



# Air Quality and Health Equity in Detroit

**A VIRTUAL TOWN HALL**

**SPONSORED BY COMMUNITY ACTION TO PROMOTE HEALTHY ENVIRONMENTS (CAPHE)  
AND COVID313**

Funded by NIEHS Grant # RO1ES022616 and the Fred A and Barbara M. Erb Family Foundation  
with additional support from NIEHS Grant # P30ES017885

# Partner Organizations & Partnerships



**Detroiters Working for Environmental Justice**  
Fostering Clean, Healthy and Safe Communities



Funded by NIEHS Grant # RO1ES022616 and the Fred A and Barbara M. Erb Family Foundation with additional support from NIEHS Grant # P30ES017885



# AGENDA: Detroit Air Quality & Health

**Introduction** Dr. Amy J. Schulz, UM SPH

**Air Pollution, Asthma & Indoor Air Filters**

Donele Wilkins, CEO, Greendoor Initiative

**Detroit Air Quality Under COVID-19**

Professor Stuart Batterman, UM SPH

**Health Assessments** Keisha Williams, PhD, Air Quality

Division, Michigan EGLE

**Cumulative Risk and HIAs** Dr. Amy J. Schulz, UM SPH

**EGLE and Air Quality Permitting**

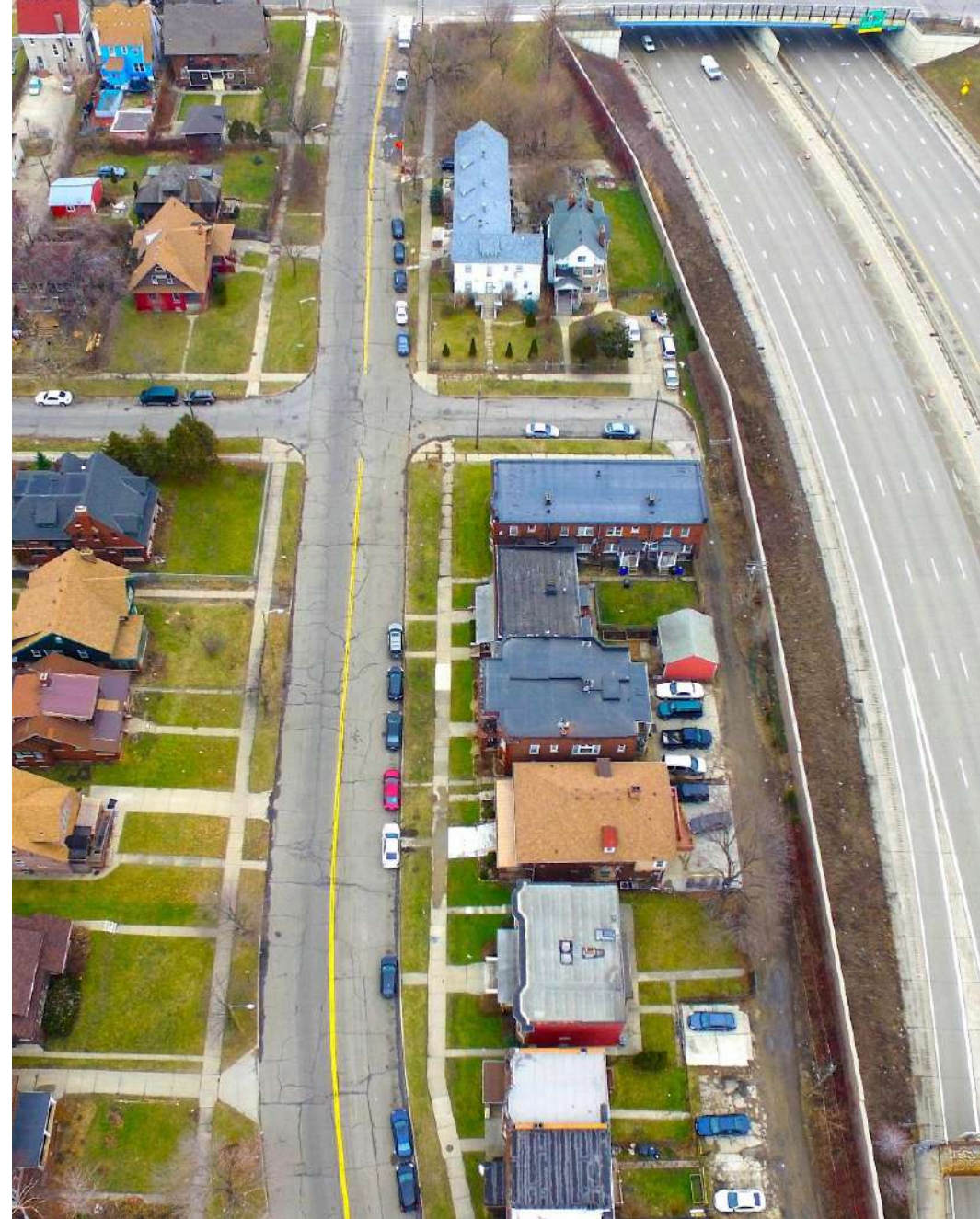
Paul Schleusener, Air Quality Division, Michigan EGLE

**City Ordinance for Spatial Buffers**

Detroit City Councilwoman Raquel Casteñada-Lopez

**Anti-Idling Ordinance and Truck Routes:**

Maggie Striz-Calnin, Director, Healthy Air Program, SDEV





# Air Quality In Detroit







Photo 2. Truck Traffic, Detroit, Hannah Gordon, 6-16-15



# Quantified Health Impacts



- **Each year** in the Detroit Metropolitan Area, air pollution is responsible for:
    - 690 deaths
    - 1800 hospitalizations and emergency room visits
    - Thousands of missed school and work days
- Total monetized cost of \$6.9 billion per year**

**These effects occur disproportionately in Detroit and surrounding areas with high concentrations of poverty, African American and Latino residents**





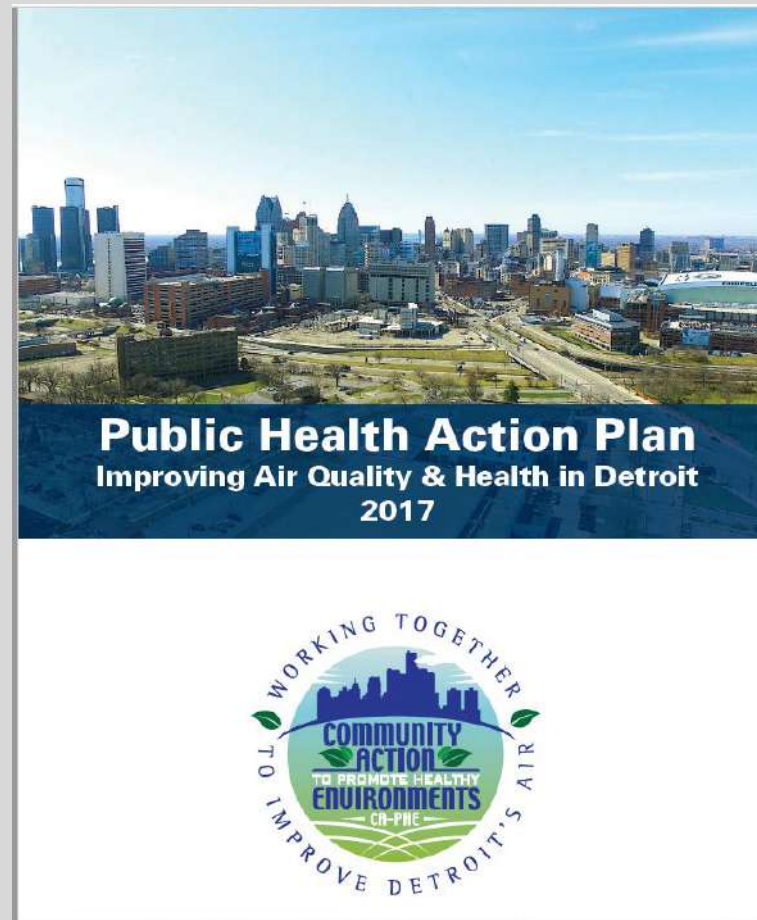


<http://caphedetroit.sph.umich.edu/public-health-action-plan/>



**2017 Launch of  
evidence-based  
recommendations for:**

- **Indoor air filters**
- **Idling controls**
- **Buffers & barriers**
- **Health impact assessments**
- **Point source controls**
- **Compliance & enforcement**
- **Monitoring**
- **Diesel engine retrofits**
- **Clean fuels**
- **Transportation control measures**



Funded by NIEHS Grant # RO1ES022616 and the Fred A and Barbara M. Erb Family Foundation with additional support from NIEHS Grant # P30ES017885





RESTORING HOPE TO A PEOPLE.  
PROVIDING HELP TO THE PLANET.

# Health, Environment and Environmental Justice

**Detroit Public Television**  
**Donele Wilkins**  
**CEO**



## Mission

- The Green Door Initiative (GDI) works to ensure that every person is environmentally literate capable of practicing and promoting a sustainable lifestyle.





# Who is most likely to get asthma?

- **Children**
  - (5 -14 years old)
- **Urban poor**
  - At or below poverty level
- **Certain ethnic minorities**



# Where We Live, Work & Play

- Environmental Justice
  - **People of Color and the poor get more than their share of dirty air, water, contaminated land and substandard housing and living conditions.**
  - 
  - **Environmental Justice means that all communities are clean, livable and sustainable.**
- Xavier Joe-  
10 Years Old
  - 2012





# Zip Code A Predictor



# Sources of Health Impacting Pollution

- Factories/Manufacturing
- **Freeways/Highways**
- **Certain Household Products**



# Health effects of disinfectants may include....

- Skin rashes or dermatitis.
- Irritation of the nose, eyes, mouth.
- Occupational asthma:
  - Sodium hypochlorite (bleach)
  - Quaternary ammonium
  - Glutaraldehyde

**Remember to not mix products. That can be deadly!**





# When you use these disinfectants:

- Follow **instructions on the product label** exactly, including for diluting and for the “contact time”, how long the surface needs to stay wet.
- Make sure all containers are **labeled**.
- Use **gloves (nitrile, non-latex) and eye protection** and check label to see what PPE is recommended.

thoroughly. ● **DRAINS:** Squirt into drains to infect and cure unpleasant smells.

● **WORK SURFACES & CHOPPING** per 5 litres of water. Wash then rinse.

● **BASINS & SINKS:** Use 60ml per 5 litres of water. Wash then rinse thoroughly.

● **FLOORS:** Use 60ml per 5 litres of water.

| Parozone Bleach contains amongst other ingredients |                     |                           |
|--|---------------------|---------------------------|
| Range  | Ingredients         | Purpose                   |
| < 5%   | Sodium Hypochlorite | Bleaching & stain removal |
| < 5%   | Anionic Detergents  | Cleaning                  |
| < 5%   | Limescale Deterrent | Prevents limescale        |

**ONE BLEACH CONTAINS SODIUM HYDROXIDE**

● **WARNING: DO NOT USE WITH OTHER PRODUCTS. MAY RELEASE DANGEROUS GASES (CHLORINE).**

● Irritating to eyes and skin.

If you have any queries, comments or suggestions or any other Jeyes products, please write to: Consumer Relations, Jeyes Limited, Thetford, IP24 1HF.



