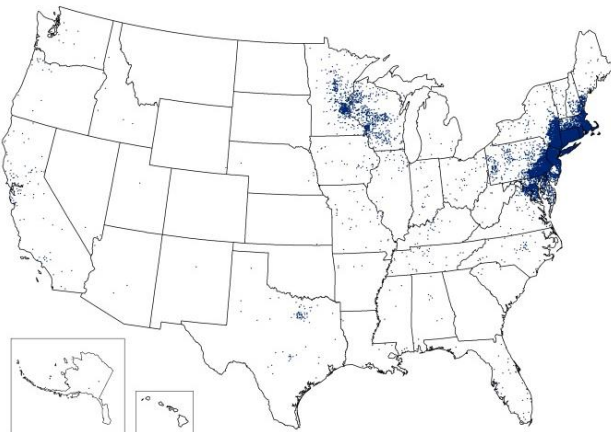
## LYME DISEASE AT THE NATIONAL LEVEL

OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001

2017



Maps courtesy of Centers for Disease Control and Prevention

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results for nitrate that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results for arsenic that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Wisconsin Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

**Asthma:** Rate of emergency room visits related to asthma, age-adjusted per 10,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

Bureau of Environmental and Occupational Health  
Wisconsin Department of Health Services | Division of Public Health

[dhstracking@wi.gov](mailto:dhstracking@wi.gov) | [dhs.wisconsin.gov/epht](https://dhs.wisconsin.gov/epht)  
MAY 2019 | P-00719 (Rev. 05/2019)





# OUTAGAMIE COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

Tracking data and resources can help you and your team develop rationale for funding requests. These data can help justify existing programs and show where work needs to be done.

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# OUTAGAMIE COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

● 96.0% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

● 1.4 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

● 6.7% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

● 22.4% | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

● 8.1 | Rate of ER visits per 100,000 people  
Wisconsin: 7.9

### Childhood Lead Poisoning

● 2.2% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

● 54.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

● 21.8 | Rate of ER visits per 10,000 people<sup>#</sup>  
Wisconsin: 35.1

### Melanoma

● 29.3 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

● 48.6 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

● 10.7 | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

● 22.6 | Crude rate per 100,000 people  
Wisconsin: 51.7

● Above state value  
● At or below state value

\* Above state value preferred for this measure  
^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

[Data details on next page](#)



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2016

**Radon:** Percent of tests with results above EPA standard of 4 pCi/L

**Source:** Radon and Indoor Air Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH OUTAGAMIE COUNTY

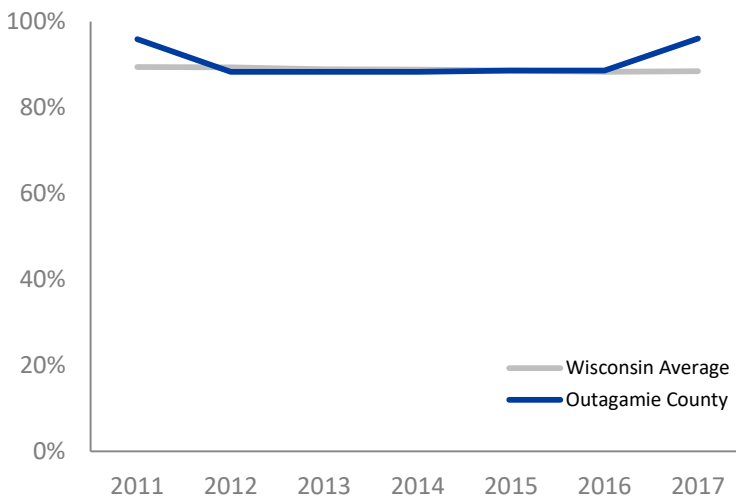
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **96.0%**

**FLUORIDE**  
PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
WISCONSIN: 88.4%

● **1.4**

**ALCOHOL OUTLET DENSITY**  
RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



## ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

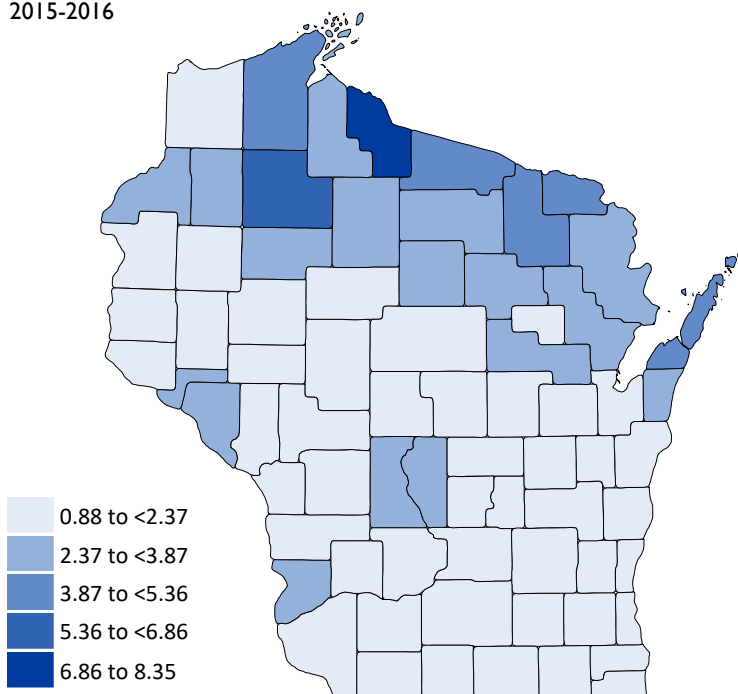
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

## ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



|                                 |                                |
|---------------------------------|--------------------------------|
| <b>510</b>                      | <b>16,948</b>                  |
| LICENSES IN<br>OUTAGAMIE COUNTY | TOTAL LICENSES IN<br>WISCONSIN |





# PRIVATE WATER QUALITY OUTAGAMIE 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 displayed in this report. Users can find public water quality data on our data portal.

● **6.7%**

**NITRATE**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 mg/L  
**WISCONSIN: 11.0%**

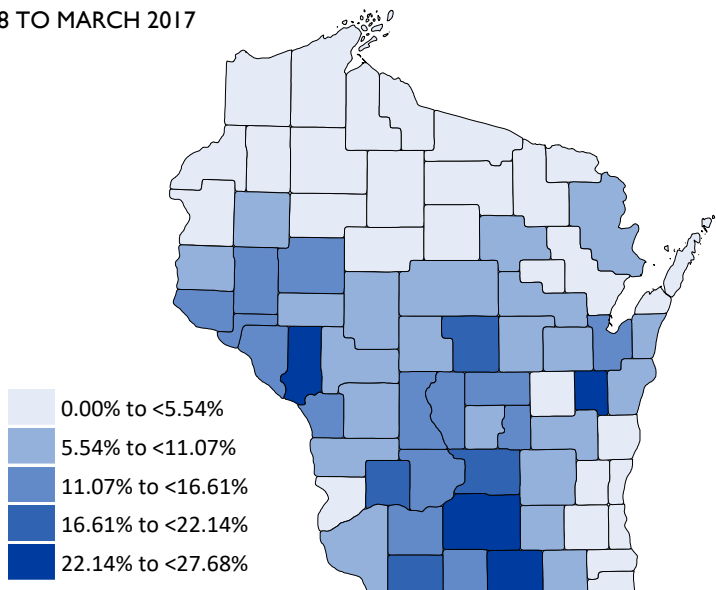
● **22.4%**

**ARSENIC**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 µg/L  
**WISCONSIN: 6.0%**

● Above state value    ● At or below state value    ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
 1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS OUTAGAMIE 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.

● **8.1**  
**CARBON MONOXIDE POISONING**  
 RATE OF ER VISITS RELATED TO CO POISONING PER 100,000  
 WISCONSIN: 7.9

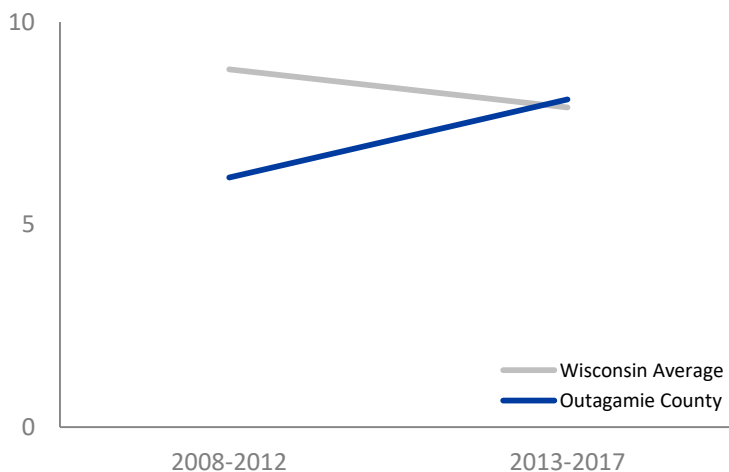
● **2.2%**  
**CHILDHOOD LEAD POISONING**  
 PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$   
 WISCONSIN: 5.0%

● **54.0%**  
**RADON**  
 PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$   
 WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

Carbon monoxide (CO) poisoning prevents oxygen from getting to the body, which can damage tissue and even cause death.

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



## 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter ( $\mu\text{g}/\text{dL}$ ). The Centers for Disease Control and Prevention defines lead poisoning at or above 5  $\mu\text{g}/\text{dL}$ .

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

## RADON

Radon is a naturally occurring gas that is radioactive and can cause lung cancer. Radon can leak into homes and other buildings through cracks in the foundation.

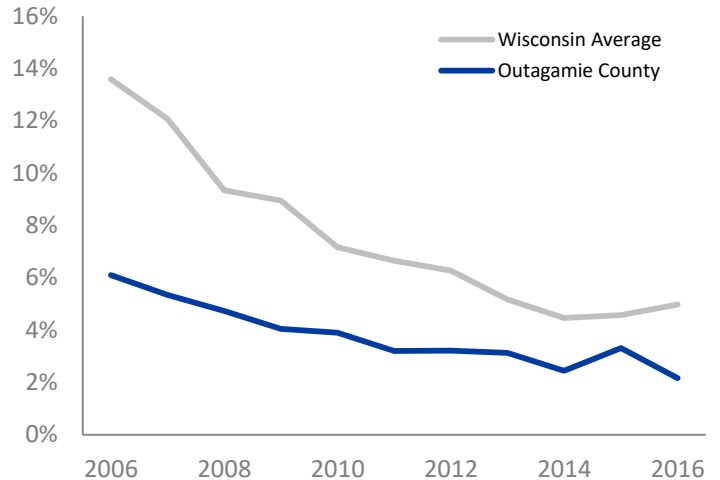
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

## CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g}/\text{dL}$

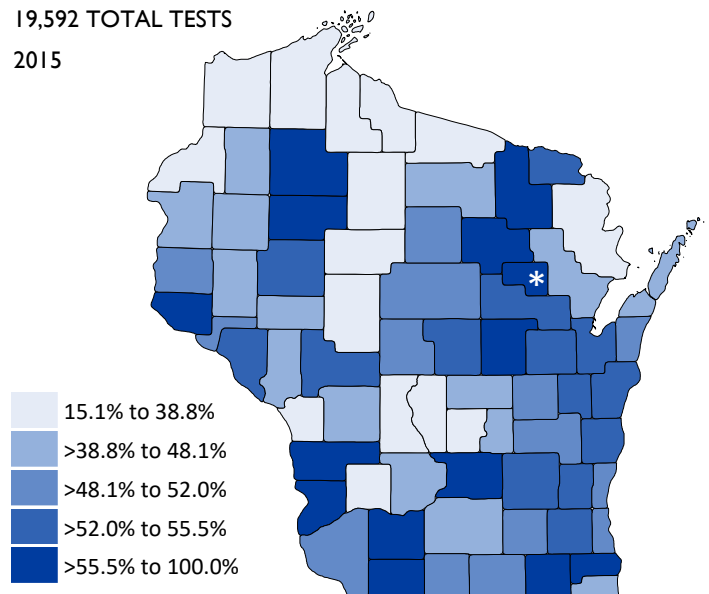


## RADON

PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi}/\text{L}$

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

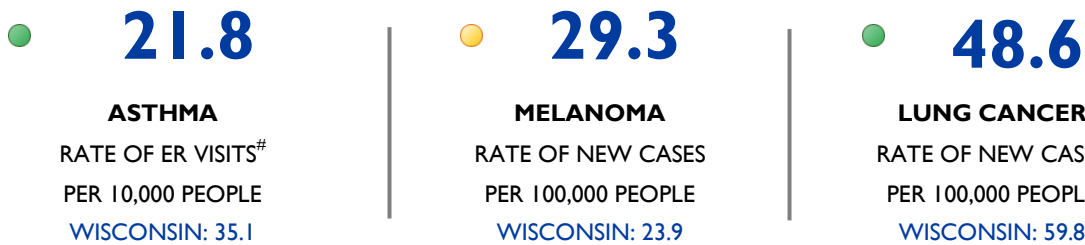




# HEALTH CONDITIONS OUTAGAMIE COUNTY

## BACKGROUND

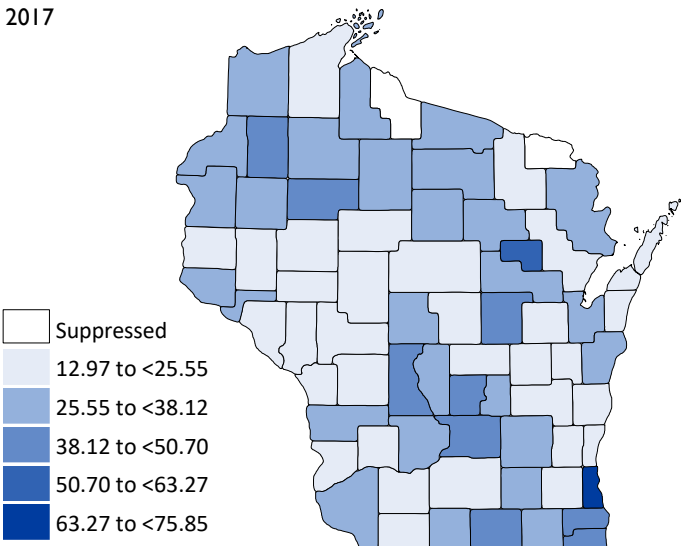
The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.



● Above state value  
● At or below state value  
<sup>^</sup> Suppressed  
<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



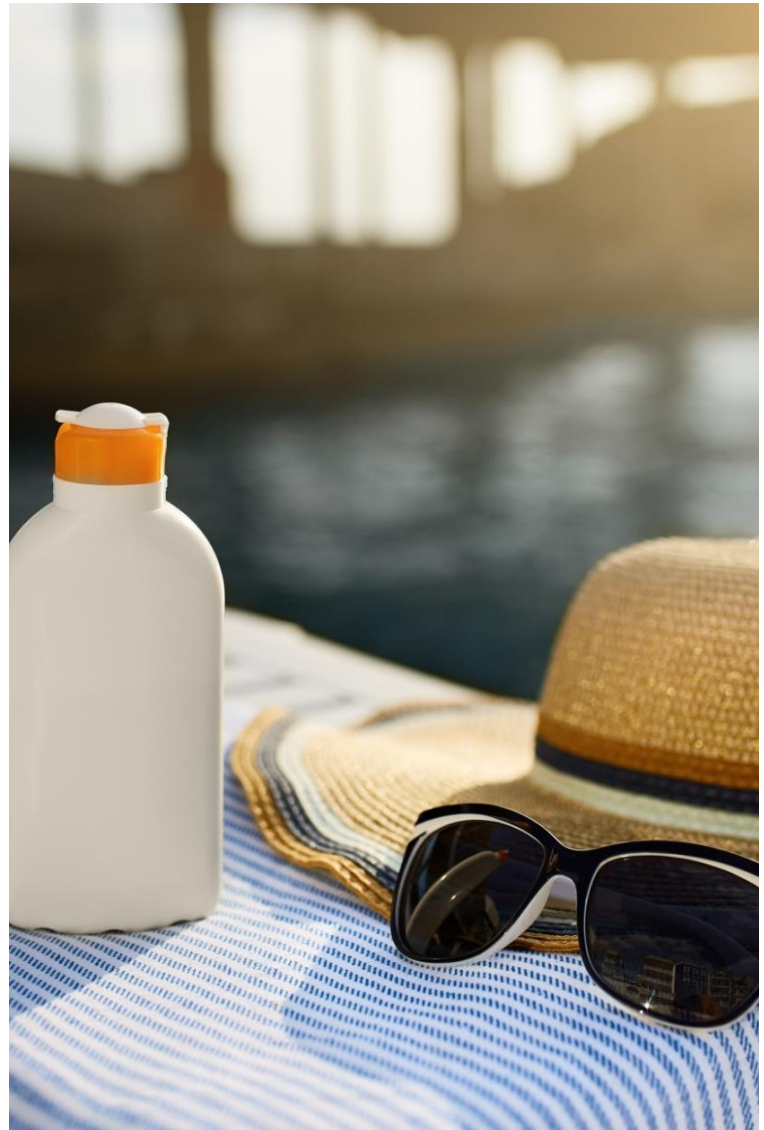
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

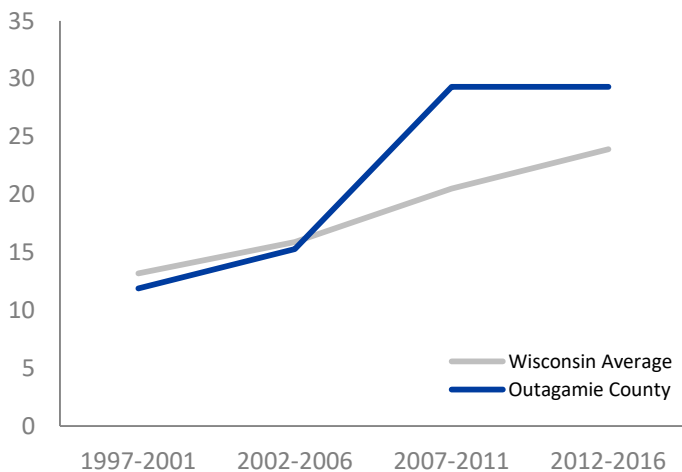
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



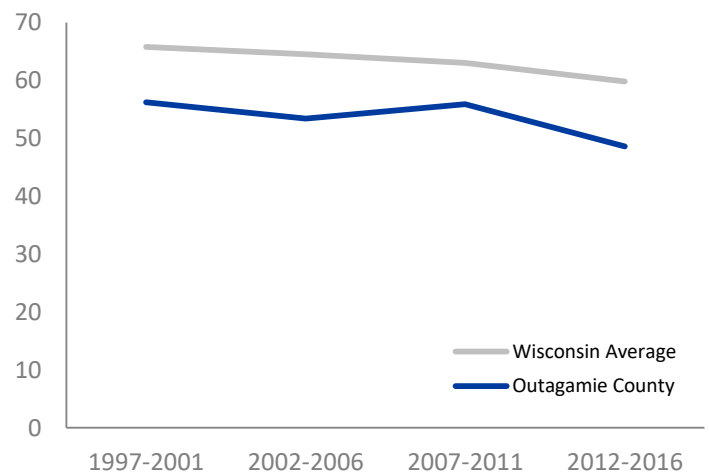
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE OUTAGAMIE COUNTY

## BACKGROUND

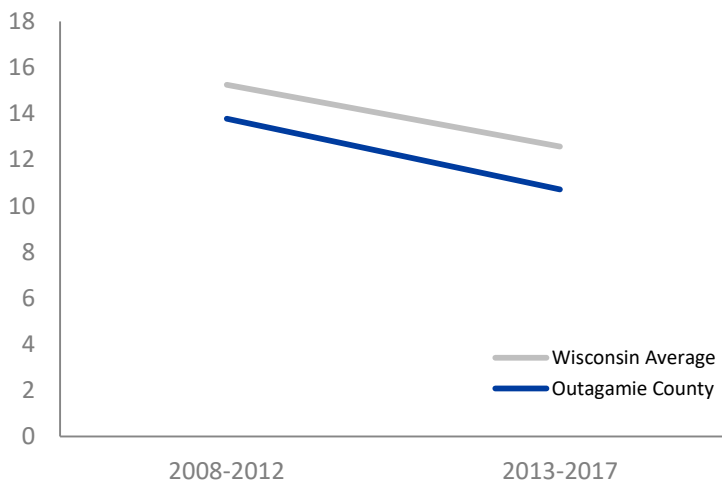
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **10.7**

**HEAT STRESS**  
RATE OF ER VISITS  
PER 100,000 PEOPLE  
WISCONSIN: 12.6

● **22.6**

**LYME DISEASE**  
RATE OF CASES  
PER 100,000 PEOPLE  
WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

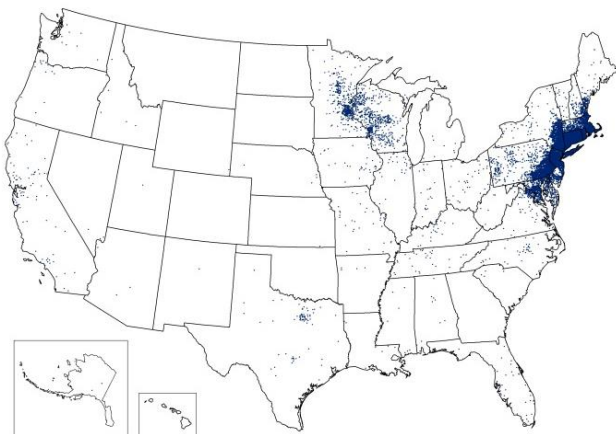
The criteria for reporting Lyme disease were revised again in 2012 to require reporting and follow-up only for cases with an erythema migrans (EM) rash. To compensate for this change, epidemiologists used a statistical method to estimate the true number of cases based on the number of total laboratory reports for each year since 2012.

## LYME DISEASE AT THE NATIONAL LEVEL

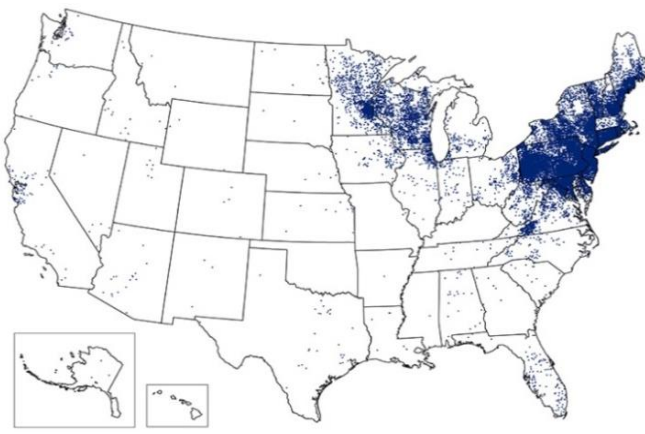
OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001



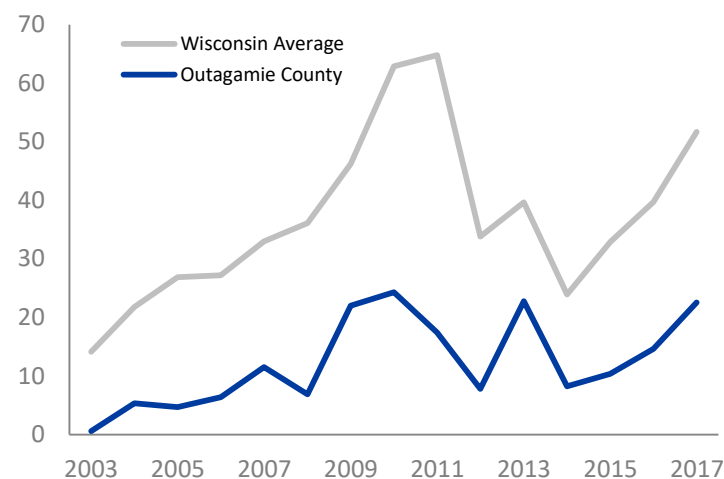
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results for nitrate that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results for arsenic that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Wisconsin Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

**Asthma:** Rate of emergency room visits related to asthma, age-adjusted per 10,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

Bureau of Environmental and Occupational Health  
Wisconsin Department of Health Services | Division of Public Health

[dhstracking@wi.gov](mailto:dhstracking@wi.gov) | [dhs.wisconsin.gov/epht](https://dhs.wisconsin.gov/epht)  
MAY 2019 | P-00719 (Rev. 05/2019)





# OZAUKEE COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

Tracking data and resources can help you and your team develop rationale for funding requests. These data can help justify existing programs and show where work needs to be done.

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# OZAUKEE COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

● 86.1% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

● 1.4 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

● 1.5% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

● 12.2% | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

● 2.8 | Rate of ER visits per 100,000 people  
Wisconsin: 7.9

### Childhood Lead Poisoning

● 5.5% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

● 49.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

● 14.2 | Rate of ER visits per 10,000 people<sup>#</sup>  
Wisconsin: 35.1

### Melanoma

● 27.2 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

● 47.9 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

● 6.3 | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

● 23.8 | Crude rate per 100,000 people  
Wisconsin: 51.7

● Above state value  
● At or below state value

\* Above state value preferred for this measure  
^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

[Data details on next page](#)



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2016

**Radon:** Percent of tests with results above EPA standard of 4 pCi/L

**Source:** Radon and Indoor Air Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH OZAUKEE COUNTY

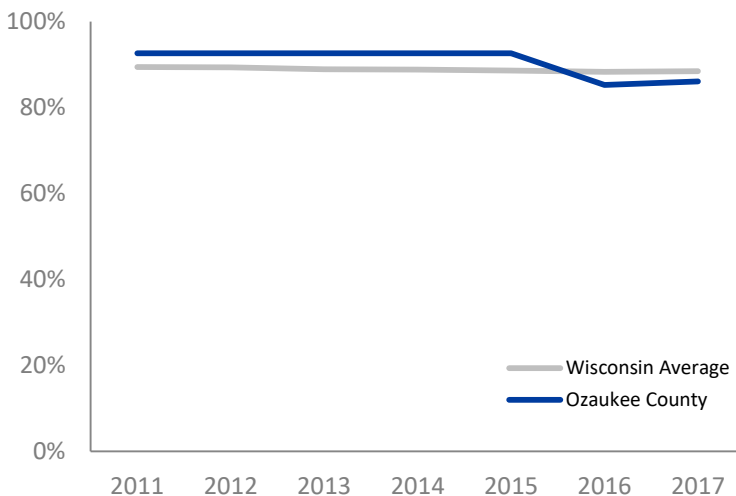
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **86.1%**

**FLUORIDE**  
PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
WISCONSIN: 88.4%

● Above state value

● **1.4**

**ALCOHOL OUTLET DENSITY**  
RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
WISCONSIN: 1.5

● At or below state value

\* Above state value preferred for this measure  
^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



### ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small 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 [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

### ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



|                               |                                |
|-------------------------------|--------------------------------|
| <b>237</b>                    | <b>16,948</b>                  |
| LICENSES IN<br>OZAUKEE COUNTY | TOTAL LICENSES IN<br>WISCONSIN |





# PRIVATE WATER QUALITY OZAUKEE 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 displayed in this report. Users can find public water quality data on our data portal.

● **1.5%**

**NITRATE  
IN PRIVATE WELLS**  
PERCENT OF TEST RESULTS  
ABOVE EPA STANDARD  
OF 10 mg/L  
WISCONSIN: 11.0%

● **12.2%**

**ARSENIC  
IN PRIVATE WELLS**  
PERCENT OF TEST RESULTS  
ABOVE EPA STANDARD  
OF 10 µg/L  
WISCONSIN: 6.0%

● Above state value    ● At or below state value    ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS OZAUKEE 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.

● **2.8**  
**CARBON MONOXIDE POISONING**  
 RATE OF ER VISITS RELATED TO CO POISONING PER 100,000  
 WISCONSIN: 7.9

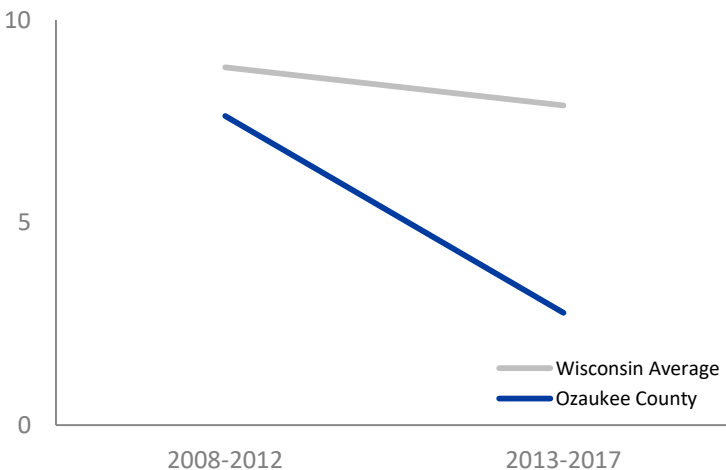
● **5.5%**  
**CHILDHOOD LEAD POISONING**  
 PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$   
 WISCONSIN: 5.0%

● **49.0%**  
**RADON**  
 PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$   
 WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

Carbon monoxide (CO) poisoning prevents oxygen from getting to the body, which can damage tissue and even cause death.

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



## 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter (µg/dL). The Centers for Disease Control and Prevention defines lead poisoning at or above 5 µg/dL.

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

## RADON

Radon is a naturally occurring gas that is radioactive and can cause lung cancer. Radon can leak into homes and other buildings through cracks in the foundation.

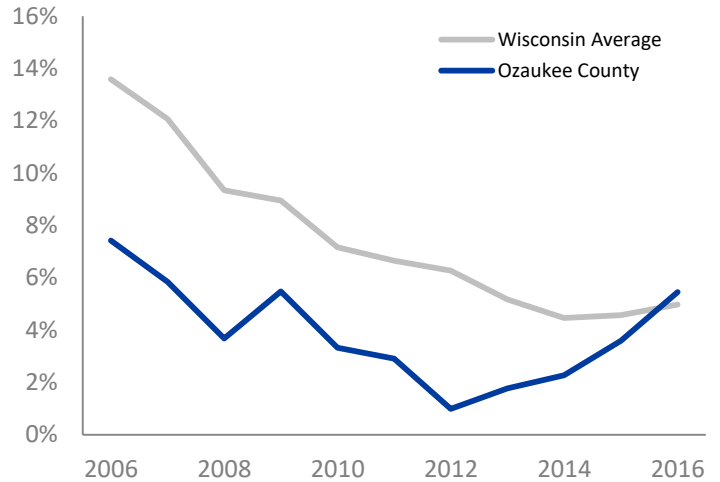
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

## CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD ≥5 µg/dL

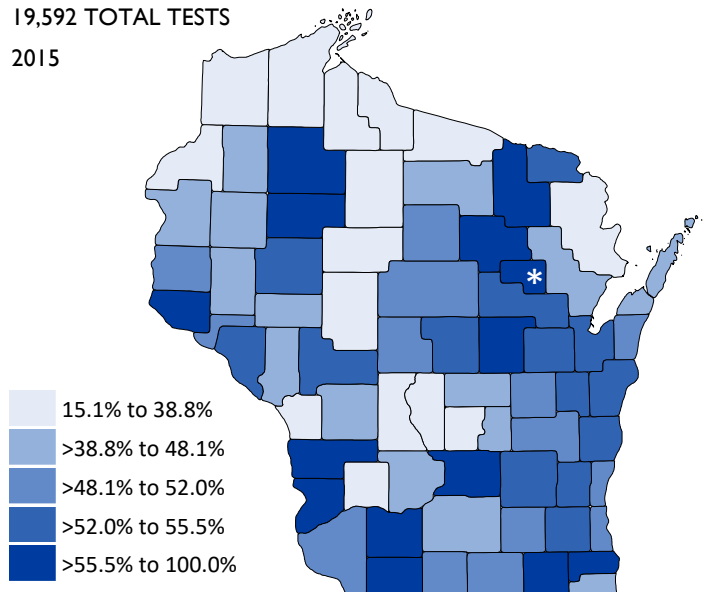


## RADON

PERCENT OF TESTS WITH RESULTS ≥4 pCi/L

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

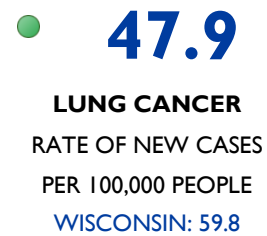
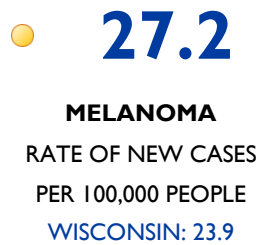
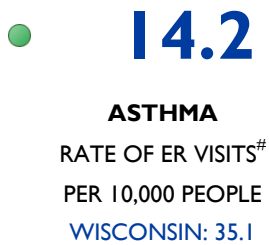




# HEALTH CONDITIONS OZAUKEE COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.



● Above state value

● At or below state value

^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



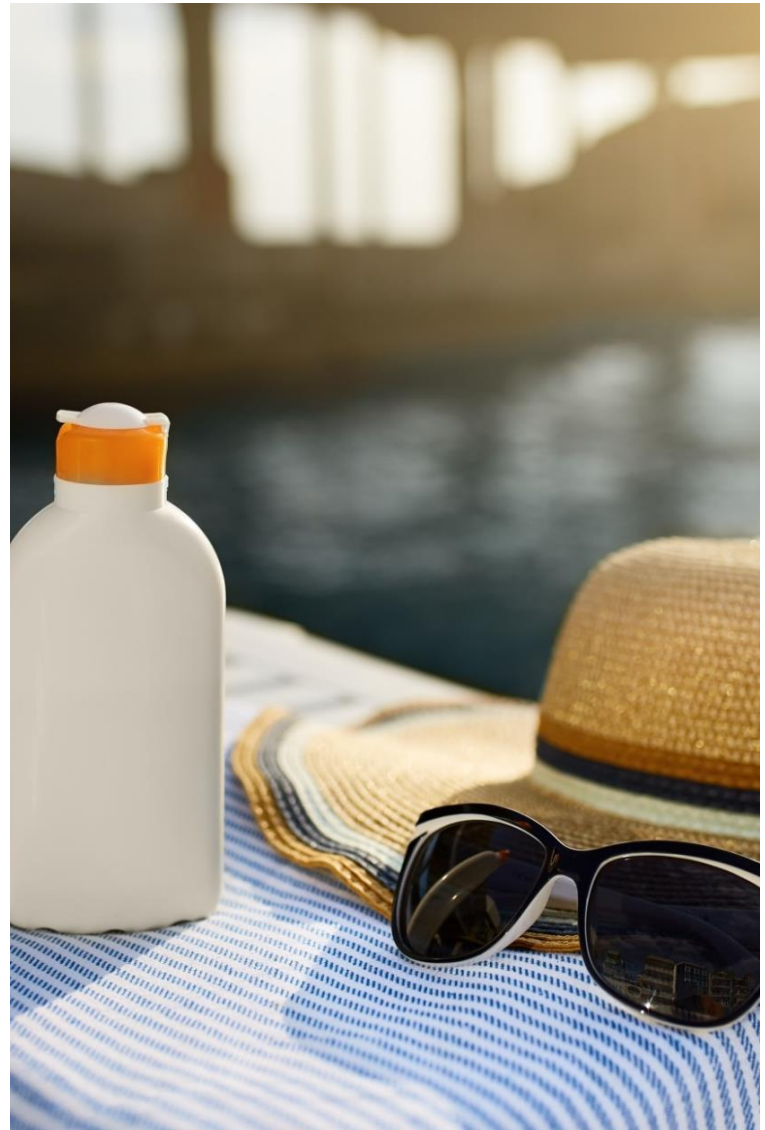
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

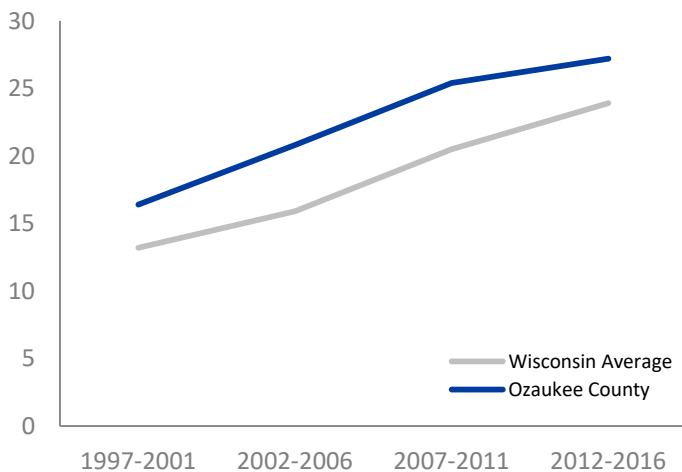
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



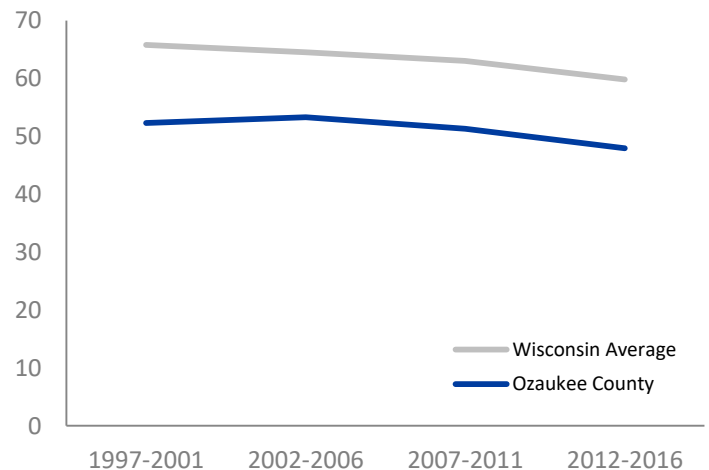
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE OZAUKEE COUNTY

## BACKGROUND

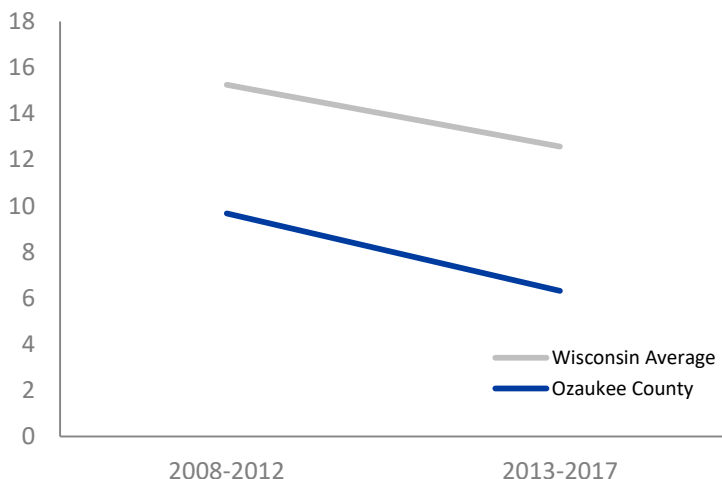
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● 6.3

**HEAT STRESS**  
RATE OF ER VISITS  
PER 100,000 PEOPLE  
WISCONSIN: 12.6

● 23.8

**LYME DISEASE**  
RATE OF CASES  
PER 100,000 PEOPLE  
WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

## LYME DISEASE AT THE NATIONAL LEVEL

OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001



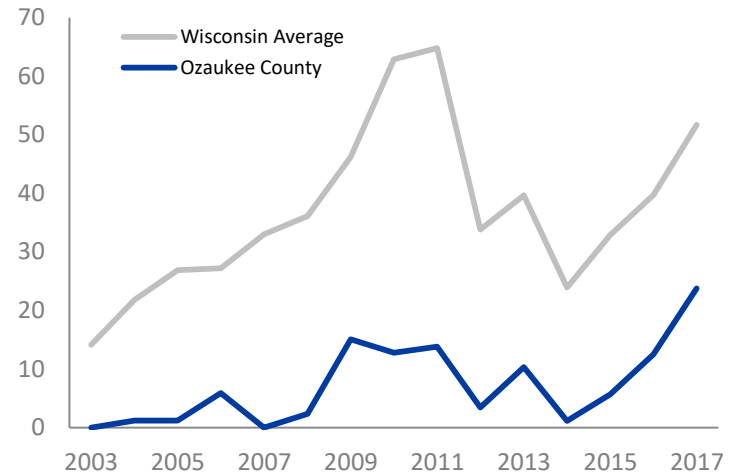
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results for nitrate that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results for arsenic that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Wisconsin Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

**Asthma:** Rate of emergency room visits related to asthma, age-adjusted per 10,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

Bureau of Environmental and Occupational Health  
Wisconsin Department of Health Services | Division of Public Health

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MAY 2019 | P-00719 (Rev. 05/2019)





# PEPIN COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

Tracking data and resources can help you and your team develop rationale for funding requests. These data can help justify existing programs and show where work needs to be done.

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# PEPIN COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

● 0.0% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

● 2.9 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

● 15.1% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

‡ | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

^ | Rate of ER visits per 100,000 people  
Wisconsin: 7.9

### Childhood Lead Poisoning

● 0.0% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

● 52.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

● 37.2 | Rate of ER visits per 10,000 people#  
Wisconsin: 35.1

### Melanoma

● 15.8 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

● 57.8 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

^ | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

● 55.1 | Crude rate per 100,000 people  
Wisconsin: 51.7

- Above state value
- At or below state value

- \* Above state value preferred for this measure
- ^ Data are suppressed
- ‡ No data

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

Data details on next page



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2016

**Radon:** Percent of tests with results above EPA standard of 4 pCi/L

**Source:** Radon and Indoor Air Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH PEPIN COUNTY

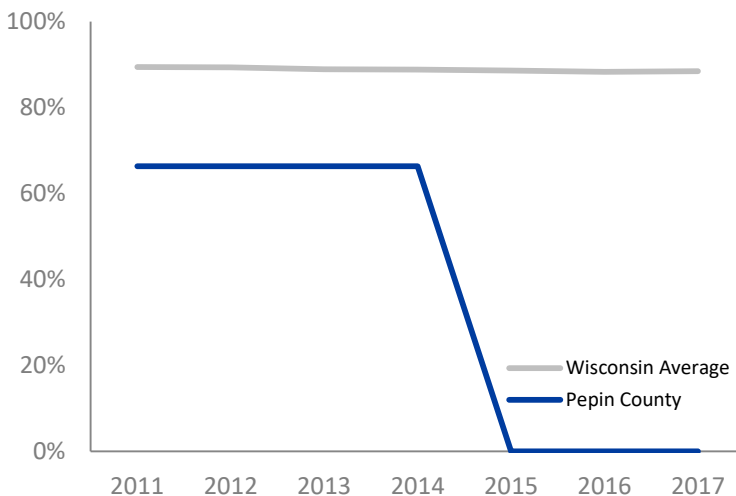
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **0.0%**  
**FLUORIDE**  
 PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
 WISCONSIN: 88.4%

● **2.9**  
**ALCOHOL OUTLET DENSITY**  
 RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
 WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
 ^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



## ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

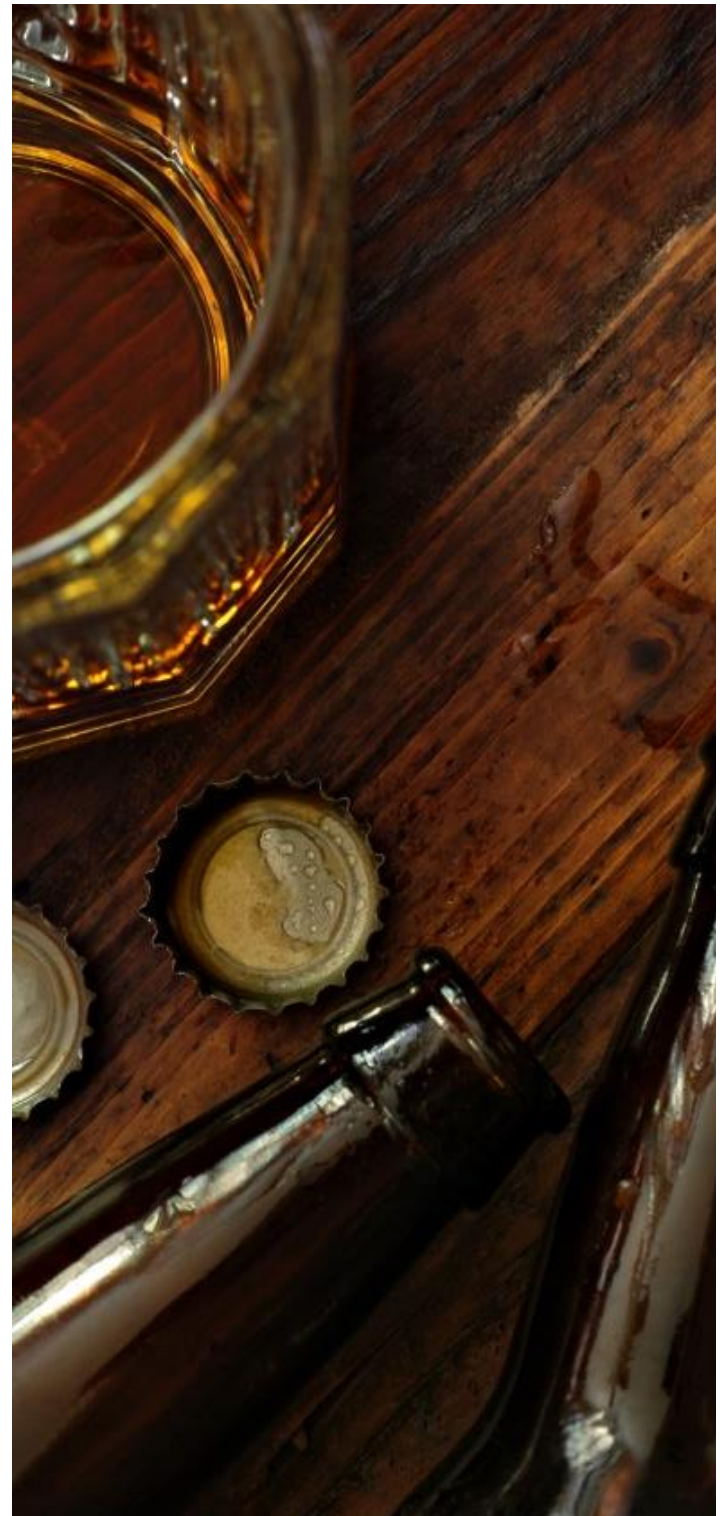
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

## ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



# 42

LICENSES IN  
PEPIN COUNTY

# 16,948

TOTAL LICENSES IN  
WISCONSIN





# PRIVATE WATER QUALITY PEPIN 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 displayed in this report. Users can find public water quality data on our data portal.

● **15.1%**

**NITRATE**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 mg/L  
**WISCONSIN: 11.0%**



**ARSENIC**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 µg/L  
**WISCONSIN: 6.0%**

● Above state value   ● At or below state value   ^ Suppressed  
 ‡ No data

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
 1988 TO MARCH 2017



## 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 certain 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.





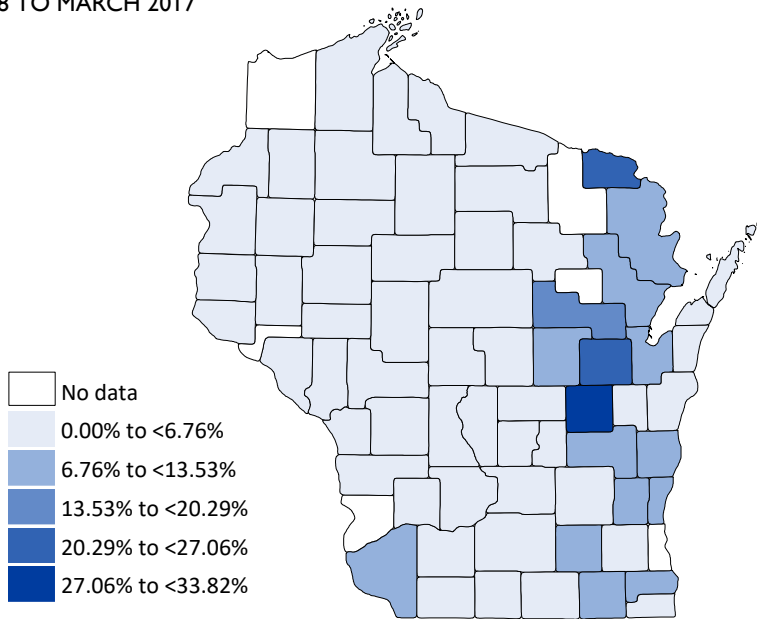
## ARSENIC IN PRIVATE WELLS

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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS PEPIN 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 RELATED TO CO POISONING PER 100,000  
 WISCONSIN: 7.9

**● 0.0%**

**CHILDHOOD LEAD POISONING**  
 PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$   
 WISCONSIN: 5.0%

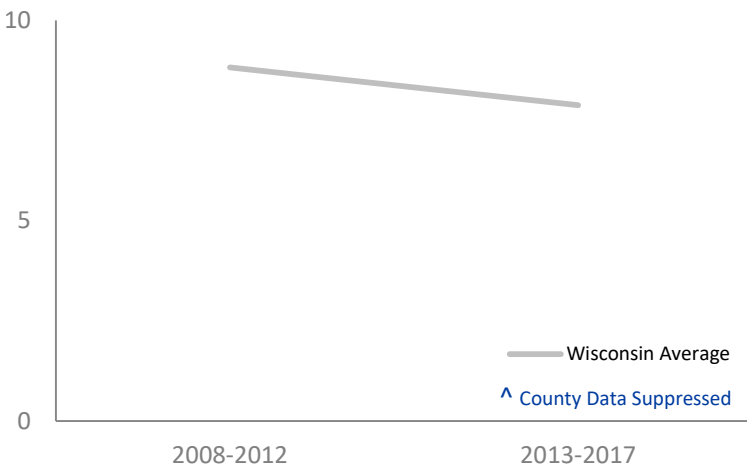
**● 52.0%**

**RADON**  
 PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$   
 WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

Carbon monoxide (CO) poisoning prevents oxygen from getting to the body, which can damage tissue and even cause death.

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



## 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter ( $\mu\text{g}/\text{dL}$ ). The Centers for Disease Control and Prevention defines lead poisoning at or above 5  $\mu\text{g}/\text{dL}$ .

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

## RADON

Radon is a naturally occurring gas that is radioactive and can cause lung cancer. Radon can leak into homes and other buildings through cracks in the foundation.

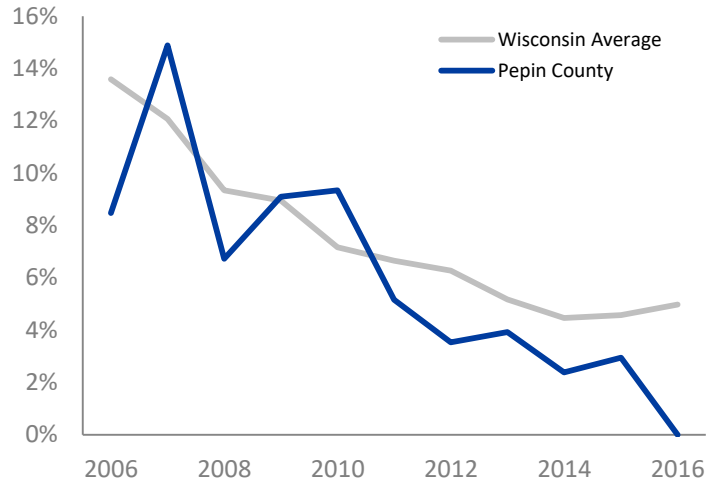
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

## CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g}/\text{dL}$

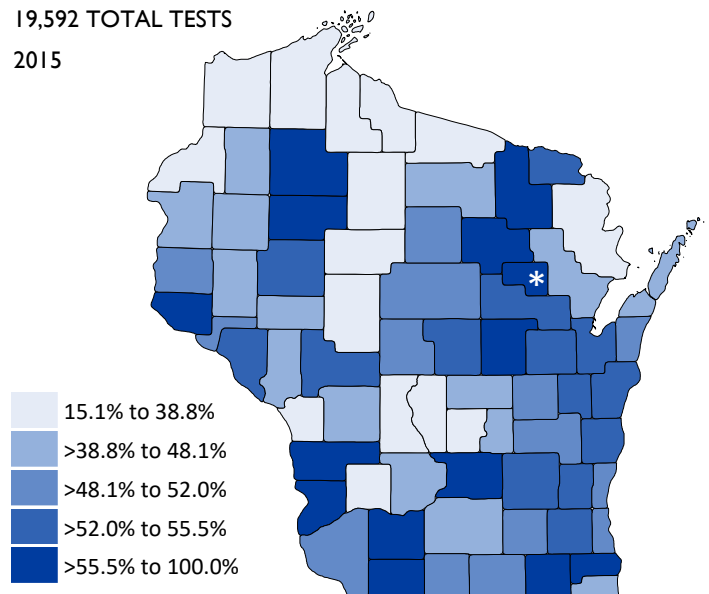


## RADON

PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

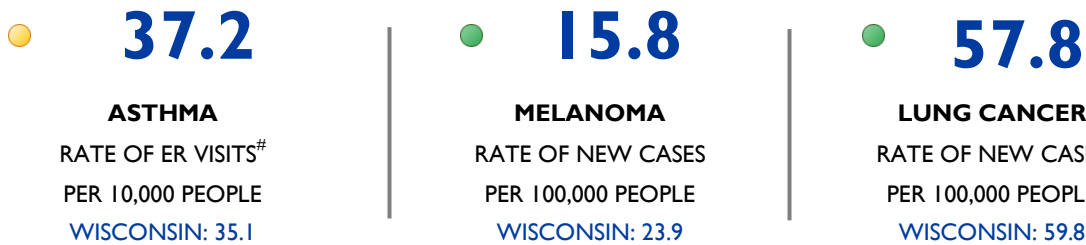




# HEALTH CONDITIONS PEPIN COUNTY

## BACKGROUND

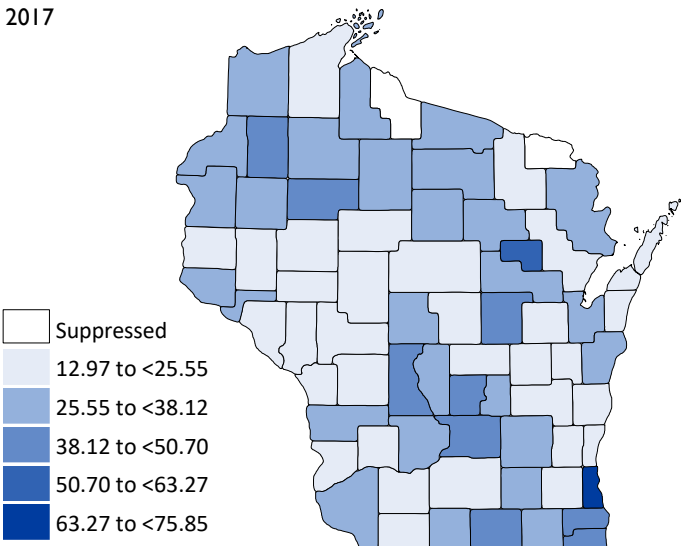
The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.



● Above state value  
● At or below state value  
<sup>^</sup> Suppressed  
<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



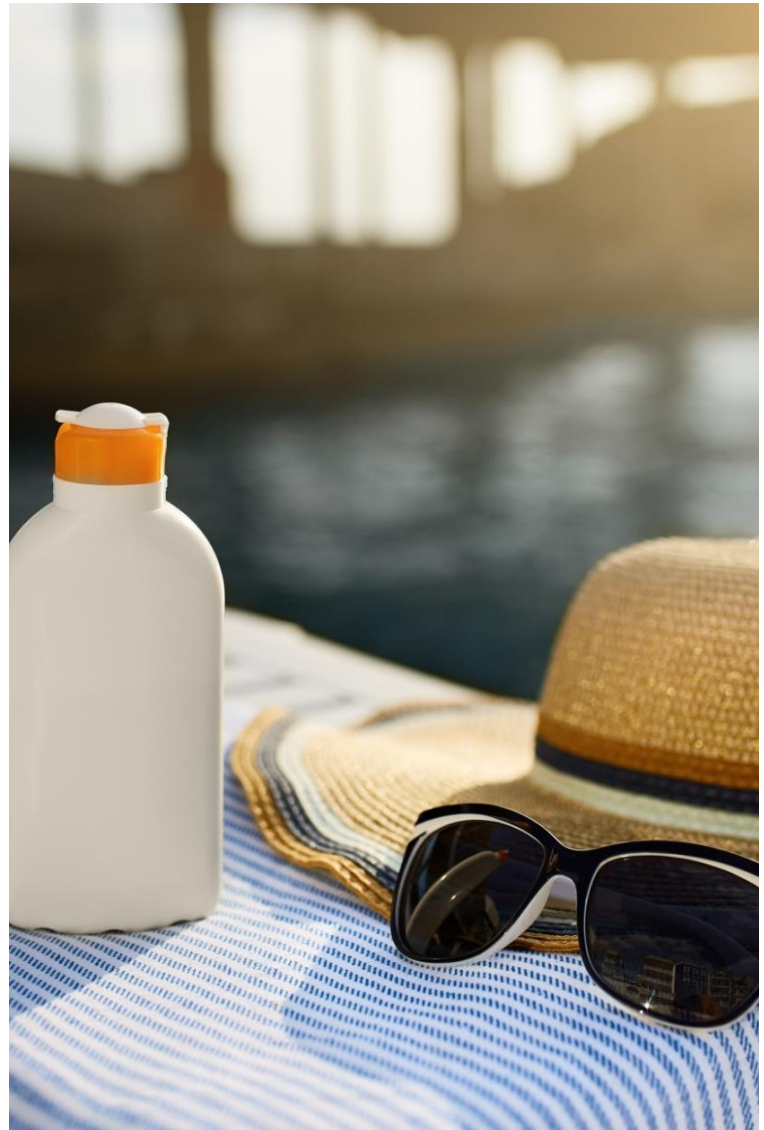
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

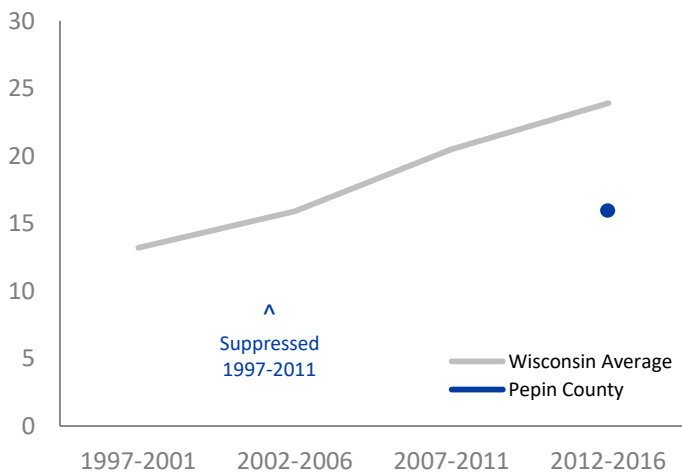
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



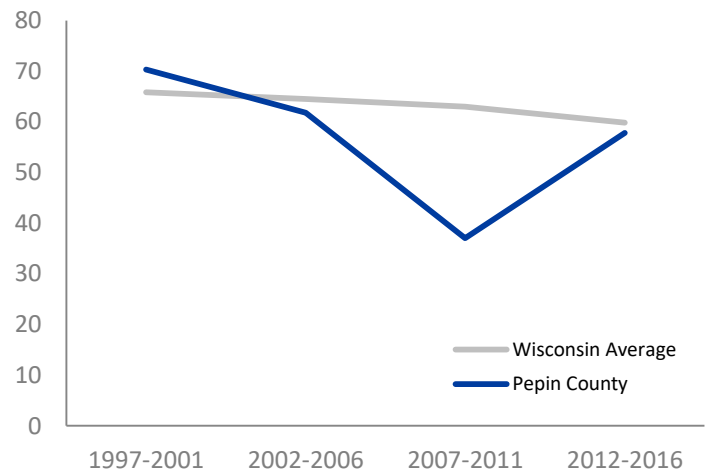
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE PEPIN COUNTY

## BACKGROUND

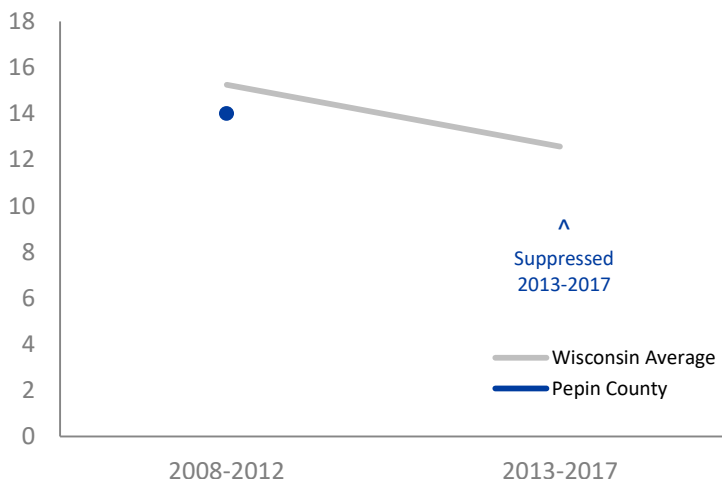
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



**HEAT STRESS**  
RATE OF ER VISITS  
PER 100,000 PEOPLE  
WISCONSIN: 12.6

**55.1**

**LYME DISEASE**  
RATE OF CASES  
PER 100,000 PEOPLE  
WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

## LYME DISEASE AT THE NATIONAL LEVEL

OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001



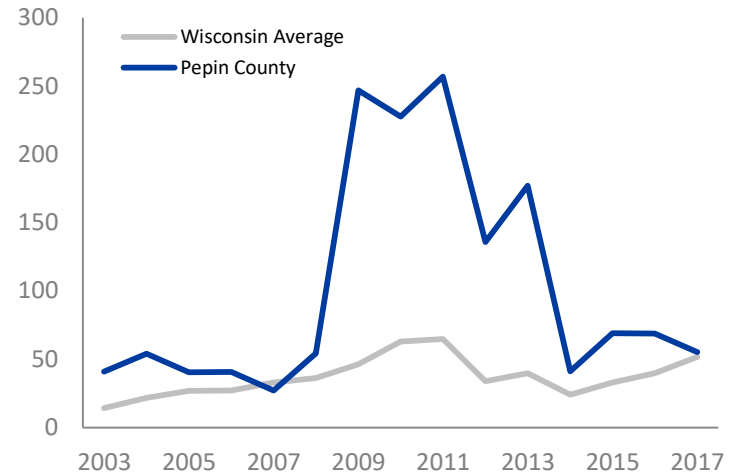
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results for nitrate that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results for arsenic that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Wisconsin Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

**Asthma:** Rate of emergency room visits related to asthma, age-adjusted per 10,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

Bureau of Environmental and Occupational Health  
Wisconsin Department of Health Services | Division of Public Health

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MAY 2019 | P-00719 (Rev. 05/2019)





# PIERCE COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

Tracking data and resources can help you and your team develop rationale for funding requests. These data can help justify existing programs and show where work needs to be done.

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# PIERCE COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

● 92.7% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

● 1.5 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

● 12.9% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

● 0.0% | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

● 2.0 | Rate of ER visits per 100,000 people  
Wisconsin: 7.9

### Childhood Lead Poisoning

● 1.0% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

● 56.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

● 32.7 | Rate of ER visits per 10,000 people<sup>#</sup>  
Wisconsin: 35.1

### Melanoma

● 21.3 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

● 39.6 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

● 13.6 | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

● 100.2 | Crude rate per 100,000 people  
Wisconsin: 51.7

● Above state value  
● At or below state value

\* Above state value preferred for this measure  
^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

[Data details on next page](#)



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2016

**Radon:** Percent of tests with results above EPA standard of 4 pCi/L

**Source:** Radon and Indoor Air Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH PIERCE COUNTY

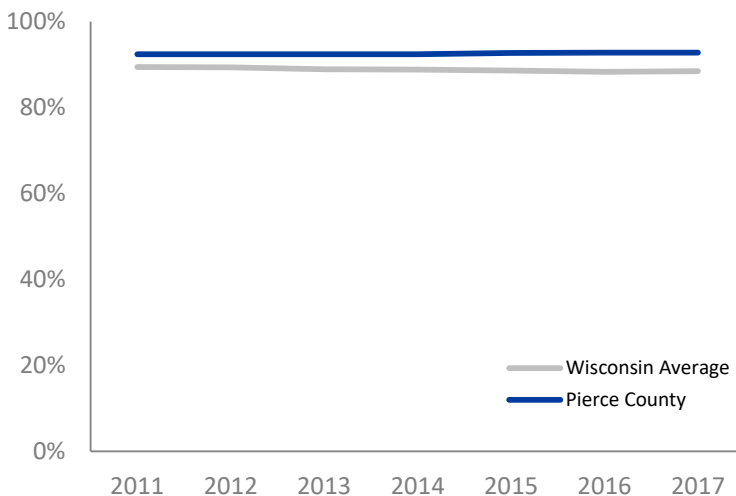
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **92.7%**

**FLUORIDE**  
PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
WISCONSIN: 88.4%

● **1.5**

**ALCOHOL OUTLET DENSITY**  
RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



## ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small 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 [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

## ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



|                              |                                |
|------------------------------|--------------------------------|
| <b>121</b>                   | <b>16,948</b>                  |
| LICENSES IN<br>PIERCE COUNTY | TOTAL LICENSES IN<br>WISCONSIN |





# PRIVATE WATER QUALITY PIERCE 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 displayed in this report. Users can find public water quality data on our data portal.

● **12.9%**

**NITRATE**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 mg/L  
**WISCONSIN: 11.0%**

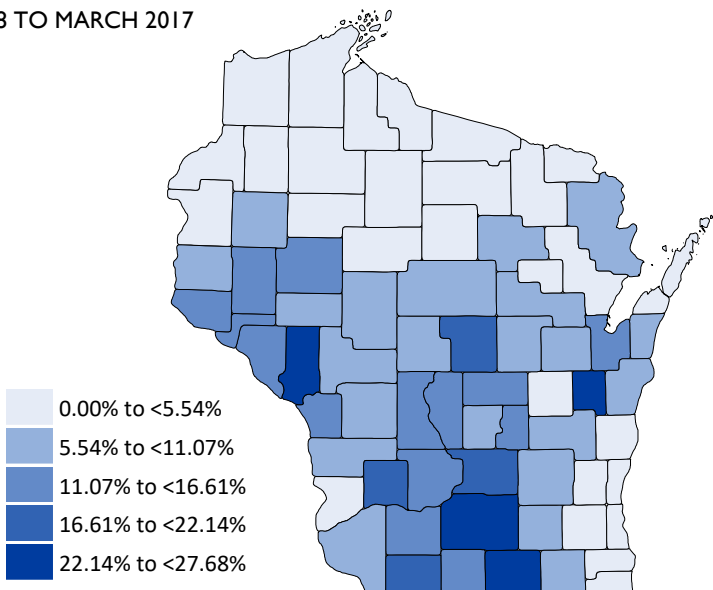
● **0.0%**

**ARSENIC**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 µg/L  
**WISCONSIN: 6.0%**

● Above state value   ● At or below state value   ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
 1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS PIERCE 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.

● **2.0**  
**CARBON MONOXIDE POISONING**  
 RATE OF ER VISITS RELATED TO CO POISONING PER 100,000  
 WISCONSIN: 7.9

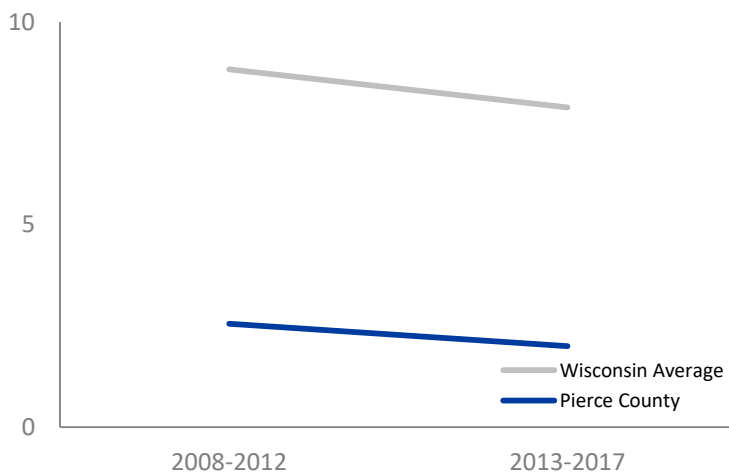
● **1.0%**  
**CHILDHOOD LEAD POISONING**  
 PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$   
 WISCONSIN: 5.0%

● **56.0%**  
**RADON**  
 PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$   
 WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

Carbon monoxide (CO) poisoning prevents oxygen from getting to the body, which can damage tissue and even cause death.

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



## 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter (µg/dL). The Centers for Disease Control and Prevention defines lead poisoning at or above 5 µg/dL.

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

## RADON

Radon is a naturally occurring gas that is radioactive and can cause lung cancer. Radon can leak into homes and other buildings through cracks in the foundation.

