

# Love My Air Wisconsin: Connecting Communities to Air Quality Resources Through a School-Based Program

## Speakers:

Craig Czarnecki

Lindsay Haas

Kate Beardmore

Erika Kluetmeier

Sarah Kroening



# Wisconsin Air Quality

Craig Czarnecki, Outreach Coordinator

Lindsay Haas, Air Quality Outreach Specialist



# DNR's Air Management Program

Business Support

Air Quality Planning and Standards

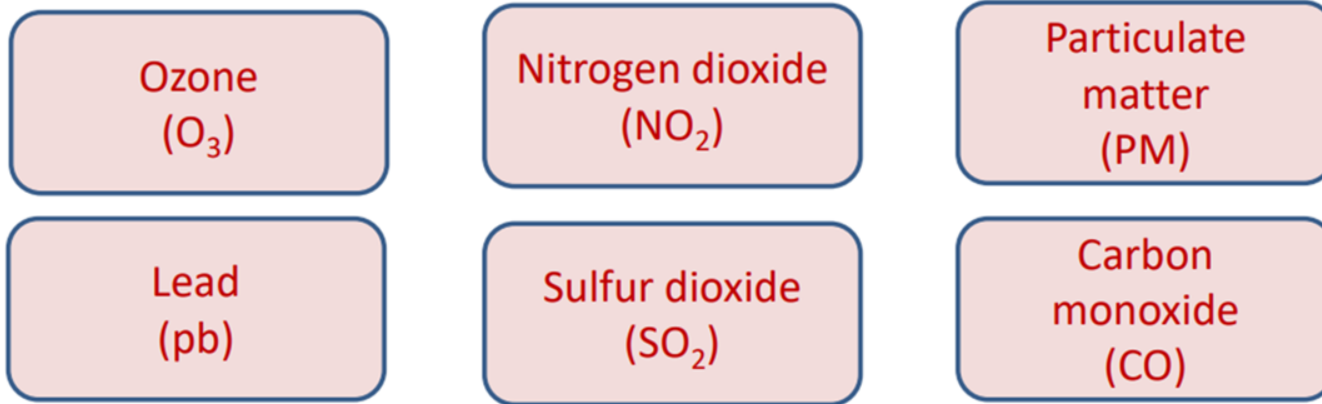
Air Monitoring

Permits and Stationary Source Modeling

Compliance, Enforcement, and Emissions Inventory



# National Ambient Air Quality Standards (NAAQS)



- Primary Standards
  - Protect public health
  - Focus on “sensitive” individuals (asthmatics, children, older adults)
- Secondary Standards
  - Protect public welfare
  - Decreased visibility, damage to animals, crops, vegetation, and buildings

Daily AQI Color	Level of Concern	Index Value	Description of Air Quality
Green	Good	0 to 50	Air quality is satisfactory
Yellow	Moderate	50-100	Air quality is acceptable, however there may be a risk of those who are especially sensitive to air pollution.
Orange	Unhealthy for Sensitive Groups	101-150	Members of sensitive groups may experience health effects. The general public is less likely to be affected.
Red	Unhealthy	151 - 200	Some members of the general public may experience health effects; members of sensitive groups may experience more serious health effects.
Purple	Very Unhealthy	201-300	Health Alert: risk of health effects is increased for everyone
Maroon	Hazardous	301 and higher	Health warning of emergency conditions. Everyone likely to be affected

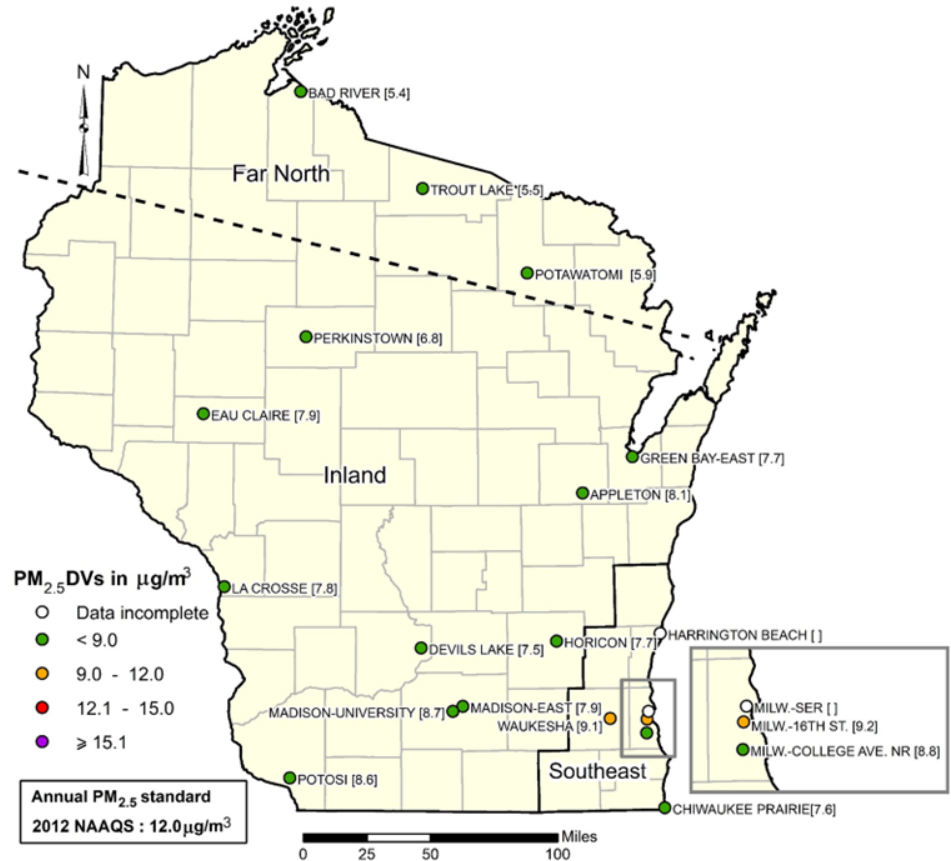
# Ozone

- 30 DNR network sites
- More densely located along the Lake Michigan shore
- Ozone forms via chemical reactions between VOCs, NO<sub>x</sub> and sunlight
- Exposure can lead to or worsen numerous health issues
- DNR ozone season April 1 – Oct 15 for most sites



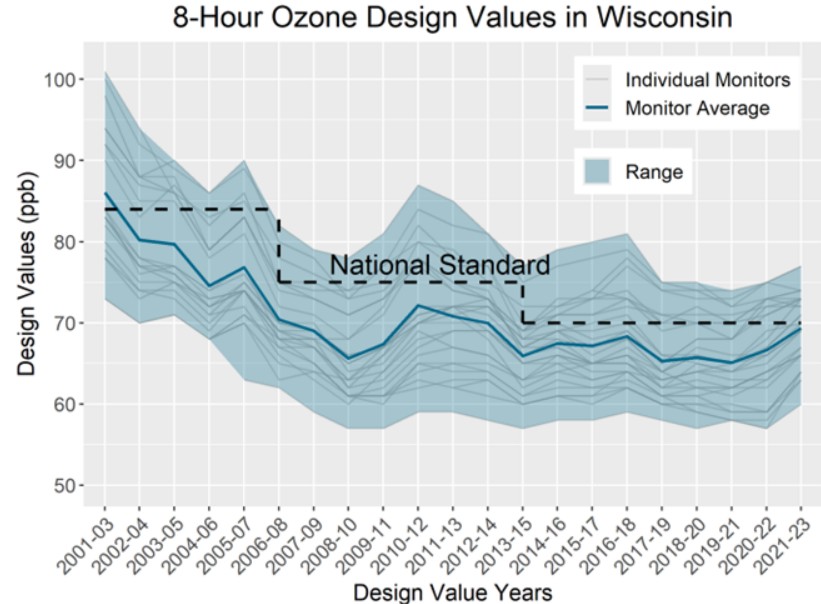
# Fine Particulate Matter (PM<sub>2.5</sub>)

- 16 DNR network sites
- Operates year-round
- Solid and liquid droplets ≤ 2.5 microns
- Can penetrate deep into respiratory tract and bloodstream
- Most common source is combustion
  - Burning of fuels
  - Wildfires