# LESS TOXIC CLEANING PRODUCTS

- Scrutinize “non-toxic” label
- Avoid Chlorine products
- Vegetable-based
- Pine or citrus based
- Pumps instead of Sprays
- Biodegradable
- “Environmentally Friendly”





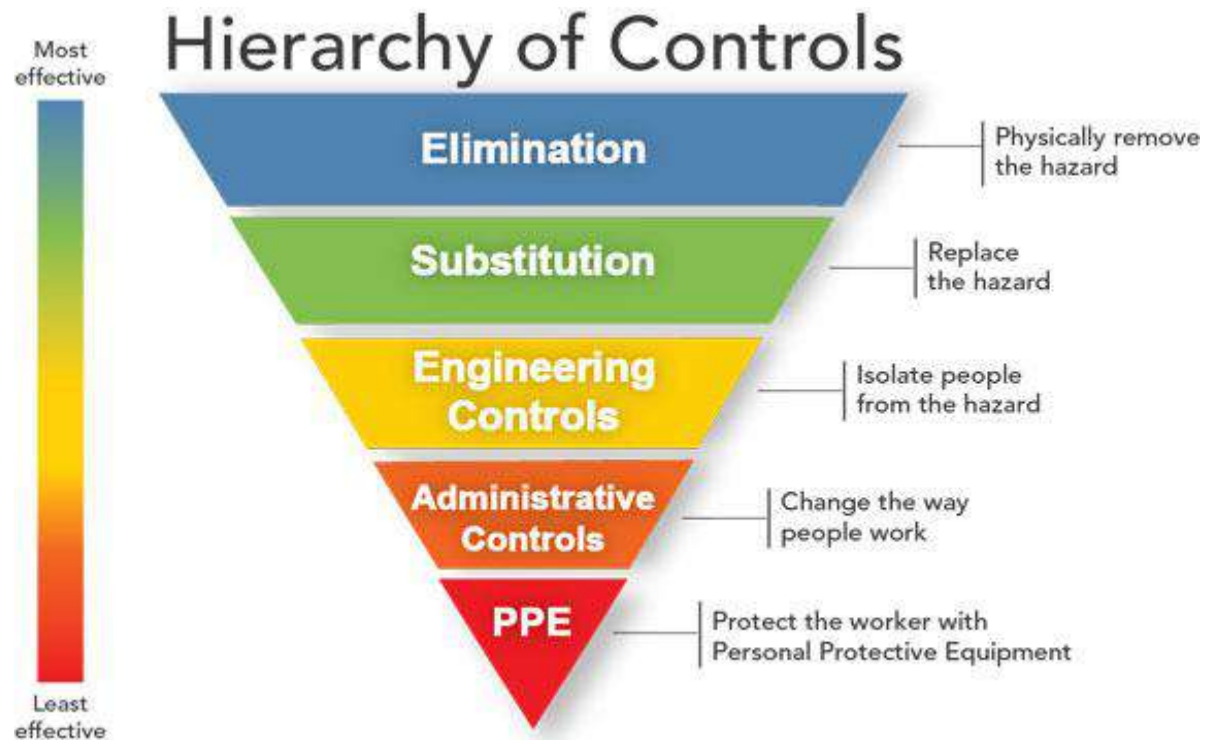
# When you use disinfectants:

- **Clean the area** first to remove dirt and dust or you can use detergent or soap.
- Open windows or use other ways to **increase ventilation**.
- **Avoid spraying** and if you spray, put it on a sponge or rag so less goes into the air.



# Levels of Safety and Health

- Controlling the Hazards





- For more information visit our website [www.greendoorinitiative.org](http://www.greendoorinitiative.org)
- Or contact the organization at
  - info@greendoorinitiative.org
  - (313) 922-8055

Facebook : Detroit Green Door Initiative/ Instagram: greendoorinitiative.org/twitter  
#2014detgreen

**Professor Stuart Batterman**

---

**University of Michigan**





# Air quality monitoring in Detroit

## Stuart Batterman

Slides from the  
Detroit Public TV presentation

### Community Action to Promote Healthy Environments & Air Quality Virtual Townhall

In Partnership with COVID313

Friday, May 15th  
12 noon - 2 pm [980.723]



#### During this townhall:

- Air Quality & Asthma
- Air Quality Testing During Covid-19
- Health Impact Assessments
- Truck Routes Idling & Buffers

#### Contact Information:

Stuart Batterman, Ph.D.  
Professor, Department of Environmental  
Health Sciences, School of Public Health  
Professor, Department of Civil &  
Environmental Engineering, College of  
Engineering  
University of Michigan  
Room 6507 SPH2, 1420 Washington Heights,  
Ann Arbor, MI 48109-2029 USA

tel: 734 763 2417 fax: 734 763-8095

email: [stuartb@umich.edu](mailto:stuartb@umich.edu)

# Stuart Batterman – PM Monitoring in Detroit

## Take home points

- Air quality monitoring shows if air quality standards are met, and provides the information needed to track trends, determine if further emission reductions are needed, and determine health risks.
- Monitoring shows that portions of SE Michigan do not meet standards for ozone and sulfur dioxide; other pollutants remain of concern, including nitrogen oxides and particulate matter, due to health impacts and their role in forming ozone.
- About 20 monitoring sites measure air quality levels in SE Michigan each hour.
- Sulfur dioxide affects especially people with asthma. While levels are highly variable, levels to date in 2020 are down by 50% from 2019 levels, in part due to the pandemic shut-down.
- PM2.5 or particulate matter, the pollutant with the most significant health impact, has decreased by 10-20% in 2020, in part due to the pandemic shutdown.
- Nitrogen oxides, a pollutant that is highest near major roads, has fallen by 15-25% in 2020, mainly due to reduced traffic during the pandemic shut-down.
- These changes are temporary, and levels will rebound as the economy resumes.
- In the months ahead, as the weather warms, we will likely see ozone alerts and ozone action days, when people should limit outdoor activity.
- Isolating at home increases the importance of indoor air quality. Often, indoor pollutant levels are higher than outdoor levels. Reduce your exposure by eliminating, reducing or controlling indoor pollution sources, ventilating appropriately, and using air filters.



# Intro

- Today, I want to present an analysis air pollutants based on monitoring data collected by the Michigan Department of Environment, Great Lakes and Energy (EGLE).
- We will talk mainly about 2 or 3 different pollutants, and how pollution levels vary from place-to-place and hour-to-hour
- How the covid shut-down affected levels
- How you are exposed to, and how you can stay safe, from outdoor and indoor air pollutants.

# Why is Air Quality Monitoring Important?

Provides key information regarding current air quality

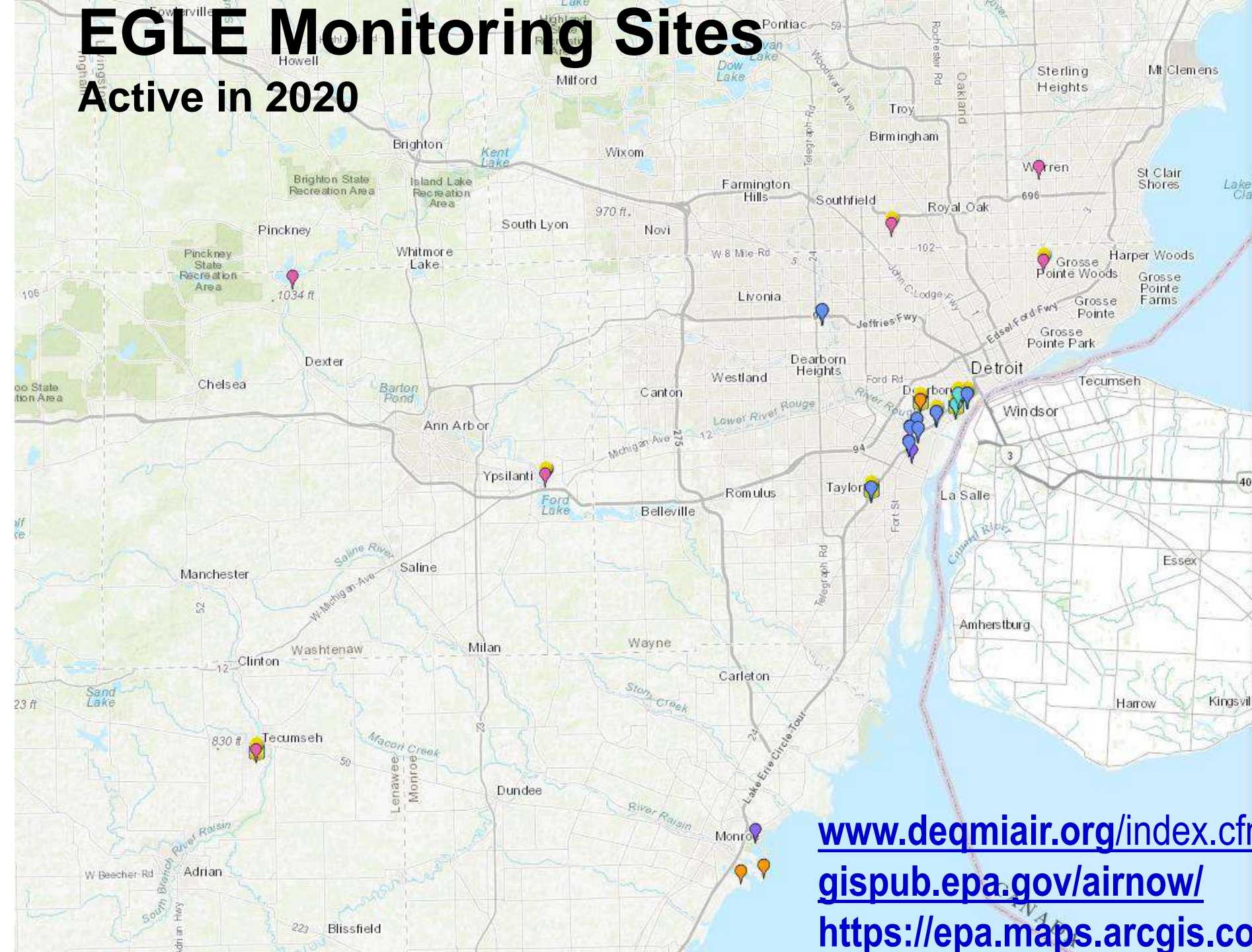
- Determines compliance with air quality standards and determine if emission reductions are needed.
- Helps identify sources causing air pollution problems.
- Show changes over time.
- Quantify health risks and conduct health (epidemiological) studies.
- Aid emergency response actions.





# EGLE Monitoring Sites

## Active in 2020



- CO - Active
- Lead - Active
- Lead - PM10(LC) - Active
- NO2 - Active
- Ozone - Active
- PM10 - Active
- PM2.5 - Active
- SO2 - Active
- PM2.5 Chemical Speciation Network - Active
- NCORE (Multipollutant Monitoring Network) - Active

[www.deqmiair.org/index.cfm?page=home](http://www.deqmiair.org/index.cfm?page=home)

[gispub.epa.gov/airnow/](http://gispub.epa.gov/airnow/)

