# DANE COUNTY

# ENVIRONMENTAL HEALTH PROFILE

2015

WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM

# HOW TO USE THIS PROFILE

Below you will find our suggestions for how to use this profile. This profile contains many data points unique to environmental health. As you explore the information on the following pages, consider how it might be put to good use in your community. We are here to help you along the way. If you have questions about how to integrate these data into your work, let us know!

## COMMUNITY HEALTH ASSESSMENTS

Data from the profiles can be used in your health department or hospital's community health assessments to help meet state and federal requirements.

## ACCREDITATION

The profiles can be used to address the Public Health Accreditation Board's accreditation standards. For instance, 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*.

## GRANT PROPOSALS

Data in this profile can help you and your team develop a rationale for funding requests. These data can help justify existing programs and show where there is still work to be done.

## EDUCATION AND OUTREACH

When creating programs and outreach materials for your community, these data can help you build your case and show the extent of a problem. Communities have used their profile data to target education efforts to areas with the most need.

## POLICY DEVELOPMENT

This profile contains measures that can be used to justify the need for a policy. If a policy is put in place, these data can be used as baseline measures with which to monitor changes over time.

How have you used your county's profile? **Tell us about it!**

dhstracking@wi.gov
608-267-2488

# DANE COUNTY

DASHBOARD | 2015 ENVIRONMENTAL HEALTH PROFILE

## AIR QUALITY

### Ozone

0.0 | Annual days above standard
Wisconsin: 0.7

### Particulate Matter 2.5

1.1 | Annual days above standard
Wisconsin: 0.1

## WATER QUALITY

### Arsenic

0.4 | Average concentration in µg/L
Wisconsin: 1.3

### Nitrate

1.5 | Average concentration in mg/L
Wisconsin: 1.5

## HOME HAZARDS

### Carbon Monoxide (CO)

7.1 | Rate of ER visits per 100,000 people
Wisconsin: 8.2

### Childhood Lead Poisoning

1.4% | Percent with blood lead ≥5 µg/L
Wisconsin: 6.3%

## BIRTH OUTCOMES

### Low Birth Weight

7.0% | Percent of births <2500 grams
Wisconsin: 7.3%

### Preterm Birth

9.4% | Percent of births <37 weeks gestation
Wisconsin: 10.3%

## HEALTH INDICATORS

### Heat Stress

11.2 | Rate of ER visits per 100,000 people
Wisconsin: 16.5

### Melanoma

19.2 | Rate of cases per 100,000 people
Wisconsin: 18.4

### Lung Cancer

54.2 | Rate of cases per 100,000 people
Wisconsin: 62.0

### Asthma

198.0 | Rate of ER visits per 100,000 people*
Wisconsin: 376.0

*This indicator is represented per 10,000 people on the data portal. Above state value At or below state value ^ Data are suppressed | **References on next page**

WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM
dhs.wi.gov/epht | dhstracking@wi.gov | 608-267-2488
Wisconsin Department of Health Services | Division of Public Health | Bureau of Environmental and Occupational Health

# 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, available at dhs.wi.gov/epht. For additional details on the data, see page 15. For more information about age-adjustment and other terms referenced in this profile, visit the Wisconsin Tracking Program "Glossary of Terms," available at dhs.wisconsin.gov/epht/glossary.htm.

## AIR QUALITY

Particulate Matter 2.5 ($PM_{2.5}$) and Ozone: Monitored and modeled estimates of air quality readings
Source: National Environmental Public Health Tracking Network, Centers for Disease Control and Prevention
Year displayed: 2011

## WATER QUALITY

Arsenic and Nitrate: Measured concentrations from public water systems
Source: National Environmental Public Health Tracking Network, Centers for Disease Control and Prevention
Years displayed: Averaged data from 2011-2013

## HOME HAZARDS

Childhood Lead Poisoning: Reported blood lead test results
Source: Wisconsin Childhood Lead Poisoning Prevention Program, Bureau of Environmental and Occupational Health, Division of Public Health, Wisconsin Department of Health Services
Note: The first version of this profile contained lead data from 2013. These data reflected duplicated cases, which might inflate rates in some counties. This issue has been corrected and the data are now deduplicated. This version also includes 2014 data, as they were available during the second printing. Please update any saved copies with this version.
Year displayed: 2014

Carbon Monoxide (CO) Poisoning: Age-adjusted rate of emergency room visits related to CO poisoning
Source: Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services
Years displayed: Averaged data from 2009-2013

## BIRTH OUTCOMES

Low Birth Weight and Preterm Birth: Wisconsin birth certificate data
Source: Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services
Years displayed: Averaged data from 2011-2013

## HEALTH INDICATORS

Heat Stress: Age-adjusted rate of emergency room visits related to heat stress
Source: Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services
Years displayed: Averaged data from 2009-2013

Melanoma and Lung Cancer: Age-adjusted rate of cases reported by health care providers
Source: Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services
Years displayed: Averaged data from 2006-2010

Asthma: Age-adjusted rate of emergency room visits related to asthma
Source: National Environmental Public Health Tracking Network, Centers for Disease Control and Prevention
Year displayed: 2012

# AIR QUALITY DANE COUNTY

Air pollution means substances are in the air that should not be there – or should be there in smaller amounts. Two important pollutants to consider for the health of a community are fine particulate matter and ozone. Particulate matter describes microscopic particles that settle in our lungs after being inhaled. The "2.5" in "particulate matter 2.5 ($PM_{2.5}$)" refers to the size of the particles, which are smaller than the width of a human hair. Ozone is created as a result of emissions from vehicles and industrial facilities. Both particulate matter and ozone can trigger health problems, especially in people with breathing conditions like asthma. Levels of these contaminants are measured by monitoring stations set up around the state.

