



Air Management Study Group Quarterly Meeting Agenda

- Opening remarks & agenda review
- Hiring update
- Proposed guidance, rules and legislative update
- Proposed state legislation
- PFAS monitoring update
- ACE rule
- Annual Network update
- EDGE update
- Member updates
- COVID-19 response
- Ozone topics
- Outreach update

Air Management Study Group Quarterly Meeting

Madison
June 4, 2020

Hiring Update

Gail Good

Air Program Director

Proposed Guidance and Rules Legislative Update

Kristin Hart

Permits and Stationary Source Modeling Section Chief

David Bizot

Air Quality Planning and Standards Section Chief

Proposed DNR Guidance

DNR Guidance in Drafting Phase	Description	Target Date
Construction Permit Exemptions	Guidance on applicability of exemptions from construction permits	July 2020
DNR Guidance in Public Comment	Description	Date Posted
Insignificant Emissions Units	Clarifying guidance on the concept of insignificant emissions units and its regulatory implications	May 11, 2020
Finalized DNR Guidance	Location	Final Date
Fact Sheet on Emission Reduction Credits	https://dnr.wi.gov/news/input/documents/guidance/final/20200203/AM-19-0080-C.pdf	Feb 3, 2020
Fact Sheet on Final Designations for 2015 Ozone Standards	https://dnr.wi.gov/news/input/documents/guidance/final/20200203/AM-19-0081-C.pdf	Feb 3, 2020
85% Control and LACT Analyses	https://dnr.wi.gov/news/input/documents/guidance/final/20200330/AM-20-0082-C.pdf	Mar 18, 2020

Proposed DNR Rules

Proposed DNR rule	Description	Phase
AM-24-12b Permit Streamlining	Changes to improve operational efficiency and to simplify the permitting processes administered under chs. NR 406 and 407, while remaining consistent with the Clean Air Act (CAA).	Revisions approved by NRB May 27, 2020
AM-20-18 VOC RACT Revisions	Updates two RACT rules in ch. NR 422 to meet current EPA Guidelines for Miscellaneous Metal and Plastic Parts Coatings, and Miscellaneous Industrial Adhesives.	Drafting rule and EIA
AM-10-19 2015 Ozone NAAQS	Incorporates the 2015 ozone NAAQS into state rule. Scope statement approved by NRB in June 2019.	Drafting rule and EIA

Proposed EPA Rules/Guidance

Proposed EPA rule/guidance	Docket	Comments due
Strengthening Transparency in Regulatory Science	EPA-HQ-OA-2018-0259	April 17, 2020* Date extended: May 18, 2020
Redesignation of IN portion of the Chicago Ozone Nonattainment Area- 2008 NAAQS and Approval of 1829(f) NOX RACT Waiver	EPA-R05-OAR-2020-0125	May 20,2020
Fuels Regulatory Streamlining	EPA-HQ-OAR-2018-0227	June 15, 2020
Review of the PM _{2.5} NAAQS	EPA-HQ-OAR-2015-0072	June 29, 2020

Proposed Redesignation of WI Areas

Proposed EPA rule/guidance	Docket	Comments due
Redesignation of Door County Ozone Nonattainment Area- 2015 NAAQS	EPA-R05-OAR-2020-0042	April 13, 2020
Redesignation of WI portion of Chicago Ozone Nonattainment Area (Kenosha)– 2008 NAAQS	EPA-R05-OAR-2020-0030 and EPA-R05-OAR-2020-0101	May 18, 2020
Redesignation of Inland Sheboygan Ozone Nonattainment Area- 2008 NAAQS	EPA-R05-OAR-2019-0557	May 27, 2020
Redesignation of the Shoreline Sheboygan Ozone Nonattainment Area- 2008 Ozone NAAQS	EPA-R05-OAR-2020-0097, EPA-R05-OAR-2020-0199 and EPA-R05-OAR-2020-0200	June 12, 2020

Finalized EPA Rules/Guidance

Finalized EPA rule/guidance	Link	Date finalized
Standards of Performance for Residential Wood Heaters: New Residential Hydronic Heaters and Forced-Air Furnaces	EPA-HQ-OAR-2018-0195	April 2, 2020
CEMS Quality Assurance Requirements during COVID-19 National Emergency	EPA-HQ-OAR-2020-0211	April 22, 2020

State Draft and Final Legislation

Draft legislation	Link

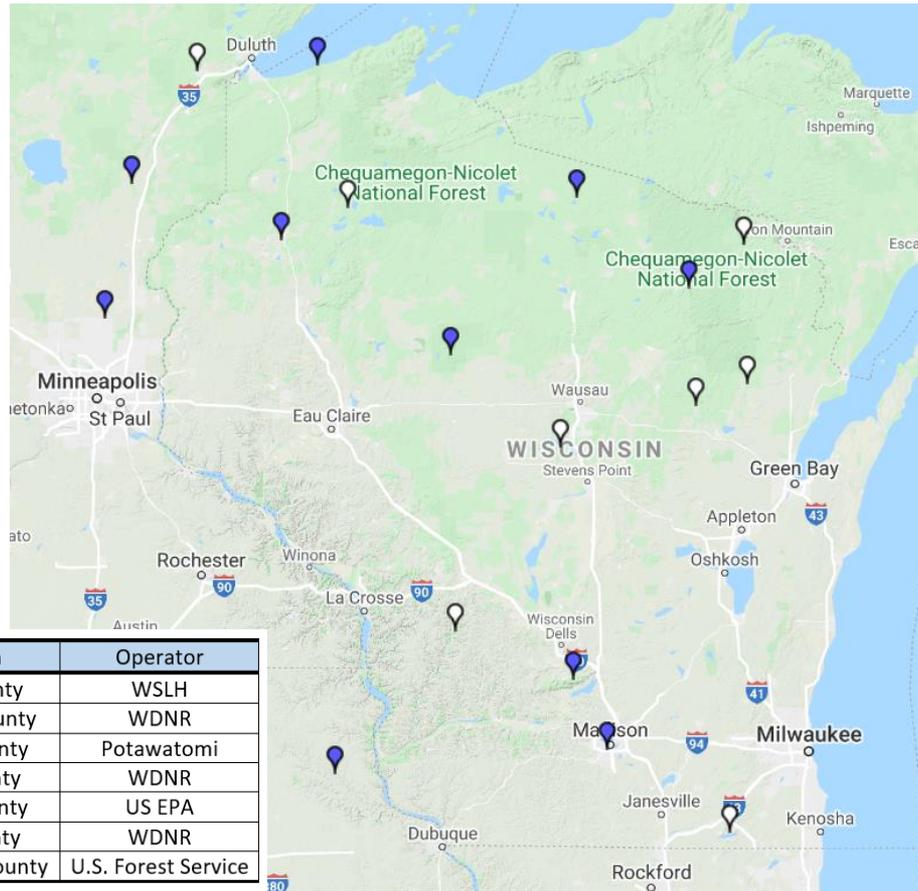
Final legislation	Link

PFAS Monitoring Study

Katie Praedel
Monitoring Section Chief

Wisconsin National Trends Network

- 7 Active sites in WI
- Precipitation is collected weekly
- Total of 263 sites nationwide