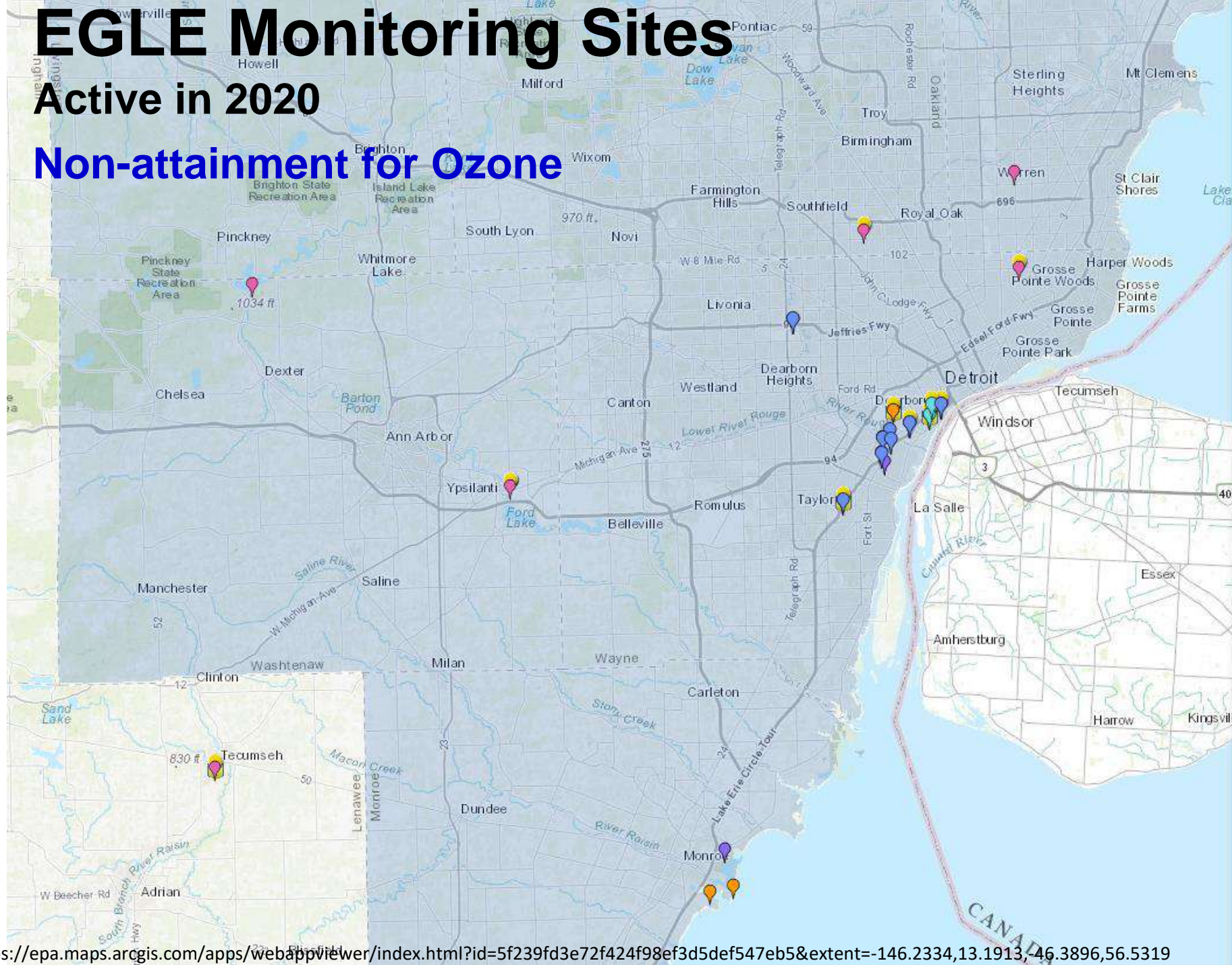
<https://epa.maps.arcgis.com/apps/webappviewer/index.html>



# EGLE Monitoring Sites

Active in 2020

Non-attainment for Ozone



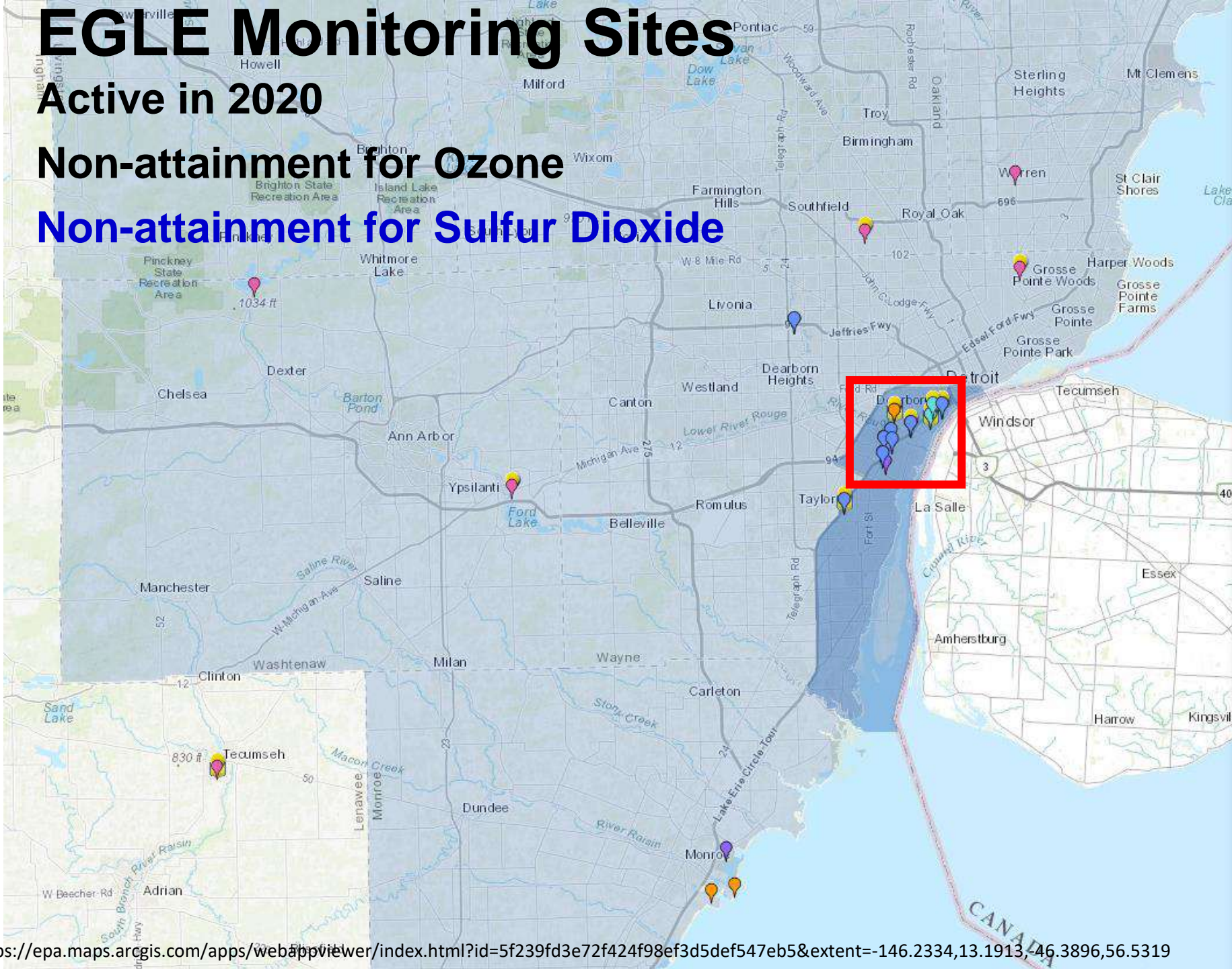


# EGLE Monitoring Sites

Active in 2020

Non-attainment for Ozone

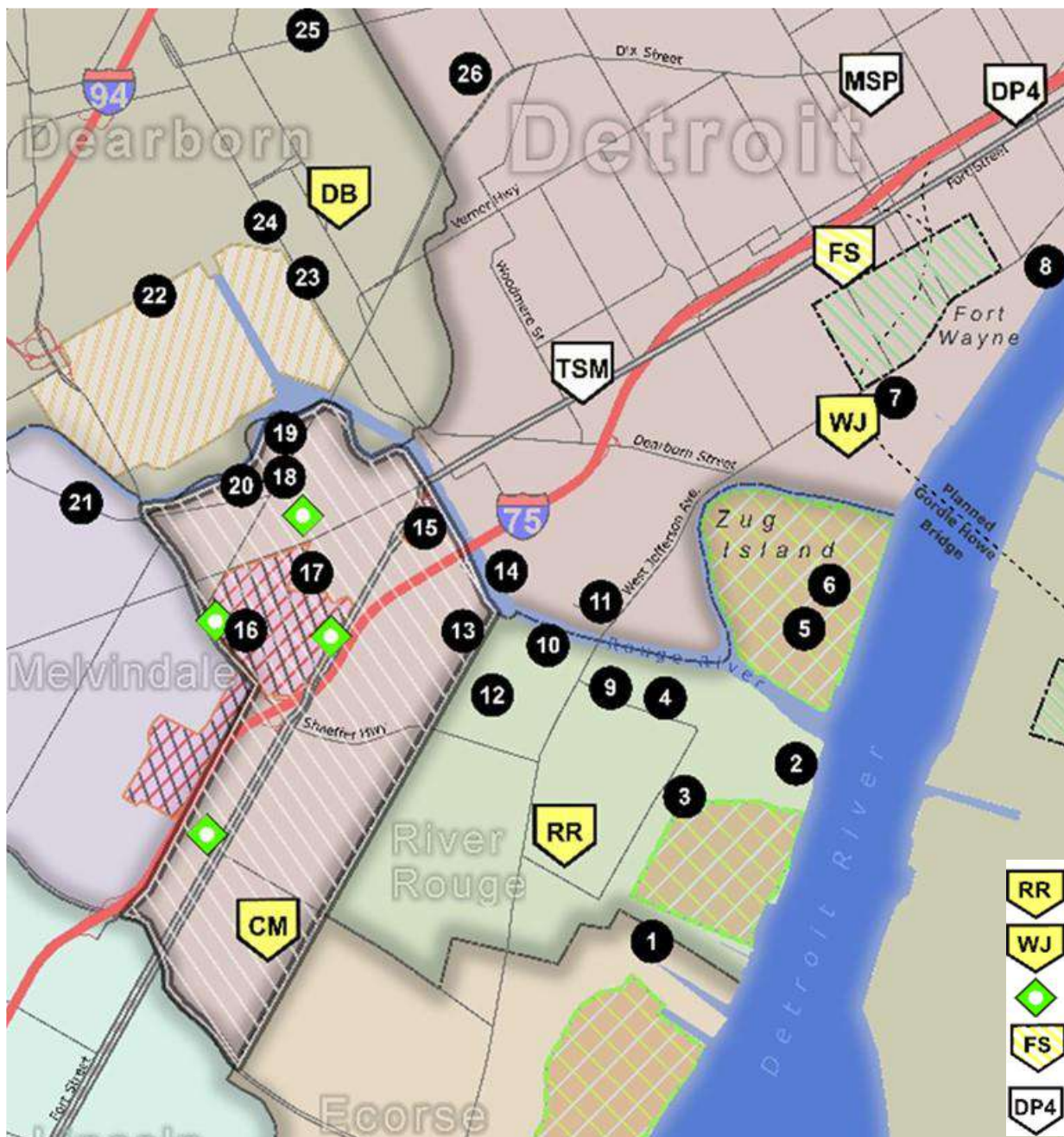
Non-attainment for Sulfur Dioxide



- CO - Active
- Lead - Active
- Lead - PM10(LC) - Active
- NO2 - Active
- Ozone - Active
- PM10 - Active
- PM2.5 - Active
- SO2 - Active
- PM2.5 Chemical Speciation Network - Active
- NCORE (Multipollutant Monitoring Network) - Active
- Nonattainment Areas: Ozone 8-hour, 2015
- Ozone 2015 NAAQS NAA State Level
  - Maintenance
  - Nonattainment



# Monitoring Sites + Major Air Emission Sources



## AIR EMISSION SOURCES†

- 1 Praxair
- 2 DTE River Rouge
- 3 Fritz Products
- 4 Buckeye Terminals River Rouge
- 5 EES Coke Battery
- 6 US Steel Great Lakes Works
- 7 DTE Delray
- 8 Waterfront Petroleum
- 9 Carmeuse Lime
- 10 United States Gypsum
- 11 Great Lakes Water Authority Treatment
- 12 Fabricon Products
- 13 Buckeye Terminals Detroit
- 14 Saint Mary's Cement
- 15 Great Lakes Petroleum
- 16 Marathon Petroleum
- 17 Detroit Salt
- 18 Cadillac Asphalt Products
- 19 Sunoco River Rouge
- 20 Edw C Levy Co Plant 6
- 21 Darling Ingredients
- 22 AK Steel Dearborn
- 23 Dearborn Industrial Generation
- 24 Ford Motor Company Rouge Complex
- 25 Xcel Steel Pickling
- 26 Edw C Levy Co Plant 1

† These facilities reported 2016 air emissions to the Michigan Air Emission Reporting System (MAERS).