**0.0**
OZONE
ANNUAL DAYS ABOVE STANDARD
STATEWIDE: 0.7

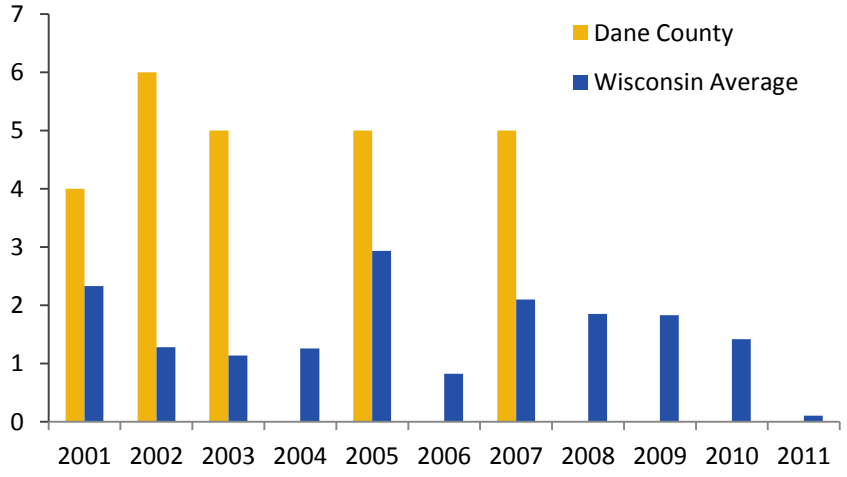
**1.1**
PARTICULATE MATTER 2.5
ANNUAL DAYS ABOVE STANDARD
STATEWIDE: 0.1

**10.4**
PARTICULATE MATTER 2.5
ANNUAL AVERAGE (µg/m3)
STATEWIDE: 9.4

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

## OZONE

### ANNUAL DAYS ABOVE STANDARD




## OZONE

The chart to the left provides a year-to-year comparison of the number of days in which ozone was above the standard set by the US Environmental Protection Agency. The fewer days above the standard, the better.

TAKE A CLOSER LOOK AT THE DATA:
dhs.wi.gov/epht

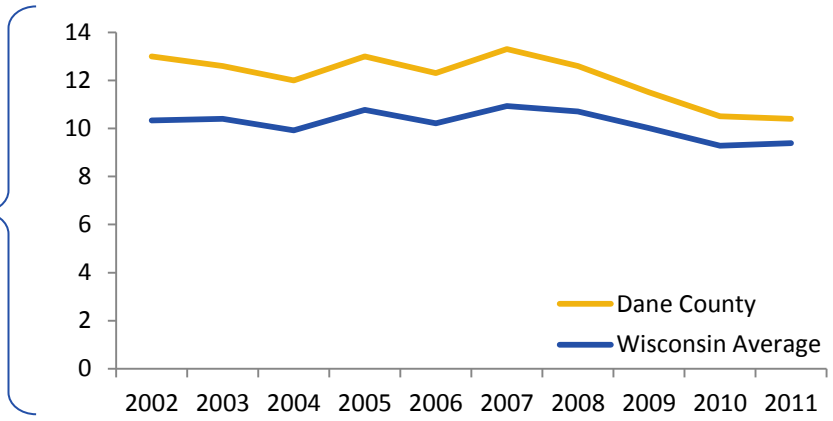
# AIR QUALITY DANE COUNTY

## PARTICULATE MATTER 2.5

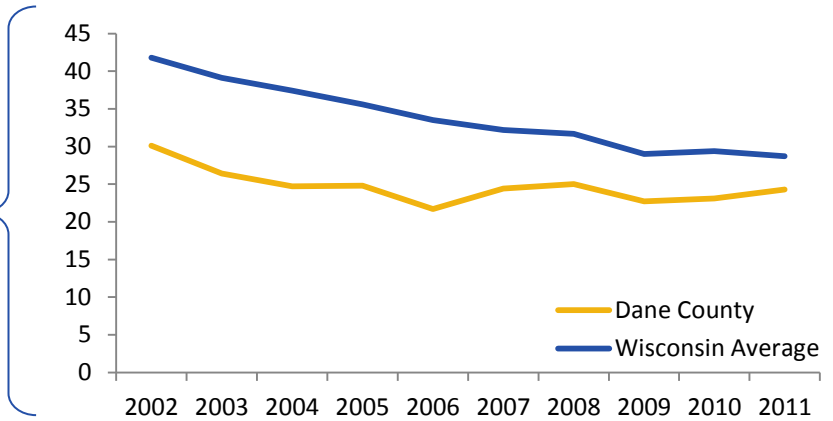
Particulate matter 2.5 ($PM_{2.5}$) is so tiny that it can settle in a person's lungs or bloodstream after being inhaled. These particles are more common near busy roads and in areas with dusty industries. PM has been linked to heart attacks and asthma attacks. Below are three charts showing how the annual average of $PM_{2.5}$, heart attack rates, and asthma emergency room visits have fluctuated over the 2002-2011 time period. In most Wisconsin counties, there has been a downward trend in all three measures over time.

For more information on ozone and particulate matter, please visit dhs.wisconsin.gov/epht/criteriapollutants.htm.

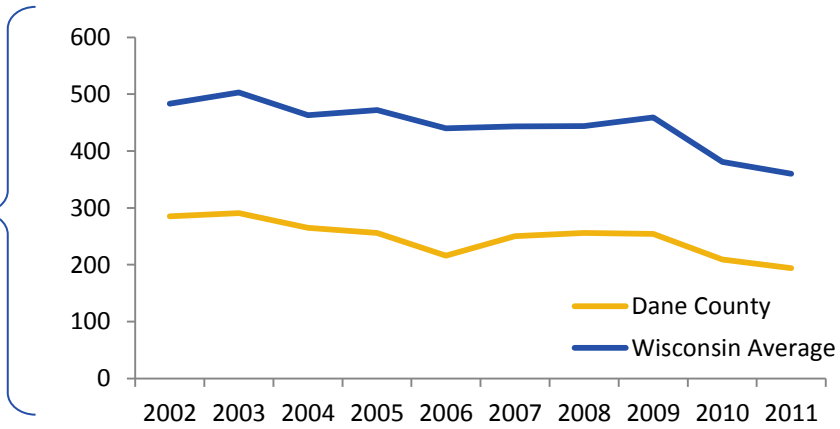
PARTICULATE MATTER 2.5
ANNUAL AVERAGE
(µg/m³)




HEART ATTACK
HOSPITALIZATIONS
Rate per 10,000 people




ASTHMA
EMERGENCY ROOM VISITS
Rate per 100,000 people



# WATER QUALITY DANE COUNTY

Water that is piped into your home, school, or workplace comes from either a public water system or a private well. Two important water contaminants to consider for the health of a community are arsenic and nitrate. Potential health effects of drinking water with high levels of arsenic include skin damage, circulatory system problems, and cancers (such as bladder and lung cancer). Some studies have also found evidence of a link between exposure to high nitrate levels in drinking water early in pregnancy and certain birth defects. Infants who consume drinking water with high nitrate levels are at risk of shortness of breath and blue baby syndrome.