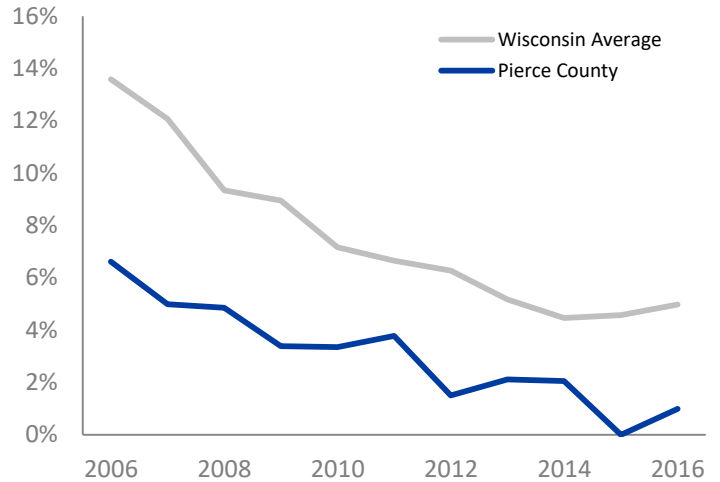
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

## CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD ≥5 µg/dL

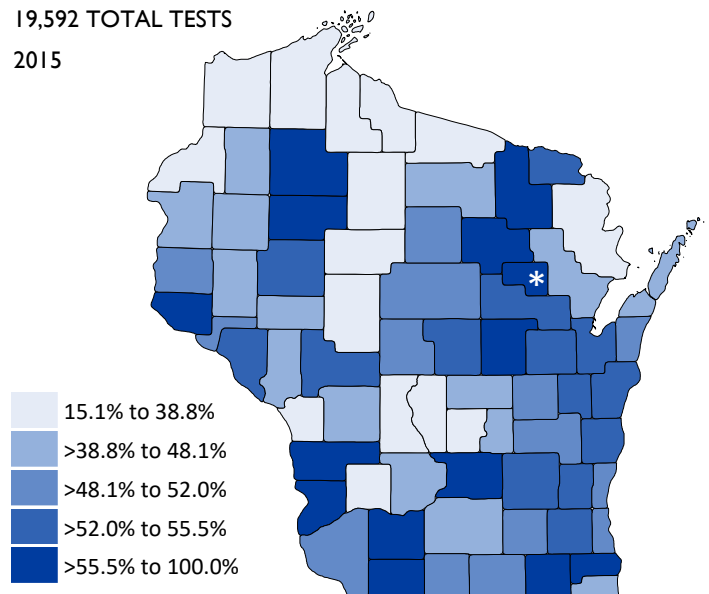


## RADON

PERCENT OF TESTS WITH RESULTS ≥4 pCi/L

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

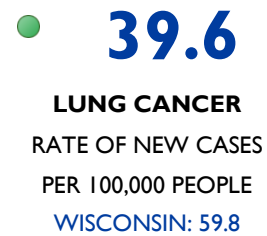
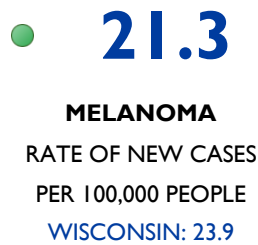
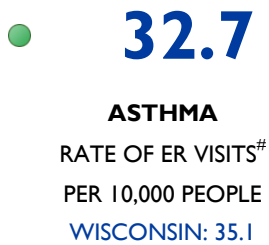




# HEALTH CONDITIONS PIERCE COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.



● Above state value

● At or below state value

^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



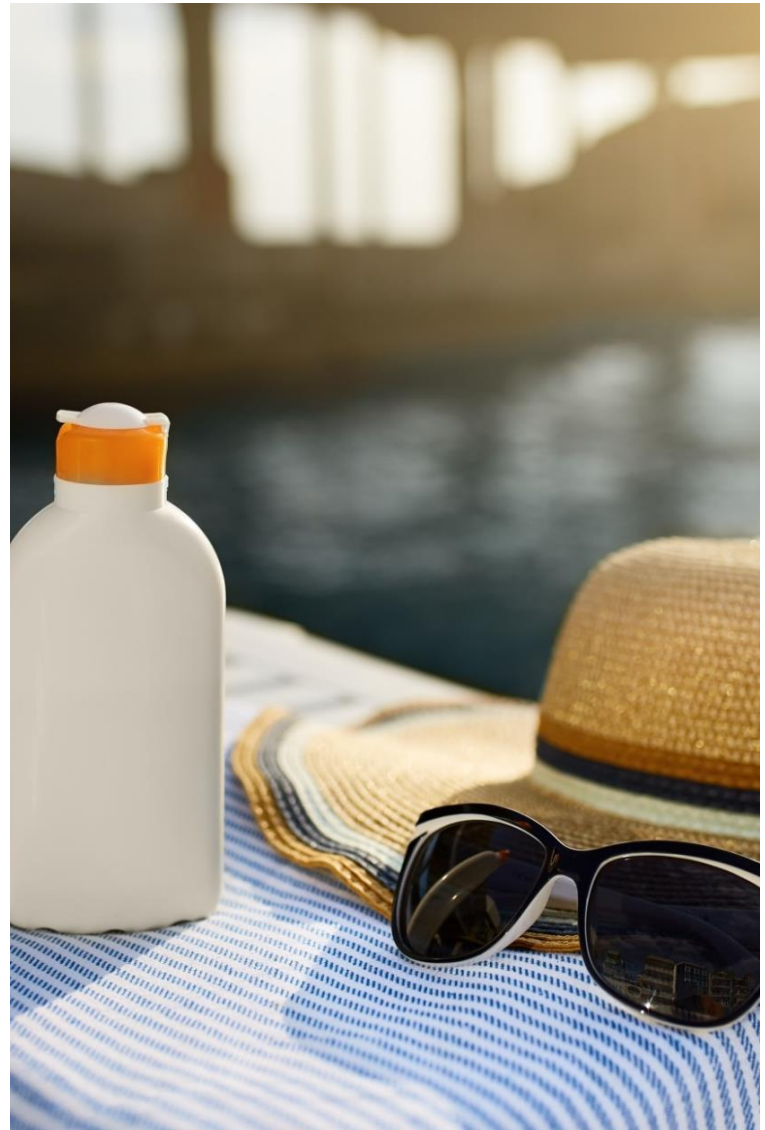
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

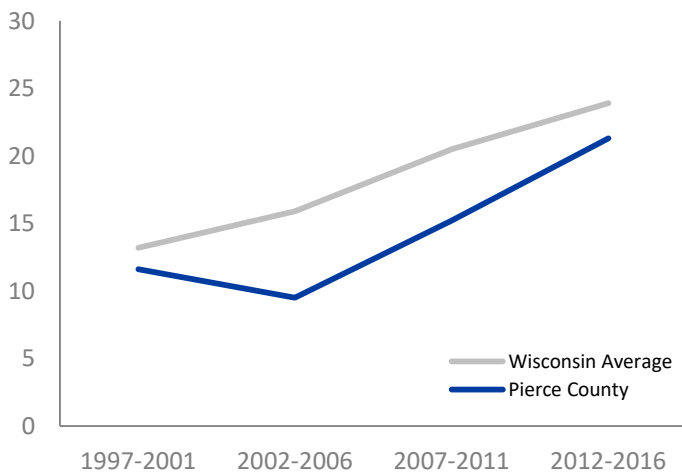
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



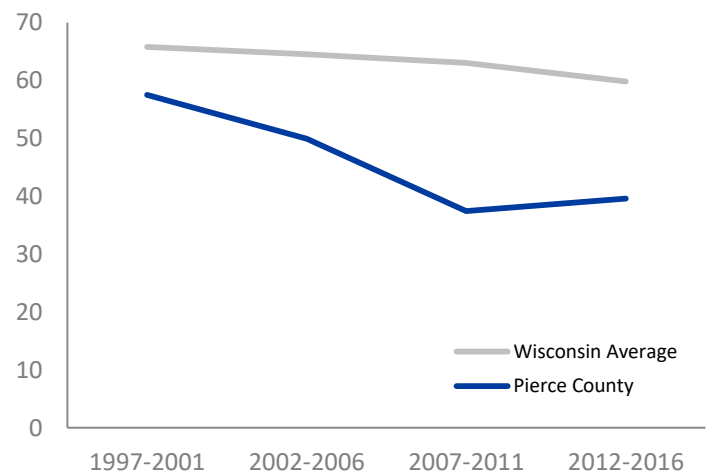
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE PIERCE COUNTY

## BACKGROUND

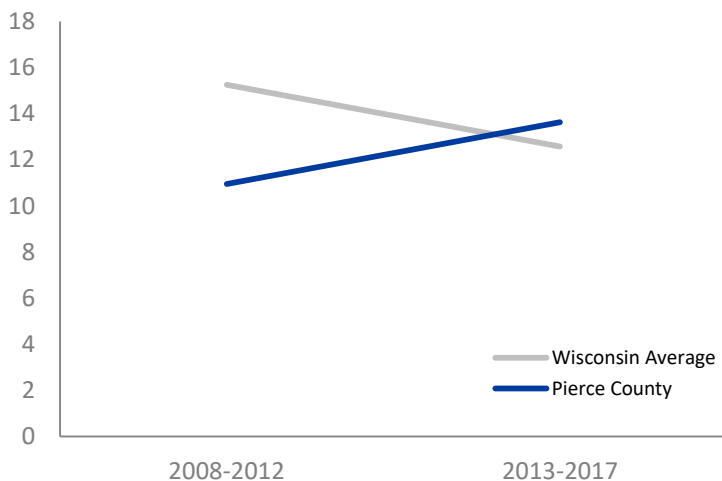
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **13.6**  
**HEAT STRESS**  
 RATE OF ER VISITS  
 PER 100,000 PEOPLE  
 WISCONSIN: 12.6

● **100.2**  
**LYME DISEASE**  
 RATE OF CASES  
 PER 100,000 PEOPLE  
 WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

## LYME DISEASE AT THE NATIONAL LEVEL

OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001



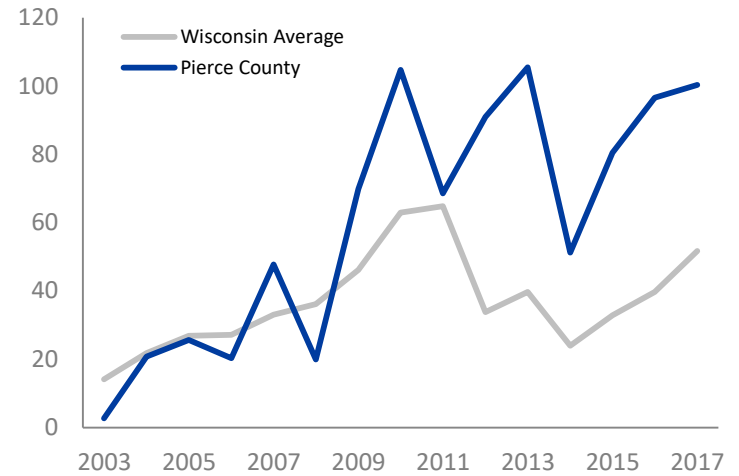
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results for nitrate that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results for arsenic that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Wisconsin Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

**Asthma:** Rate of emergency room visits related to asthma, age-adjusted per 10,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

Bureau of Environmental and Occupational Health  
Wisconsin Department of Health Services | Division of Public Health

[dhstracking@wi.gov](mailto:dhstracking@wi.gov) | [dhs.wisconsin.gov/epht](https://dhs.wisconsin.gov/epht)  
MAY 2019 | P-00719 (Rev. 05/2019)





# POLK COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

Tracking data and resources can help you and your team develop rationale for funding requests. These data can help justify existing programs and show where work needs to be done.

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# POLK COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

● 56.9% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

● 1.9 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

● 3.2% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

● 0.0% | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

● 8.9 | Rate of ER visits per 100,000 people  
Wisconsin: 7.9

### Childhood Lead Poisoning

● 2.2% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

● 41.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

● 29.0 | Rate of ER visits per 10,000 people<sup>#</sup>  
Wisconsin: 35.1

### Melanoma

● 17.1 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

● 53.3 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

● 24.7 | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

● 179.5 | Crude rate per 100,000 people  
Wisconsin: 51.7

● Above state value  
● At or below state value

\* Above state value preferred for this measure  
^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

[Data details on next page](#)



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2016

**Radon:** Percent of tests with results above EPA standard of 4 pCi/L

**Source:** Radon and Indoor Air Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH POLK COUNTY

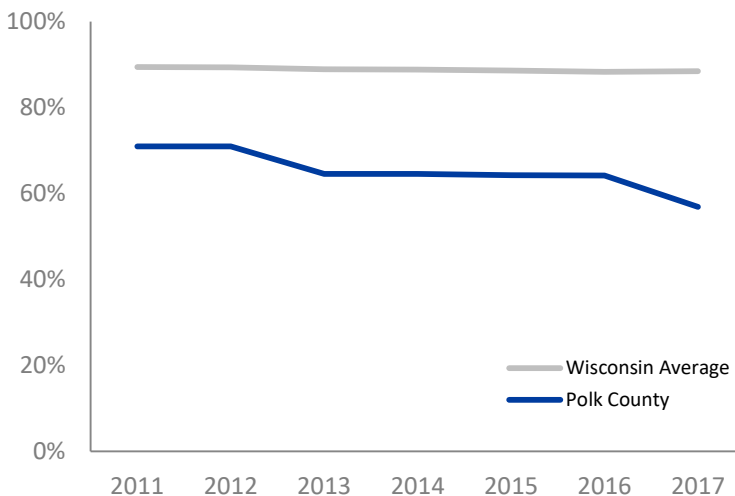
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **56.9%**

**FLUORIDE**  
PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
WISCONSIN: 88.4%

● **1.9**

**ALCOHOL OUTLET DENSITY**  
RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



## ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

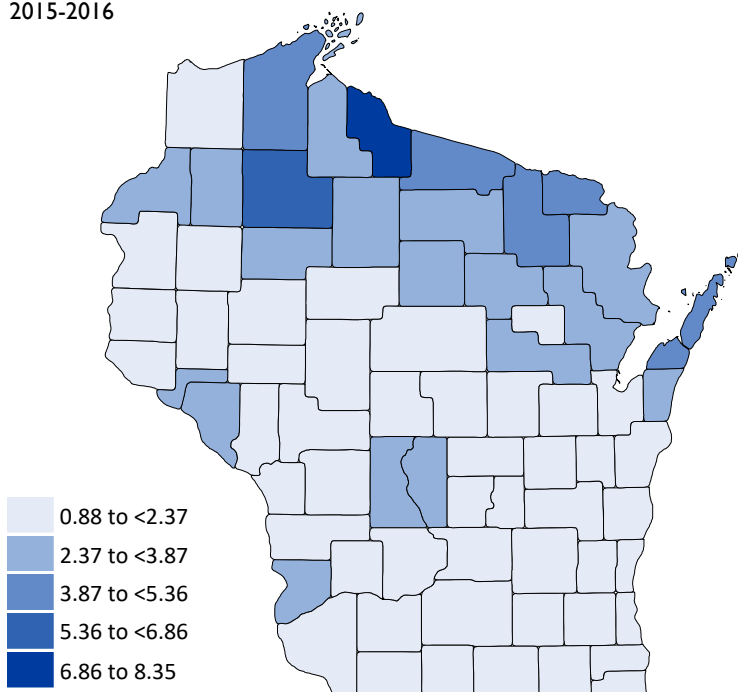
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

## ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



**161**  
LICENSES IN  
POLK COUNTY

**16,948**  
TOTAL LICENSES IN  
WISCONSIN





# PRIVATE WATER QUALITY POLK 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 displayed in this report. Users can find public water quality data on our data portal.

● **3.2%**

**NITRATE**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 mg/L  
**WISCONSIN: 11.0%**

● **0.0%**

**ARSENIC**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 µg/L  
**WISCONSIN: 6.0%**

● Above state value   ● At or below state value   ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
 1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS POLK 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.

● **8.9**  
**CARBON MONOXIDE POISONING**  
 RATE OF ER VISITS RELATED TO CO POISONING PER 100,000  
 WISCONSIN: 7.9

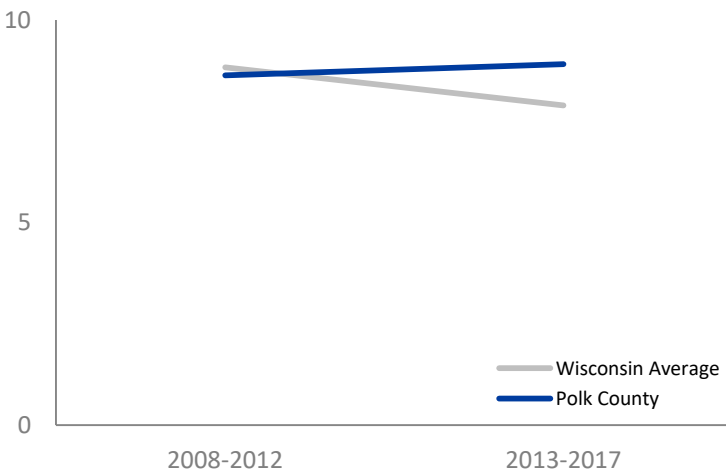
● **2.2%**  
**CHILDHOOD LEAD POISONING**  
 PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$   
 WISCONSIN: 5.0%

● **41.0%**  
**RADON**  
 PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$   
 WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

Carbon monoxide (CO) poisoning prevents oxygen from getting to the body, which can damage tissue and even cause death.

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



## 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter (µg/dL). The Centers for Disease Control and Prevention defines lead poisoning at or above 5 µg/dL.

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

## RADON

Radon is a naturally occurring gas that is radioactive and can cause lung cancer. Radon can leak into homes and other buildings through cracks in the foundation.

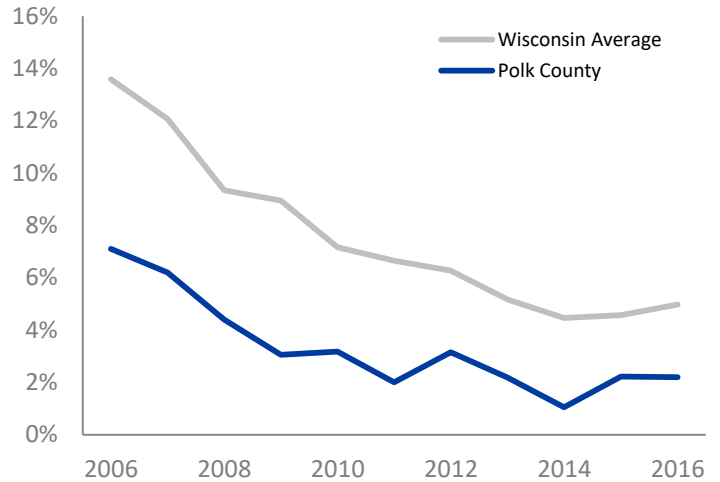
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

## CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD ≥5 µg/dL

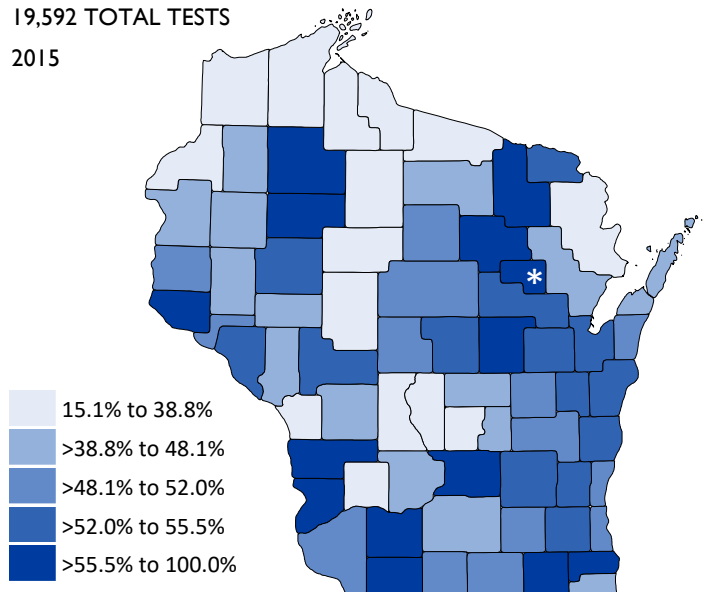


## RADON

PERCENT OF TESTS WITH RESULTS ≥4 pCi/L

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

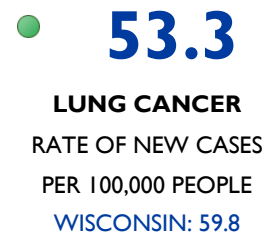
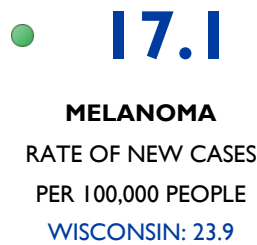
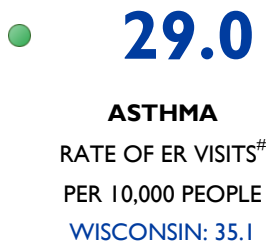




# HEALTH CONDITIONS POLK COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.



● Above state value

● At or below state value

^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



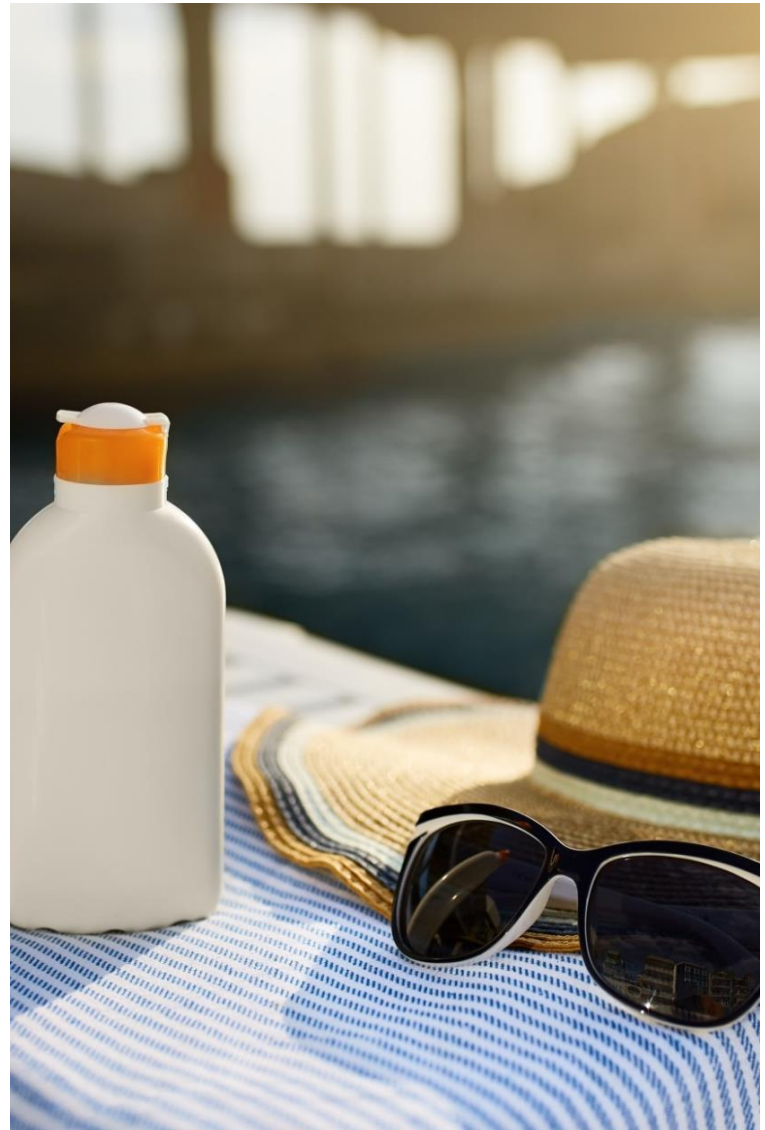
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

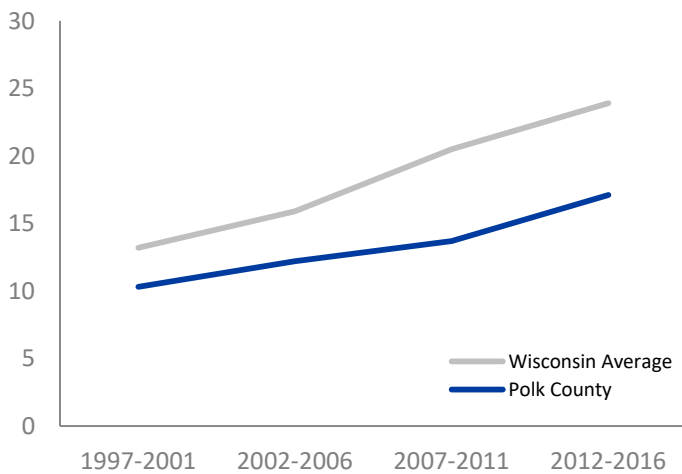
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



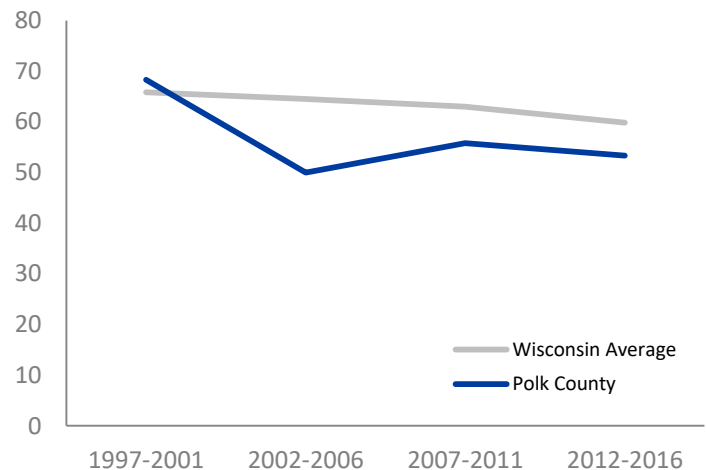
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE POLK COUNTY

## BACKGROUND

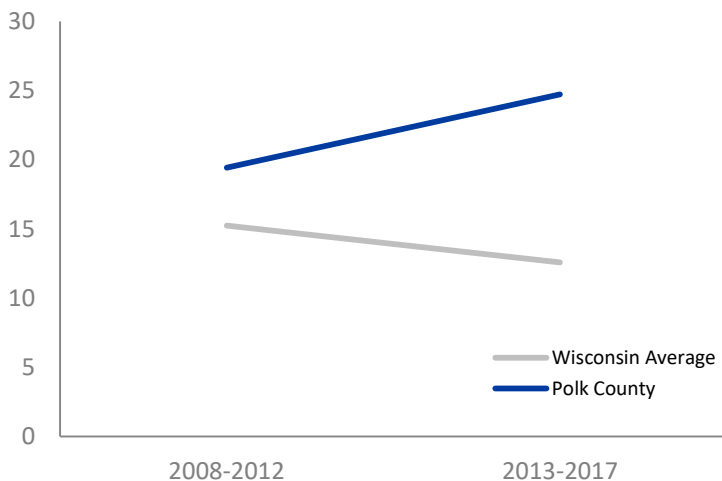
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **24.7**  
**HEAT STRESS**  
 RATE OF ER VISITS  
 PER 100,000 PEOPLE  
 WISCONSIN: 12.6

● **179.5**  
**LYME DISEASE**  
 RATE OF CASES  
 PER 100,000 PEOPLE  
 WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

## LYME DISEASE AT THE NATIONAL LEVEL

OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001



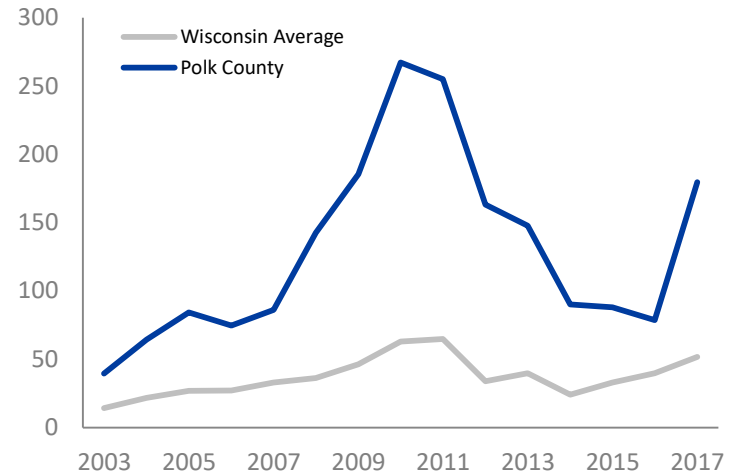
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results for nitrate that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results for arsenic that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Wisconsin Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

**Asthma:** Rate of emergency room visits related to asthma, age-adjusted per 10,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

Bureau of Environmental and Occupational Health  
Wisconsin Department of Health Services | Division of Public Health

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MAY 2019 | P-00719 (Rev. 05/2019)





# PORTAGE COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

Tracking data and resources can help you and your team develop rationale for funding requests. These data can help justify existing programs and show where work needs to be done.

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# PORTAGE COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

● 94.3% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

● 1.6 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

● 19.4% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

● 0.0% | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

● 12.4 | Rate of ER visits per 100,000 people  
Wisconsin: 7.9

### Childhood Lead Poisoning

● 2.7% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

● 54.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

● 17.7 | Rate of ER visits per 10,000 people<sup>#</sup>  
Wisconsin: 35.1

### Melanoma

● 21.7 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

● 49.1 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

● 11.6 | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

● 116.4 | Crude rate per 100,000 people  
Wisconsin: 51.7

● Above state value  
● At or below state value

\* Above state value preferred for this measure  
^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

Data details on next page



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2016

**Radon:** Percent of tests with results above EPA standard of 4 pCi/L

**Source:** Radon and Indoor Air Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH PORTAGE COUNTY

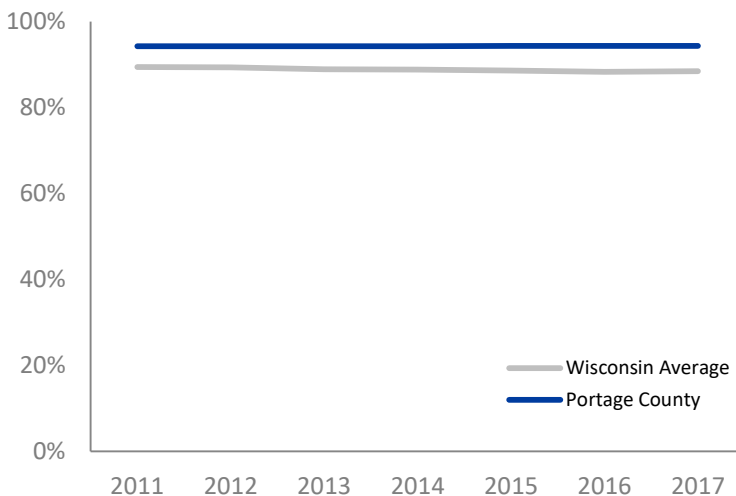
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **94.3%**  
**FLUORIDE**  
 PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
 WISCONSIN: 88.4%

● **1.6**  
**ALCOHOL OUTLET DENSITY**  
 RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
 WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
 ^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



### ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small 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 [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

### ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



# 226

LICENSES IN  
PORTAGE COUNTY

# 16,948

TOTAL LICENSES IN  
WISCONSIN





# PRIVATE WATER QUALITY PORTAGE 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 displayed in this report. Users can find public water quality data on our data portal.

● **19.4%**

**NITRATE**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 mg/L  
**WISCONSIN: 11.0%**

● **0.0%**

**ARSENIC**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 µg/L  
**WISCONSIN: 6.0%**

● Above state value   ● At or below state value   ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
 1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS PORTAGE 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.

● **12.4**

**CARBON MONOXIDE POISONING**

RATE OF ER VISITS RELATED TO CO POISONING PER 100,000

WISCONSIN: 7.9

● **2.7%**

**CHILDHOOD LEAD POISONING**

PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$

WISCONSIN: 5.0%

● **54.0%**

**RADON**

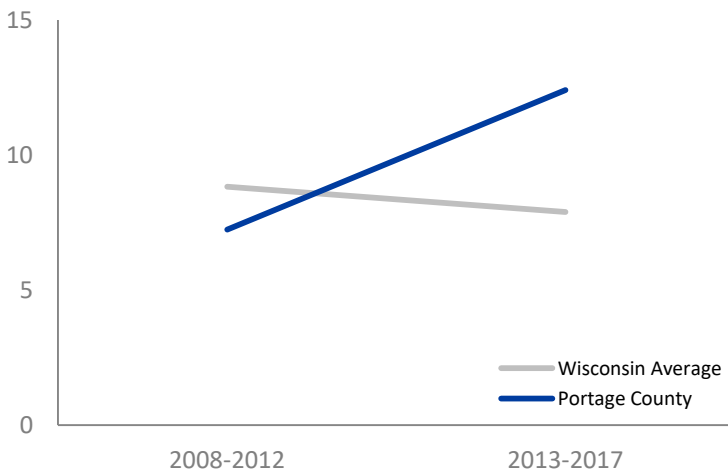
PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$

WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

Carbon monoxide (CO) poisoning prevents oxygen from getting to the body, which can damage tissue and even cause death.

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



## 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter (µg/dL). The Centers for Disease Control and Prevention defines lead poisoning at or above 5 µg/dL.

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

## RADON

Radon is a naturally occurring gas that is radioactive and can cause lung cancer. Radon can leak into homes and other buildings through cracks in the foundation.

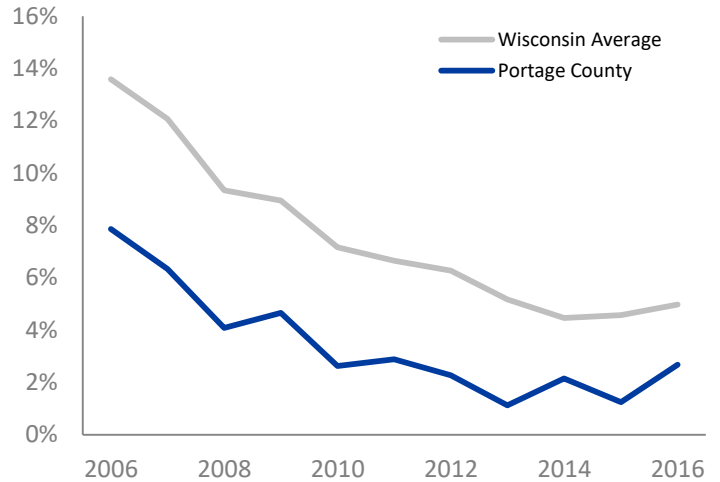
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

## CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD ≥5 µg/dL

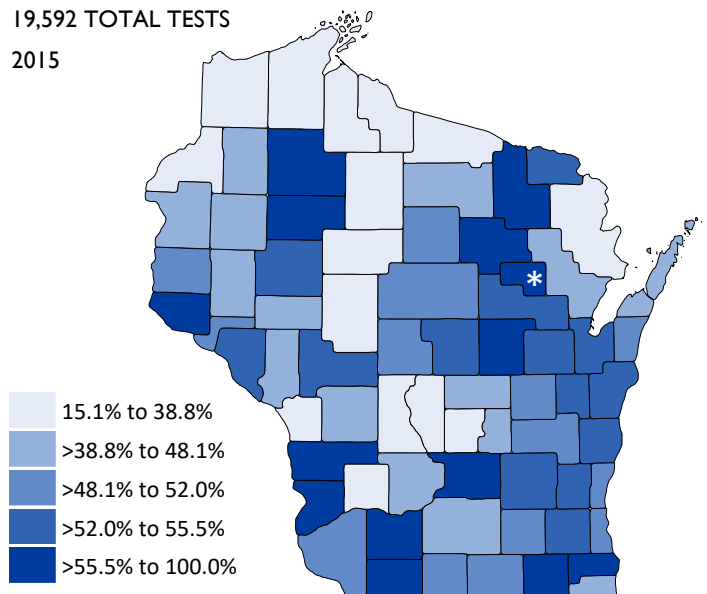


## RADON

PERCENT OF TESTS WITH RESULTS ≥4 pCi/L

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

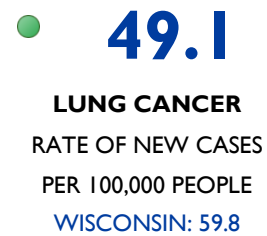
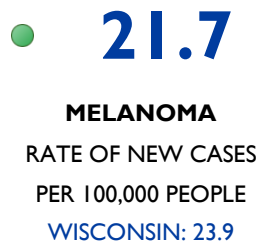
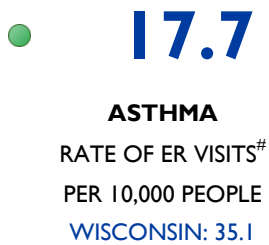




# HEALTH CONDITIONS PORTAGE COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.



● Above state value

● At or below state value

^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



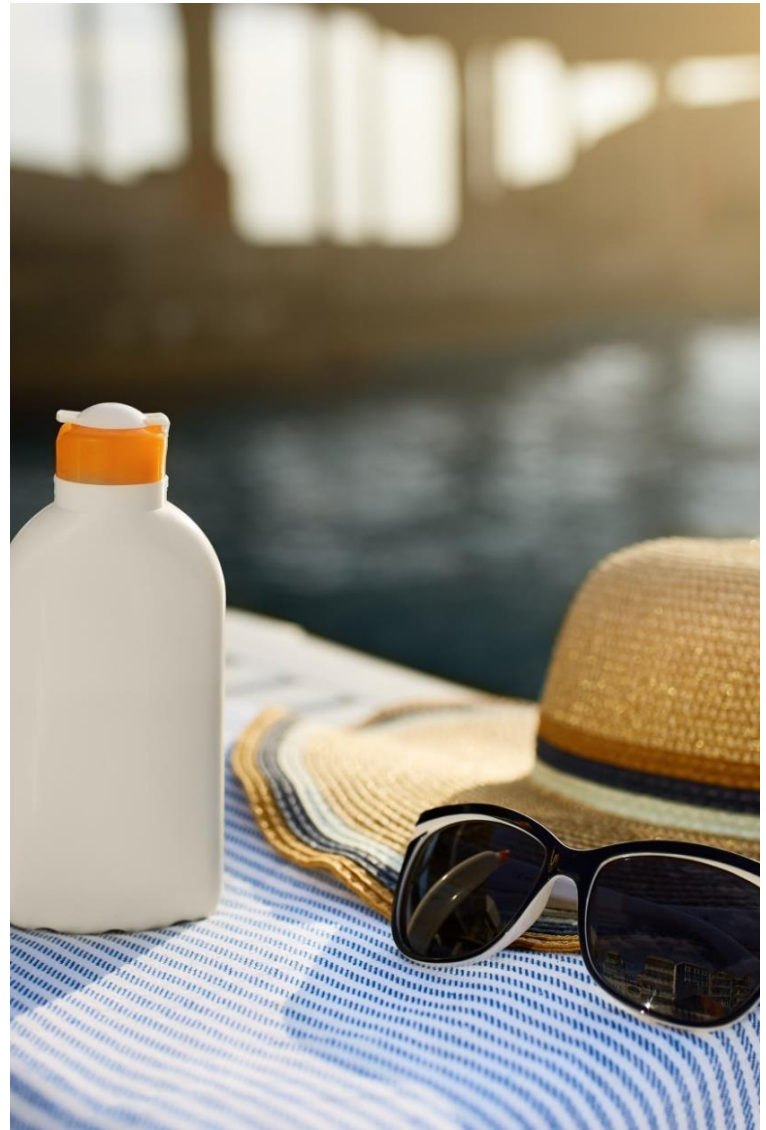
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

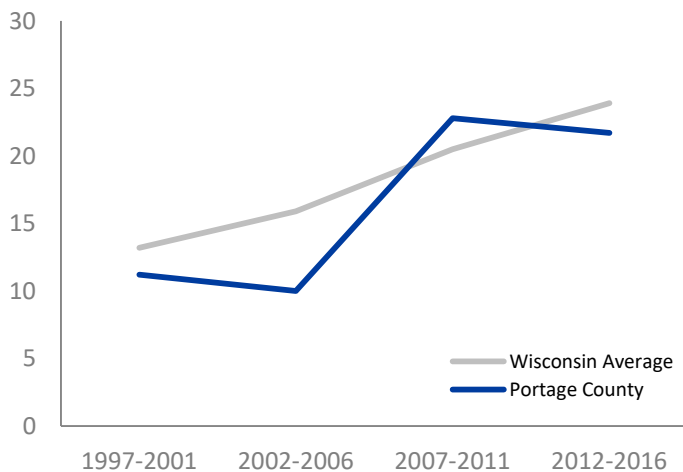
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



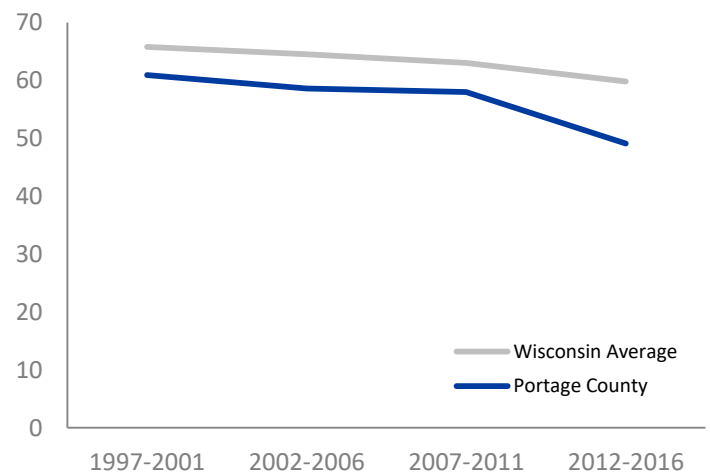
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE PORTAGE COUNTY

## BACKGROUND

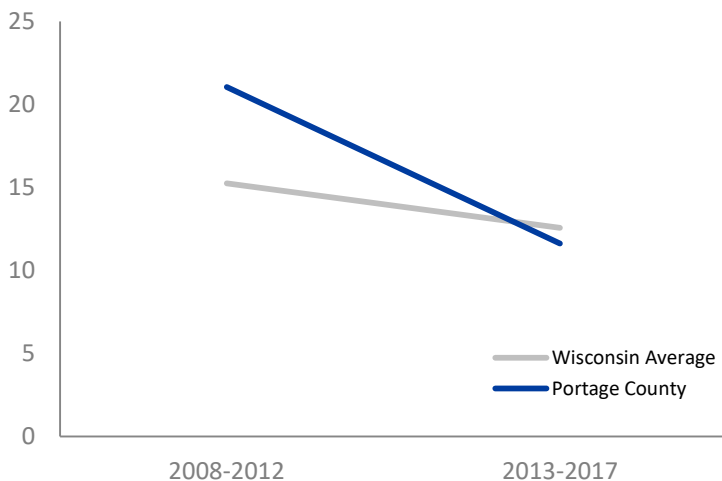
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **11.6**  
**HEAT STRESS**  
 RATE OF ER VISITS  
 PER 100,000 PEOPLE  
 WISCONSIN: 12.6

● **116.4**  
**LYME DISEASE**  
 RATE OF CASES  
 PER 100,000 PEOPLE  
 WISCONSIN: 51.7

● Above state value    ● At or below state value    ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

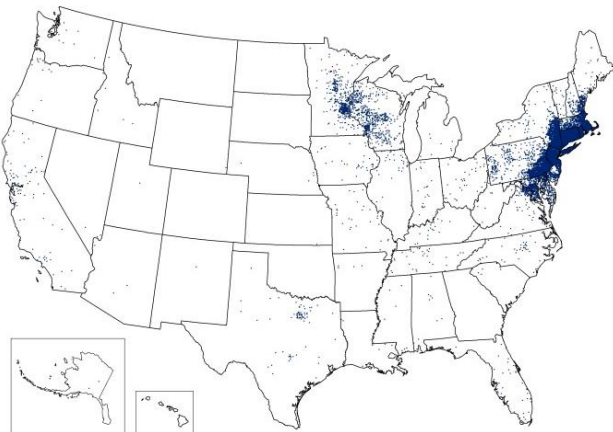
## LYME DISEASE AT THE NATIONAL LEVEL

OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001

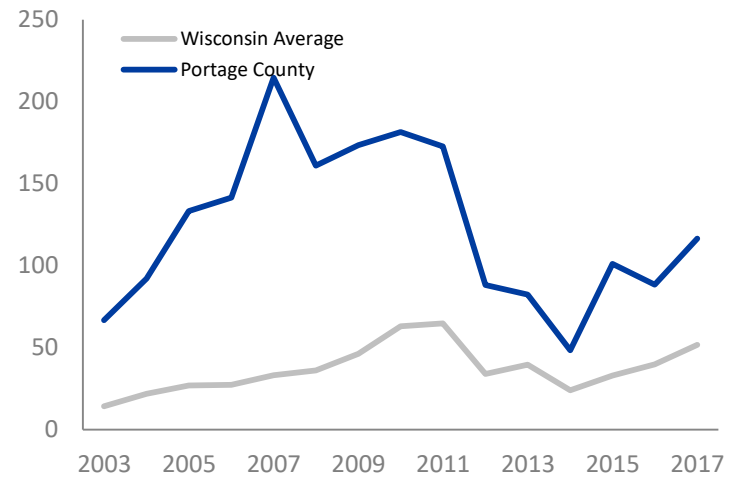
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results for nitrate that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results for arsenic that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Wisconsin Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

**Asthma:** Rate of emergency room visits related to asthma, age-adjusted per 10,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

Bureau of Environmental and Occupational Health  
Wisconsin Department of Health Services | Division of Public Health

[dhstracking@wi.gov](mailto:dhstracking@wi.gov) | [dhs.wisconsin.gov/epht](https://dhs.wisconsin.gov/epht)  
MAY 2019 | P-00719 (Rev. 05/2019)





# PRICE COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

Tracking data and resources can help you and your team develop rationale for funding requests. These data can help justify existing programs and show where work needs to be done.

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

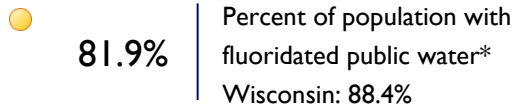
# PRICE COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE

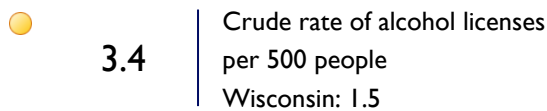


## COMMUNITY HEALTH

### Fluoride

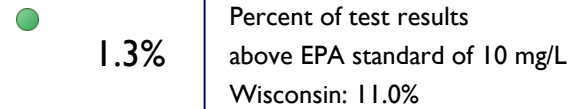


### Alcohol Outlet Density

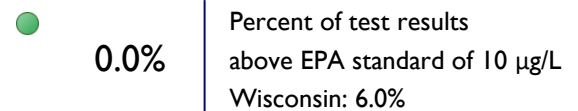


## PRIVATE WATER QUALITY

### Nitrate

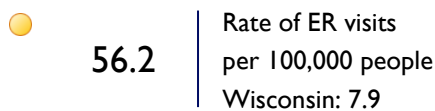


### Arsenic

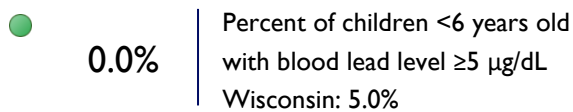


## HOME HAZARDS

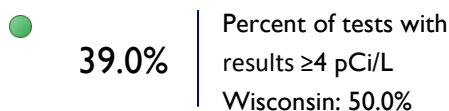
### Carbon Monoxide Poisoning



### Childhood Lead Poisoning

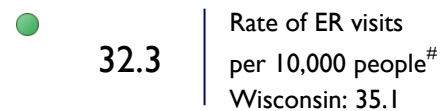


### Radon

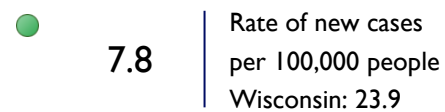


## HEALTH CONDITIONS

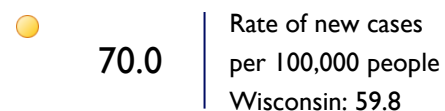
### Asthma



### Melanoma

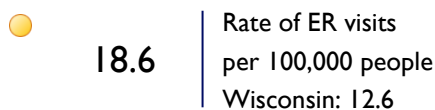


### Lung Cancer

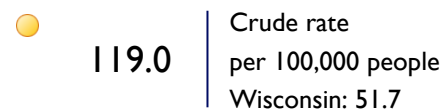


## CLIMATE

### Heat Stress



### Lyme Disease



- Above state value
- At or below state value

- \* Above state value preferred for this measure
- ^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

Data details on next page



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2016

**Radon:** Percent of tests with results above EPA standard of 4 pCi/L

**Source:** Radon and Indoor Air Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH PRICE COUNTY

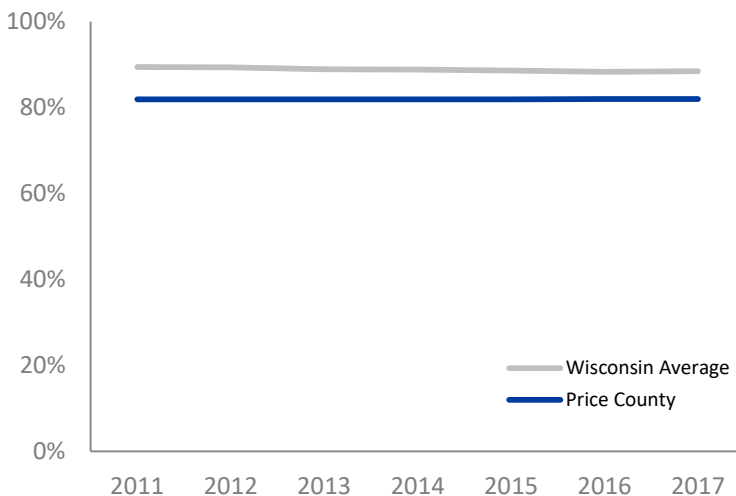
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **81.9%**

**FLUORIDE**  
PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
WISCONSIN: 88.4%

● Above state value

● **3.4**

**ALCOHOL OUTLET DENSITY**  
RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
WISCONSIN: 1.5

● At or below state value

\* Above state value preferred for this measure  
^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



## ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

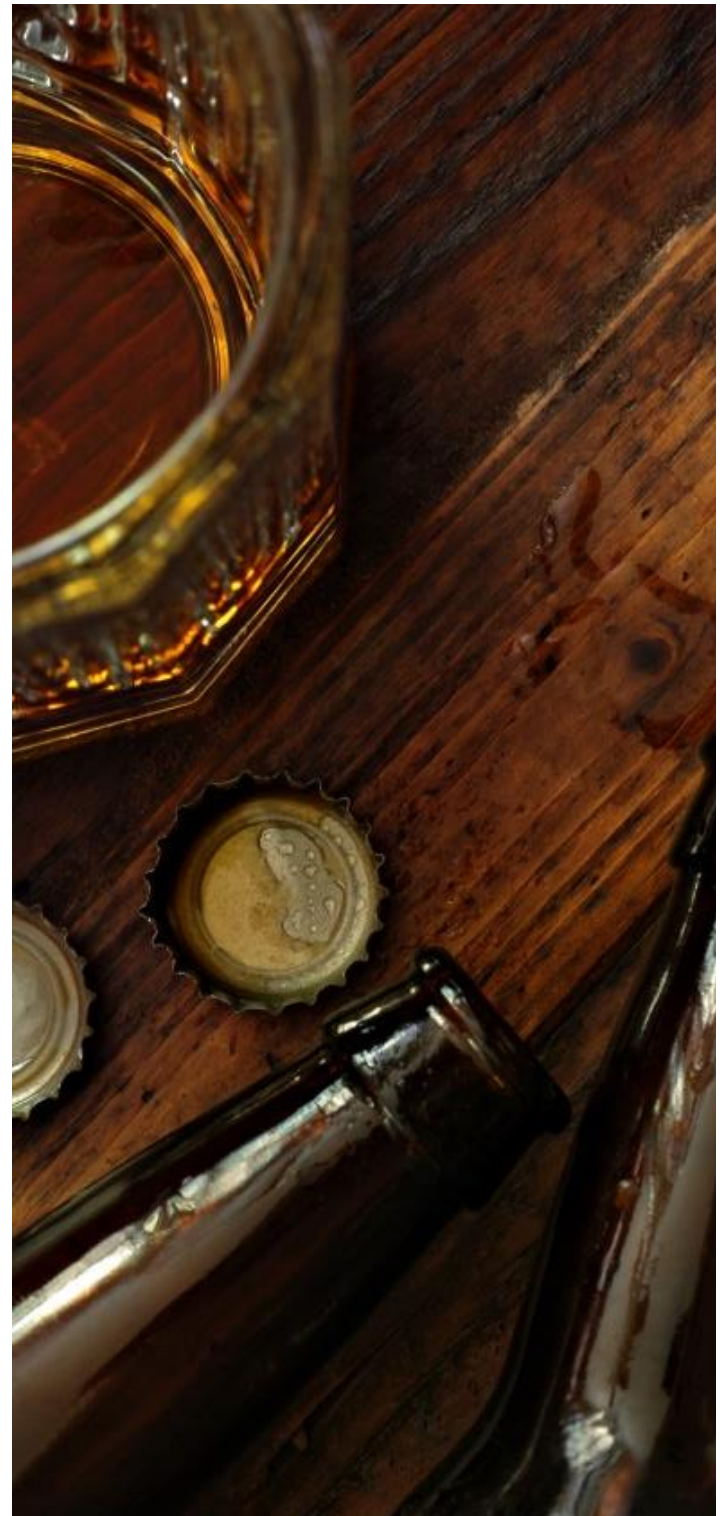
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

## ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



# 93

LICENSES IN  
PRICE COUNTY

# 16,948

TOTAL LICENSES IN  
WISCONSIN





# PRIVATE WATER QUALITY PRICE 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 displayed in this report. Users can find public water quality data on our data portal.

● **1.3%**

**NITRATE  
IN PRIVATE WELLS**  
PERCENT OF TEST RESULTS  
ABOVE EPA STANDARD  
OF 10 mg/L  
WISCONSIN: 11.0%

● **0.0%**

**ARSENIC  
IN PRIVATE WELLS**  
PERCENT OF TEST RESULTS  
ABOVE EPA STANDARD  
OF 10 µg/L  
WISCONSIN: 6.0%

● Above state value   ● At or below state value   ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS PRICE 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.

● **56.2**  
**CARBON MONOXIDE POISONING**  
 RATE OF ER VISITS RELATED TO CO POISONING PER 100,000  
 WISCONSIN: 7.9

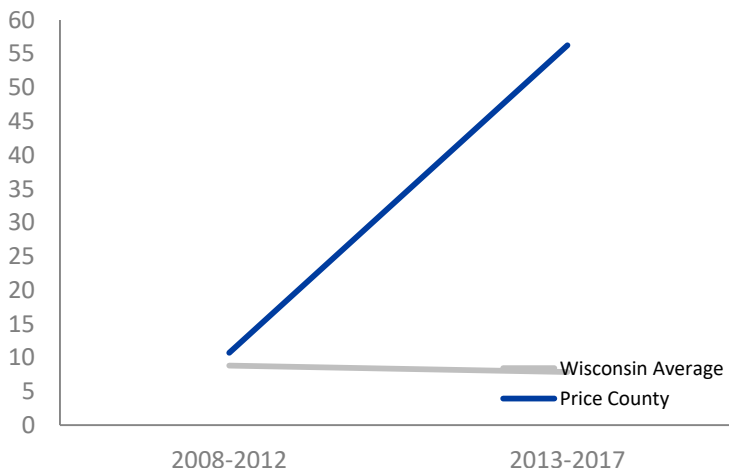
● **0.0%**  
**CHILDHOOD LEAD POISONING**  
 PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$   
 WISCONSIN: 5.0%

● **39.0%**  
**RADON**  
 PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$   
 WISCONSIN: 50.0%

● Above state value    ● At or below state value    ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

Carbon monoxide (CO) poisoning prevents oxygen from getting to the body, which can damage tissue and even cause death.

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



## 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter ( $\mu\text{g}/\text{dL}$ ). The Centers for Disease Control and Prevention defines lead poisoning at or above 5  $\mu\text{g}/\text{dL}$ .

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

## RADON

Radon is a naturally occurring gas that is radioactive and can cause lung cancer. Radon can leak into homes and other buildings through cracks in the foundation.

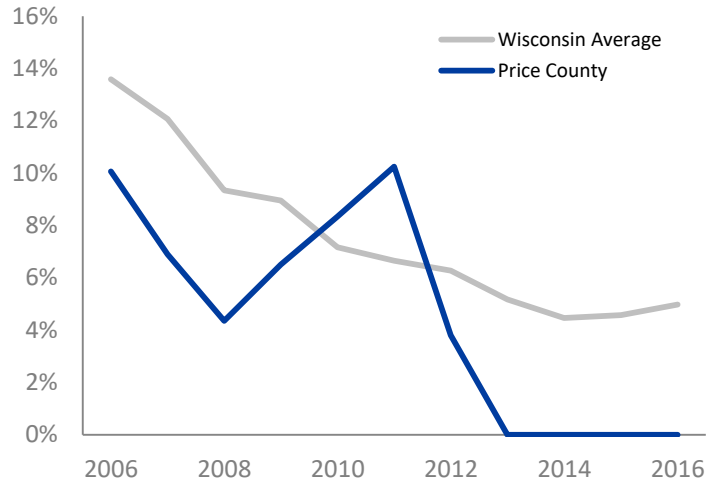
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

## CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g}/\text{dL}$

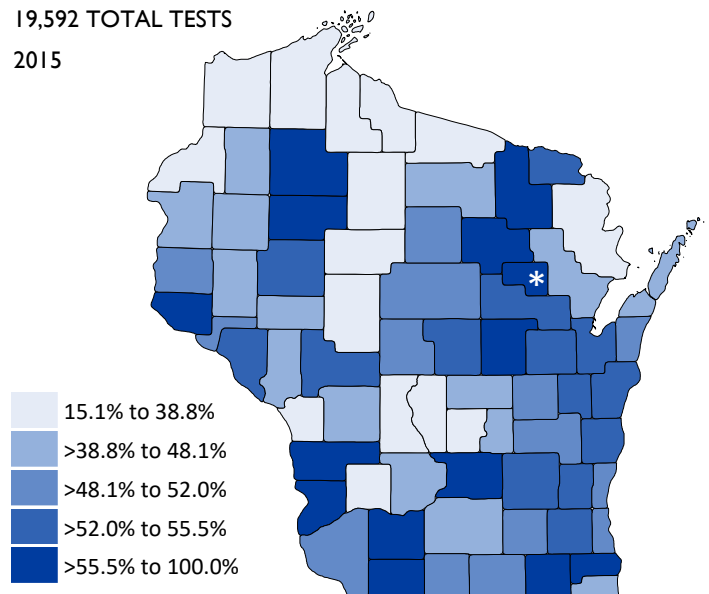


## RADON

PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi}/\text{L}$

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

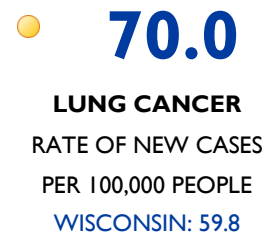
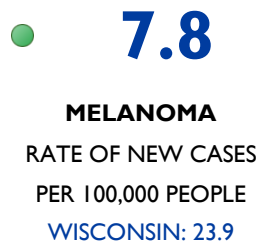
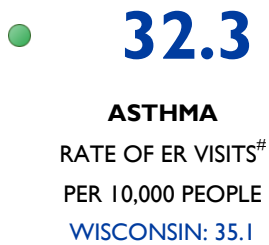




# HEALTH CONDITIONS PRICE COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.

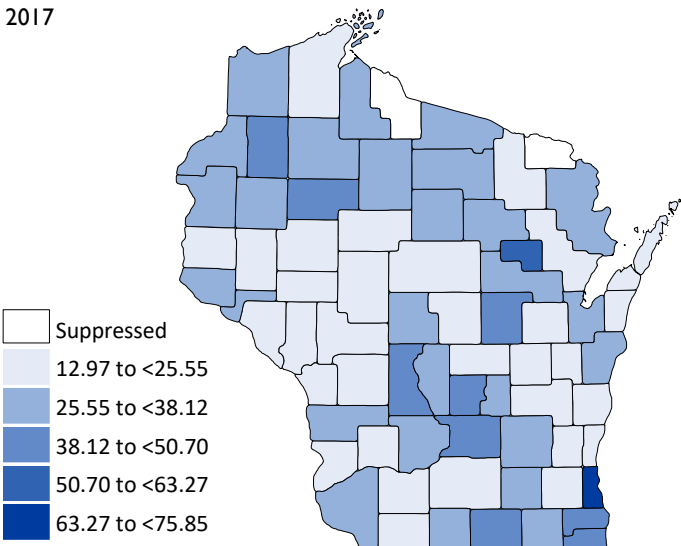


- Above state value
- At or below state value
- ^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



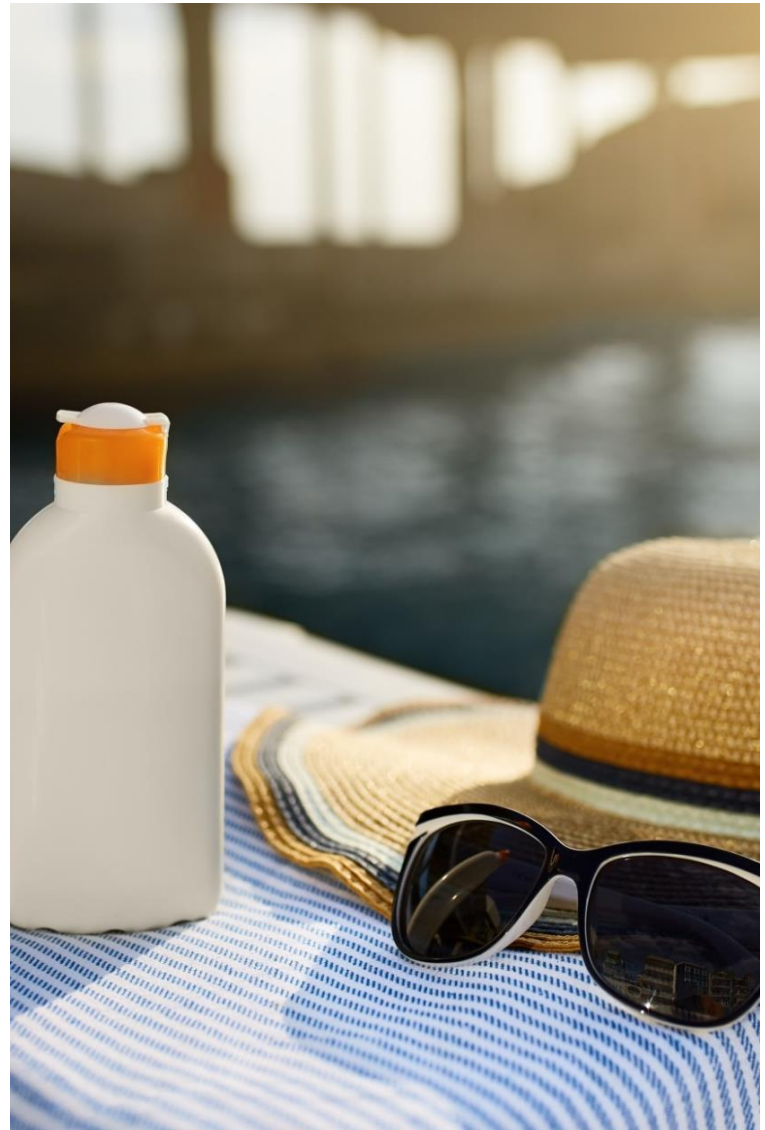
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

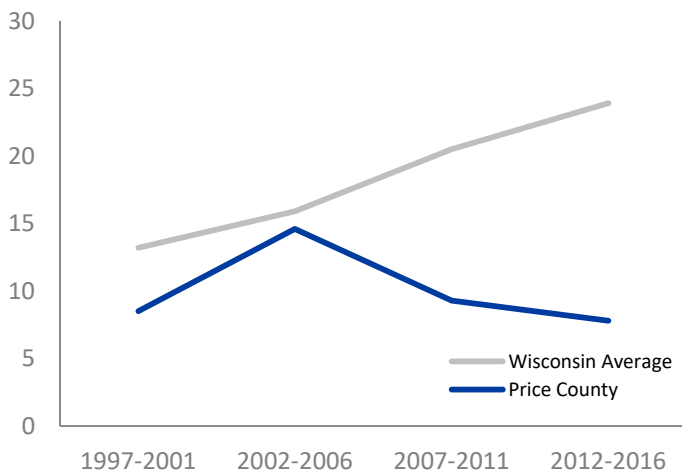
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



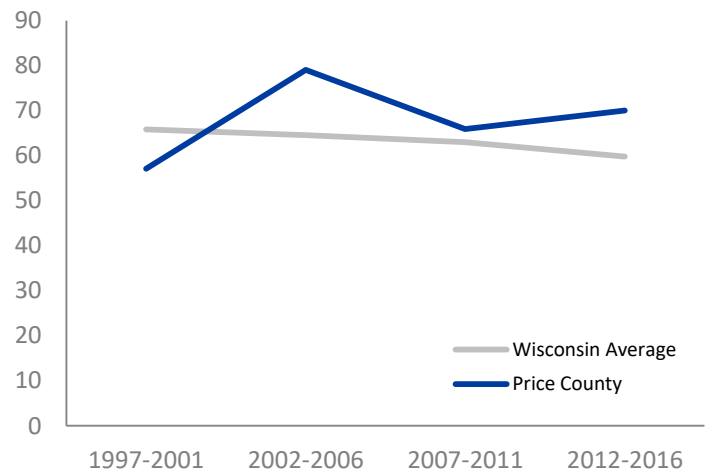
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE PRICE COUNTY

## BACKGROUND

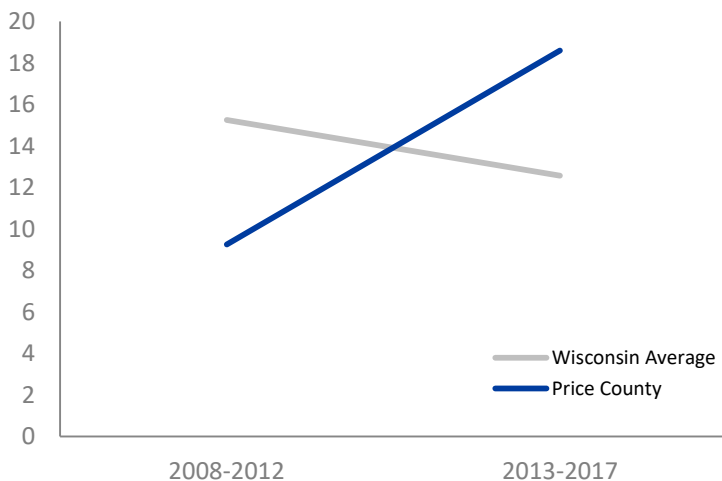
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **18.6**  
**HEAT STRESS**  
 RATE OF ER VISITS  
 PER 100,000 PEOPLE  
 WISCONSIN: 12.6

● **119.0**  
**LYME DISEASE**  
 RATE OF CASES  
 PER 100,000 PEOPLE  
 WISCONSIN: 51.7

● Above state value    ● At or below state value    ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

## LYME DISEASE AT THE NATIONAL LEVEL

OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001



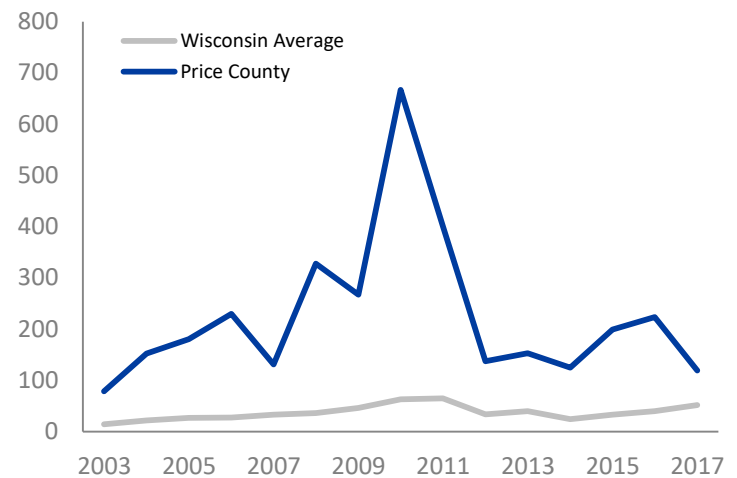
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results for nitrate that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results for arsenic that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Wisconsin Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

**Asthma:** Rate of emergency room visits related to asthma, age-adjusted per 10,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

Bureau of Environmental and Occupational Health  
Wisconsin Department of Health Services | Division of Public Health

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MAY 2019 | P-00719 (Rev. 05/2019)





# RACINE COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

Tracking data and resources can help you and your team develop rationale for funding requests. These data can help justify existing programs and show where work needs to be done.

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# RACINE COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

● 89.7% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

● 1.2 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

● 1.7% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

● 10.0% | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

● 5.7 | Rate of ER visits per 100,000 people  
Wisconsin: 7.9

### Childhood Lead Poisoning

● 5.7% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

● 58.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

● 48.2 | Rate of ER visits per 10,000 people<sup>#</sup>  
Wisconsin: 35.1

### Melanoma

● 23.7 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

● 68.7 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

● 9.7 | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

● 14.8 | Crude rate per 100,000 people  
Wisconsin: 51.7

● Above state value  
● At or below state value

\* Above state value preferred for this measure  
^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

[Data details on next page](#)



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2016

**Radon:** Percent of tests with results above EPA standard of 4 pCi/L

**Source:** Radon and Indoor Air Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH RACINE COUNTY

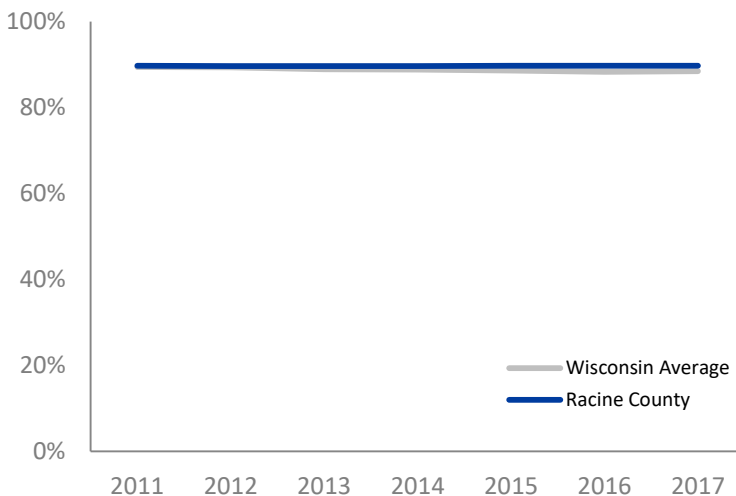
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **89.7%**

**FLUORIDE**  
PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
WISCONSIN: 88.4%

● **1.2**

**ALCOHOL OUTLET DENSITY**  
RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



## ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

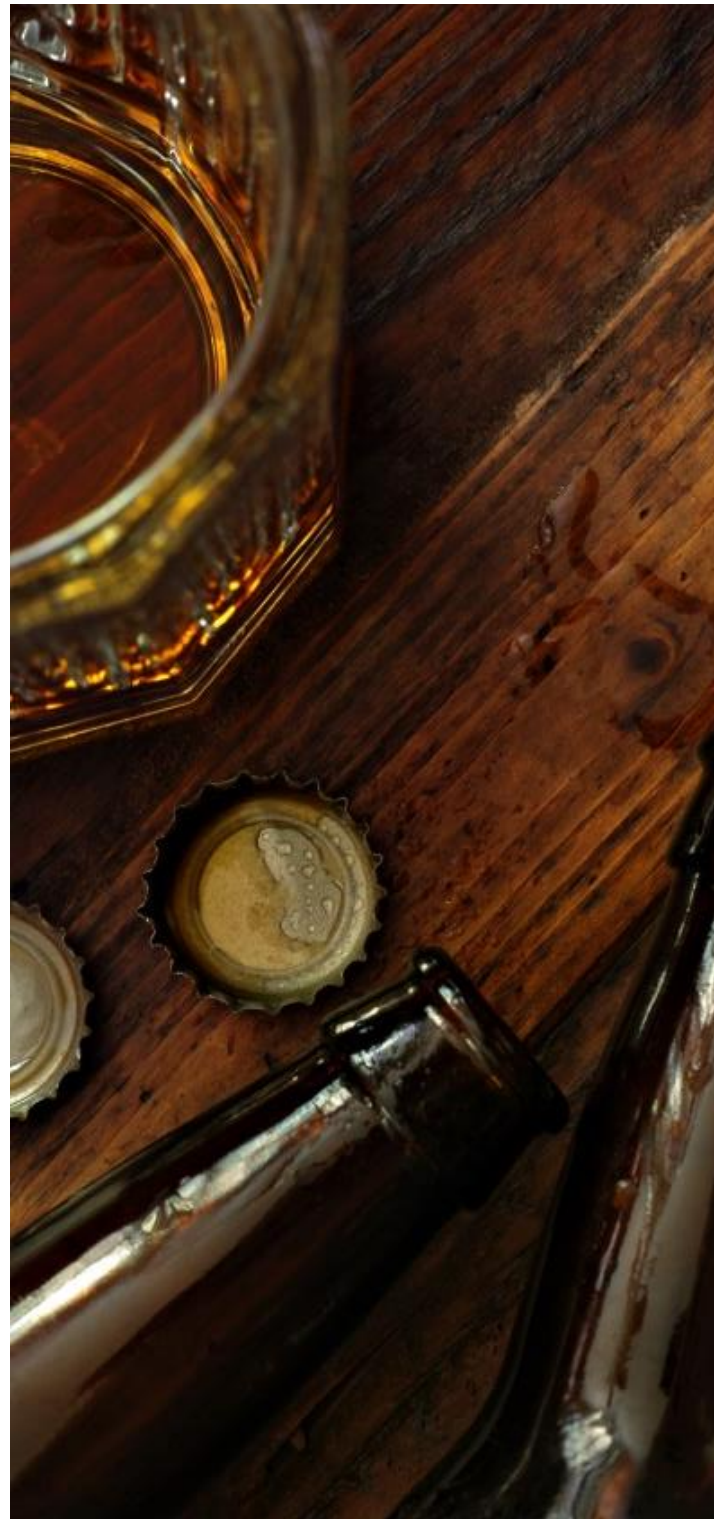
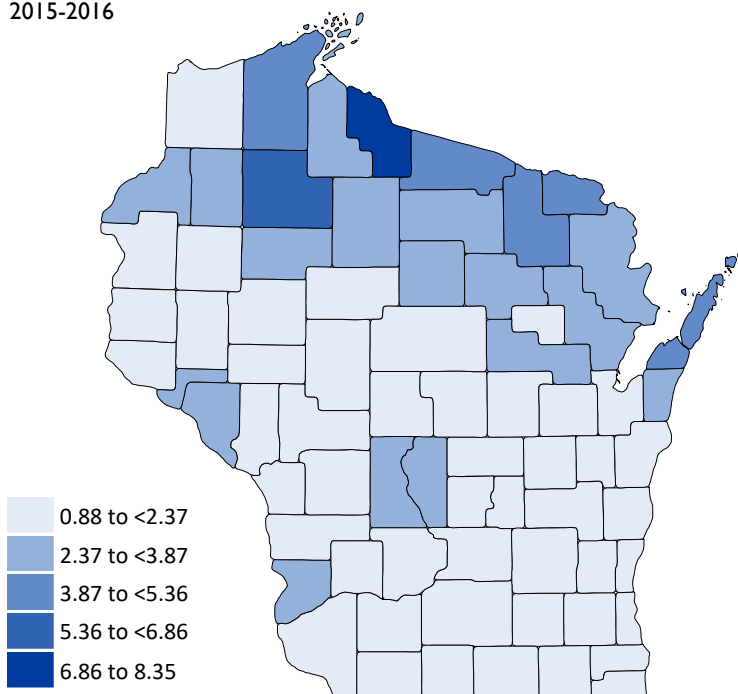
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

## ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



|                              |                                |
|------------------------------|--------------------------------|
| <b>457</b>                   | <b>16,948</b>                  |
| LICENSES IN<br>RACINE COUNTY | TOTAL LICENSES IN<br>WISCONSIN |





# PRIVATE WATER QUALITY RACINE 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 displayed in this report. Users can find public water quality data on our data portal.

● **1.7%**

**NITRATE  
IN PRIVATE WELLS**  
PERCENT OF TEST RESULTS  
ABOVE EPA STANDARD  
OF 10 mg/L  
WISCONSIN: 11.0%

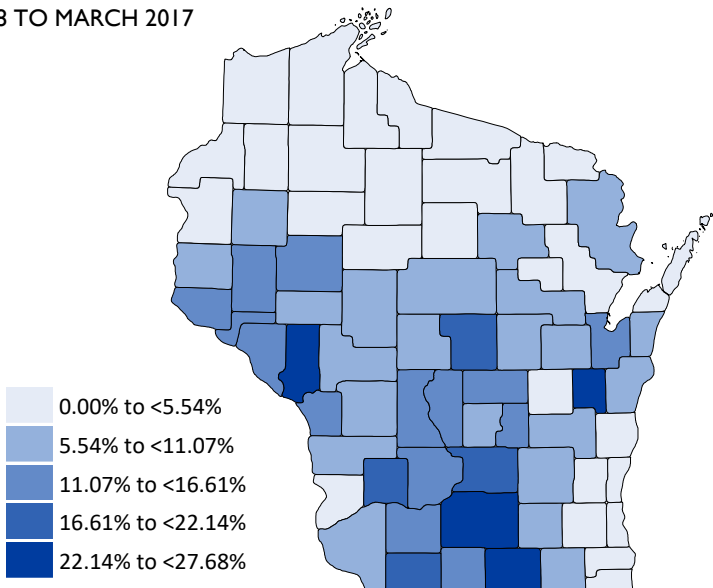
● **10.0%**

**ARSENIC  
IN PRIVATE WELLS**  
PERCENT OF TEST RESULTS  
ABOVE EPA STANDARD  
OF 10 µg/L  
WISCONSIN: 6.0%

● Above state value   ● At or below state value   ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS RACINE 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.