NTN Site ID	Site Name	Location	Operator
WI06	UW-Arboretum	Dane County	WSLH
WI08	Brule River	Douglas County	WDNR
WI10	Potawatomi	Forest County	Potawatomi
WI31	Devil's Lake Park	Sauk County	WDNR
WI35	Perkinstown	Taylor County	US EPA
WI36	Trout Lake	Vilas County	WDNR
WI37	Spooner	Washburn County	U.S. Forest Service



PFAS in Rainwater

- MOU with the WI State Lab of Hygiene
 - Dr. Martin Shafer leading method development
- Products of the collaboration will be used to conduct similar studies in other states
 - Monitoring Plan
 - Quality Assurance Project Plan
 - Training materials

Affordable Clean Energy (ACE) Rule

David Bizot



ACE Rule Implementation Update

- Checklist to assist utilities in developing permit applications went through guidance public comment process and is now available
- Air Program website has been updated with ACE information, including list of affected units and checklist:
<https://dnr.wi.gov/topic/AirQuality/CO2.html>
- Informal dialogue within Region 5 states to be started at a technical staff level to share information about implementation

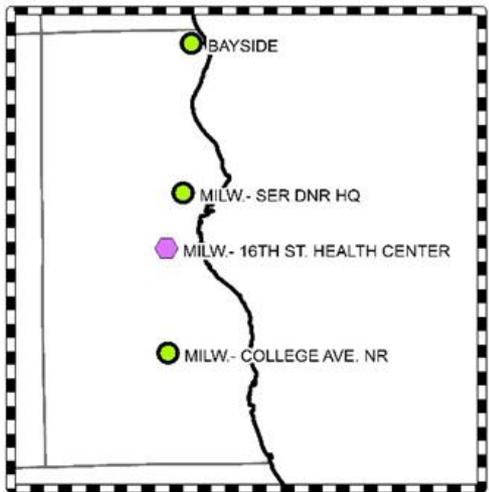
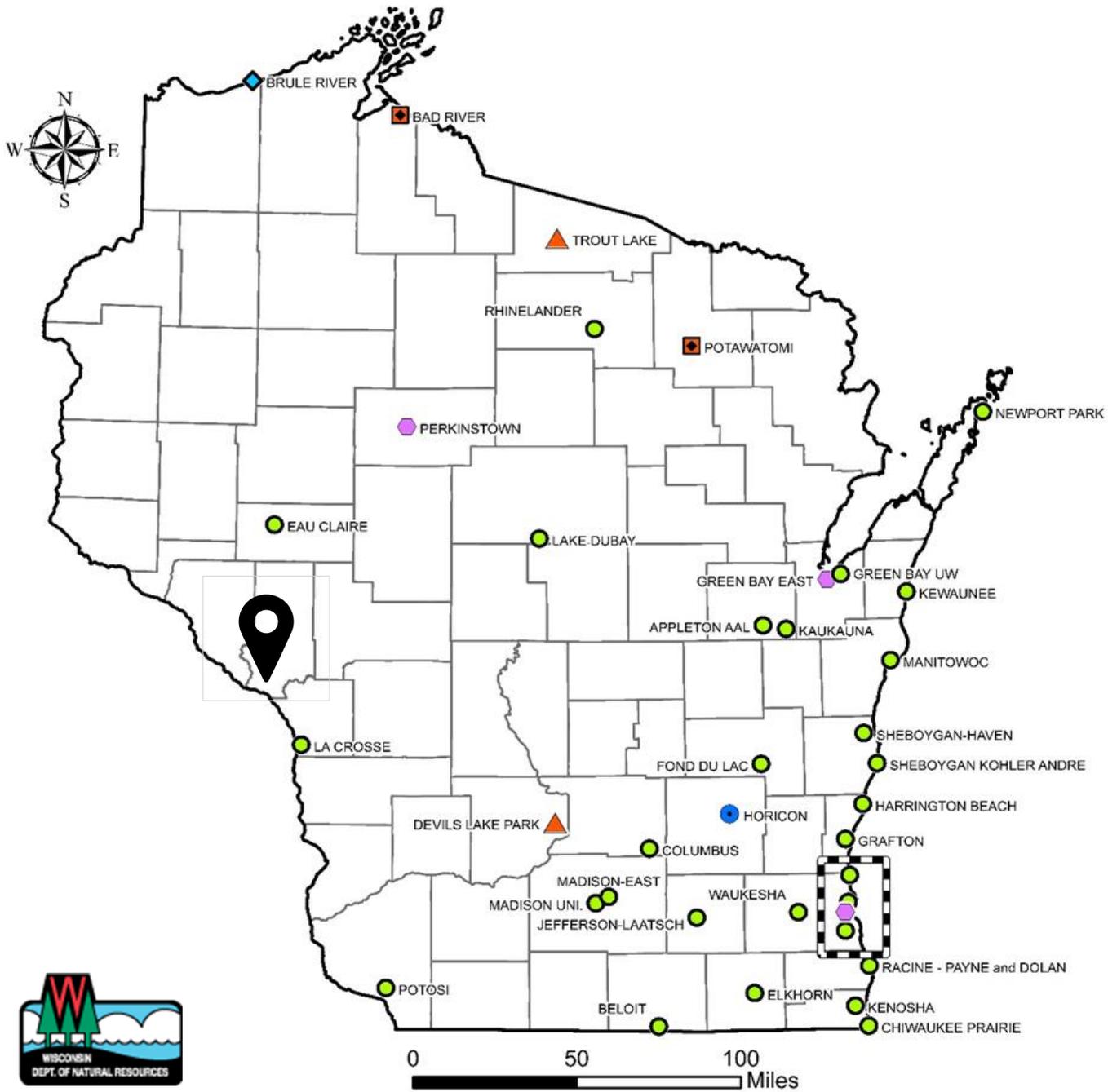
Annual network update