**0.4**

**ARSENIC**

AVERAGE CONCENTRATION IN PUBLIC WATER (µg/L)

STATEWIDE: 1.3

**1.5**

**NITRATE**

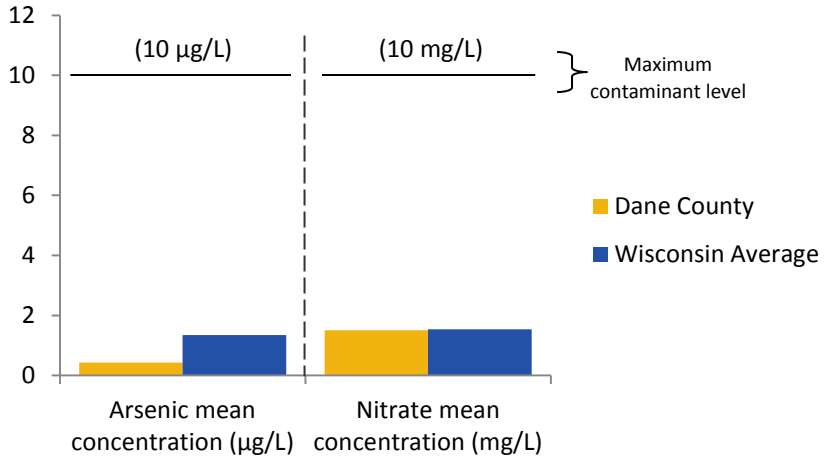
AVERAGE CONCENTRATION IN PUBLIC WATER (mg/L)

STATEWIDE: 1.5

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

## ARSENIC AND NITRATE

### MEAN CONCENTRATION LEVELS IN PUBLIC WATER (2011-2013)




## PUBLIC DRINKING WATER

About two-thirds of Wisconsin residents obtain water from public water systems. Data presented on this page are collected from public water systems.

Levels of contaminants in public water systems are monitored and regulated by the Wisconsin Department of Natural Resources. All counties reported arsenic and nitrate mean concentrations below the maximum contaminant levels established by the US Environmental Protection Agency.

For more information and to explore data about other drinking water contaminants in Wisconsin, visit dhs.wi.gov/epht.

TAKE A CLOSER LOOK AT THE DATA:
dhs.wi.gov/epht

# WATER QUALITY DANE COUNTY

## PRIVATE DRINKING WATER

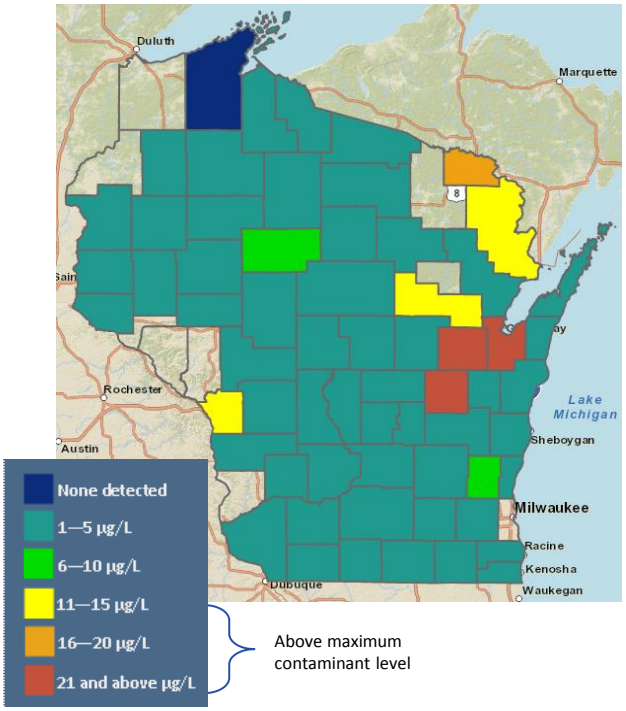
About one-third of Wisconsin residents obtain water from private wells. Private water wells are those that are owned by individuals. Private well owners are responsible for monitoring and testing their wells. Regulations are in place to guide the creation of new wells, but requirements are limited once a well is in place. As a result, not all private wells are regularly monitored for contamination.

The Wisconsin Environmental Public Health Tracking Program worked to improve access to private well data by partnering with the University of Wisconsin-Stevens Point's Center for Watershed Science to support a mapping tool. This tool provides private well data for multiple contaminants at county, township, and section levels. The well data were voluntarily submitted by homeowners and represent data from the past 25 years. The data do not include water quality information for all known private wells.

County-specific measures for arsenic and nitrate in private wells are displayed below. Seven counties have reported average concentrations of arsenic above the 10 µg/L maximum contaminant level. For nitrate, all counties are below the 10 mg/L maximum contaminant level. To explore data for the other water contaminants, visit bit.ly/wellwaterviewer.

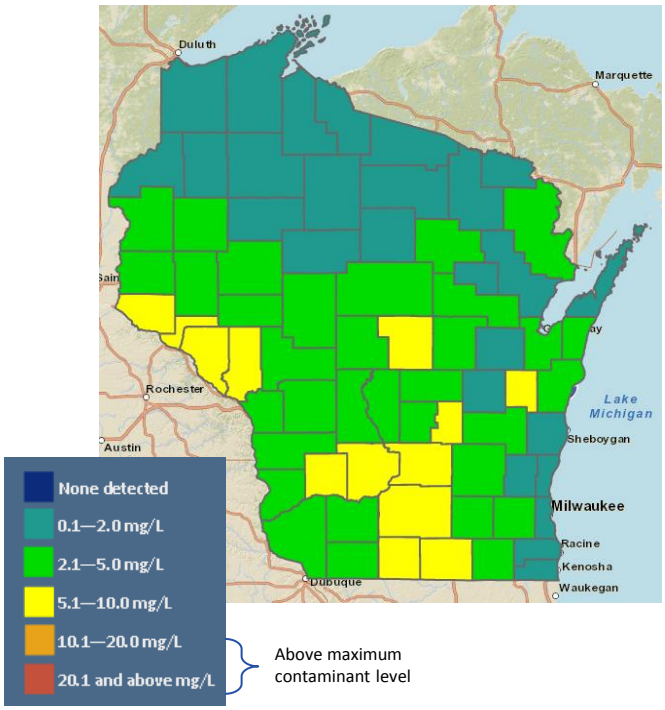
### ARSENIC IN PRIVATE WELLS

AVERAGE CONCENTRATION (µg/L)