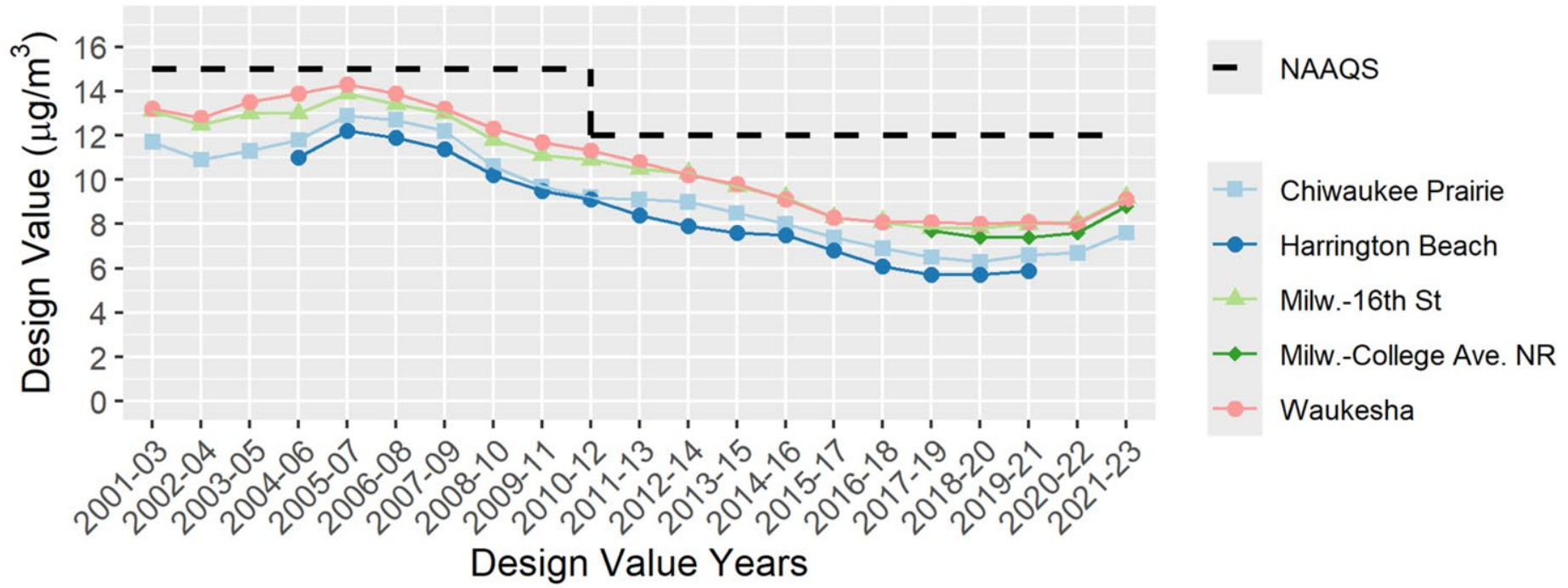


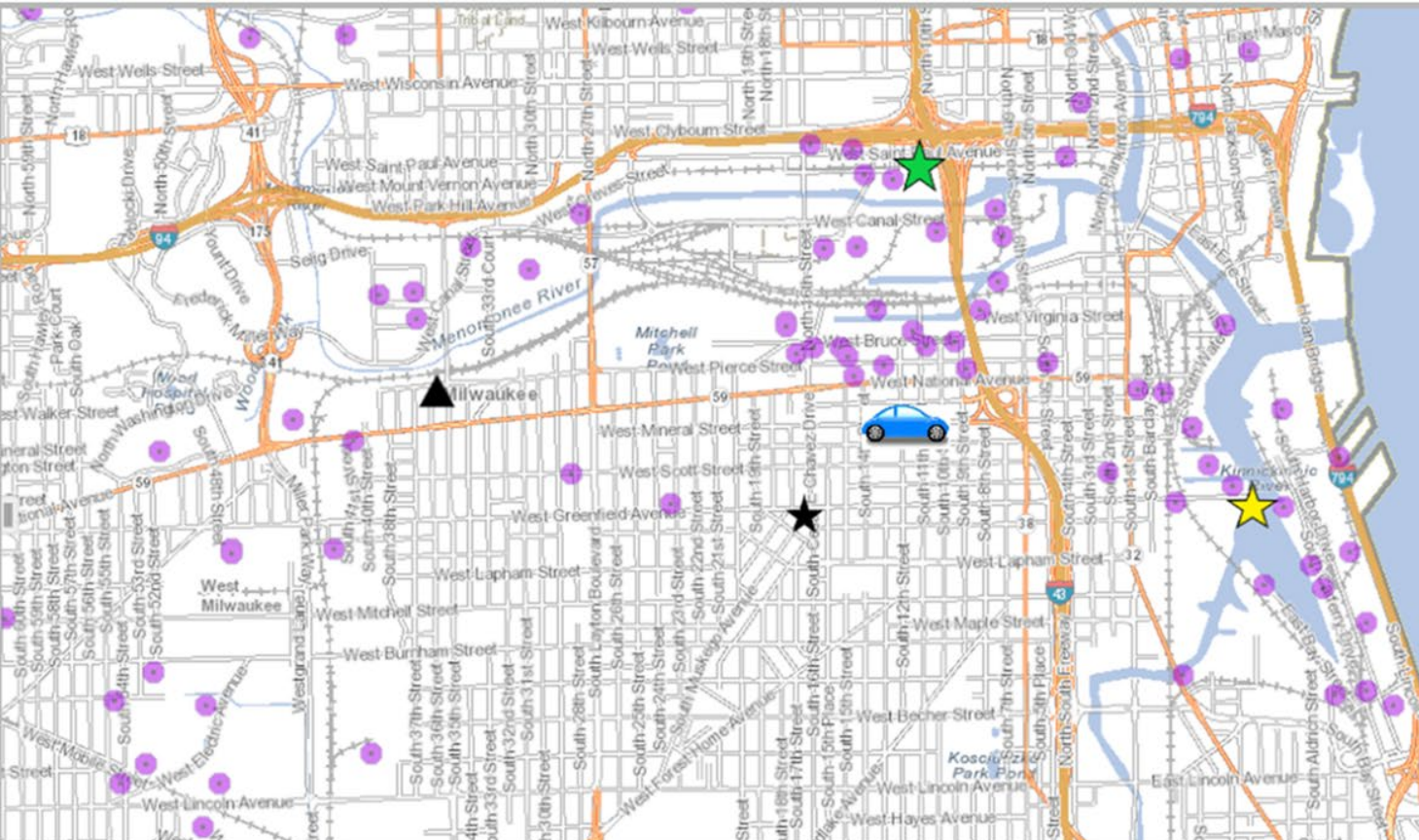
# 2024 Trends Report and Storymap

- Scheduled for release in early December
- Statewide since 2001-2003:
  - Sulfur Dioxide (SO<sub>2</sub>) has decreased 89%
  - Ozone has decreased 15%
  - PM2.5 has decreased 25%
- Find the report and Storymap on the [Air Quality Trends page](#).



# Annual PM<sub>2.5</sub> Design Values - Southeast Region



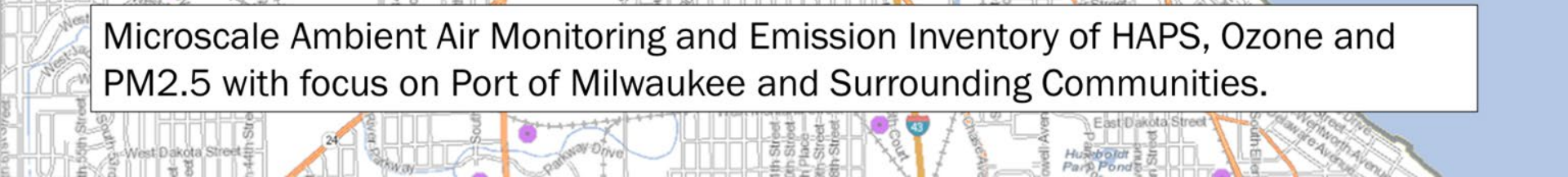


**Legend**

- ★ Sixteenth Street HC
- Permitted Air Sources
- ★ DNR Milwaukee (MAML)
- ★ UW School of Freshwater Sciences
- ▲ Urban Ecology Center (AQSync)
- 🚗 Mobile Monitoring



Microscale Ambient Air Monitoring and Emission Inventory of HAPS, Ozone and PM2.5 with focus on Port of Milwaukee and Surrounding Communities.