**5.7**  
**CARBON MONOXIDE POISONING**  
 RATE OF ER VISITS RELATED TO CO POISONING PER 100,000  
 WISCONSIN: 7.9

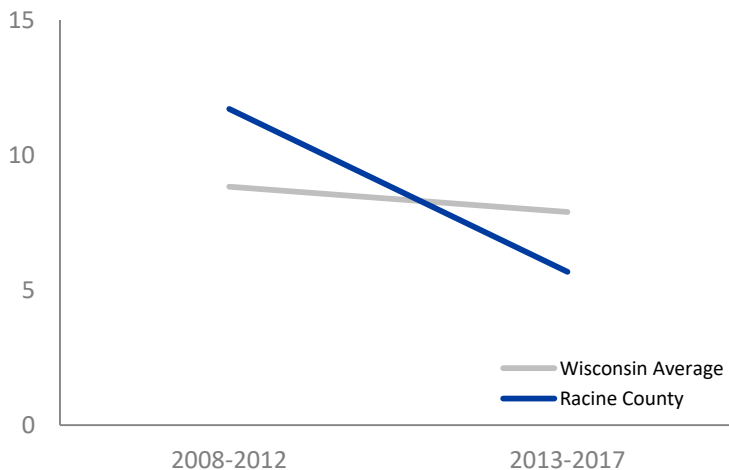
**5.7%**  
**CHILDHOOD LEAD POISONING**  
 PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$   
 WISCONSIN: 5.0%

**58.0%**  
**RADON**  
 PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$   
 WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

Carbon monoxide (CO) poisoning prevents oxygen from getting to the body, which can damage tissue and even cause death.

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



### 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter (µg/dL). The Centers for Disease Control and Prevention defines lead poisoning at or above 5 µg/dL.

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

### RADON

Radon is a naturally occurring gas that is radioactive and can cause lung cancer. Radon can leak into homes and other buildings through cracks in the foundation.

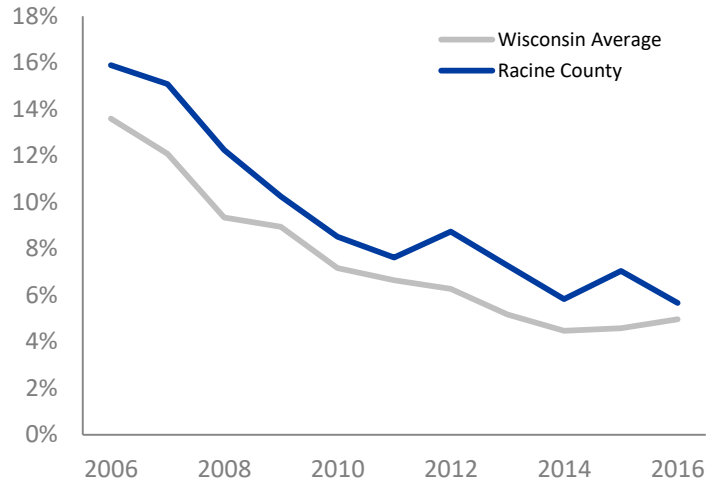
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

### CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD ≥5 µg/dL

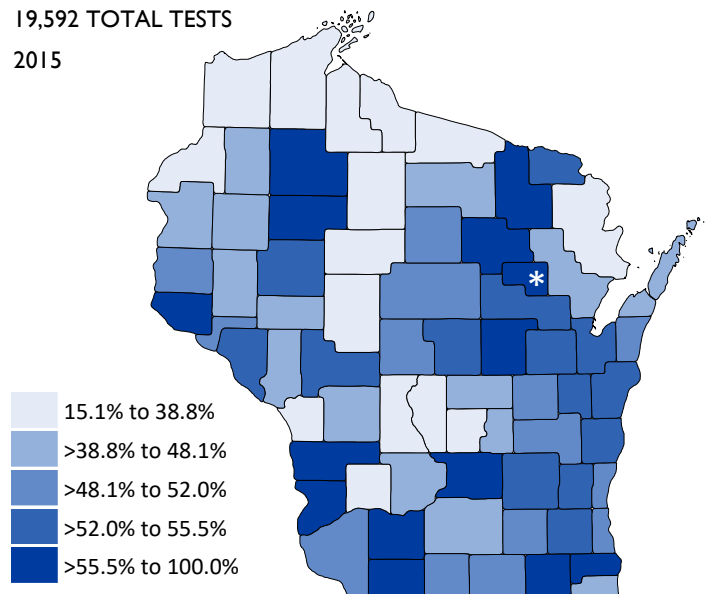


### RADON

PERCENT OF TESTS WITH RESULTS ≥4 pCi/L

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

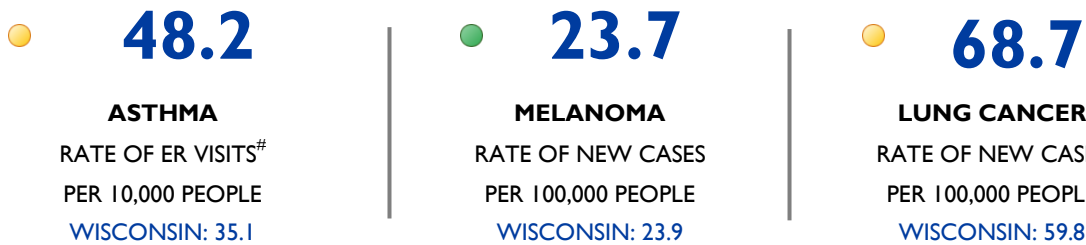




# HEALTH CONDITIONS RACINE COUNTY

## BACKGROUND

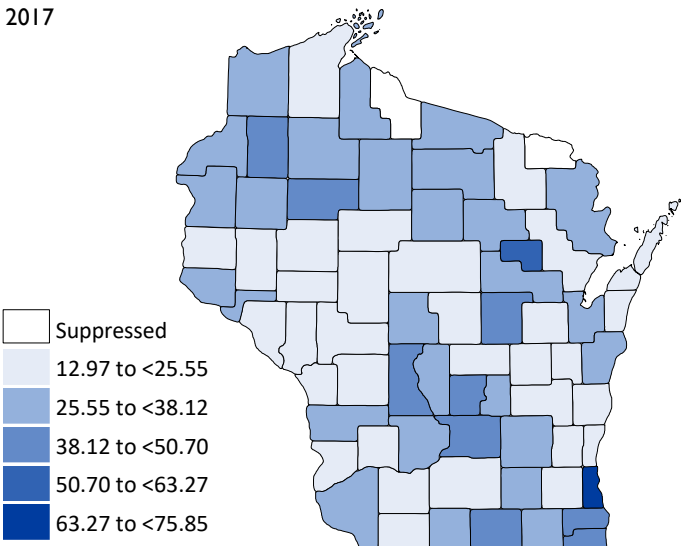
The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.



● Above state value  
● At or below state value  
<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.  
<sup>^</sup> Suppressed

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

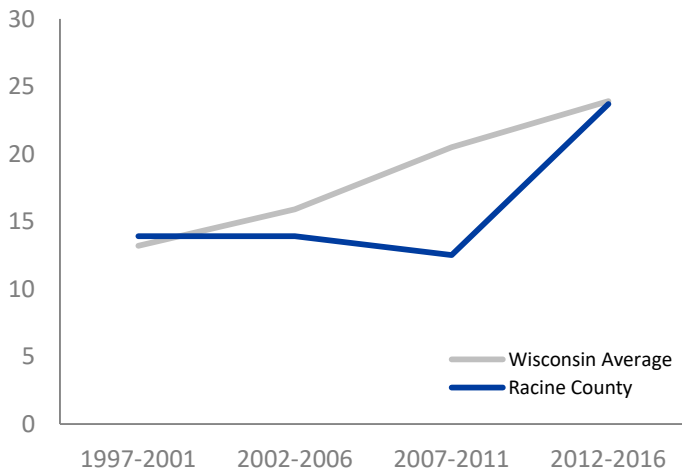
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



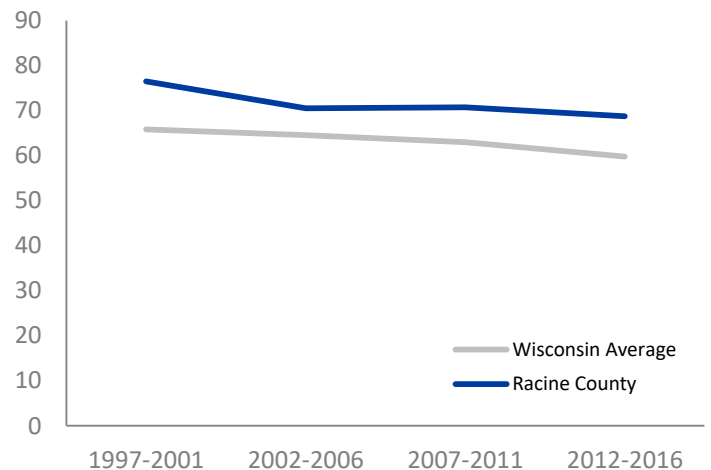
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE RACINE COUNTY

## BACKGROUND

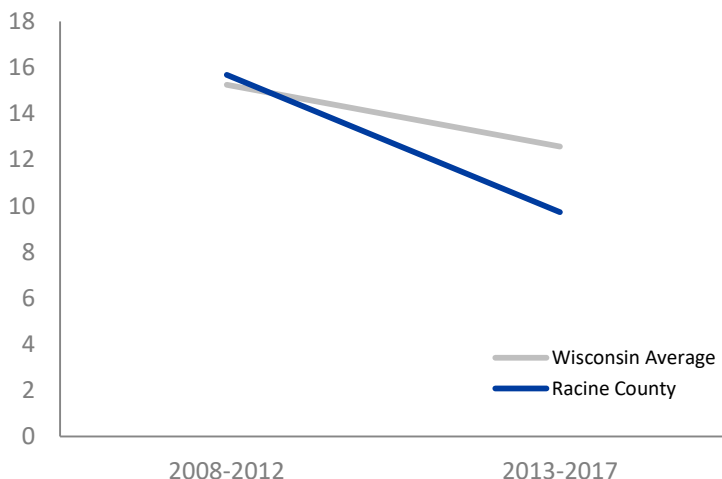
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● 9.7

**HEAT STRESS**  
RATE OF ER VISITS  
PER 100,000 PEOPLE  
WISCONSIN: 12.6

● 14.8

**LYME DISEASE**  
RATE OF CASES  
PER 100,000 PEOPLE  
WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

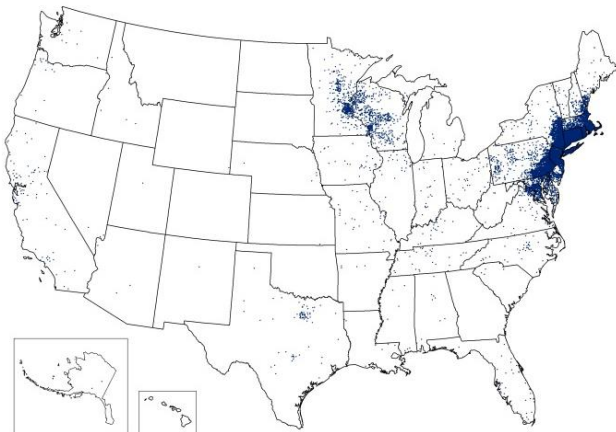
The criteria for reporting Lyme disease were revised again in 2012 to require reporting and follow-up only for cases with an erythema migrans (EM) rash. To compensate for this change, epidemiologists used a statistical method to estimate the true number of cases based on the number of total laboratory reports for each year since 2012.

## LYME DISEASE AT THE NATIONAL LEVEL

OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001



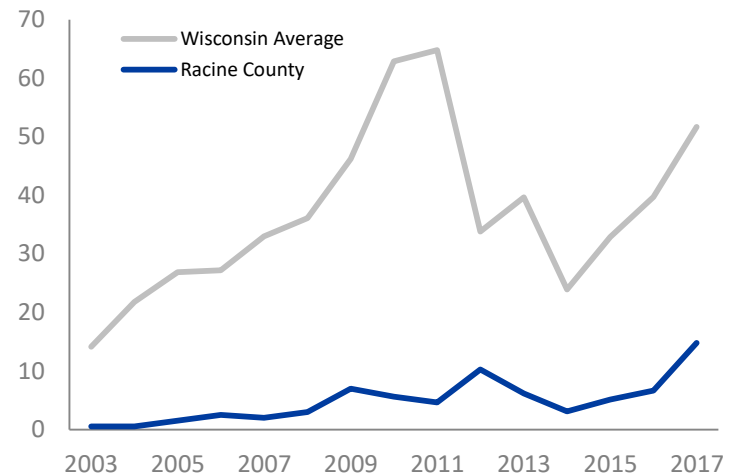
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results for nitrate that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results for arsenic that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Wisconsin Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

**Asthma:** Rate of emergency room visits related to asthma, age-adjusted per 10,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

Bureau of Environmental and Occupational Health  
Wisconsin Department of Health Services | Division of Public Health

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MAY 2019 | P-00719 (Rev. 05/2019)





# **RICHLAND COUNTY**

## **2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

Tracking data and resources can help you and your team develop rationale for funding requests. These data can help justify existing programs and show where work needs to be done.

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# RICHLAND COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

● 85.8% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

● 1.5 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

● 20.5% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

● 0.0% | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

● 12.9 | Rate of ER visits per 100,000 people  
Wisconsin: 7.9

### Childhood Lead Poisoning

● 3.3% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

● 36.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

● 21.4 | Rate of ER visits per 10,000 people<sup>#</sup>  
Wisconsin: 35.1

### Melanoma

● 15.5 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

● 52.8 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

● 19.0 | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

● 285.5 | Crude rate per 100,000 people  
Wisconsin: 51.7

● Above state value  
● At or below state value

\* Above state value preferred for this measure  
^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

[Data details on next page](#)



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2016

**Radon:** Percent of tests with results above EPA standard of 4 pCi/L

**Source:** Radon and Indoor Air Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH RICHLAND COUNTY

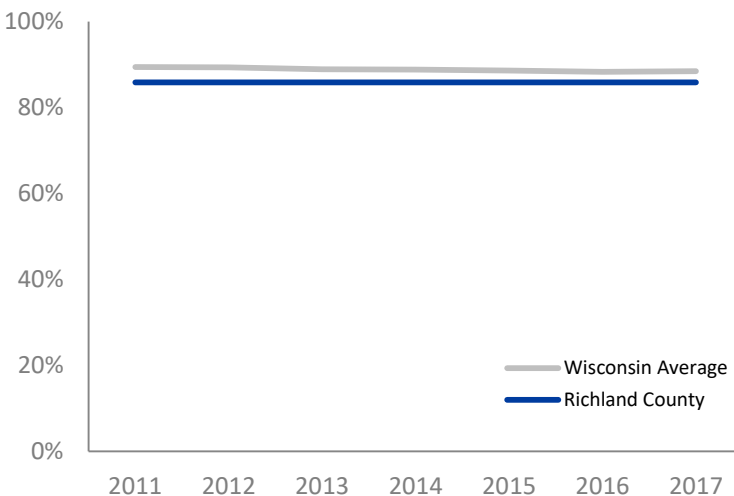
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **85.8%**

**FLUORIDE**  
PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
WISCONSIN: 88.4%

● Above state value

● **1.5**

**ALCOHOL OUTLET DENSITY**  
RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
WISCONSIN: 1.5

● At or below state value

\* Above state value preferred for this measure  
^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



## ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

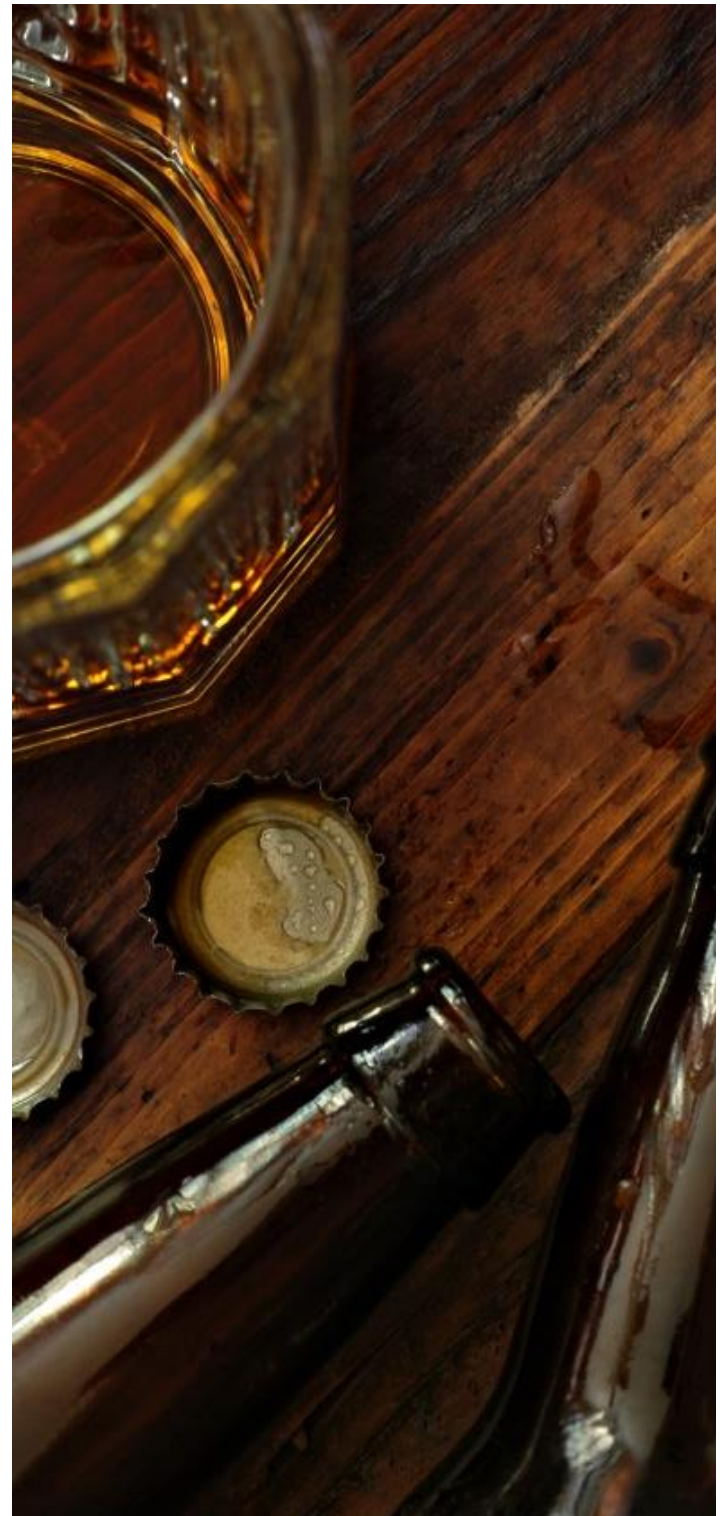
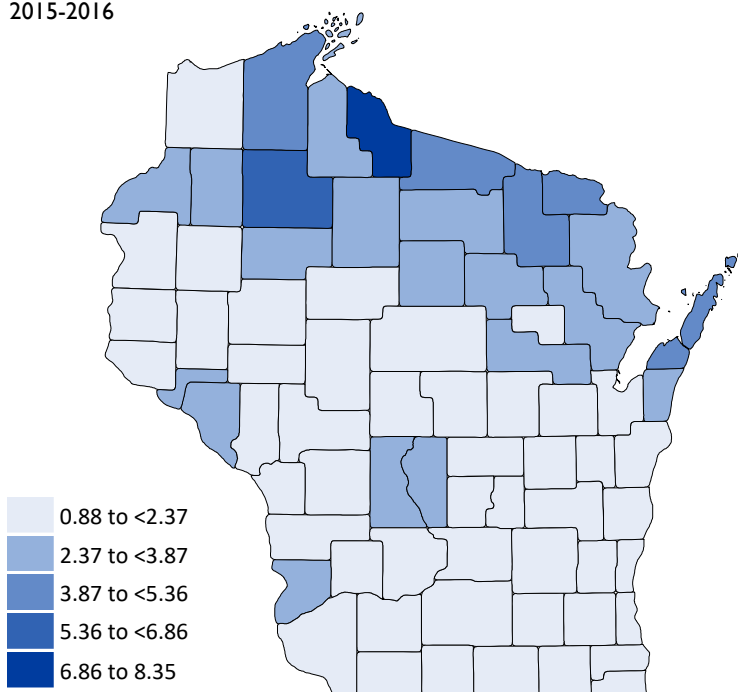
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

## ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



# 53

LICENSES IN  
RICHLAND COUNTY

# 16,948

TOTAL LICENSES IN  
WISCONSIN





# PRIVATE WATER QUALITY RICHLAND 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 displayed in this report. Users can find public water quality data on our data portal.

● **20.5%**

**NITRATE**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 mg/L  
**WISCONSIN: 11.0%**

● **0.0%**

**ARSENIC**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 µg/L  
**WISCONSIN: 6.0%**

● Above state value   ● At or below state value   ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
 1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS RICHLAND 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.

● **12.9**

**CARBON MONOXIDE POISONING**

RATE OF ER VISITS RELATED TO CO POISONING PER 100,000

WISCONSIN: 7.9

● **3.3%**

**CHILDHOOD LEAD POISONING**

PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$

WISCONSIN: 5.0%

● **36.0%**

**RADON**

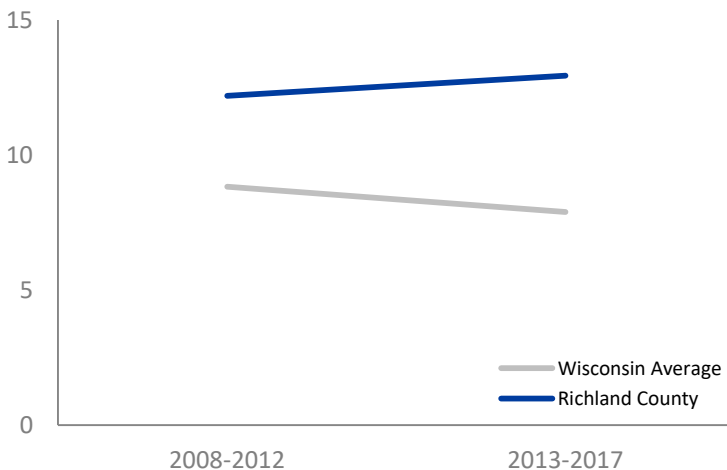
PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$

WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

Carbon monoxide (CO) poisoning prevents oxygen from getting to the body, which can damage tissue and even cause death.

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



### 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter (µg/dL). The Centers for Disease Control and Prevention defines lead poisoning at or above 5 µg/dL.

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

### RADON

Radon is a naturally occurring gas that is radioactive and can cause lung cancer. Radon can leak into homes and other buildings through cracks in the foundation.

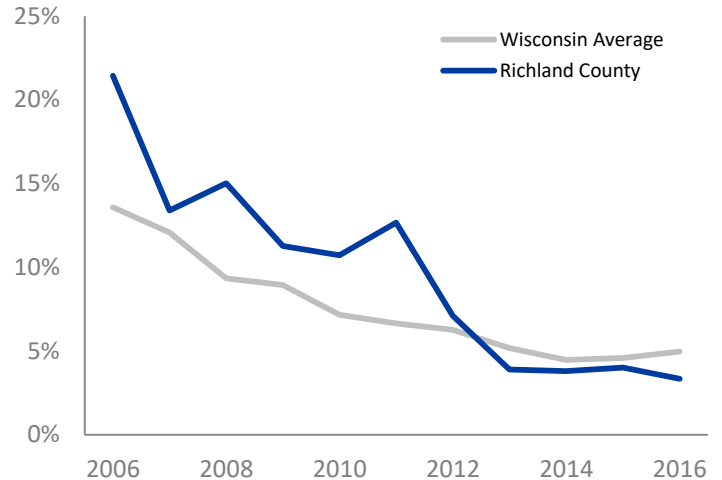
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

### CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD ≥5 µg/dL

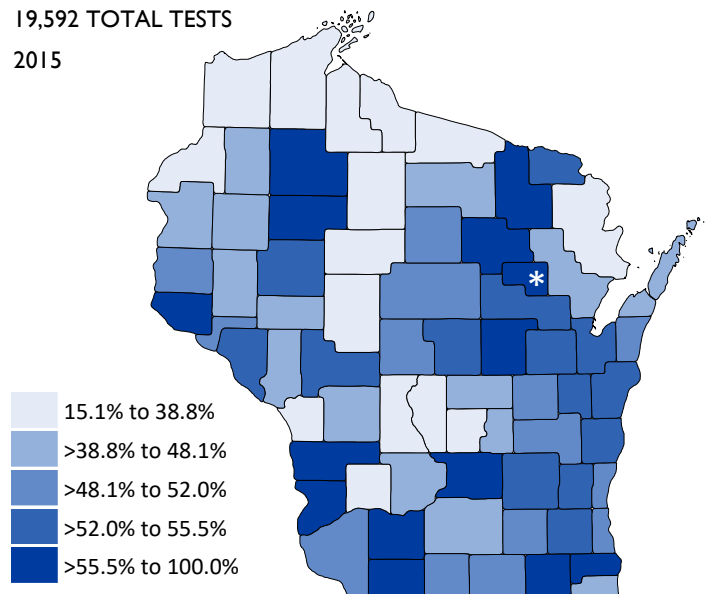


### RADON

PERCENT OF TESTS WITH RESULTS ≥4 pCi/L

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

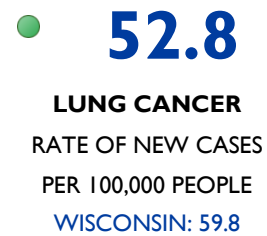
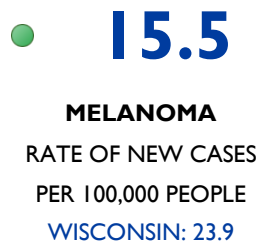
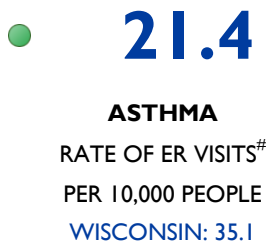




# HEALTH CONDITIONS RICHLAND COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.



● Above state value

● At or below state value

^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



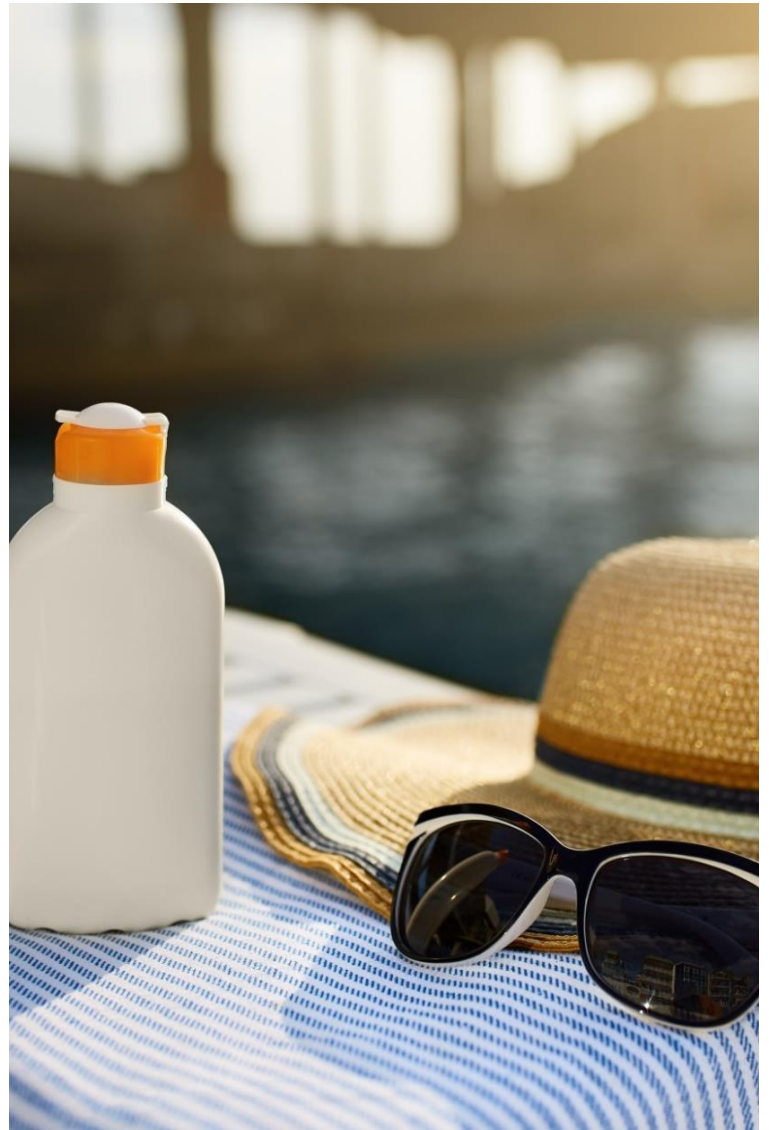
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

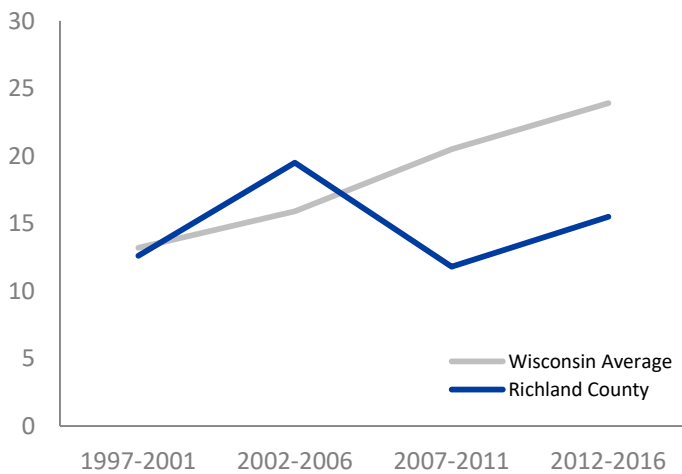
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



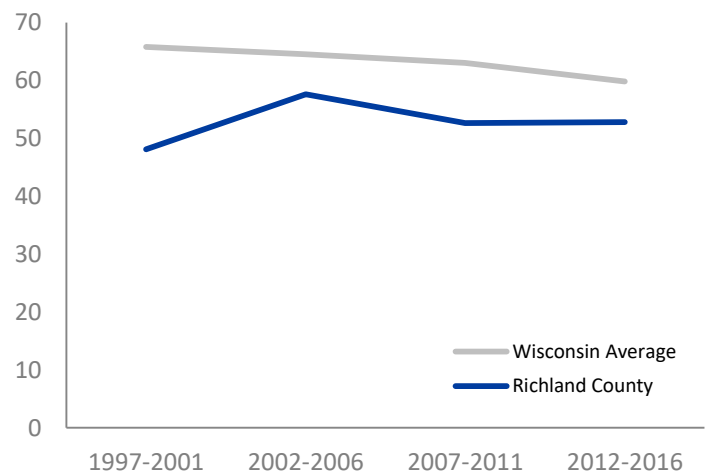
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE RICHLAND COUNTY

## BACKGROUND

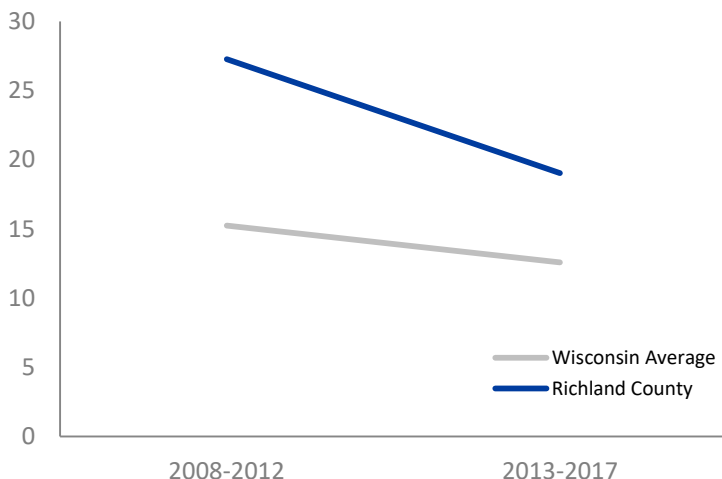
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **19.0**  
**HEAT STRESS**  
 RATE OF ER VISITS  
 PER 100,000 PEOPLE  
 WISCONSIN: 12.6

● **285.5**  
**LYME DISEASE**  
 RATE OF CASES  
 PER 100,000 PEOPLE  
 WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

## LYME DISEASE AT THE NATIONAL LEVEL

OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001



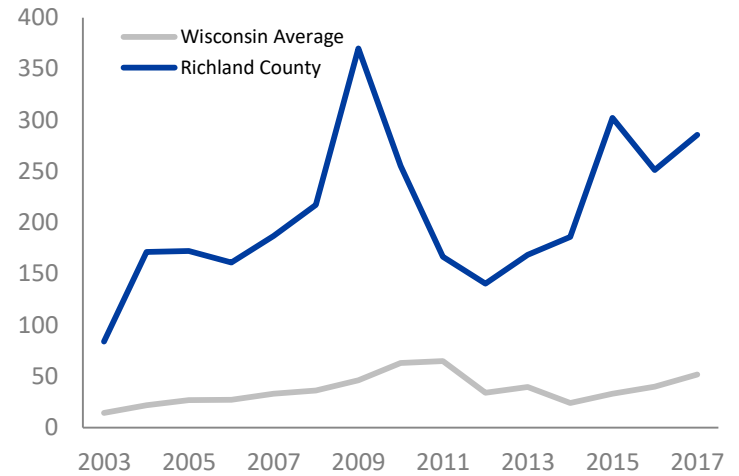
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results for nitrate that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results for arsenic that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Wisconsin Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

**Asthma:** Rate of emergency room visits related to asthma, age-adjusted per 10,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

Bureau of Environmental and Occupational Health  
Wisconsin Department of Health Services | Division of Public Health

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MAY 2019 | P-00719 (Rev. 05/2019)





# ROCK COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

Tracking data and resources can help you and your team develop rationale for funding requests. These data can help justify existing programs and show where work needs to be done.

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# ROCK COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

● 97.0% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

● 1.0 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

● 27.7% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

● 1.3% | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

● 10.8 | Rate of ER visits per 100,000 people  
Wisconsin: 7.9

### Childhood Lead Poisoning

● 7.5% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

● 50.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

● 50.0 | Rate of ER visits per 10,000 people<sup>#</sup>  
Wisconsin: 35.1

### Melanoma

● 24.2 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

● 70.4 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

● 17.9 | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

● 11.1 | Crude rate per 100,000 people  
Wisconsin: 51.7

● Above state value  
● At or below state value

\* Above state value preferred for this measure  
^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

Data details on next page



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2016

**Radon:** Percent of tests with results above EPA standard of 4 pCi/L

**Source:** Radon and Indoor Air Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH ROCK COUNTY

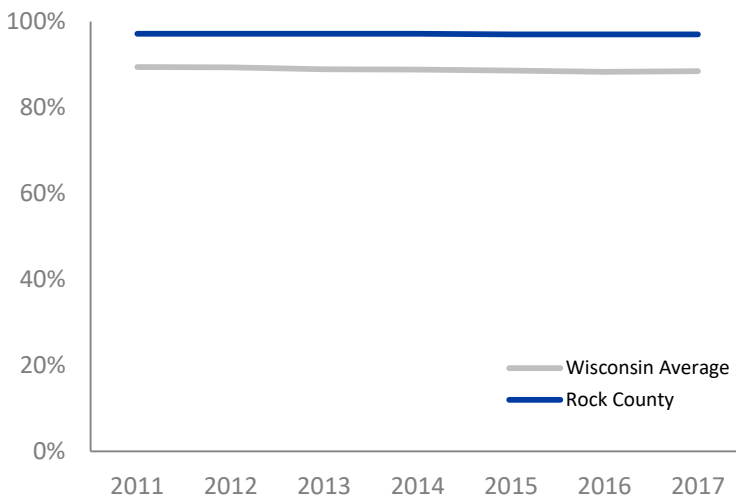
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **97.0%**  
**FLUORIDE**  
 PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
 WISCONSIN: 88.4%

● **1.0**  
**ALCOHOL OUTLET DENSITY**  
 RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
 WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
 ^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



## ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

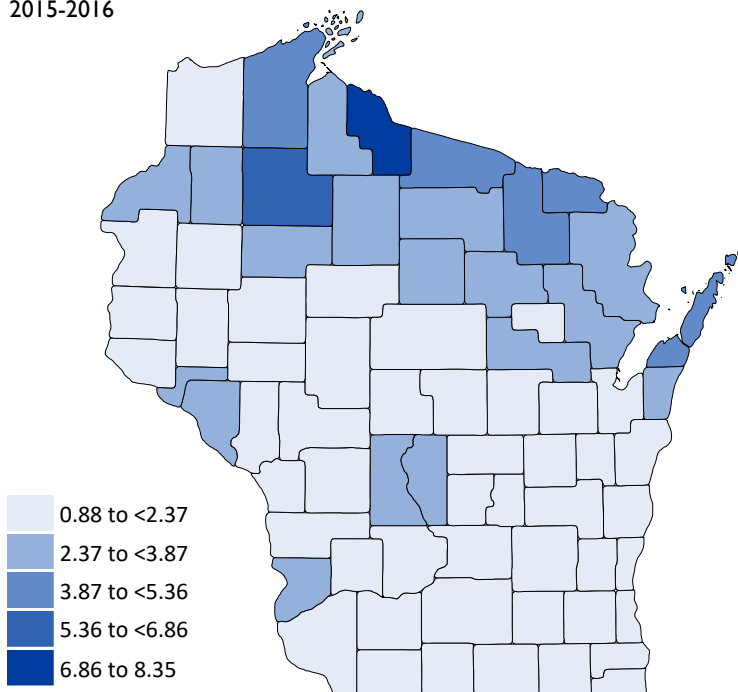
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

## ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



|                            |                                |
|----------------------------|--------------------------------|
| <b>327</b>                 | <b>16,948</b>                  |
| LICENSES IN<br>ROCK COUNTY | TOTAL LICENSES IN<br>WISCONSIN |





# PRIVATE WATER QUALITY ROCK 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 displayed in this report. Users can find public water quality data on our data portal.

● **27.7%**

**NITRATE**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 mg/L  
**WISCONSIN: 11.0%**

● **1.3%**

**ARSENIC**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 µg/L  
**WISCONSIN: 6.0%**

● Above state value    ● At or below state value    ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
 1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS ROCK 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.

● **10.8**  
**CARBON MONOXIDE POISONING**  
 RATE OF ER VISITS RELATED TO CO POISONING PER 100,000  
 WISCONSIN: 7.9

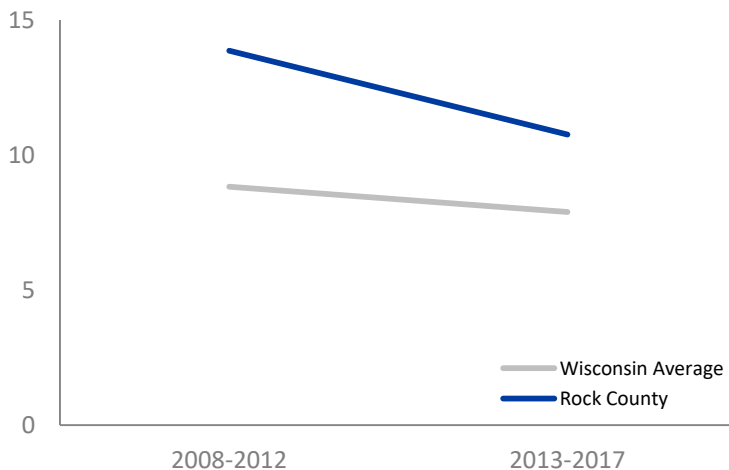
● **7.5%**  
**CHILDHOOD LEAD POISONING**  
 PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$   
 WISCONSIN: 5.0%

● **50.0%**  
**RADON**  
 PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$   
 WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

Carbon monoxide (CO) poisoning prevents oxygen from getting to the body, which can damage tissue and even cause death.

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



## 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter ( $\mu\text{g}/\text{dL}$ ). The Centers for Disease Control and Prevention defines lead poisoning at or above 5  $\mu\text{g}/\text{dL}$ .

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

## RADON

Radon is a naturally occurring gas that is radioactive and can cause lung cancer. Radon can leak into homes and other buildings through cracks in the foundation.

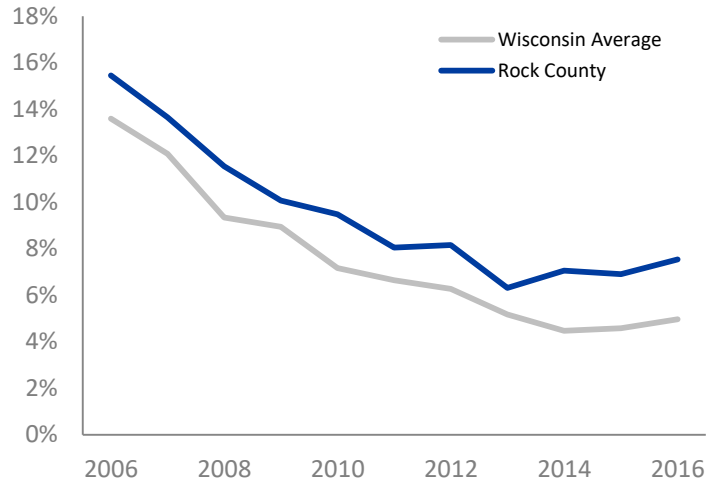
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

## CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g}/\text{dL}$

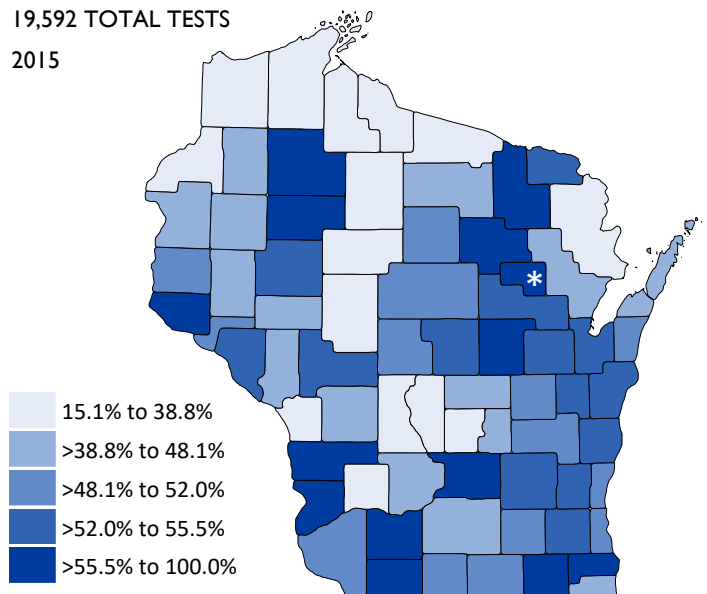


## RADON

PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi}/\text{L}$

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

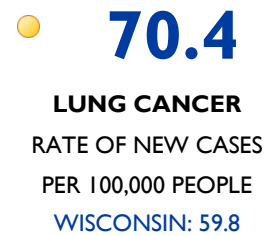
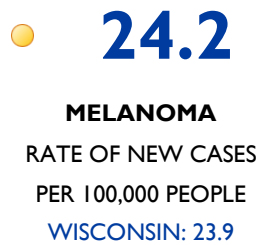
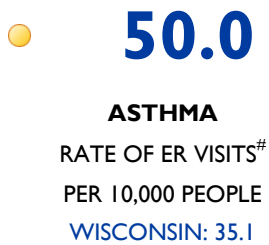




# HEALTH CONDITIONS ROCK COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.



● Above state value

● At or below state value

^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



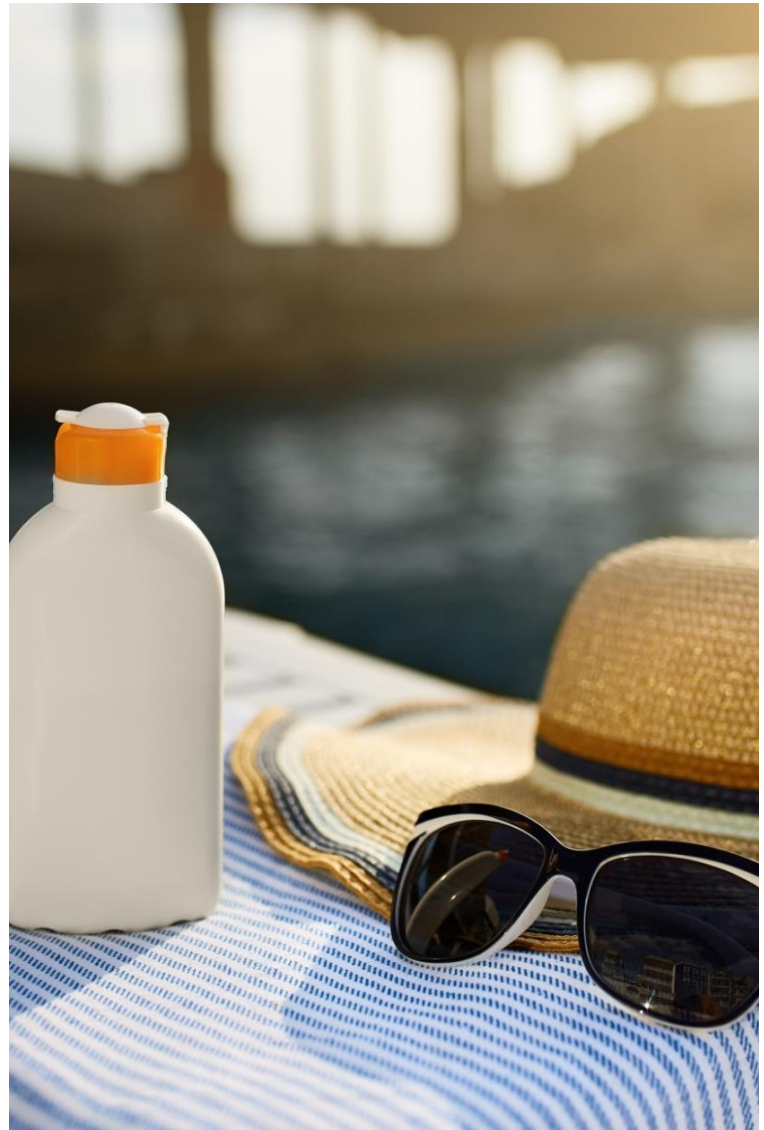
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

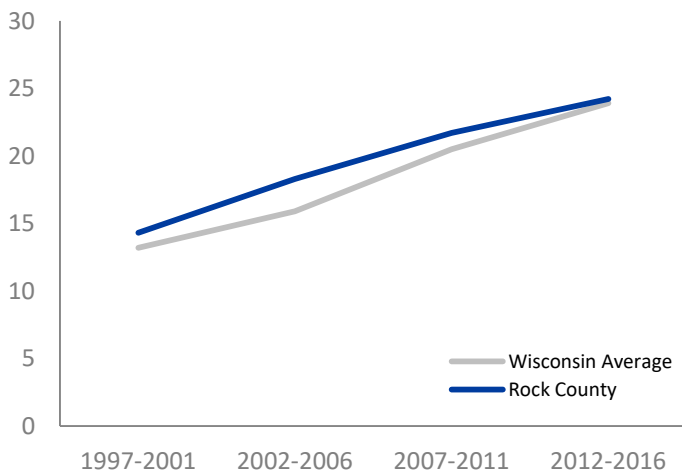
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



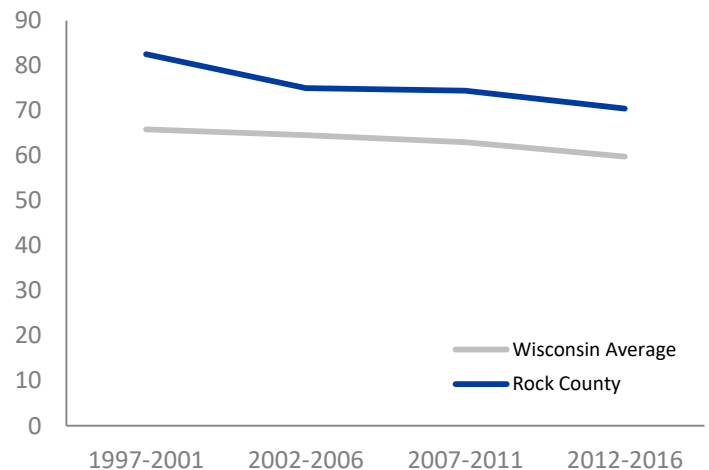
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE ROCK COUNTY

## BACKGROUND

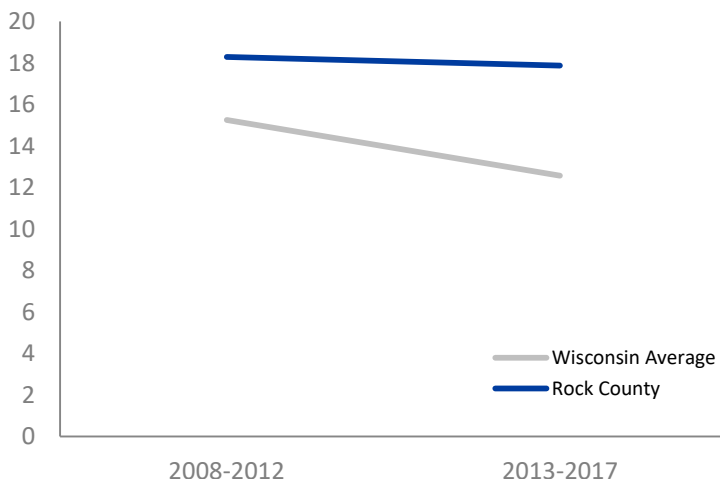
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **17.9**  
**HEAT STRESS**  
 RATE OF ER VISITS  
 PER 100,000 PEOPLE  
 WISCONSIN: 12.6

● **11.1**  
**LYME DISEASE**  
 RATE OF CASES  
 PER 100,000 PEOPLE  
 WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

## LYME DISEASE AT THE NATIONAL LEVEL

OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001



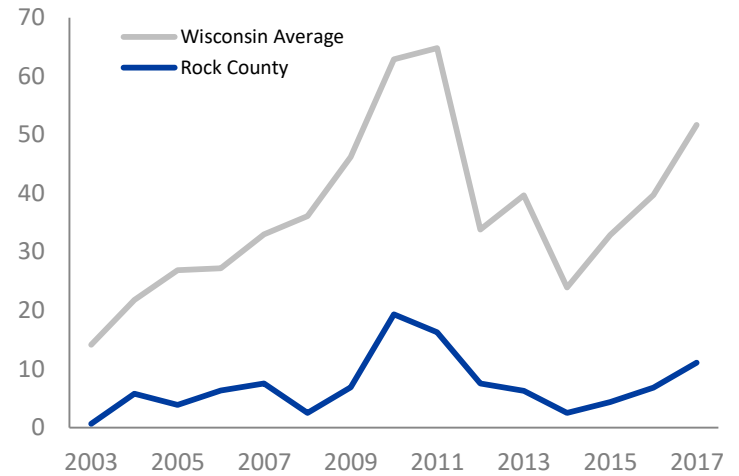
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results for nitrate that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results for arsenic that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Wisconsin Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

**Asthma:** Rate of emergency room visits related to asthma, age-adjusted per 10,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

Bureau of Environmental and Occupational Health  
Wisconsin Department of Health Services | Division of Public Health

[dhstracking@wi.gov](mailto:dhstracking@wi.gov) | [dhs.wisconsin.gov/epht](https://dhs.wisconsin.gov/epht)  
MAY 2019 | P-00719 (Rev. 05/2019)





# RUSK COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

Tracking data and resources can help you and your team develop rationale for funding requests. These data can help justify existing programs and show where work needs to be done.

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

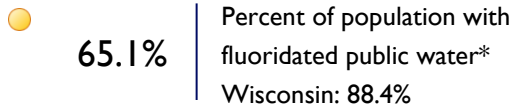
# RUSK COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE

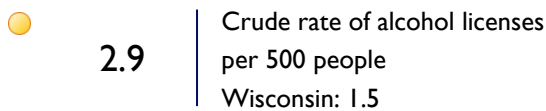


## COMMUNITY HEALTH

### Fluoride

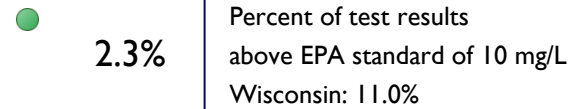


### Alcohol Outlet Density

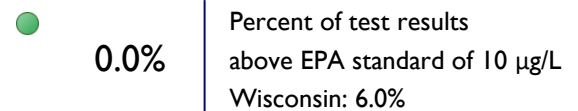


## PRIVATE WATER QUALITY

### Nitrate

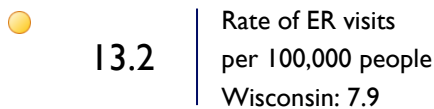


### Arsenic

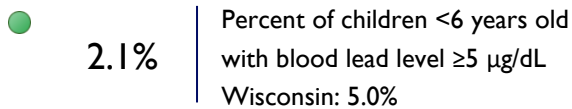


## HOME HAZARDS

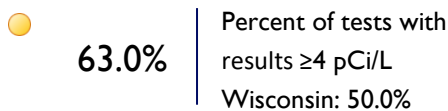
### Carbon Monoxide Poisoning



### Childhood Lead Poisoning

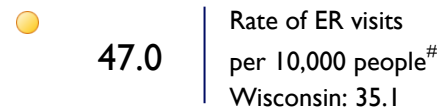


### Radon

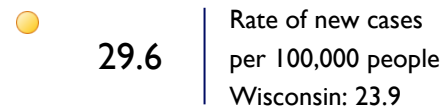


## HEALTH CONDITIONS

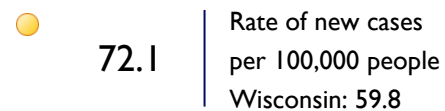
### Asthma



### Melanoma

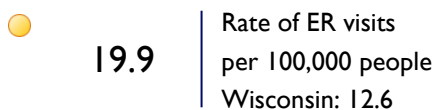


### Lung Cancer

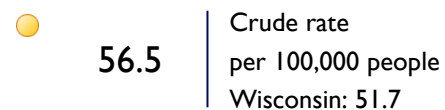


## CLIMATE

### Heat Stress



### Lyme Disease



- Above state value
- At or below state value

- \* Above state value preferred for this measure
- ^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

[Data details on next page](#)



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2016

**Radon:** Percent of tests with results above EPA standard of 4 pCi/L

**Source:** Radon and Indoor Air Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH RUSK COUNTY

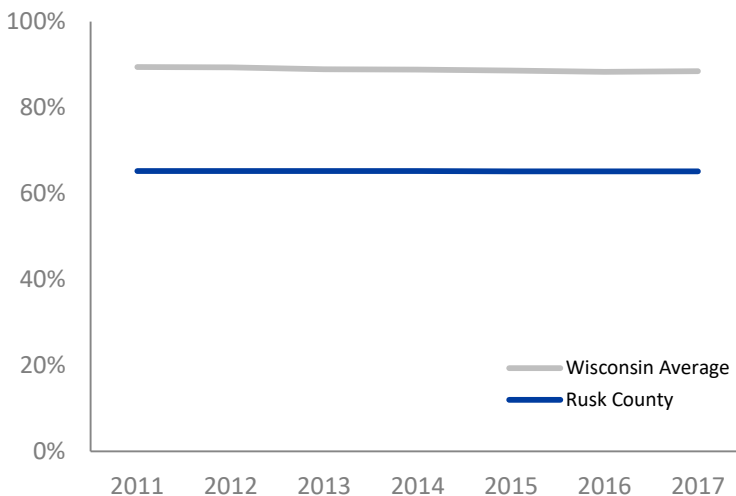
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **65.1%**

**FLUORIDE**  
PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
WISCONSIN: 88.4%

● **2.9**

**ALCOHOL OUTLET DENSITY**  
RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



## ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

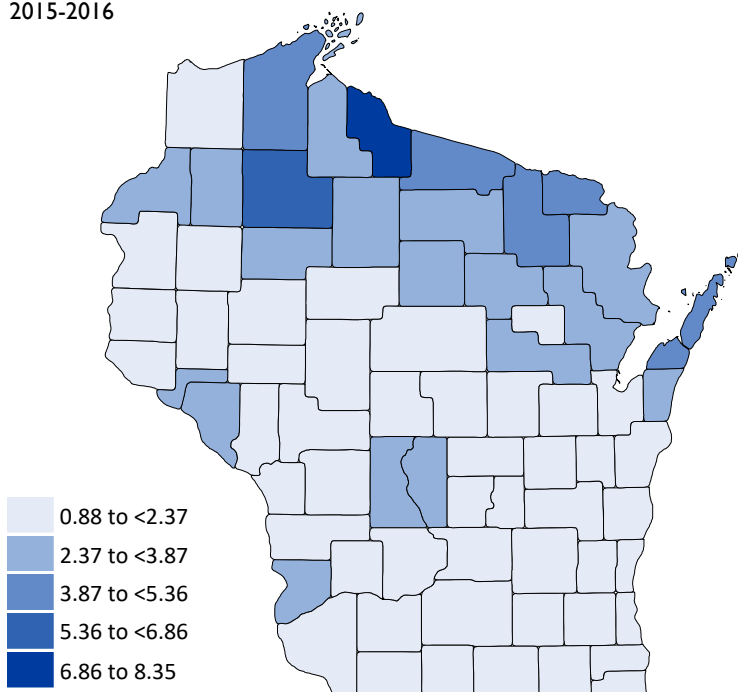
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

## ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



# 81

LICENSES IN  
RUSK COUNTY

# 16,948

TOTAL LICENSES IN  
WISCONSIN





# PRIVATE WATER QUALITY RUSK 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 displayed in this report. Users can find public water quality data on our data portal.

● **2.3%**

**NITRATE**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 mg/L  
**WISCONSIN: 11.0%**

● **0.0%**

**ARSENIC**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 µg/L  
**WISCONSIN: 6.0%**

● Above state value    ● At or below state value    ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
 1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS RUSK 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.

● **13.2**  
**CARBON MONOXIDE POISONING**  
 RATE OF ER VISITS RELATED TO CO POISONING PER 100,000  
 WISCONSIN: 7.9

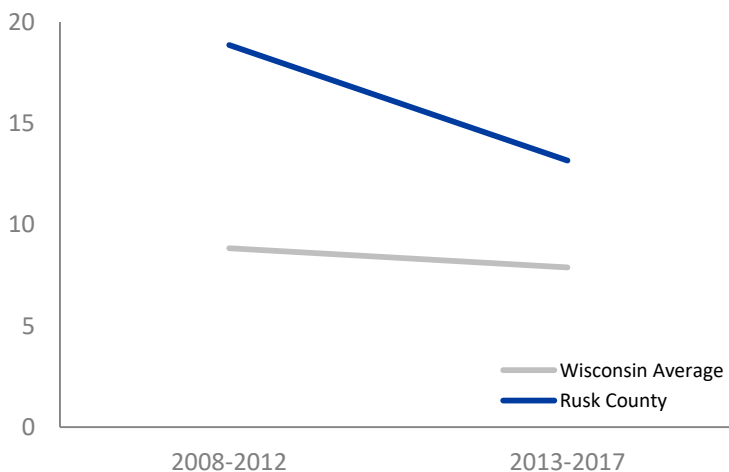
● **2.1%**  
**CHILDHOOD LEAD POISONING**  
 PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$   
 WISCONSIN: 5.0%

● **63.0%**  
**RADON**  
 PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$   
 WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

Carbon monoxide (CO) poisoning prevents oxygen from getting to the body, which can damage tissue and even cause death.

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



## 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter ( $\mu\text{g}/\text{dL}$ ). The Centers for Disease Control and Prevention defines lead poisoning at or above 5  $\mu\text{g}/\text{dL}$ .

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

## RADON

Radon is a naturally occurring gas that is radioactive and can cause lung cancer. Radon can leak into homes and other buildings through cracks in the foundation.

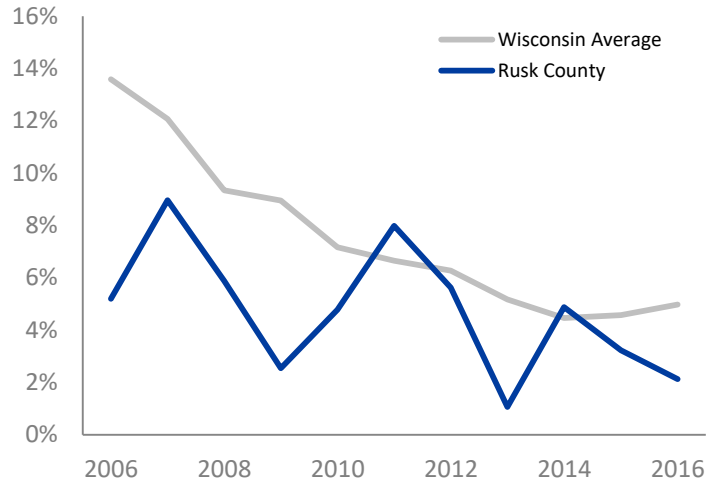
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

## CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g}/\text{dL}$

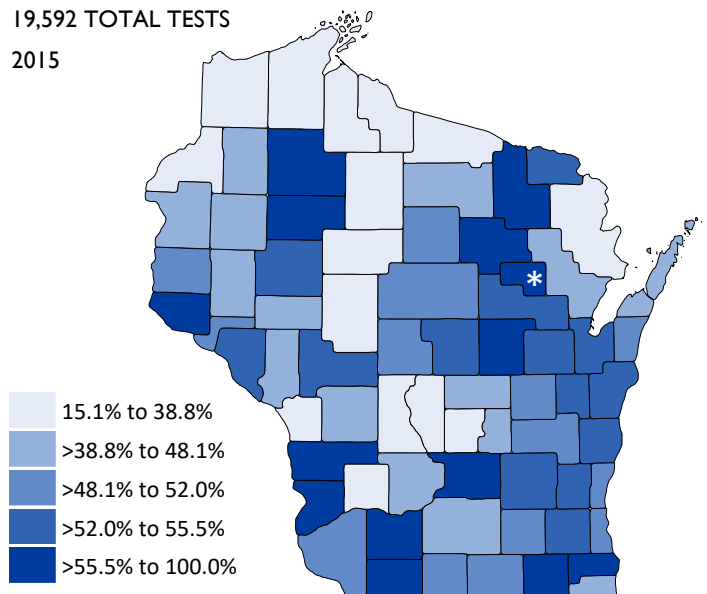


## RADON

PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi}/\text{L}$

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

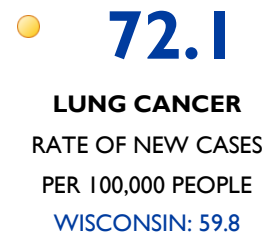
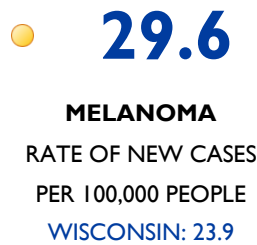
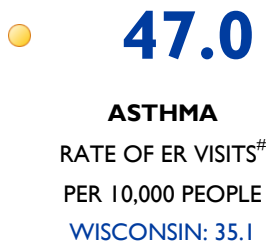




# HEALTH CONDITIONS RUSK COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.

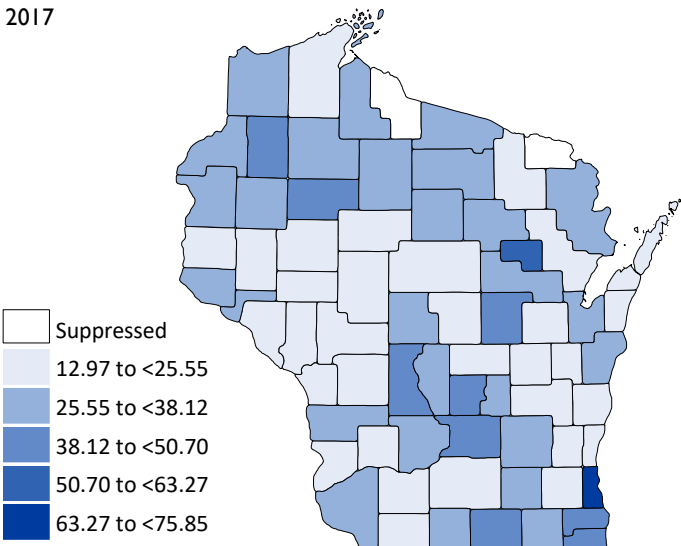


- Above state value
- At or below state value
- ^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



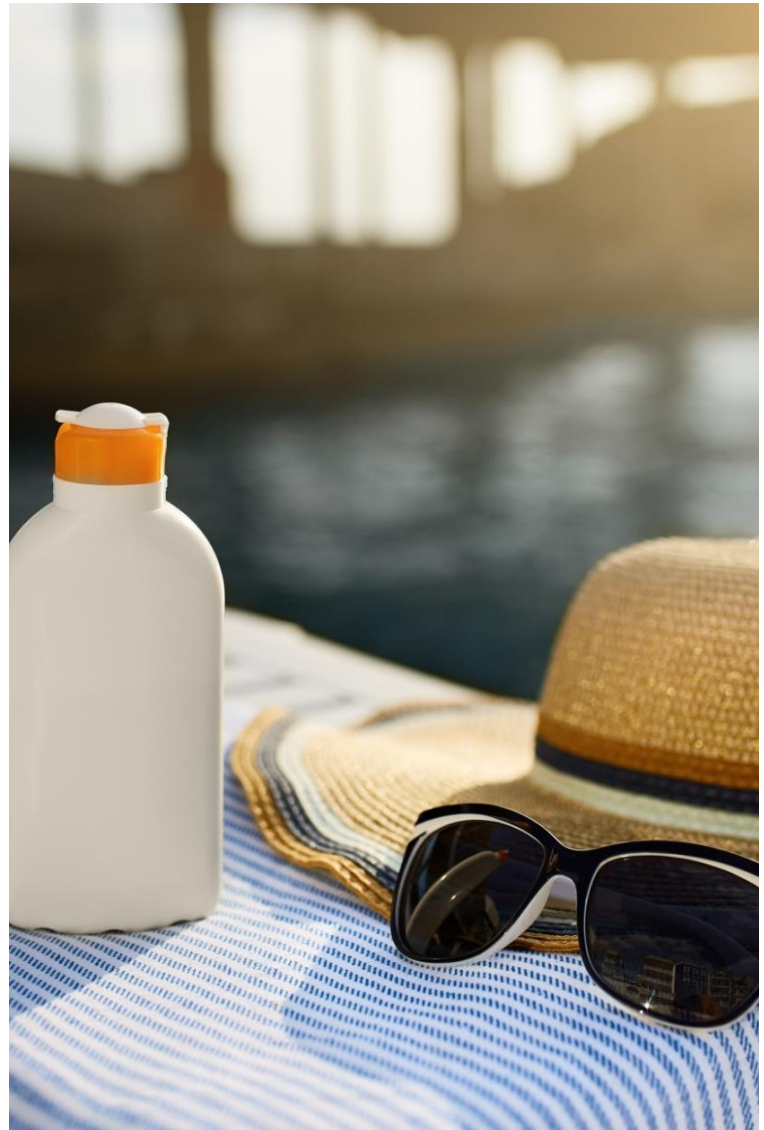
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

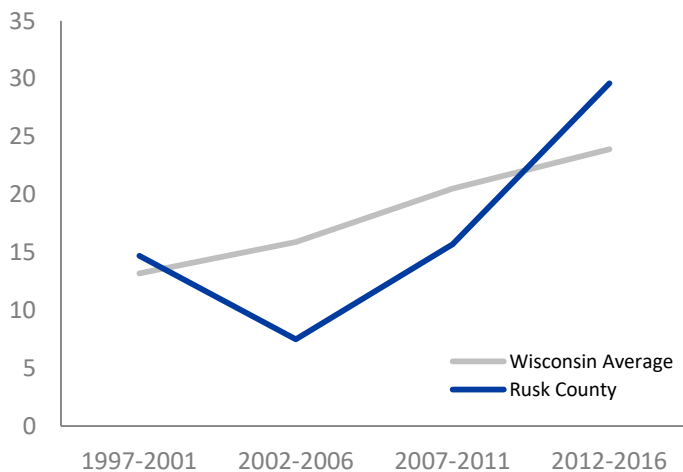
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



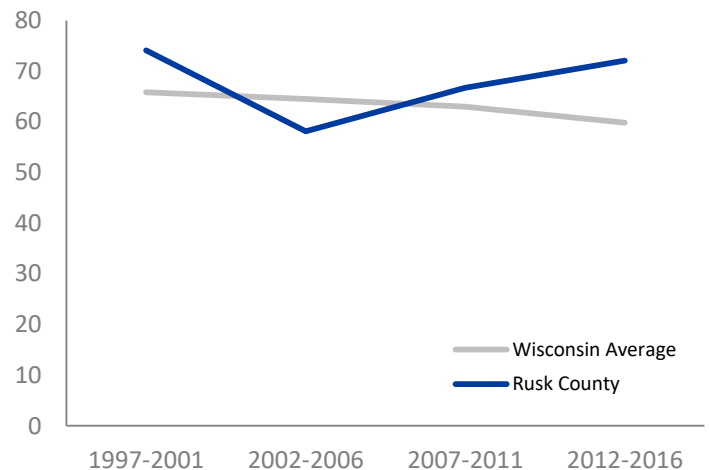
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE RUSK COUNTY

## BACKGROUND

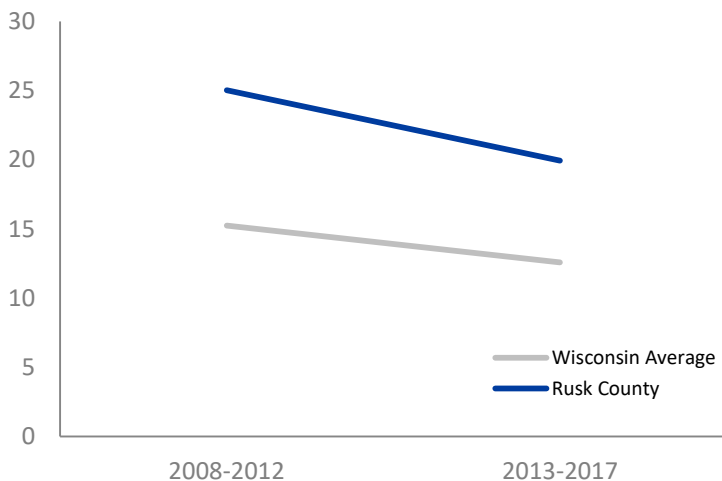
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **19.9**  
**HEAT STRESS**  
 RATE OF ER VISITS  
 PER 100,000 PEOPLE  
 WISCONSIN: 12.6

● **56.5**  
**LYME DISEASE**  
 RATE OF CASES  
 PER 100,000 PEOPLE  
 WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

## LYME DISEASE AT THE NATIONAL LEVEL

OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001



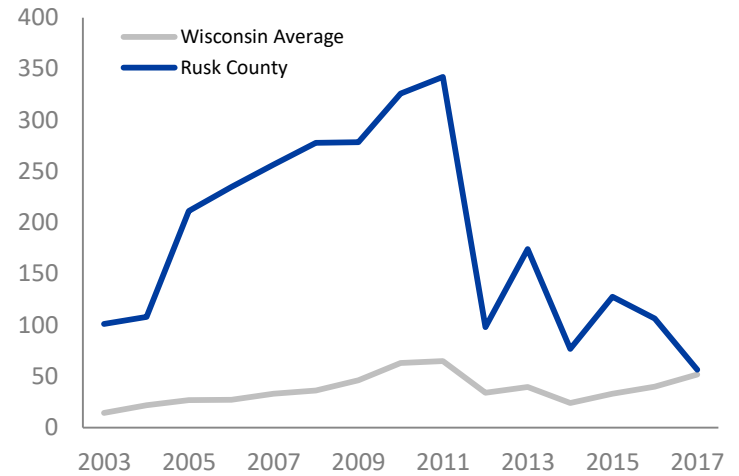
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results for nitrate that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results for arsenic that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Wisconsin Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

**Asthma:** Rate of emergency room visits related to asthma, age-adjusted per 10,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

Bureau of Environmental and Occupational Health  
Wisconsin Department of Health Services | Division of Public Health

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MAY 2019 | P-00719 (Rev. 05/2019)





# SAUK COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

Tracking data and resources can help you and your team develop rationale for funding requests. These data can help justify existing programs and show where work needs to be done.