### NITRATE IN PRIVATE WELLS

AVERAGE CONCENTRATION (mg/L)




The arsenic data displayed include results of 15,230 samples collected from 1988-2014. The nitrate data displayed include results of 113,465 samples collected from 1972-2014. The number of samples collected varies from year to year; accordingly, some years are better represented than others. Note that the level of precision between the arsenic and nitrate values is different in the map legends; this is related to the level of detection capabilities of the laboratory equipment.

# HOME HAZARDS DANE COUNTY

Lead and carbon monoxide (CO) poisoning are two home hazards monitored by the Wisconsin Environmental Public Health Tracking Program. Carbon monoxide poisoning prevents oxygen from getting to the body, which can damage tissue and even cause death. In children, lead poisoning slows growth and development, particularly in the brain. Lead poisoning is also associated with increased incarceration and poor academic outcomes.

**7.1**

**CARBON MONOXIDE POISONING**

RATE OF ER VISITS RELATED TO CO PER 100,000

STATEWIDE: 8.2

**1.4%**

**CHILDHOOD LEAD POISONING**

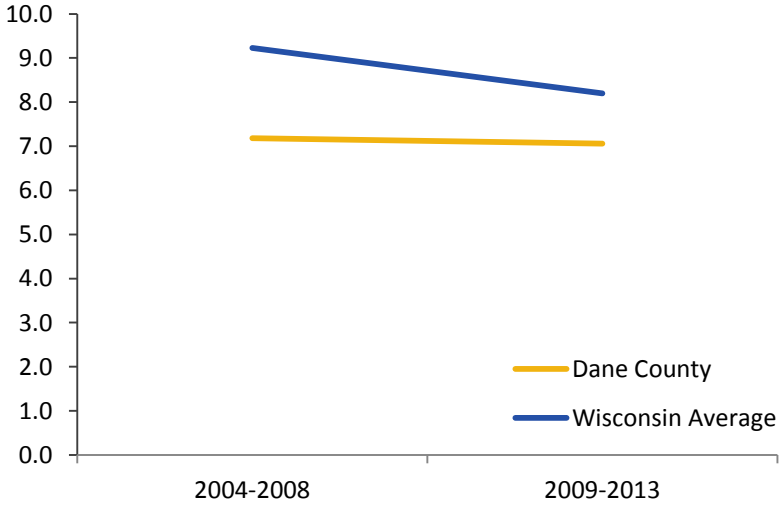
PERCENT OF TESTED CHILDREN WITH BLOOD LEAD ≥5 µg/dL

STATEWIDE: 6.3%

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

## CARBON MONOXIDE

RATE OF ER VISITS PER 100,000 PEOPLE




## CARBON MONOXIDE POISONING

Carbon monoxide (CO) is a toxic, colorless, and odorless gas. CO is created whenever fuel or other materials are burned. Wisconsin state law requires that all homes have a carbon monoxide detector on every level.

The chart to the left presents age-adjusted rates of emergency room visits for CO poisoning. For more information on carbon monoxide poisoning, please visit dhs.wisconsin.gov/air/co.htm.

TAKE A CLOSER LOOK AT THE DATA:
dhs.wi.gov/epht

# HOME HAZARDS DANE COUNTY

## CHILDHOOD LEAD POISONING

Wisconsin statute defines lead poisoning in a child as a blood lead level of 10 or more µg/dL (Wis. Stat. § 254.11[9]). However, in 2012, the Centers for Disease Control and Prevention recommended the lead poisoning reference value be lowered to greater than or equal to 5 µg/dL.

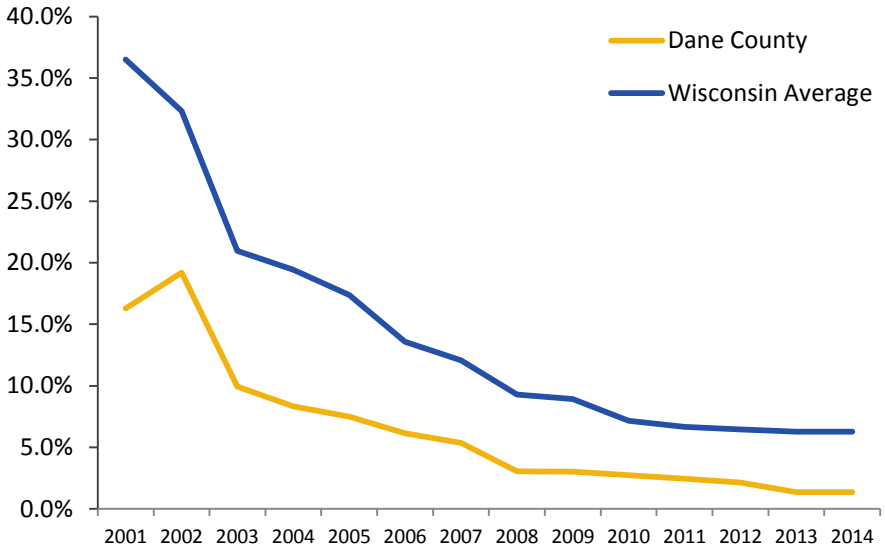
This decision was made due to the overwhelming evidence that blood lead levels below 10 µg/dL can cause damage to the brain and other parts of the body.

There is no safe level of lead in the human body. Even very low levels of exposure can cause adverse health effects.

The percentage of children tested with a blood lead level greater than or equal to 5 µg/dL has declined over the past 14 years in most Wisconsin counties. This decline is due in part to prevention and outreach efforts that have happened throughout the state. Together we have made great progress, but there is still work to be done to eliminate lead poisoning for all children.