# Air Quality Education

- [Air Quality Monitoring Data Map](#) and mobile app
- K-12 Materials: [Education and Outreach](#) webpage
  - Air, Air Everywhere
  - Air Defenders
  - Clean Air, Healthy Children
  - Where's the Air?
- Email [DNRAirEducation@wisconsin.gov](mailto:DNRAirEducation@wisconsin.gov) to order
- Annual [poetry contest](#)



# CONNECT WITH US

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**Lindsay Haas**

**[Lindsay.haas@wisconsin.gov](mailto:Lindsay.haas@wisconsin.gov)**



@WIDNR



@WI\_DNR



/WIDNRTV



"WILD WISCONSIN:  
OFF THE RECORD"

# Asthma, Air Quality & Climate Connections in Milwaukee

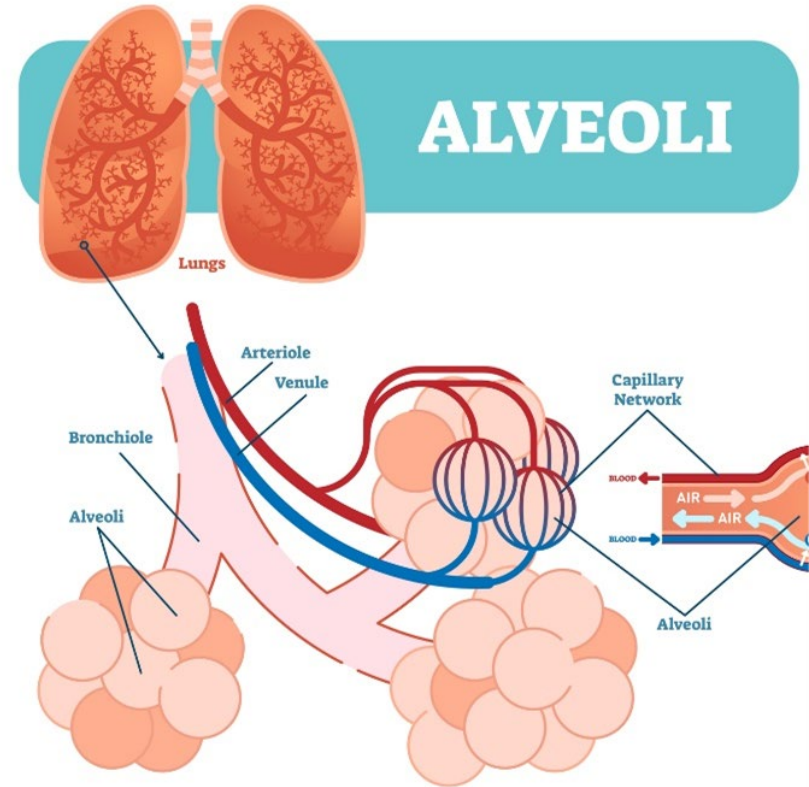
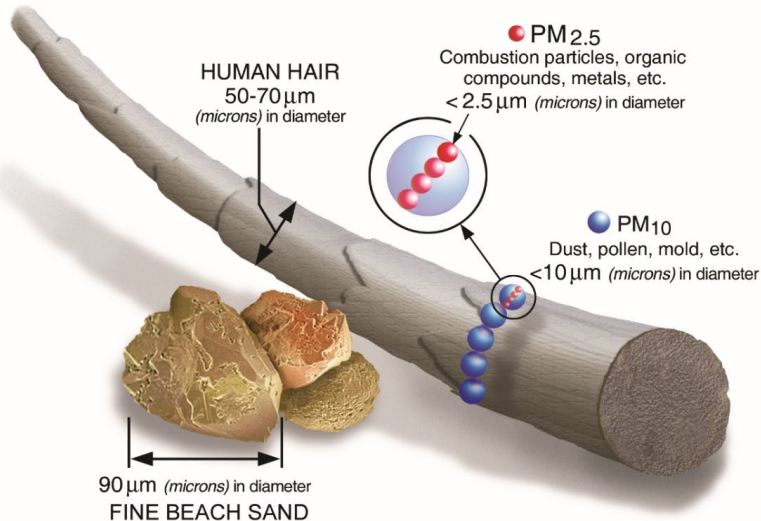
Erika Kluetmeier, communications strategist  
Kate Beardmore, program manager  
Wisconsin Department of Health Services  
Climate and Health Program



# Air Pollution, health & asthma triggers

The most widespread air pollutants that harm our health:

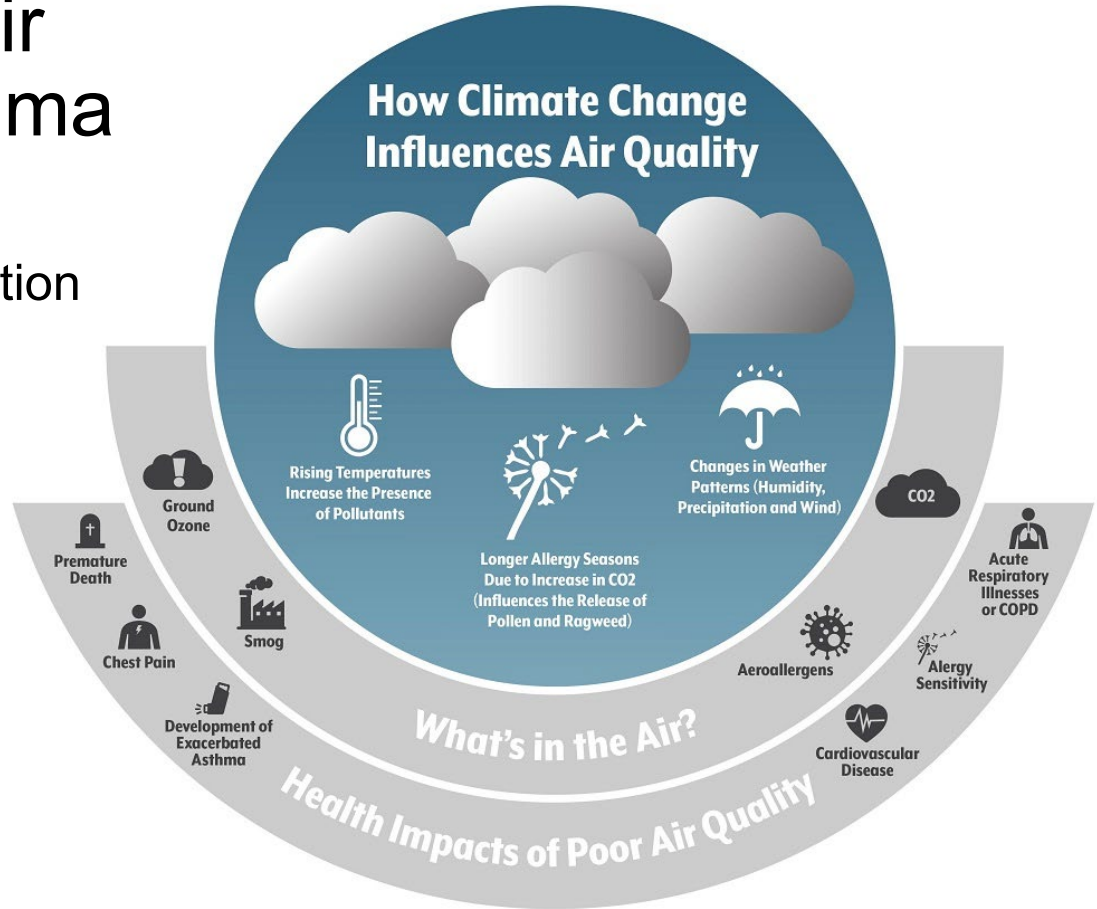
- Fine particles (particulate matter, PM2.5/10)
- Ground-level ozone



# Climate change, air pollution, and asthma

Climate change fuels more frequent and severe air pollution events and asthma triggers:

- Air pollution
  - Wildfires
  - Fine particles (PM2.5)
- Heat waves
  - Ground-level ozone
  - Drought
- Airborne allergens
- Humidity
- Wind



# Air Pollution and asthma

Exposure to air pollution can make it harder for people with asthma to breathe

Fine particle pollution can cause:

- Shortness of breath
- Wheezing, coughing
- **Chest Pain**
- Fatigue
- Itchy eyes



Ground-level ozone pollution can cause:

- **Difficulty breathing**
- Shortness of breath
- Wheezing, coughing
- **Sore throat**
- Fatigue
- Itchy eyes

Asthma attacks often require:

- Use of quick-relief "rescue" medication
- Visits to emergency departments to control asthma
- Overnight stays in hospitals to stabilize asthma



# People Who Have Increased Health Risks from Air Pollution

# Who's Most at Risk?

- Children:
  - Developing lungs, smaller airways
  - More active outdoors
  - Breathe more rapidly than adults
- Older adults
- People living with chronic lung and cardiovascular diseases:
  - Asthma
  - COPD
  - Heart disease
- People who are:
  - Pregnant (and their fetuses)
  - Live or work outdoors near air pollution sources
  - Unhoused
  - Lower income
  - Black Hispanic American Indian/Alaska



# Milwaukee Context

- High poverty rates
- Redlining and deep segregation
- Cumulative pollution exposures and health burdens
- Health disparities and inequities
- Marginalization persists



# Milwaukee Asthma Burden

High asthma burden in areas with high concentrations of:

- Young children
- Poverty
- Racial and ethnic diversity
- Non-English speakers
- Air pollution sources
- Rental housing

## Elementary Public Schools in High Asthma Burden Areas in Milwaukee

### Legend



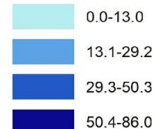
Milwaukee Community Schools

### Milwaukee Public Elementary Schools



Milwaukee Public Elementary Schools

### Average Annual Rate of Asthma Emergency Department Visits (2017-2019)



### City of Milwaukee

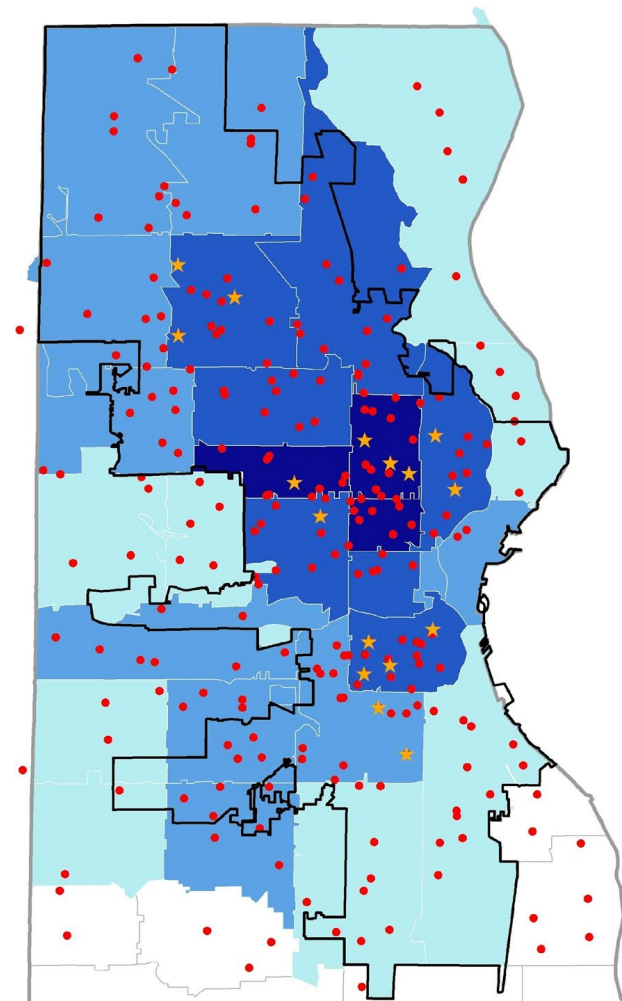
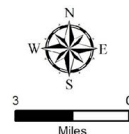


City of Milwaukee

### County Boundary



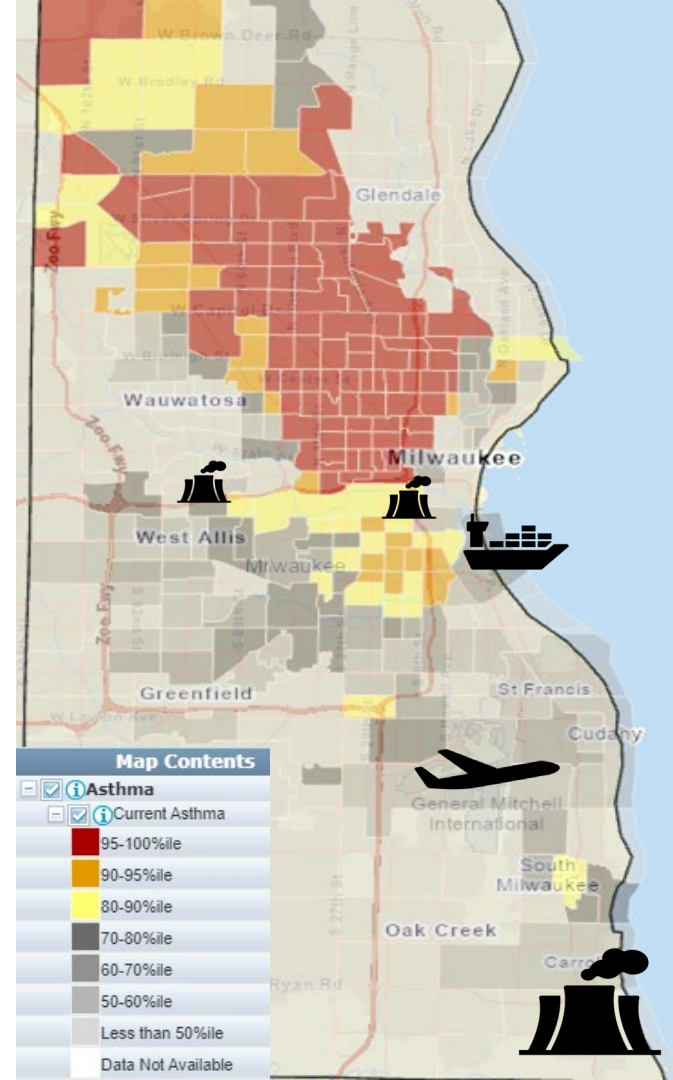
County Boundary



# Milwaukee Air Pollution Sources

High asthma burden in areas with concentrated air pollution sources:

- Transportation
  - Freeways and highways
  - Major roads
  - Airport
  - Port of Milwaukee
  - Rail (freight, passenger)
- 3 power plants
- Industry
- Commercial, residential buildings





# Using Data to Assess Asthma Burden and Air Pollution Health Impacts

- EPA Environmental Justice Screen
- Wisconsin Environmental Public Health Tracking portal

Please note: Territory data (except Puerto Rico) is not available as comparable to the US. It is only comparable to the territory itself by using the 'Compare to State' functionality. Likewise, some



Compare to US  Compare to State

**Environmental Burden Indicators**

Particulate Matter 2.5

Ozone

Nitrogen Dioxide (NO<sub>2</sub>)