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

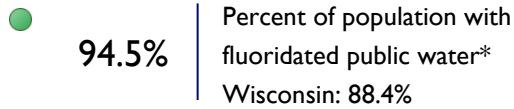
# SAUK COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE

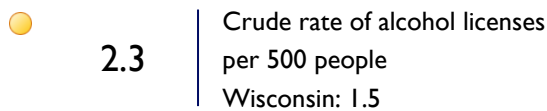


## COMMUNITY HEALTH

### Fluoride

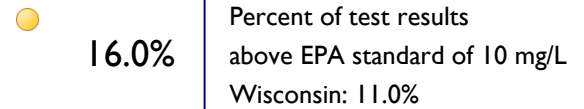


### Alcohol Outlet Density

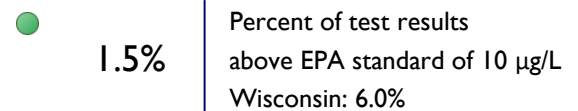


## PRIVATE WATER QUALITY

### Nitrate

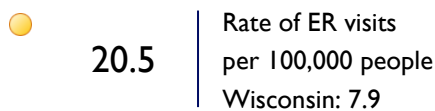


### Arsenic

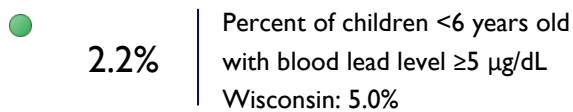


## HOME HAZARDS

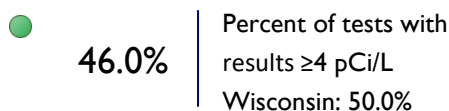
### Carbon Monoxide Poisoning



### Childhood Lead Poisoning

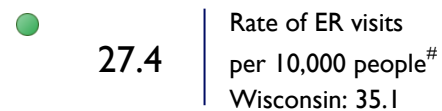


### Radon

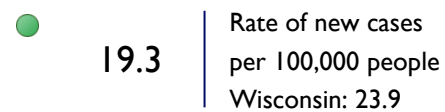


## HEALTH CONDITIONS

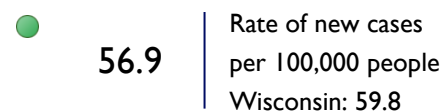
### Asthma



### Melanoma

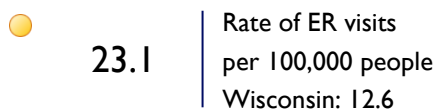


### Lung Cancer

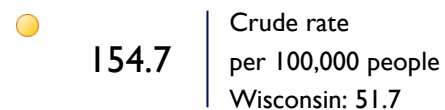


## CLIMATE

### Heat Stress



### Lyme Disease



- Above state value
- At or below state value

- \* Above state value preferred for this measure
- ^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

[Data details on next page](#)



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2016

**Radon:** Percent of tests with results above EPA standard of 4 pCi/L

**Source:** Radon and Indoor Air Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH SAUK COUNTY

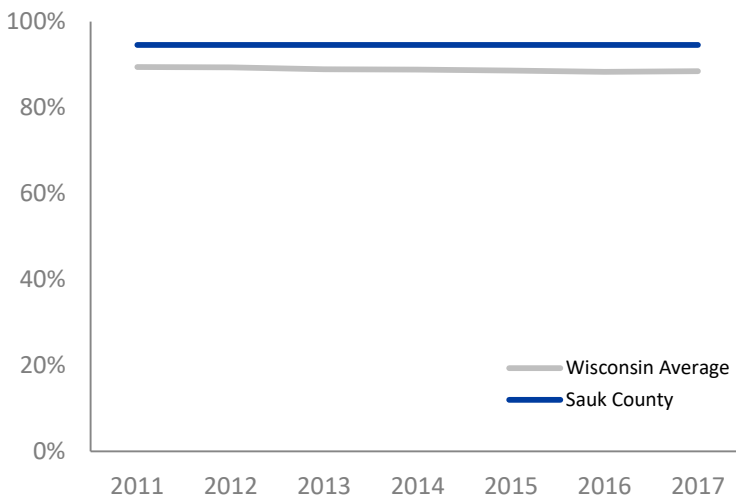
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **94.5%**  
**FLUORIDE**  
 PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
 WISCONSIN: 88.4%

● **2.3**  
**ALCOHOL OUTLET DENSITY**  
 RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
 WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
 ^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



## ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

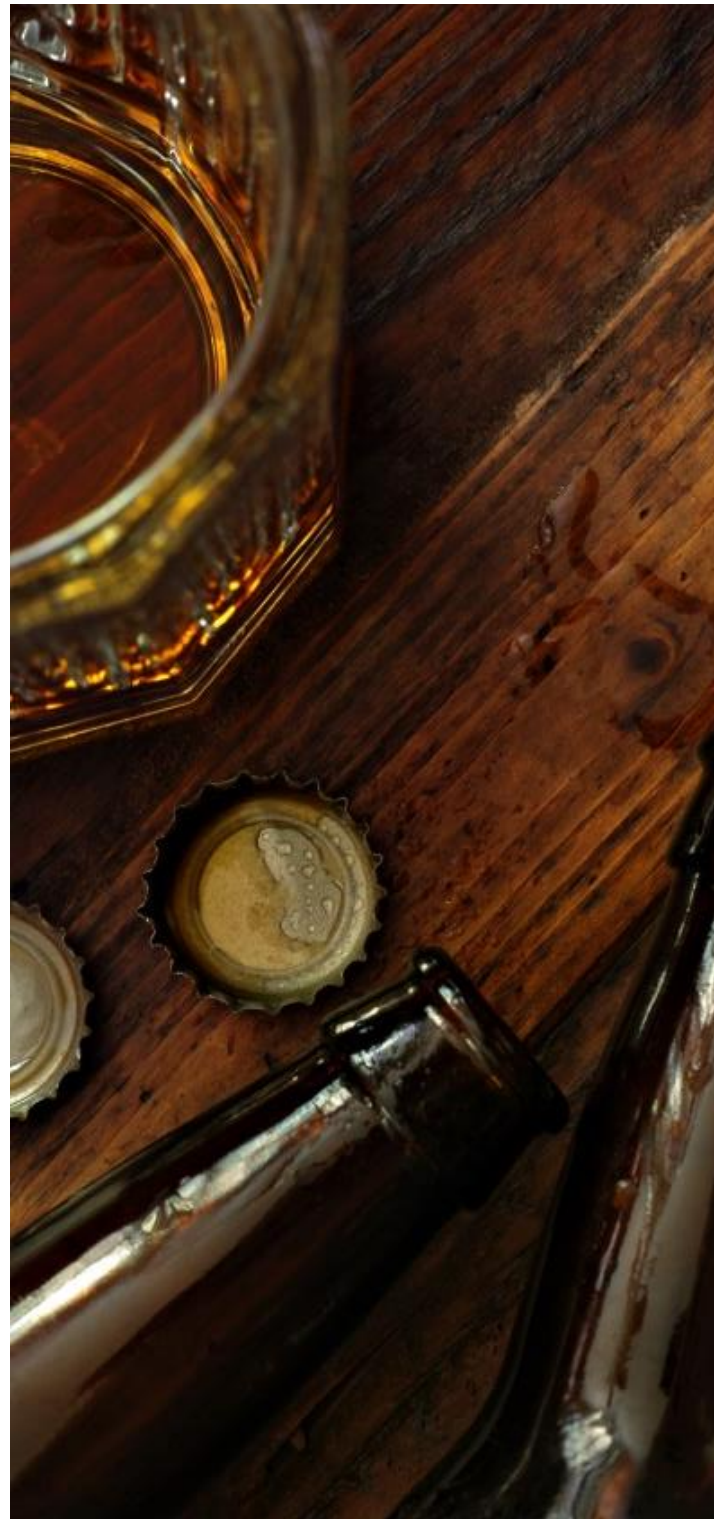
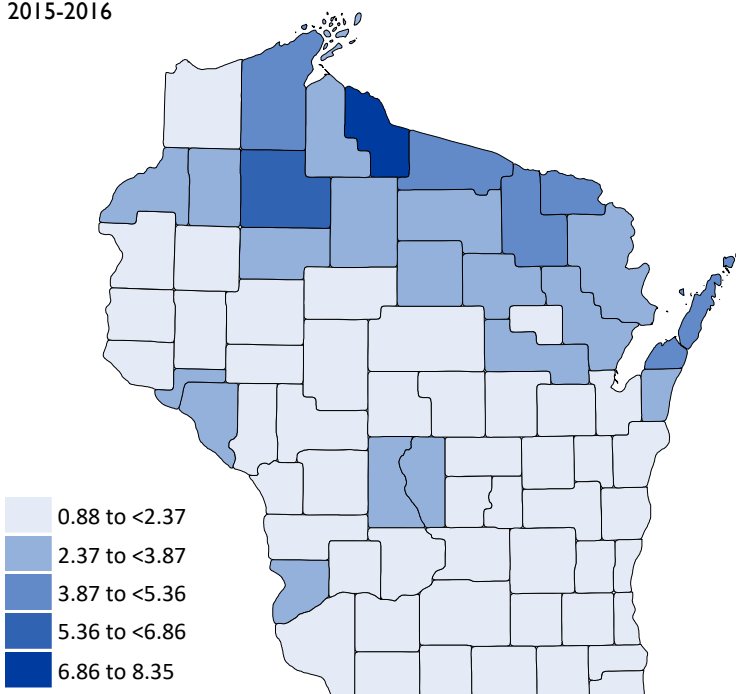
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

## ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



|                            |                                |
|----------------------------|--------------------------------|
| <b>285</b>                 | <b>16,948</b>                  |
| LICENSES IN<br>SAUK COUNTY | TOTAL LICENSES IN<br>WISCONSIN |





# PRIVATE WATER QUALITY SAUK 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 displayed in this report. Users can find public water quality data on our data portal.

● **16.0%**

**NITRATE**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 mg/L  
**WISCONSIN: 11.0%**

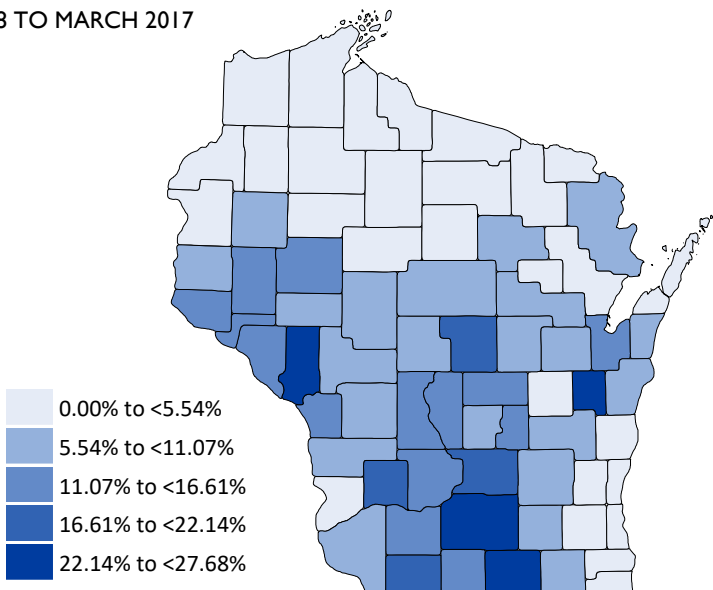
● **1.5%**

**ARSENIC**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 µg/L  
**WISCONSIN: 6.0%**

● Above state value   ● At or below state value   ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
 1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS SAUK 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.

● **20.5**  
**CARBON MONOXIDE POISONING**  
 RATE OF ER VISITS RELATED TO CO POISONING PER 100,000  
 WISCONSIN: 7.9

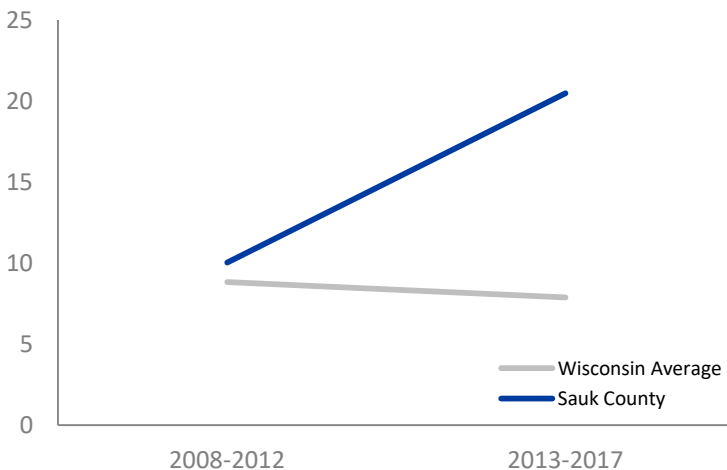
● **2.2%**  
**CHILDHOOD LEAD POISONING**  
 PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$   
 WISCONSIN: 5.0%

● **46.0%**  
**RADON**  
 PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$   
 WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

Carbon monoxide (CO) poisoning prevents oxygen from getting to the body, which can damage tissue and even cause death.

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



## 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter ( $\mu\text{g}/\text{dL}$ ). The Centers for Disease Control and Prevention defines lead poisoning at or above 5  $\mu\text{g}/\text{dL}$ .

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

## RADON

Radon is a naturally occurring gas that is radioactive and can cause lung cancer. Radon can leak into homes and other buildings through cracks in the foundation.

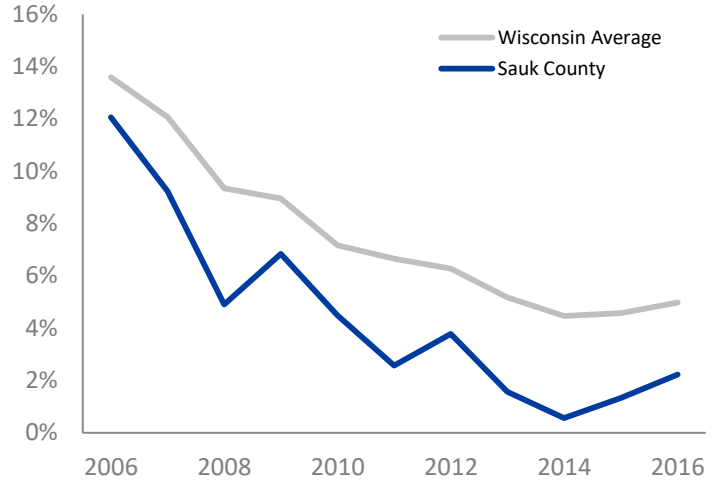
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

## CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g}/\text{dL}$

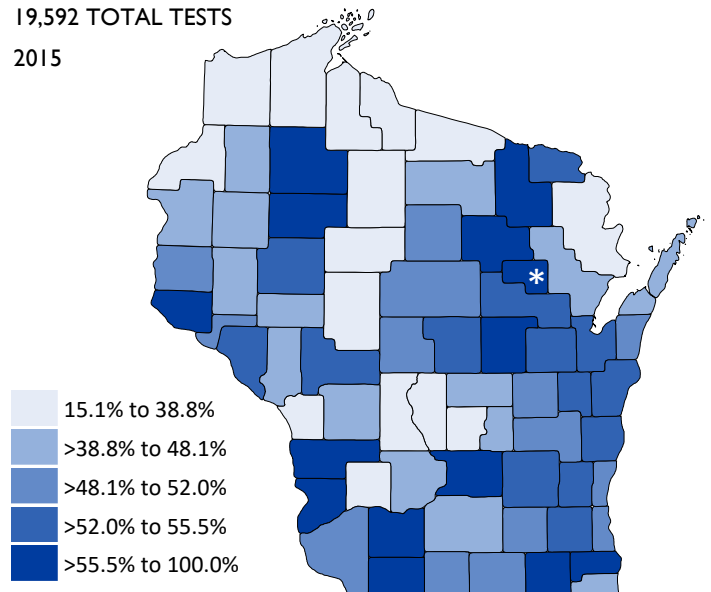


## RADON

PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi}/\text{L}$

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

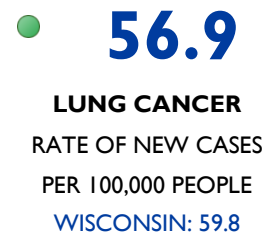
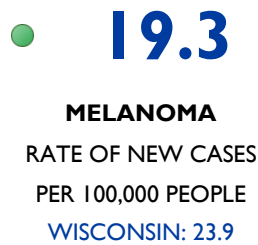
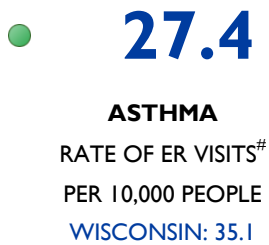




# HEALTH CONDITIONS SAUK COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.



● Above state value

● At or below state value

^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



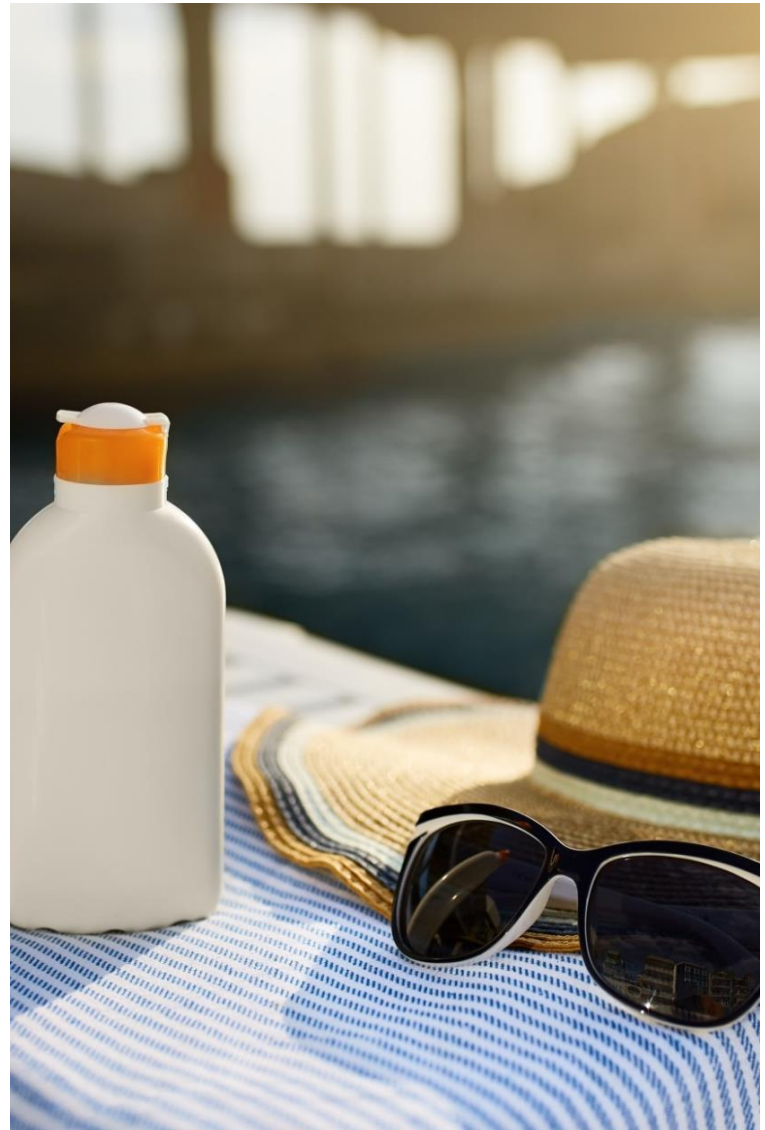
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

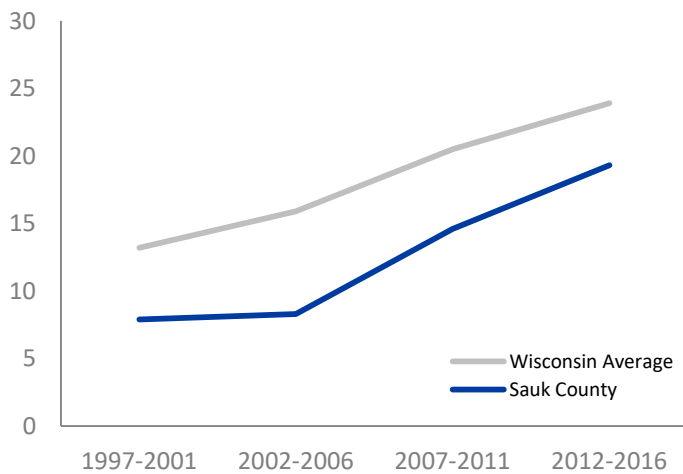
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



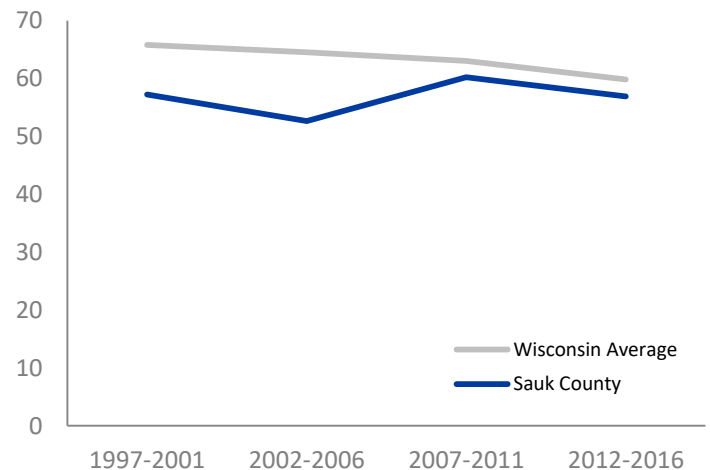
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE SAUK COUNTY

## BACKGROUND

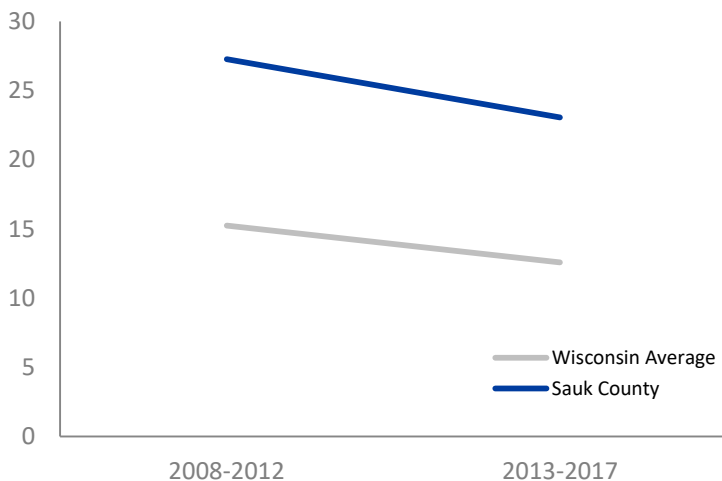
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **23.1**

**HEAT STRESS**  
RATE OF ER VISITS  
PER 100,000 PEOPLE  
WISCONSIN: 12.6

● **154.7**

**LYME DISEASE**  
RATE OF CASES  
PER 100,000 PEOPLE  
WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

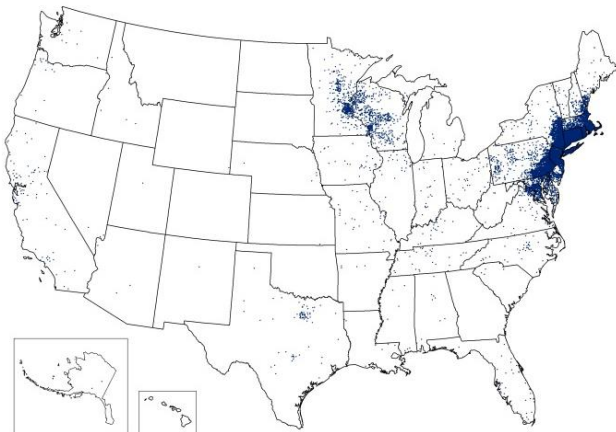
The criteria for reporting Lyme disease were revised again in 2012 to require reporting and follow-up only for cases with an erythema migrans (EM) rash. To compensate for this change, epidemiologists used a statistical method to estimate the true number of cases based on the number of total laboratory reports for each year since 2012.

## LYME DISEASE AT THE NATIONAL LEVEL

OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001



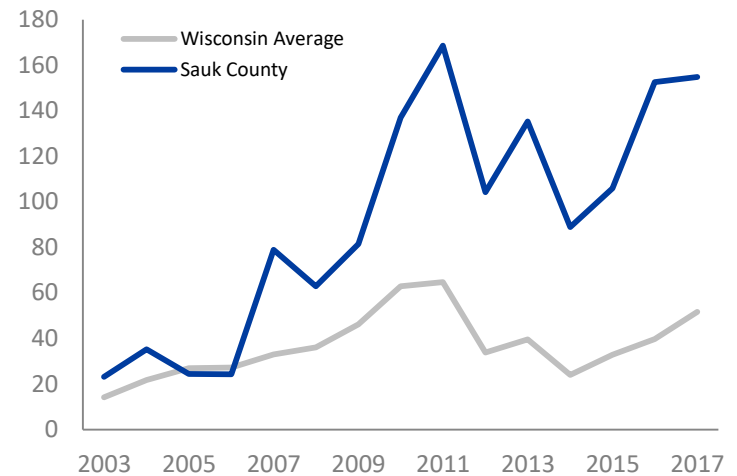
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results for nitrate that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results for arsenic that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Wisconsin Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

**Asthma:** Rate of emergency room visits related to asthma, age-adjusted per 10,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

Bureau of Environmental and Occupational Health  
Wisconsin Department of Health Services | Division of Public Health

[dhstracking@wi.gov](mailto:dhstracking@wi.gov) | [dhs.wisconsin.gov/epht](https://dhs.wisconsin.gov/epht)  
MAY 2019 | P-00719 (Rev. 05/2019)





# SAWYER COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

Tracking data and resources can help you and your team develop rationale for funding requests. These data can help justify existing programs and show where work needs to be done.

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# SAWYER COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

● 65.3% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

● 5.5 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

● 1.1% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

● 1.1% | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

● 9.6 | Rate of ER visits per 100,000 people  
Wisconsin: 7.9

### Childhood Lead Poisoning

● 0.0% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

● 56.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

● 31.8 | Rate of ER visits per 10,000 people<sup>#</sup>  
Wisconsin: 35.1

### Melanoma

● 17.1 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

● 76.6 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

● 21.3 | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

● 127.9 | Crude rate per 100,000 people  
Wisconsin: 51.7

● Above state value  
● At or below state value

\* Above state value preferred for this measure  
^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

[Data details on next page](#)



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2016

**Radon:** Percent of tests with results above EPA standard of 4 pCi/L

**Source:** Radon and Indoor Air Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH SAWYER COUNTY

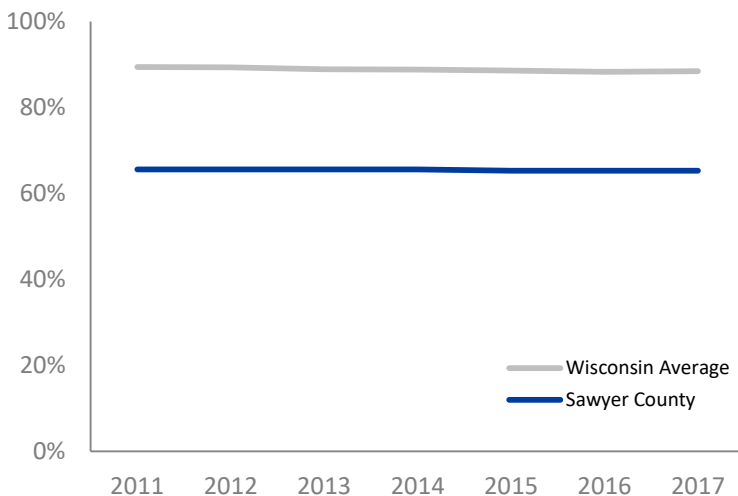
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **65.3%**

**FLUORIDE**  
PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
WISCONSIN: 88.4%

● **5.5**

**ALCOHOL OUTLET DENSITY**  
RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



## ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

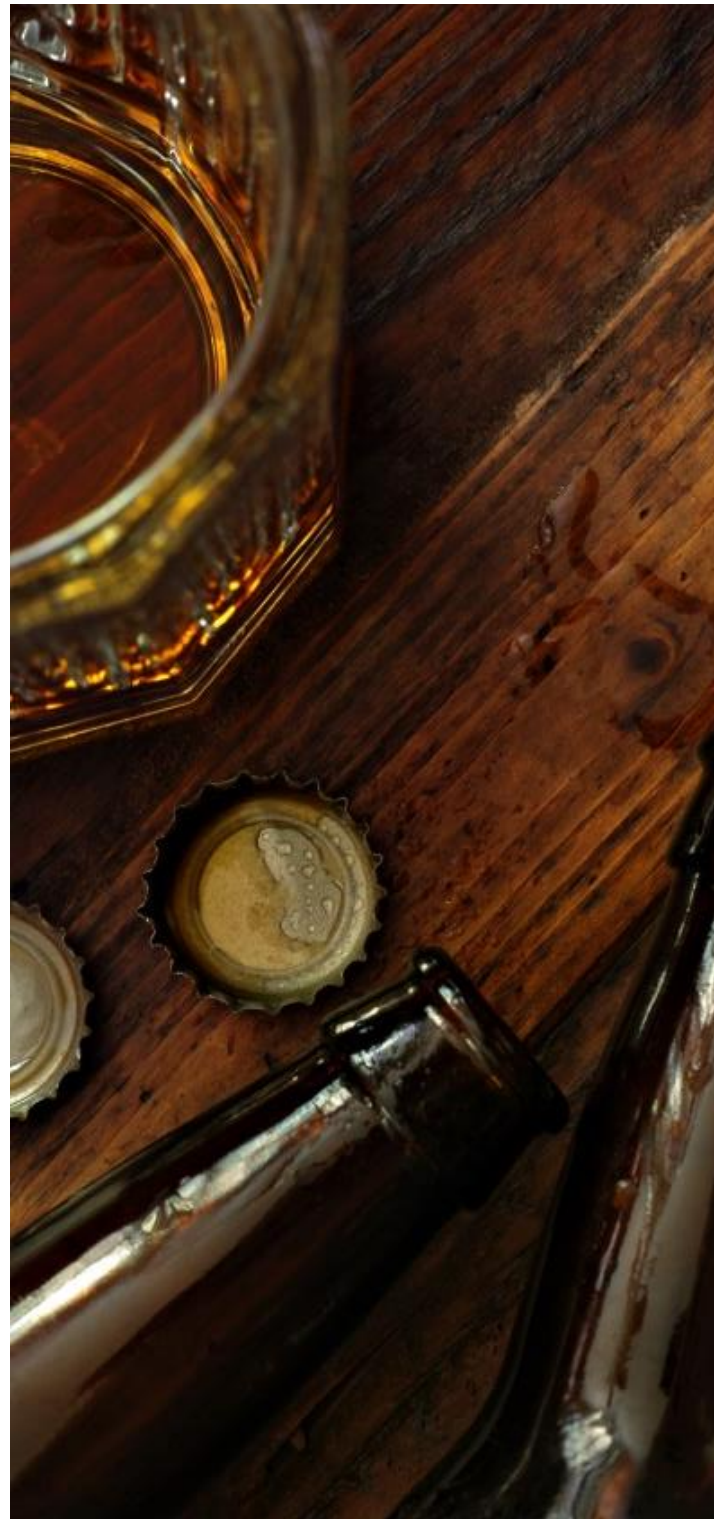
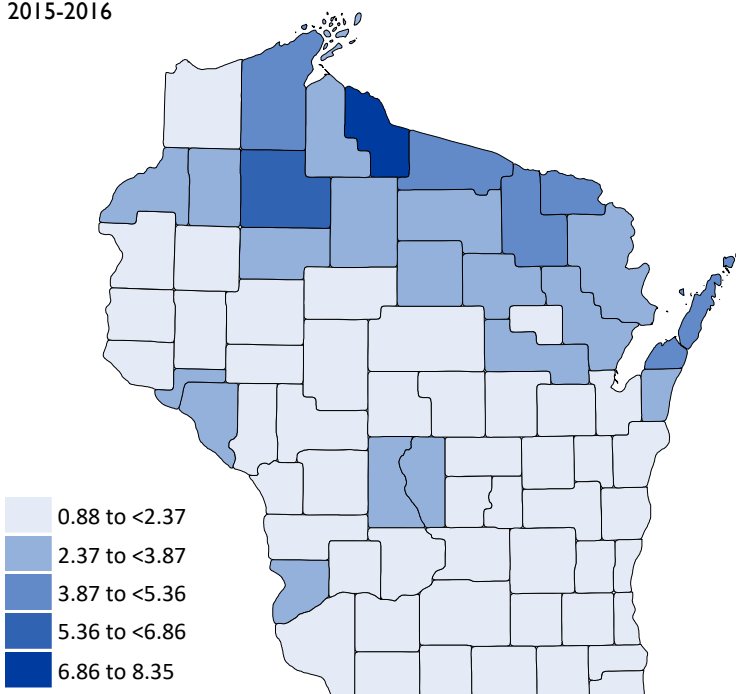
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

## ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



**179**  
LICENSES IN  
SAWYER COUNTY

**16,948**  
TOTAL LICENSES IN  
WISCONSIN





# PRIVATE WATER QUALITY SAWYER 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 displayed in this report. Users can find public water quality data on our data portal.

● **1.1%**

**NITRATE  
IN PRIVATE WELLS**  
PERCENT OF TEST RESULTS  
ABOVE EPA STANDARD  
OF 10 mg/L  
WISCONSIN: 11.0%

● **1.1%**

**ARSENIC  
IN PRIVATE WELLS**  
PERCENT OF TEST RESULTS  
ABOVE EPA STANDARD  
OF 10 µg/L  
WISCONSIN: 6.0%

● Above state value   ● At or below state value   ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS SAWYER 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.

● **9.6**

**CARBON MONOXIDE POISONING**

RATE OF ER VISITS RELATED TO CO POISONING PER 100,000

WISCONSIN: 7.9

● **0.0%**

**CHILDHOOD LEAD POISONING**

PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$

WISCONSIN: 5.0%

● **56.0%**

**RADON**

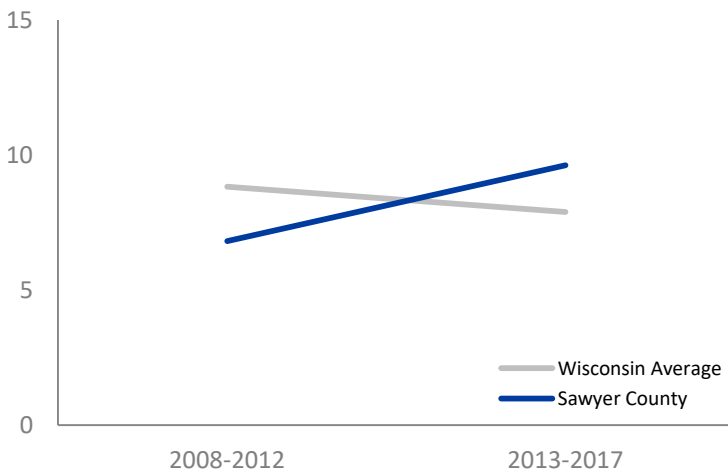
PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$

WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

Carbon monoxide (CO) poisoning prevents oxygen from getting to the body, which can damage tissue and even cause death.

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



## 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter ( $\mu\text{g}/\text{dL}$ ). The Centers for Disease Control and Prevention defines lead poisoning at or above 5  $\mu\text{g}/\text{dL}$ .

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

## RADON

Radon is a naturally occurring gas that is radioactive and can cause lung cancer. Radon can leak into homes and other buildings through cracks in the foundation.

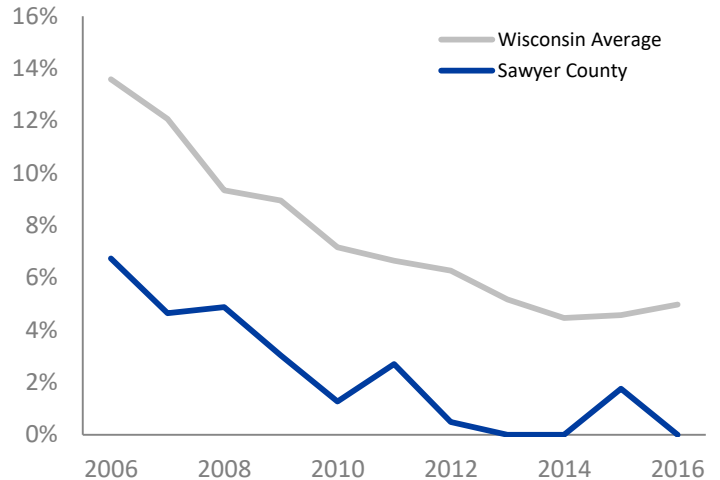
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

## CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g}/\text{dL}$

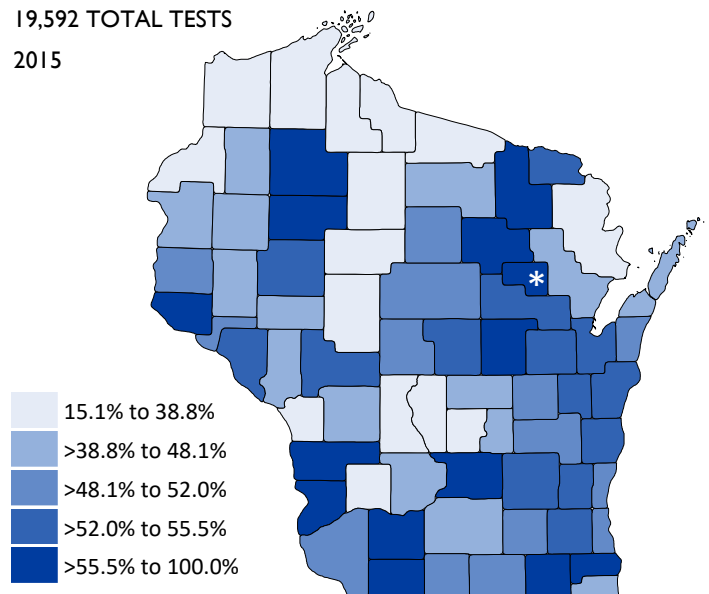


## RADON

PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

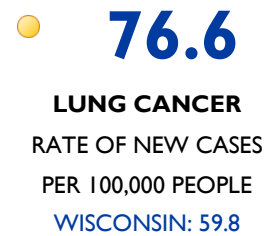
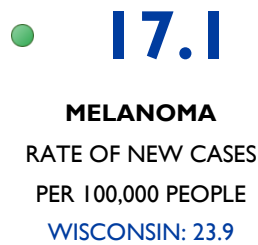
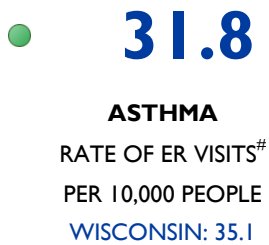




# HEALTH CONDITIONS SAWYER COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.

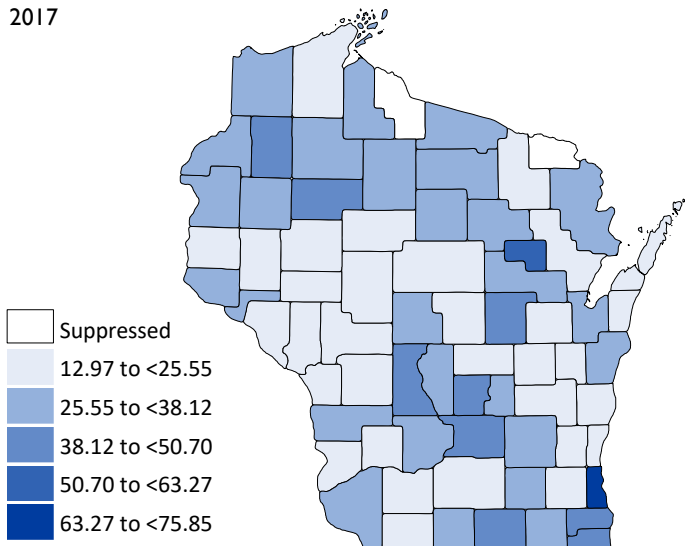


- Above state value
- At or below state value
- ^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



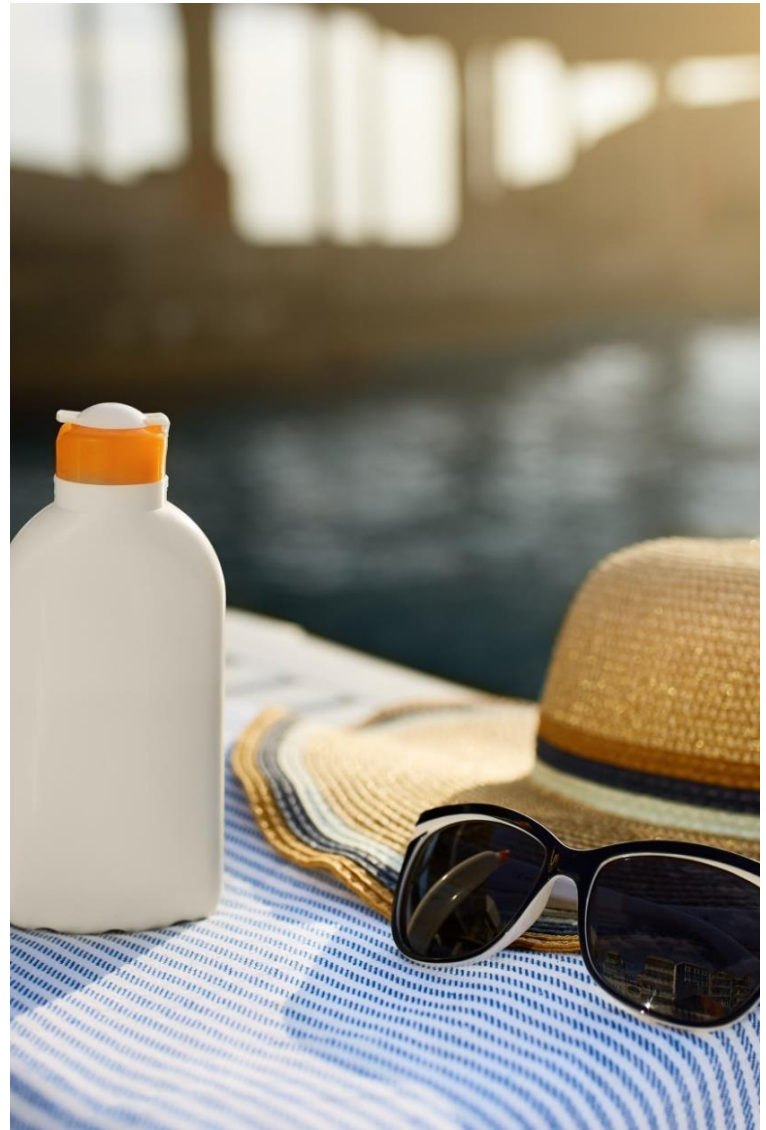
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

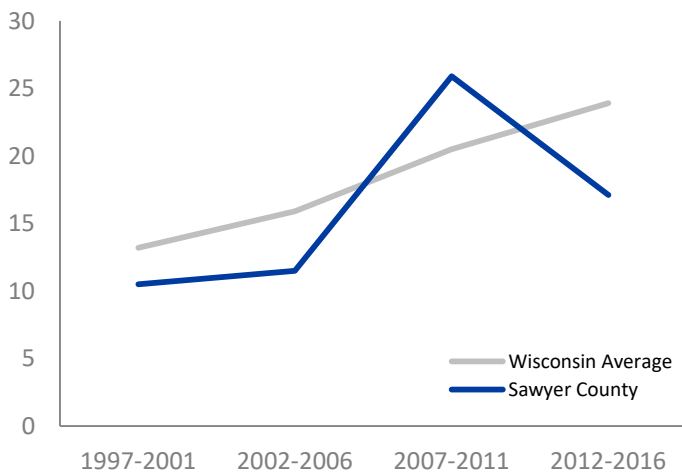
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



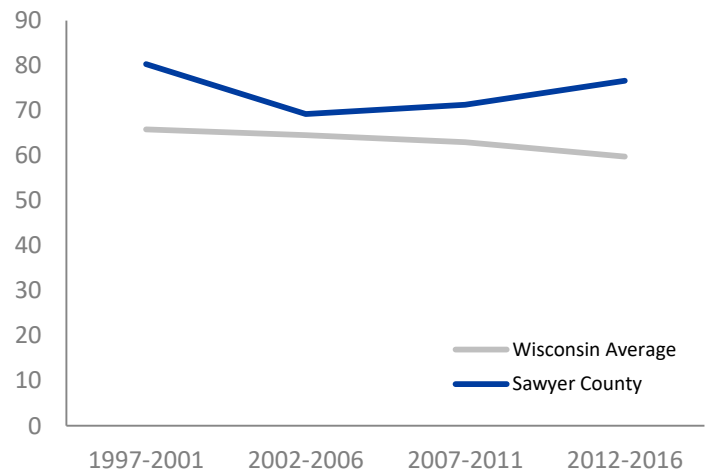
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE SAWYER COUNTY

## BACKGROUND

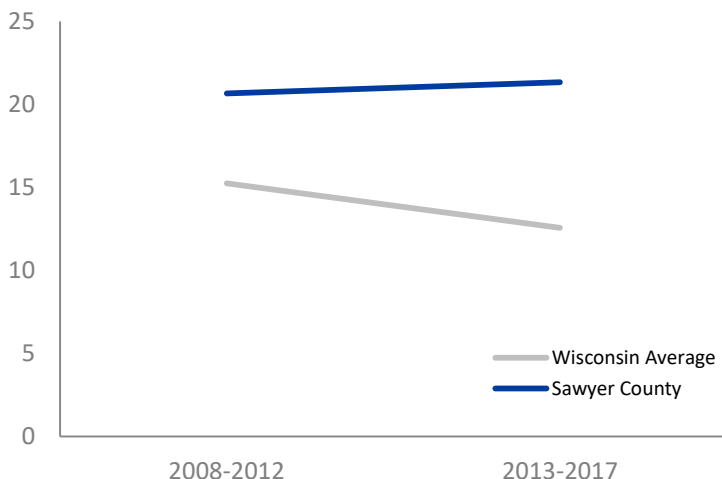
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **21.3**  
**HEAT STRESS**  
 RATE OF ER VISITS  
 PER 100,000 PEOPLE  
 WISCONSIN: 12.6

● **127.9**  
**LYME DISEASE**  
 RATE OF CASES  
 PER 100,000 PEOPLE  
 WISCONSIN: 51.7

● Above state value    ● At or below state value    ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

## LYME DISEASE AT THE NATIONAL LEVEL

OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001



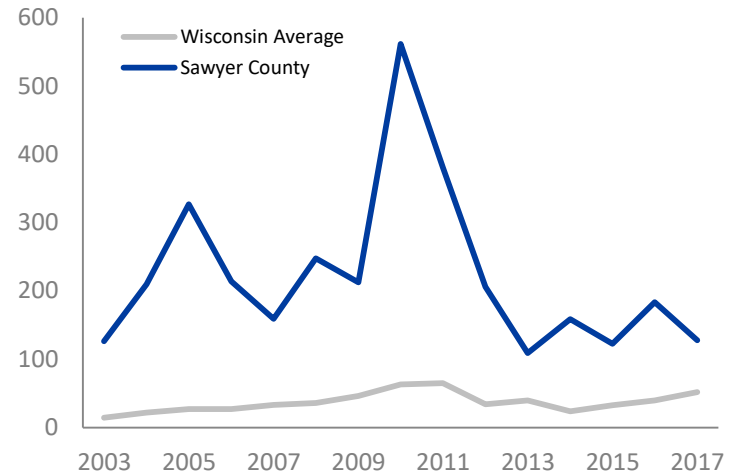
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results for nitrate that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results for arsenic that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Wisconsin Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

**Asthma:** Rate of emergency room visits related to asthma, age-adjusted per 10,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

Bureau of Environmental and Occupational Health  
Wisconsin Department of Health Services | Division of Public Health

[dhstracking@wi.gov](mailto:dhstracking@wi.gov) | [dhs.wisconsin.gov/epht](https://dhs.wisconsin.gov/epht)  
MAY 2019 | P-00719 (Rev. 05/2019)





# SHAWANO COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

Tracking data and resources can help you and your team develop rationale for funding requests. These data can help justify existing programs and show where work needs to be done.

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

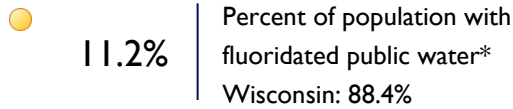
# SHAWANO COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE

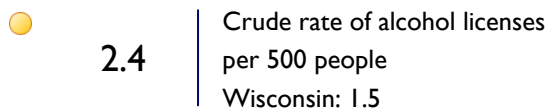


## COMMUNITY HEALTH

### Fluoride

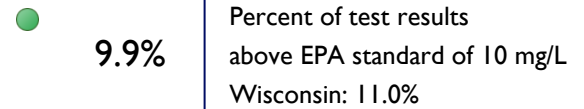


### Alcohol Outlet Density

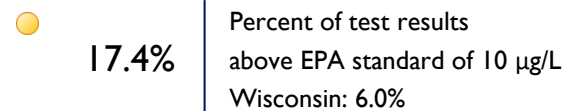


## PRIVATE WATER QUALITY

### Nitrate

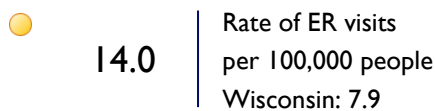


### Arsenic

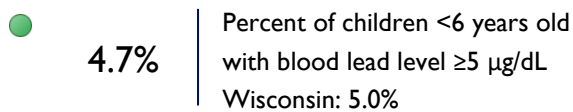


## HOME HAZARDS

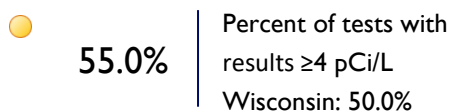
### Carbon Monoxide Poisoning



### Childhood Lead Poisoning

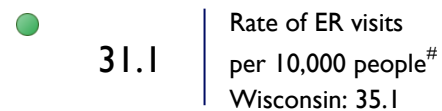


### Radon

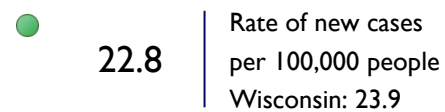


## HEALTH CONDITIONS

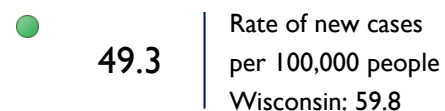
### Asthma



### Melanoma

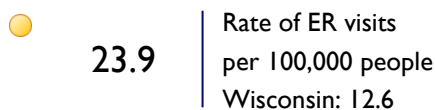


### Lung Cancer

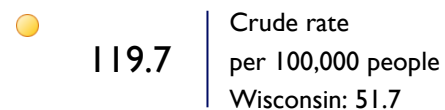


## CLIMATE

### Heat Stress



### Lyme Disease



- Above state value
- At or below state value

- \* Above state value preferred for this measure
- ^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

[Data details on next page](#)



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2016

**Radon:** Percent of tests with results above EPA standard of 4 pCi/L

**Source:** Radon and Indoor Air Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH SHAWANO COUNTY

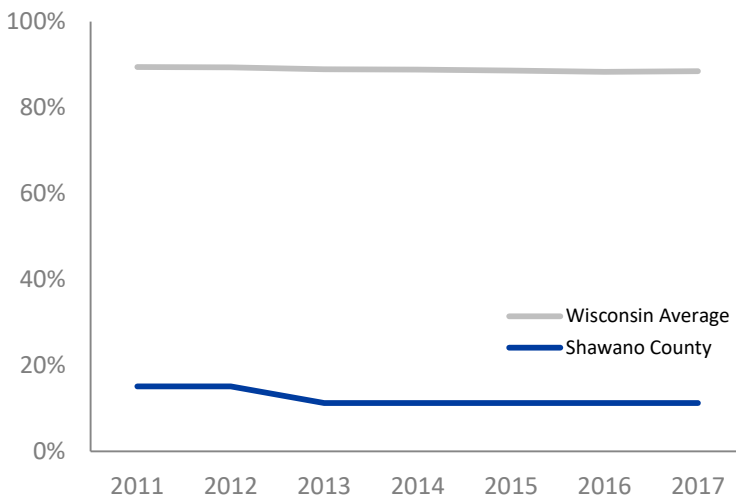
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **11.2%**  
**FLUORIDE**  
 PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
 WISCONSIN: 88.4%

● **2.4**  
**ALCOHOL OUTLET DENSITY**  
 RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
 WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
 ^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



### ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small 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 [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

### ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



# 196

LICENSES IN  
SHAWANO COUNTY

# 16,948

TOTAL LICENSES IN  
WISCONSIN





# PRIVATE WATER QUALITY SHAWANO 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 displayed in this report. Users can find public water quality data on our data portal.

● **9.9%**

**NITRATE**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 mg/L  
**WISCONSIN: 11.0%**

● **17.4%**

**ARSENIC**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 µg/L  
**WISCONSIN: 6.0%**

● Above state value   ● At or below state value   ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
 1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS SHAWANO 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.

● **14.0**  
**CARBON MONOXIDE POISONING**  
 RATE OF ER VISITS RELATED TO CO POISONING PER 100,000  
 WISCONSIN: 7.9

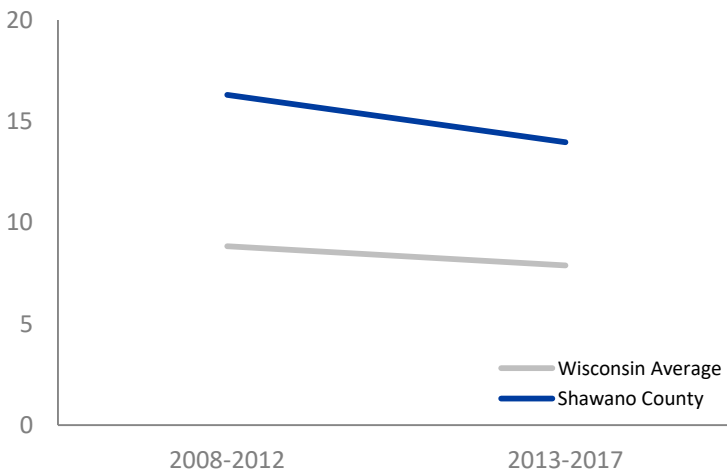
● **4.7%**  
**CHILDHOOD LEAD POISONING**  
 PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$   
 WISCONSIN: 5.0%

● **55.0%**  
**RADON**  
 PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$   
 WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

Carbon monoxide (CO) poisoning prevents oxygen from getting to the body, which can damage tissue and even cause death.

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



## 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter (µg/dL). The Centers for Disease Control and Prevention defines lead poisoning at or above 5 µg/dL.

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

## RADON

Radon is a naturally occurring gas that is radioactive and can cause lung cancer. Radon can leak into homes and other buildings through cracks in the foundation.

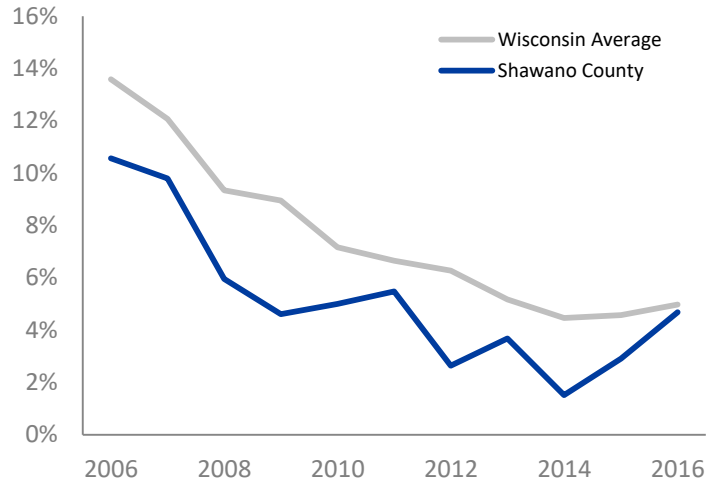
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

## CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD ≥5 µg/dL

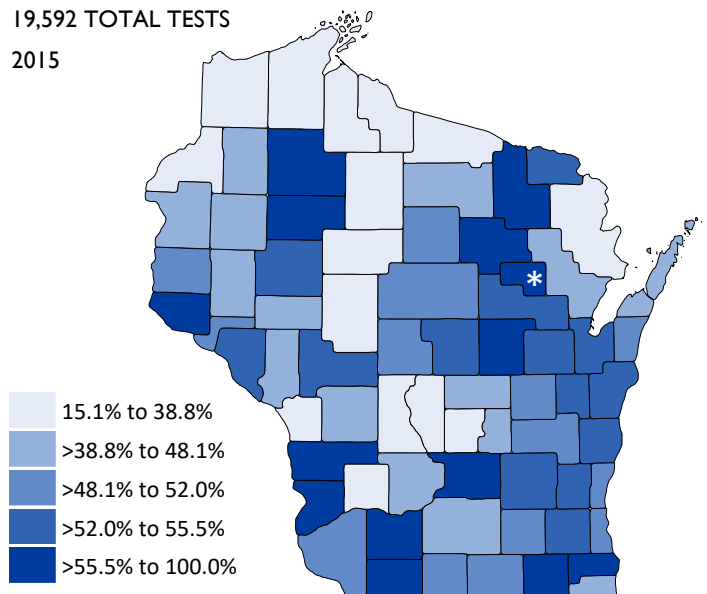


## RADON

PERCENT OF TESTS WITH RESULTS ≥4 pCi/L

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

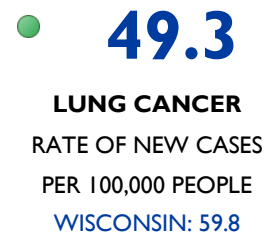
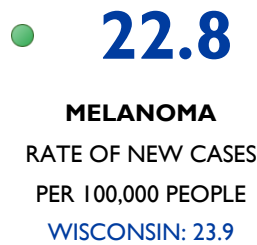
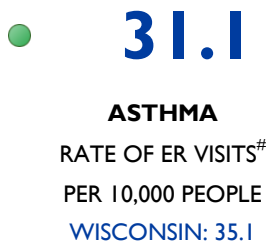




# HEALTH CONDITIONS SHAWANO COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.



● Above state value

● At or below state value

^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



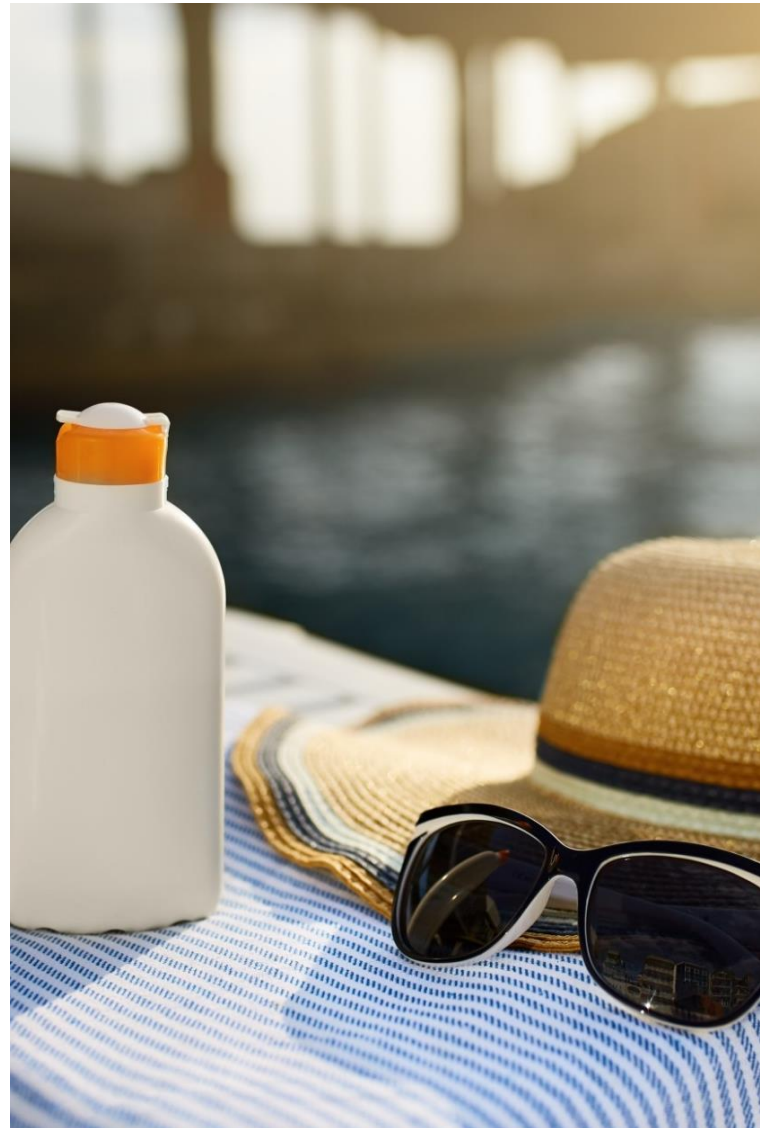
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

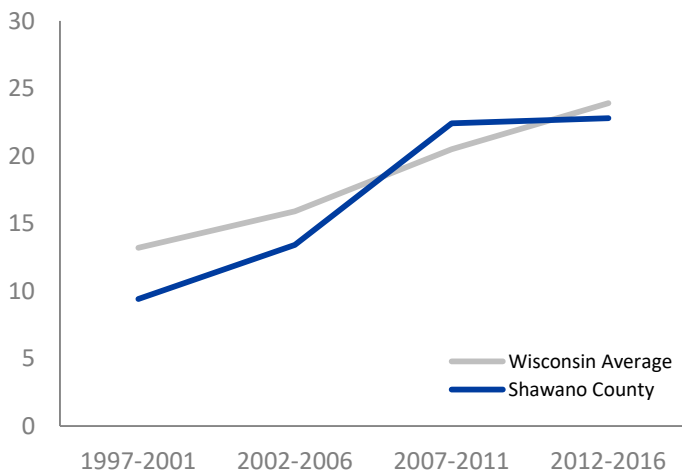
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



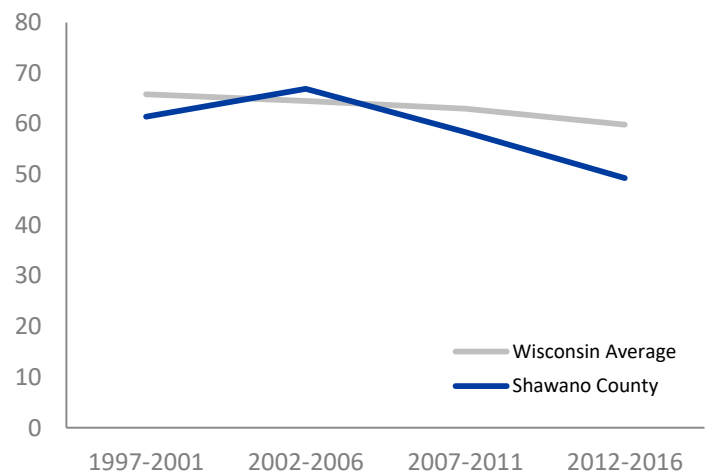
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE SHAWANO COUNTY

## BACKGROUND

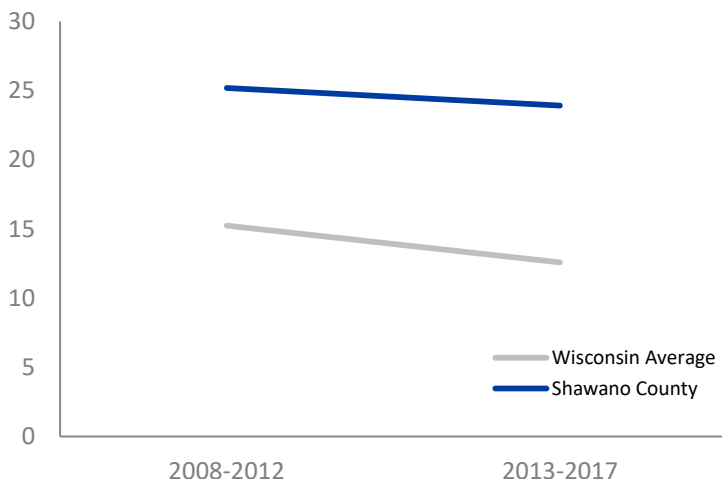
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **23.9**

**HEAT STRESS**  
RATE OF ER VISITS  
PER 100,000 PEOPLE  
WISCONSIN: 12.6

● **119.7**

**LYME DISEASE**  
RATE OF CASES  
PER 100,000 PEOPLE  
WISCONSIN: 51.7

● Above state value    ● At or below state value    ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

## LYME DISEASE AT THE NATIONAL LEVEL

OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001



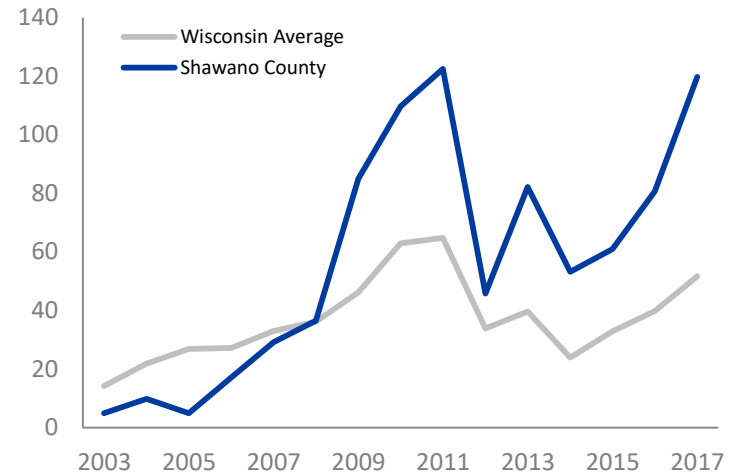
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results for nitrate that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results for arsenic that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Wisconsin Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

**Asthma:** Rate of emergency room visits related to asthma, age-adjusted per 10,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

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Wisconsin Department of Health Services | Division of Public Health

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MAY 2019 | P-00719 (Rev. 05/2019)





# SHEBOYGAN COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

Tracking data and resources can help you and your team develop rationale for funding requests. These data can help justify existing programs and show where work needs to be done.

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# SHEBOYGAN COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

● 72.7% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

● 1.7 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

● 2.0% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

● 9.3% | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

● 7.3 | Rate of ER visits per 100,000 people  
Wisconsin: 7.9

### Childhood Lead Poisoning

● 9.7% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

● 55.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

● 22.6 | Rate of ER visits per 10,000 people<sup>#</sup>  
Wisconsin: 35.1

### Melanoma

● 24.9 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

● 53.3 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

● 13.5 | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

● 6.9 | Crude rate per 100,000 people  
Wisconsin: 51.7

● Above state value  
● At or below state value

\* Above state value preferred for this measure  
^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

[Data details on next page](#)



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2016

**Radon:** Percent of tests with results above EPA standard of 4 pCi/L

**Source:** Radon and Indoor Air Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH SHEBOYGAN COUNTY

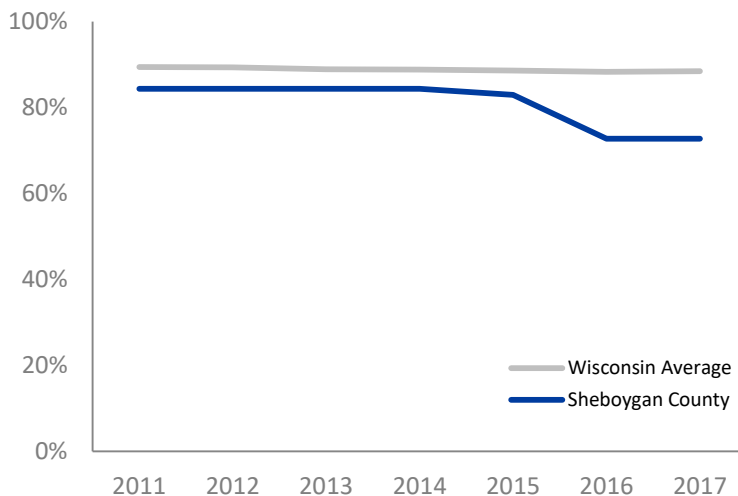
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **72.7%**

**FLUORIDE**  
PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
WISCONSIN: 88.4%

● **1.7**

**ALCOHOL OUTLET DENSITY**  
RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



### ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

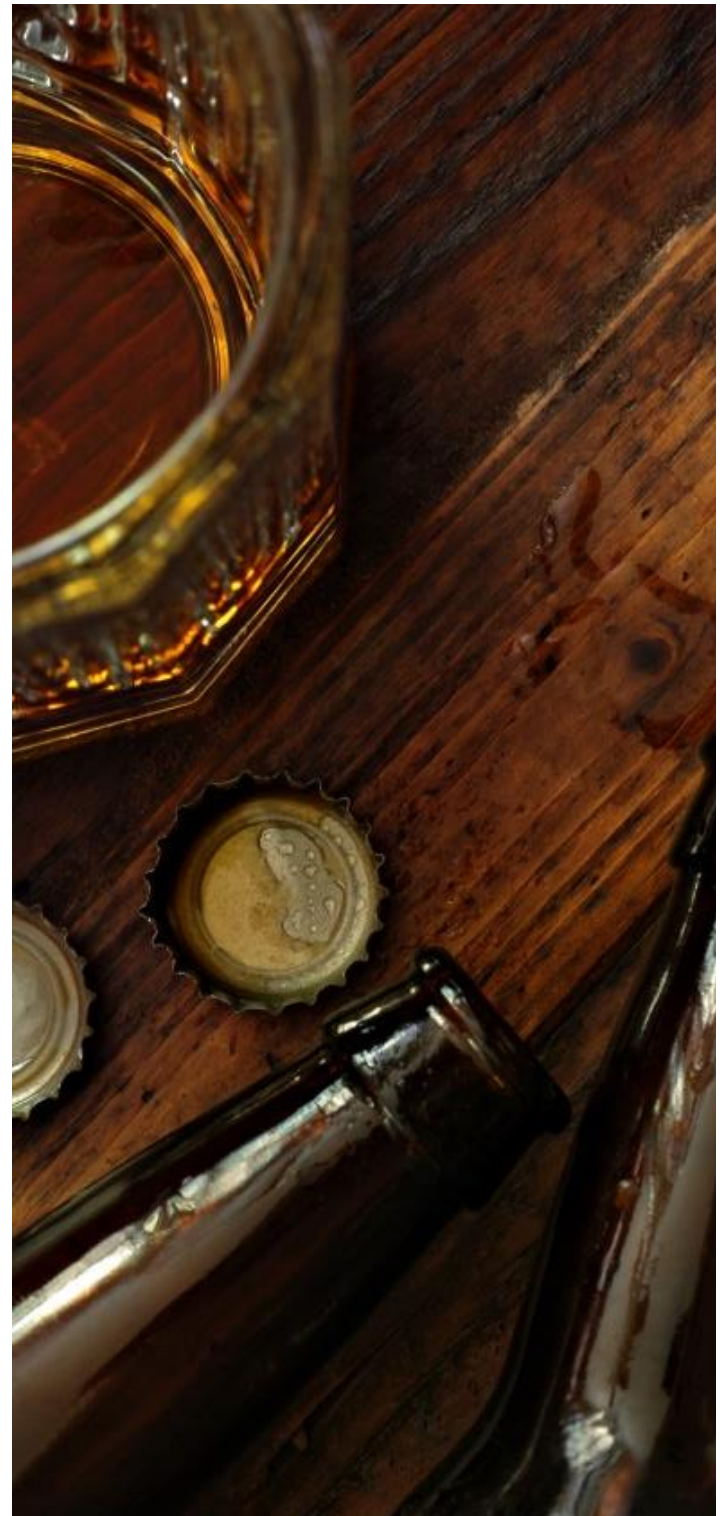
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

### ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



# 384

LICENSES IN SHEBOYGAN COUNTY

# 16,948

TOTAL LICENSES IN WISCONSIN





# PRIVATE WATER QUALITY SHEBOYGAN 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 displayed in this report. Users can find public water quality data on our data portal.

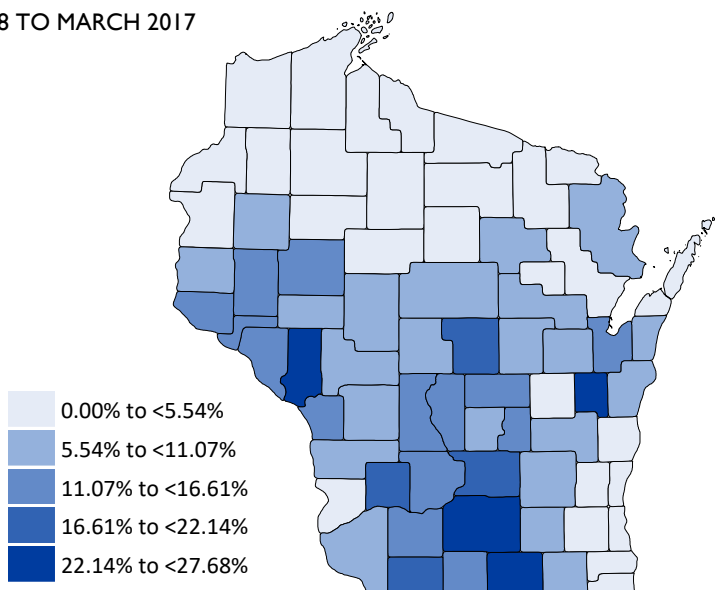
● **2.0%**  
**NITRATE**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 mg/L  
**WISCONSIN: 11.0%**

● **9.3%**  
**ARSENIC**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 µg/L  
**WISCONSIN: 6.0%**

● Above state value   ● At or below state value   ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
 1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS SHEBOYGAN 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.