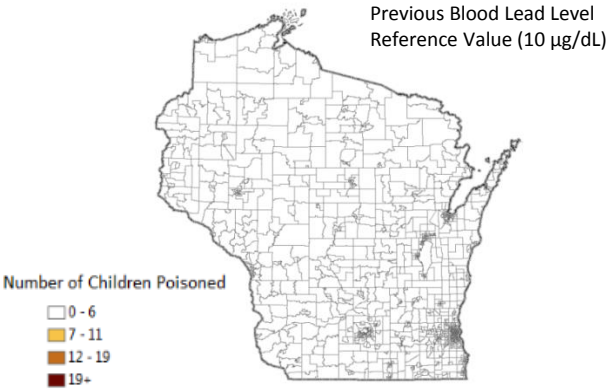
### CHILDHOOD LEAD POISONING

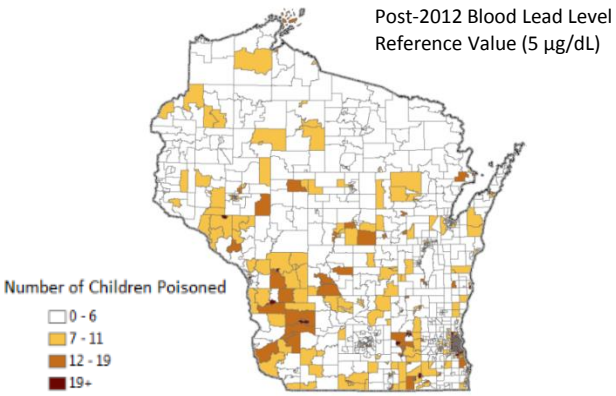
PERCENT OF TESTED CHILDREN WITH BLOOD LEAD ≥5 µg/dL




The change in reference value for lead poisoning from ≥10 µg/dL to ≥5 µg/dL had a substantial impact on the number of Wisconsin children recognized as being affected by lead poisoning. The maps below illustrate that change. The map on the left shows the number of children who were considered lead poisoned at the previous level. The map on the right shows the number of children who are considered lead poisoned at the new level. For more information on preventing and remediating lead exposure, please visit the Wisconsin Lead Program website, dhs.wi.gov/lead.

### CENSUS TRACT-LEVEL COUNTS OF CHILDHOOD LEAD POISONING (2009-2011)



# BIRTH OUTCOMES DANE COUNTY

Reproduction is complex, and many factors affect a mother's ability to conceive, carry a baby to term, and deliver a baby without complications. Environmental factors such as air pollution and exposure to contaminated drinking water can increase the likelihood of low birth weight and preterm births. Low birth weight has also been linked to exposure during pregnancy to lead, solvents, pesticides, and polycyclic aromatic hydrocarbons (a group of over 100 contaminants produced by burning fuels like coal).

**7.0%**

**LOW BIRTH WEIGHT**

PERCENT BIRTHS
<2,500 GRAMS

STATEWIDE: 7.3%

**9.4%**

**PRETERM BIRTH**

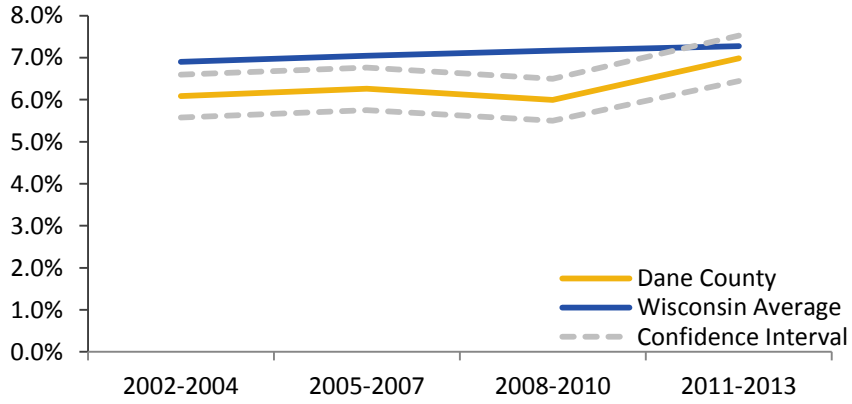
PERCENT BIRTHS
<37 WEEKS GESTATION

STATEWIDE: 10.3%

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

## LOW BIRTH WEIGHT

PERCENT OF BIRTHS BELOW 2,500 GRAMS




## LOW BIRTH WEIGHT

Low birth weight – being born with a weight under 2,500 grams – can occur as a result of slow fetal growth over a full-term pregnancy, being born preterm, or both. The figure to the left provides a comparison between the county-level percentage of low birth weight babies and the percentage of low birth weight babies in Wisconsin from 2002-2013.

Confidence intervals based on the county rate have been added to the chart to the left. They are denoted with dotted gray lines. These confidence intervals indicate the precision of the estimated values. The closer the dotted lines are to the county line, the better (or more precise) the estimate.