Katie Praedel



Annual Monitoring Network Plan

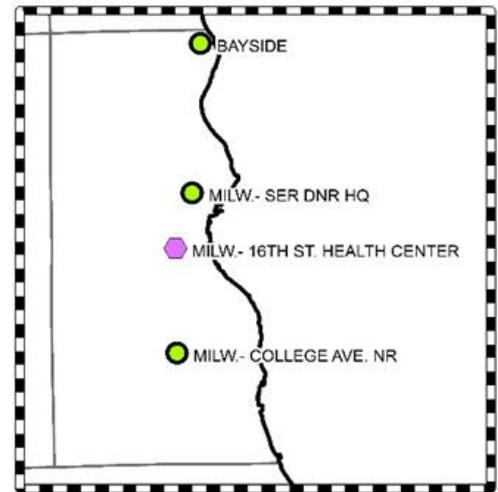
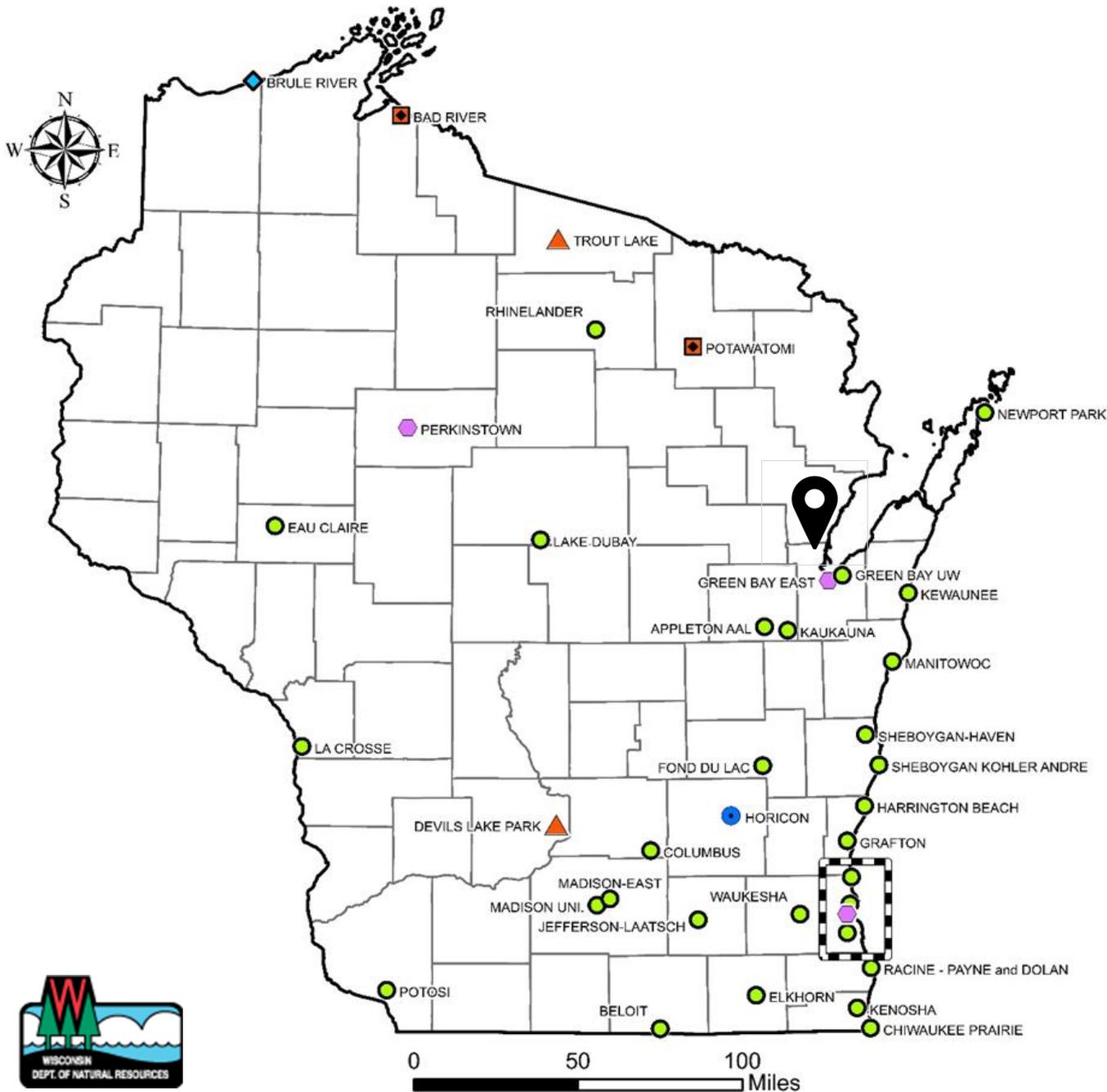
- Benefits of having this federal requirement
 - ANP process ensures monitoring requirements are met
 - Allows an opportunity for the public to comment on the WI monitoring network
 - Monitoring network is designed to meet requirements outlined in federal rule
 - Sets black and white requirements for siting – no gray area
 - Defined timelines/expectations for core work
 - Allows a true up of population/spatial distribution coverage for the network





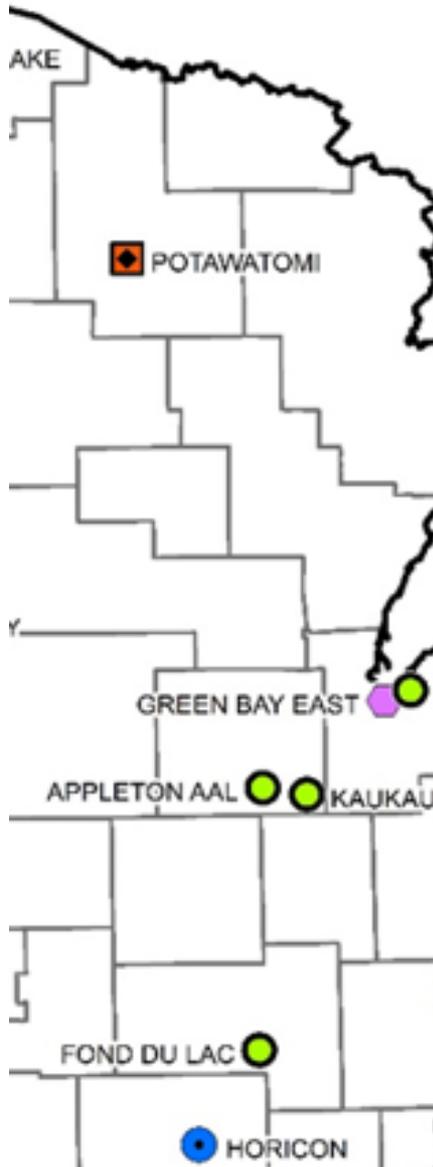
West Central Region

- Industrial Sand Mine (ISM) network
 - Monitoring has indicated that there are no significant impacts on PM10 concentrations
 - Two exceedances in 10 years
 - Resultant variances and network reduction
 - Total of 19 ISMs have monitored over the 10 years
 - Currently have 6 ISM sites monitoring
 - Downward trends in number of sites monitoring
 - Eligibility to discontinue due to monitored concentrations
 - Economics of sand mining/current market need



0 50 100 Miles

Sulfur Dioxide



- Kaukauna, Green Bay East SO₂ sites
- The minimum monitoring requirements for SO₂ are established in Appendix D of 40 CFR Part 58.
- The SO₂ monitoring requirement is based on the Population Weighted Emissions Index (PWEI) for all Core Based Statistical Areas (CBSAs).
- $PWEI = (CBSA \text{ Population} \times SO_2 \text{ emitted TPY}) / \text{one million}$

Comparison of 2020 vs. 2021 PWEI

Cutoff for monitoring site requirement is a PWEI of 5,000 – 100,000 in 2020

Emissions reductions in the 2017 NEI led to Milwaukee, Green Bay and Madison no longer meeting the threshold that would require monitoring