Diesel Particulate Matter

Toxic Releases to Air

Traffic Proximity

Lead Paint

Superfund Proximity

RMP Facility Proximity

Hazardous Waste Proximity

Underground Storage Tanks

Wastewater Discharge

Drinking Water Non-Compliance

**Socioeconomic Indicators**

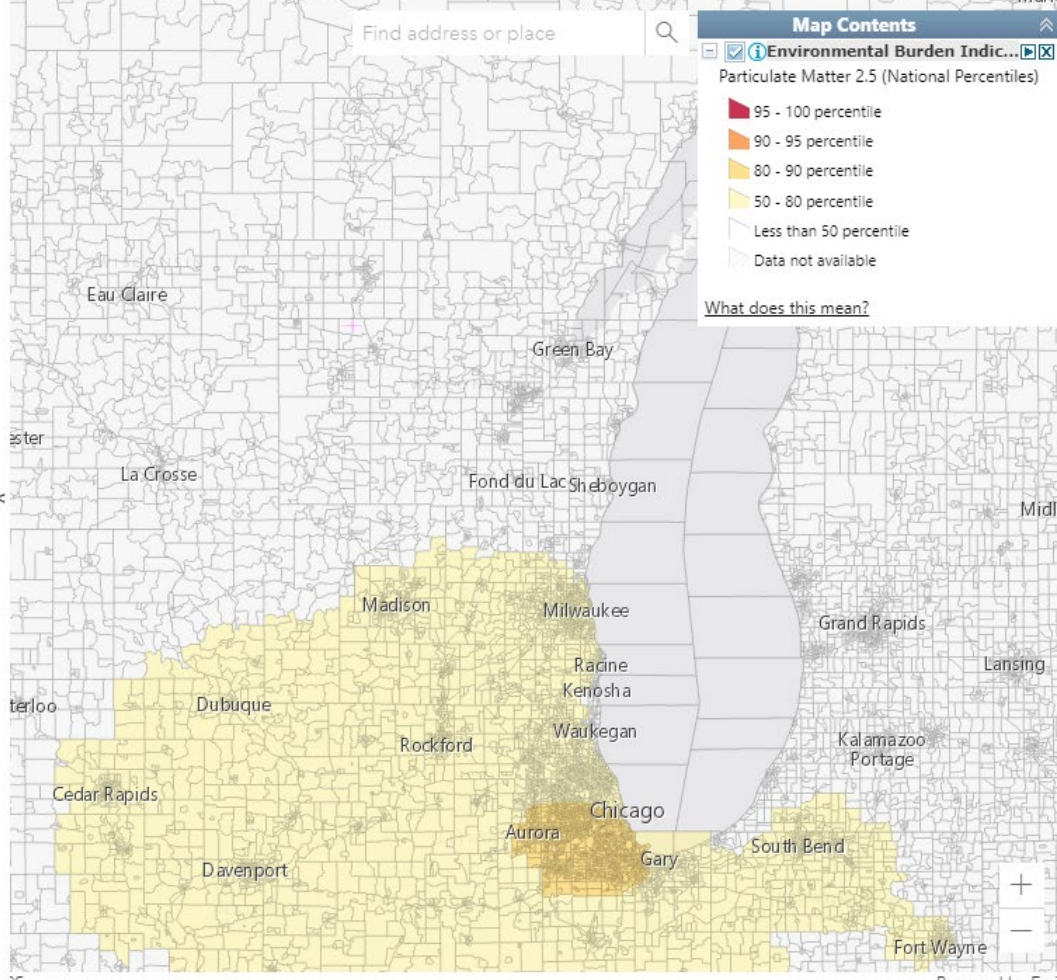
**Environmental Justice Indexes**

**Supplemental Indexes**

**Climate Change**

**Health Disparities**

**Critical Service Gaps**



# Love My Air Case Study – Hopkins Lloyd

## School

**EPA EJScreen** EPA's Environmental Justice Screening and Mapping Tool (Version 2.3)

[EJScreen Website](#) | [Mobile](#) | [Glossary](#) | [Help](#) | [Contact Us](#)

Please note: Territory data (except Puerto Rico) is not available as comparable to the US. It is only comparable to the territory itself by using the 'Compare to State' functionality. Likewise, some of the indicators may not be available for territories.



Compare to US  Compare to State

**Environmental Burden Indicators**

**Particulate Matter 2.5**

Ozone

Nitrogen Dioxide (NO<sub>2</sub>)

Diesel Particulate Matter

Toxic Releases to Air

Traffic Proximity

Lead Paint

Superfund Proximity

RMP Facility Proximity

Hazardous Waste Proximity

Underground Storage Tanks

Wastewater Discharge

Drinking Water Non-Compliance

**Socioeconomic Indicators**

**Environmental Justice Indexes**

**Supplemental Indexes**

**Climate Change**

**Health Disparities**

1503 W Hopkins St, Milwa

Milwaukee County, WI US Percentile

Population: 807

Particulate Matter 2.5 percentile:	61 %ile
Particulate Matter 2.5 score:	8.49 µg/m3
Demographic Index:	95 %ile
Low Income:	91 %ile
People of color:	94 %ile

Generate Report

**Map Contents**

Particulate Matter 2.5 (National Percentiles)

- 95 - 100 percentile
- 90 - 95 percentile
- 80 - 90 percentile
- 50 - 80 percentile
- Less than 50 percentile
- Data not available

[What does this mean?](#)

# WI DHS

## Environmental Public Health Tracking

- Houses data on more than a dozen environmental health topics including air quality and asthma
- Displays data at county or census tract level
- Includes county profile reports
- Exports data into multiple formats

Asthma - Emergency Department Visits

2022 - Counts

EXPORT DATA (.CSV) ADD TO REPORT

Choose primary category by topic

Primary Secondary Places of Interest

Choose a Category

Asthma

Choose a Geography

- By County
- Statewide (No Map)

Choose a Topic

- Emergency Department Visits
- Hospitalizations

Years

2022

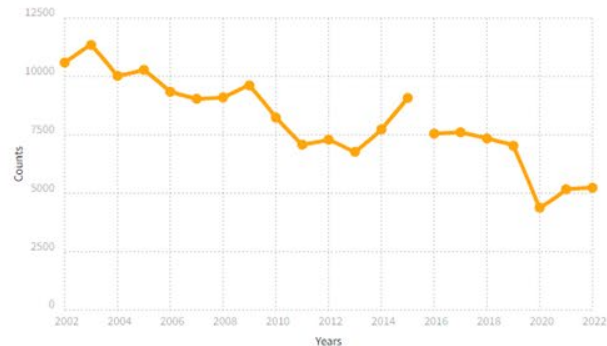
What would you like to see?

- Counts
- Crude Rate (per 10,000 population)
- Age-Adjusted Rate



Milwaukee County - Counts

Click on the graph points to filter the data to that year. ⓘ



Legend - Counts ⓘ

- 4,186.6 to 5,233
- 3,140.2 to < 4,186.6
- 2,093.8 to < 3,140.2
- 1,047.4 to < 2,093.8
- 1 to < 1,047.4
- Current selection
- Data not available
- Data suppressed
- Confidence intervals

Asthma - Hospitalizations

2022 - Counts

EXPORT DATA (.CSV) ADD TO REPORT

Choose primary category by topic

Primary Secondary Places of Interest

Choose a Category

Asthma

Choose a Geography

- By County
- Statewide (No Map)

Choose a Topic

- Emergency Department Visits
- Hospitalizations

Years

2022

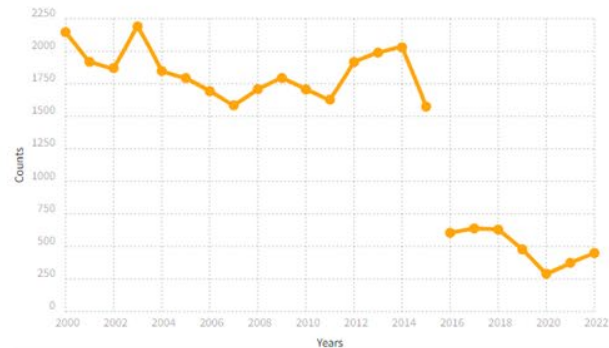
What would you like to see?

- Counts
- Crude Rate (per 10,000 population)
- Age-Adjusted Rate



Milwaukee County - Counts

Click on the graph points to filter the data to that year.



Legend - Counts

- 359.2 to 449
- 269.4 to < 359.2
- 179.6 to < 269.4
- 89.8 to < 179.6
- 0 to < 89.8
- Current selection
- Data not available
- Data suppressed
- Confidence intervals

Air Quality - Air Toxics - Annual Average Air Concentration Estimates of Selected Pollutant (µg/m3)

2018 - Pollutant: Benzene

EXPORT DATA (.CSV) + ADD TO REPORT

[Choose primary category by topic](#)

Primary Secondary Places of Interest

Choose a Category

Air Quality ▾

Choose a Topic

- Air Toxics
- Historical Air Quality
- National Ambient Air Quality Standards (NAAQS)

Choose a Sub Topic

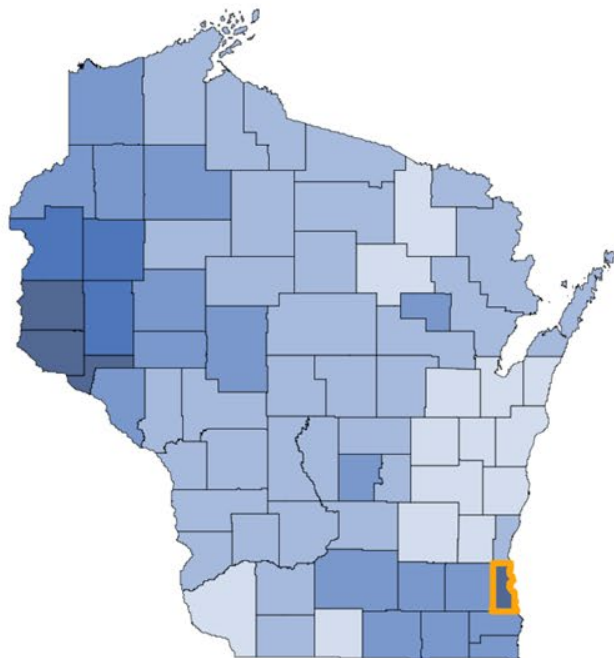
Annual Average Air Concentration Estimates of S ▾

Years

2018 ▾

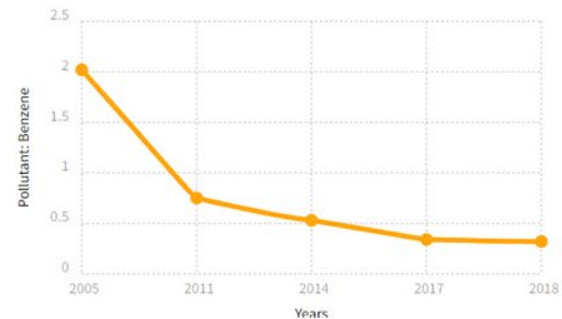
What would you like to see?