● **7.3**  
**CARBON MONOXIDE POISONING**  
 RATE OF ER VISITS RELATED TO CO POISONING PER 100,000  
 WISCONSIN: 7.9

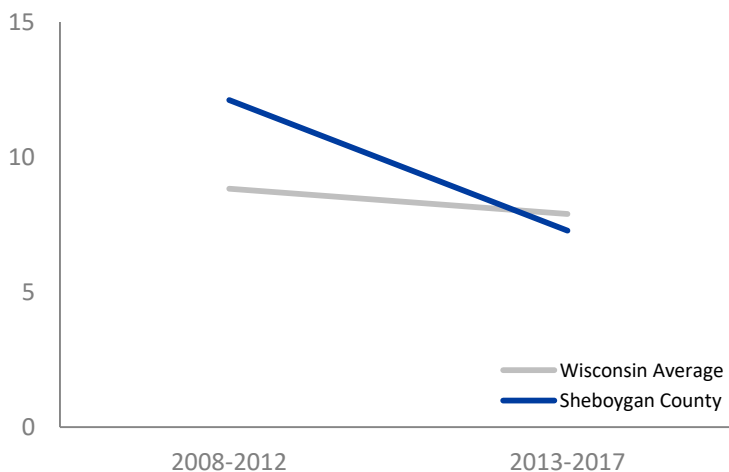
● **9.7%**  
**CHILDHOOD LEAD POISONING**  
 PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$   
 WISCONSIN: 5.0%

● **55.0%**  
**RADON**  
 PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$   
 WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

Carbon monoxide (CO) poisoning prevents oxygen from getting to the body, which can damage tissue and even cause death.

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



### 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter (µg/dL). The Centers for Disease Control and Prevention defines lead poisoning at or above 5 µg/dL.

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

### RADON

Radon is a naturally occurring gas that is radioactive and can cause lung cancer. Radon can leak into homes and other buildings through cracks in the foundation.

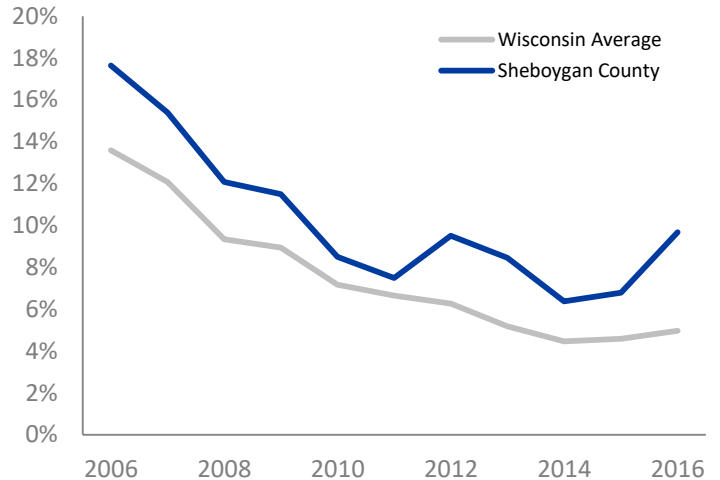
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

### CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD ≥5 µg/dL

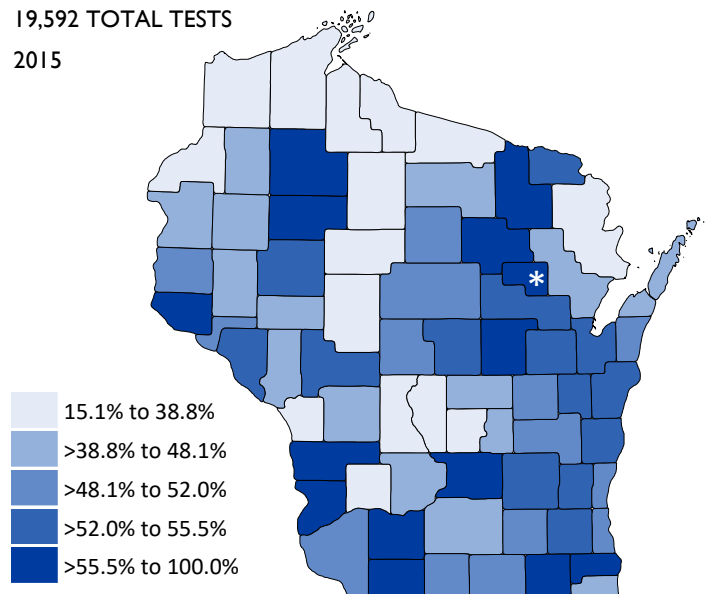


### RADON

PERCENT OF TESTS WITH RESULTS ≥4 pCi/L

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

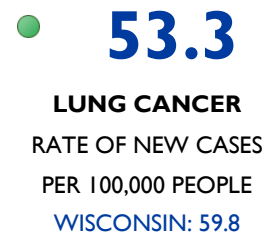
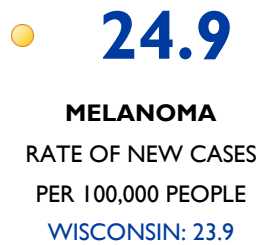
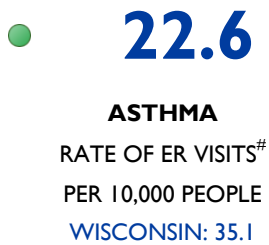




# HEALTH CONDITIONS SHEBOYGAN COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.



● Above state value

● At or below state value

^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



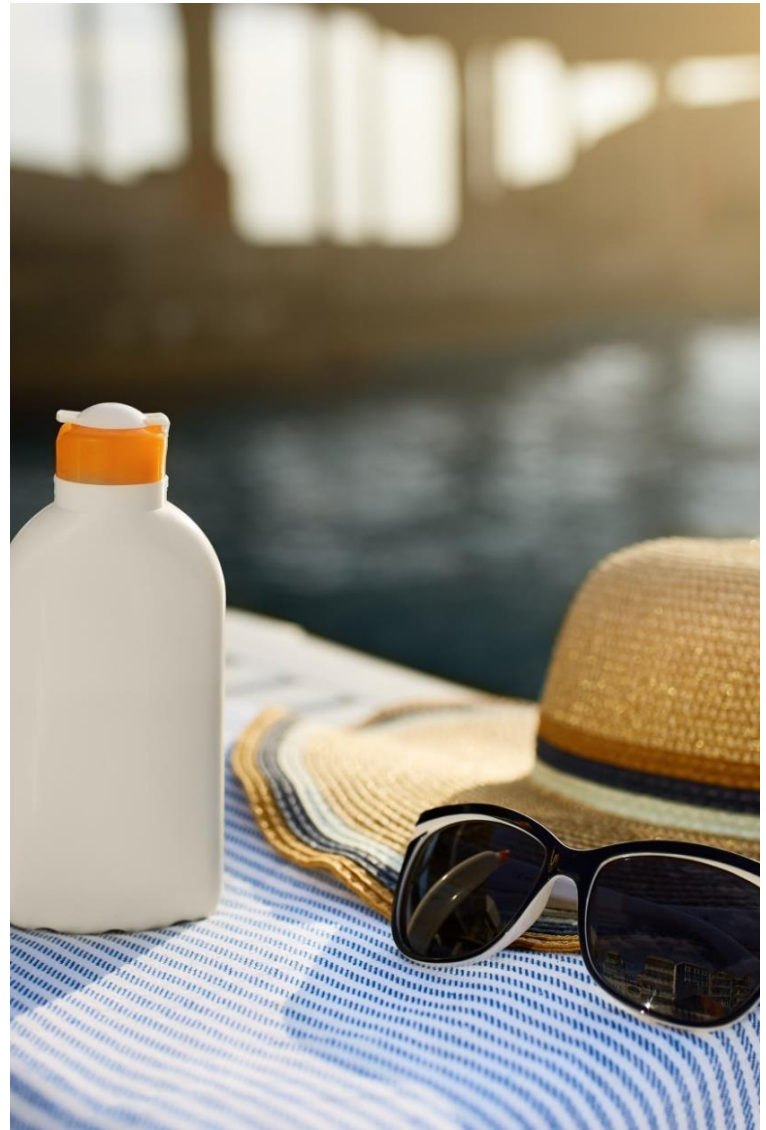
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

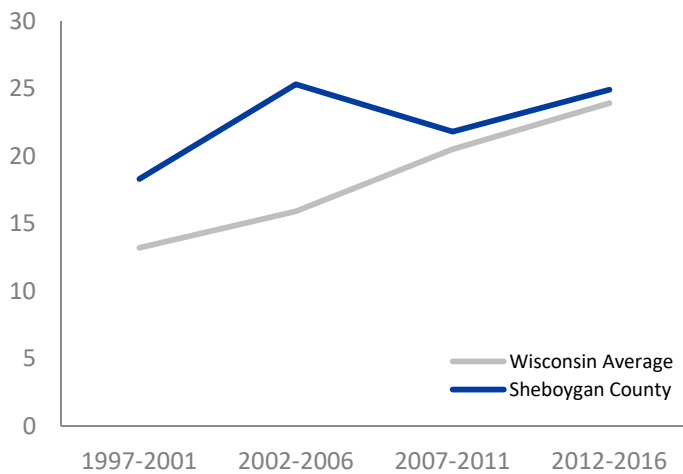
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



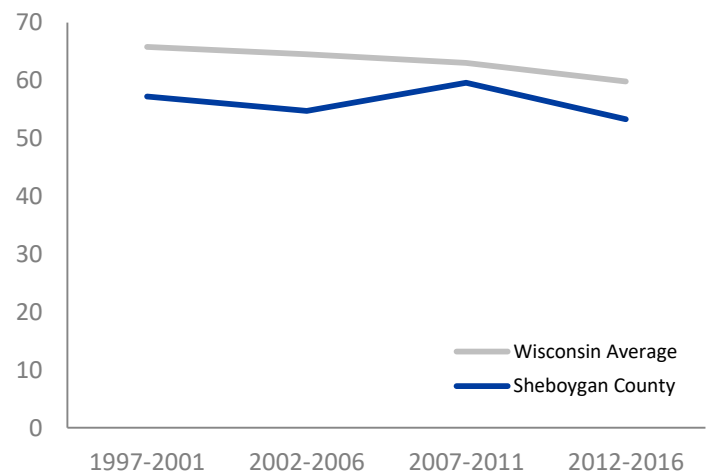
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE SHEBOYGAN COUNTY

## BACKGROUND

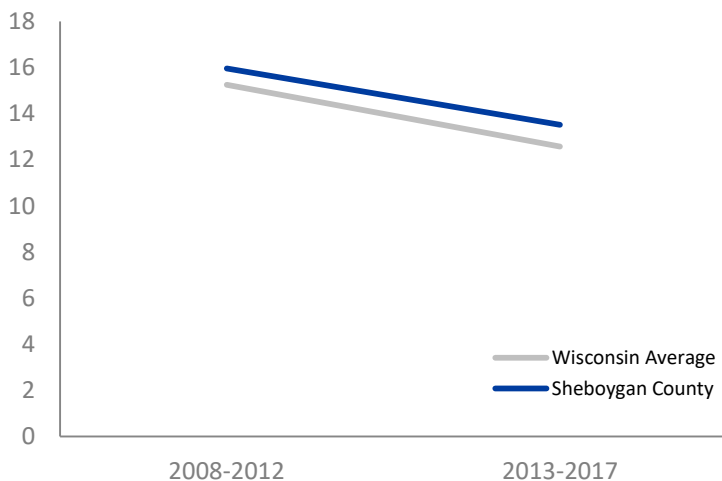
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **13.5**  
**HEAT STRESS**  
 RATE OF ER VISITS  
 PER 100,000 PEOPLE  
 WISCONSIN: 12.6

● **6.9**  
**LYME DISEASE**  
 RATE OF CASES  
 PER 100,000 PEOPLE  
 WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

## LYME DISEASE AT THE NATIONAL LEVEL

OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001



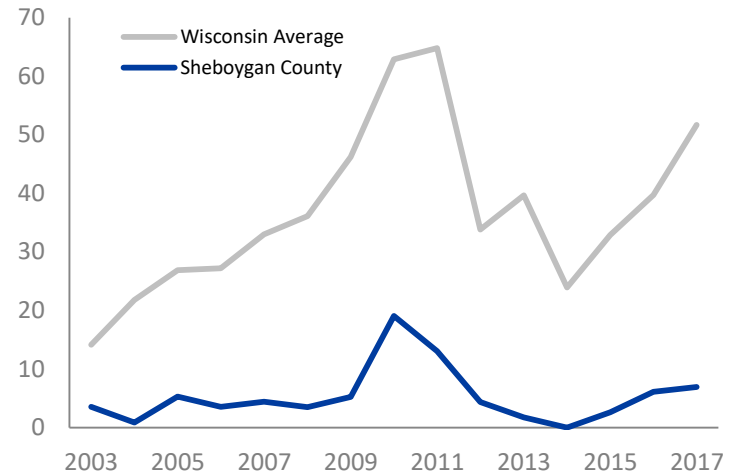
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results for nitrate that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results for arsenic that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Wisconsin Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

**Asthma:** Rate of emergency room visits related to asthma, age-adjusted per 10,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

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Wisconsin Department of Health Services | Division of Public Health

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MAY 2019 | P-00719 (Rev. 05/2019)





# ST. CROIX COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

Tracking data and resources can help you and your team develop rationale for funding requests. These data can help justify existing programs and show where work needs to be done.

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# ST. CROIX COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

73.7% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

1.2 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

10.2% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

0.3% | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

5.8 | Rate of ER visits per 100,000 people  
Wisconsin: 7.9

### Childhood Lead Poisoning

0.0% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

49.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

16.9 | Rate of ER visits per 10,000 people<sup>#</sup>  
Wisconsin: 35.1

### Melanoma

17.9 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

58.5 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

15.8 | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

62.0 | Crude rate per 100,000 people  
Wisconsin: 51.7

● Above state value  
● At or below state value

\* Above state value preferred for this measure  
^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

[Data details on next page](#)



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2016

**Radon:** Percent of tests with results above EPA standard of 4 pCi/L

**Source:** Radon and Indoor Air Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH ST. CROIX COUNTY

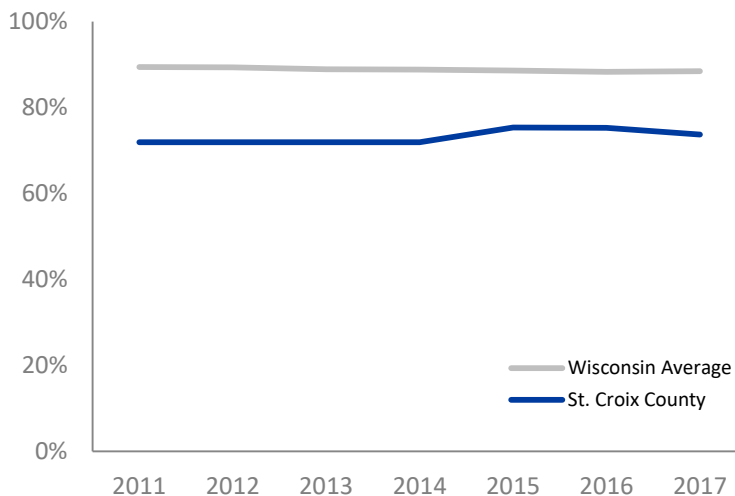
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **73.7%**

**FLUORIDE**  
PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
WISCONSIN: 88.4%

● **1.2**

**ALCOHOL OUTLET DENSITY**  
RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



## ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

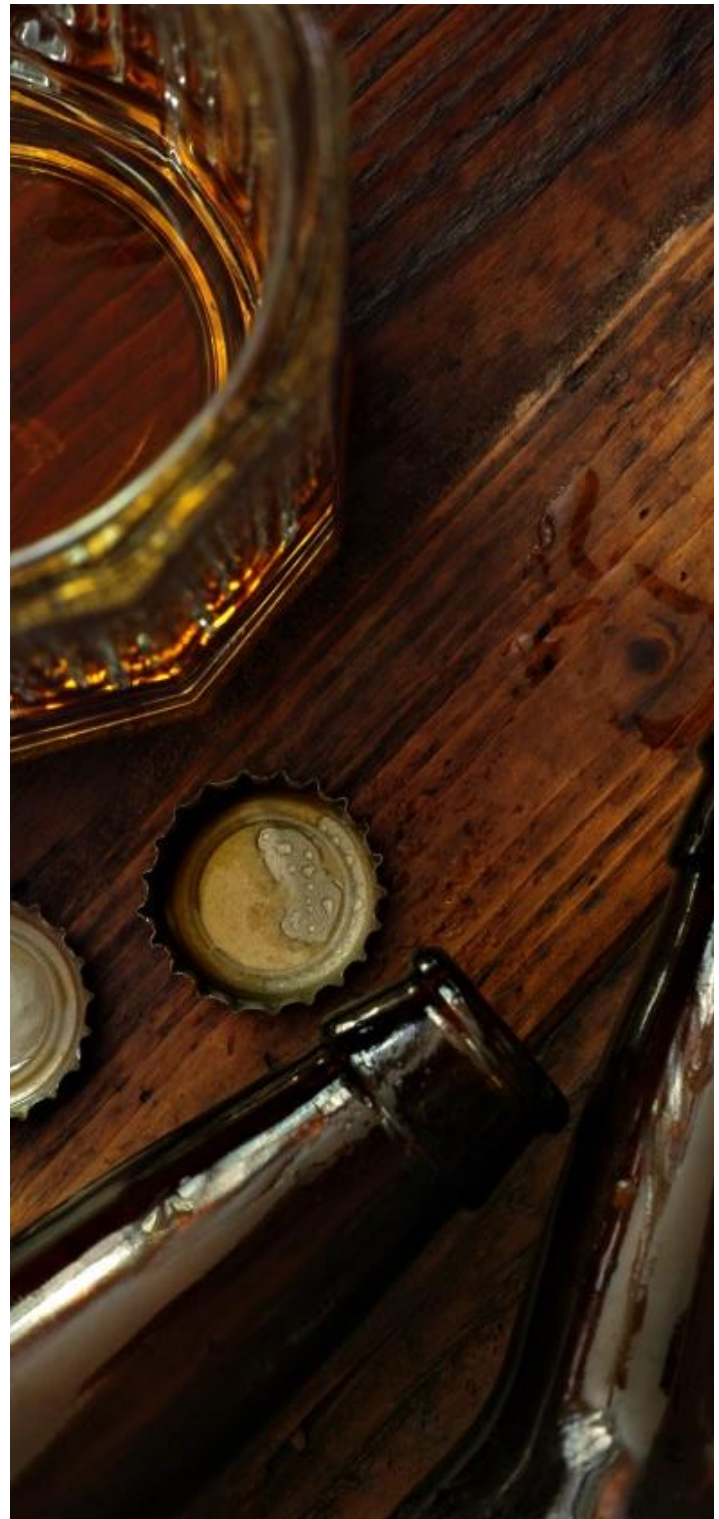
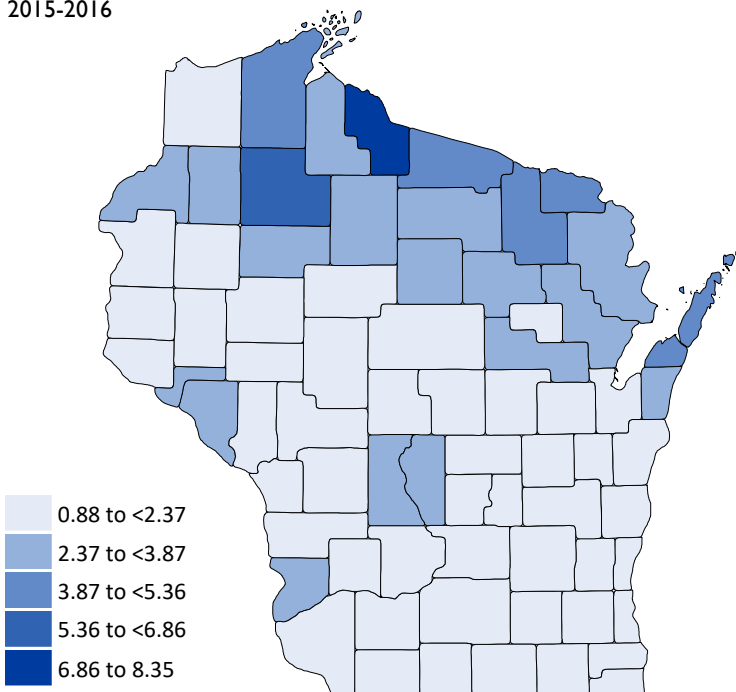
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

## ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



|                                 |                                |
|---------------------------------|--------------------------------|
| <b>203</b>                      | <b>16,948</b>                  |
| LICENSES IN<br>ST. CROIX COUNTY | TOTAL LICENSES IN<br>WISCONSIN |





# PRIVATE WATER QUALITY ST. CROIX 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 displayed in this report. Users can find public water quality data on our data portal.

● **10.2%**

**NITRATE**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 mg/L  
**WISCONSIN: 11.0%**

● **0.3%**

**ARSENIC**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 µg/L  
**WISCONSIN: 6.0%**

● Above state value    ● At or below state value    ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
 1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS ST. CROIX 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.

● **5.8**  
**CARBON MONOXIDE POISONING**  
 RATE OF ER VISITS RELATED TO CO POISONING PER 100,000  
 WISCONSIN: 7.9

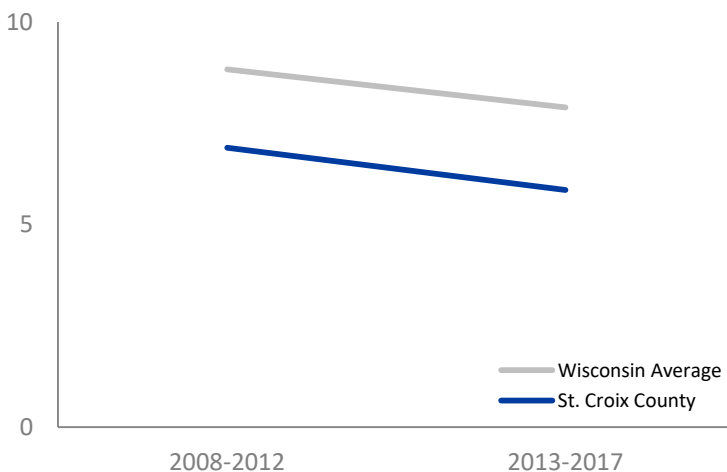
● **0.0%**  
**CHILDHOOD LEAD POISONING**  
 PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$   
 WISCONSIN: 5.0%

● **49.0%**  
**RADON**  
 PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$   
 WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

Carbon monoxide (CO) poisoning prevents oxygen from getting to the body, which can damage tissue and even cause death.

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



## 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter (µg/dL). The Centers for Disease Control and Prevention defines lead poisoning at or above 5 µg/dL.

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

## RADON

Radon is a naturally occurring gas that is radioactive and can cause lung cancer. Radon can leak into homes and other buildings through cracks in the foundation.

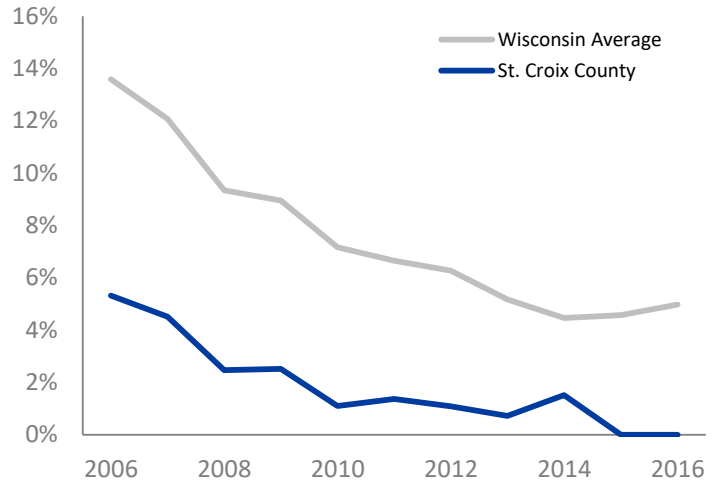
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

## CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD ≥5 µg/dL

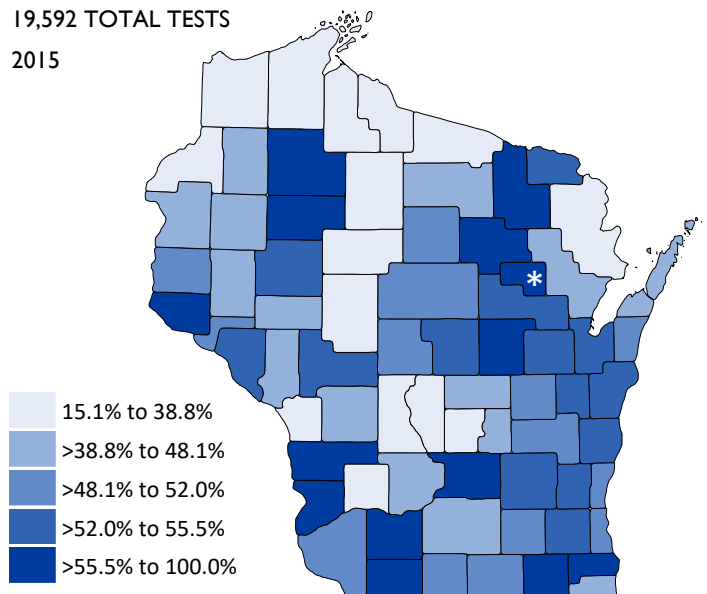


## RADON

PERCENT OF TESTS WITH RESULTS ≥4 pCi/L

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

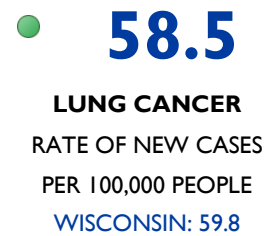
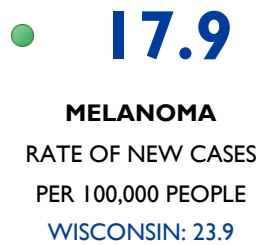
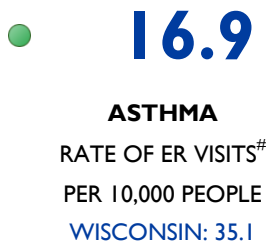




# HEALTH CONDITIONS ST. CROIX COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.



● Above state value

● At or below state value

^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



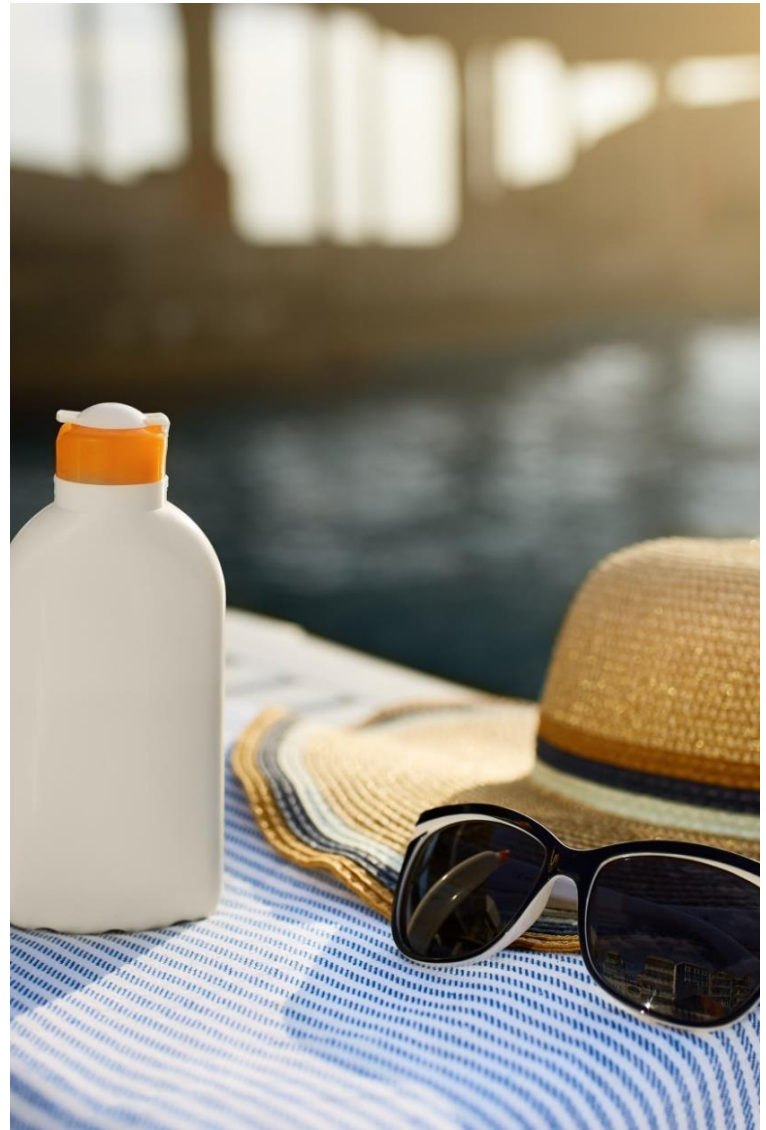
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

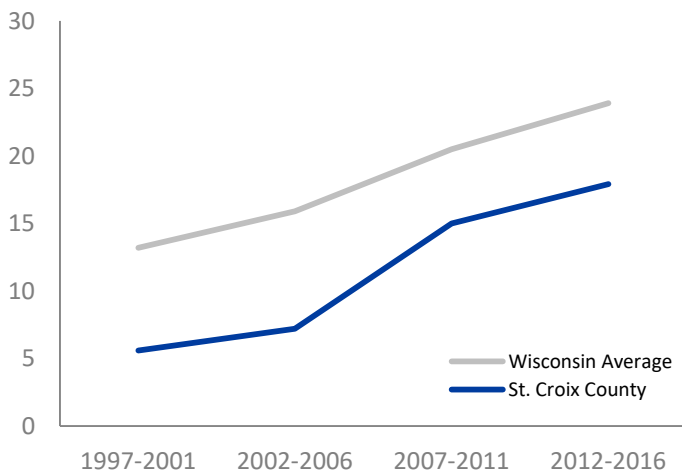
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



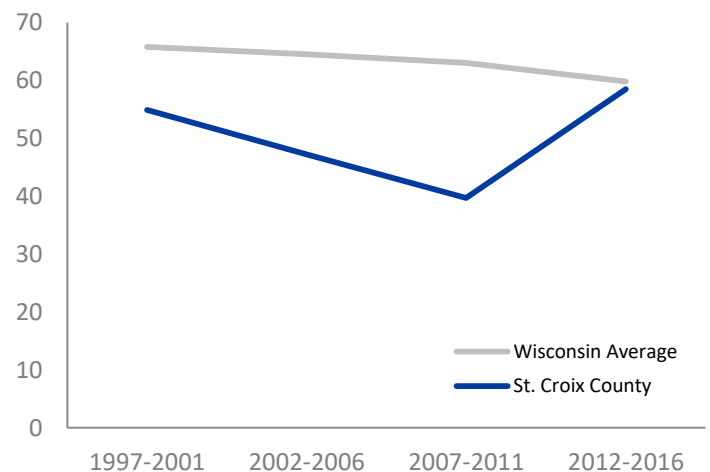
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE ST. CROIX COUNTY

## BACKGROUND

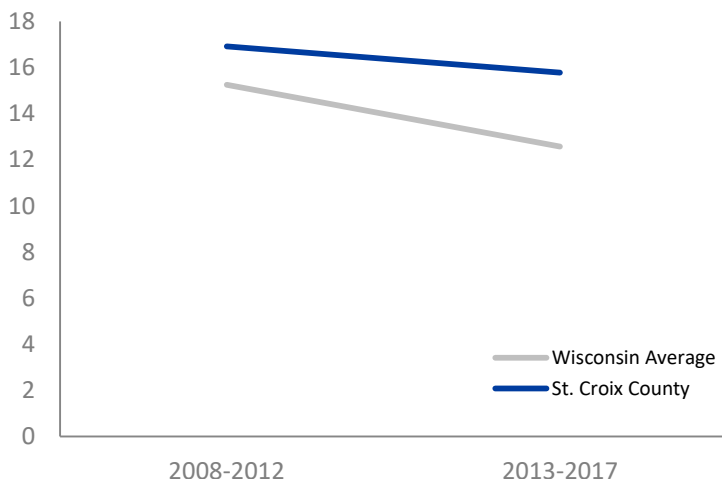
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **15.8**  
**HEAT STRESS**  
 RATE OF ER VISITS  
 PER 100,000 PEOPLE  
 WISCONSIN: 12.6

● **62.0**  
**LYME DISEASE**  
 RATE OF CASES  
 PER 100,000 PEOPLE  
 WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

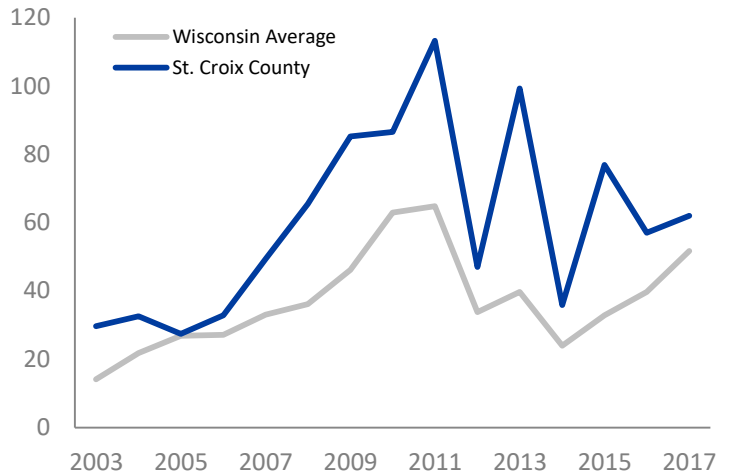
## INTERPRETING LYME DISEASE DATA

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.

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

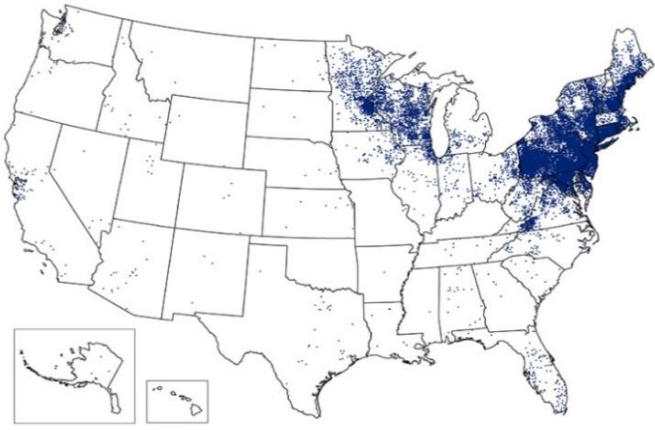
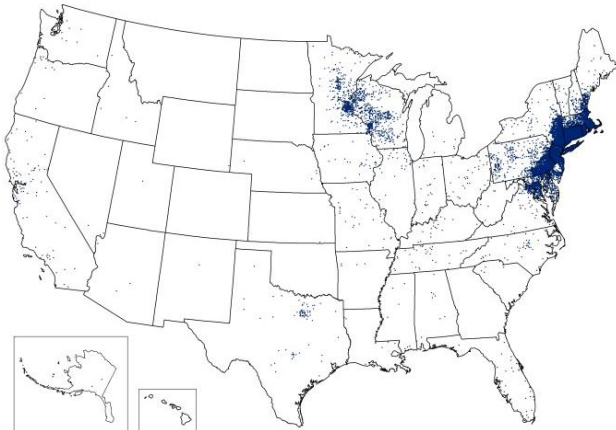
## LYME DISEASE AT THE NATIONAL LEVEL

### OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001

2017



Maps courtesy of Centers for Disease Control and Prevention

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results for nitrate that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results for arsenic that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Wisconsin Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

**Asthma:** Rate of emergency room visits related to asthma, age-adjusted per 10,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

Bureau of Environmental and Occupational Health  
Wisconsin Department of Health Services | Division of Public Health

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MAY 2019 | P-00719 (Rev. 05/2019)





# TAYLOR COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

Tracking data and resources can help you and your team develop rationale for funding requests. These data can help justify existing programs and show where work needs to be done.

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# TAYLOR COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

0.0% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

2.3 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

2.0% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

5.1% | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

16.8 | Rate of ER visits per 100,000 people  
Wisconsin: 7.9

### Childhood Lead Poisoning

8.4% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

37.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

14.1 | Rate of ER visits per 10,000 people#  
Wisconsin: 35.1

### Melanoma

24.9 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

50.0 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

8.7 | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

123.0 | Crude rate per 100,000 people  
Wisconsin: 51.7

● Above state value  
● At or below state value

\* Above state value preferred for this measure  
^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

[Data details on next page](#)



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2016

**Radon:** Percent of tests with results above EPA standard of 4 pCi/L

**Source:** Radon and Indoor Air Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH TAYLOR COUNTY

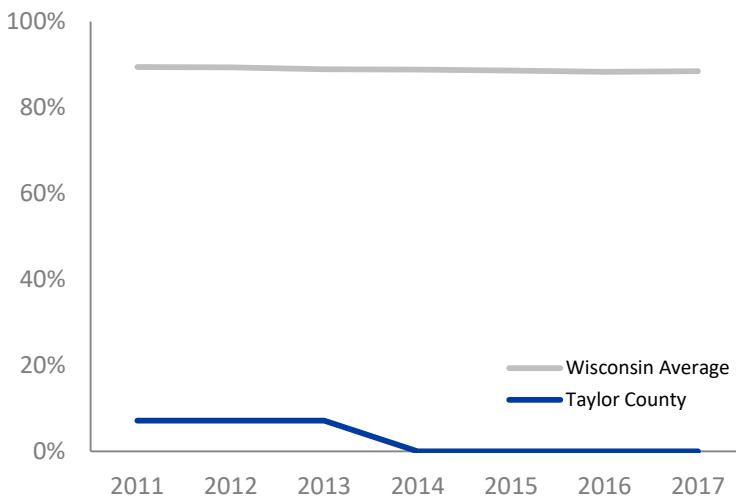
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **0.0%**  
**FLUORIDE**  
 PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
 WISCONSIN: 88.4%

● **2.3**  
**ALCOHOL OUTLET DENSITY**  
 RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
 WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
 ^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



## ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

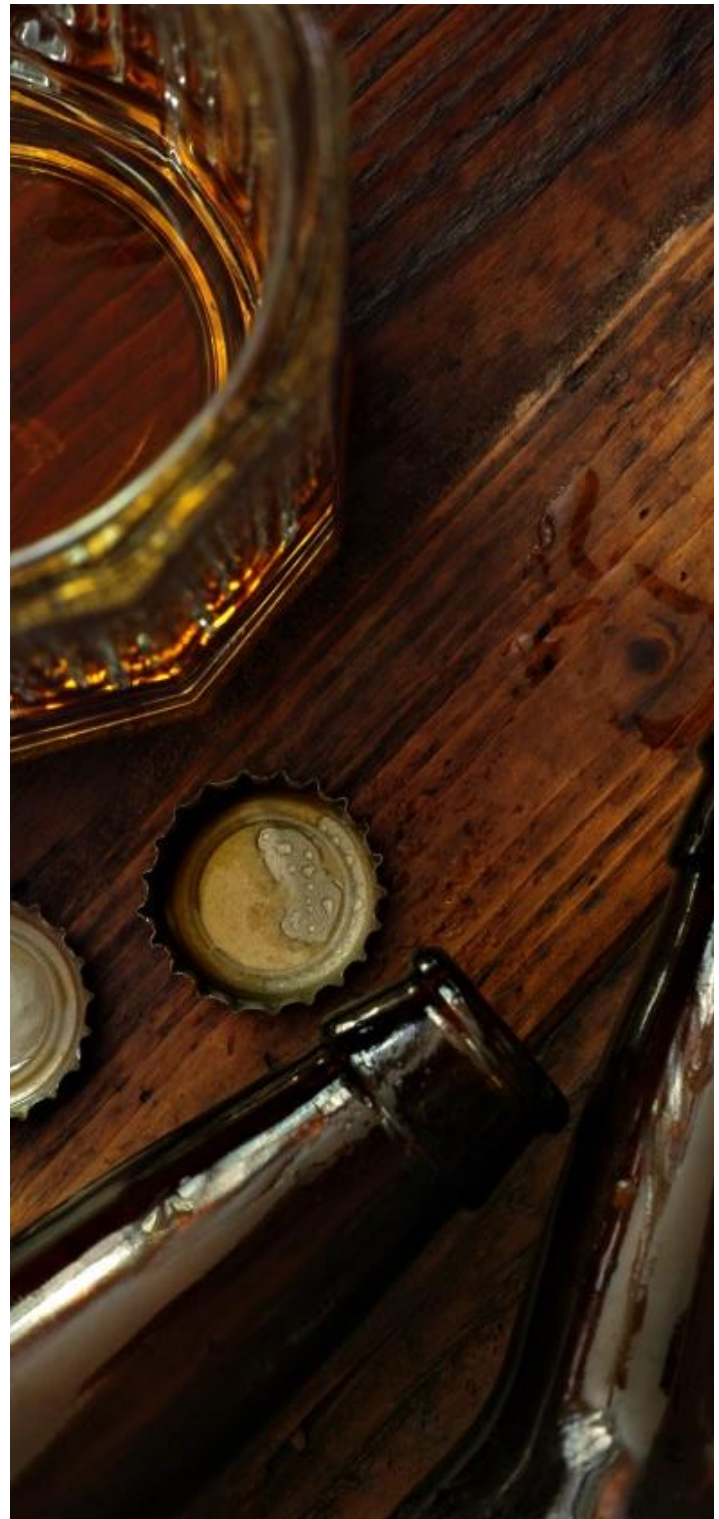
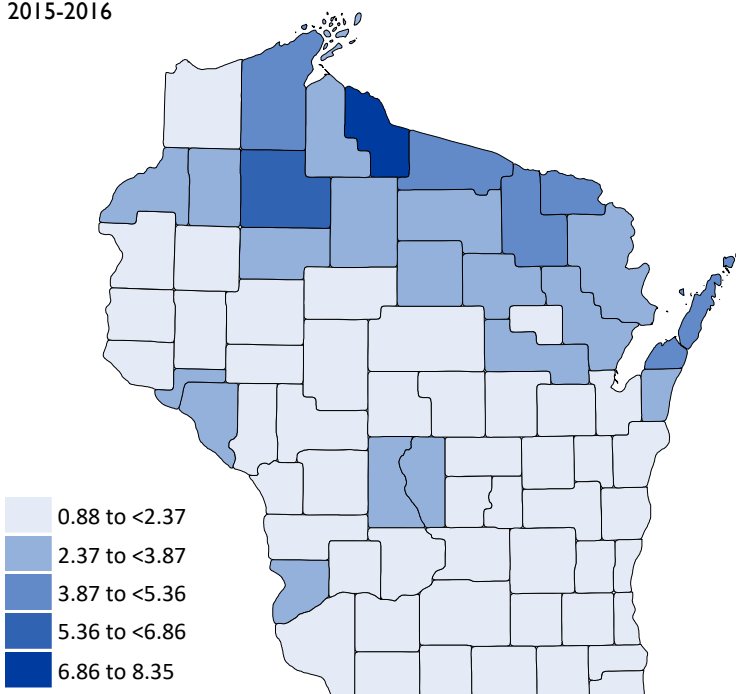
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

## ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



|                              |                                |
|------------------------------|--------------------------------|
| <b>94</b>                    | <b>16,948</b>                  |
| LICENSES IN<br>TAYLOR COUNTY | TOTAL LICENSES IN<br>WISCONSIN |





# PRIVATE WATER QUALITY TAYLOR 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 displayed in this report. Users can find public water quality data on our data portal.

● **2.0%**

**NITRATE**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 mg/L  
**WISCONSIN: 11.0%**

● **5.1%**

**ARSENIC**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 µg/L  
**WISCONSIN: 6.0%**

● Above state value    ● At or below state value    ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
 1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS TAYLOR 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.

● **16.8**  
**CARBON MONOXIDE POISONING**  
 RATE OF ER VISITS RELATED TO CO POISONING PER 100,000  
 WISCONSIN: 7.9

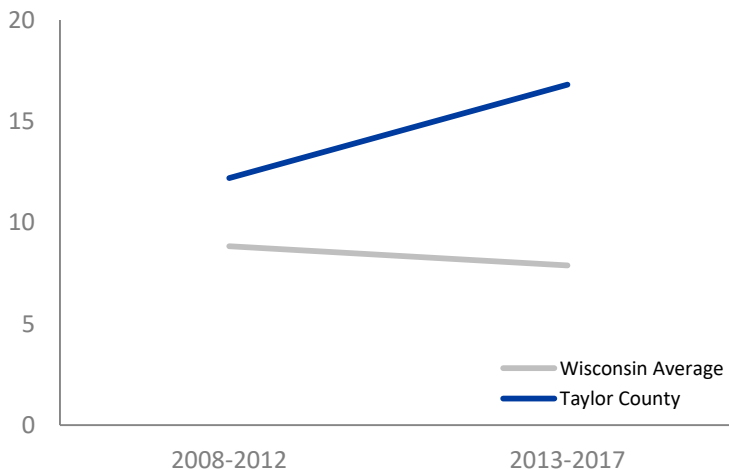
● **8.4%**  
**CHILDHOOD LEAD POISONING**  
 PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$   
 WISCONSIN: 5.0%

● **37.0%**  
**RADON**  
 PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$   
 WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

Carbon monoxide (CO) poisoning prevents oxygen from getting to the body, which can damage tissue and even cause death.

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



## 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter (µg/dL). The Centers for Disease Control and Prevention defines lead poisoning at or above 5 µg/dL.

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

## RADON

Radon is a naturally occurring gas that is radioactive and can cause lung cancer. Radon can leak into homes and other buildings through cracks in the foundation.

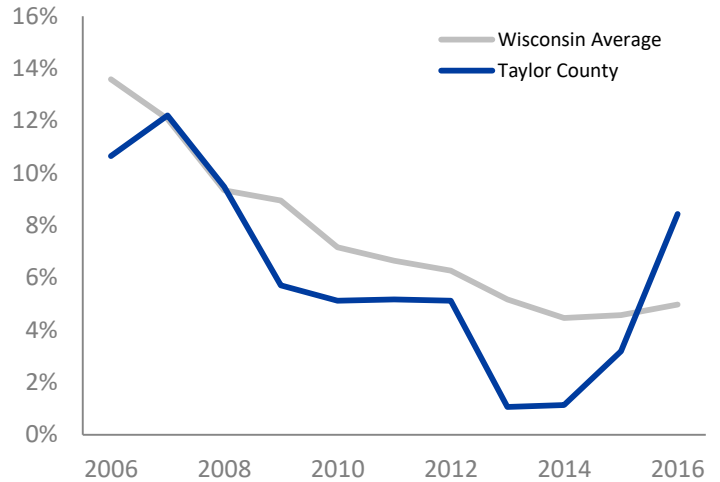
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

## CHILDHOOD LEAD POISONING

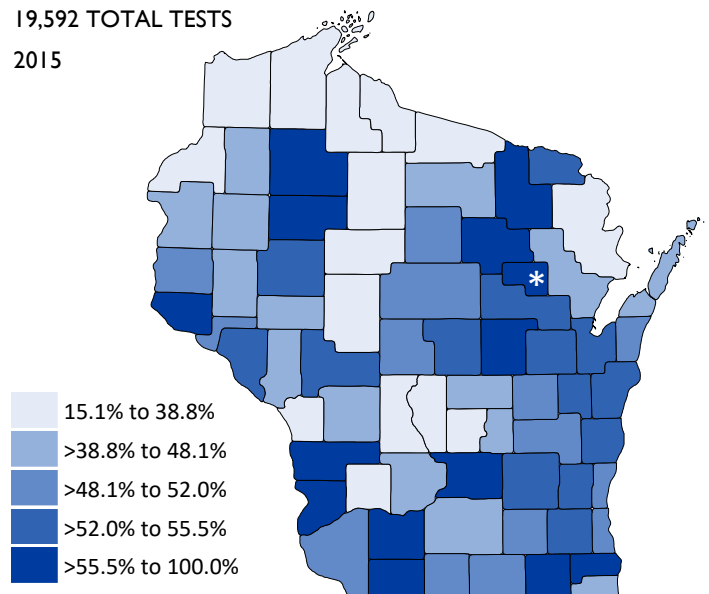
PERCENT OF TESTED CHILDREN WITH BLOOD LEAD ≥5 µg/dL



## RADON

PERCENT OF TESTS WITH RESULTS ≥4 pCi/L

19,592 TOTAL TESTS  
2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

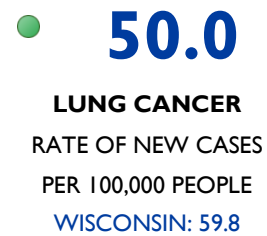
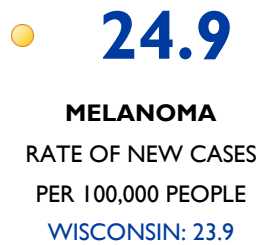
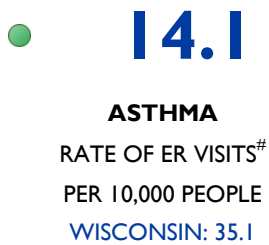




# HEALTH CONDITIONS TAYLOR COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.



● Above state value

● At or below state value

^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



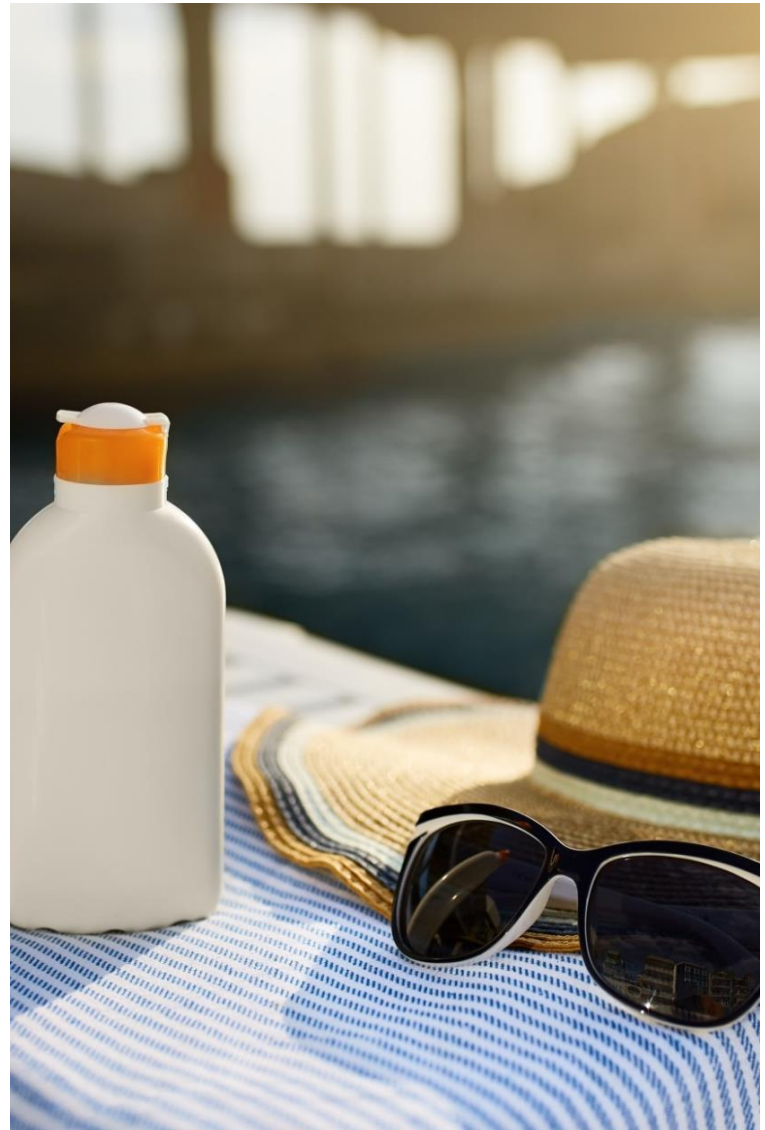
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

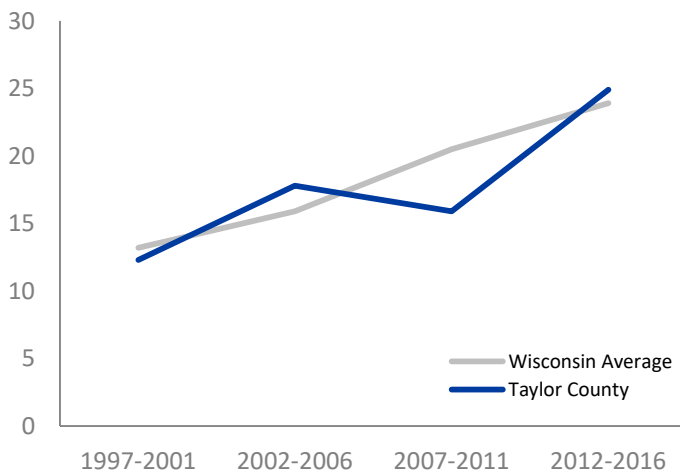
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



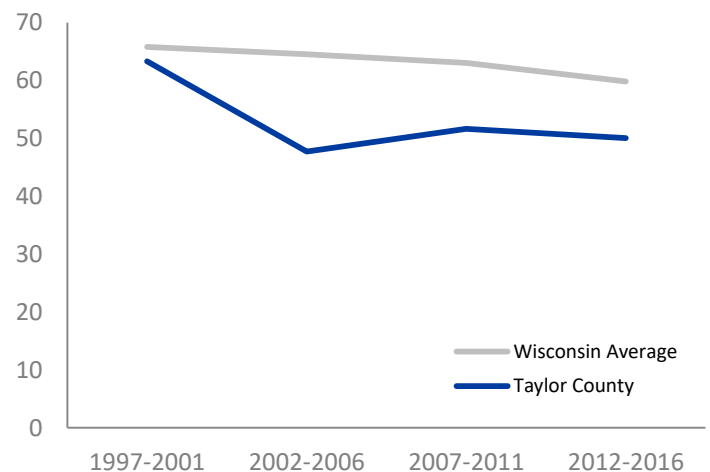
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE TAYLOR COUNTY

## BACKGROUND

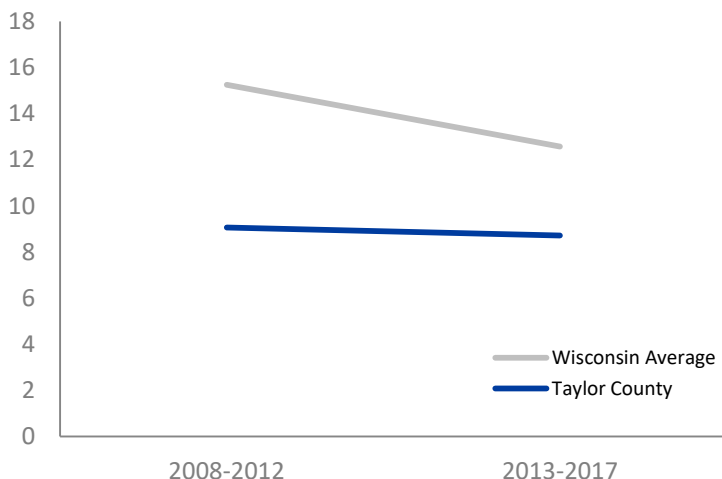
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **8.7**

**HEAT STRESS**  
RATE OF ER VISITS  
PER 100,000 PEOPLE  
WISCONSIN: 12.6

● **123.0**

**LYME DISEASE**  
RATE OF CASES  
PER 100,000 PEOPLE  
WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

## LYME DISEASE AT THE NATIONAL LEVEL

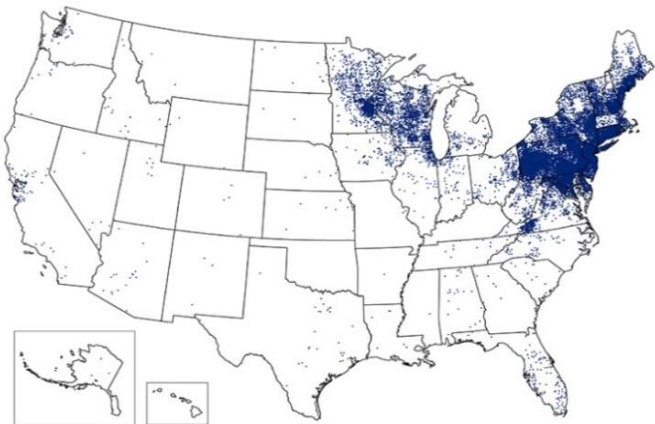
OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001



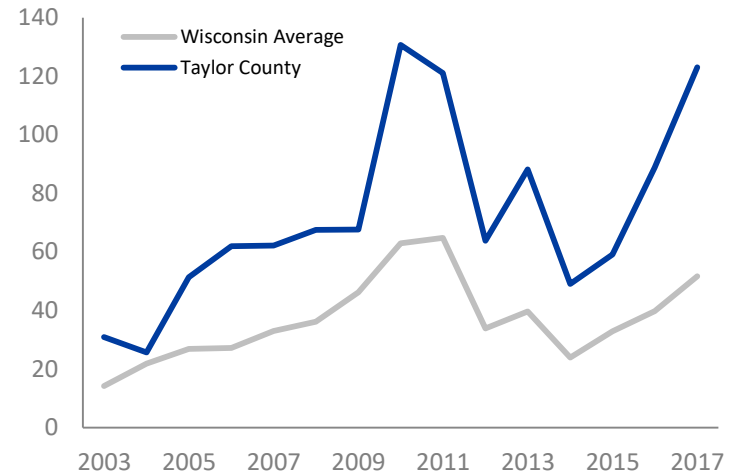
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results for nitrate that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results for arsenic that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Wisconsin Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

**Asthma:** Rate of emergency room visits related to asthma, age-adjusted per 10,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

Bureau of Environmental and Occupational Health  
Wisconsin Department of Health Services | Division of Public Health

[dhstracking@wi.gov](mailto:dhstracking@wi.gov) | [dhs.wisconsin.gov/epht](https://dhs.wisconsin.gov/epht)  
MAY 2019 | P-00719 (Rev. 05/2019)





# TREMPEALEAU COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

Tracking data and resources can help you and your team develop rationale for funding requests. These data can help justify existing programs and show where work needs to be done.

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# TREMPEALEAU COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

● 61.3% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

● 2.2 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

● 22.3% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

● 0.9% | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

● 14.6 | Rate of ER visits per 100,000 people  
Wisconsin: 7.9

### Childhood Lead Poisoning

● 2.4% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

● 49.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

● 20.4 | Rate of ER visits per 10,000 people<sup>#</sup>  
Wisconsin: 35.1

### Melanoma

● 30.3 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

● 54.4 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

● 12.2 | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

● 78.0 | Crude rate per 100,000 people  
Wisconsin: 51.7

● Above state value  
● At or below state value

\* Above state value preferred for this measure  
^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

[Data details on next page](#)



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2016

**Radon:** Percent of tests with results above EPA standard of 4 pCi/L

**Source:** Radon and Indoor Air Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH TREMPEALEAU COUNTY

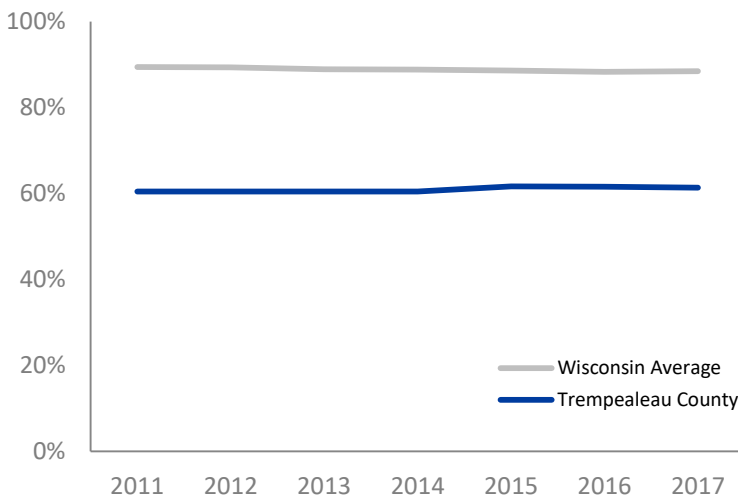
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **61.3%**

**FLUORIDE**  
PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
WISCONSIN: 88.4%

● **2.2**

**ALCOHOL OUTLET DENSITY**  
RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



### ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

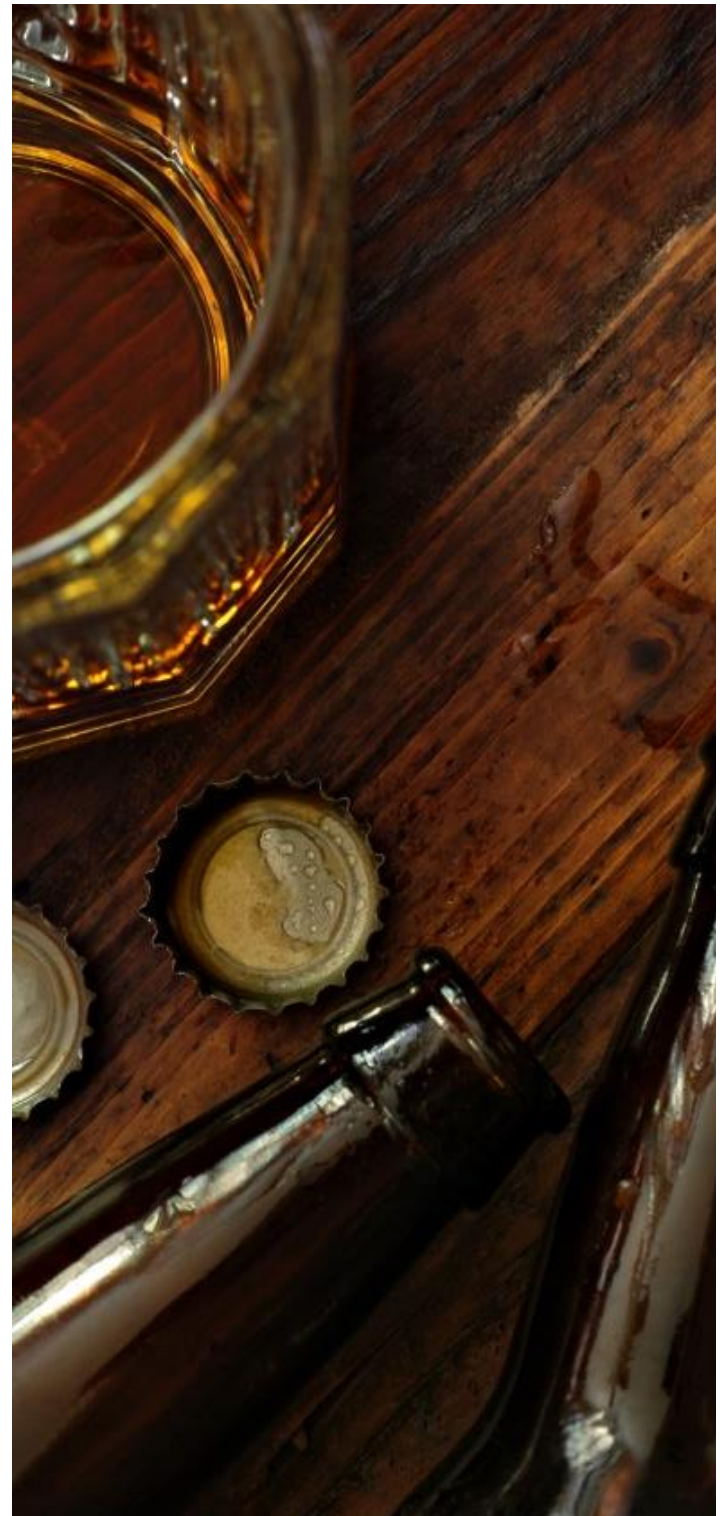
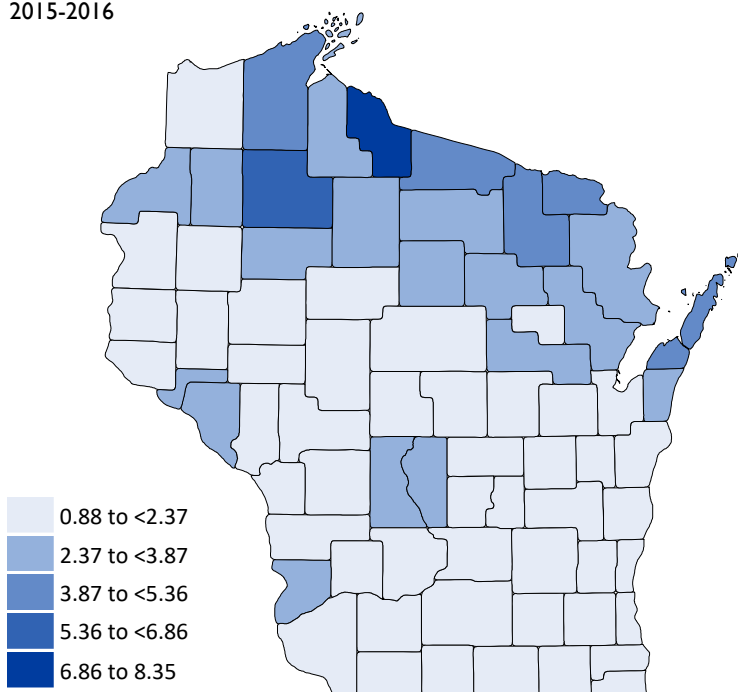
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

### ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



# 129

LICENSES IN  
TREMPEALEAU COUNTY

# 16,948

TOTAL LICENSES IN  
WISCONSIN





# PRIVATE WATER QUALITY TREMPPEALEAU 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 displayed in this report. Users can find public water quality data on our data portal.

● **22.3%**

**NITRATE**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 mg/L  
**WISCONSIN: 11.0%**

● **0.9%**

**ARSENIC**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 µg/L  
**WISCONSIN: 6.0%**

● Above state value   ● At or below state value   ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
 1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS TREMPEALEAU 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.

● **14.6**  
**CARBON MONOXIDE POISONING**  
 RATE OF ER VISITS RELATED TO CO POISONING PER 100,000  
 WISCONSIN: 7.9

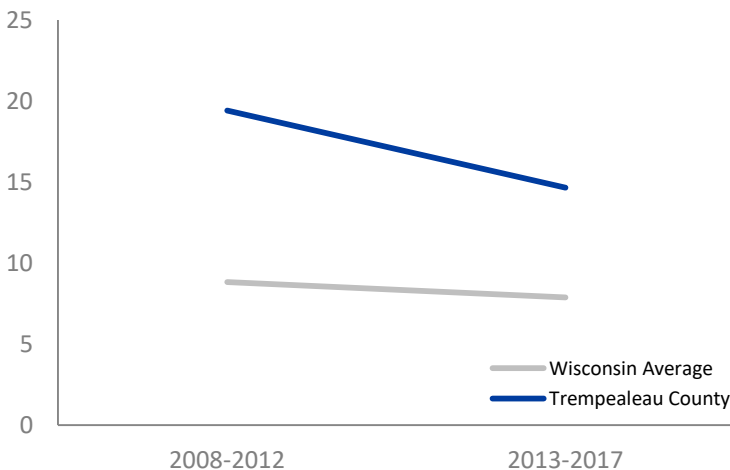
● **2.4%**  
**CHILDHOOD LEAD POISONING**  
 PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$   
 WISCONSIN: 5.0%

● **49.0%**  
**RADON**  
 PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$   
 WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

Carbon monoxide (CO) poisoning prevents oxygen from getting to the body, which can damage tissue and even cause death.

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



### 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter (µg/dL). The Centers for Disease Control and Prevention defines lead poisoning at or above 5 µg/dL.

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

### RADON

Radon is a naturally occurring gas that is radioactive and can cause lung cancer. Radon can leak into homes and other buildings through cracks in the foundation.