Core Based Statistical Area	2019 Population Estimate	NEI SO2 (tons/year)		2019		2020		Sites
		2014	2017	PWEI	Min Requirement	PWEI	Min Requirement	
Chicago-Naperville-Elgin, IL-IN-WI	9,458,539	80,686	42,535	769,183	2	402,317	2	8
Minneapolis-St.Paul-Bloomington, MN-WI	3,640,043	22,839	10,685	83,235	1	38,893	1	6
Milwaukee-Waukesha-West Allis, WI	1,575,179	5,204	1,006	8,203	1	1,584	0	1
Madison, WI4	664,865	8,355	2,325	5,466	1	1,546	0	1
Green Bay, WI5	322,906	15,206	1,896	4,867	0	612	0	1
Duluth, MN-WI6	288,732	6,867	6,225	1,914	0	1,797	0	0
Appleton, WI7	237,974	8,052	6,118	1,901	0	1,456	0	1
Racine, WI8	196,311	244	179	41	0	35	0	0
Oshkosh-Neenah, WI9	171,907	238	89	33	0	15	0	0
Eau Claire, WI10	169,304	250	53	49	0	9	0	0
Janesville-Beloit, WI11	163,354	120	1	20	0	0	0	0
Wausau, WI12	163,285	153	2,201	25	0	359	0	0
La Crosse-Onalaska, WI-MN13	136,616	7,096	82	963	0	11	0	0
Sheboygan, WI14	115,340	10,720	4,517	1,236	0	521	0	0
Fond du Lac, WI15	103,403	163	86	17	0	9	0	0

Table was updated with the 2017 NEI (provided by Grant) and the 2019 Census Estimates (from www.census.gov)

Minimum monitoring requirements dropped to 0 for Madison and Milwaukee, also 0 for Green Bay. Rhinelander isn't even on the chart.

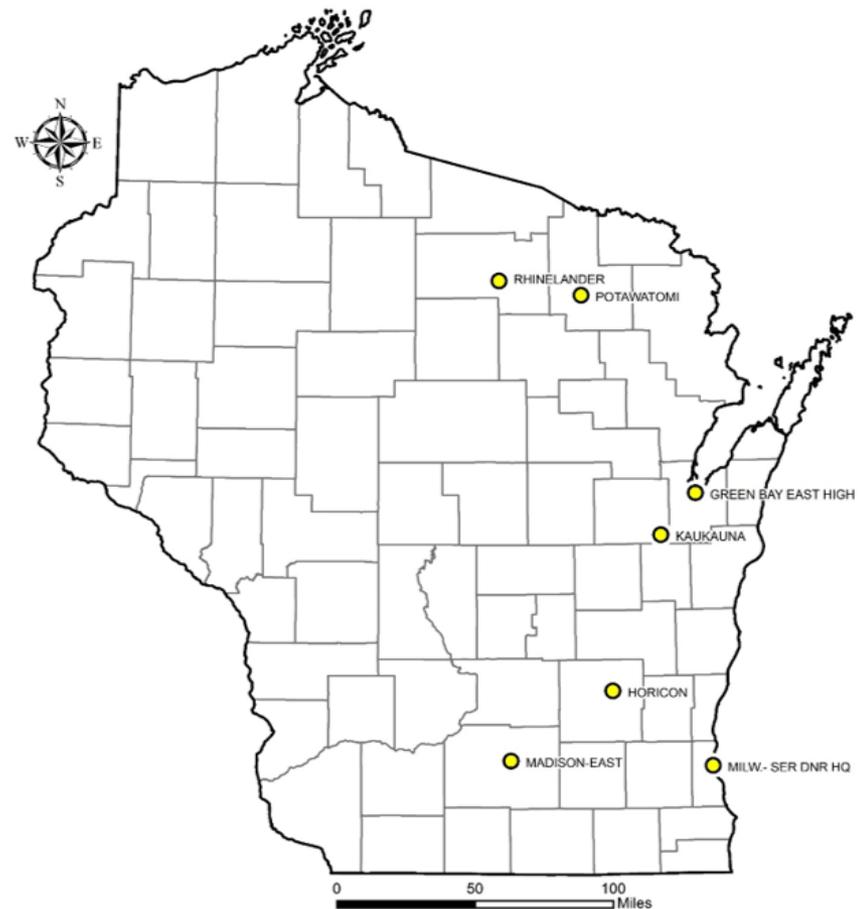
Oneida county has 35,470 population and 932 tons of emissions for a PWEI of 33.

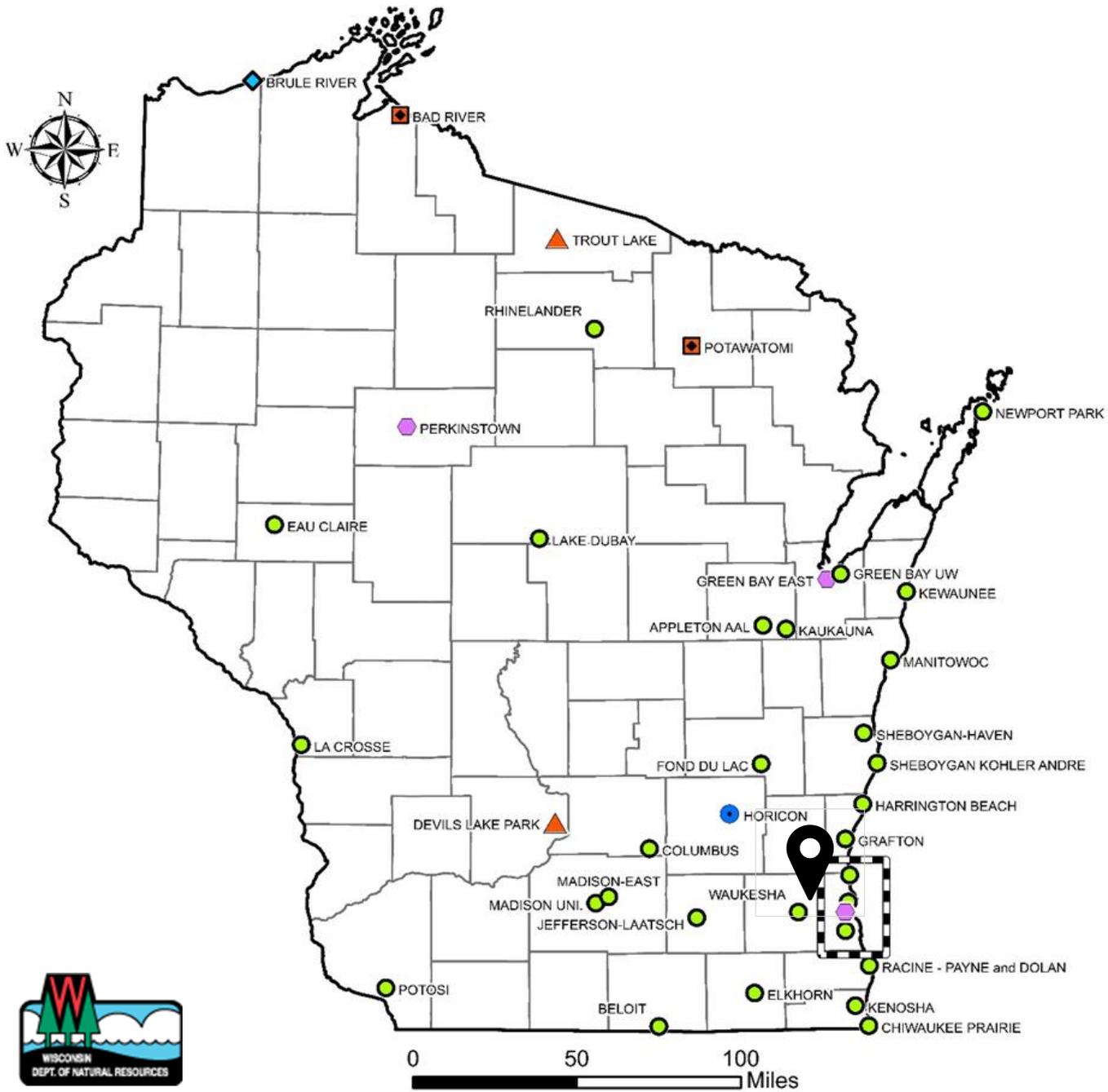
Green Bay and Rhinelander are still required monitors. but could Milwaukee and Madison be shut down???