Pollutant: Benzene ▾



Milwaukee County - Pollutant: Benzene

Click on the graph points to filter the data to that year.



Legend - Pollutant: Benzene ⓘ

- 0.32 to 0.34
- 0.3 to < 0.32
- 0.28 to < 0.3
- 0.26 to < 0.28
- 0.24 to < 0.26
- 0.22 to < 0.24
- Current selection
- Data not available
- Data suppressed
- Confidence intervals

[Find out more information on the dataset.](#)

Air Emissions Tract - Milwaukee - Greenhouse Gases - Total Reportable Emissions

2022 - Pounds

EXPORT DATA (.CSV) ADD TO REPORT

Choose primary category by topic

Primary Secondary Places of Interest

Choose a Category

Air Emissions

Choose a Geography

- By Census Tract
- By County
- Statewide (No Map)

Choose a County

Milwaukee

Choose a Topic

Greenhouse Gases

Choose a Sub Topic

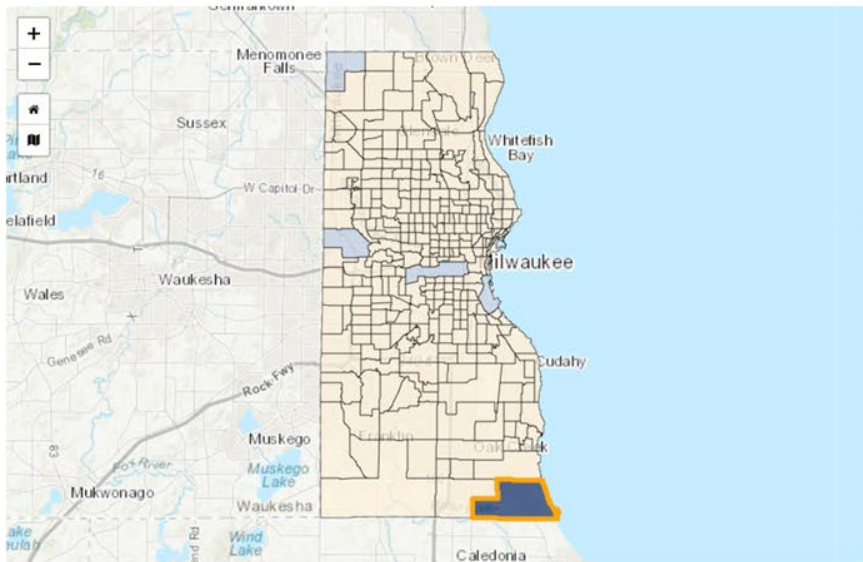
- Facilities Reported
- Total Reportable Emissions

Year

2022

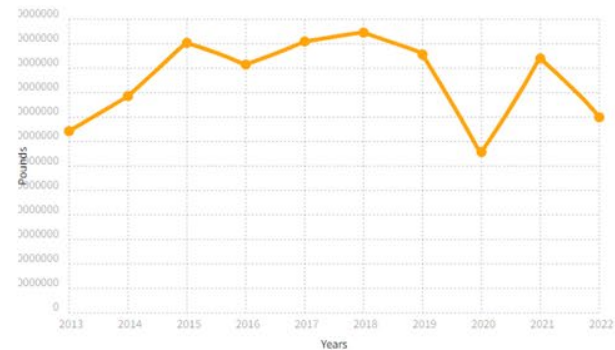
What would you like to see?

- Pounds
- Tons



Tract 1603.01 - Pounds

Click on the graph points to filter the data to that year.



Legend - Pounds

- 15,985,507,364.8 to 19,981,884,206
- 11,989,130,523.6 to < 15,985,507,364.8
- 7,992,753,682.4 to < 11,989,130,523.6
- 3,996,376,841.2 to < 7,992,753,682.4
- 0 to < 3,996,376,841.2
- Current selection
- Data not available
- Data suppressed
- Confidence intervals

[Find out more information on the dataset.](#)



# Breathe SMART Project History

From school-based anti-idling to school neighborhood air monitoring

# Breathe SMART Scope

- Engage schools and neighborhoods
- Install monitors
- Train partners to collect, analyze and disseminate data
- Train community members to access data and take action
- Help integrate air quality monitoring and anti-idling campaigns into curriculum and student activities.
- Share air quality data through apps, dashboards and websites
- Evaluate success




# Project Goals and Outcomes

- Identify air quality trends, risks and associated health impacts
- Develop action plans and implement mitigation strategies
- Empower communities with access to real-time data and actions to protect health
- Build knowledge of harmful impacts of idling to reduce or eliminate idling time
- Long-term air quality trends and health impacts documented on a variety of data platforms





**WAITING?**  
10+ SECONDS



turn off  
your engine

**No IDLE ZONE**  
Help Kids Breathe Easier  
and **\$ave Money**

WISCONSIN DEPARTMENT OF HEALTH SERVICES MPS MILWAUKEE PUBLIC SCHOOLS

**2022  
Pilot**

**ESPERANDO?**  
10+ SEGUNDOS



apague  
su motor

**SIN RALENTÍ**  
Ayuda a los niños a respirar



A man and a woman are standing outdoors on a paved area next to a brick building. Both are wearing blue polo shirts and are focused on their handheld devices. The man is wearing a dark face mask and sunglasses. The woman is wearing sunglasses and has her hair in a ponytail. In the background, there is a brick building with large windows, a parking lot with yellow markings, and a multi-story residential building. An American flag is visible on a pole in the distance.

Observations  
and  
lessons learned

An aerial photograph of a city skyline, likely Indianapolis, Indiana, with a dense residential area in the foreground and a cluster of skyscrapers in the background. The entire image is overlaid with a semi-transparent blue filter. The text is centered in the middle of the image.

# Contact Us

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[ErikaT.Kluetmeier@wi.gov](mailto:ErikaT.Kluetmeier@wi.gov)

608.266.1120



# Voice for children's health

Visit [chawisconsin.org](http://chawisconsin.org)





**Love My Air Wisconsin:  
Connecting Communities to Air Quality Resources  
Through a School-Based Program**

Sarah Kroening, MSpEd- Program Manager  
Children's Health Alliance of Wisconsin

# Implementation: Year One

**Resources**

-   
**Love My Air Support Team Toolkit**  
This Toolkit houses key Love My Air Program resources.
-   
**Educational Resources**  
Check out a variety of lesson plans and more!
-   
**Outdoor Activity Guide**  
This guide provides activity suggestions based on local air quality. (Also available in Spanish)
-   
**Training Videos**  
View these helpful videos to learn how to utilize sensors and other key resources.