## LARGE AREA SYMBOLS

- 48217 Zip
- Marathon
- US Steel
- AK Steel
- Gordie Howe Bridge Plaza

- RR** River Rouge: Carb, 5 TSP Metals
- WJ** West Jefferson: 5 TSP Metals
- DB** Dearborn – Salina Elem. Sch.: PM2.5, PM2.5 spec., PM10, PAHs, VOCs, Carb, Carbon Black, 14 TSP and PM10 Metals
- CM** Community Monitor (48217): PM2.5, SO2, 5 TSP Metals
- FS** Fort Street\*\* (Southwestern High Sch.): PM2.5, PM2.5 spec., PM10, NOx, SO2, VOCs, Carb, Carbon Black, 5 TSP Metals
- MSP** Military Street Park: PM2.5, NOx, SO2, Carbon Black, 5 TSP Metals
- DP4** Detroit Police Precinct 4: PM2.5, CO, NOx, SO2, Carbon Black, 5 TSP Metals
- TSM** Trinity Saint Marks: PM2.5, CO, NOx, CO2, Carbon Black, 5 TSP Metals



# Sulfur Dioxide (SO<sub>2</sub>)



**What is it?** Highly reactive gas that causes adverse respiratory effects with short-term exposures, even just a few minutes.

**Where does it come from?** Largest sources are power plants, steel, coke, refineries, and other industry using coal or oil.

**What are the health effects?** Bronchoconstriction, increased asthma symptoms, emergency visits for respiratory illnesses.

**Who is affected?** Most affected are children, elderly, and people with asthma. Particularly affects people with asthma while exercising or playing.

**Is sulfur dioxide a problem in Michigan and Detroit?** Non-attainment in both Detroit and St. Clair.

**Fact sheets:** <http://caphedetroit.sph.umich.edu/project/sulfur-dioxide-ver2/>

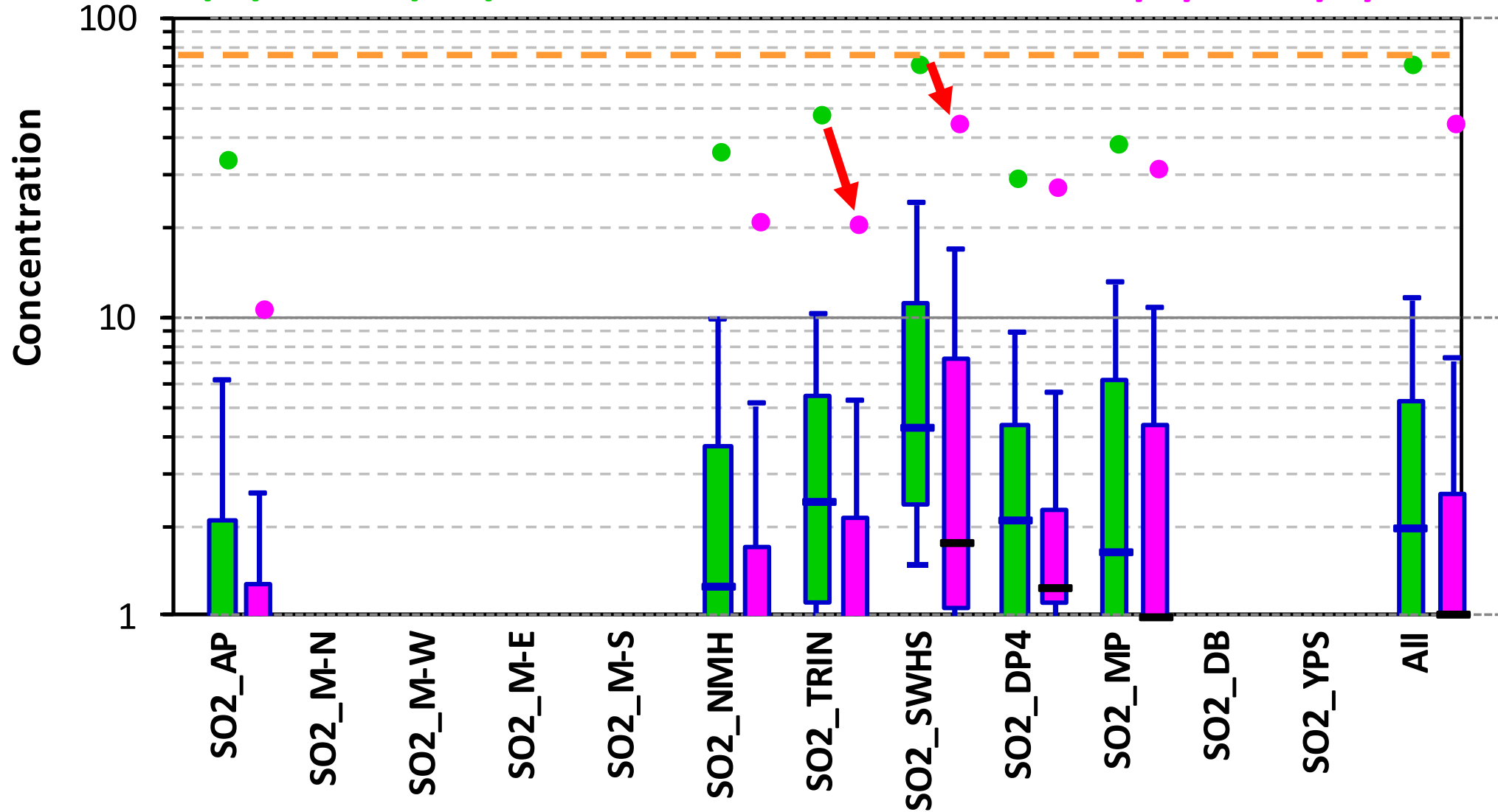
# Sulfur Dioxide Levels at Detroit Monitors

Daily 1 hour.

Standard is 75 ppb

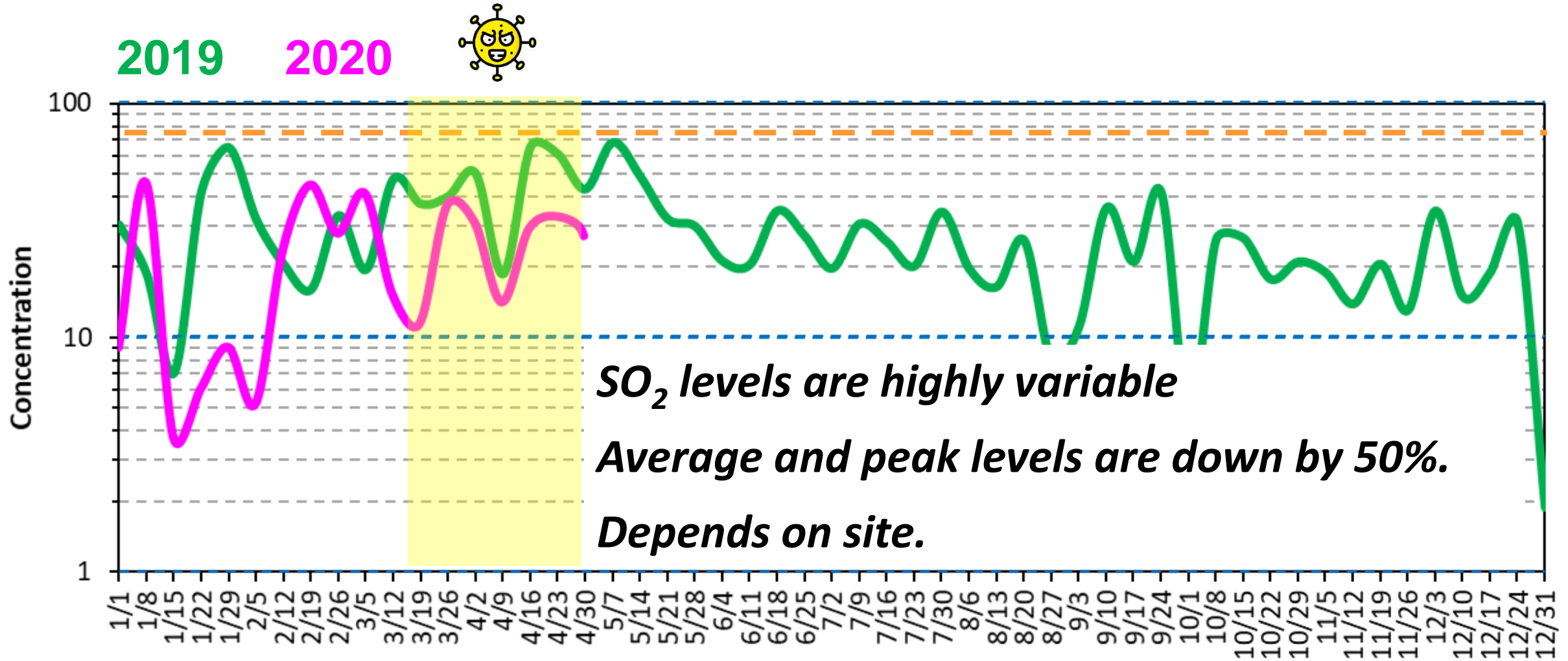
1/1/19 - 12/31/19.

1/1/20 - 5/8/20



# Sulfur Dioxide Trends over 2019-2020

Weekly 1-hour maximum. **Standard is 75 ppb**





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

**What is it?** Extremely small particles and liquid droplets that contain combustion particles, soil, dust, fungal spores and many other substances.

**Where does it come from?** Mostly combustion sources, including industry, trucks, cars, and wood smoke.

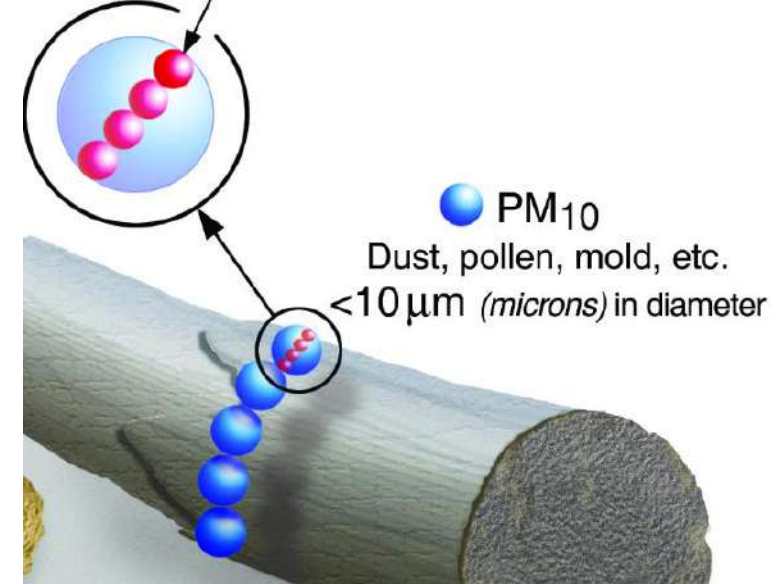
**What are its health effects?** PM<sub>2.5</sub> causes or worsens many diseases and can cause death. It causes lung and breathing problems, asthma attacks, premature and low birth weight babies, increased blood pressure, CV effects and cancer.

**Recently, a 1  $\mu\text{g}/\text{m}^3$  increase was linked to 8% increase in Covid-19 death rate.**

**Who is affected?** Most affected are children, elderly, people with asthma, COPD, bronchitis, emphysema, heart disease, or diabetes.