Statewide SO₂ Outlook

Figure 10: 2020 SO₂ Monitoring Sites in Wisconsin

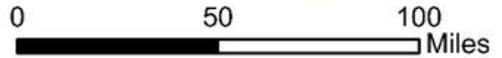
- No intent to discontinue SO₂ monitoring at this time
- Due to proximity to Kaukauna SO₂ monitor, Green Bay SO₂ monitor would be assessed for shutdown in future ANPs

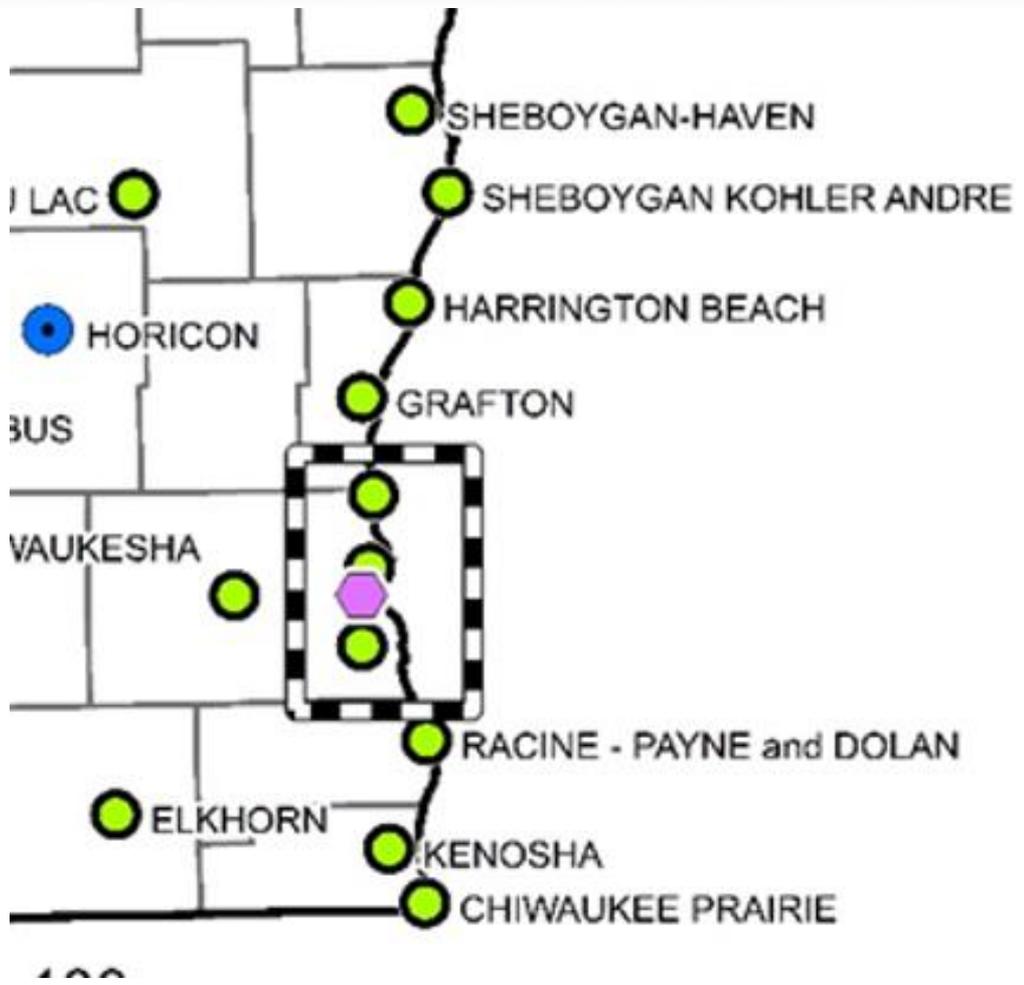




Type of site

- WDNR
- ◆ NADP
- ▲ WDNR/NADP
- ◆ WDNR/CSN
- WDNR/CSN/NATTS/NADP
- Tribal/NADP





Southeast Region

Enhanced Ozone
Monitoring



Southeast Region

- Enhanced ozone monitoring is underway
- Sheboygan – Mobile Air Monitoring Laboratory (MAML)
- Chiwaukee – Ozone, PM_{2.5}, added NO₂, NO_y
- Both sites will have triggered Carb/VOC samplers collecting ozone precursors
- Research Grade Instruments at Chiwaukee
 - Pandora, Wind Lidar



Southeast Region - Sheboygan





Proposed ANP Process Change

- 2017 Wisconsin Act 159 created Wis. Stat. 285.72(3)(a). This statute requires the department to exclude the Kohler Andrae monitoring site from the initial air monitoring network plan submitted to EPA pursuant to 40 CFR § 58.10. The department has reason to believe that it has met this requirement. DNR excluded the monitoring site in the initial (2019) plan submitted after the 2018 effective date of the Act. EPA did not approve that initial plan, and the DNR submitted a revised plan per s. 285.72(3)(c) that included the monitoring site. In future annual monitoring network plan submittals to EPA, the department plans to include all State and Local Air Monitoring Sites (SLAMS) in the state.