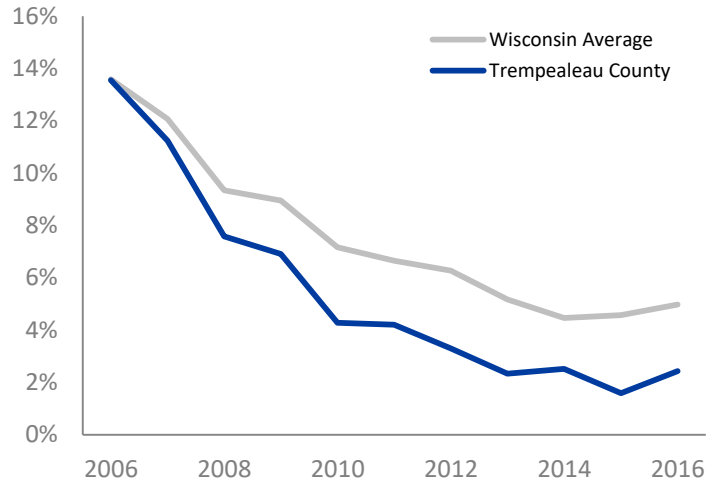
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

### CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD ≥5 µg/dL

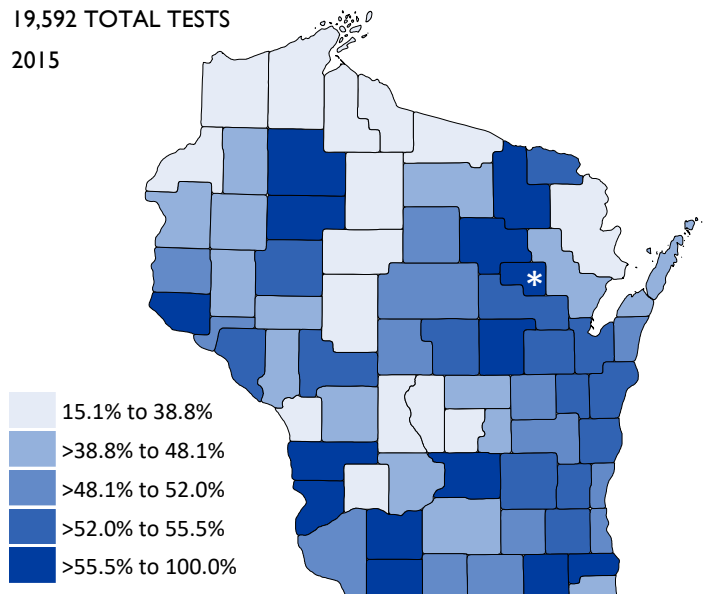


### RADON

PERCENT OF TESTS WITH RESULTS ≥4 pCi/L

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

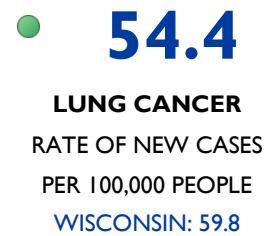
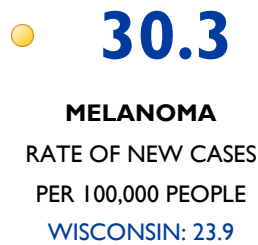
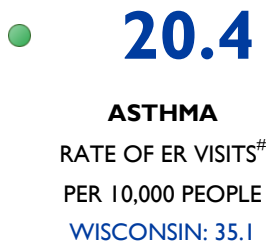




# HEALTH CONDITIONS TREMPEALEAU COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.



● Above state value

● At or below state value

^ Suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
 2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



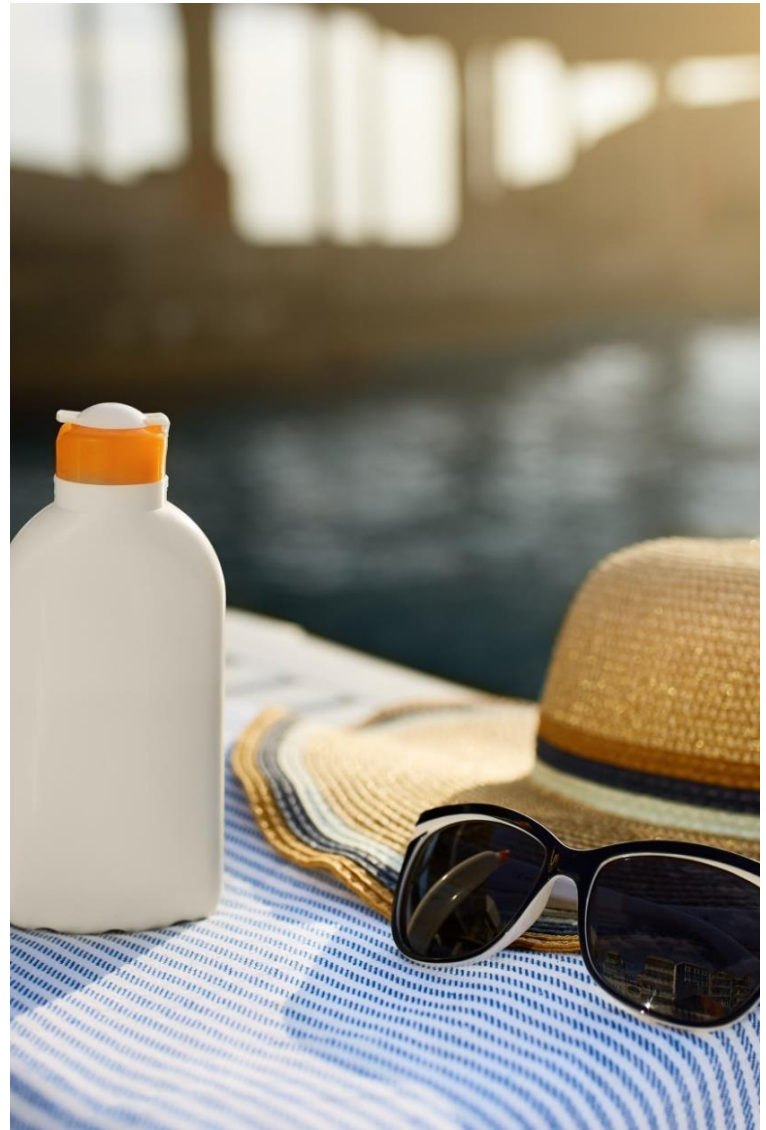
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

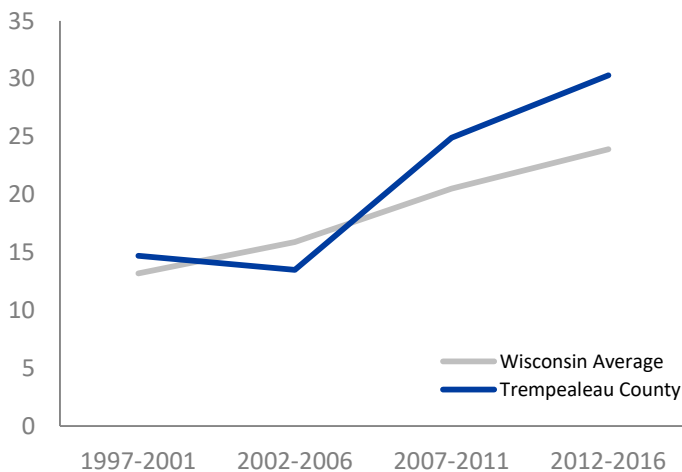
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



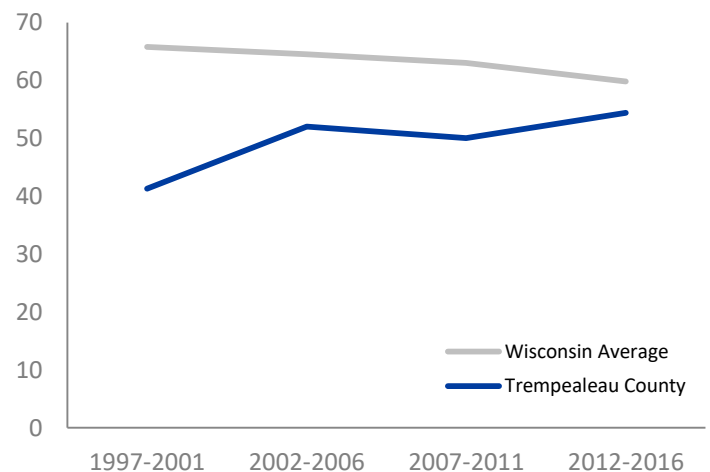
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE TREMPPEALEAU COUNTY

## BACKGROUND

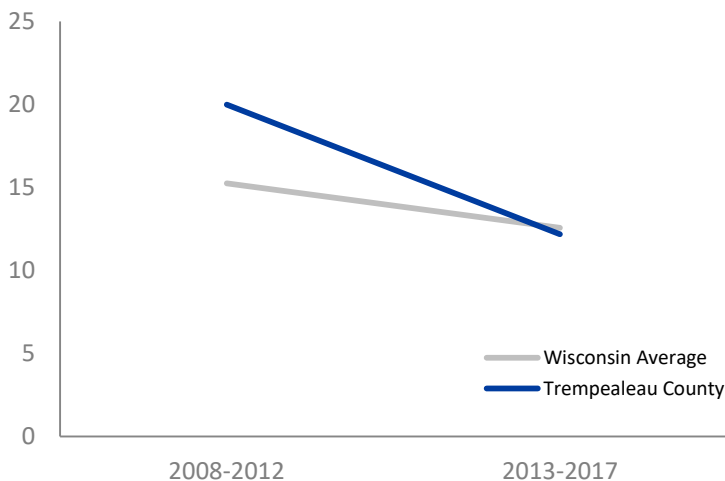
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **12.2**  
**HEAT STRESS**  
 RATE OF ER VISITS  
 PER 100,000 PEOPLE  
 WISCONSIN: 12.6

● **78.0**  
**LYME DISEASE**  
 RATE OF CASES  
 PER 100,000 PEOPLE  
 WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

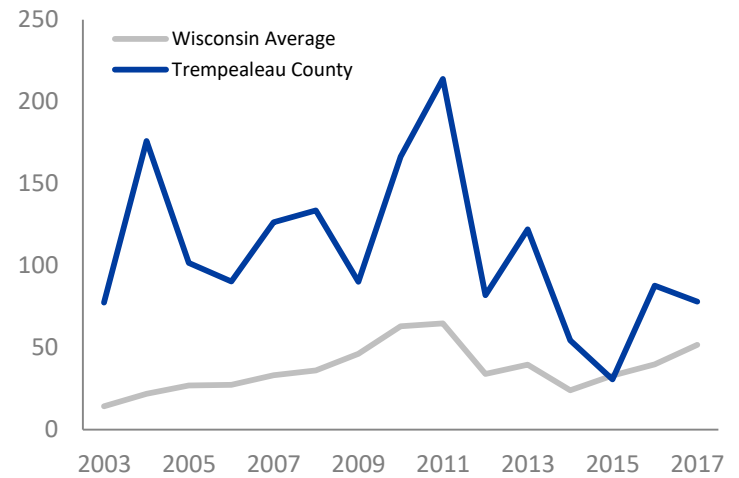
## INTERPRETING LYME DISEASE DATA

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.

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

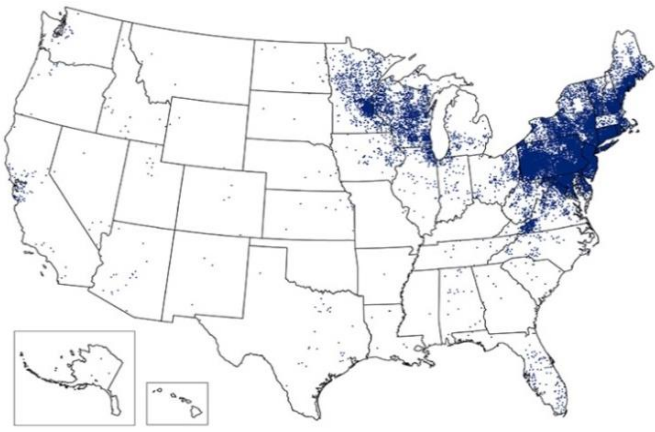
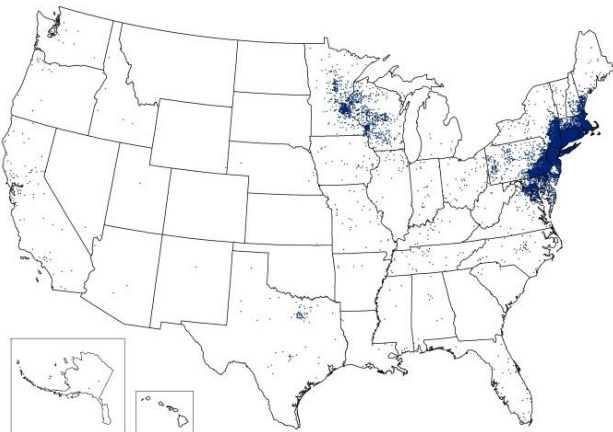
## LYME DISEASE AT THE NATIONAL LEVEL

OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001

2017



Maps courtesy of Centers for Disease Control and Prevention

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results for nitrate that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results for arsenic that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Wisconsin Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

**Asthma:** Rate of emergency room visits related to asthma, age-adjusted per 10,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

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Wisconsin Department of Health Services | Division of Public Health

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MAY 2019 | P-00719 (Rev. 05/2019)





# VERNON COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

Tracking data and resources can help you and your team develop rationale for funding requests. These data can help justify existing programs and show where work needs to be done.

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# VERNON COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

0.0% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

1.6 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

7.7% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

0.6% | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

10.4 | Rate of ER visits per 100,000 people  
Wisconsin: 7.9

### Childhood Lead Poisoning

2.0% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

61.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

30.8 | Rate of ER visits per 10,000 people#  
Wisconsin: 35.1

### Melanoma

20.2 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

54.8 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

24.8 | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

221.1 | Crude rate per 100,000 people  
Wisconsin: 51.7

● Above state value  
● At or below state value

\* Above state value preferred for this measure  
^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

[Data details on next page](#)



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2016

**Radon:** Percent of tests with results above EPA standard of 4 pCi/L

**Source:** Radon and Indoor Air Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH VERNON COUNTY

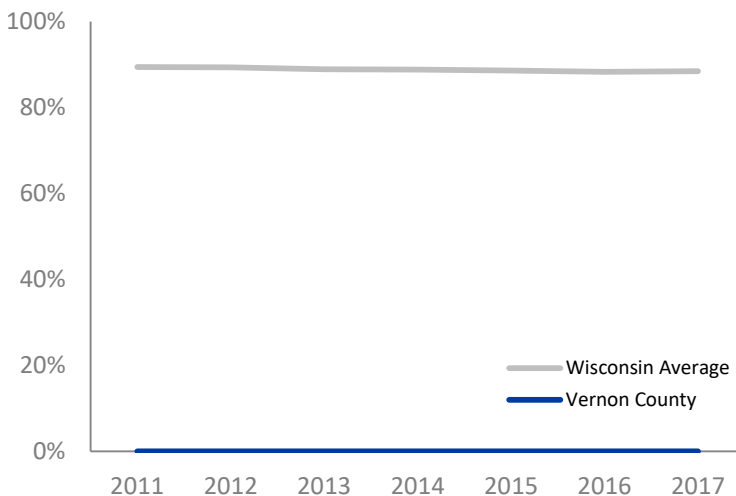
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **0.0%**  
**FLUORIDE**  
 PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
 WISCONSIN: 88.4%

● **1.6**  
**ALCOHOL OUTLET DENSITY**  
 RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
 WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
 ^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



### ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

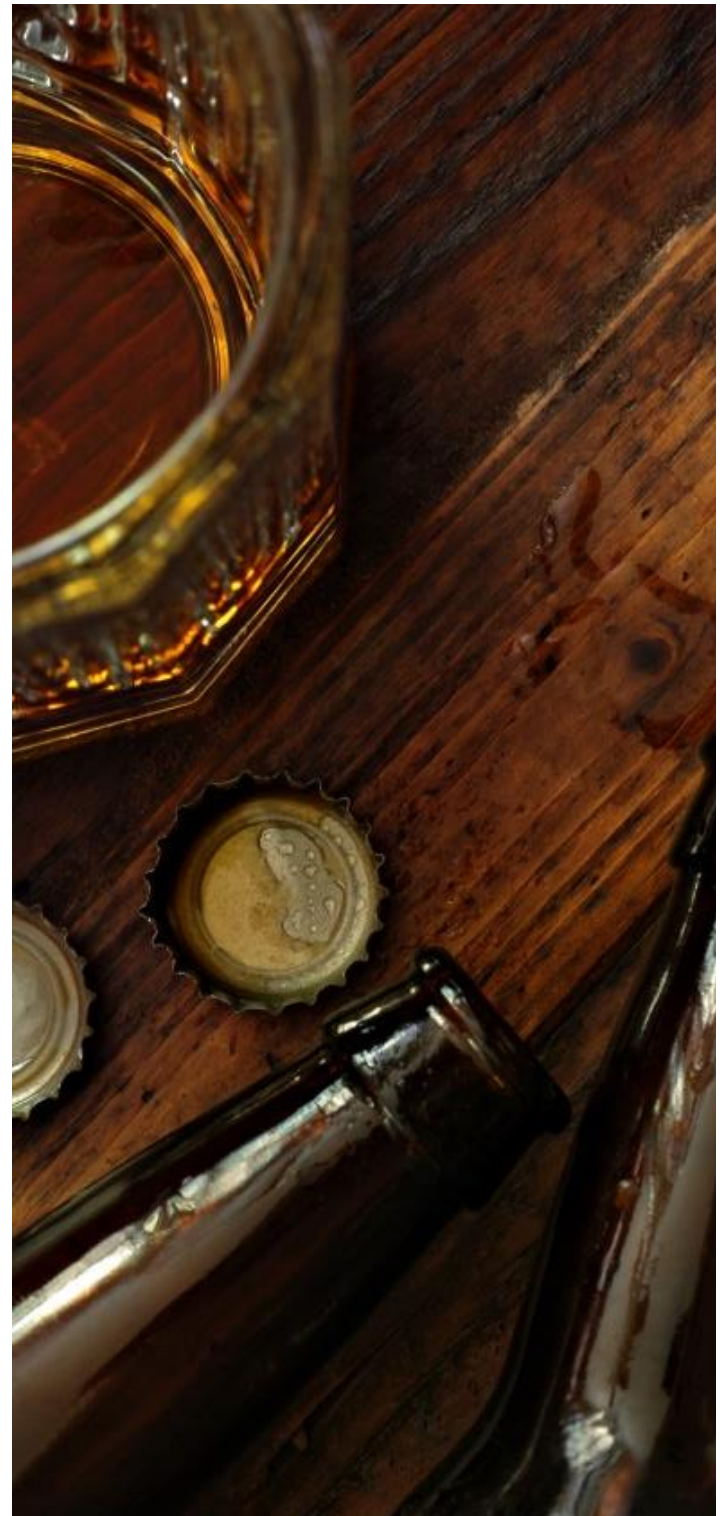
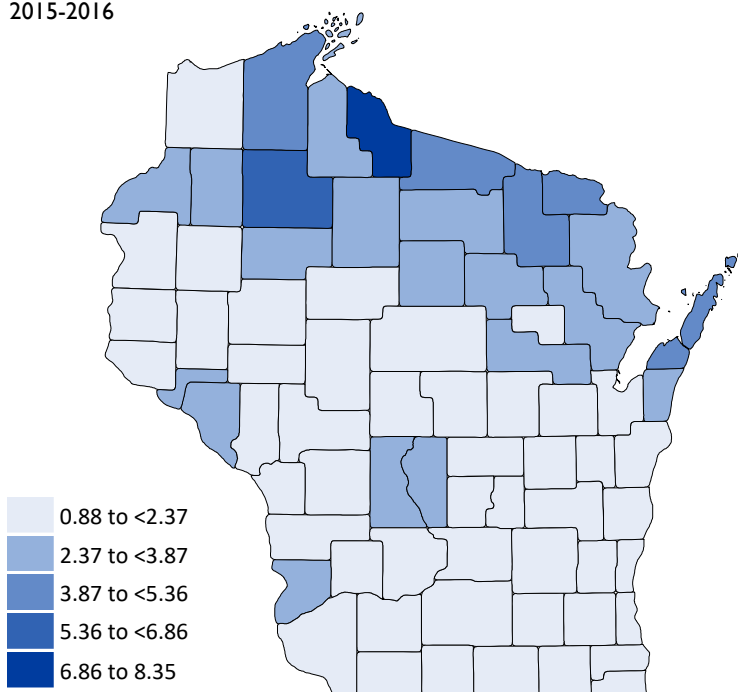
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

### ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



**99**  
LICENSES IN  
VERNON COUNTY

**16,948**  
TOTAL LICENSES IN  
WISCONSIN





# PRIVATE WATER QUALITY VERNON 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 displayed in this report. Users can find public water quality data on our data portal.

● **7.7%**

**NITRATE  
IN PRIVATE WELLS**  
PERCENT OF TEST RESULTS  
ABOVE EPA STANDARD  
OF 10 mg/L  
**WISCONSIN: 11.0%**

● **0.6%**

**ARSENIC  
IN PRIVATE WELLS**  
PERCENT OF TEST RESULTS  
ABOVE EPA STANDARD  
OF 10 µg/L  
**WISCONSIN: 6.0%**

● Above state value   ● At or below state value   ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
1988 TO MARCH 2017



## 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 certain 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.





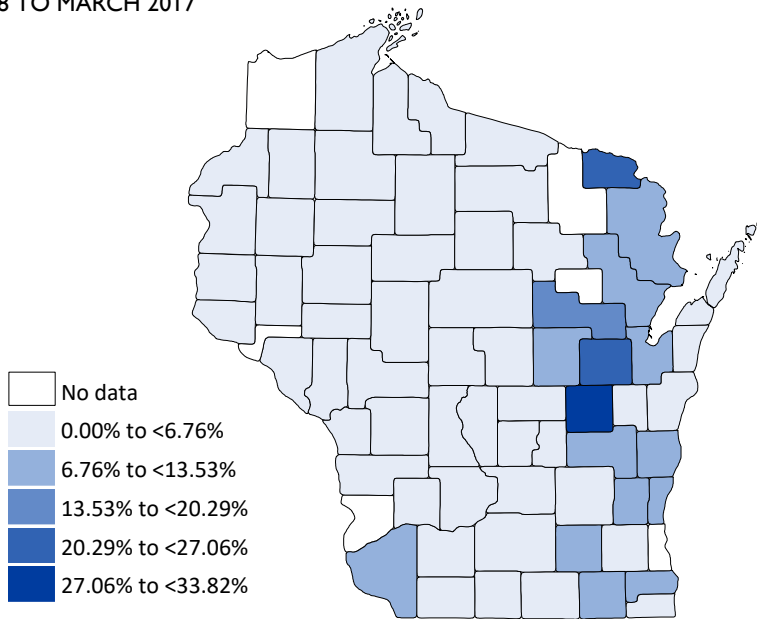
## ARSENIC IN PRIVATE WELLS

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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS VERNON 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.

● **10.4**

**CARBON MONOXIDE POISONING**

RATE OF ER VISITS RELATED TO CO POISONING PER 100,000

WISCONSIN: 7.9

● **2.0%**

**CHILDHOOD LEAD POISONING**

PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$

WISCONSIN: 5.0%

● **61.0%**

**RADON**

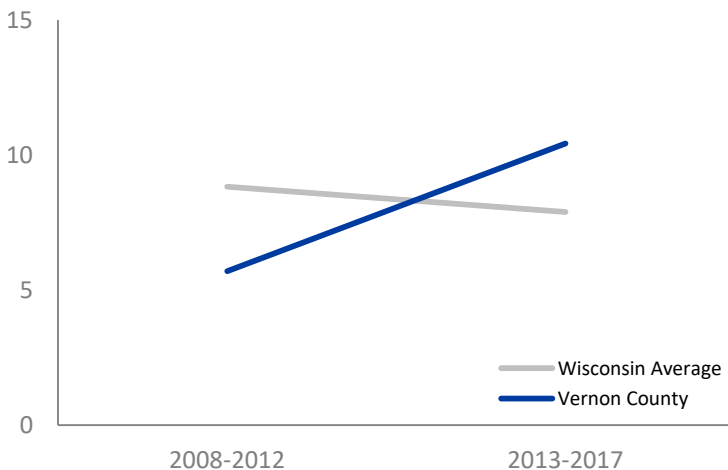
PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$

WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

Carbon monoxide (CO) poisoning prevents oxygen from getting to the body, which can damage tissue and even cause death.

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



## 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter ( $\mu\text{g}/\text{dL}$ ). The Centers for Disease Control and Prevention defines lead poisoning at or above 5  $\mu\text{g}/\text{dL}$ .

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

## RADON

Radon is a naturally occurring gas that is radioactive and can cause lung cancer. Radon can leak into homes and other buildings through cracks in the foundation.

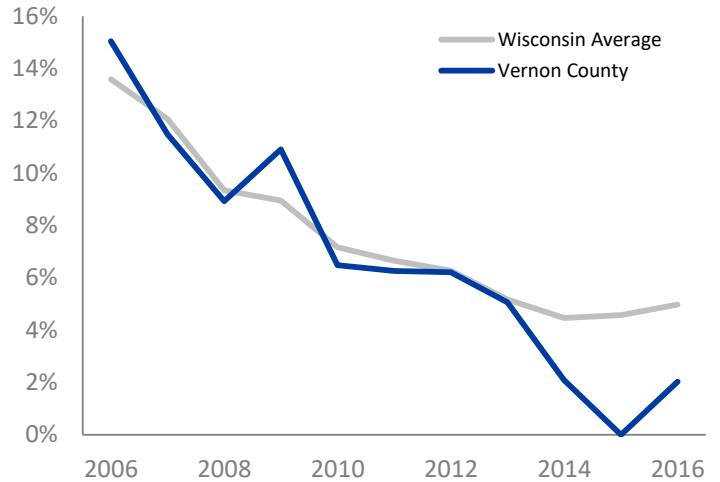
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

## CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g}/\text{dL}$

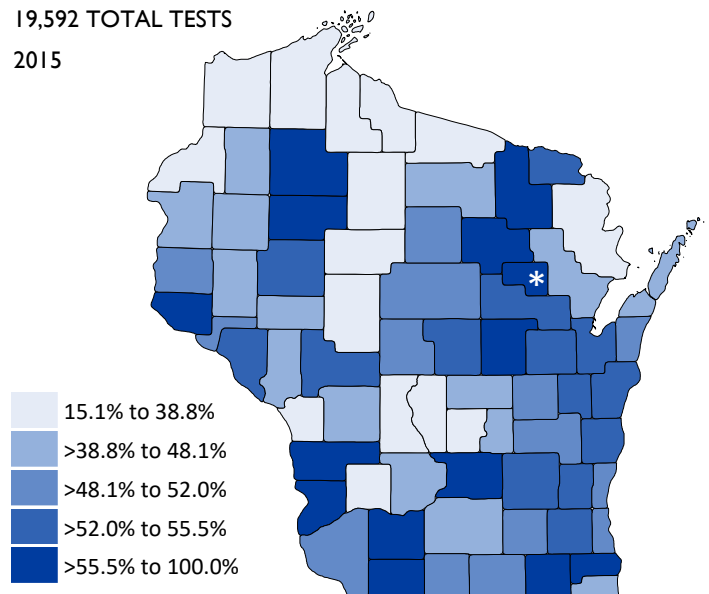


## RADON

PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi}/\text{L}$

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

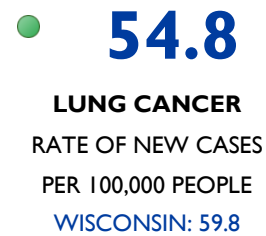
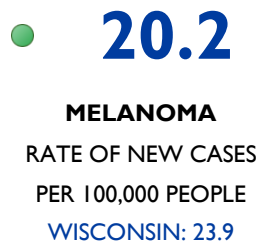
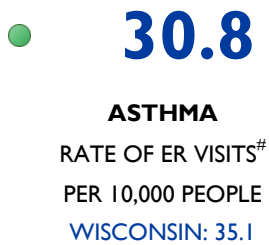




# HEALTH CONDITIONS VERNON COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.



● Above state value

● At or below state value

^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



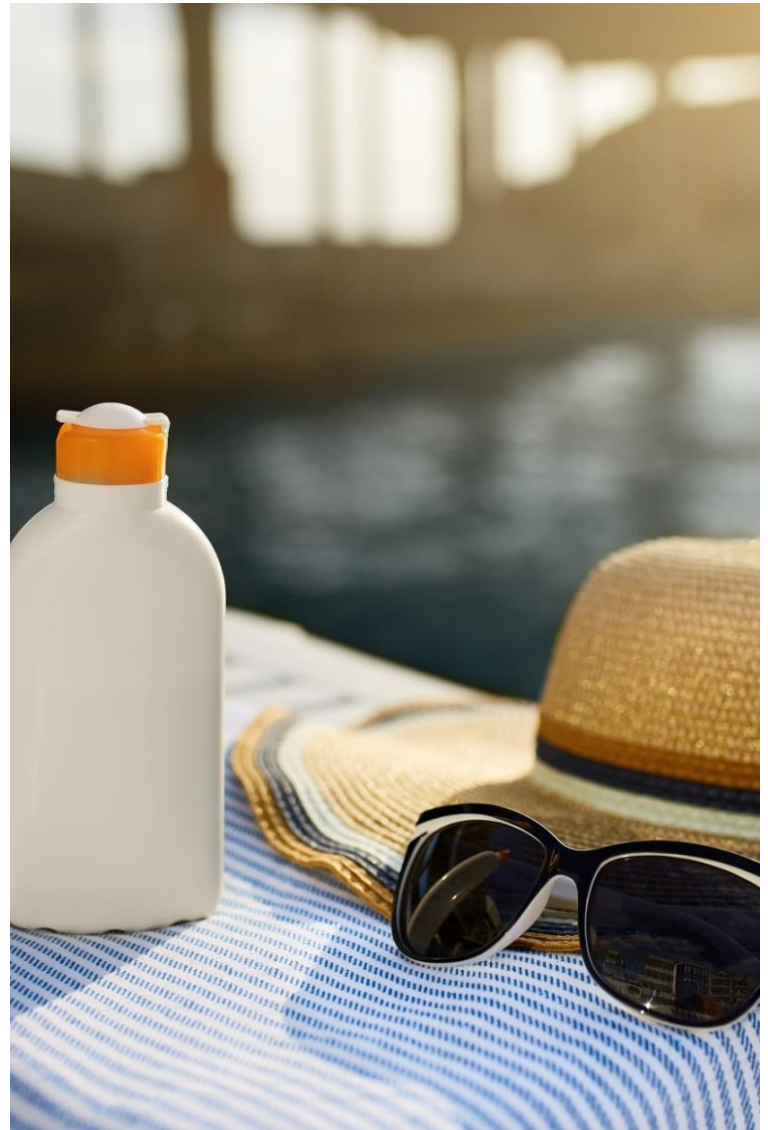
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

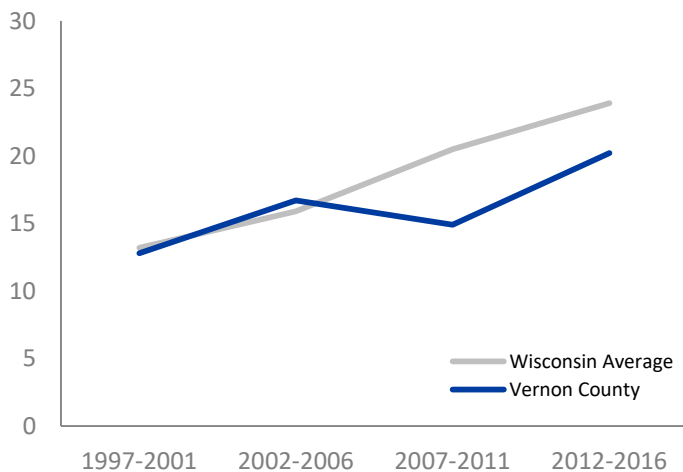
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



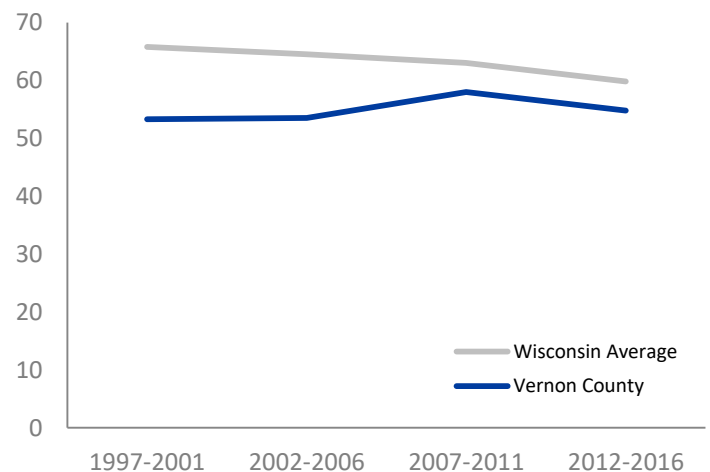
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE VERNON COUNTY

## BACKGROUND

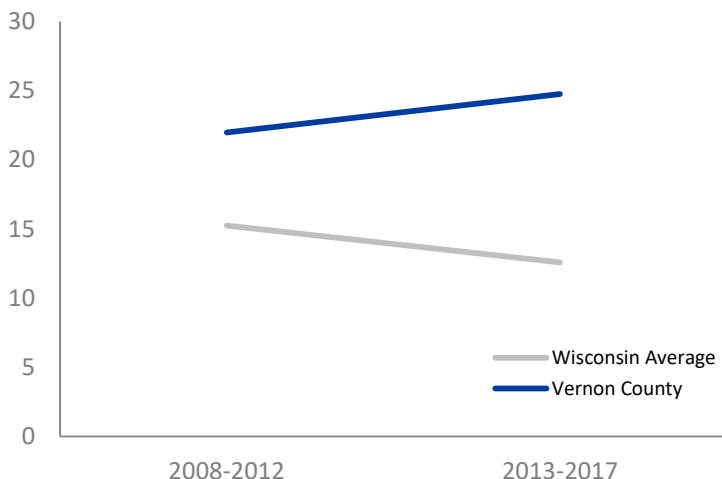
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **24.8**

**HEAT STRESS**  
RATE OF ER VISITS  
PER 100,000 PEOPLE  
WISCONSIN: 12.6

● **221.1**

**LYME DISEASE**  
RATE OF CASES  
PER 100,000 PEOPLE  
WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

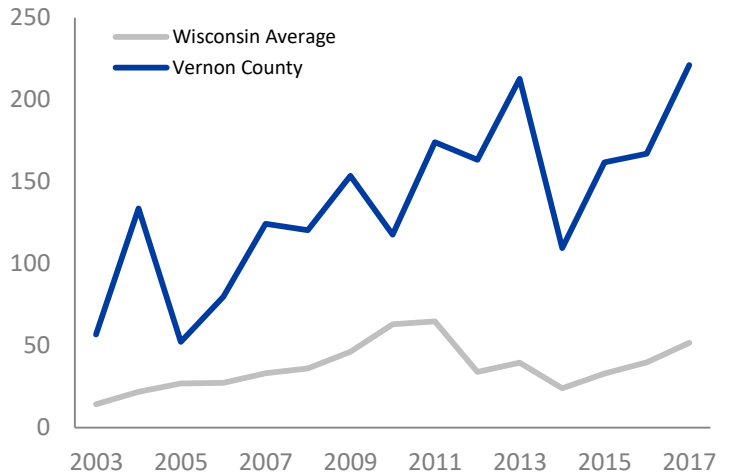
## INTERPRETING LYME DISEASE DATA

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.

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

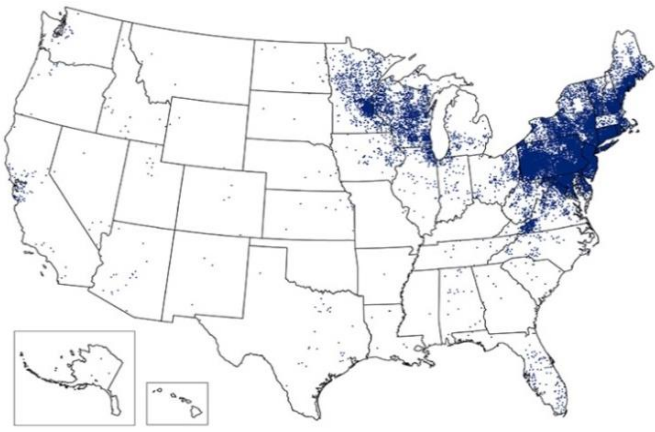
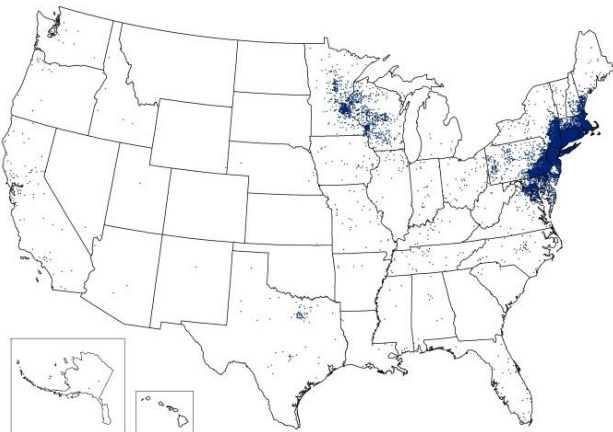
## LYME DISEASE AT THE NATIONAL LEVEL

OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001

2017



Maps courtesy of Centers for Disease Control and Prevention

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results for nitrate that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results for arsenic that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Wisconsin Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

**Asthma:** Rate of emergency room visits related to asthma, age-adjusted per 10,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

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Wisconsin Department of Health Services | Division of Public Health

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MAY 2019 | P-00719 (Rev. 05/2019)





# VILAS COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

Tracking data and resources can help you and your team develop rationale for funding requests. These data can help justify existing programs and show where work needs to be done.

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# VILAS COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

● 63.1% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

● 5.4 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

● 1.2% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

● 0.8% | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

● 13.0 | Rate of ER visits per 100,000 people  
Wisconsin: 7.9

### Childhood Lead Poisoning

● 0.0% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

● 33.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

● 33.7 | Rate of ER visits per 10,000 people<sup>#</sup>  
Wisconsin: 35.1

### Melanoma

● 14.9 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

● 72.0 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

● 14.1 | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

● 143.0 | Crude rate per 100,000 people  
Wisconsin: 51.7

● Above state value  
● At or below state value

\* Above state value preferred for this measure  
^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

[Data details on next page](#)



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2016

**Radon:** Percent of tests with results above EPA standard of 4 pCi/L

**Source:** Radon and Indoor Air Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH VILAS COUNTY

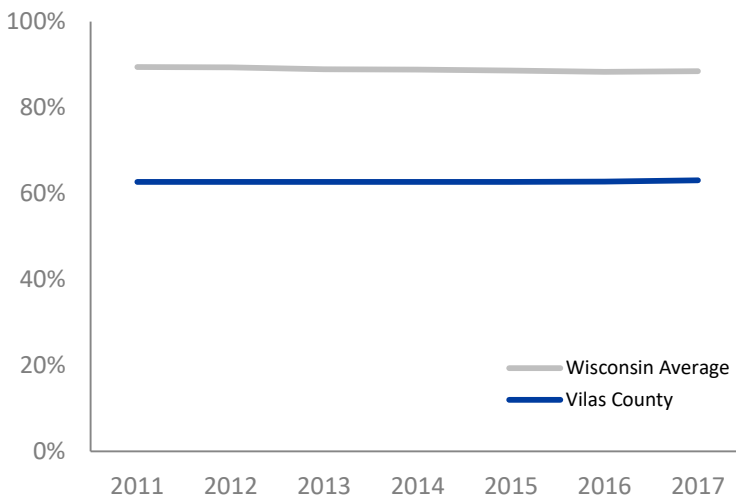
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **63.1%**

**FLUORIDE**  
PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
WISCONSIN: 88.4%

● **5.4**

**ALCOHOL OUTLET DENSITY**  
RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



### ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

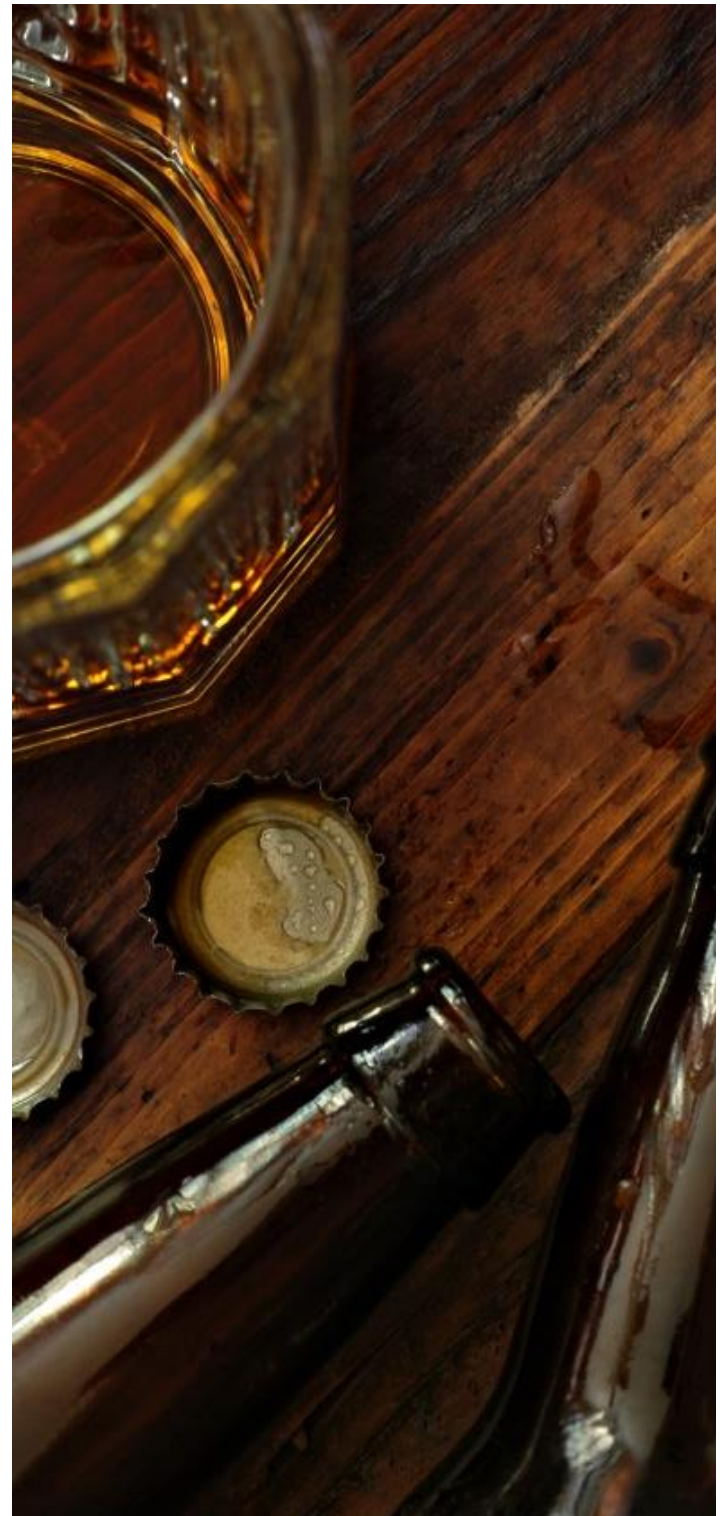
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

### ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



**230**  
LICENSES IN  
VILAS COUNTY

**16,948**  
TOTAL LICENSES IN  
WISCONSIN





# PRIVATE WATER QUALITY VILAS 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 displayed in this report. Users can find public water quality data on our data portal.

● **1.2%**

**NITRATE  
IN PRIVATE WELLS**  
PERCENT OF TEST RESULTS  
ABOVE EPA STANDARD  
OF 10 mg/L  
WISCONSIN: 11.0%

● **0.8%**

**ARSENIC  
IN PRIVATE WELLS**  
PERCENT OF TEST RESULTS  
ABOVE EPA STANDARD  
OF 10 µg/L  
WISCONSIN: 6.0%

● Above state value   ● At or below state value   ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS VILAS 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.

● **13.0**  
**CARBON MONOXIDE POISONING**  
 RATE OF ER VISITS RELATED TO CO POISONING PER 100,000  
 WISCONSIN: 7.9

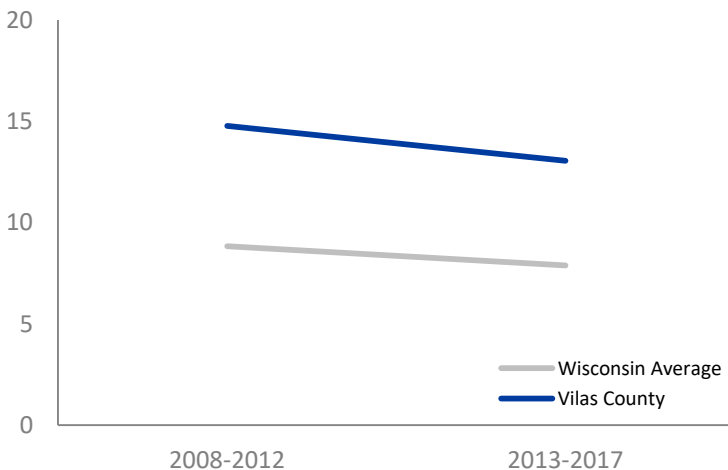
● **0.0%**  
**CHILDHOOD LEAD POISONING**  
 PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$   
 WISCONSIN: 5.0%

● **33.0%**  
**RADON**  
 PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$   
 WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

Carbon monoxide (CO) poisoning prevents oxygen from getting to the body, which can damage tissue and even cause death.

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



## 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter ( $\mu\text{g}/\text{dL}$ ). The Centers for Disease Control and Prevention defines lead poisoning at or above 5  $\mu\text{g}/\text{dL}$ .

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

## RADON

Radon is a naturally occurring gas that is radioactive and can cause lung cancer. Radon can leak into homes and other buildings through cracks in the foundation.

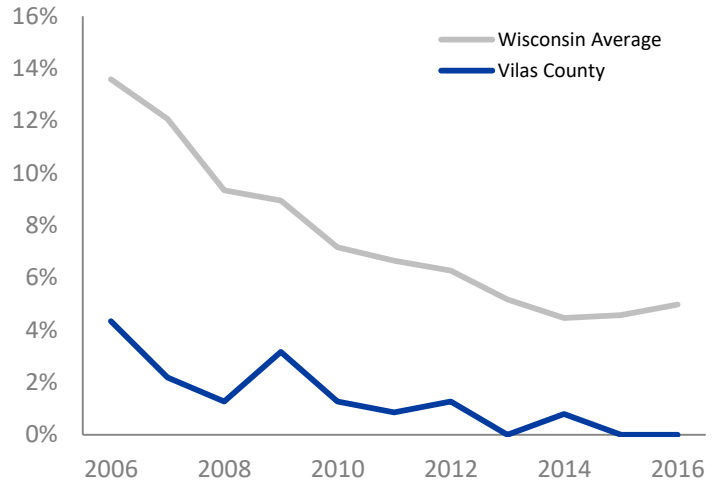
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

## CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g}/\text{dL}$

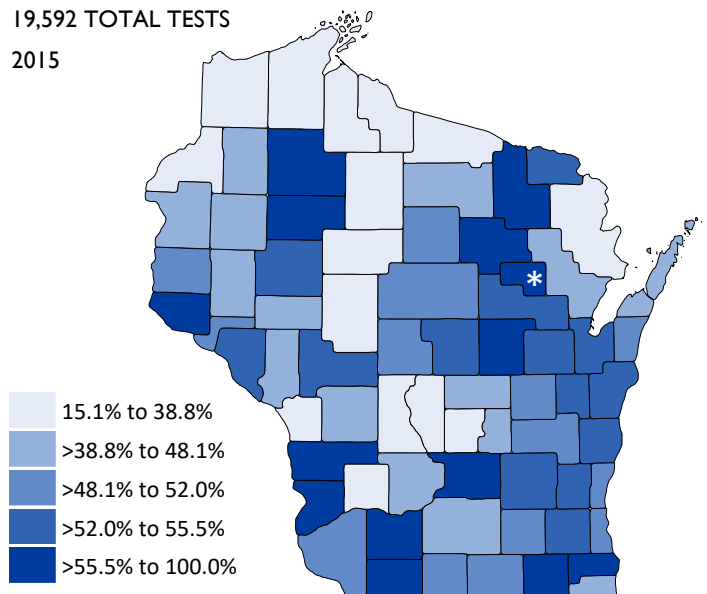


## RADON

PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

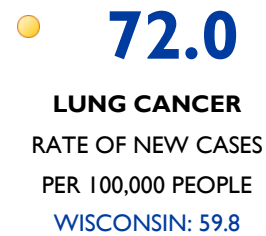
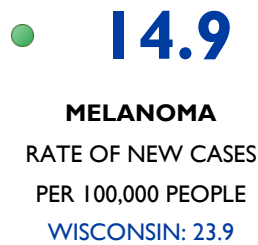
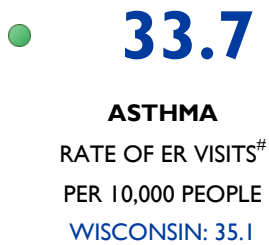




# HEALTH CONDITIONS VILAS COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.

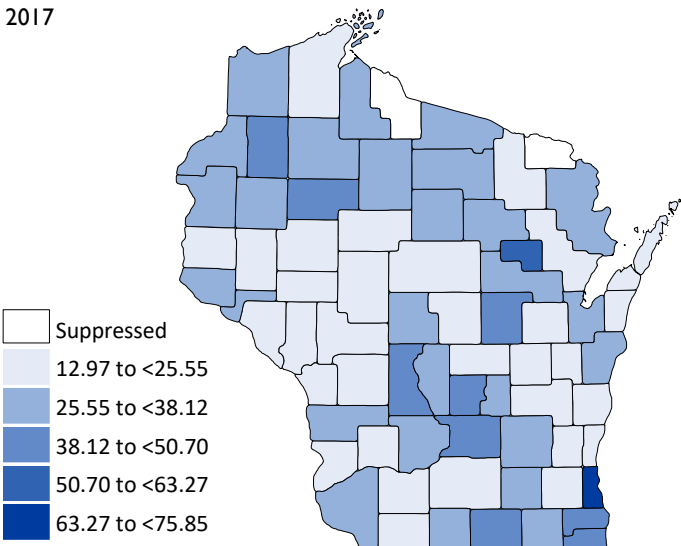


- Above state value
- At or below state value
- ^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



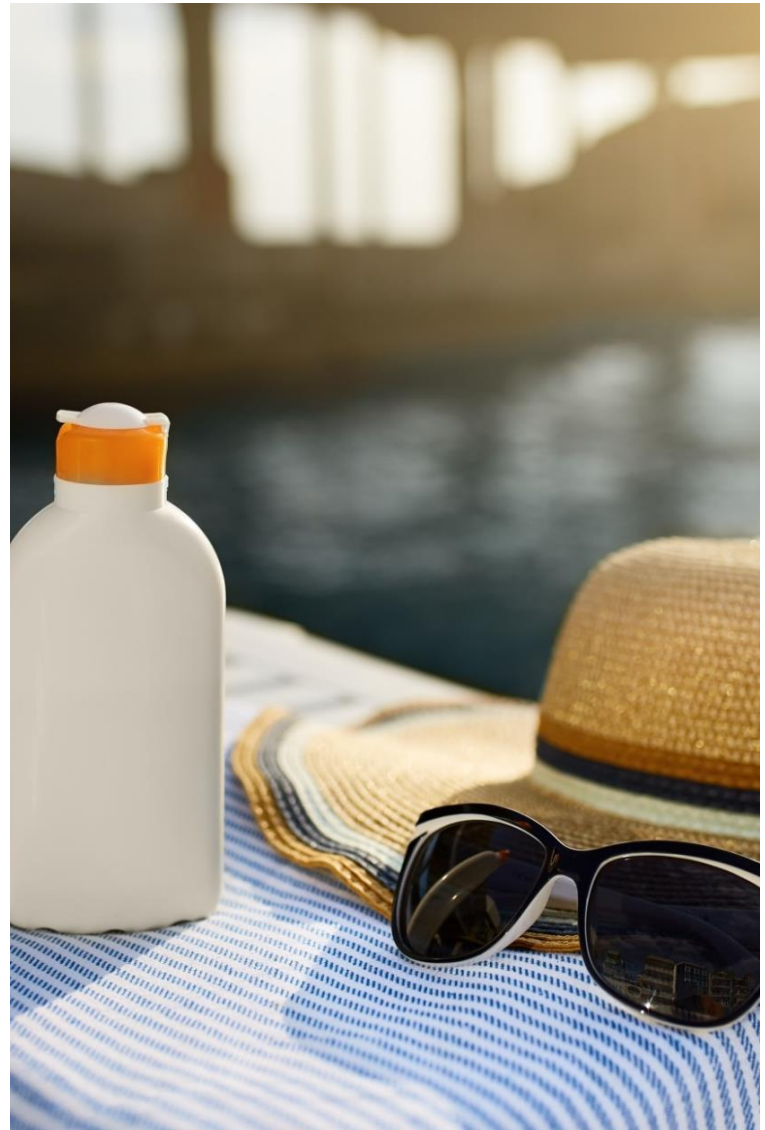
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

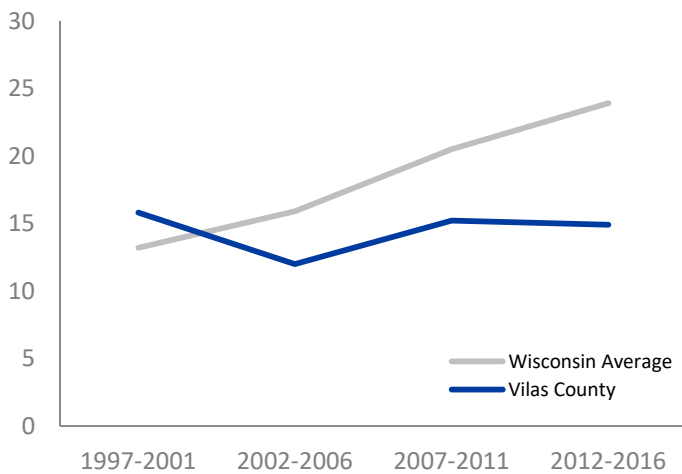
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



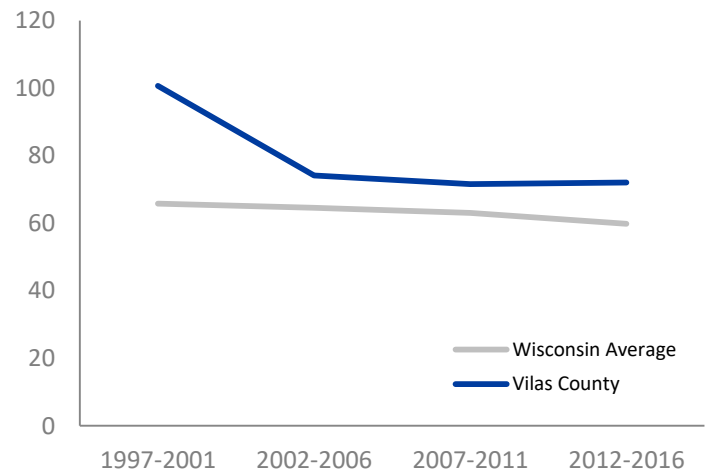
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE VILAS COUNTY

## BACKGROUND

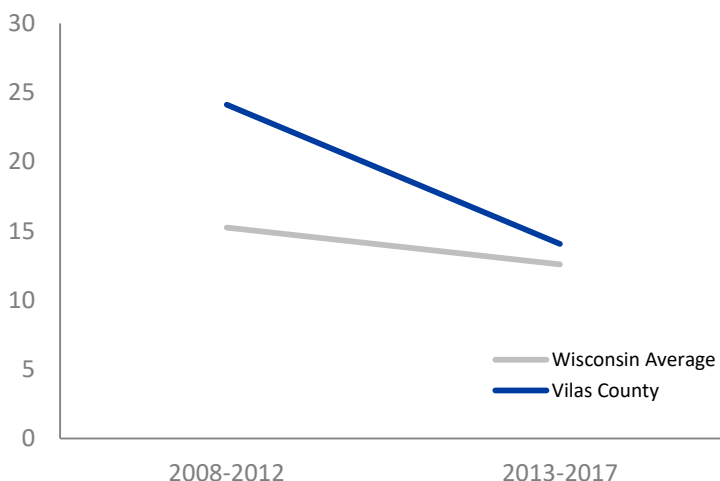
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **14.1**

**HEAT STRESS**  
RATE OF ER VISITS  
PER 100,000 PEOPLE  
WISCONSIN: 12.6

● **143.0**

**LYME DISEASE**  
RATE OF CASES  
PER 100,000 PEOPLE  
WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

## LYME DISEASE AT THE NATIONAL LEVEL

OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001



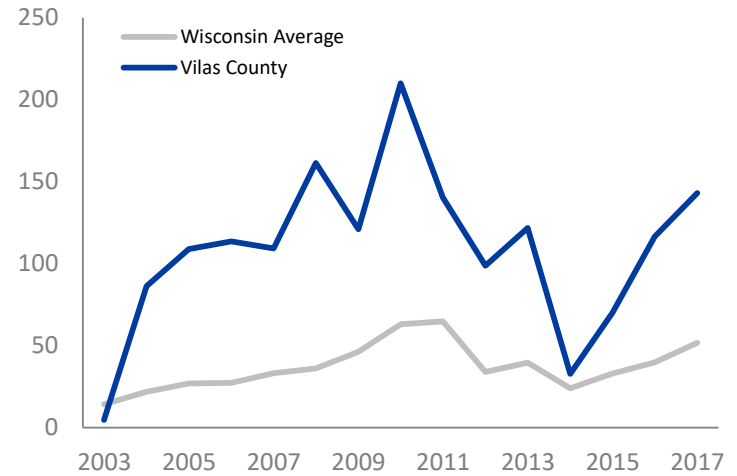
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results for nitrate that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results for arsenic that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Wisconsin Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

**Asthma:** Rate of emergency room visits related to asthma, age-adjusted per 10,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

Bureau of Environmental and Occupational Health  
Wisconsin Department of Health Services | Division of Public Health

[dhstracking@wi.gov](mailto:dhstracking@wi.gov) | [dhs.wisconsin.gov/epht](https://dhs.wisconsin.gov/epht)  
MAY 2019 | P-00719 (Rev. 05/2019)





# WALWORTH COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

Tracking data and resources can help you and your team develop rationale for funding requests. These data can help justify existing programs and show where work needs to be done.

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

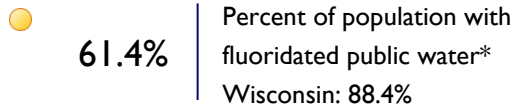
# WALWORTH COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE

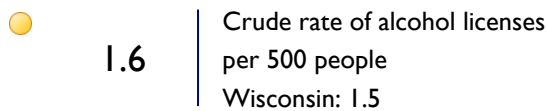


## COMMUNITY HEALTH

### Fluoride

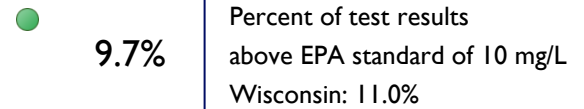


### Alcohol Outlet Density

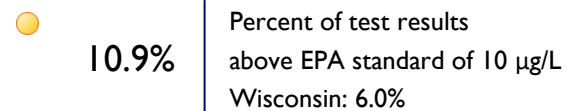


## PRIVATE WATER QUALITY

### Nitrate

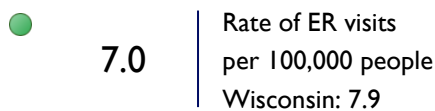


### Arsenic

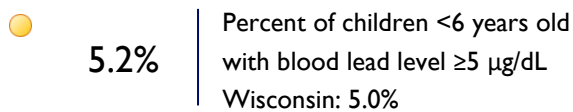


## HOME HAZARDS

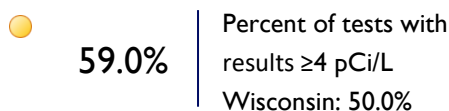
### Carbon Monoxide Poisoning



### Childhood Lead Poisoning

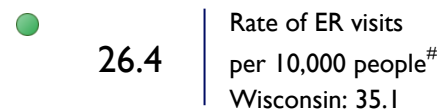


### Radon

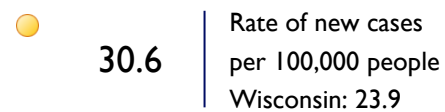


## HEALTH CONDITIONS

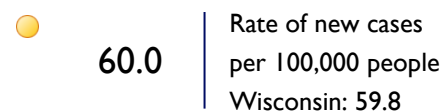
### Asthma



### Melanoma

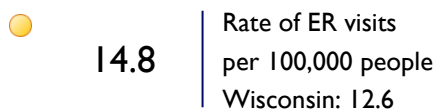


### Lung Cancer

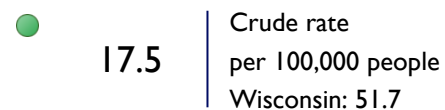


## CLIMATE

### Heat Stress



### Lyme Disease



- Above state value
- At or below state value

- \* Above state value preferred for this measure
- ^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

Data details on next page



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2016

**Radon:** Percent of tests with results above EPA standard of 4 pCi/L

**Source:** Radon and Indoor Air Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH WALWORTH COUNTY

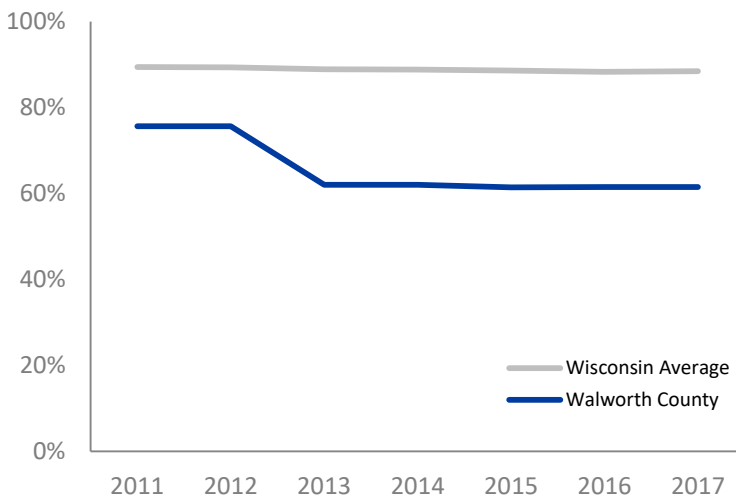
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **61.4%**  
**FLUORIDE**  
 PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
 WISCONSIN: 88.4%

● **1.6**  
**ALCOHOL OUTLET DENSITY**  
 RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
 WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
 ^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



### ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small 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 [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

### ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



# 328

LICENSES IN  
WALWORTH COUNTY

# 16,948

TOTAL LICENSES IN  
WISCONSIN





# PRIVATE WATER QUALITY WALWORTH 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 displayed in this report. Users can find public water quality data on our data portal.

● **9.7%**

**NITRATE**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 mg/L  
**WISCONSIN: 11.0%**

● **10.9%**

**ARSENIC**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 µg/L  
**WISCONSIN: 6.0%**

● Above state value   ● At or below state value   ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
 1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS WALWORTH 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.

**7.0**

**CARBON MONOXIDE POISONING**

RATE OF ER VISITS RELATED TO CO POISONING PER 100,000

WISCONSIN: 7.9

**5.2%**

**CHILDHOOD LEAD POISONING**

PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$

WISCONSIN: 5.0%

**59.0%**

**RADON**

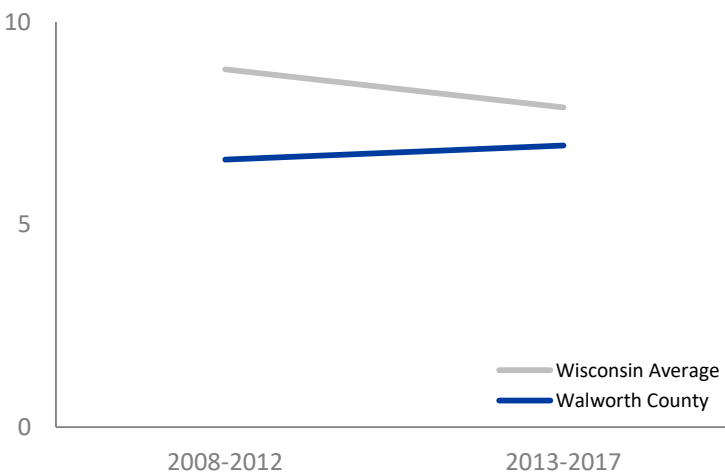
PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$

WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

Carbon monoxide (CO) poisoning prevents oxygen from getting to the body, which can damage tissue and even cause death.

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



## 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter ( $\mu\text{g}/\text{dL}$ ). The Centers for Disease Control and Prevention defines lead poisoning at or above 5  $\mu\text{g}/\text{dL}$ .

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

## RADON

Radon is a naturally occurring gas that is radioactive and can cause lung cancer. Radon can leak into homes and other buildings through cracks in the foundation.

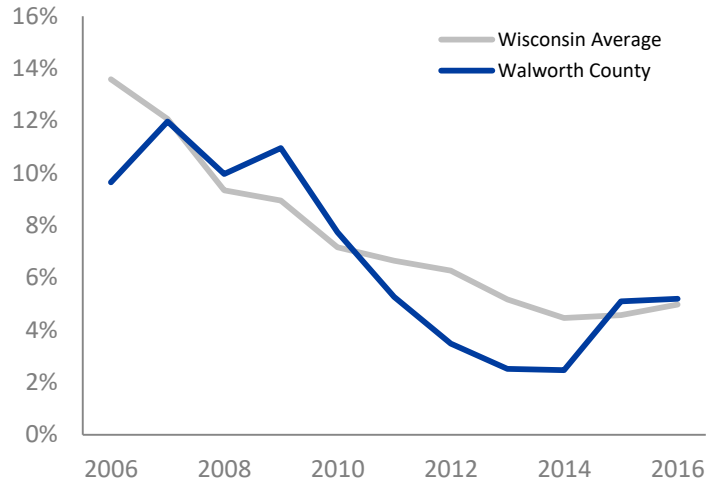
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

## CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g}/\text{dL}$

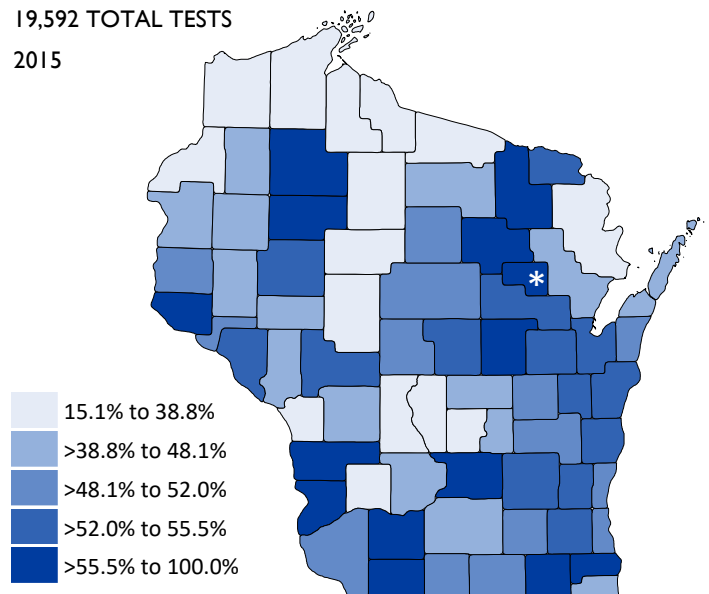


## RADON

PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi}/\text{L}$

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

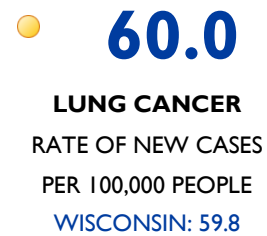
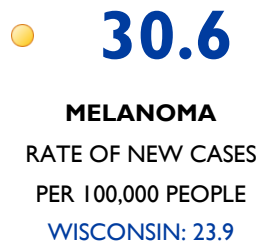
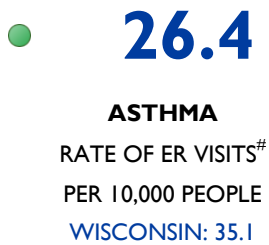




# HEALTH CONDITIONS WALWORTH COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.

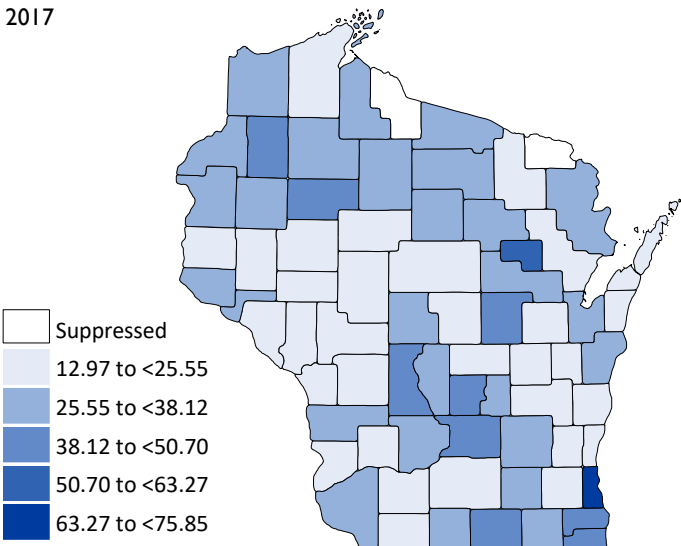


- Above state value
- At or below state value
- ^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



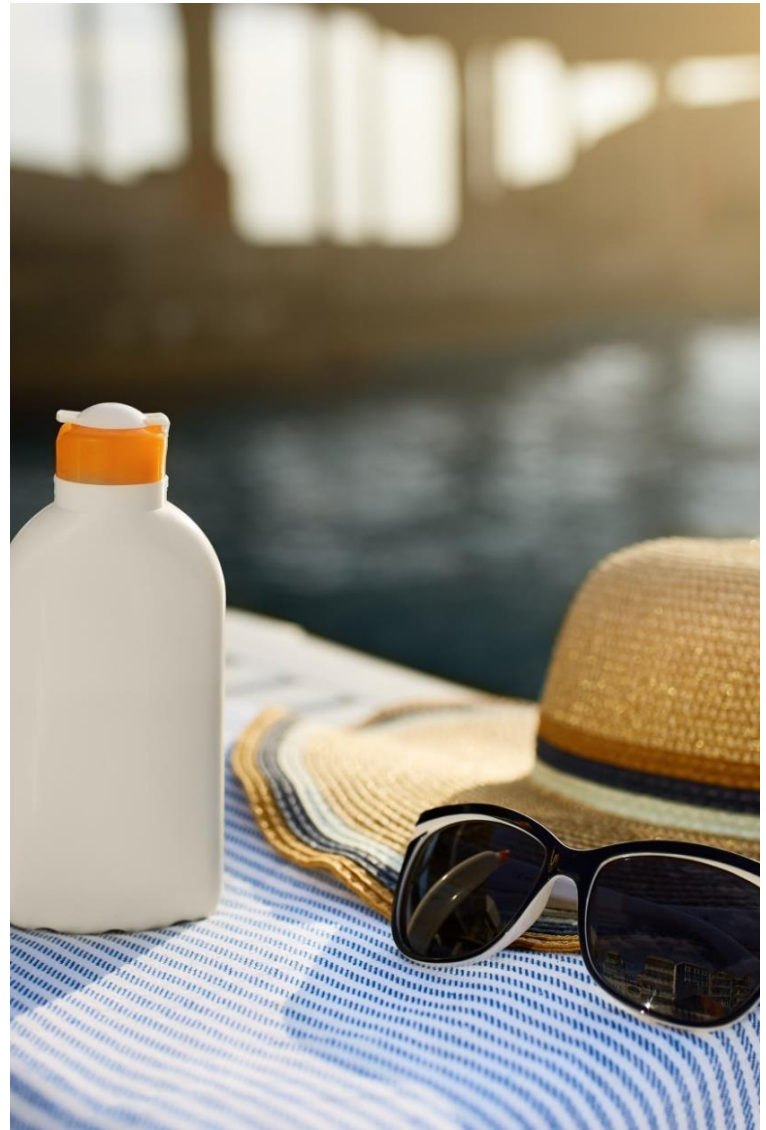
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

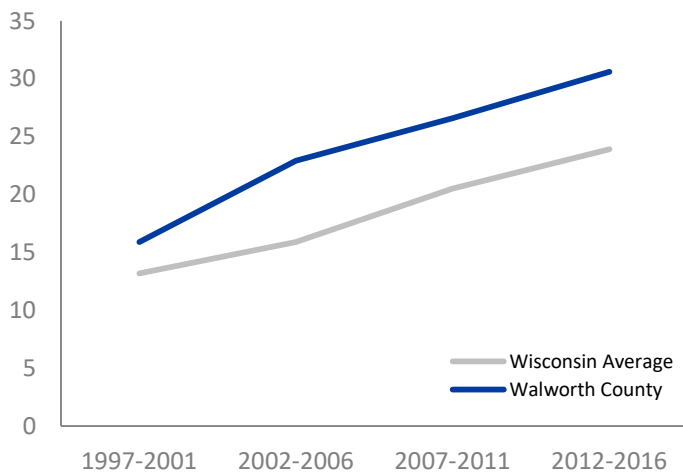
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



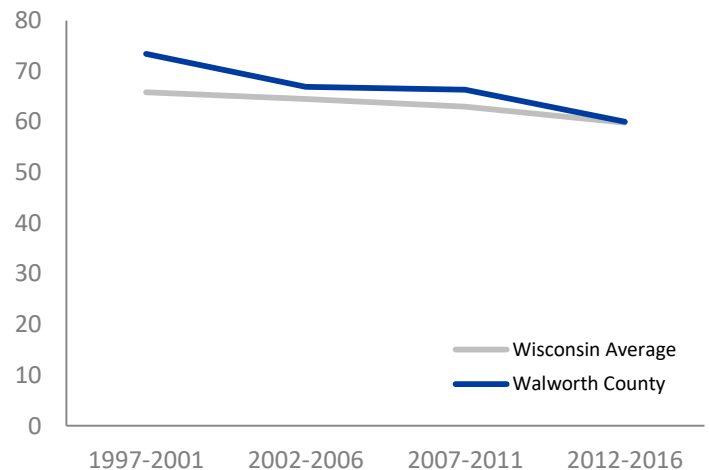
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE WALWORTH COUNTY

## BACKGROUND

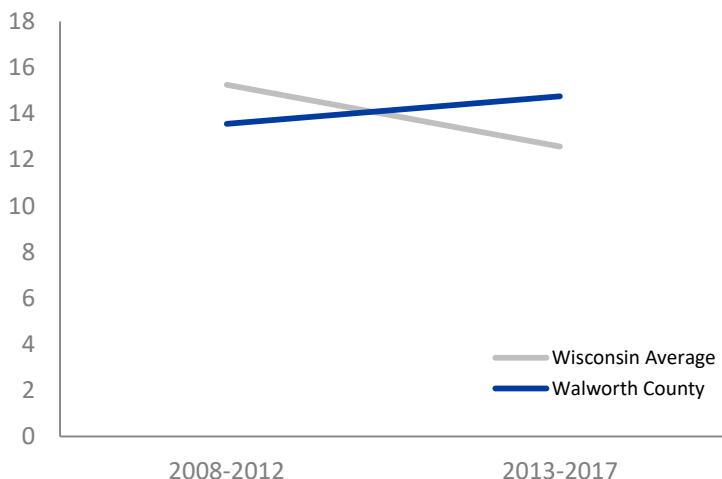
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **14.8**  
**HEAT STRESS**  
 RATE OF ER VISITS  
 PER 100,000 PEOPLE  
 WISCONSIN: 12.6

● **17.5**  
**LYME DISEASE**  
 RATE OF CASES  
 PER 100,000 PEOPLE  
 WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

## LYME DISEASE AT THE NATIONAL LEVEL

OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001



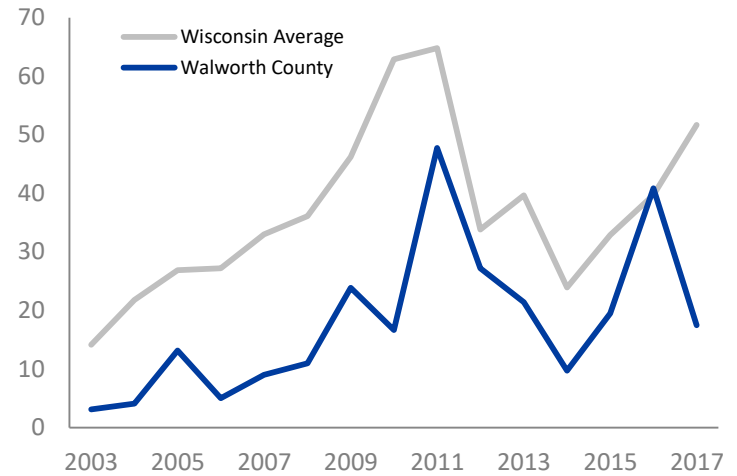
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results for nitrate that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results for arsenic that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Wisconsin Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

**Asthma:** Rate of emergency room visits related to asthma, age-adjusted per 10,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

Bureau of Environmental and Occupational Health  
Wisconsin Department of Health Services | Division of Public Health

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MAY 2019 | P-00719 (Rev. 05/2019)





# WASHBURN COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

Tracking data and resources can help you and your team develop rationale for funding requests. These data can help justify existing programs and show where work needs to be done.