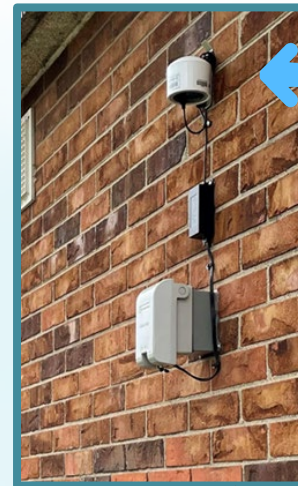
**Participating schools receive the following:**

 Air quality lesson plans	 Air quality sensor installed on exterior of school	 Anti-idling signs to install around school	 Asthma education/ programs for school staff
 Community outreach tools	 Customized air quality dashboard for school	 Mobile personal air monitors for hands-on learning for students (supplies limited)	 Supplies to participate in EPA's Air Quality Flag Program

**Cohort 1 – Love My Air Schools (2023-25)**  
Allen-Field Elementary School // Browning Elementary School  
Hopkins Lloyd Community School  
Lincoln Avenue School // Westside Academy

**Cohort 2 – Love My Air Schools (2024-25)**  
Hawthorne School // Carson Academy  
Milwaukee High School of the Arts  
O.W. Holmes School // Starns Discovery School

Website with FREE resources



Sensors installed for FREE



5 Milwaukee Public Schools = 1,544 STUDENTS!

# Foundational Programming: Staff Training

- Many educators not aware of the impacts asthma has on academic progress and social-emotional development
- School nurses need staff eyes, and ears, in classrooms to support students with asthma

LOW SELF-ESTEEM

FATIGUE

MISSED CLASS TIME

ABSENTEEISM

DISTRACTED

INATTENTIVENESS

ANXIETY

# Foundational Programming



Love My Air Dashboard

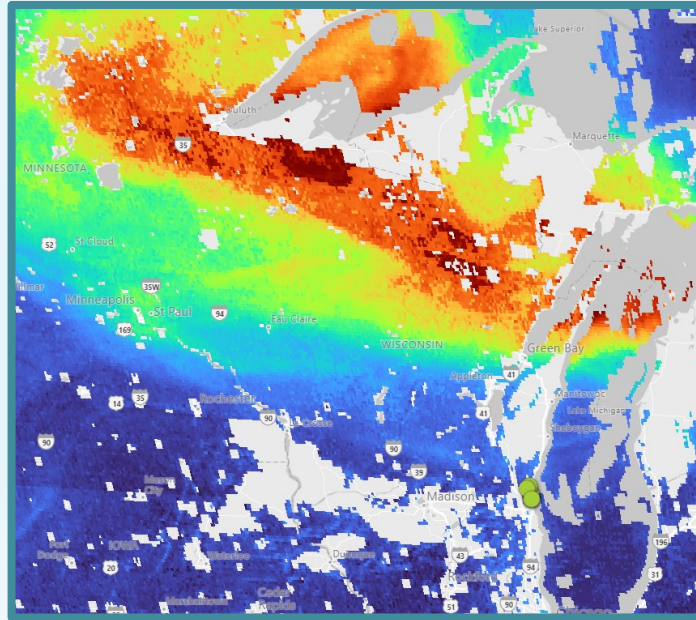
Personalized dashboard

LOVE MY AIR DASHBOARD



# NASA Health and Air Quality Applied Sciences Team- Satellite Layer

Students can understand air movement, and impact, on local air quality!



# Love My Air Lessons: Air Quality and Health

## Air Quality and Your Health

love my air<sup>WI</sup>



Grades K-2

≈ 60 min

Stay updated on Subject to Climate's newest resources through our newsletter [Sign up here!](#)

[Back to Subject to Climate Materials](#)

### Air Quality and Your Health Lesson K-2

Created by Teacher(s): Sarah Kroening | Published on: April 15, 2024

[Lesson Plan](#) [Grades K-2](#) [Created by Wisconsin Climate Education Hub teachers](#)

#### Synopsis

In this lesson, students are introduced to the importance of monitoring air quality while staying active.

**Inquire:** Students discuss air and air pollution to build background knowledge.

**Investigate:** Students listen to the story *Why is Coco Orange?* to learn about air quality monitoring and health.

**Inspire:** Students discuss how they can use knowledge about air quality monitoring to continue to stay active and healthy despite challenges.

**Share:** This lesson plan is licensed under Creative Commons.



- Subjects: Health
- Duration: 1 hour
- Region: Global
- No Reviews

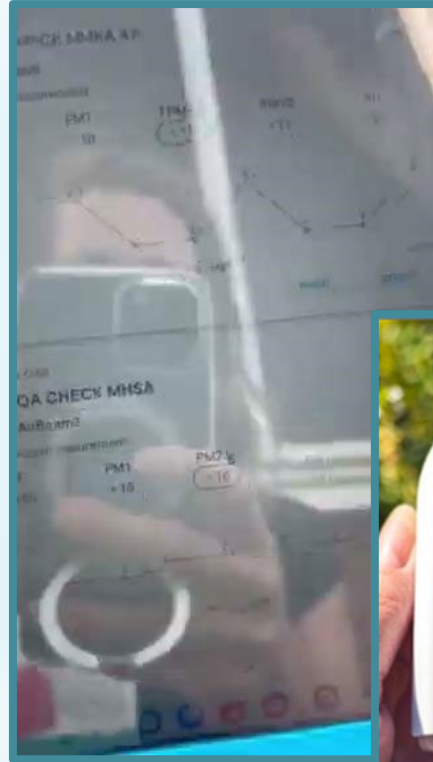
[View Lesson Plan](#)

[Related Teaching Library Resources](#)

Posted on Apr 16, 2024

# Additional Tools for Air Quality Application

AirBeams to see real-time air quality changes!



# School Engagement

## Activity Guide Stay Active

No Idle Campaigns

**love my air** WI

**AIR QUALITY INDEX (AQI) - ACTIVITY GUIDE - GRADES K-5**  
 Visit [Playworks.org](http://Playworks.org) or scan the code below for fun game ideas and videos on how to play.

AQI 0-50 GOOD	AQI 51-100 MODERATE	AQI 101-150 UNHEALTHY for sensitive groups	AQI 151-200 UNHEALTHY for all groups	AQI 201-500 VERY UNHEALTHY
<b>NORMAL DAY</b> It's a great day to be outside! Visit <a href="http://Playworks.org">Playworks.org</a> or scan the code below for fun game ideas.  <b>OUTSIDE</b>	<b>SENSITIVE GROUPS</b>  <b>WATCH FOR SYMPTOMS</b> (coughing and/or shortness of breath)  <b>LET'S PLAY</b> Outside games that limit exertion: Grades K-1 Bandage Tag*   Catch and Drop   Pac Tag* Grades 2-5 Helicopter   Hot Shot Basketball   Wall Ball *walking option	<b>SENSITIVE GROUPS</b>  <b>LIMIT PROLONGED EXERTION</b>  <b>WATCH FOR SYMPTOMS</b> (coughing and/or shortness of breath)  <b>TAKE BREAKS</b>  <b>MORNING IS BEST</b> <b>SHORTEN OUTSIDE ACTIVITIES</b>	<b>ALL GROUPS</b>  <b>LIMIT PROLONGED EXERTION</b>  <b>WATCH FOR SYMPTOMS</b> (coughing and/or shortness of breath)  <b>TAKE BREAKS</b>  <b>MORNING IS BEST</b> <b>CONSIDER INSIDE ACTIVITIES</b>	<b>ALL GROUPS</b> <b>AVOID OUTSIDE ACTIVITIES</b>  <b>INSIDE</b>  <b>LET'S PLAY</b> Inside games: Grades K-1 Beans on Toast   Bob the Bunny   Detective Frog   I See   See   Sleep Bunny   The Big Cheese Grades 2-5 Detective   The Big Cheese   Wall Tag
 <b>NOTE</b> These recommendations do not represent EPA recommendations or provider guidance for each individual child. Always refer to each child's asthma plan and watch all children for any signs of distress. For any questions/concerns, please consult with the school nurse for personalized guidance based on specific needs and medical history. Love My Air Wisconsin is a program of Children's Health Alliance of Wisconsin. Learn more at <a href="http://www.chawisconsin.org/air">www.chawisconsin.org/air</a> .				<b>VISIT PLAYWORKS GAME LIBRARY</b> Search by age, class size, inside/outside and more. Watch fun videos on how to play. 