Proposed Network Changes

- **May 1, 2020 – December 31, 2021**
- Continue the relocation of Milwaukee SER DNR Headquarters, to a site approximately 2 miles north of the current site at Milwaukee UWM Park & Ride 4498 Humboldt Blvd. Milwaukee, WI 53212
- Increase PM_{2.5} FRM frequency at Milwaukee 16th St. to 1 in 3 day
- Implement Enhanced Ozone Monitoring Plan
- Shutdown and start-up of industrial monitors

EDGE Pilot Project Update (Formerly known as Act 70 Pilot)

Kristin Hart



Economic Development and Green Environment

Economic development initiative designed to bring environmentally responsible development to brownfields

- Pilot work group update:
 - ✓ Developing outreach materials
 - ✓ Discussing the EDGE Pilot with specific facilities
 - ✓ Developing metrics



Progress

Small Foundry

- Granted Coverage under the Green Tier Registration Permit
- Working on Green Tier 2 contract
- Discussing VPLE



Manufacturer

- Covered under a Type B Registration Permit
- Working on Green Tier Charter
- Submitting application for VPLE

Member Updates

COVID-19 Response

Gail Good



Compliance Assistance

1. Use of extensions, exceptions, and waivers to minimize need for enforcement discretion
2. Collaboration with legal, EPA Region 5, and program compliance staff to create consistent response language
3. Program check-ins with inspectors to ensure consistency
4. All e-signature options will continue post Covid19
5. Development of the virtual inspection

Ozone Update

David Bizot

Air Quality Planning and Standards Section Chief

Katie Praedel

Air Monitoring Section Chief



Ozone Nonattainment Area Redesignations

Area	Submitted	Status (as-of DATE)
2015 Ozone – Door County (p)	Jan 27, 2020	EPA signed final approval on May 12; awaiting publication in FR
2008 Ozone – Kenosha County (p)	Jan 21, 2020	Comment period on proposal ended May 18; EPA drafting final action
2008 Ozone – Inland Sheboygan County	Oct 9, 2019	Comment period on proposal ended May 27; EPA drafting final action
2008 Ozone – Shoreline Sheboygan County	Feb 11, 2020	Comment period on proposal ends Jun 12.

Areas are meeting applicable NAAQS based on certified 2017-19 data



Status of the 2020 Ozone Season

“Critical values” for selected ozone monitors for 2020

site	SITE ID	4th high values		2020 Critical values		Days at/above C.V.	
		2018	2019	2008 std	2015 std	2008 std	2015 std
Newport	550290004	75	66	87	72	0	0
Chiwaukee Prairie	550590019	79	67	82	67	0	0
Kenosha WT	550590025	80	66	82	67	0	0
Kewaunee	550610002	72	61	95	80	0	0
Manitowoc	550710007	76	66	86	71	0	0
Milw SER	550790026	71	58	99	84	0	0
Bayside	550790085	73	64	91	76	0	0
Grafton	550890008	73	68	87	72	0	0
Harrington Beach	550890009	73	66	89	74	0	0
Racine Payne & Dolan	551010020	78	66	84	69	0	0
Sheboygan Kohler Andrae	551170006	83	68	77	62	0	0
Sheboygan Haven	551170009	70	59	99	84	0	0
Waukesha	551330027	68	58	102	87	0	0

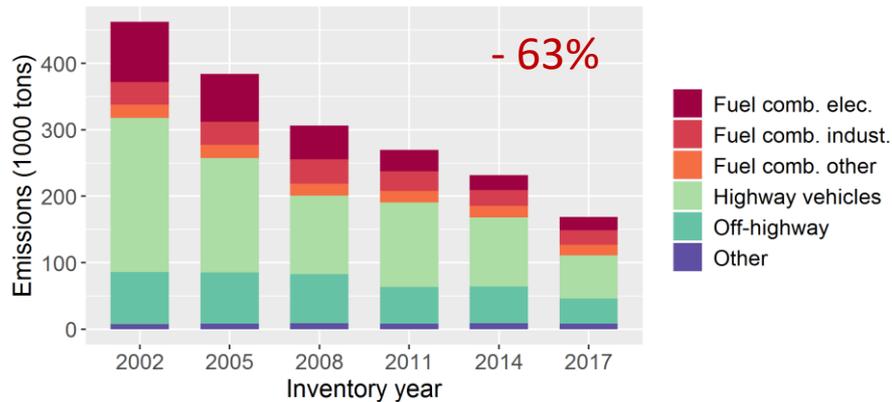


2017 National Emissions Inventory

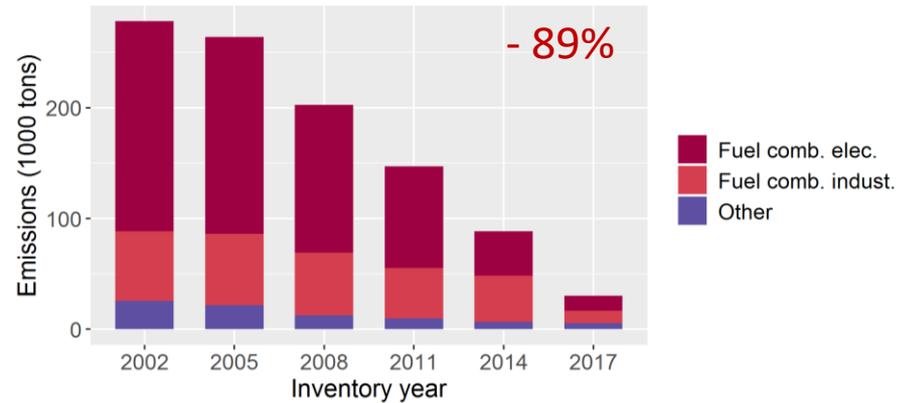
- Latest triennial inventory of air emissions was released by EPA in May.
- This is the first update since 2014.
- Inventory takes over two years to develop and is done by EPA in close coordination with state, local and tribal agencies.