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# WASHBURN COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

● 58.2% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

● 3.2 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

● 2.7% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

● 0.0% | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

● 33.4 | Rate of ER visits per 100,000 people  
Wisconsin: 7.9

### Childhood Lead Poisoning

● 0.0% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

● 46.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

● 39.3 | Rate of ER visits per 10,000 people<sup>#</sup>  
Wisconsin: 35.1

### Melanoma

● 21.1 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

● 69.8 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

● 13.5 | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

● 406.1 | Crude rate per 100,000 people  
Wisconsin: 51.7

● Above state value  
● At or below state value

\* Above state value preferred for this measure  
^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

[Data details on next page](#)



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2016

**Radon:** Percent of tests with results above EPA standard of 4 pCi/L

**Source:** Radon and Indoor Air Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH WASHBURN COUNTY

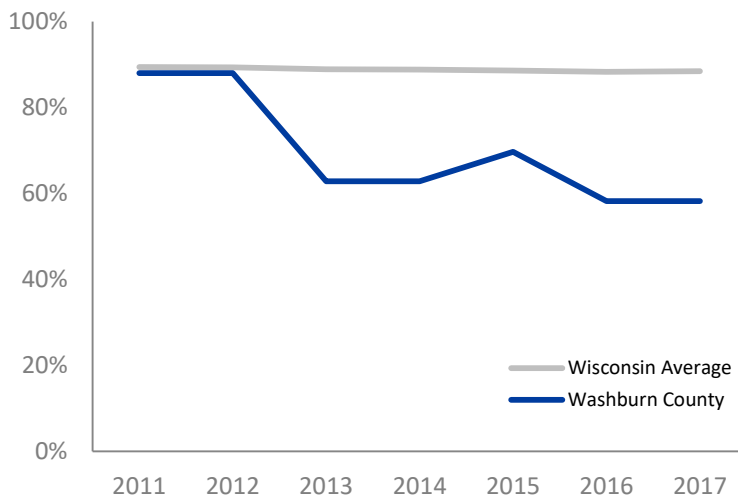
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **58.2%**

**FLUORIDE**  
PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
WISCONSIN: 88.4%

● Above state value

● **3.2**

**ALCOHOL OUTLET DENSITY**  
RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
WISCONSIN: 1.5

● At or below state value

\* Above state value preferred for this measure  
^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



### ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

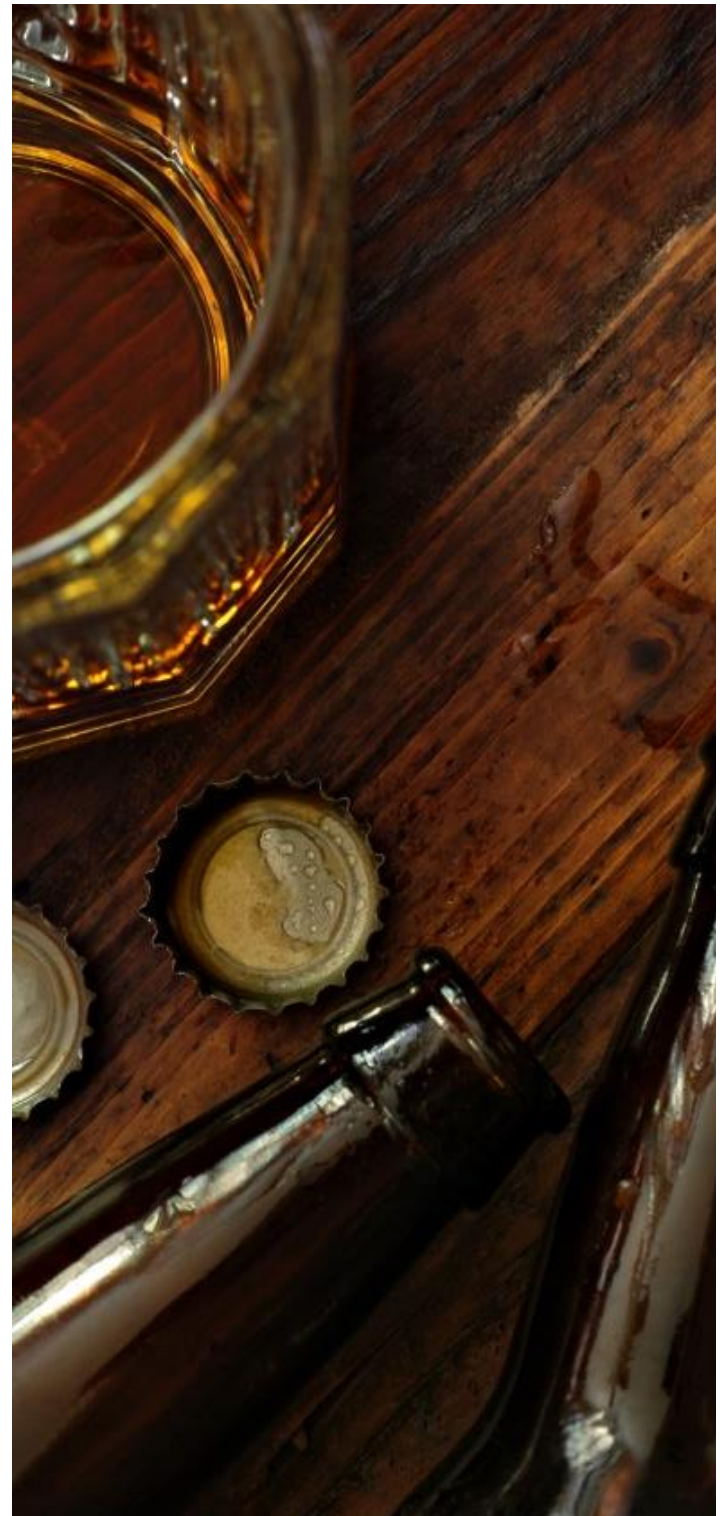
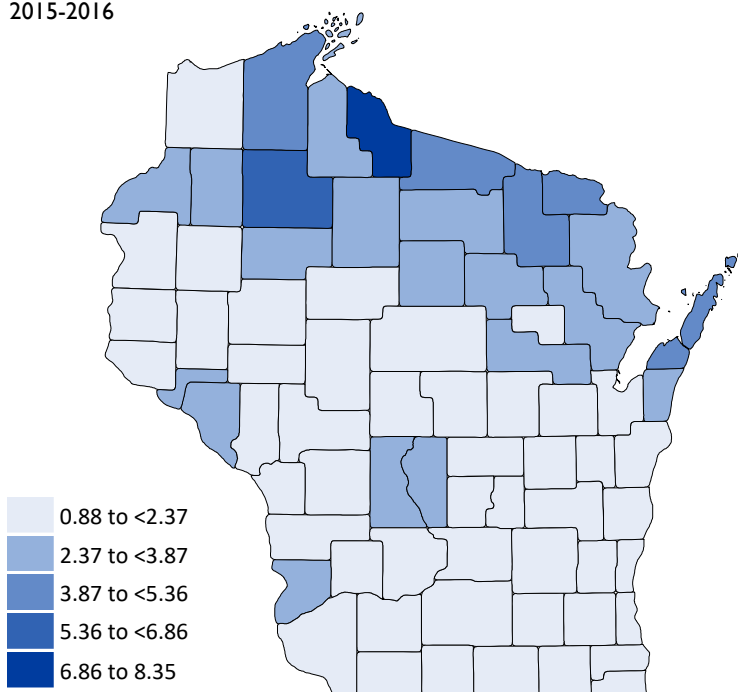
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

### ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



**100**  
LICENSES IN  
WASHBURN COUNTY

**16,948**  
TOTAL LICENSES IN  
WISCONSIN





# PRIVATE WATER QUALITY WASHBURN 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 displayed in this report. Users can find public water quality data on our data portal.

● **2.7%**

**NITRATE**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 mg/L  
**WISCONSIN: 11.0%**

● **0.0%**

**ARSENIC**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 µg/L  
**WISCONSIN: 6.0%**

● Above state value   ● At or below state value   ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
 1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS WASHBURN 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.

● **33.4**  
**CARBON MONOXIDE POISONING**  
 RATE OF ER VISITS RELATED TO CO POISONING PER 100,000  
 WISCONSIN: 7.9

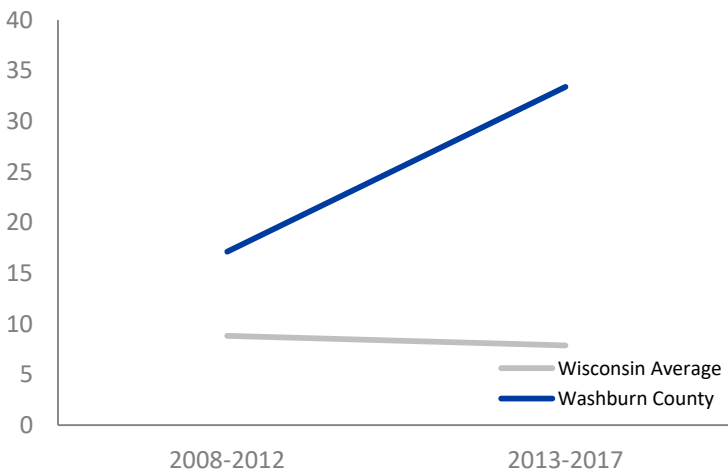
● **0.0%**  
**CHILDHOOD LEAD POISONING**  
 PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$   
 WISCONSIN: 5.0%

● **46.0%**  
**RADON**  
 PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$   
 WISCONSIN: 50.0%

● Above state value    ● At or below state value    ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

Carbon monoxide (CO) poisoning prevents oxygen from getting to the body, which can damage tissue and even cause death.

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



### 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter (µg/dL). The Centers for Disease Control and Prevention defines lead poisoning at or above 5 µg/dL.

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

### RADON

Radon is a naturally occurring gas that is radioactive and can cause lung cancer. Radon can leak into homes and other buildings through cracks in the foundation.

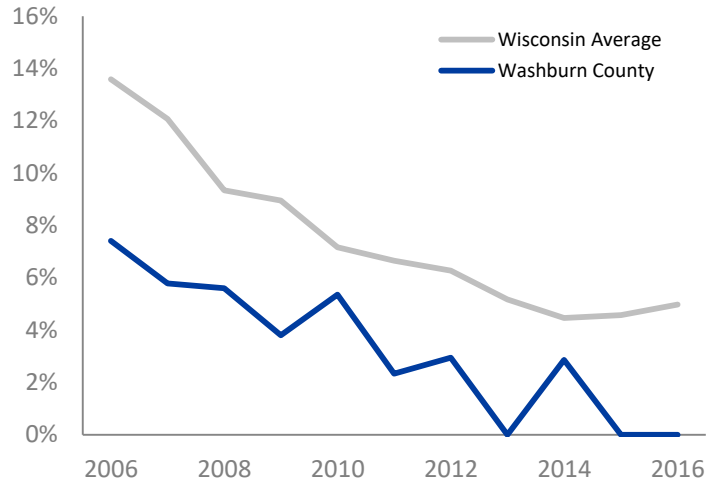
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

### CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD ≥5 µg/dL

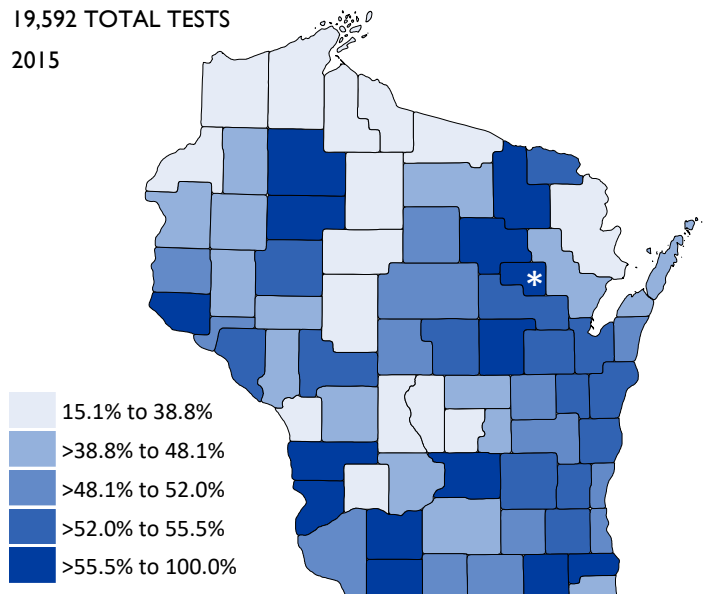


### RADON

PERCENT OF TESTS WITH RESULTS ≥4 pCi/L

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

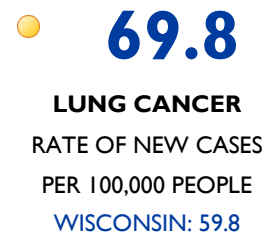
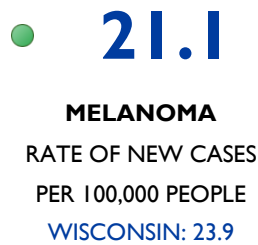
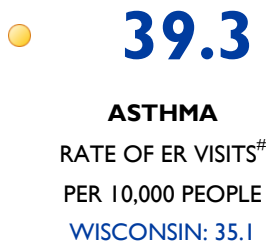




# HEALTH CONDITIONS WASHBURN COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.



● Above state value

● At or below state value

^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



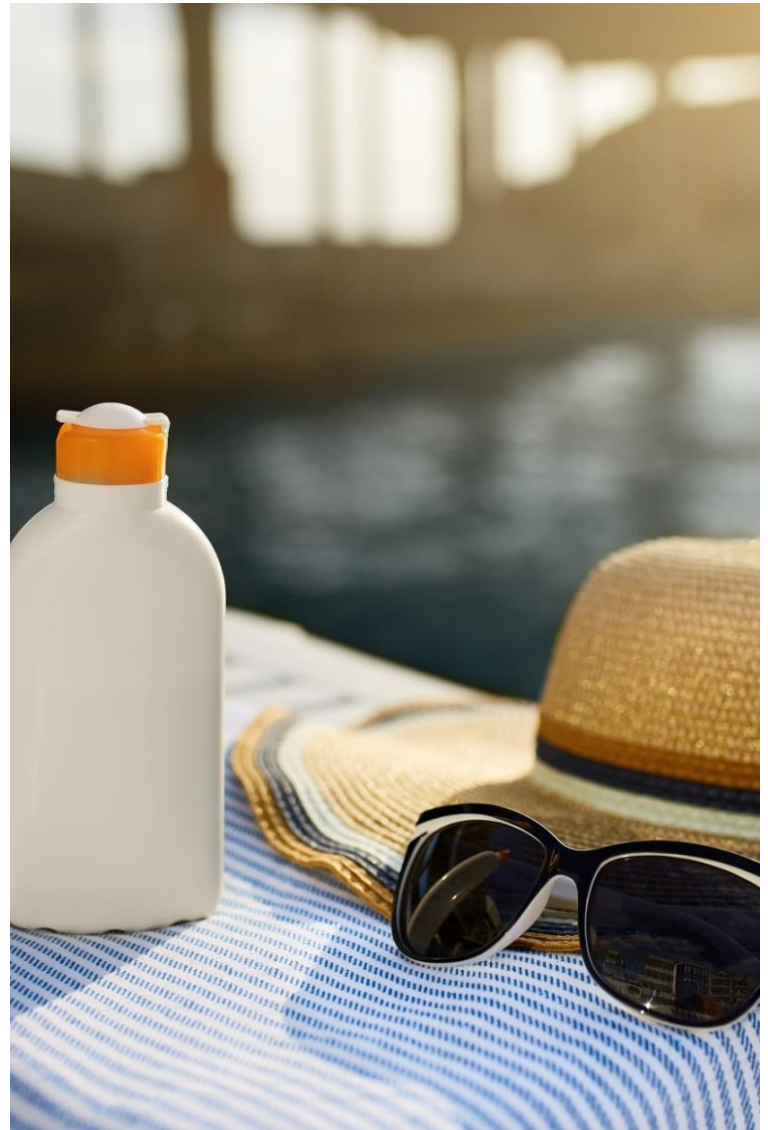
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

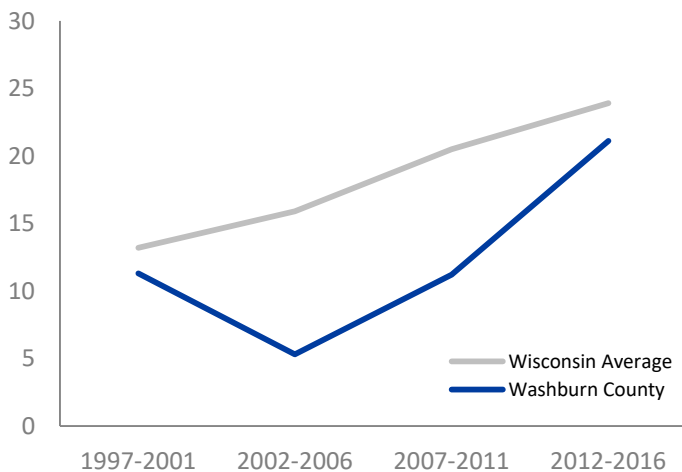
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



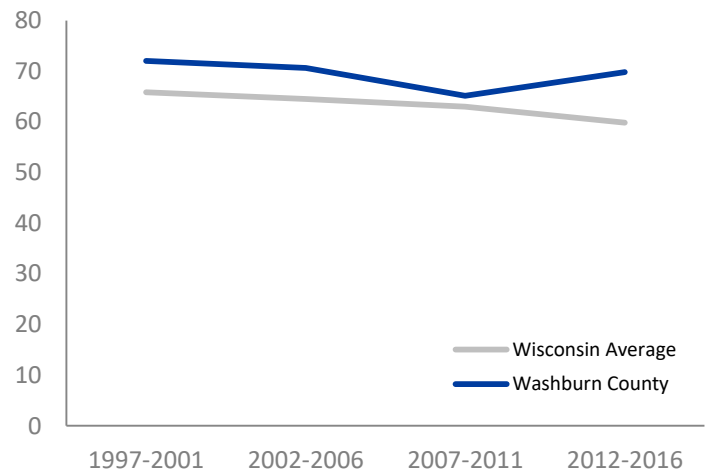
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE WASHBURN COUNTY

## BACKGROUND

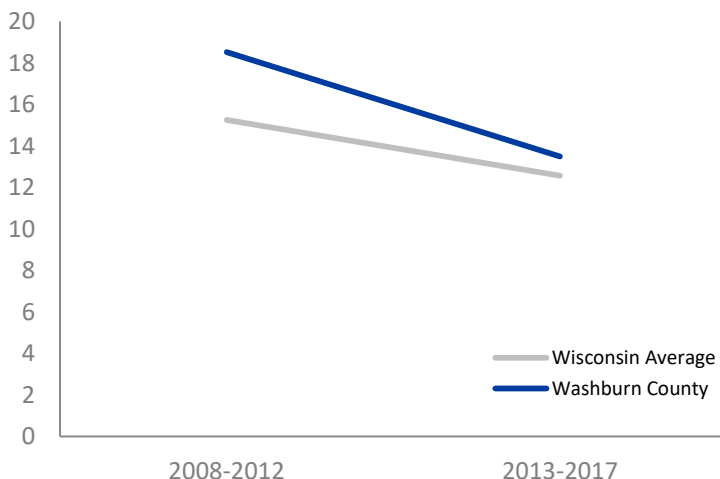
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **13.5**  
**HEAT STRESS**  
 RATE OF ER VISITS  
 PER 100,000 PEOPLE  
 WISCONSIN: 12.6

● **406.1**  
**LYME DISEASE**  
 RATE OF CASES  
 PER 100,000 PEOPLE  
 WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

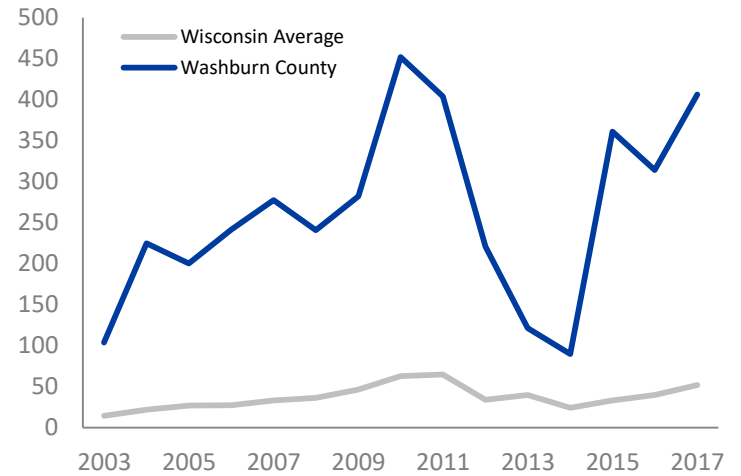
## INTERPRETING LYME DISEASE DATA

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.

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

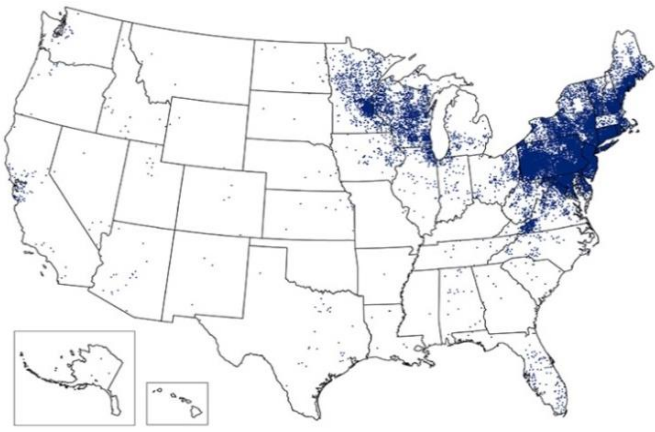
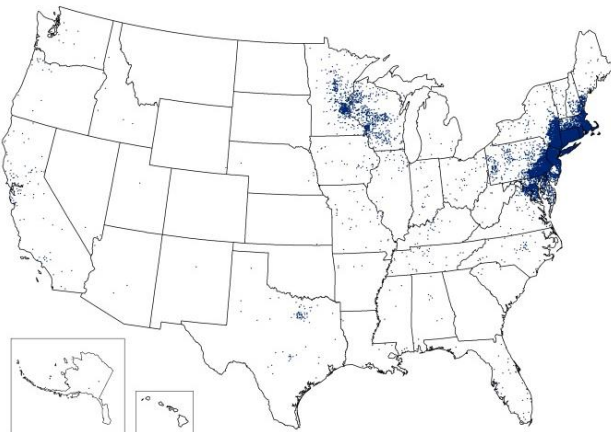
## LYME DISEASE AT THE NATIONAL LEVEL

OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001

2017



Maps courtesy of Centers for Disease Control and Prevention

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results for nitrate that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results for arsenic that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Wisconsin Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

**Asthma:** Rate of emergency room visits related to asthma, age-adjusted per 10,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

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Wisconsin Department of Health Services | Division of Public Health

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MAY 2019 | P-00719 (Rev. 05/2019)





# WASHINGTON COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

Tracking data and resources can help you and your team develop rationale for funding requests. These data can help justify existing programs and show where work needs to be done.

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# WASHINGTON COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

82.4% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

1.1 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

3.5% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

6.9% | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

3.0 | Rate of ER visits per 100,000 people  
Wisconsin: 7.9

### Childhood Lead Poisoning

3.6% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

54.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

13.0 | Rate of ER visits per 10,000 people<sup>#</sup>  
Wisconsin: 35.1

### Melanoma

24.5 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

58.6 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

6.7 | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

39.2 | Crude rate per 100,000 people  
Wisconsin: 51.7

● Above state value  
● At or below state value

\* Above state value preferred for this measure  
^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

[Data details on next page](#)



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2016

**Radon:** Percent of tests with results above EPA standard of 4 pCi/L

**Source:** Radon and Indoor Air Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH WASHINGTON COUNTY

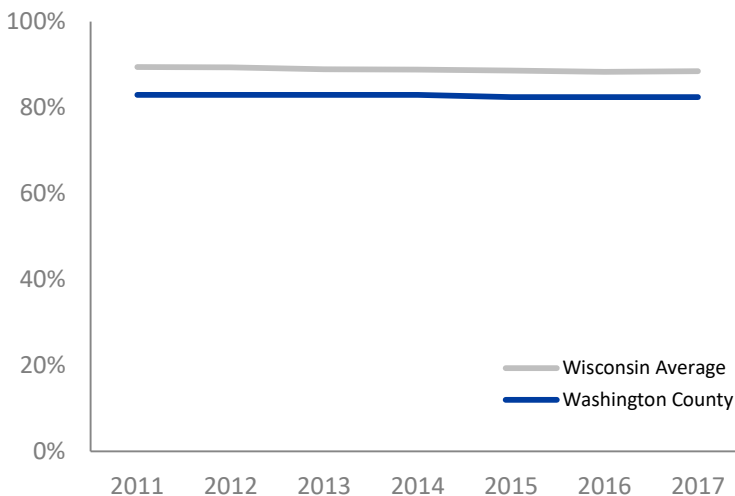
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **82.4%**

**FLUORIDE**  
PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
WISCONSIN: 88.4%

● Above state value

● **1.1**

**ALCOHOL OUTLET DENSITY**  
RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
WISCONSIN: 1.5

● At or below state value

\* Above state value preferred for this measure  
^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



### ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small 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 [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

### ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



|                                  |                                |
|----------------------------------|--------------------------------|
| <b>300</b>                       | <b>16,948</b>                  |
| LICENSES IN<br>WASHINGTON COUNTY | TOTAL LICENSES IN<br>WISCONSIN |





# PRIVATE WATER QUALITY WASHINGTON 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 displayed in this report. Users can find public water quality data on our data portal.

● **3.5%**

**NITRATE**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 mg/L  
**WISCONSIN: 11.0%**

● **6.9%**

**ARSENIC**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 µg/L  
**WISCONSIN: 6.0%**

● Above state value    ● At or below state value    ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
 1988 TO MARCH 2017



## 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 certain 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.





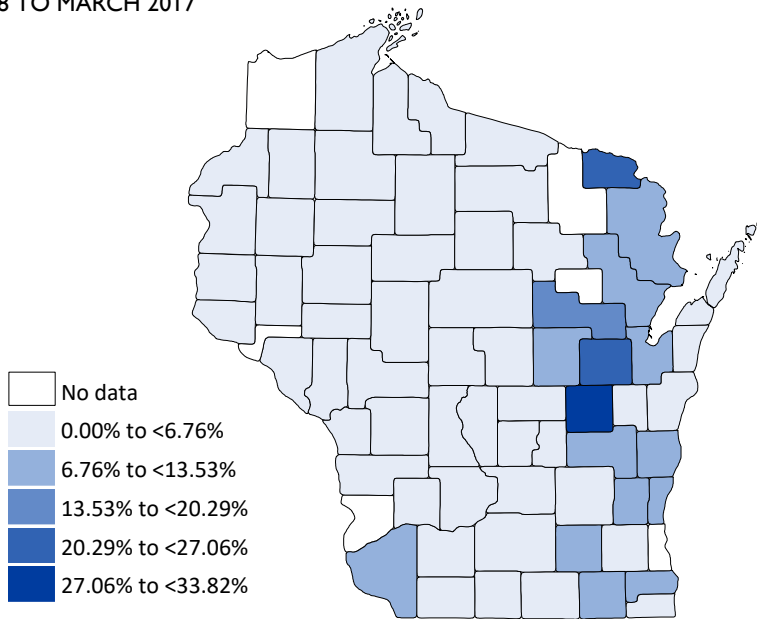
## ARSENIC IN PRIVATE WELLS

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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS WASHINGTON 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.

● **3.0**  
**CARBON MONOXIDE POISONING**  
 RATE OF ER VISITS RELATED TO CO POISONING PER 100,000  
 WISCONSIN: 7.9

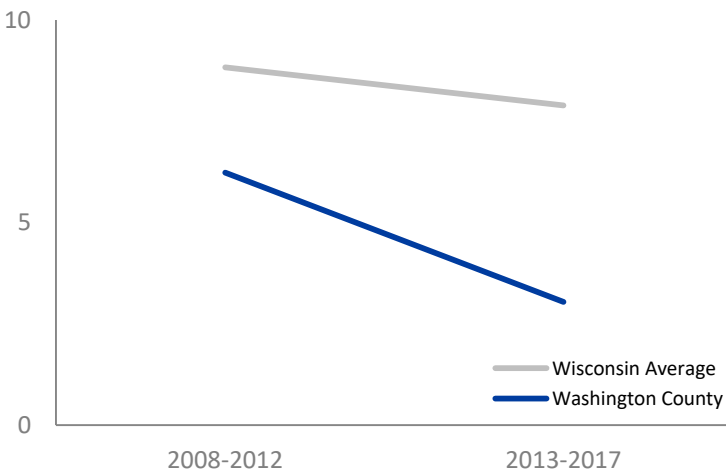
● **3.6%**  
**CHILDHOOD LEAD POISONING**  
 PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$   
 WISCONSIN: 5.0%

● **54.0%**  
**RADON**  
 PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$   
 WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

Carbon monoxide (CO) poisoning prevents oxygen from getting to the body, which can damage tissue and even cause death.

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



### 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter ( $\mu\text{g}/\text{dL}$ ). The Centers for Disease Control and Prevention defines lead poisoning at or above 5  $\mu\text{g}/\text{dL}$ .

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

### RADON

Radon is a naturally occurring gas that is radioactive and can cause lung cancer. Radon can leak into homes and other buildings through cracks in the foundation.

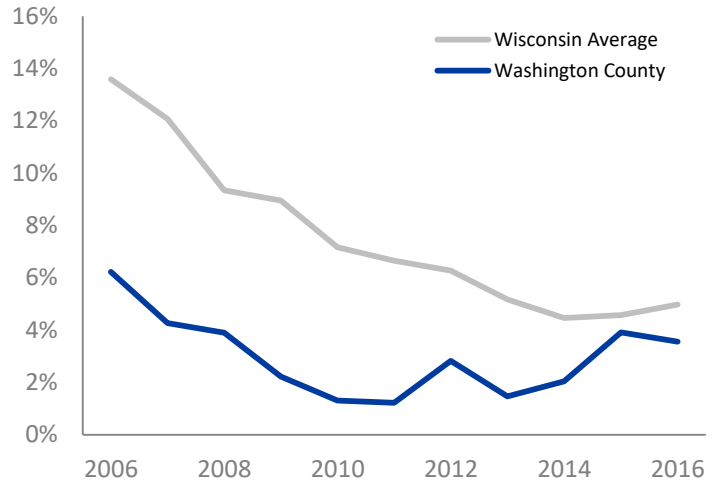
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

### CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g}/\text{dL}$

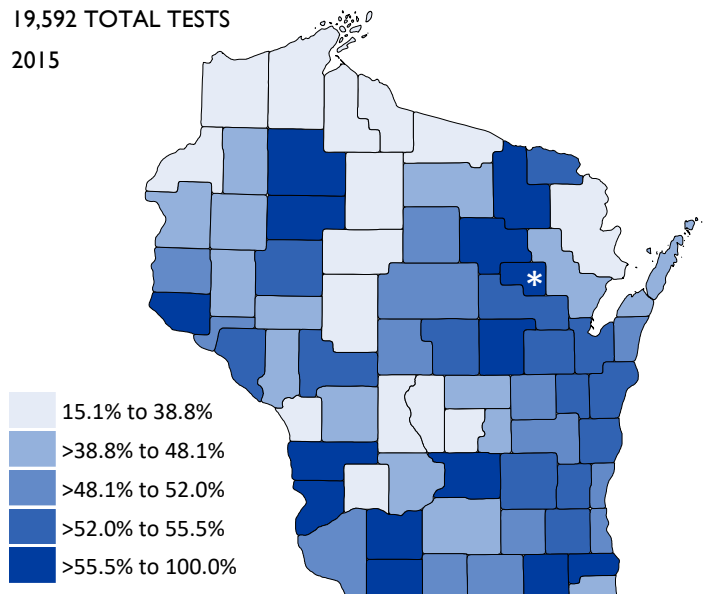


### RADON

PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi}/\text{L}$

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

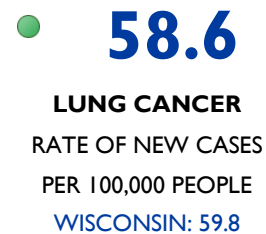
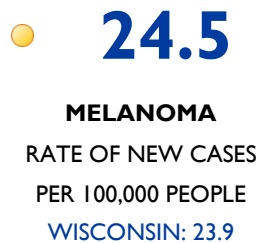
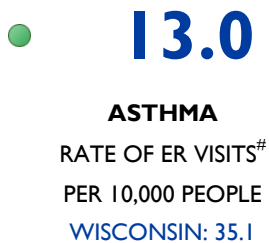




# HEALTH CONDITIONS WASHINGTON COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.



● Above state value

● At or below state value

^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



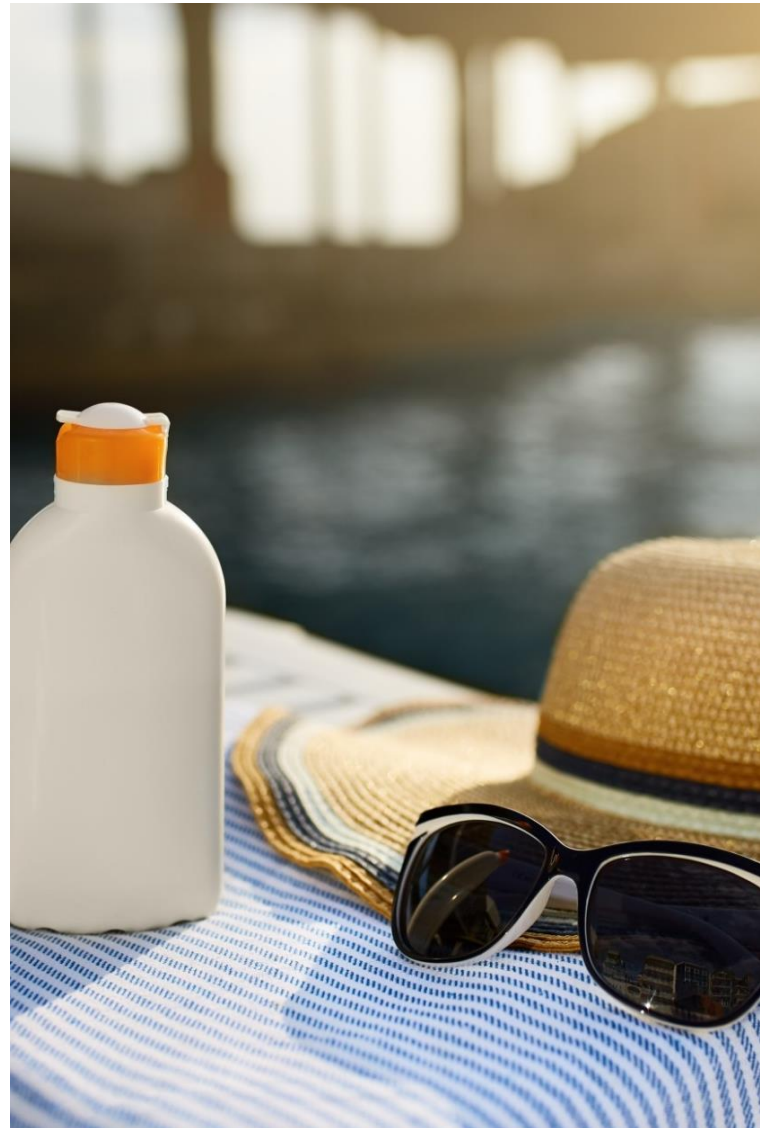
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

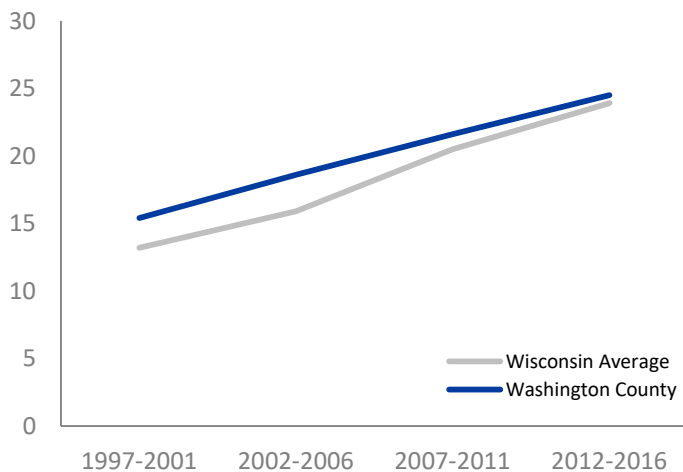
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



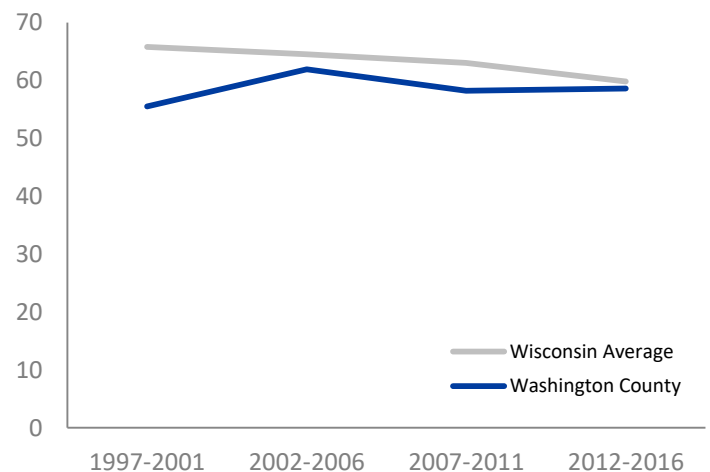
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE WASHINGTON COUNTY

## BACKGROUND

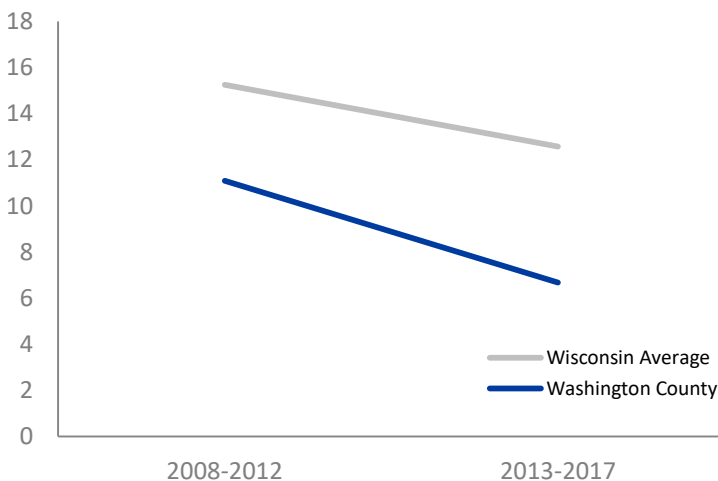
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **6.7**

**HEAT STRESS**  
RATE OF ER VISITS  
PER 100,000 PEOPLE  
WISCONSIN: 12.6

● **39.2**

**LYME DISEASE**  
RATE OF CASES  
PER 100,000 PEOPLE  
WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

## LYME DISEASE AT THE NATIONAL LEVEL

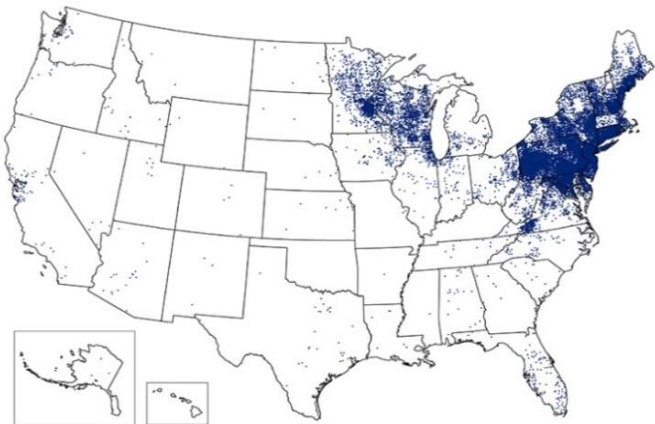
OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001



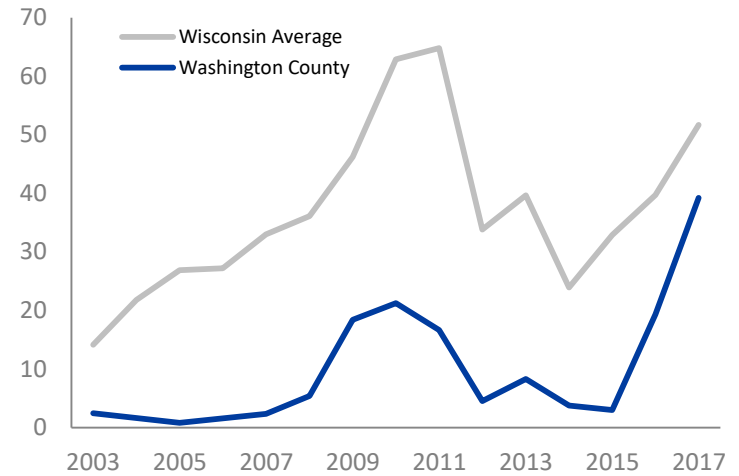
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results for nitrate that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results for arsenic that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Wisconsin Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

**Asthma:** Rate of emergency room visits related to asthma, age-adjusted per 10,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

Bureau of Environmental and Occupational Health  
Wisconsin Department of Health Services | Division of Public Health

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MAY 2019 | P-00719 (Rev. 05/2019)





# WAUKESHA COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

Tracking data and resources can help you and your team develop rationale for funding requests. These data can help justify existing programs and show where work needs to be done.

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# WAUKESHA COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

80.5% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

1.0 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

3.0% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

6.2% | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

5.8 | Rate of ER visits per 100,000 people  
Wisconsin: 7.9

### Childhood Lead Poisoning

1.4% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

55.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

17.7 | Rate of ER visits per 10,000 people#  
Wisconsin: 35.1

### Melanoma

29.0 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

53.4 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

8.3 | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

27.2 | Crude rate per 100,000 people  
Wisconsin: 51.7

● Above state value  
● At or below state value

\* Above state value preferred for this measure  
^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

[Data details on next page](#)



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2016

**Radon:** Percent of tests with results above EPA standard of 4 pCi/L

**Source:** Radon and Indoor Air Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH WAUKESHA COUNTY

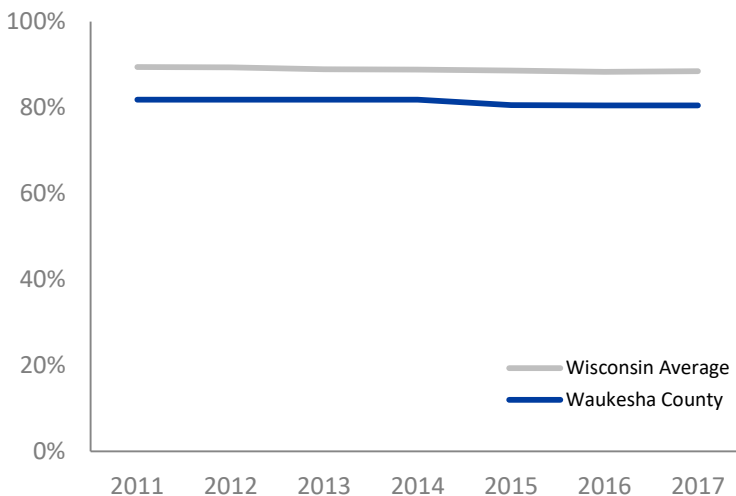
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **80.5%**

**FLUORIDE**  
PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
WISCONSIN: 88.4%

● Above state value

● **1.0**

**ALCOHOL OUTLET DENSITY**  
RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
WISCONSIN: 1.5

● At or below state value

\* Above state value preferred for this measure  
^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



## ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

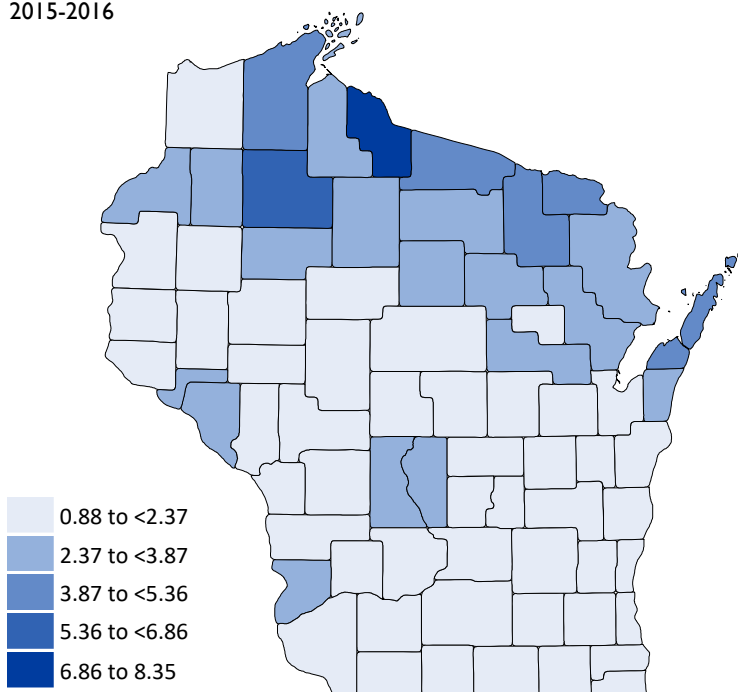
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

## ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



# 790

LICENSES IN  
WAUKESHA COUNTY

# 16,948

TOTAL LICENSES IN  
WISCONSIN





# PRIVATE WATER QUALITY WAUKESHA 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 displayed in this report. Users can find public water quality data on our data portal.

● **3.0%**

**NITRATE**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 mg/L  
**WISCONSIN: 11.0%**

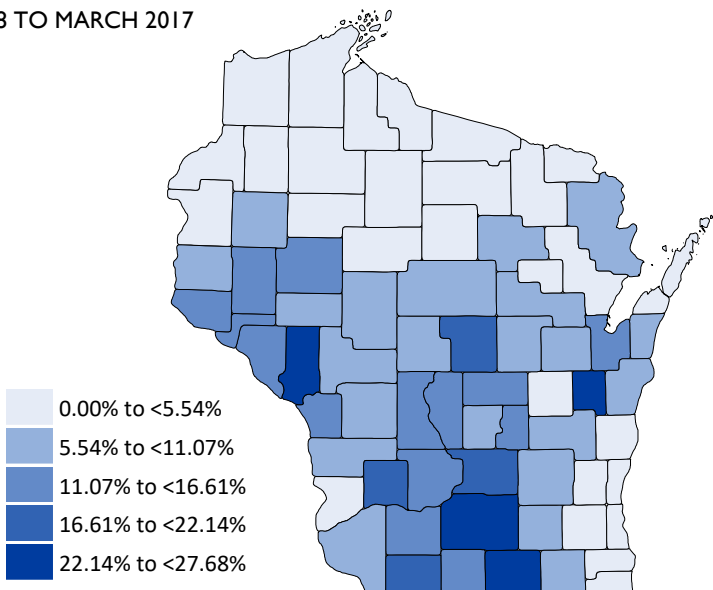
● **6.2%**

**ARSENIC**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 µg/L  
**WISCONSIN: 6.0%**

● Above state value    ● At or below state value    ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
 1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS WAUKESHA 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.

● **5.8**  
**CARBON MONOXIDE POISONING**  
 RATE OF ER VISITS RELATED TO CO POISONING PER 100,000  
 WISCONSIN: 7.9

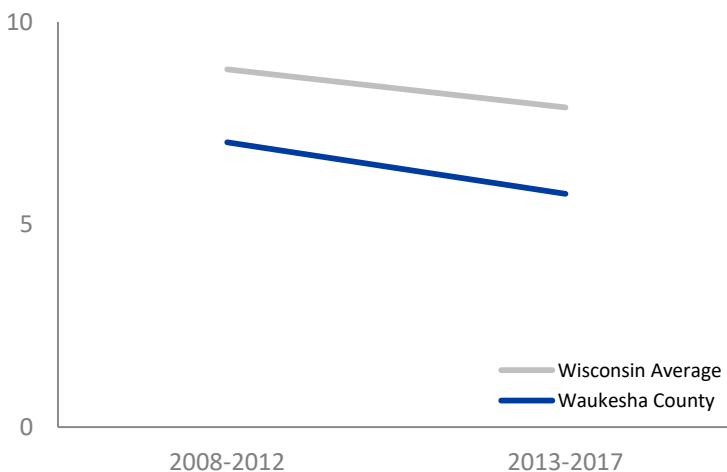
● **1.4%**  
**CHILDHOOD LEAD POISONING**  
 PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$   
 WISCONSIN: 5.0%

● **55.0%**  
**RADON**  
 PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$   
 WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

Carbon monoxide (CO) poisoning prevents oxygen from getting to the body, which can damage tissue and even cause death.

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



### 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter ( $\mu\text{g}/\text{dL}$ ). The Centers for Disease Control and Prevention defines lead poisoning at or above 5  $\mu\text{g}/\text{dL}$ .

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

### RADON

Radon is a naturally occurring gas that is radioactive and can cause lung cancer. Radon can leak into homes and other buildings through cracks in the foundation.

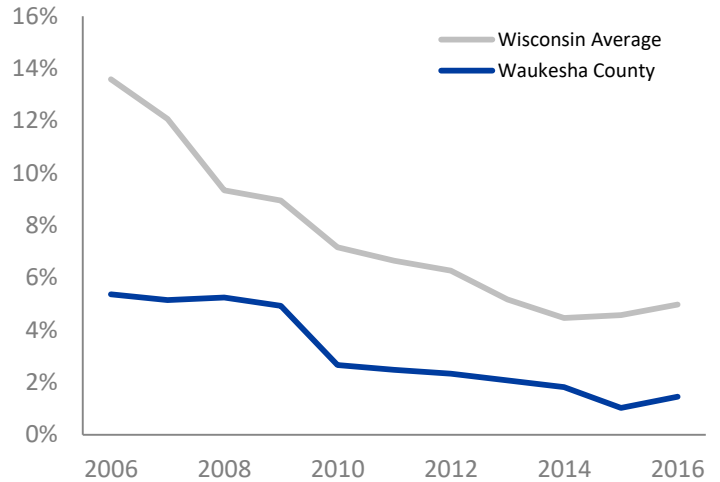
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

### CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g}/\text{dL}$

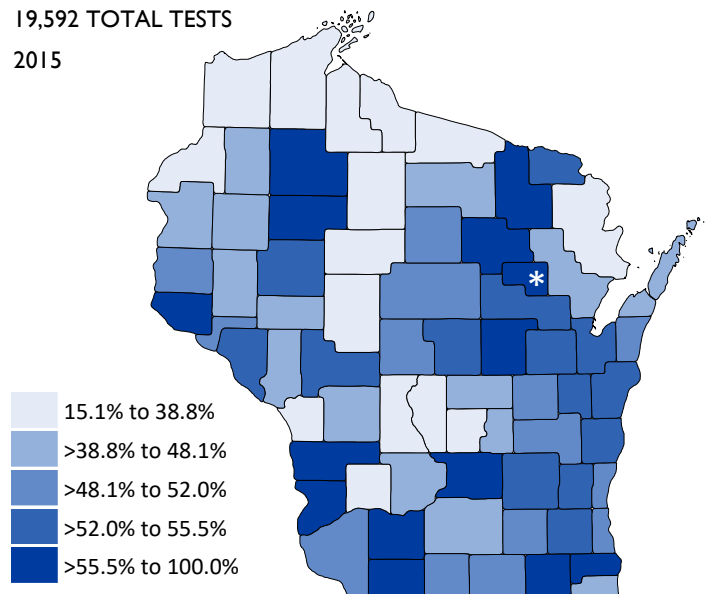


### RADON

PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

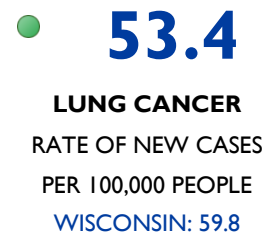
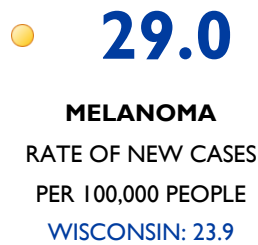
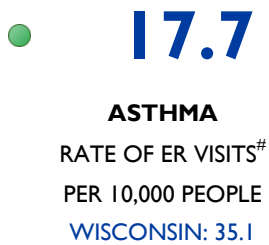




# HEALTH CONDITIONS WAUKESHA COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.



● Above state value

● At or below state value

^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



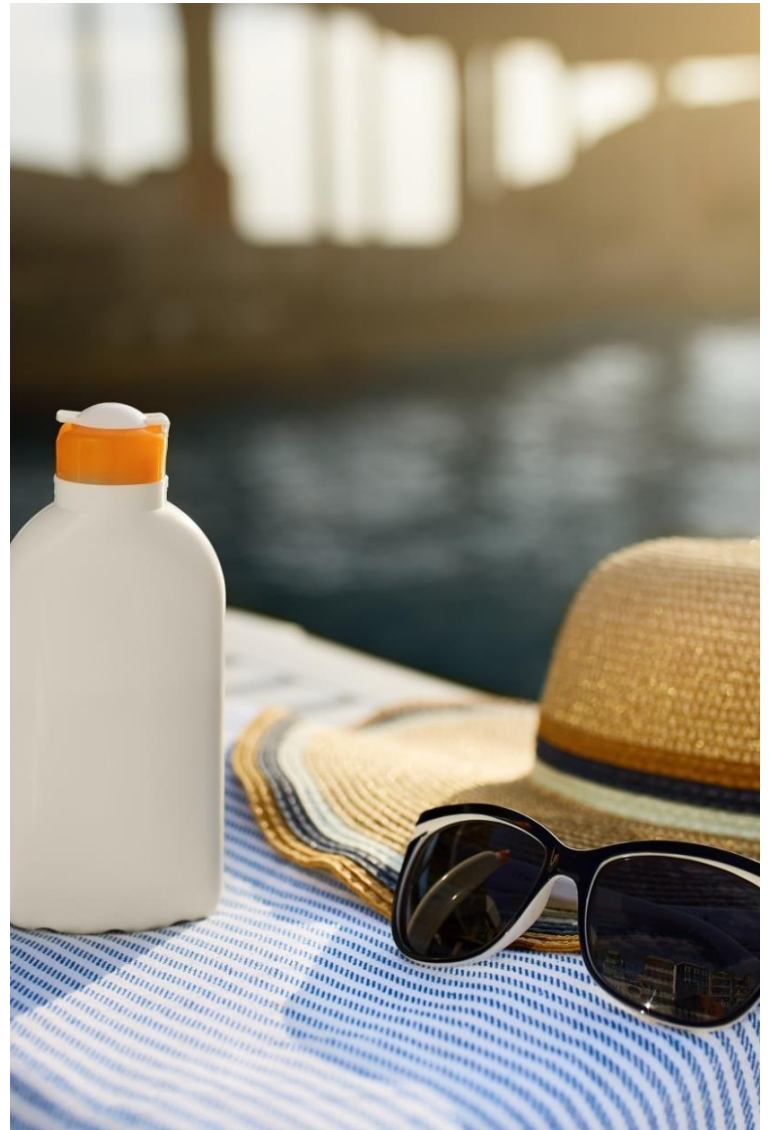
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

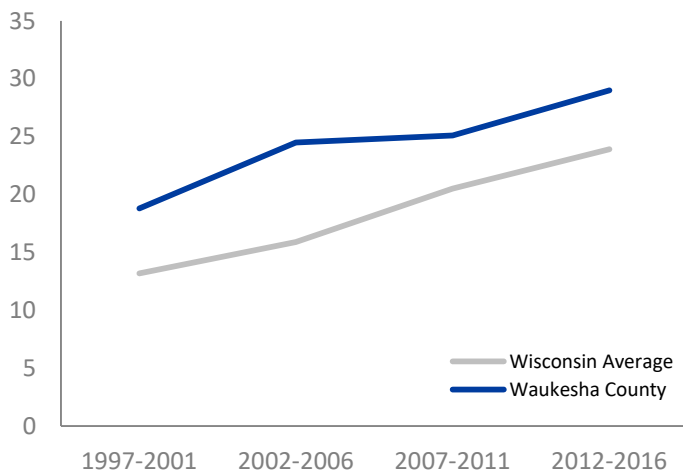
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



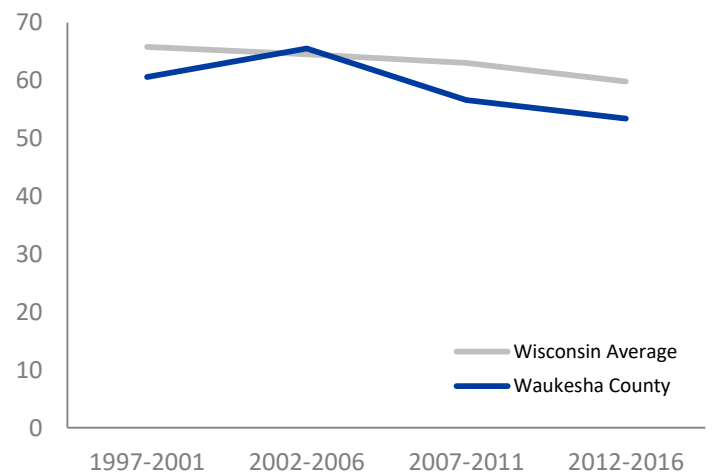
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE WAUKESHA COUNTY

## BACKGROUND

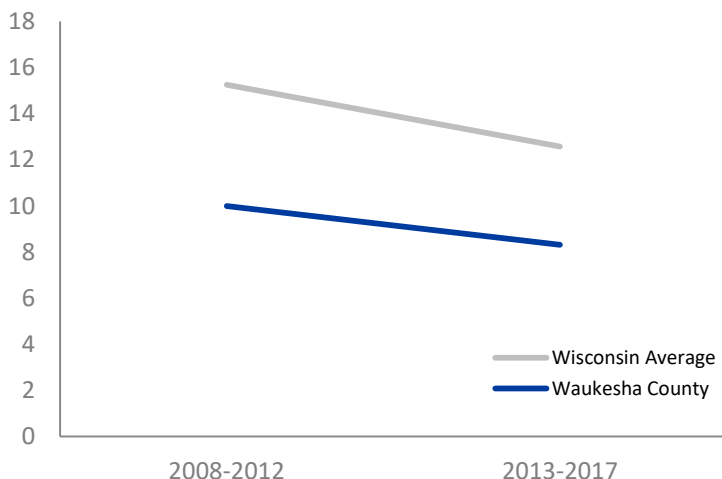
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● 8.3

**HEAT STRESS**  
RATE OF ER VISITS  
PER 100,000 PEOPLE  
WISCONSIN: 12.6

● 27.2

**LYME DISEASE**  
RATE OF CASES  
PER 100,000 PEOPLE  
WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

## LYME DISEASE AT THE NATIONAL LEVEL

OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001



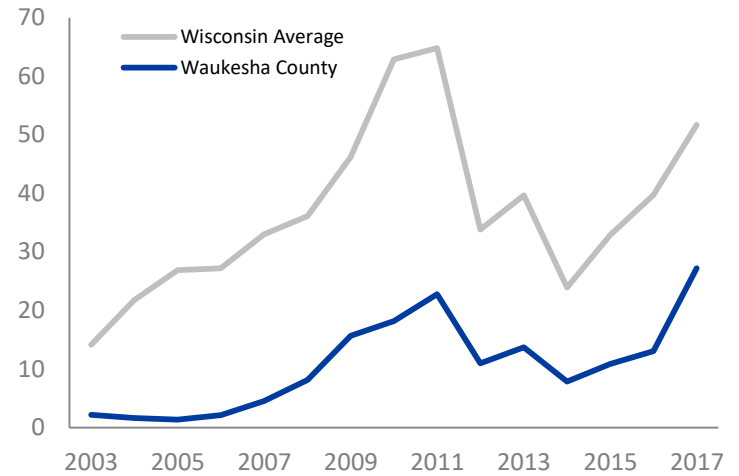
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results for nitrate that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results for arsenic that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Wisconsin Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

**Asthma:** Rate of emergency room visits related to asthma, age-adjusted per 10,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

Bureau of Environmental and Occupational Health  
Wisconsin Department of Health Services | Division of Public Health

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MAY 2019 | P-00719 (Rev. 05/2019)





# WAUPACA COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

Tracking data and resources can help you and your team develop rationale for funding requests. These data can help justify existing programs and show where work needs to be done.

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# WAUPACA COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

67.7% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

2.1 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

8.9% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

8.6% | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

6.0 | Rate of ER visits per 100,000 people  
Wisconsin: 7.9

### Childhood Lead Poisoning

5.0% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

58.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

40.6 | Rate of ER visits per 10,000 people<sup>#</sup>  
Wisconsin: 35.1

### Melanoma

27.5 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

52.0 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

28.3 | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

165.9 | Crude rate per 100,000 people  
Wisconsin: 51.7

● Above state value  
● At or below state value

\* Above state value preferred for this measure  
^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

[Data details on next page](#)



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2016

**Radon:** Percent of tests with results above EPA standard of 4 pCi/L

**Source:** Radon and Indoor Air Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH WAUPACA COUNTY

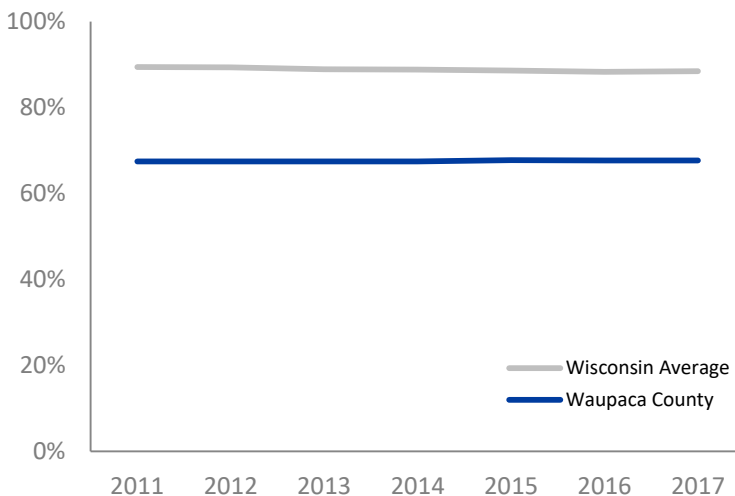
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **67.7%**

**FLUORIDE**  
PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
WISCONSIN: 88.4%

● Above state value

● **2.1**

**ALCOHOL OUTLET DENSITY**  
RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
WISCONSIN: 1.5

● At or below state value

\* Above state value preferred for this measure  
^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



### ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

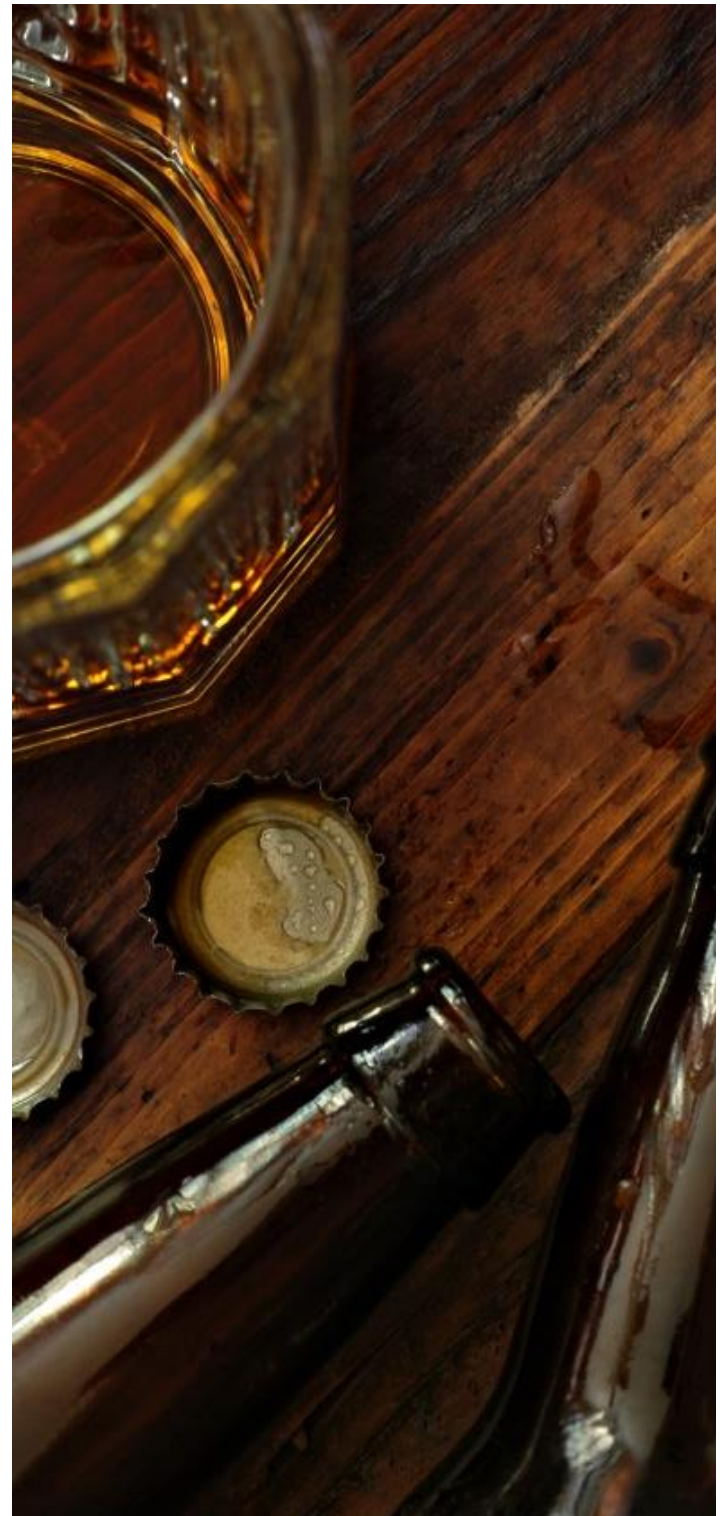
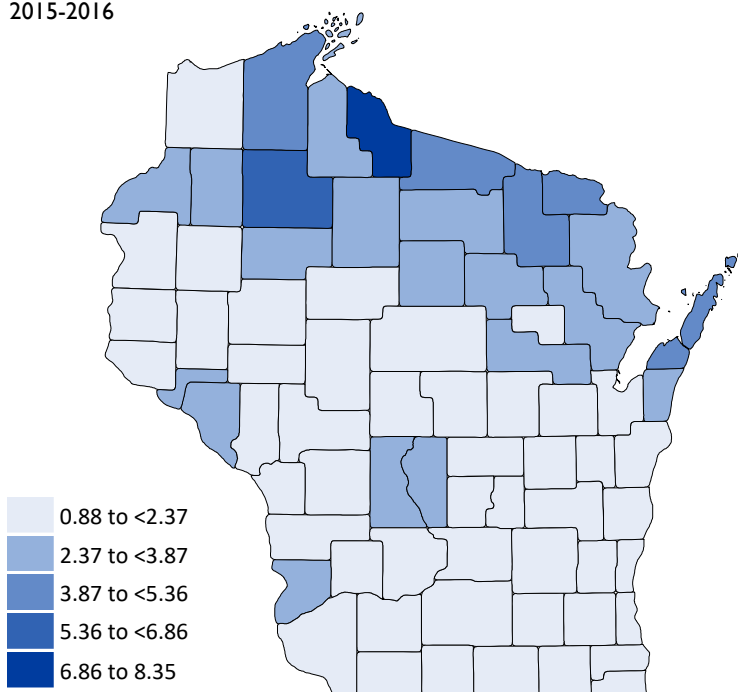
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

### ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



# 214

LICENSES IN  
WAUPACA COUNTY

# 16,948

TOTAL LICENSES IN  
WISCONSIN





# PRIVATE WATER QUALITY WAUPACA 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 displayed in this report. Users can find public water quality data on our data portal.

● **8.9%**

**NITRATE  
IN PRIVATE WELLS**  
PERCENT OF TEST RESULTS  
ABOVE EPA STANDARD  
OF 10 mg/L  
WISCONSIN: 11.0%

● **8.6%**

**ARSENIC  
IN PRIVATE WELLS**  
PERCENT OF TEST RESULTS  
ABOVE EPA STANDARD  
OF 10 µg/L  
WISCONSIN: 6.0%

● Above state value    ● At or below state value    ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS WAUPACA 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.

● **6.0**  
**CARBON MONOXIDE POISONING**  
 RATE OF ER VISITS RELATED TO CO POISONING PER 100,000  
 WISCONSIN: 7.9

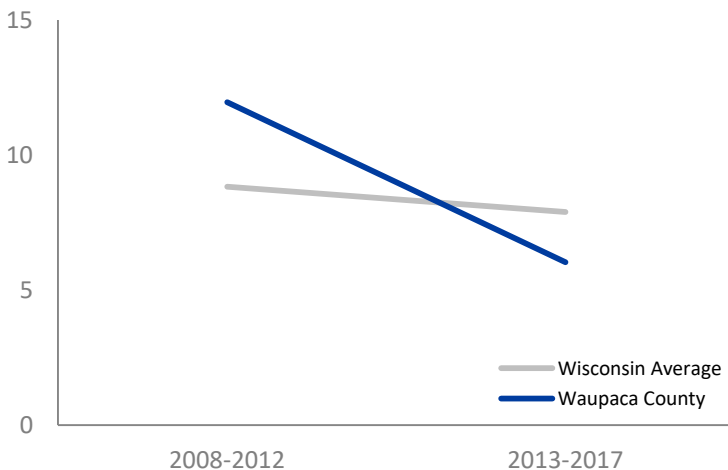
● **5.0%**  
**CHILDHOOD LEAD POISONING**  
 PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$   
 WISCONSIN: 5.0%

● **58.0%**  
**RADON**  
 PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$   
 WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

Carbon monoxide (CO) poisoning prevents oxygen from getting to the body, which can damage tissue and even cause death.

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



### 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter ( $\mu\text{g}/\text{dL}$ ). The Centers for Disease Control and Prevention defines lead poisoning at or above 5  $\mu\text{g}/\text{dL}$ .

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

### RADON

Radon is a naturally occurring gas that is radioactive and can cause lung cancer. Radon can leak into homes and other buildings through cracks in the foundation.