# Community Engagement

Information table  
at school events



Magnets for families

**love my air WI** AIR QUALITY INDEX (AQI) AND ASTHMA GUIDE

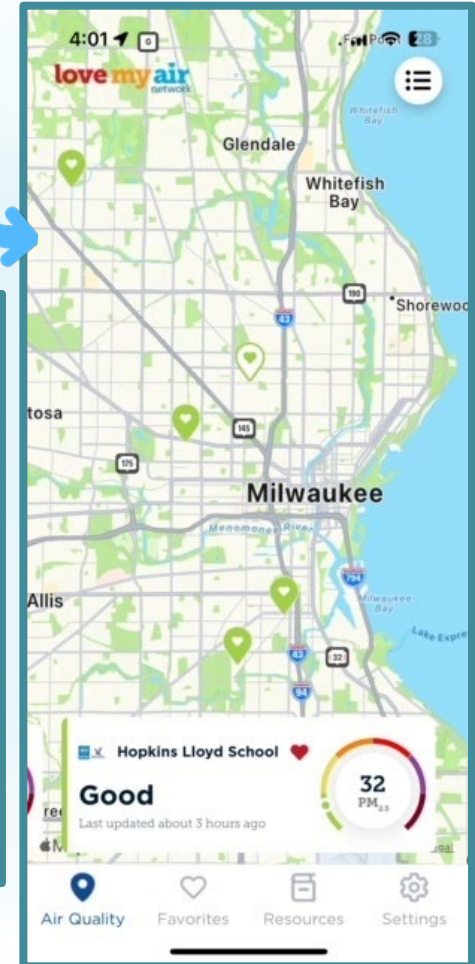
AQI 0-50	AQI 51-100	AQI 101-150	AQI 151-200	AQI 201-500
<b>GOOD</b>	<b>MODERATE</b>	<b>UNHEALTHY</b> for sensitive groups	<b>UNHEALTHY</b> for all groups	<b>VERY UNHEALTHY</b>
<b>NORMAL DAY</b>	<b>SENSITIVE GROUPS</b>	<b>SENSITIVE GROUPS</b>	<b>ALL GROUPS</b>	<b>ALL GROUPS</b>
IT'S A GREAT DAY TO BE ACTIVE OUTSIDE!	WATCH FOR SYMPTOMS (coughing and/or difficulty breathing)	WATCH FOR SYMPTOMS	WATCH FOR SYMPTOMS	AVOID OUTSIDE ACTIVITIES
FOLLOW ASTHMA PLAN	FOLLOW ASTHMA PLAN	FOLLOW ASTHMA PLAN	FOLLOW ASTHMA PLAN	FOLLOW ASTHMA PLAN
	SHORTEN OUTSIDE ACTIVITIES	SHORTEN OUTSIDE ACTIVITIES	SHORTEN OUTSIDE ACTIVITIES	KEEP WINDOWS CLOSED
	KEEP WINDOWS CLOSED	KEEP WINDOWS CLOSED	KEEP WINDOWS CLOSED	CLEAN INDOOR AIR FILTER
		CLEAN INDOOR AIR FILTER	CLEAN INDOOR AIR FILTER	
		CONSIDER STAYING INSIDE	CONSIDER STAYING INSIDE	

Love My Air Wisconsin is a program of Children's Health Alliance of Wisconsin. Learn more at [www.chawisconsin.org/air](http://www.chawisconsin.org/air).

WISCONSIN ASTHMA ALLIANCE  
Children's Health Alliance of Wisconsin

CHECK THE AIR QUALITY NEAR YOU!

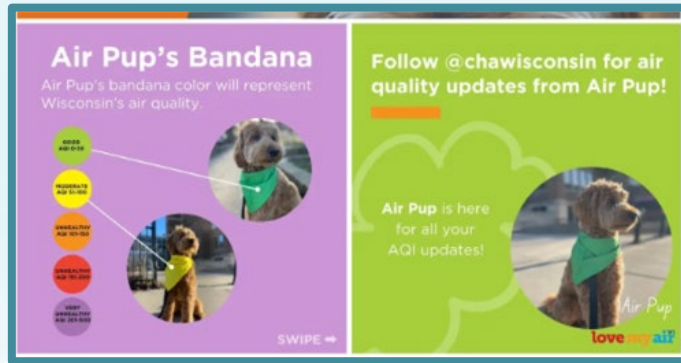
App



# Community Engagement



Social media  
@chawisconsin



Community events

# Community Engagement

Hephatha  
Lutheran Church  
Work Ministry



11:16 wuwm.com

WUWM 89.7  
MILWAUKEE'S

Donate

### At this Milwaukee church, parishioners learn to monitor air quality

WUWM 89.7 FM | By Lina Tran  
Published August 27, 2024 at 9:16 AM CDT

LISTEN • 5:15

Lina Tran / WUWM

Pastor Mary Martha Kannass, Skie-Lee Meadows, and Amira Pechauer on the front steps of Hephatha Lutheran Church.

It's a drizzly, gray August morning. But inside

WUWM Fresh Air



Healthy Climate  
Wisconsin and  
Nature at the  
Confluence: Air  
Quality Trivia  
Night



**Tailored for each school!  
You get an air quality program!**



# Year One Learnings → Year Two Successes: Enhanced Menu of Options

Classroom teacher  
readiness



Air quality teams (School adult liaison, two  
to four students)

Lesson plan  
implementation



Love My Air staff direct support

Lesson plans grades  
K-5



Lesson plans grades 6-12

Program  
implementation details

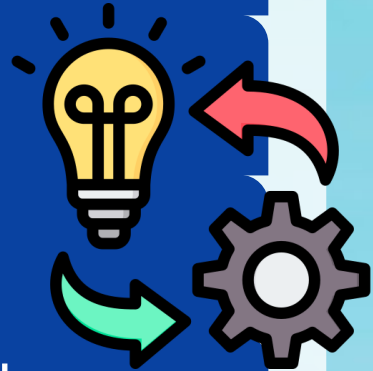


Google Classroom, copy/paste/share  
resources (e.g., monthly newsletter)

No-idle campaigns



Air Quality Public Awareness  
Campaigns



# Year One Learnings → Year Two Successes: Partnerships



Milwaukee Public  
School champions



Physical Education/Health: Environmental Protection Agency Flag Program  
Climate Education: Air Beam Kits

Community  
partnerships



School and community connections,  
Nature Centers, etc.!

Advisory Board



Department of Health Services, Department  
of Natural Resources and more!

Air quality  
conversations



National air quality working groups: air  
quality curriculum, Love My Air

# Year One Learnings → Year Two Successes: Asthma

Asthma resources



Wisconsin Asthma Coalition collaboration



WISCONSIN  
**ASTHMA**  
COALITION

★ Children's Health  
Alliance of Wisconsin



Normal Airway

Narrowed Airway

## Health

- Acute Exposure
- Long-term Exposure



## Child

- Difficulties engaging at school
- Increase in absences
- Impacts on long term educational achievement

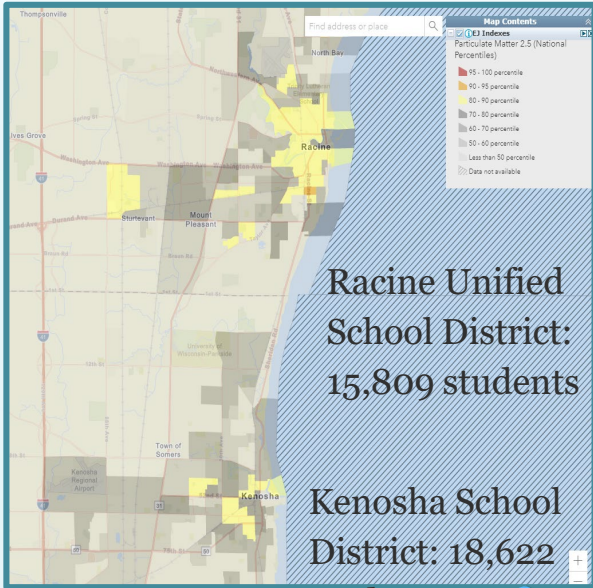


## Family

- Time off work
- Financial burdens
- Lost wages

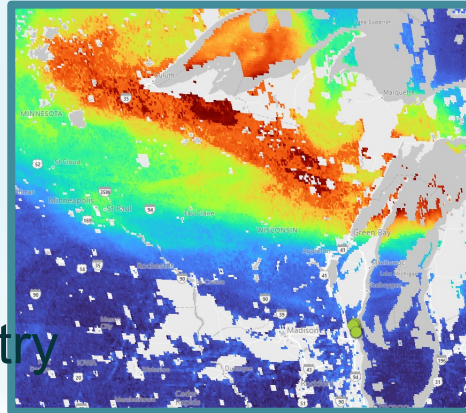


# Statewide Concern



Urban settings, Environmental Justice complexities, and industry

Wildfires and agricultural practices



By WIFR Newsroom  
Published: Mar. 19, 2024 at 3:26 PM CDT

Power plants, factories and vehicles



Thank you!

Sarah Kroening, MSpEd - Program Manager  
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