Emissions by source category

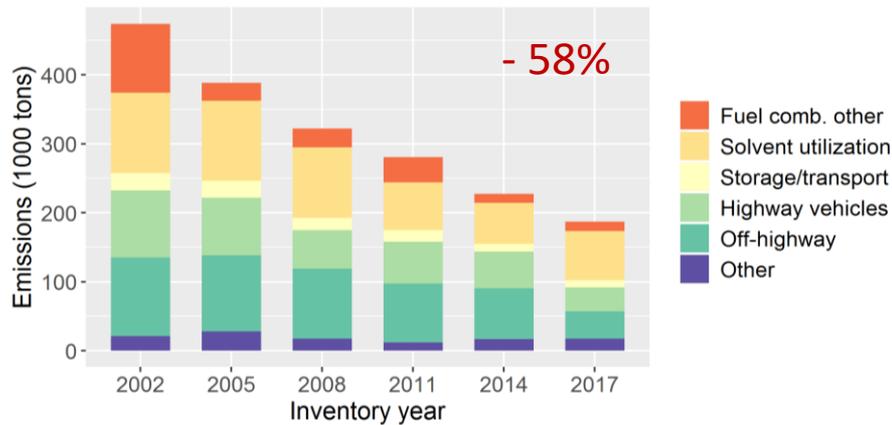
Wisconsin total NO_x emissions



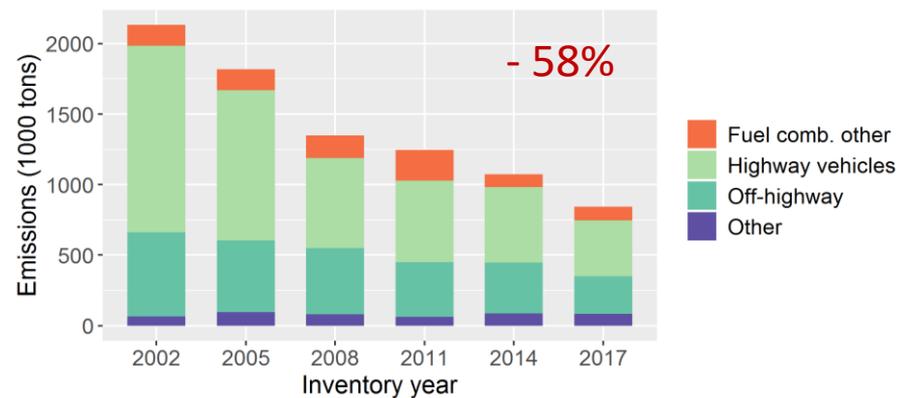
Wisconsin total SO₂ emissions



Wisconsin total VOC emissions

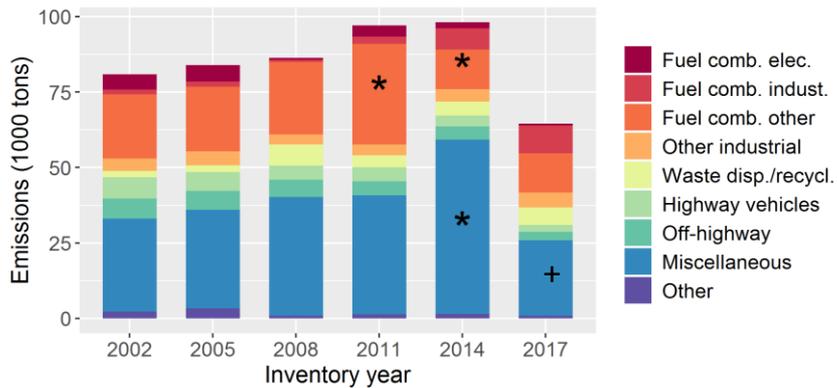


Wisconsin total CO emissions

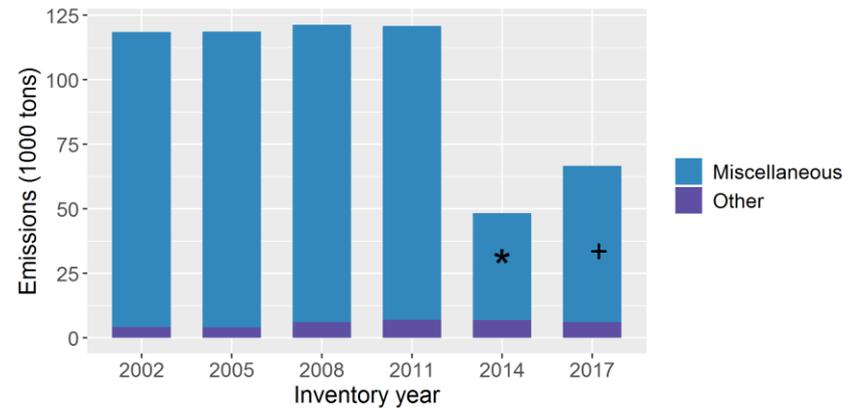


Emissions by source category

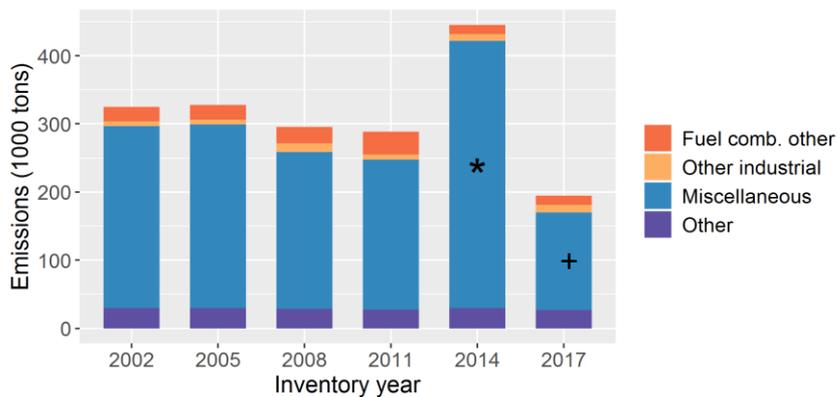
Wisconsin total PM_{2.5} emissions



Wisconsin total NH₃ emissions



Wisconsin total PM₁₀ emissions



* = methodology change from previous NEI

+ = Additional methodology changes evident with the 2017 NEI for these pollutants

- All in the “Miscellaneous” category.
- These will need investigation.
- Can’t directly compare between years



Wisconsin's Ozone Season Start-up

- March 1, 2020 for Kenosha County sites
- April 1, 2020 for most sites





Ozone Start-up

- All criteria pollutant monitoring deemed essential
- Able to meet requirements at all sites with the exception of one, due to COVID-19 (Milwaukee 16th Street Community Health Center)

Clean Air Month

Craig Czarnecki
Outreach Coordinator



Clean Air Month outreach:

- *Video Committed to Clean Air: Ozone*
- **Off the Record DNR podcast: Clean Air Act**
- **Media release**
- **Webpage updates**



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Committed to Clean Air: Ozone