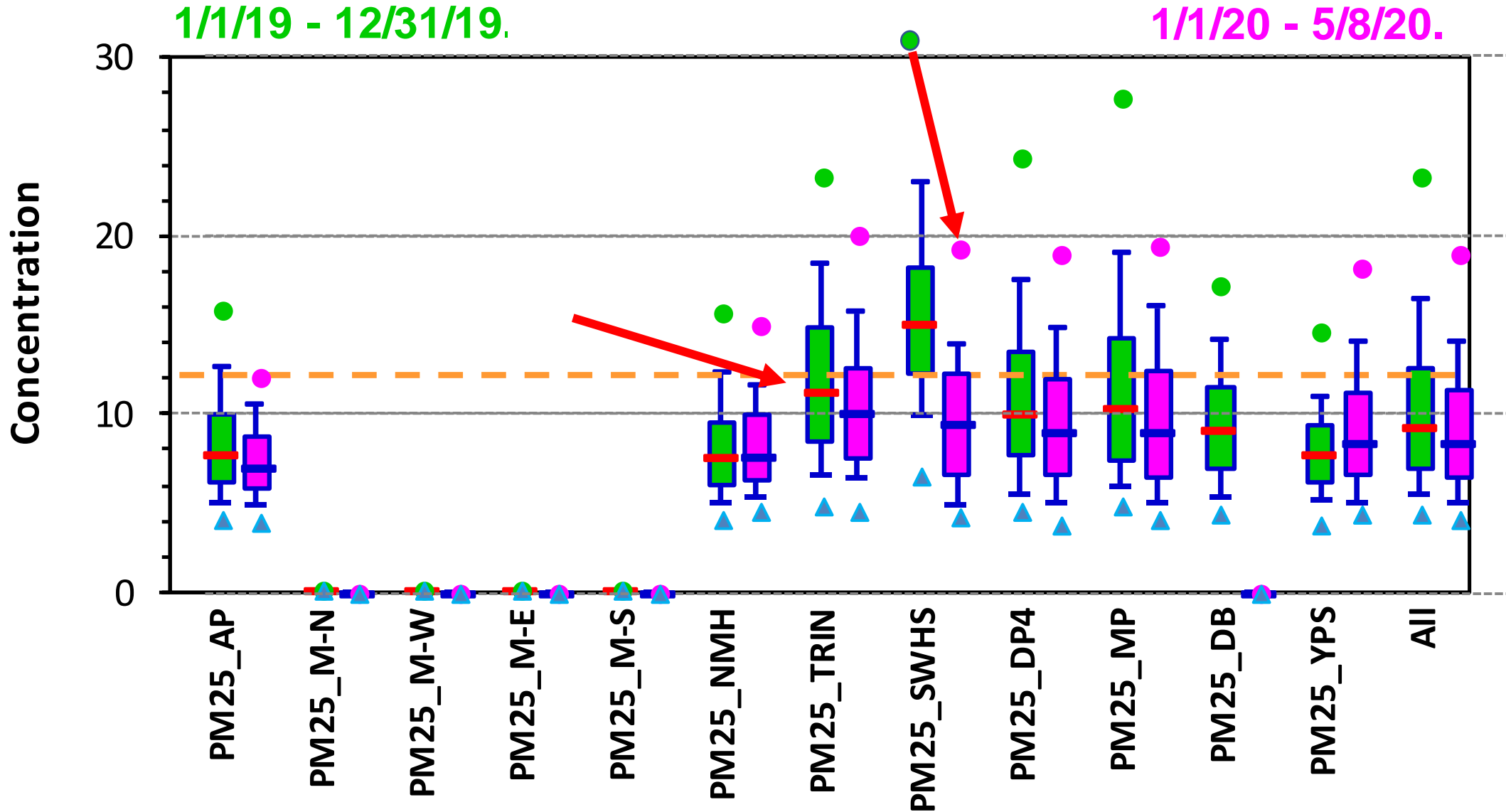
**Is PM<sub>2.5</sub> a problem in Michigan and Detroit?** PM levels have declined and now meet EPA standards. However, health effects occur at current levels and higher level are found near major highways and industry

**Fact sheets:** <http://caphedetroit.sph.umich.edu/project/pm2-5/>



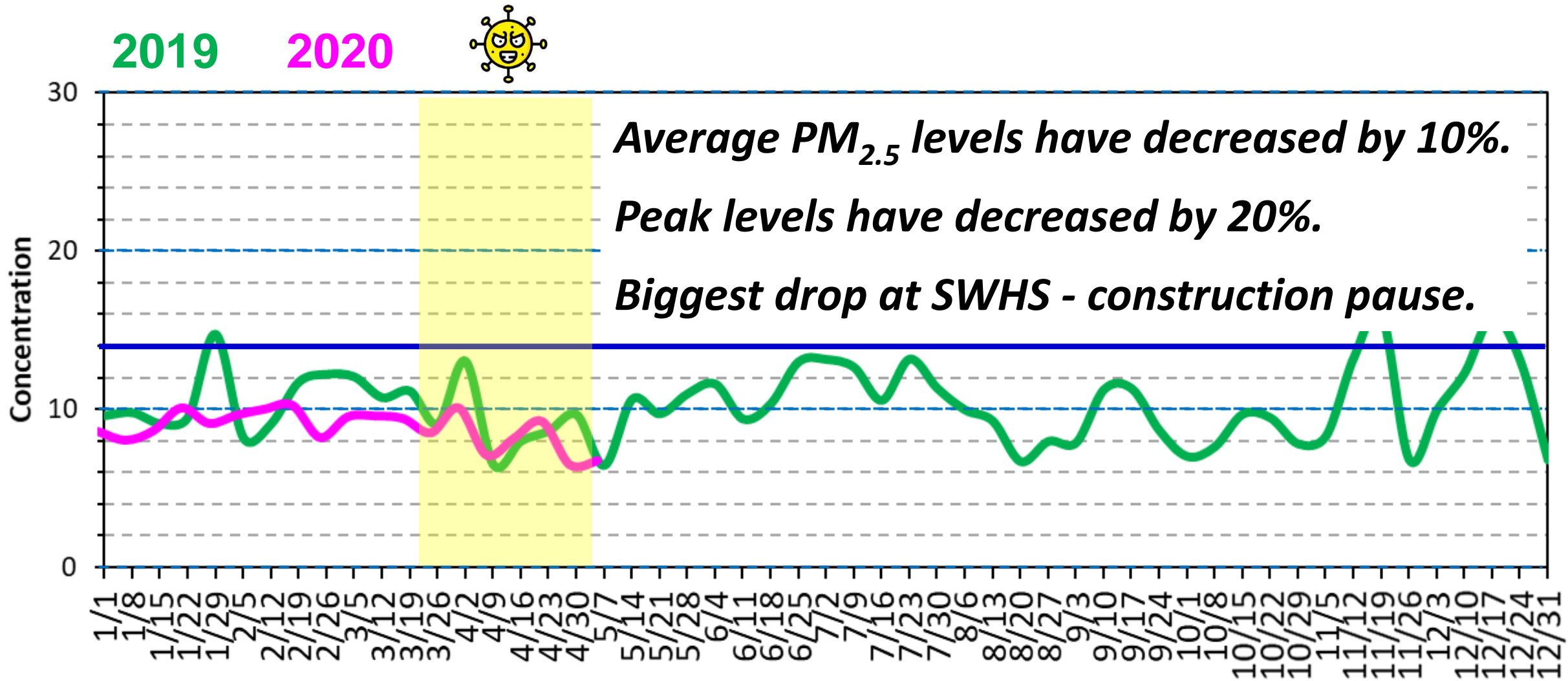
# PM<sub>2.5</sub> Levels in 2019-2020

Daily 24 hour averages at Detroit monitors. Standards are 12 and 35 ug/m<sup>3</sup>

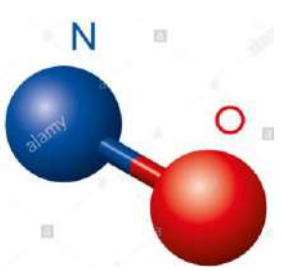


# PM2.5 Levels in 2019 & 2020

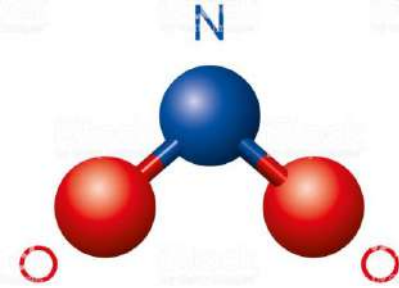
Trend lines shows weekly averages across 5 monitoring sites







# Nitrogen Oxides (NO<sub>2</sub>, NO, NO<sub>x</sub>)



**What is it?** Reactive and irritating gas that causes adverse respiratory effects with short-term exposures, even just a few minutes.

**Where does it come from?** Fuel combustion - largest sources are diesel trucks, cars, off-road equipment, power plants, industry, and gas heating.

**What are the health effects?** Worsens heart disease and can lead to hospital visits and early death. Exposure also affects the lung and is associated with poor birth outcomes such as underweight babies.

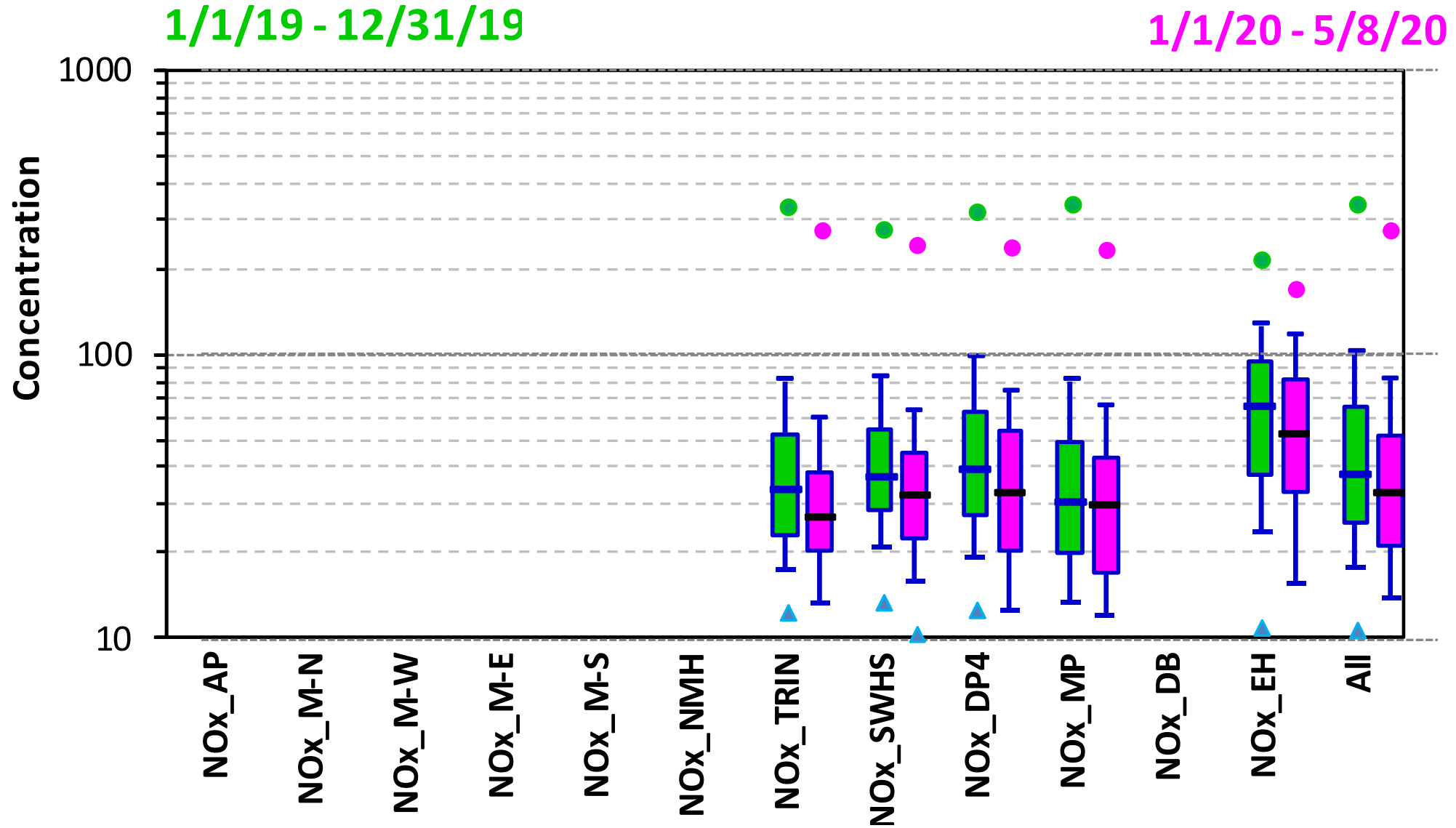
**Is nitrogen oxide a problem in Michigan and Detroit?** Standards are not exceeded, but nitrogen dioxide is a good indicator of traffic-related pollutants. Highest levels near busy roads.