TAKE A CLOSER LOOK AT THE DATA:
dhs.wi.gov/epht

# BIRTH OUTCOMES DANE COUNTY

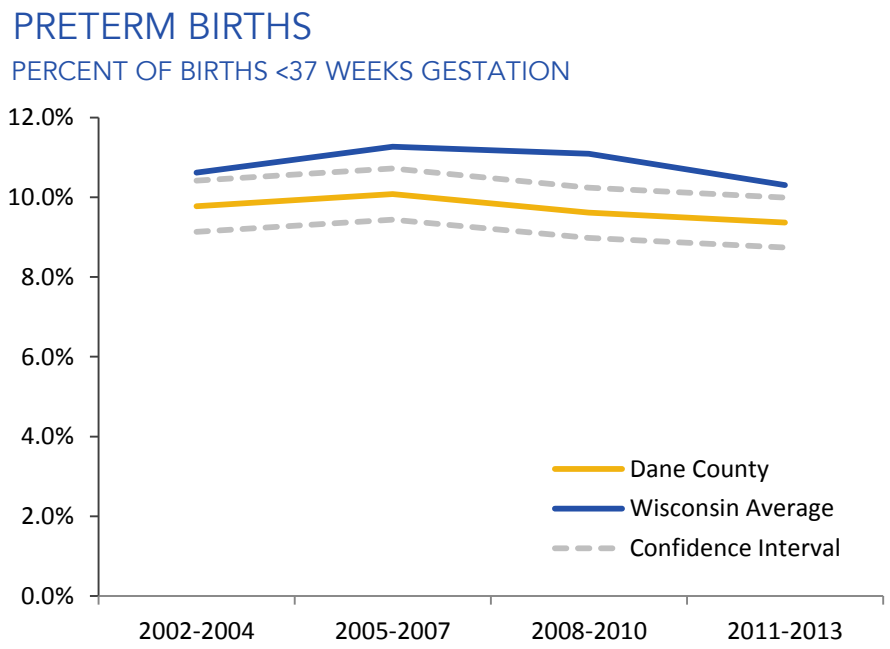
## PRETERM BIRTH

A baby is considered to be preterm if he or she is born before completing 37 weeks of gestation. Many women who have preterm birth have no known risk factors. Women have the best chance of preventing preterm birth by being healthy before and during pregnancy and receiving high-quality prenatal care. Environmental factors can also play a role, as research has shown a relationship between exposure to air pollution, lead, solvents, and tobacco smoke during pregnancy and a higher risk of preterm birth.

The figure to the right provides a comparison between the percentage of preterm babies at the county level and the percentage of preterm babies in Wisconsin from 2002-2013.

Confidence intervals based on the county rate have been added to the chart to the right. They are denoted with dotted gray lines, which indicate the precision of the estimated values. The closer the dotted lines are to the county line, the better (or more precise) the estimate.

For more information on preterm births, visit dhs.wi.gov/epht/premature.htm.




## BIRTH DEFECTS

A birth defect is a problem that happens while the baby is developing in the mother's body. Most birth defects happen during the first three months of pregnancy. A birth defect may affect how a baby's body looks, works, or both.

Many birth defects are known to be related to environmental factors. Birth defects such as spina bifida, cleft lip/palate, gastroschisis, hypospadias, Down syndrome, and heart defects have all been linked to living near hazardous waste sites. Some birth defects have also been linked to disinfection by-products in drinking water. Some studies have also found evidence of a link between exposure to high nitrate levels in drinking water early in pregnancy and certain birth defects.

The causes of most birth defects remain unknown. With the data collected through the National Environmental Public Health Tracking Program, researchers will be better equipped to study the relationship between birth defects and the environment.

The Wisconsin Environmental Public Health Tracking Program obtains data on 10 types of birth defects from the Birth Defect Prevention and Surveillance Program at the Wisconsin Department of Health Services. The Birth Defects Registry is a passive surveillance system for which reporting by health care providers is optional. Much of this data is available on our web portal, which can be found at dhs.wisconsin.gov/epht/birthdefects.htm.

# HEALTH INDICATORS DANE COUNTY

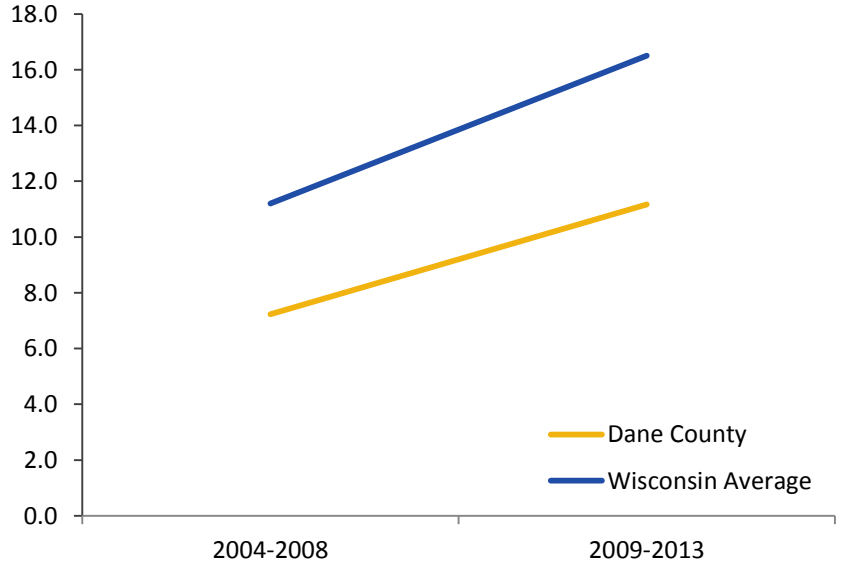
Heat stress, melanoma, lung cancer, and asthma are four of the many health indicators collected by the Wisconsin Environmental Public Health Tracking Program. Each of these indicators is strongly linked to one or more environmental factors.

| 11.2 | 19.2 | 54.2 | 198.0 |
|---|---|---|---|
| HEAT STRESS | MELANOMA | LUNG CANCER | ASTHMA |
| RATE OF ER VISITS PER 100,000 PEOPLE | RATE OF CASES PER 100,000 PEOPLE | RATE OF CASES PER 100,000 PEOPLE | RATE OF ER VISITS PER 100,000 PEOPLE |
| STATEWIDE: 16.5 | STATEWIDE: 18.4 | STATEWIDE: 62 | STATEWIDE: 376 |

Above state value  At or below state value  ^ Suppressed

## HEAT STRESS

RATE OF ER VISITS PER 100,000 PEOPLE




## HEAT STRESS

Heat stress encompasses a range of conditions including heat rash, heat syncope, heat cramps, and heat exhaustion. Any individual can develop heat stress when involved in intense physical activity or when exposed to high environmental temperatures.

In this profile, heat stress is measured by emergency room visits related to heat. For more information on heat stress, visit bit.ly/cdcheatstress.