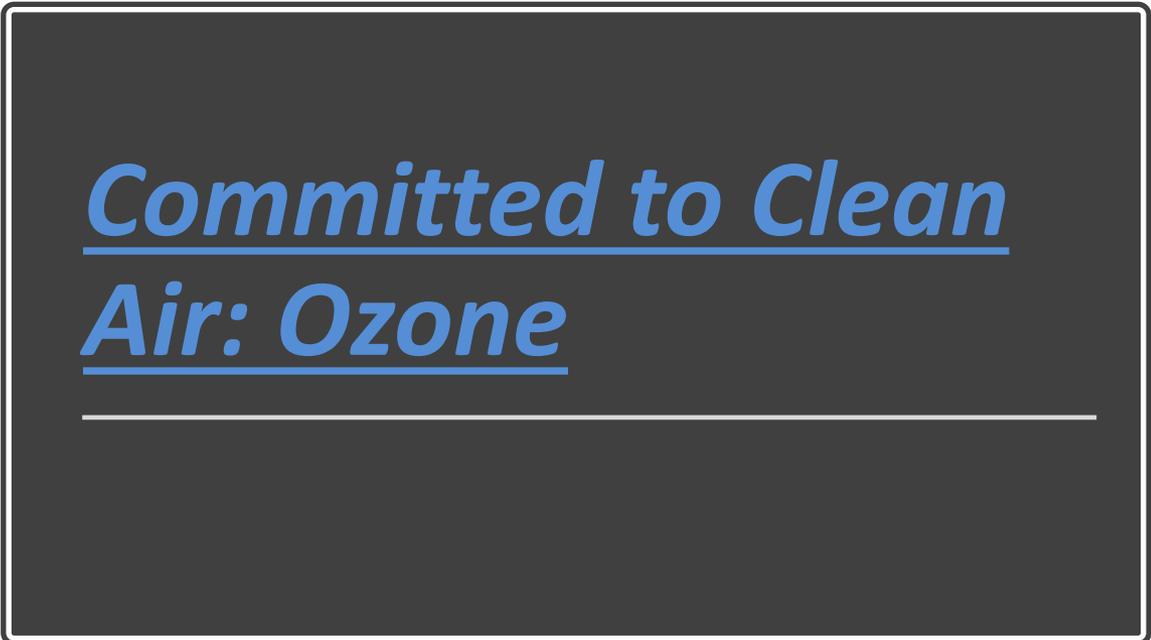
189 views · May 12, 2020

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Off the Record Podcast



Change in the air

For 50 years, the Clean Air Act has delivered steady and remarkable improvements

CRAIG CZARNECKI

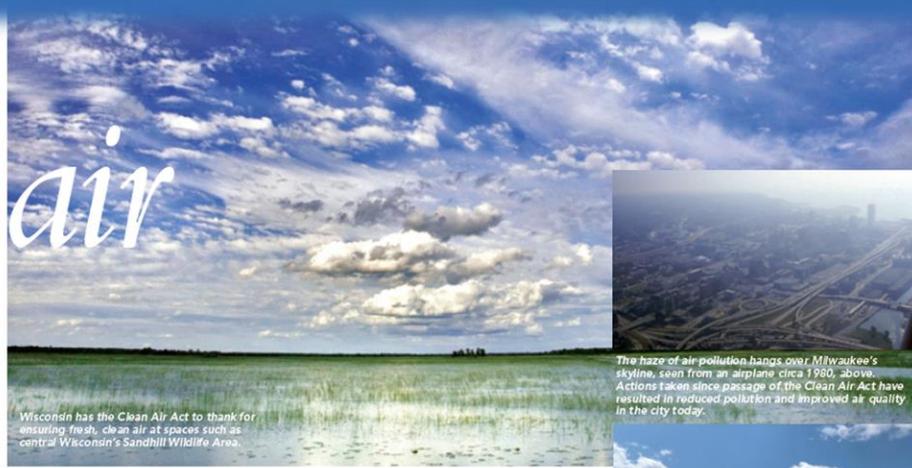
Step outside today and take a breath. This is some of the cleanest air Wisconsin has had in decades.

A landmark piece of environmental legislation passed 50 years ago, the Clean Air Act, is largely responsible for the quality of the air we breathe today. Considered to be one of the more successful and comprehensive of all federal laws, the Clean Air Act set in motion an extensive series of successful environmental protection programs that continue to benefit citizens today.

The early 20th century was marked by a series of air pollution events that escalated as new technologies led to greater electricity consumption, increased industrial production and a more automobile-based society. Following extensive public concerns regarding air pollution throughout the 1960s—and concurrent with the growth of the environmental movement—in 1970, Congress passed the Clean Air Act.

This law, along with significant amendments to the act passed in 1990, put into place a wide range of state and federal regulatory programs to improve the quality of the nation's air.

This included setting national health-based standards for air quality, establishing air permitting requirements, authorizing regulations to limit air pollutant emissions from industrial facilities and motorized vehicles, and ensuring protection of visibility.



Wisconsin has the Clean Air Act to thank for ensuring fresh, clear air at places such as central Wisconsin's Sandhill Wildlife Area.

Many actions we take for granted today, such as cleaner-burning vehicles and pollution controls on power plants, are thanks to the Clean Air Act.

ENVIRONMENTAL SUCCESS STORY

Since the passage of the Clean Air Act, the combined emissions of six common pollutants referred to in the act as criteria pollutants have dropped by 74% across the United States. Those are: particulate matter, sulfur dioxide, nitrogen oxides, volatile organic compounds, carbon monoxide and lead.

Emissions of mercury and other toxic pollutants also have dropped substantially. These improvements occurred while the U.S. population and energy use increased, the economy continued to grow and Americans drove more miles than ever before.

These changes had a major impact on the overall health of people across the country. According to the U.S. Environmental Protection Agency, from 1970 to 2020, the Clean Air Act prevented more than 435,000 premature deaths and prevented millions of cases of disease and sicknesses. Overall, the health benefits

of the Clean Air Act have outweighed its costs by more than 30 to 1.

Although national in its impact, the Clean Air Act has undeniably helped improve the air quality in Wisconsin. To take just a few examples:

- **Emissions of air pollutants have significantly decreased.** Due to acid rain controls and other programs, for example, emissions of sulfur dioxide from power plants and industry have decreased by 90% since 1999.

- **Efforts to control emissions from mobile sources like cars and trucks, as well as large industrial facilities and power plants, reduced emissions of the two compounds that form ozone—oxides of nitrogen (NOx) and volatile organic compounds (VOCs)—by 50% in just the 12 years since 2002.** Particulate matter emissions from industrial operations, combustion sources and open burning also have decreased over the last few decades.

- **Vehicles are polluting less.** EPA initiatives to reduce air pollution from heavy-duty trucks and passenger

vehicles have greatly reduced emissions from highway vehicles. Carbon monoxide, NOx, and VOC emissions in Wisconsin decreased significantly from 1970 to 2018 due to new vehicle standards—despite a doubling in the number of miles Wisconsinites traveled during that time.

More people are breathing healthy air.

The portion of the state exceeding federal air quality standards has shrunk over the years, even as the standards themselves have become increasingly stringent.

In the early 1980s, more than half of Wisconsinites lived in an area violating at least one air quality standard. Now, about 94% of the state population lives in areas that meet all air quality standards.



The haze of air pollution hangs over Milwaukee's skyline, seen from an airplane circa 1980. Above. Actions taken since passage of the Clean Air Act have resulted in reduced pollution and improved air quality in the city today.

LOOK TO THE FUTURE

Over the past 50 years, the Clean Air Act has dramatically improved air quality and human health throughout the state, yet there is still much to accomplish. The coming years will see the DNR turn to the Clean Air Act to address challenges both old and new, including:

- **Responding to climate change.** The response to this challenge is one of the defining issues for this generation. Reducing greenhouse gas emissions, moving toward a cleaner automotive fleet and encouraging more efficient use of energy are just some of the ways the act will be used to help

address human impact on the climate.

At the state level, Gov. Tony Evers has signed a pair of executive orders to address climate change. Executive Order #52 has created the Governor's Task Force on Climate Change, while Executive Order #38 aims to have Wisconsin utilities carbon-free by 2050.



- **Addressing PFAS.** Per- and polyfluoroalkyl substances (PFAS) are a large group of human-made chemicals used in industry and consumer products worldwide since the 1950s. Exposure to certain PFAS may increase the risk of adverse health effects, such as thyroid disease, low birth weights and cancer.

- **Solving lakeshore ozone challenges.** While ozone levels across the state have decreased dramatically over the last few decades, some areas along Wisconsin's Lake Michigan shoreline continue to experience ozone levels above federal standards.

Determining how and where to reduce regional ozone-causing emissions further, and from which sources, is an ongoing challenge. Understanding more about the science of ozone formation and transport in the region will help.

The Clean Air Act has been a resounding success for 50 years. As a result, Wisconsin residents are fortunate to breathe air every day that is clean to a degree once unimaginable.

In the decades to come, the DNR will continue to rely on this landmark piece of legislation to ensure that future generations of Wisconsinites have access to clean, healthy air.

Craig Czarnicki is public information specialist for the DNR's Air Program.

Summer 2020 13

- Natural Resources Magazine
- Annual Poetry contest
- Social Media posts
- Kohler-Andrae display



2020 Meeting Dates

- August 20, 2020
- November 11, 2020