NO<sub>2</sub> also helps create ozone, a problem in Detroit and SE Michigan.

**Fact sheets:** <http://caphedetroit.sph.umich.edu/project/nitrogen-oxides/>

# NOx Levels at Detroit Monitors

Daily 1-hour maxima at Detroit monitors. **NO<sub>2</sub> standard is 100 ppb NO<sub>2</sub>**

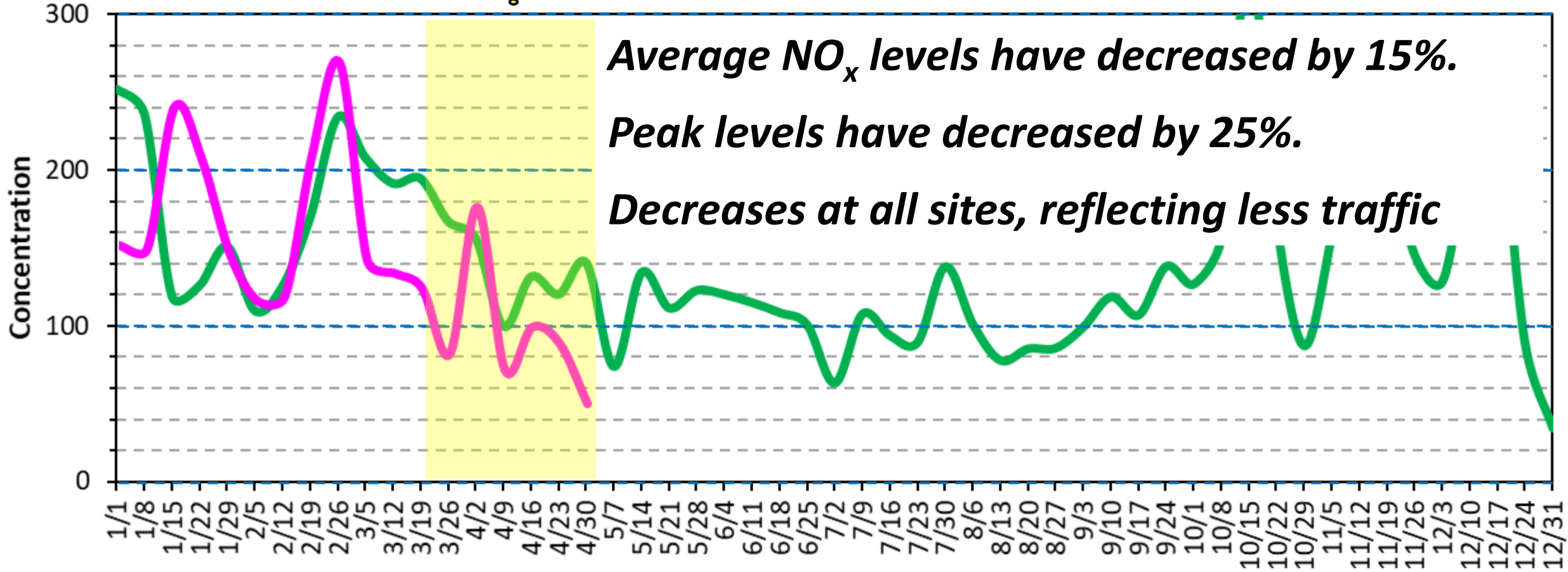
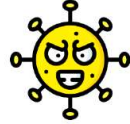


# Nitrogen Oxide Trends over 2019 and 2020

Weekly 1-hour maximum across 5 monitoring sites

2019

2020

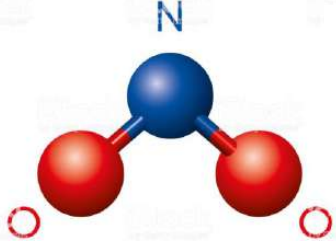




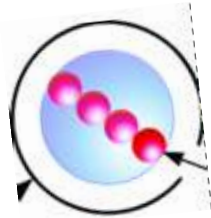
# Summary of the Trends



*Sulfur dioxide down by 50%*



*Nitrogen oxides levels down by 15-25%*



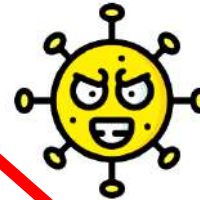
*PM2.5 is down by 10-20%*

*Covid effect?*

*Shut-downs?*

*Weather effect?*

2019



2020

*Temporary  
Rebound expected*

# Two more concerns

## **We are entering the summer ozone season.**

With hot and stagnant weather, ozone levels increase significantly and can worsen many health issues. Limit outdoor activity on ozone alerts or ozone action days.

## **We have been isolating at home. Indoor air quality!**

Often, pollutant levels are higher indoors than outdoors due to indoor sources like cigarette smoking, gas stoves, deodorizers, scents, pesticides, cleaners, home renovation activities.

Best to (1) eliminate, reduce or control these sources; (2) ventilate using exhaust fans and windows; and (3) use high quality filters, either in your furnace or free-standing filters.

<http://caphedetroit.sph.umich.edu/project/indoor-air-filters>

# References

## PM2.5 and Covid-19

- <https://projects.iq.harvard.edu/covid-pm/home>
- [https://projects.iq.harvard.edu/files/covid-pm/files/pm\\_and\\_covid\\_mortality\\_med.pdf](https://projects.iq.harvard.edu/files/covid-pm/files/pm_and_covid_mortality_med.pdf)

## Air quality monitoring and attainment

- [www.deqmiair.org/index.cfm?page=home](http://www.deqmiair.org/index.cfm?page=home)
- [gispub.epa.gov/airnow/](http://gispub.epa.gov/airnow/)
- <https://epa.maps.arcgis.com/apps/webappviewer/index.html>
- <https://www3.epa.gov/airquality/greenbook/tnc.html>

## CAPHE fact sheets

- <http://caphedetroit.sph.umich.edu/air-quality-health/pollutant-fact-sheets/>

This and related presentations





MICHIGAN DEPARTMENT OF  
ENVIRONMENT, GREAT LAKES, AND ENERGY

# Health Assessments

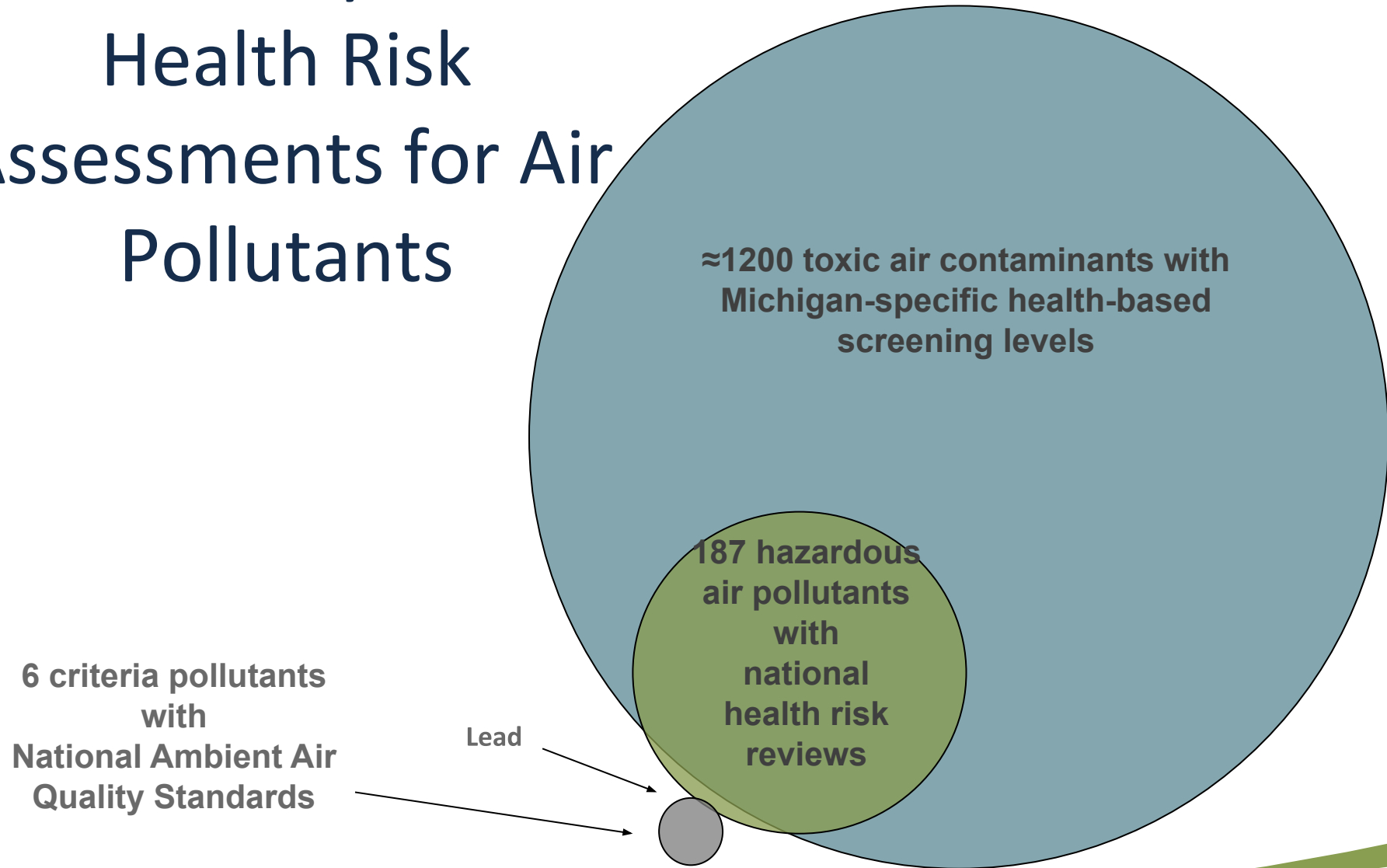
---

**Keisha Williams, PhD**

**Air Quality Division, Air Toxics Unit**

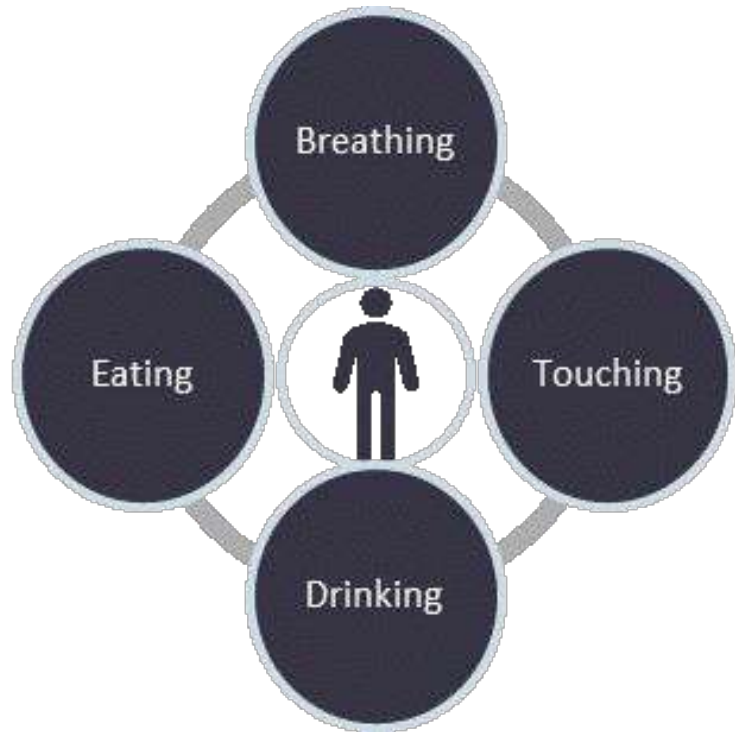
**517-284-6764 | [Williamsk29@Michigan.gov](mailto:Williamsk29@Michigan.gov)**