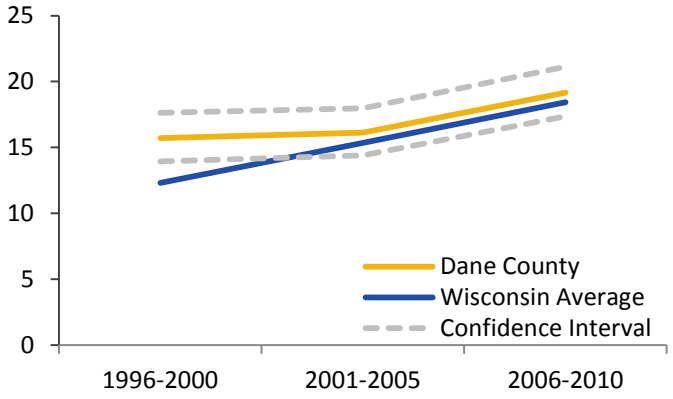
TAKE A CLOSER LOOK AT THE DATA:
dhs.wi.gov/epht

## 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 tissues. There are more than 100 different types of cancer. Melanoma is a cancer of the skin pigment cells and is the most dangerous type of skin cancer. Lung cancer forms in the tissues of the lung, usually in the cells lining the air passages, and is the leading cause of cancer deaths in the United States.

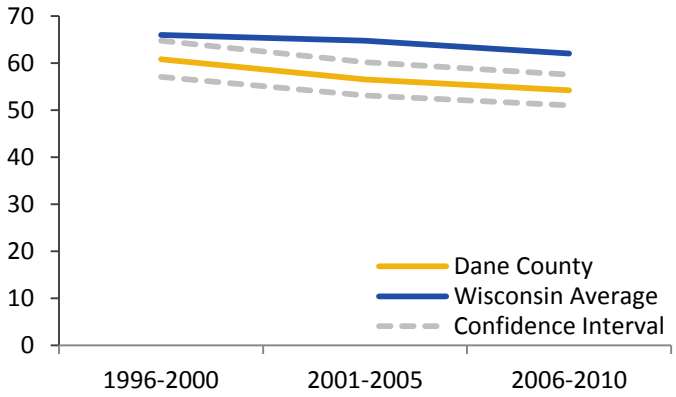
### MELANOMA

RATE OF CASES PER 100,000 PEOPLE




### LUNG CANCER

RATE OF CASES PER 100,000 PEOPLE




Both melanoma and lung cancer are strongly linked to environmental causes. Melanoma is linked to ultraviolet (UV) radiation exposure, and lung cancer is related to radon and environmental tobacco smoke. In this profile, melanoma and lung cancer data are presented as age-adjusted rates of new cases per 100,000 people.

The rate of melanoma in Wisconsin is increasing over time, and nearly all Wisconsin counties are following the same upward trend. The rate of lung cancer has held relatively steady in Wisconsin, with more variability by county. Confidence intervals based on the county rate have been added to the charts above. They are denoted with dotted gray lines, which indicate the precision of the estimated values. The closer the dotted lines are to the county line, the better (or more precise) the estimate.

For more information on melanoma, visit dhs.wisconsin.gov/epht/melanoma.htm. To read more about lung cancer, visit dhs.wisconsin.gov/epht/lung.htm.

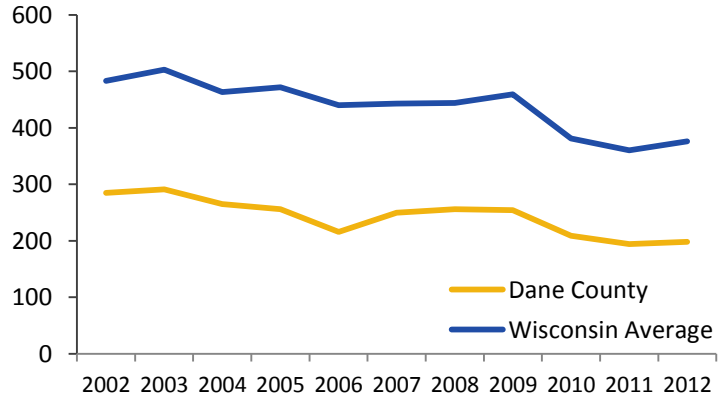
## ASTHMA

Asthma is a disease that affects breathing and may restrict the ability to get oxygen to the lungs. Symptoms of asthma often occur because a person is exposed to a trigger such as outdoor air pollution.

In this profile, asthma is measured by the rate of asthma-related emergency room visits per 100,000 people. The overall rate of asthma emergency room visits in Wisconsin has declined slightly since 2002. Rates at the county level are more variable. For more information about asthma, visit dhs.wisconsin.gov/asthma/Index.htm

### ASTHMA

RATE OF ER VISITS PER 100,000 PEOPLE



# DATA DETAILS

## AIR QUALITY

### Particulate Matter 2.5 ($PM_{2.5}$)

**Measures:** Annual Average $PM_{2.5}$ (µg/m$^3$), Percent of days above standard set by the US Environmental Protection Agency

**Source:** National Environmental Public Health Tracking Network, Centers for Disease Control and Prevention

**Years displayed:** 2002-2011, data from 2011 are displayed on the dashboard

**Data details:** These measures include monitored and modeled estimates of $PM_{2.5}$ levels. Modeled estimates are used to fill in gaps for days when monitoring does not occur or in counties where monitors do not exist. The data downloaded from the national portal for percent of days above standard were multiplied by 365 to get number of days above US Environmental Protection Agency standard. The US Environmental Protection Agency's National Ambient Air Quality Standard (NAAQS) for a 24-hour average $PM_{2.5}$ concentration is 35 µg/m$^3$.

### Ozone

**Measure:** Number of days above standard set by the US Environmental Protection Agency

**Source:** National Environmental Public Health Tracking Network, Centers for Disease Control and Prevention

**Years displayed:** 2001-2011, data from 2011 are displayed on the dashboard

**Data details:** This measure is the number of days with maximum eight-hour average ozone concentration over the Environmental Protection Agency's National Ambient Air Quality Standard (NAAQS) of 0.075 ppm. This measure includes monitored and modeled estimates of ozone levels. Modeled estimates are used to fill in gaps for days when monitoring does not occur or in counties where monitors do not exist.

### Heart Attack

**Measure:** Age-adjusted rate of hospitalizations among persons age 35 and over per 10,000 people

**Source:** National Environmental Public Health Tracking Network, Centers for Disease Control and Prevention

**Years displayed:** 2002-2011

**Data details:** These data are collected from inpatient hospital records. This measure includes cases with an ICD-9 code of 410.0-410.92. The National Environmental Public Health Tracking Network suppresses data for counties with fewer than six hospitalizations per 100,000 to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 US standard population.