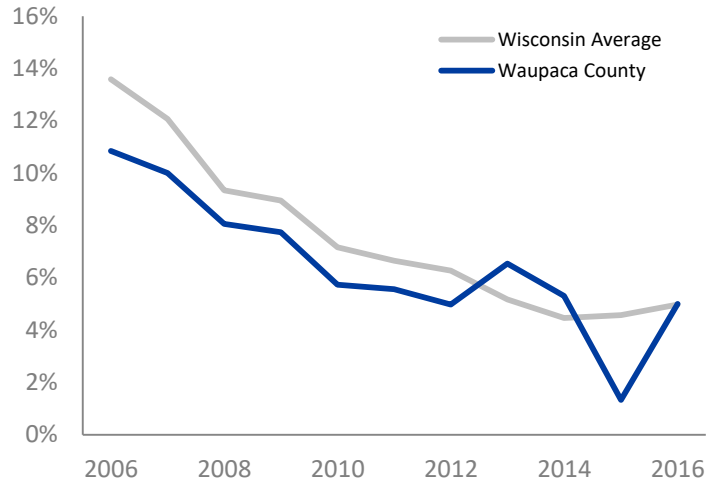
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

### CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g}/\text{dL}$

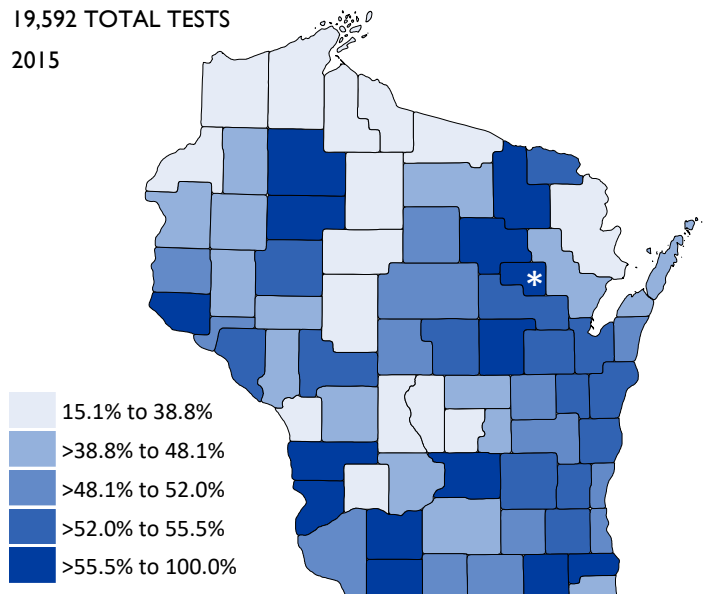


### RADON

PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi}/\text{L}$

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

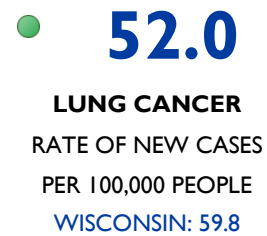
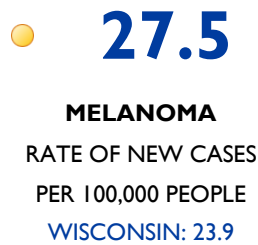
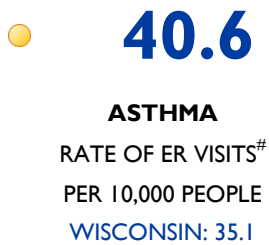




# HEALTH CONDITIONS WAUPACA COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.



● Above state value

● At or below state value

^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



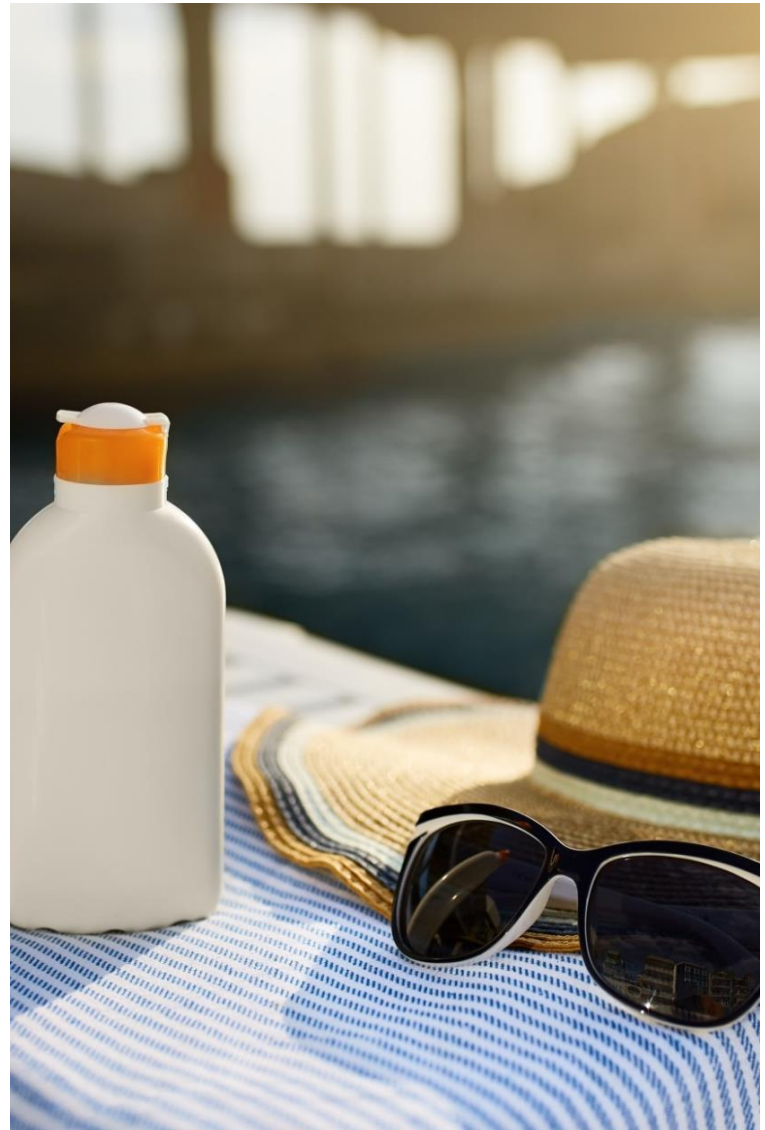
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

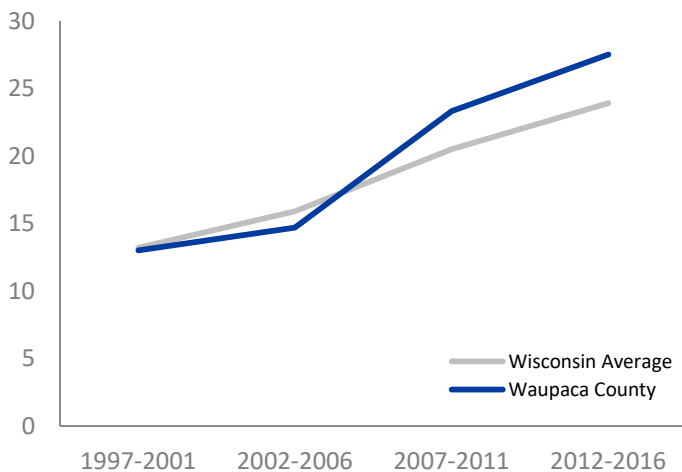
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



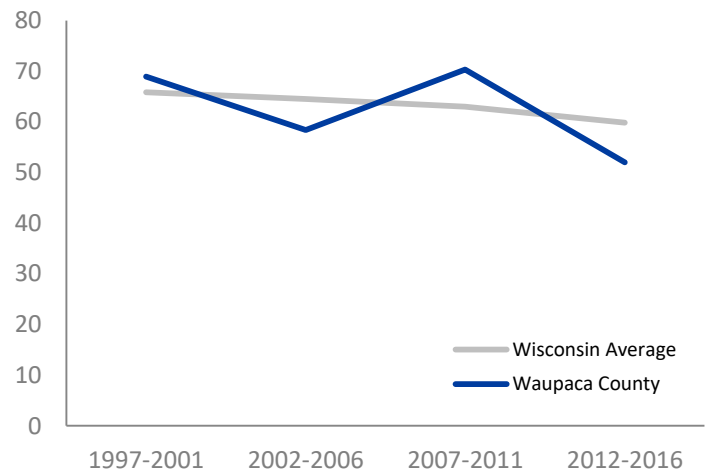
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE WAUPACA COUNTY

## BACKGROUND

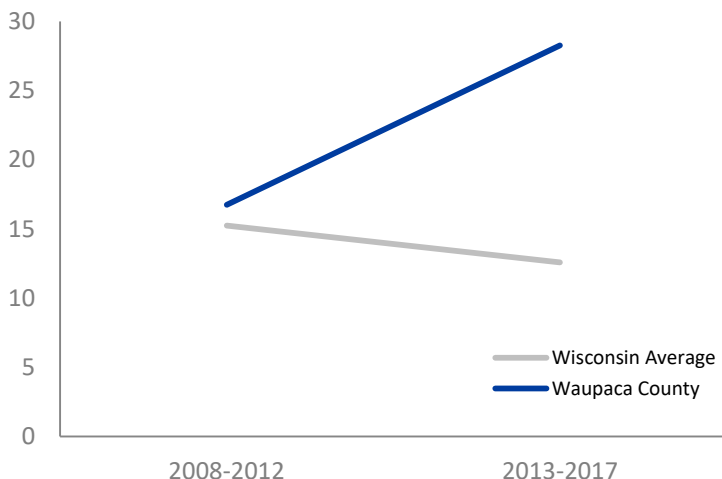
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **28.3**  
**HEAT STRESS**  
 RATE OF ER VISITS  
 PER 100,000 PEOPLE  
 WISCONSIN: 12.6

● **165.9**  
**LYME DISEASE**  
 RATE OF CASES  
 PER 100,000 PEOPLE  
 WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

## LYME DISEASE AT THE NATIONAL LEVEL

OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001



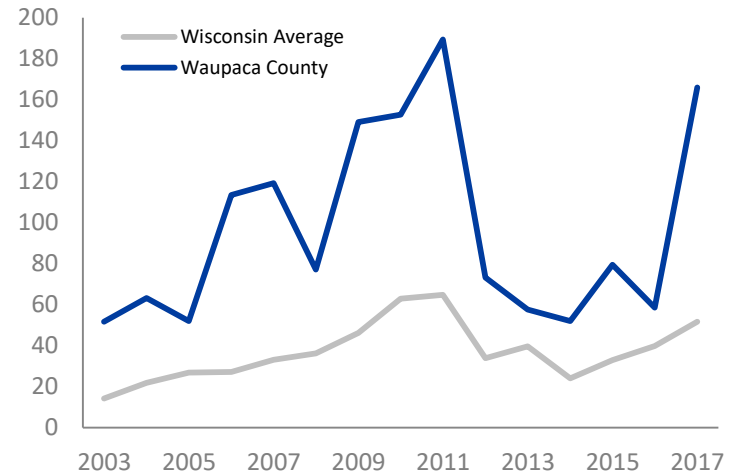
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results for nitrate that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results for arsenic that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Wisconsin Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

**Asthma:** Rate of emergency room visits related to asthma, age-adjusted per 10,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

Bureau of Environmental and Occupational Health  
Wisconsin Department of Health Services | Division of Public Health

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MAY 2019 | P-00719 (Rev. 05/2019)





# WAUSHARA COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

Tracking data and resources can help you and your team develop rationale for funding requests. These data can help justify existing programs and show where work needs to be done.

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# WAUSHARA COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

● 34.8% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

● 2.1 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

● 13.5% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

● 1.2% | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

● 9.3 | Rate of ER visits per 100,000 people  
Wisconsin: 7.9

### Childhood Lead Poisoning

● 2.5% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

● 48.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

● 24.4 | Rate of ER visits per 10,000 people<sup>#</sup>  
Wisconsin: 35.1

### Melanoma

● 24.4 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

● 65.7 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

● 14.4 | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

● 147.7 | Crude rate per 100,000 people  
Wisconsin: 51.7

● Above state value  
● At or below state value

\* Above state value preferred for this measure  
^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

[Data details on next page](#)



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2016

**Radon:** Percent of tests with results above EPA standard of 4 pCi/L

**Source:** Radon and Indoor Air Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH WAUSHARA COUNTY

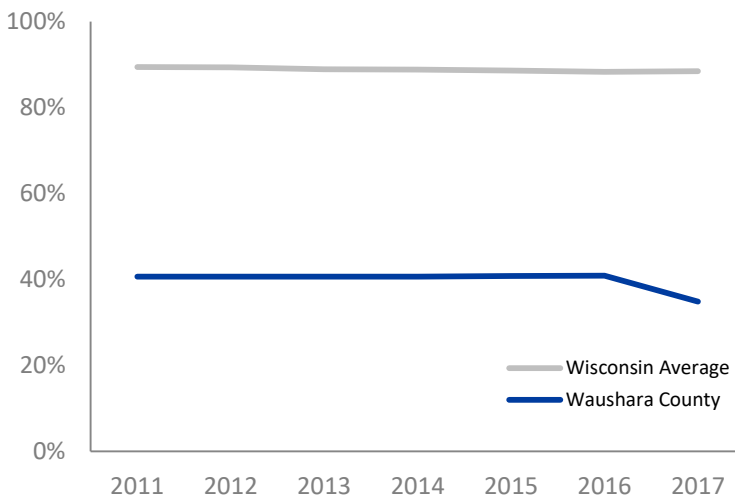
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **34.8%**

**FLUORIDE**  
PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
WISCONSIN: 88.4%

● **2.1**

**ALCOHOL OUTLET DENSITY**  
RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



### ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

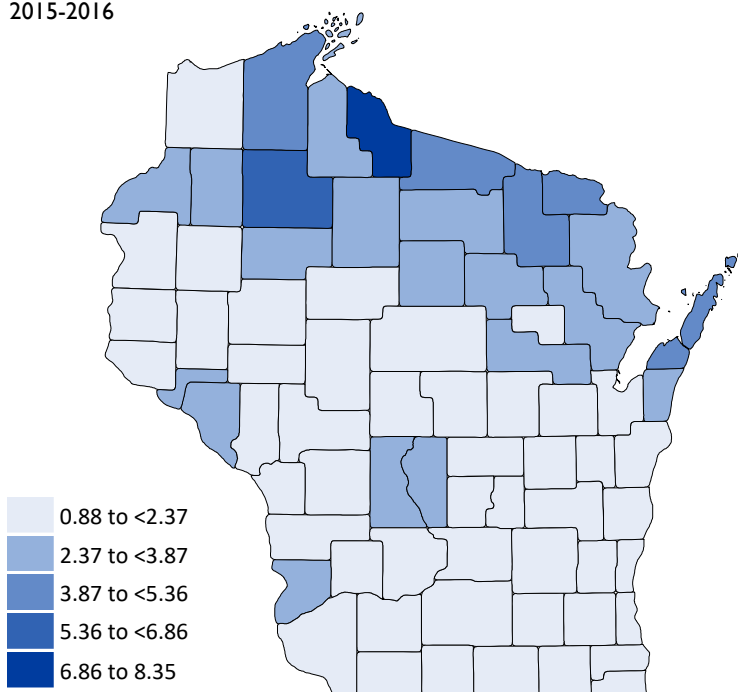
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

### ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



|                                |                                |
|--------------------------------|--------------------------------|
| <b>100</b>                     | <b>16,948</b>                  |
| LICENSES IN<br>WAUSHARA COUNTY | TOTAL LICENSES IN<br>WISCONSIN |





# PRIVATE WATER QUALITY WAUSHARA 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 displayed in this report. Users can find public water quality data on our data portal.

● **13.5%**

**NITRATE**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 mg/L  
**WISCONSIN: 11.0%**

● **1.2%**

**ARSENIC**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 µg/L  
**WISCONSIN: 6.0%**

● Above state value    ● At or below state value    ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
 1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS WAUSHARA 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.

● **9.3**  
**CARBON MONOXIDE POISONING**  
 RATE OF ER VISITS RELATED TO CO POISONING PER 100,000  
 WISCONSIN: 7.9

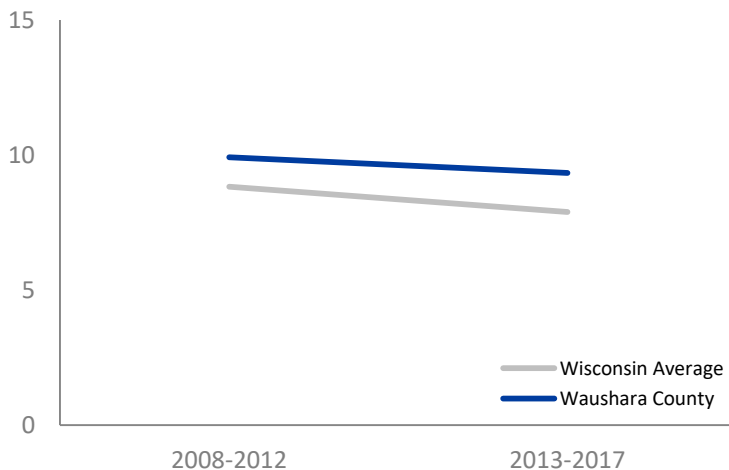
● **2.5%**  
**CHILDHOOD LEAD POISONING**  
 PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$   
 WISCONSIN: 5.0%

● **48.0%**  
**RADON**  
 PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$   
 WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

Carbon monoxide (CO) poisoning prevents oxygen from getting to the body, which can damage tissue and even cause death.

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



### 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter (µg/dL). The Centers for Disease Control and Prevention defines lead poisoning at or above 5 µg/dL.

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

### RADON

Radon is a naturally occurring gas that is radioactive and can cause lung cancer. Radon can leak into homes and other buildings through cracks in the foundation.

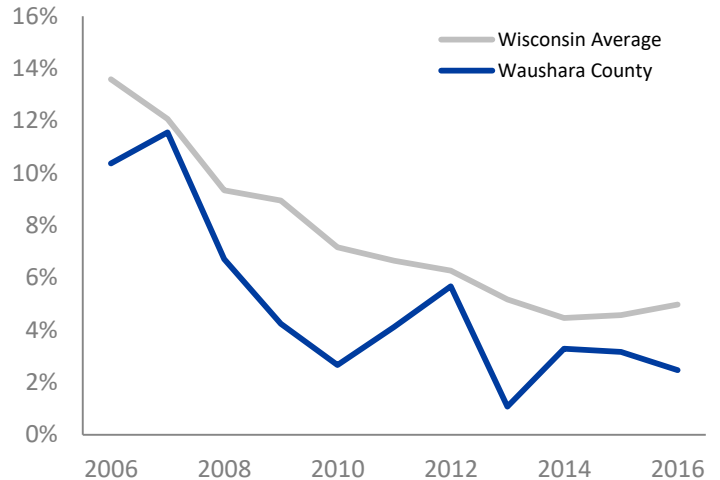
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

### CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD ≥5 µg/dL

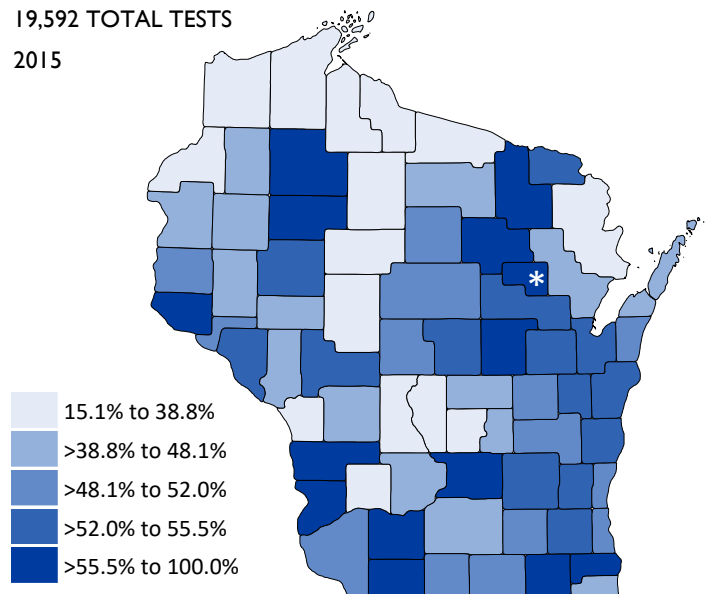


### RADON

PERCENT OF TESTS WITH RESULTS ≥4 pCi/L

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

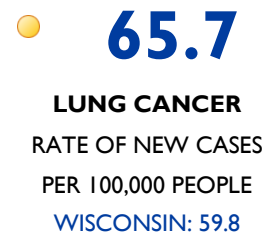
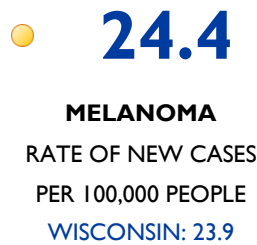
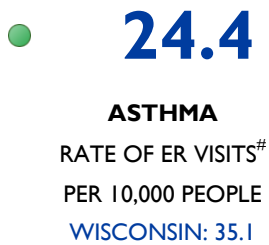




# HEALTH CONDITIONS WAUSHARA COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.



● Above state value

● At or below state value

^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



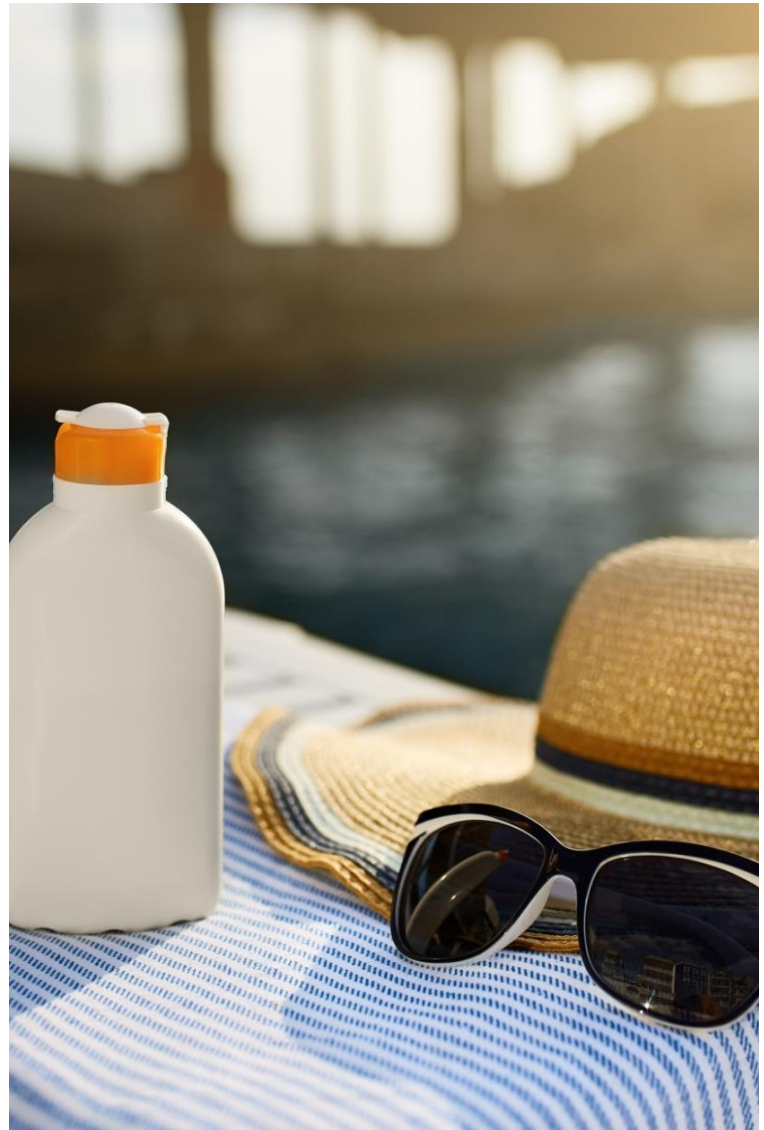
### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

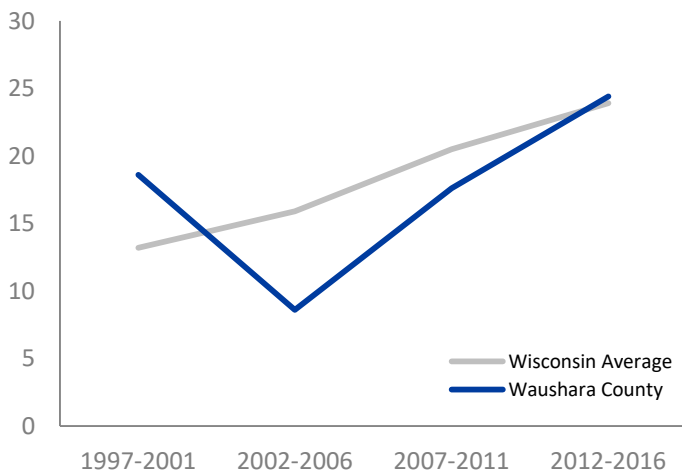
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



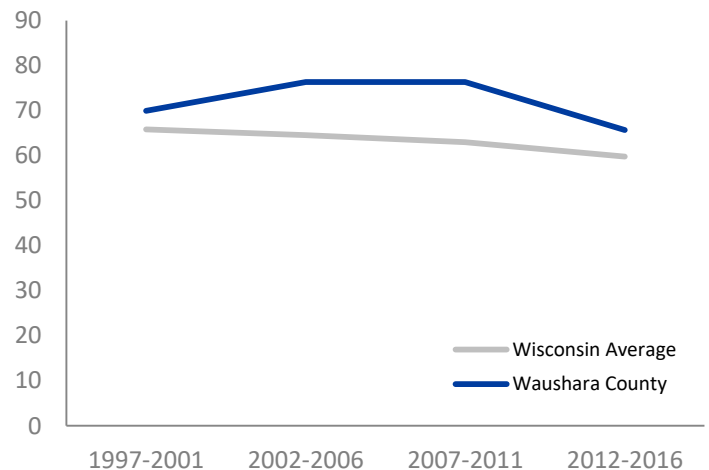
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE WAUSHARA COUNTY

## BACKGROUND

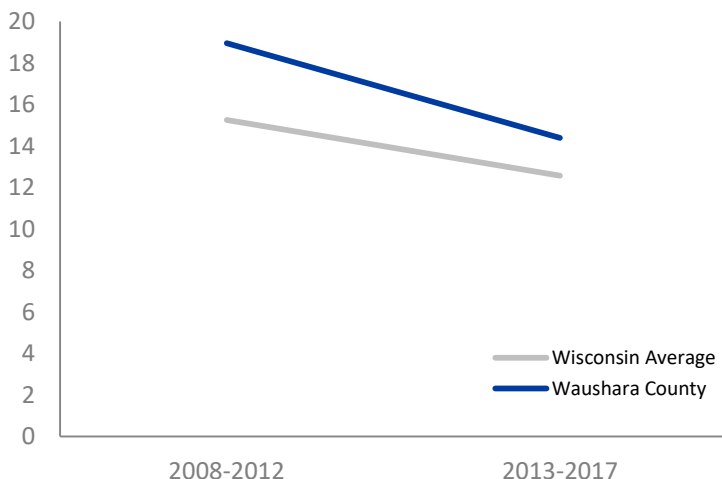
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **14.4**  
**HEAT STRESS**  
 RATE OF ER VISITS  
 PER 100,000 PEOPLE  
 WISCONSIN: 12.6

● **147.7**  
**LYME DISEASE**  
 RATE OF CASES  
 PER 100,000 PEOPLE  
 WISCONSIN: 51.7

● Above state value    ● At or below state value    ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

## LYME DISEASE AT THE NATIONAL LEVEL

OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001



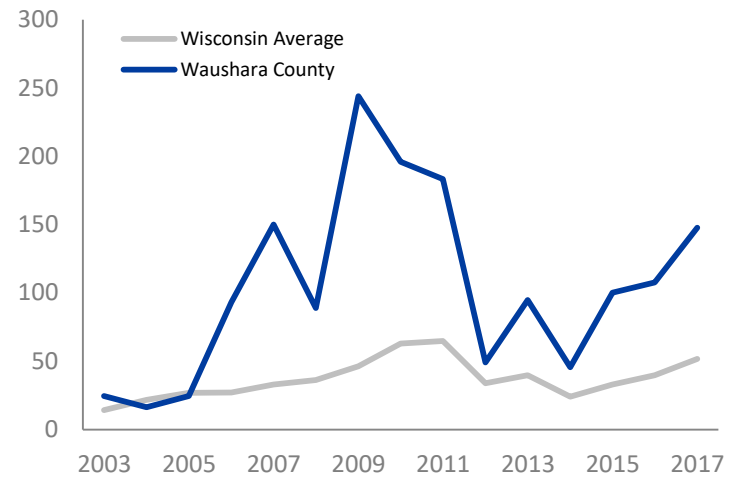
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results for nitrate that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results for arsenic that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Wisconsin Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

**Asthma:** Rate of emergency room visits related to asthma, age-adjusted per 10,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

Bureau of Environmental and Occupational Health  
Wisconsin Department of Health Services | Division of Public Health

[dhstracking@wi.gov](mailto:dhstracking@wi.gov) | [dhs.wisconsin.gov/epht](https://dhs.wisconsin.gov/epht)  
MAY 2019 | P-00719 (Rev. 05/2019)





# WINNEBAGO COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

Tracking data and resources can help you and your team develop rationale for funding requests. These data can help justify existing programs and show where work needs to be done.

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# WINNEBAGO COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

● 94.3% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

● 1.2 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

● 3.2% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

● 33.8% | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

● 4.7 | Rate of ER visits per 100,000 people  
Wisconsin: 7.9

### Childhood Lead Poisoning

● 4.7% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

● 50.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

● 22.2 | Rate of ER visits per 10,000 people<sup>#</sup>  
Wisconsin: 35.1

### Melanoma

● 28.5 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

● 60.2 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

● 10.5 | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

● 20.0 | Crude rate per 100,000 people  
Wisconsin: 51.7

● Above state value  
● At or below state value

\* Above state value preferred for this measure  
^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

[Data details on next page](#)



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2016

**Radon:** Percent of tests with results above EPA standard of 4 pCi/L

**Source:** Radon and Indoor Air Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH WINNEBAGO COUNTY

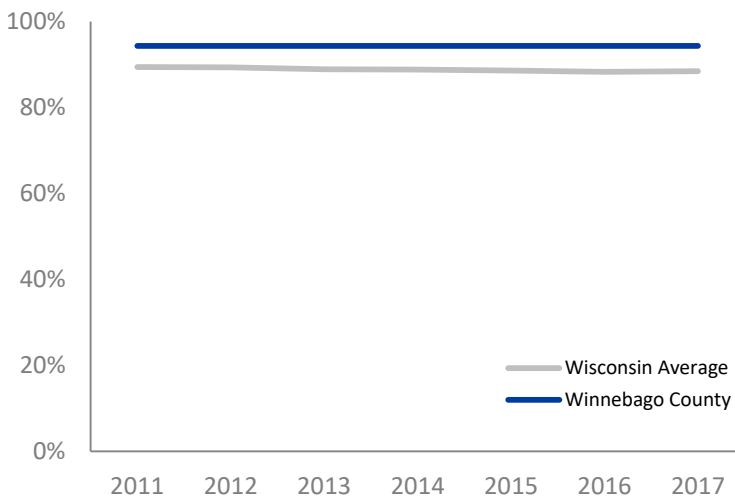
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **94.3%**

**FLUORIDE**  
PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
WISCONSIN: 88.4%

● **1.2**

**ALCOHOL OUTLET DENSITY**  
RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



### ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

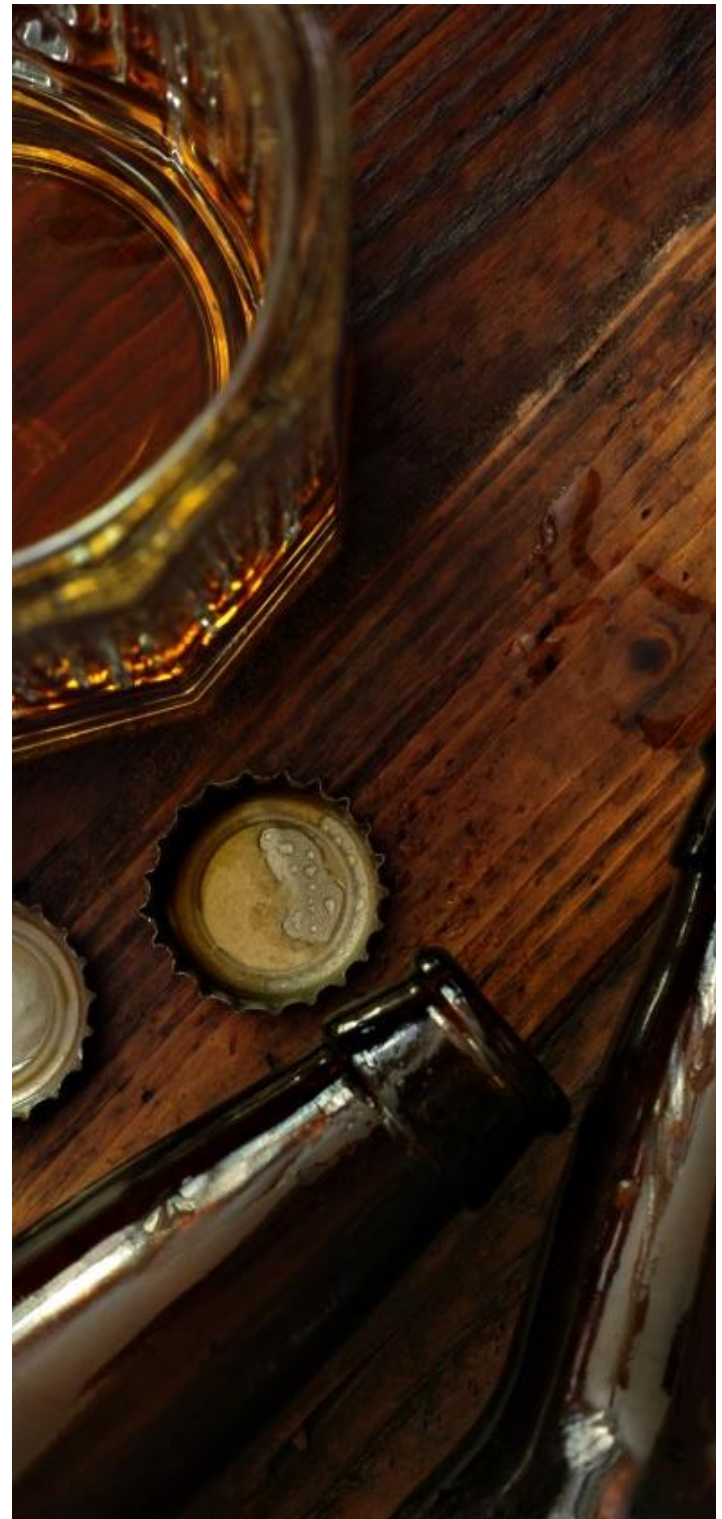
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

### ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



# 400

LICENSES IN  
WINNEBAGO COUNTY

# 16,948

TOTAL LICENSES IN  
WISCONSIN





# PRIVATE WATER QUALITY WINNEBAGO 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 displayed in this report. Users can find public water quality data on our data portal.

● **3.2%**

**NITRATE  
IN PRIVATE WELLS**  
PERCENT OF TEST RESULTS  
ABOVE EPA STANDARD  
OF 10 mg/L  
WISCONSIN: 11.0%

● **33.8%**

**ARSENIC  
IN PRIVATE WELLS**  
PERCENT OF TEST RESULTS  
ABOVE EPA STANDARD  
OF 10 µg/L  
WISCONSIN: 6.0%

● Above state value    ● At or below state value    ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS WINNEBAGO 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.

● **4.7**  
**CARBON MONOXIDE POISONING**  
 RATE OF ER VISITS RELATED TO CO POISONING PER 100,000  
 WISCONSIN: 7.9

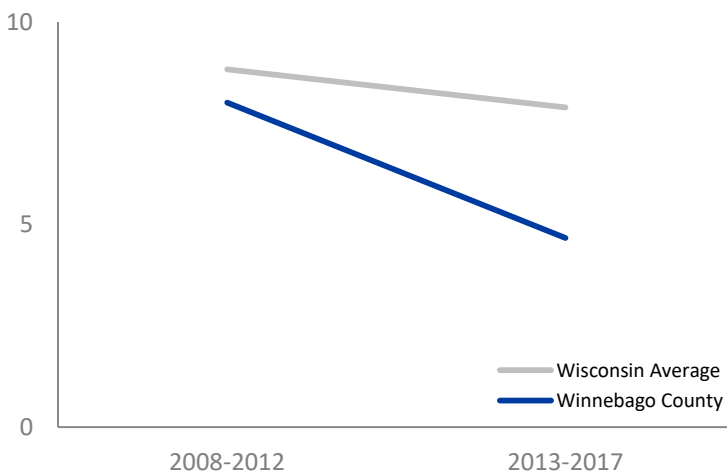
● **4.7%**  
**CHILDHOOD LEAD POISONING**  
 PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$   
 WISCONSIN: 5.0%

● **50.0%**  
**RADON**  
 PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$   
 WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

Carbon monoxide (CO) poisoning prevents oxygen from getting to the body, which can damage tissue and even cause death.

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



### 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter ( $\mu\text{g}/\text{dL}$ ). The Centers for Disease Control and Prevention defines lead poisoning at or above 5  $\mu\text{g}/\text{dL}$ .

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

### RADON

Radon is a naturally occurring gas that is radioactive and can cause lung cancer. Radon can leak into homes and other buildings through cracks in the foundation.

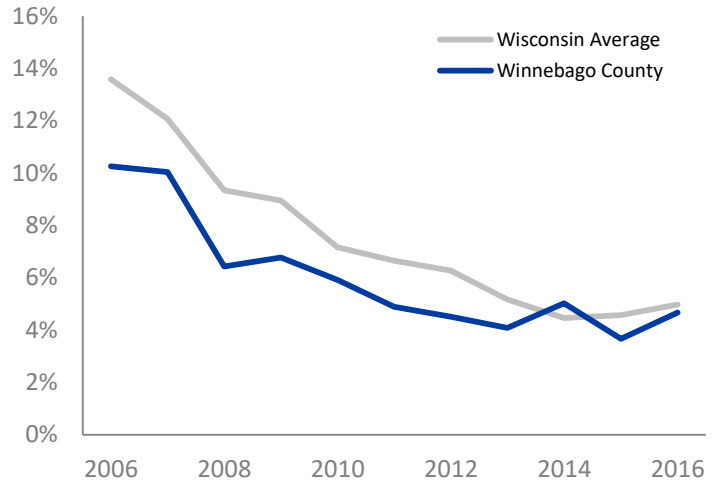
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

### CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g}/\text{dL}$

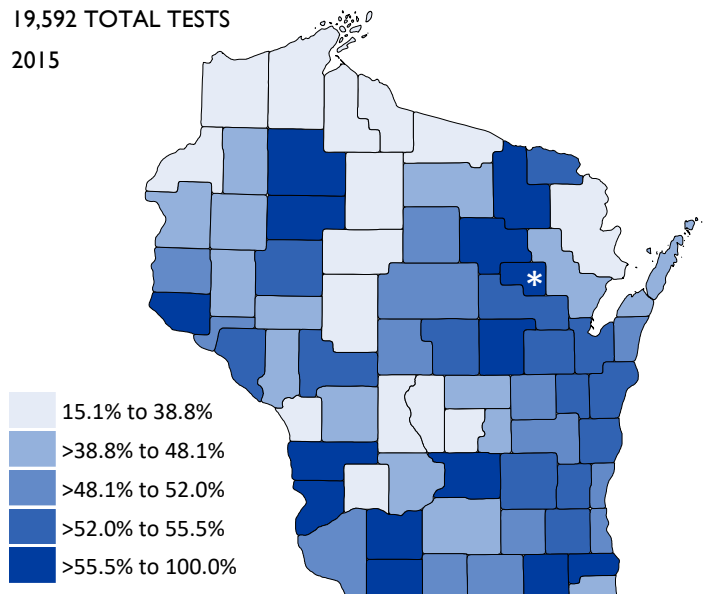


### RADON

PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi}/\text{L}$

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

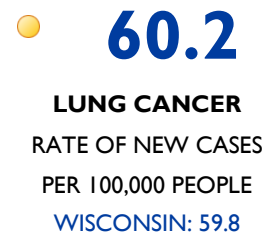
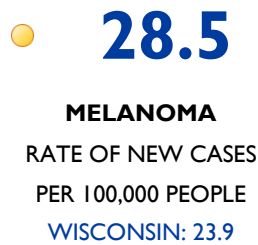
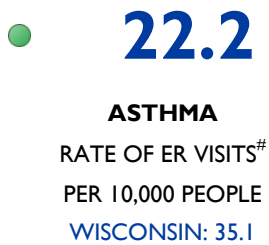




# HEALTH CONDITIONS WINNEBAGO COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.

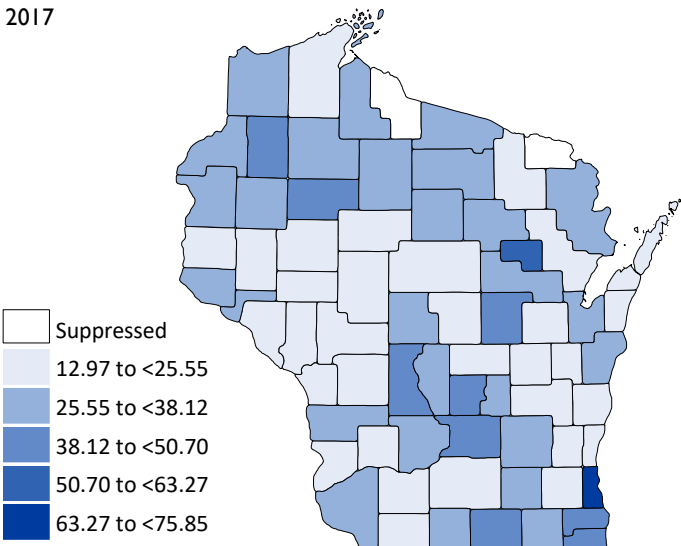


- Above state value
- At or below state value
- ^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

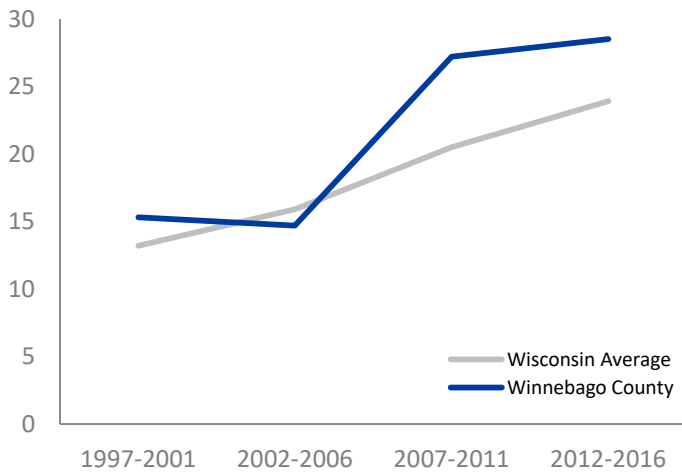
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



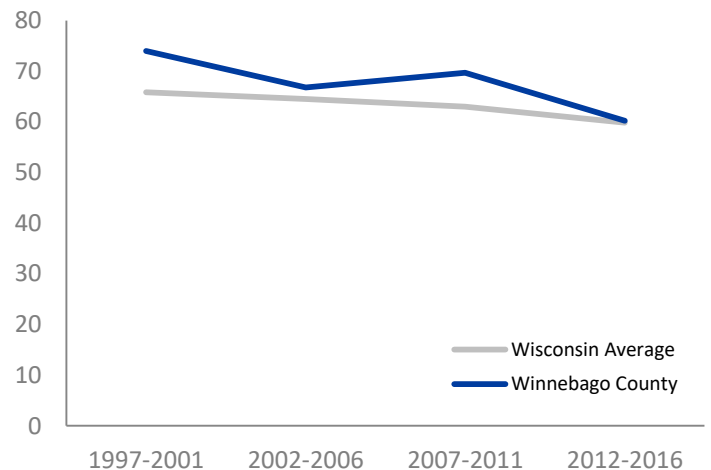
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE WINNEBAGO COUNTY

## BACKGROUND

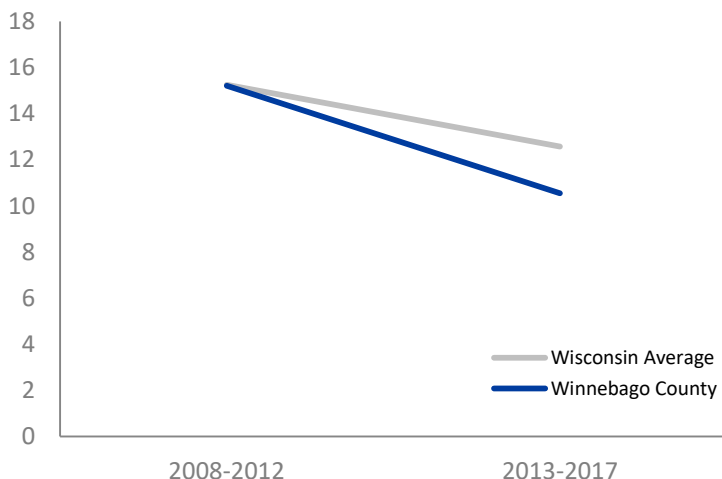
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **10.5**  
**HEAT STRESS**  
 RATE OF ER VISITS  
 PER 100,000 PEOPLE  
 WISCONSIN: 12.6

● **20.0**  
**LYME DISEASE**  
 RATE OF CASES  
 PER 100,000 PEOPLE  
 WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

## LYME DISEASE AT THE NATIONAL LEVEL

OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001



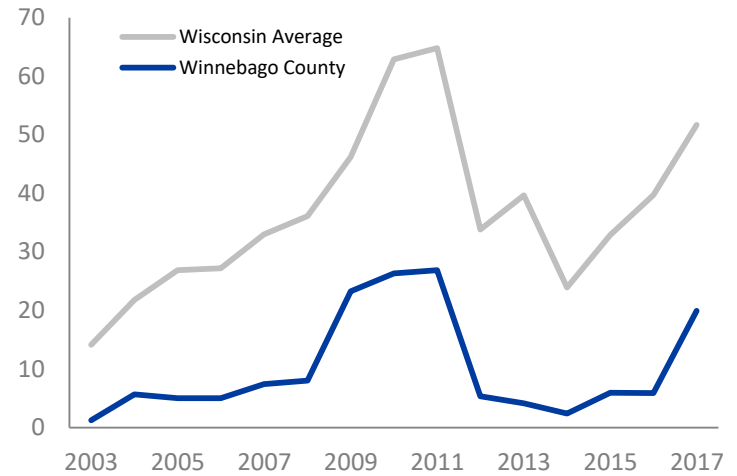
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results for nitrate that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results for arsenic that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Wisconsin Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

**Asthma:** Rate of emergency room visits related to asthma, age-adjusted per 10,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group  
Center for Watershed Science and Education, University of Wisconsin-Stevens Point



**WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM**

Bureau of Environmental and Occupational Health  
Wisconsin Department of Health Services | Division of Public Health

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MAY 2019 | P-00719 (Rev. 05/2019)





# WOOD COUNTY

## 2019 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 flesh out your community health assessment and help meet state requirements.

## 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 can be used to explore environmental health research questions.

## MEDIA STORIES

Strengthen your interview, article, or press release with facts and figures from Tracking and [our resources](#).

## 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."

## SOCIAL MEDIA

Localize your posts with data from your community.

## GRANT PROPOSALS

Tracking data and resources can help you and your team develop rationale for funding requests. These data can help justify existing programs and show where work needs to be done.

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, Tracking data can help you make your case and show the extent of the problem.

## POLICY DEVELOPMENT

Tracking data and these County Environmental Health Profiles contain measures that can be used to identify the need for a policy. Once a policy is in place, the data can be used as a baseline 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)

# WOOD COUNTY

DASHBOARD | 2019 COUNTY ENVIRONMENTAL HEALTH PROFILE



## COMMUNITY HEALTH

### Fluoride

● 96.9% | Percent of population with fluoridated public water\*  
Wisconsin: 88.4%

### Alcohol Outlet Density

● 1.6 | Crude rate of alcohol licenses per 500 people  
Wisconsin: 1.5



## PRIVATE WATER QUALITY

### Nitrate

● 5.7% | Percent of test results above EPA standard of 10 mg/L  
Wisconsin: 11.0%

### Arsenic

● 2.7% | Percent of test results above EPA standard of 10 µg/L  
Wisconsin: 6.0%



## HOME HAZARDS

### Carbon Monoxide Poisoning

● 14.3 | Rate of ER visits per 100,000 people  
Wisconsin: 7.9

### Childhood Lead Poisoning

● 1.0% | Percent of children <6 years old with blood lead level ≥5 µg/dL  
Wisconsin: 5.0%

### Radon

● 51.0% | Percent of tests with results ≥4 pCi/L  
Wisconsin: 50.0%



## HEALTH CONDITIONS

### Asthma

● 32.7 | Rate of ER visits per 10,000 people<sup>#</sup>  
Wisconsin: 35.1

### Melanoma

● 22.4 | Rate of new cases per 100,000 people  
Wisconsin: 23.9

### Lung Cancer

● 58.5 | Rate of new cases per 100,000 people  
Wisconsin: 59.8



## CLIMATE

### Heat Stress

● 22.6 | Rate of ER visits per 100,000 people  
Wisconsin: 12.6

### Lyme Disease

● 79.3 | Crude rate per 100,000 people  
Wisconsin: 51.7

● Above state value  
● At or below state value

\* Above state value preferred for this measure  
^ Data are suppressed

# Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

[Data details on next page](#)



# DASHBOARD DATA DETAILS

Below are the abbreviated 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 details on the data, see pages 15-16. For more information about age-adjustment and other terms referenced in this Profile, visit the Wisconsin Tracking Program's data details webpage or our Tracking 270 tutorial, both available [on our website](#).



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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:** 2015-2016



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017



## HOME HAZARDS

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2016

**Radon:** Percent of tests with results above EPA standard of 4 pCi/L

**Source:** Radon and Indoor Air Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2015

**Carbon Monoxide (CO) Poisoning:** Age-adjusted rate of unintentional emergency room visits related to CO poisoning per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017



## 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:** 2017

**Melanoma:** Age-adjusted rate of new cases of melanoma reported by health care providers per 100,000 people

**Lung Cancer:** Age-adjusted rate of new cases of lung cancer reported by health care providers per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2012-2016



## CLIMATE

**Heat Stress:** Age-adjusted rate of emergency room visits related to heat stress per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2013-2017

**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:** 2017





# COMMUNITY HEALTH WOOD COUNTY

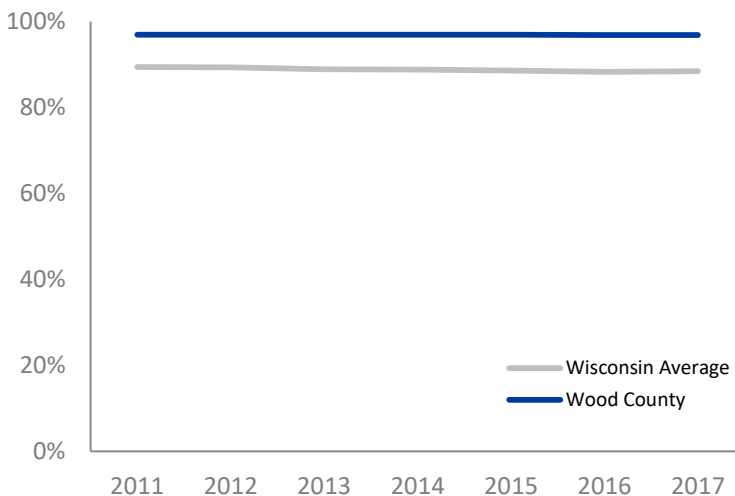
## BACKGROUND

Fluoride is a mineral in water that is often naturally-occurring and offers protection against tooth decay. If you are on public water, you can read about your water's fluoridation levels in a consumer confidence report. You can request this report from your water utility.

Environment includes not only the air we breathe and the water we drink but also our built environment: the businesses, parks, schools, bike paths, and other surroundings that make up our communities. Places that sell alcohol are part of that built environment. Examining the number of places that sell alcohol—which is known as alcohol outlet density—can help us understand how alcohol impacts our health and communities.

## FLUORIDE

PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER



● **96.9%**

**FLUORIDE**  
PERCENT OF POPULATION WITH FLUORIDATED PUBLIC WATER\*  
WISCONSIN: 88.4%

● **1.6**

**ALCOHOL OUTLET DENSITY**  
RATE OF ALCOHOL LICENSES PER 500 PEOPLE  
WISCONSIN: 1.5

● Above state value

● At or below state value

\* Above state value preferred for this measure  
^ Suppressed

## FLUORIDE IN PUBLIC DRINKING WATER

The CDC selected community water fluoridation as one of the 10 greatest public health achievements of the 20th century, as it is a low-cost, effective way to prevent tooth decay.

Some water systems may not have enough natural fluoride to offer protection, so community water systems can add fluoride to bring the levels up to the U.S. Department of Health and Human Services' recommended level of 0.7 mg/L.

The fluoride data in this Profile are collected from public water systems. The data include the percentage of the population on public drinking water that have access to fluoridated water (regardless of whether it is at the recommended level).



## ALCOHOL OUTLET DENSITY

Alcohol has many potential health consequences, including increased risk for seven types of cancer.

Alcohol outlets are places where someone can buy alcohol to drink on premises (such as bars) or elsewhere (such as liquor stores).

Communities can use alcohol outlet density data to get a better understanding of how alcohol impacts their residents. 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 small and serve fewer people than a single outlet in a larger city.

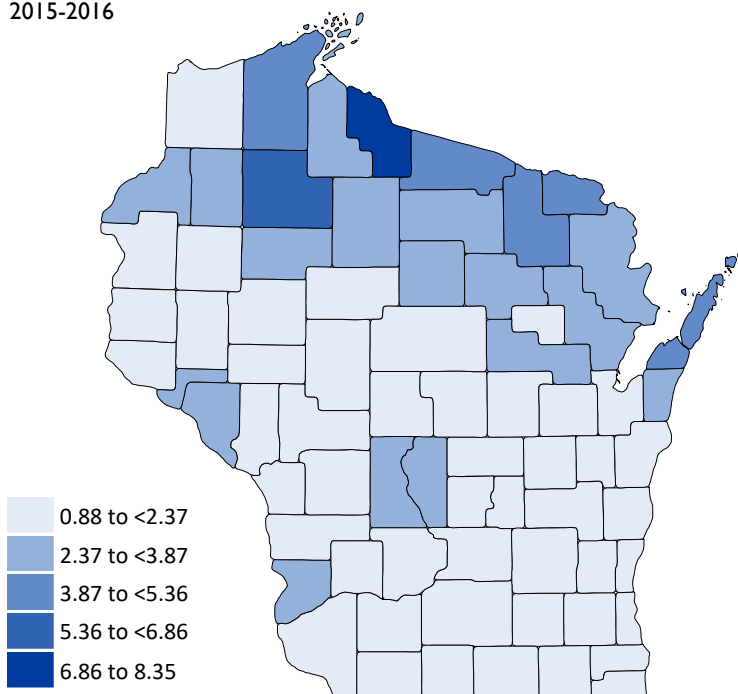
Learn more about alcohol outlet density and Wisconsin's alcohol environment by visiting [law.wisc.edu/wapp](http://law.wisc.edu/wapp).

## ALCOHOL OUTLET DENSITY

CRUDE RATE OF ALCOHOL LICENSES

PER 500 PEOPLE

2015-2016



|                            |                                |
|----------------------------|--------------------------------|
| <b>228</b>                 | <b>16,948</b>                  |
| LICENSES IN<br>WOOD COUNTY | TOTAL LICENSES IN<br>WISCONSIN |





# PRIVATE WATER QUALITY WOOD 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 displayed in this report. Users can find public water quality data on our data portal.

● **5.7%**

**NITRATE**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 mg/L  
**WISCONSIN: 11.0%**

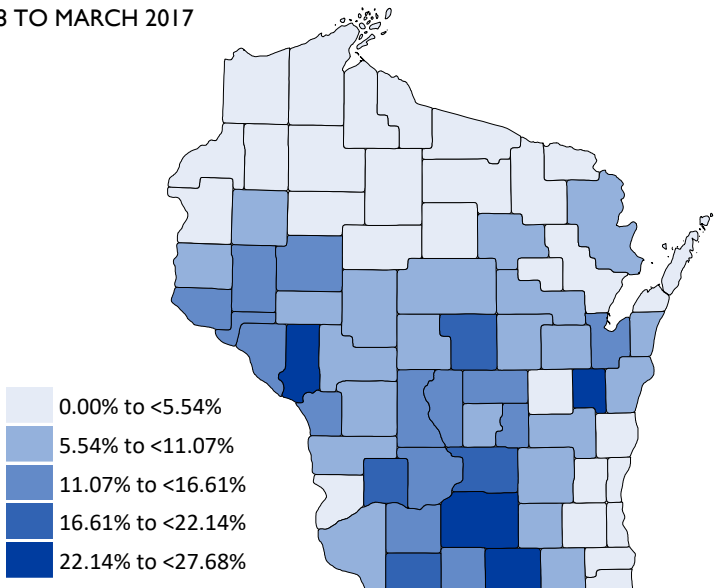
● **2.7%**

**ARSENIC**  
**IN PRIVATE WELLS**  
 PERCENT OF TEST RESULTS  
 ABOVE EPA STANDARD  
 OF 10 µg/L  
**WISCONSIN: 6.0%**

● Above state value    ● At or below state value    ^ Suppressed

## NITRATE IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 mg/L  
 1988 TO MARCH 2017



## 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 certain 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.





## 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 learning.

## ARSENIC IN PRIVATE WELLS

PERCENT OF TEST RESULTS ABOVE EPA STANDARD OF 10 µg/L  
1988 TO MARCH 2017



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 March 2017. The maps include results of 19,317 arsenic samples and 122,260 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, enter "UW Stevens Point Well Water Viewer" in your search engine.





# HOME HAZARDS WOOD 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.

● **14.3**  
**CARBON MONOXIDE POISONING**  
 RATE OF ER VISITS RELATED TO CO POISONING PER 100,000  
 WISCONSIN: 7.9

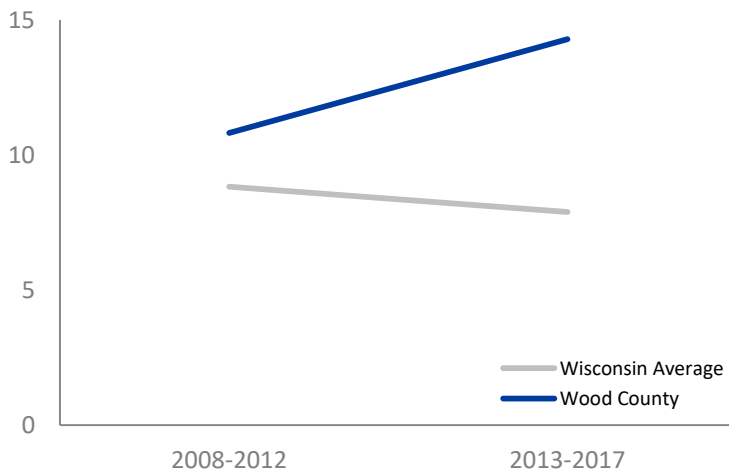
● **1.0%**  
**CHILDHOOD LEAD POISONING**  
 PERCENT OF CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g/dL}$   
 WISCONSIN: 5.0%

● **51.0%**  
**RADON**  
 PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi/L}$   
 WISCONSIN: 50.0%

● Above state value   ● At or below state value   ^ Suppressed

## CARBON MONOXIDE POISONING

RATE OF ER VISITS PER 100,000 PEOPLE



## CARBON MONOXIDE POISONING

Carbon monoxide (CO) poisoning prevents oxygen from getting to the body, which can damage tissue and even cause death.

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.

CO poisoning is also a risk in indoor ice arenas or recreational facilities where fuel-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.



## 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.

There is no safe level of lead in the human body. Even very low levels of exposure can be harmful to our health. Blood lead levels are measured in micrograms per deciliter ( $\mu\text{g}/\text{dL}$ ). The Centers for Disease Control and Prevention defines lead poisoning at or above 5  $\mu\text{g}/\text{dL}$ .

In most counties, the percentage of children poisoned is below 5%. However, counties vary greatly in the number of children that are tested for lead poisoning. Keep in mind that high percentages of poisoning may reflect fewer children tested. For example, if a county tested eight children and two were poisoned, the percentage poisoned would be 25%. There is also great variation within counties; some pockets of a county could have much higher percentages of children poisoned than the county as a whole.

On our data portal users can dig deeper to see how many children were tested, how many were poisoned, and how these numbers vary at the census tract level.

## RADON

Radon is a naturally occurring gas that is radioactive and can cause lung cancer. Radon can leak into homes and other buildings through cracks in the foundation.

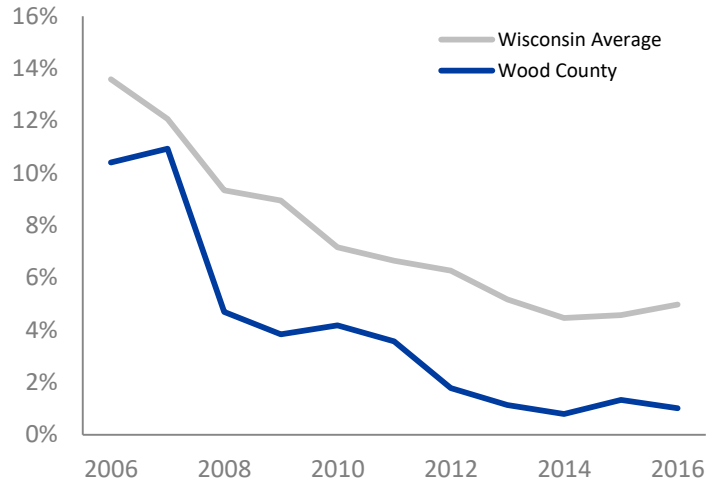
Like carbon monoxide, radon can't be seen or smelled. Homes both old and new can have unsafe radon levels, and the only way to know if a home has high radon levels is to test for it.

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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).

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](http://lowradon.org).

## CHILDHOOD LEAD POISONING

PERCENT OF TESTED CHILDREN WITH BLOOD LEAD  $\geq 5 \mu\text{g}/\text{dL}$

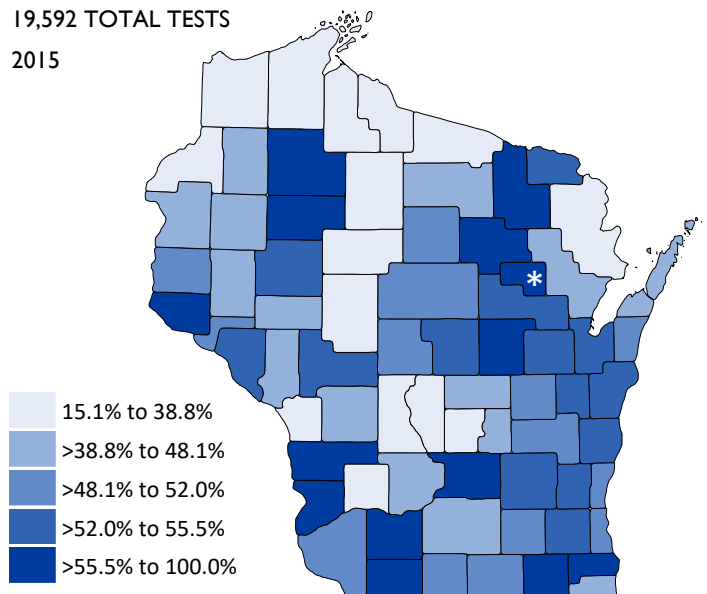


## RADON

PERCENT OF TESTS WITH RESULTS  $\geq 4 \text{ pCi}/\text{L}$

19,592 TOTAL TESTS

2015



**Note:** The white asterisk denotes a county with fewer than 11 tests. Tests may not be representative of radon levels for the county and should be interpreted with caution.

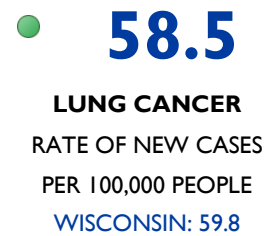
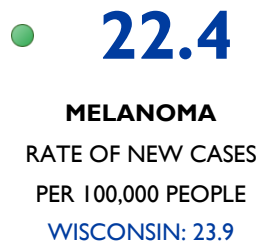
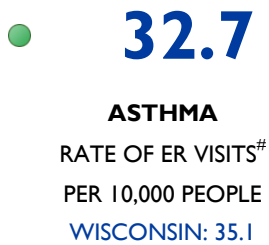




# HEALTH CONDITIONS WOOD COUNTY

## BACKGROUND

The Environmental Public Health Tracking Program monitors data on asthma, melanoma (a type of skin cancer), and lung cancer. Each of these measures is strongly linked to one or more environmental factors.



● Above state value

● At or below state value

^ Suppressed

<sup>#</sup> Note this rate is per 10,000 people, while the others are per 100,000. To compare this measure to others, be sure to multiply the rate by 10.

## ASTHMA

RATE OF ER VISITS PER 10,000 PEOPLE  
2017



## ASTHMA

Asthma is a disease that affects breathing and limits the ability to get oxygen to the lungs. Asthma symptoms often happen because a person came in contact with a trigger, such as outdoor air pollution or airborne pollens.

The overall rate of asthma emergency room visits in Wisconsin has declined slightly 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 the asthma webpage](#). View more years of asthma data on our portal.



### MELANOMA AND LUNG CANCER

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other body parts. There are more than 100 different types of cancer.

Melanoma is a cancer of the skin pigment cells and is the most deadly type of skin cancer. Lung cancer forms in the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the U.S.

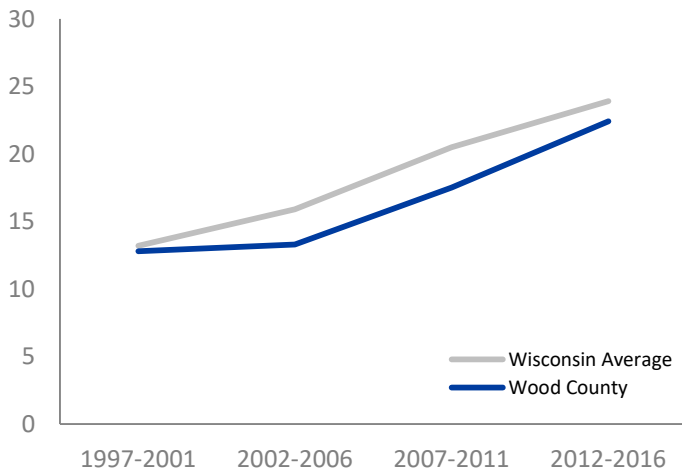
Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation, and lung cancer is related to radon and secondhand smoke. In addition to these environmental exposures, lung cancer is also caused by smoking.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The Wisconsin rate of lung cancer has held relatively steady in recent years, with more variability by county.



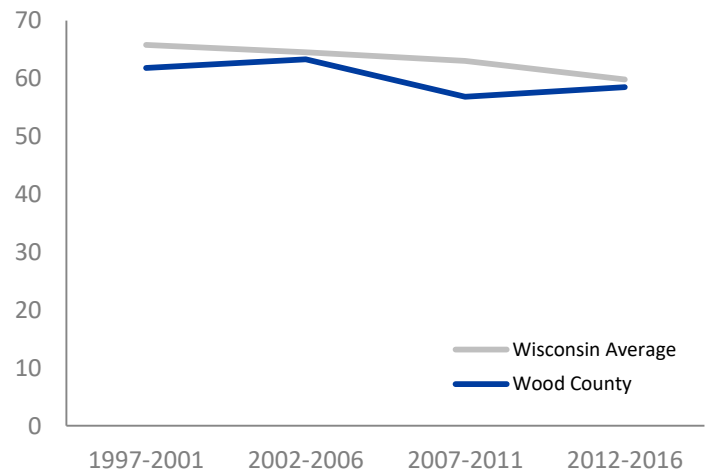
### MELANOMA

RATE OF NEW CASES PER 100,000 PEOPLE



### LUNG CANCER

RATE OF NEW CASES PER 100,000 PEOPLE





# CLIMATE WOOD COUNTY

## BACKGROUND

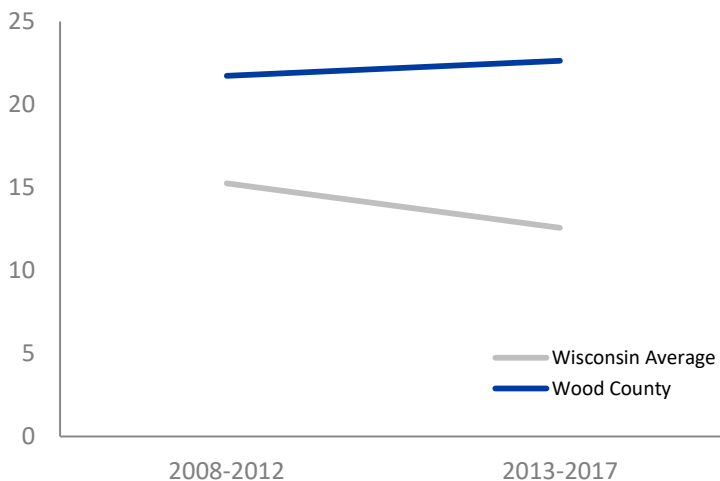
Consistent with global climate change trends over the past 60 years, Wisconsin has become generally warmer and wetter. Changes in the climate may lead to more precipitation and flooding, temperature extremes (very hot and very cold days), drought, and more carriers of disease (for example, mosquitoes and ticks). Climate change can contribute to mental health problems, water and vectorborne diseases, allergies, water and food insecurity, and even death.

In this section, we focus on heat stress and Lyme disease, two climate-related health outcomes.

To learn more about the connection between climate change and health and work being done by the Climate and Health Program, [visit their webpage](#).

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE



● **22.6**  
**HEAT STRESS**  
 RATE OF ER VISITS  
 PER 100,000 PEOPLE  
 WISCONSIN: 12.6

● **79.3**  
**LYME DISEASE**  
 RATE OF CASES  
 PER 100,000 PEOPLE  
 WISCONSIN: 51.7

● Above state value   ● At or below state value   ^ Suppressed

## HEAT STRESS

Heat stress encompasses a range of symptoms including heat rash, heat syncope (fainting), heat cramps, and heat exhaustion.

Any individual can develop heat stress when involved in intense physical activity or when it's hot.

Certain populations, such as adults who live alone or have limited social contacts, males who work or play outside, and people without access to air conditioning, are at increased risk of heat-related illness. While adults aged 15-34 are most likely to visit the ER for heat stress, adults over 65 are most likely to be hospitalized for heat stress.

To learn more about historical extreme heat—such as the number of days in which the heat index was at or above 90°F—visit our data portal.





## 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. Lyme disease was Wisconsin's fourth highest reported notifiable communicable disease in 2017.

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.

## LYME DISEASE AT THE NATIONAL LEVEL

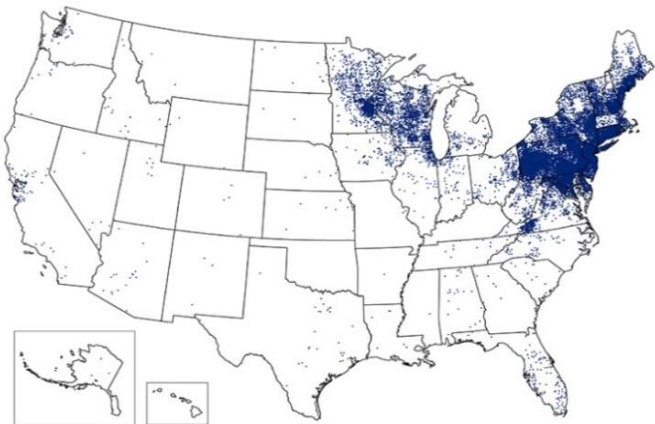
OVER TIME, WE ARE SEEING MORE TICK ACTIVITY

One dot placed randomly within county of residence for each reported case

2001



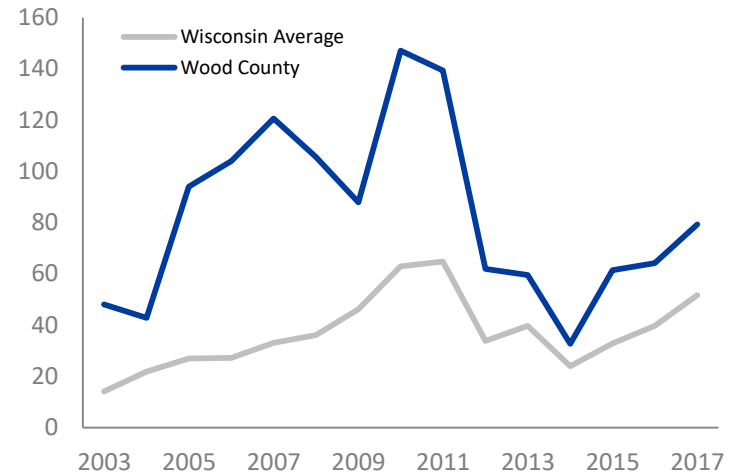
2017



Maps courtesy of Centers for Disease Control and Prevention

## LYME DISEASE

CRUDE RATE PER 100,000 PEOPLE



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).

# PROFILE DATA DETAILS



## COMMUNITY HEALTH

**Fluoride:** Percent of population with access to fluoridated public drinking water

**Source:** Wisconsin Oral Health Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2011-2017; data from 2017 displayed on dashboard

**Data details:** Data on fluoride in drinking water are based on samples taken from active public community water systems and do not reflect data from private wells. The data represent the population using public drinking water that have access to fluoridated water, regardless of whether it is at the recommended level.

**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:** 2015-2016

**Data details:** Data are a point-in-time estimate (that means the data are shared once annually and, at any given time throughout the year, a new license could be 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.



## PRIVATE WATER QUALITY

**Nitrate:** Percent of test results for nitrate that exceed EPA standard of 10 mg/L

**Arsenic:** Percent of test results for arsenic that exceed EPA standard of 10 µg/L

**Source:** Well Water Quality Viewer, Center for Watershed Science and Education, University of Wisconsin-Stevens Point

**Years displayed:** 1988 to March 2017

**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 rate of unintentional emergency room visits related to CO poisoning, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data averaged from 2013-2017 displayed on the dashboard

**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 2008 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 2017) 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. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Childhood Lead Poisoning:** Percent of children (less than 6 years of age) tested who had a blood lead level  $\geq 5$  µg/dL

**Source:** Wisconsin Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2006-2016; data from 2016 displayed on dashboard

**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 we have location data for a given test.



## HOME HAZARDS, CONTINUED

**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:** 2015

**Data details:** The map of these data comes from the National Tracking data explorer. Data are those from pre-mitigation tests or those where mitigation status was not designated. Post-mitigation tests are not included. This Profile includes data from 19,592 tests. 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 do not include all tests conducted by private contractors. To view more years of data and data at the zip code level, visit [lowradon.org](http://lowradon.org).



## HEALTH CONDITIONS

**Asthma:** Rate of emergency room visits related to asthma, age-adjusted per 10,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Year displayed:** 2017

**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). Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.

**Melanoma:** Annual average rate of new cases of melanoma, age-adjusted per 100,000 people

**Lung Cancer:** Annual average rate of new cases of lung cancer, age-adjusted per 100,000 people

**Source:** Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 1997-2016; data from 2012-2016 displayed on the dashboard

**Data details:** Rates are calculated from counts of new cancer cases reported to the Wisconsin Cancer Reporting System by health care providers in Wisconsin. Data for counties with fewer than six cases are suppressed to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 U.S. standard population.



## CLIMATE

**Heat Stress:** Annual average rate of emergency room visits related to heat stress, age-adjusted per 100,000 people

**Source:** Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services

**Years displayed:** 2008-2017; data from 2013-2017 are displayed on the dashboard

**Data details:** These data are collected from emergency room visit records. This measure includes cases with an ICD-9 code (from 2008 through quarter three of 2015) of 992.0–992.96 or cause of injury code E900.0 or E900.9 and cases with an ICD-10 code (from quarter four of 2015 through 2017) of T67, X30, or X32. Cases are excluded if there is any ICD-9 or ICD-10 code that indicates the source of heat was human-made. Cases are only included if they occurred during May 1 to September 30 of each year. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, data from counties with zero visits are not suppressed. 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:** 2003-2017; data from 2017 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.





## TAKING THE NEXT STEP

### Present to Stakeholders and 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 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.

### Join Our Quarterly 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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