# Commonly Used Health Risk Assessments for Air Pollutants

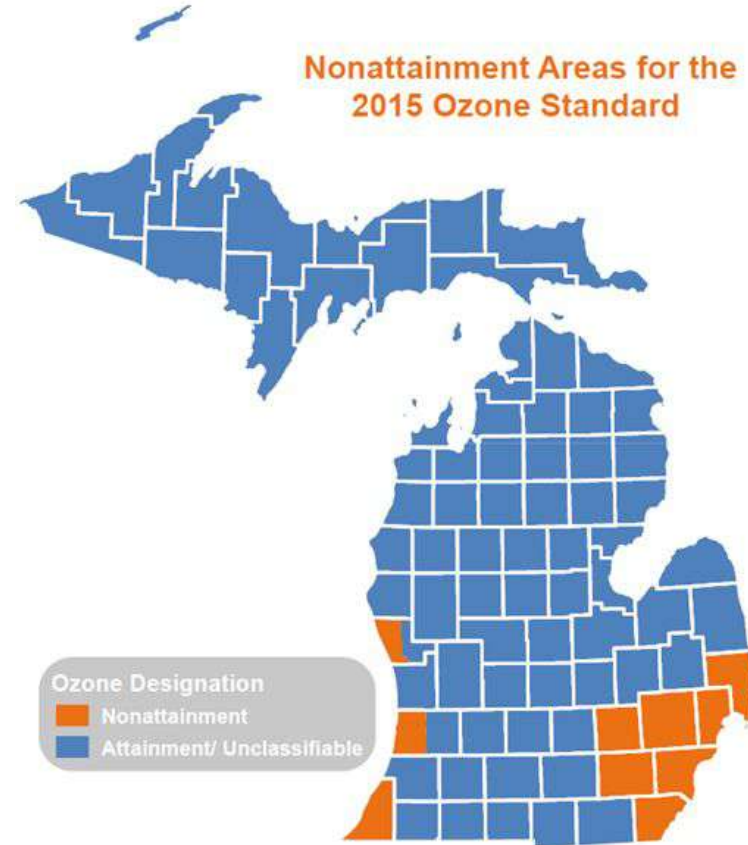


# What about cumulative exposure?

What it is



How it is considered





# What about other ways to review health impacts?

**Health impact assessments (HIAs)** assess likely health impacts of a policy, program, or permit and use the results to inform decision-making.

HIAs differ from health risk assessments used by AQD, because HIAs can consider more factors than those outlined in current rules and laws.

Michigan Department of  
**Environment, Great Lakes, and Energy**

800-662-9278  
Michigan.gov/EGLE

For pollution emergencies:  
800-292-4706

Follow us at: [Michigan.gov/EGLEConnect](https://Michigan.gov/EGLEConnect)





# Cumulative Risk & Health Impact Assessment

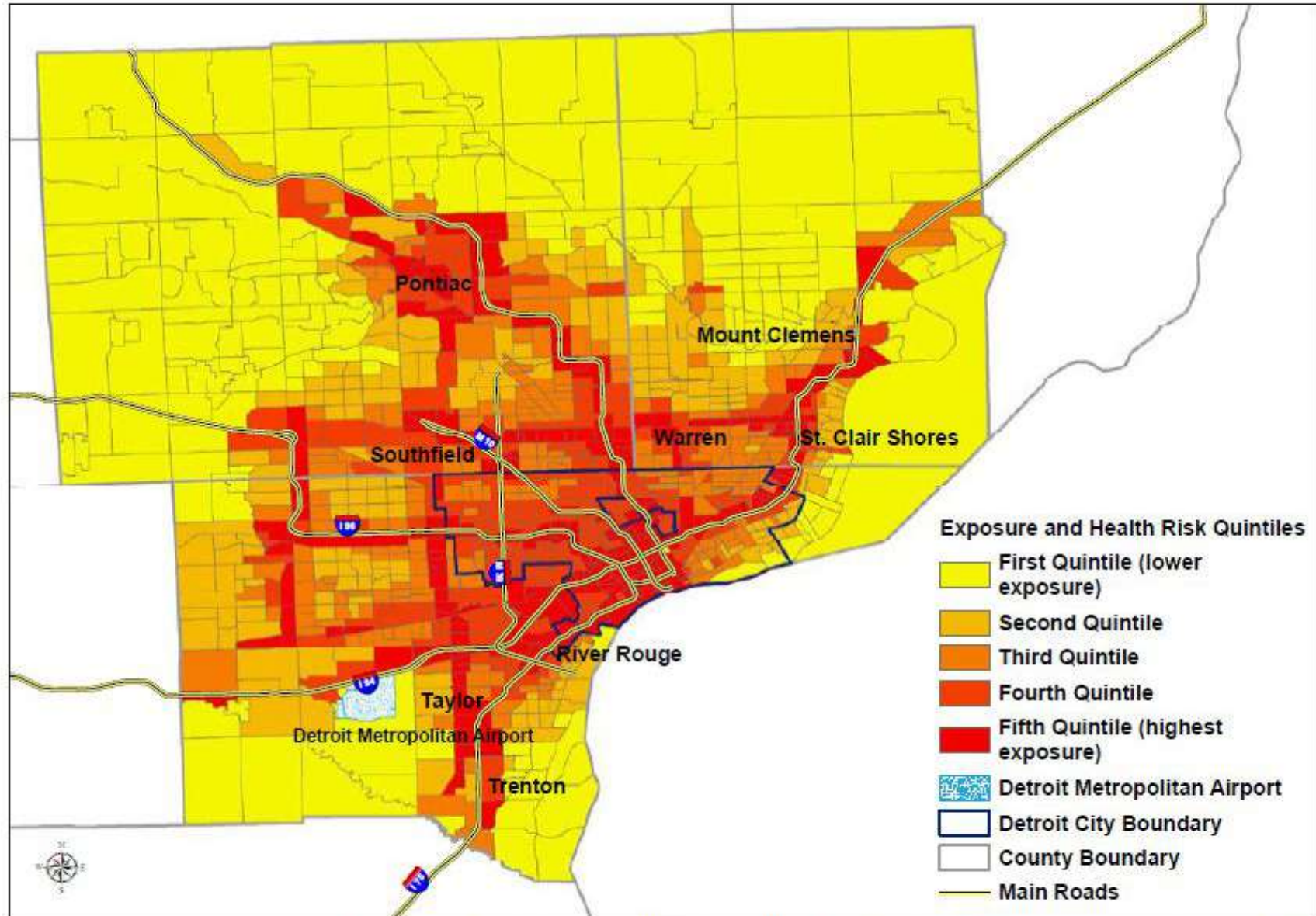
Amy J Schulz, University of Michigan School of Public Health







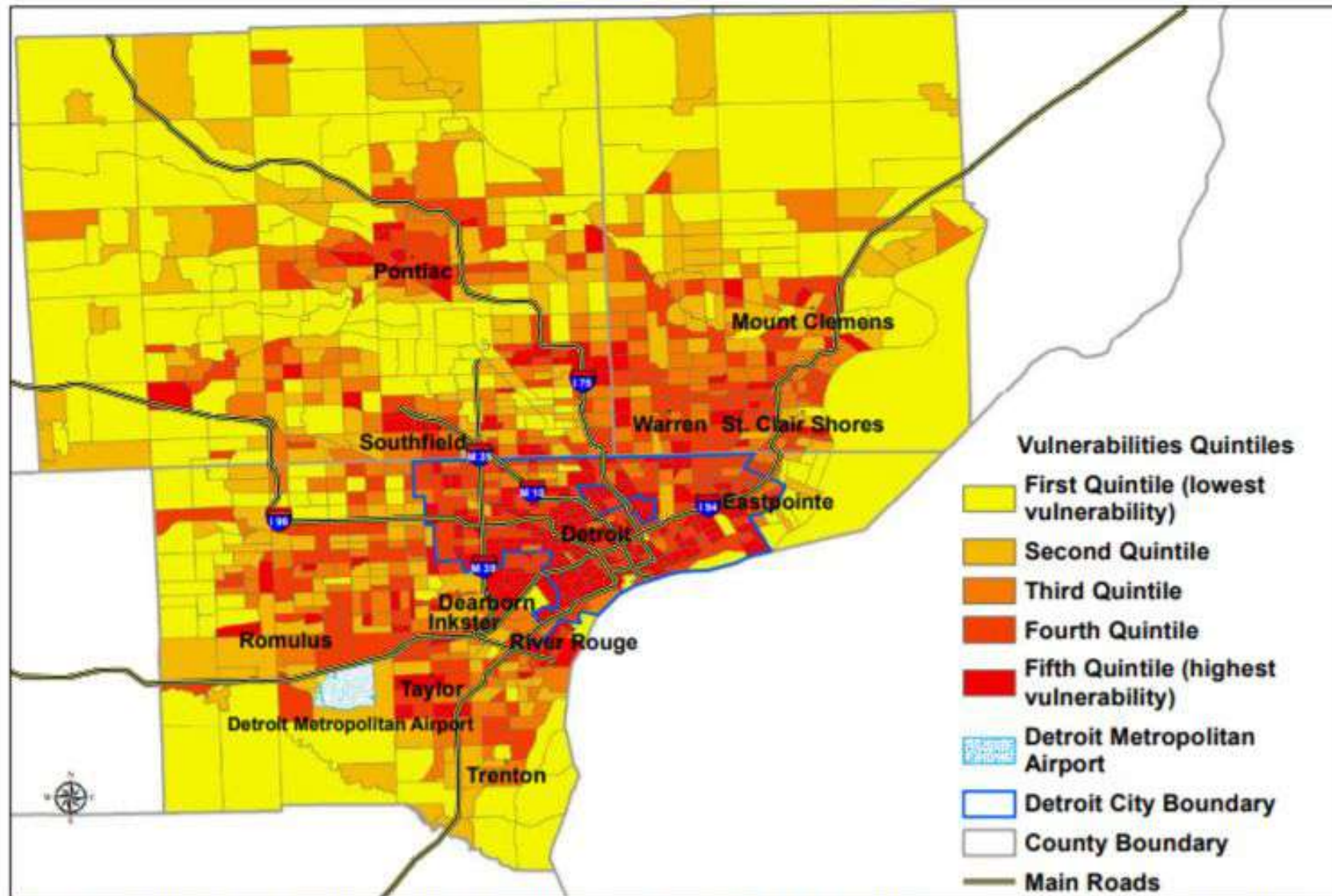
**FIGURE 1:** Diesel PM exposure, cancer and respiratory risk attributable to air pollution in the Detroit metropolitan area.



Cumulative impact polygons (CI) include: residential areas, child care facilities, health care facilities, schools and playgrounds. Exposure and Health risk include: 2011 NATA estimates of respiratory risk, cancer risk and diesel PM (non-cancer) concentration.