## HEALTH INDICATORS

### Asthma

**Measures:** Annual age-adjusted rate of emergency department visits per 100,000 people

**Source:** National Environmental Public Health Tracking Network, Centers for Disease Control and Prevention

**Years displayed:** 2002-2012, data from 2012 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 of 493. The National Environmental Public Health Tracking Network suppresses data for counties with fewer than six visits per 100,000 to protect confidentiality. However, counties with zero cases are not suppressed. Direct age-adjustment is conducted using the 2000 US standard population. On the National Environmental Public Health Tracking portal, this measure is calculated per 10,000 people. For use in this profile, it is converted to per 100,000 people.

### Lung Cancer and Melanoma

**Measure:** Age-adjusted rates of cases among persons age 35 and over per 100,000 people

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

**Years displayed:** 1996-2010, data from 2006-2010 are displayed on the dashboard

**Data details:** Rates are calculated from counts of 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 US standard population.

### Heat Stress

**Measure:** Age-adjusted rate of emergency department visits per 100,000 people

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

**Years displayed:** 2004-2013, data from 2009-2013 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 of 992.0-992.9, or cause of injury code E900.0 or E900.9. Data for counties with fewer than five visits are suppressed to protect confidentiality. However, counties with zero visits are not suppressed. Direct age-adjustment is conducted using the 2000 US standard population.

## WATER QUALITY

### Arsenic

**Measures:** Mean concentration of arsenic (µg/L) in public drinking water

**Source:** National Environmental Public Health Tracking Network, Centers for Disease Control and Prevention

**Years displayed:** Averaged data from 2011-2013

**Data details:** Arsenic concentrations in drinking water are based on samples taken from public community water systems. Because many counties did not have any samples for a given year, three years of data were aggregated (2011-2013). Some counties had multiple arsenic mean values (from different water systems), so the values were first averaged within a given county and then averaged across the years.

### Nitrate

**Measure:** Mean concentration of nitrate (mg/L) in public drinking water

**Source:** National Environmental Public Health Tracking Network, Centers for Disease Control and Prevention

**Years displayed:** Averaged data from 2011-2013

**Data details:** Nitrate concentrations in drinking water are based on samples taken from public community water systems. Because many counties did not have any samples for a given year, we aggregated three years of data (2011-2013). Some counties had multiple nitrate mean values (from different water systems), so the values were first averaged within a given county and then averaged across the years.

## HOME HAZARDS

### Lead Poisoning

**Measure:** Percent of children tested who had a blood lead level ≥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:** 2001-2014, data from 2014 displayed on dashboard

**Data details:** Wisconsin blood lead testing data from children less than six years of age are reported to the Wisconsin 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 first version of this profile contained lead data from 2013. These data reflected duplicated cases, which might inflate rates in some counties. This issue has been corrected. This version of the profile also includes 2014 data, as they were available during the second printing. Please update any saved copies with this version.

### Carbon Monoxide Poisoning

**Measure:** Annual average rate of emergency room visits, age adjusted per 100,000 people

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

**Years displayed:** 2004-2013, data averaged from 2009-2013 displayed on dashboard

**Data details:** This measure includes carbon monoxide poisonings that were unintentional (fire- or non-fire-related) and of unknown intent. These data are collected from emergency room visit records. The measure includes cases with an ICD-9 code of 986 or cause of injury code E868.2, E868.3, E868.8, E868.9, E982.0, E982.1, E818, E825 ,E838, E844, E867, E868, or E890-E899. 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 US standard population.

## BIRTH OUTCOMES

### Low Birth Weight

**Measures:** Percentage of babies weighing <2,500 grams at birth among all babies born to county residents

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

**Years displayed:** 2002-2013, data from 2011-2013 are displayed on dashboard

**Data details:** Data are from Wisconsin resident birth certificates. Birth weight in grams is reported by the hospital or attending clinical staff.

### Preterm Birth

**Measure:** Percentage of babies born at <37 weeks gestation among all babies born to county residents

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

**Years displayed:** 2002-2013, data from 2011-2013 are displayed on dashboard

**Data details:** Data are from Wisconsin resident birth certificates. The last menstrual period a mother had prior to confirmed pregnancy is used to determine weeks of gestation. If data from this source are not available, the attending clinician's estimated weeks of gestation is used.

# WISCONSIN ENVIRONMENTAL PUBLIC HEALTH TRACKING PROGRAM

**HENRY ANDERSON, MD**
Principal Investigator, Chief Medical Officer
608-266-1253
henry.anderson@dhs.wisconsin.gov

**DAWN BERNEY, MPA**
Evaluator
608-267-3830
dawn.berney@dhs.wisconsin.gov

**JENNY CAMPONESCHI, MS**
Program Manager
608-267-3811
jennifer.camponeschi@dhs.wisconsin.gov

**MEGAN CHRISTENSON, MS, MPH**
Epidemiologist
608-266-7897
megan.christenson@dhs.wisconsin.gov

**PAUL CRESWELL, PHD**
Senior Epidemiologist
608-267-9752
paul.creswell@dhs.wisconsin.gov

**JOSEPH OLSON**
IS Systems Development Services Professional
608-266-6696
josepha.olson@dhs.wisconsin.gov

**CHRISTY VOGT, MPH, CHES**
Communications and Education Coordinator
608-267-2488
christy.vogt@dhs.wisconsin.gov

**MARK WERNER, PHD**
Chief, Health Hazard Evaluation Section
608-266-7480
mark.werner@dhs.wisconsin.gov

## SPECIAL THANKS

Iowa Environmental Public Health Tracking Program

Wisconsin Environmental Public Health Tracking Program's Technical Advisory Group

Jeff Phillips, Bureau of Environmental and Occupational Health, Wisconsin Department of Health Services

Sarah Mattes, Tobacco Prevention and Control Program, Wisconsin Department of Health Services

Kevin Masarik, Center for Watershed Science and Education, University of Wisconsin-Extension

State of Wisconsin | Department of Health Services | Division of Public Health
Bureau of Environmental and Occupational Health
Wisconsin Environmental Public Health Tracking Program
dhstracking@wi.gov | dhs.wisconsin.gov/epht
MAY 2015 | P-00719