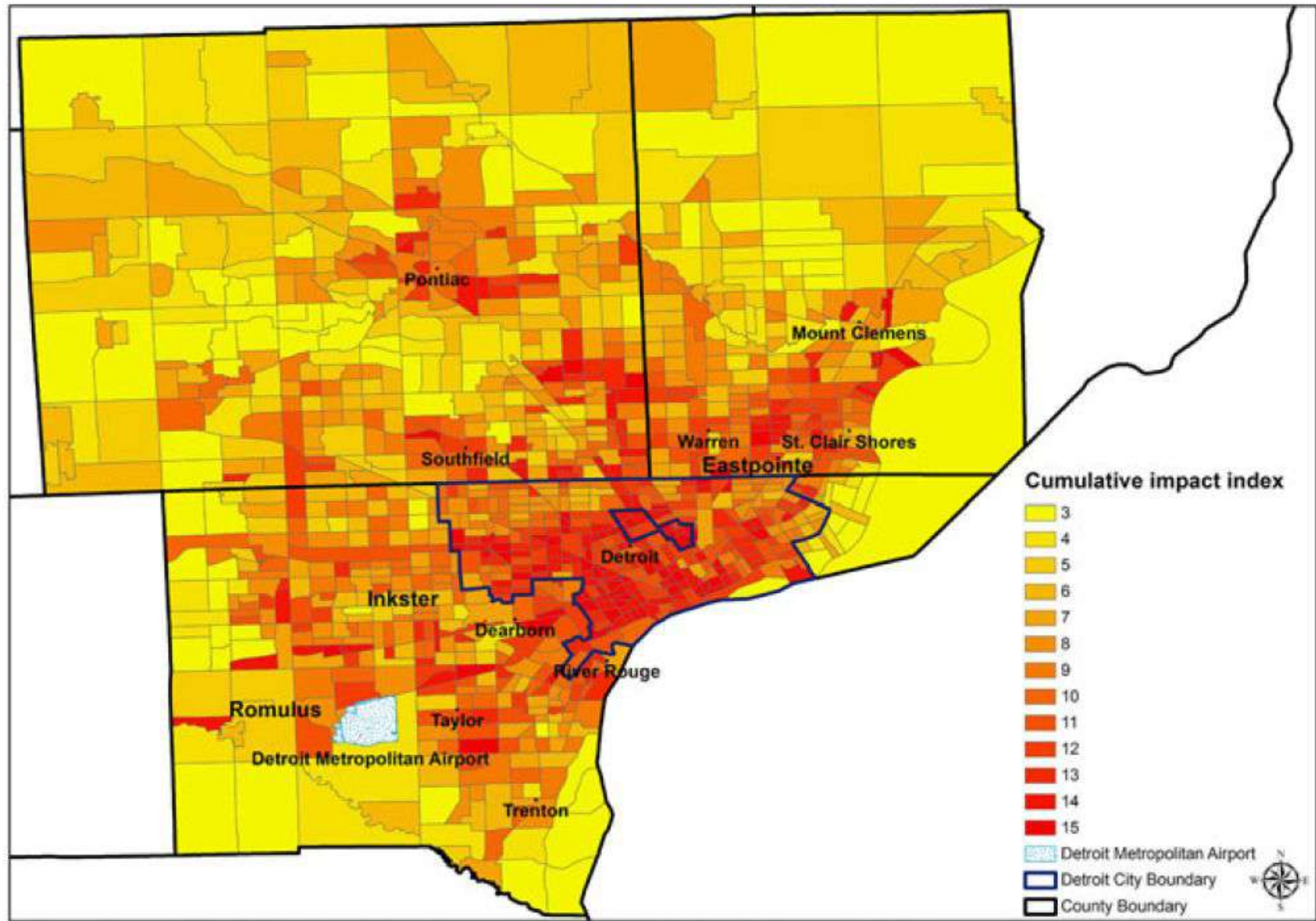


**FIGURE 2:** Population vulnerability, defined as percent below poverty, renters, low median home value, less than high school education, adults over age 60, and children below age 5, in the Detroit Metropolitan Area.<sup>7</sup>



Cumulative impact polygons (CI) include: residential areas, child care facilities, health care facilities, schools and playgrounds. Vulnerabilities includes: % below the national poverty level, % renters, median house value (reverse coded), % > age 24 with < high school completion, children age < 5, adults age >= 60, and linguistic isolation.





Cumulative impact polygons (CI) include: residential areas, child care facilities, health care facilities, schools and playgrounds.  
 Total Cumulative Impact includes: Hazardous Facilities and Land Uses, Exposure and Health Risk and Vulnerabilities



# Health Impact Assessments (HIAs)

---

Assess likely health impacts of a policy, program or permit before a decision is made, so that the impacts on health can be weighed as part of the decision making process.

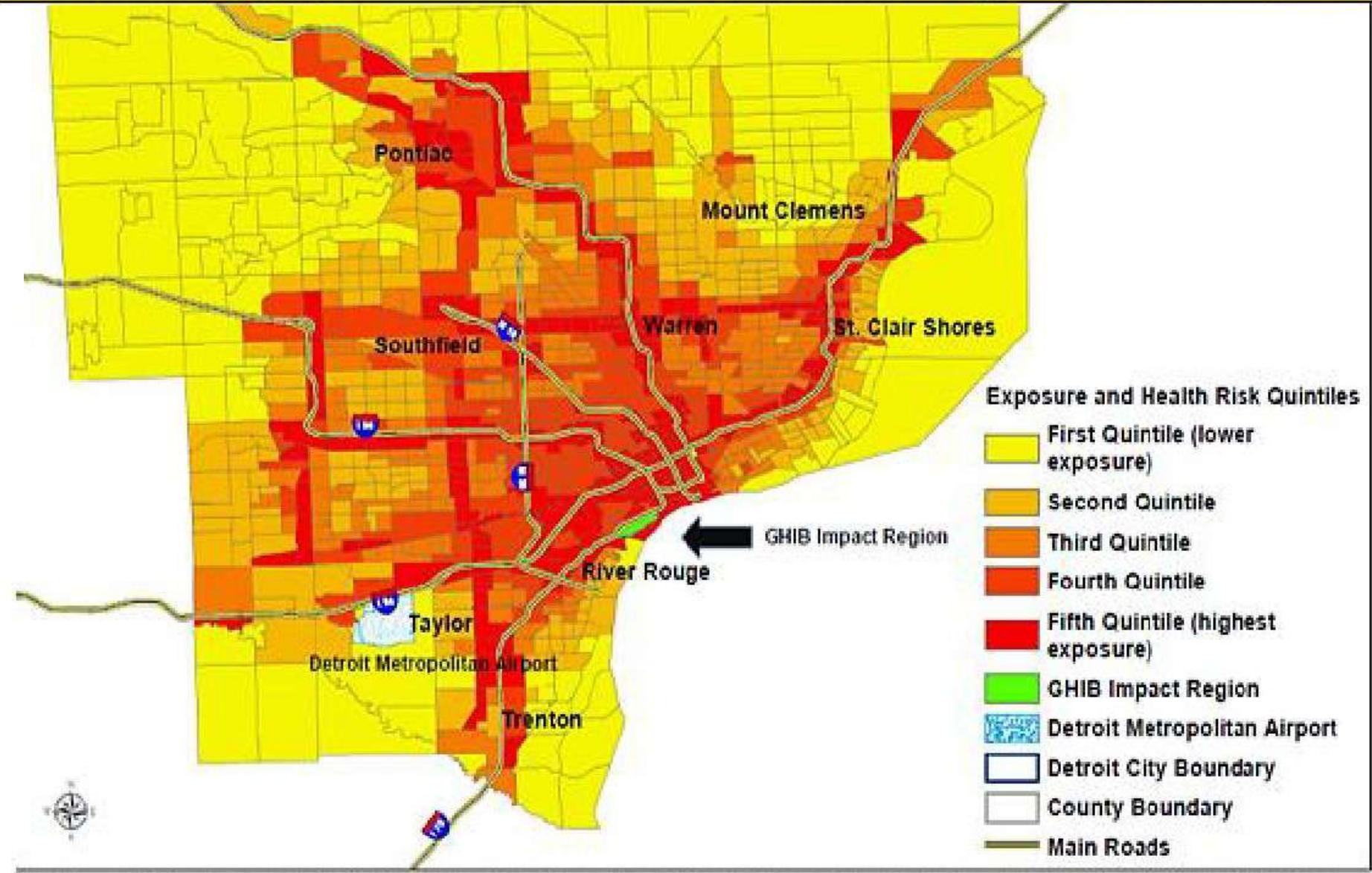
Brings consideration of health into decisions that may not be thought of as health related: transportation, emissions from industry or manufacturing, energy production

Goal is to recommend strategies to reduce adverse health impacts, focus on equity

**Figure 2: Diesel Particulate Matter (PM) exposure, cancer and respiratory risk attributable to air pollution in the Detroit Metropolitan Area (Schulz et al. 2016)**

# Gordie Howe International Bridge

*This residential area is home to many families, with among the highest proportions of children under the age of 5 in Detroit.*



**Cumulative impact polygons (CI) include: residential areas, child care facilities, health care facilities, schools and playgrounds. Exposure and Health risk include: 2011 NATA estimates of respiratory risk, cancer risk and diesel PM (non-cancer) concentration.**

Schulz, A., Mentz, G., Sampson, N., Ward, M., Anderson, R., deMajo, R., Israel, B., Lewis, T., Wilkins, D. (2016) Social and physical environments and the distribution of risk: A case example from Detroit. *DuBois Review*, 13(2), 285-304.

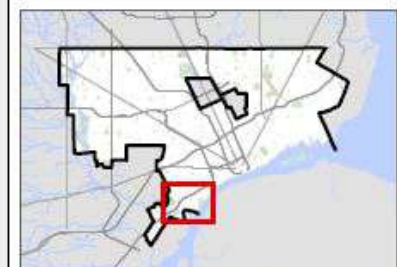


# Gordie Howe International Bridge



- Neighborhood Improvement Area
- MDOT Buyout
- Optional Buyout\*
- Optional Buyout\* or Retrofit
- Retrofit

\* Optional buyouts are for owner-occupied homes only.





# Health Impacts of Indoor Air Filters in Schools and Homes of Children With Asthma\*

---

- Monetized health risks attributable to PM2.5 exposures in Detroit (in 2010 \$)\*\*
  - \$3 million per calendar year
- Reductions in monetized health risks with indoor air filters (MERV 12)
  - In all schools: \$0.9 Million
  - In homes of children with asthma: \$ 1.0 Million

\* Martenies and Batterman, 2018. ACSJCA.

\*\* Monetized risk includes costs associated with asthma hospitalizations, emergency department visits and exacerbations, estimated

# Detroit Energy Integrated Resource Plan

---

- Integrated Resource Plan (IRP) lays out Detroit Energy's proposed energy mix (e.g, energy from coal fired power plants, renewables) for the next five years
- Reviewed by the Michigan Public Securities Commission
- Is required to demonstrate sufficient energy, and affordability of energy
- Is NOT currently required to estimate health impacts (in Michigan)
- Team from UM SPH, MEJC, NRDC estimate energy use & health impacts of Proposed IRP, with a focus on equity

# CAPHE Recommendation: HIAs

---

**Require the use of qualitative and quantitative health impact assessments (HIAs) and cumulative impact assessments as part of the air quality management process, including enforcement actions, SIP development, and permitting.**





MICHIGAN DEPARTMENT OF  
ENVIRONMENT, GREAT LAKES, AND ENERGY

# EGLE and Air Quality Permitting

---

**Paul Schleusener**

**Air Quality Division, Permit Section**

**800-662-9278 | [SchleusenerP@Michigan.gov](mailto:SchleusenerP@Michigan.gov)**

# The Setting for Air Quality Permits

- Federal and Michigan law and regulations
- Air quality permits required for many sources of air pollution

# Two Kinds of Air Quality Permits

- Renewable Operating Permit (Title V)
- Permit to Install



# The Permit to Install Application

- Describes what the company wants to do
- What and how much will be emitted
- How will the proposal meet the requirements?
  - Emission limits
  - Equipment and operating restrictions
  - Testing
  - Monitoring and record-keeping

# The Permit Review

- Independently evaluate (review) the application
- Final permit is result of a review meeting necessary requirements

# The Permit Decision

- Public comment for all Renewable Operating Permit renewals
- Public comment for some Permits to Install



Michigan Department of  
**Environment, Great Lakes, and Energy**

800-662-9278  
Michigan.gov/EGLE

For pollution emergencies:  
800-292-4706

Follow us at: [Michigan.gov/EGLEConnect](https://Michigan.gov/EGLEConnect)



# Environmental Justice In Detroit

---

May 15, 2020

# EJ Ordinances

1. **Fugitive Dust (+ amendments)**
2. **Vegetative Buffer Space**
3. **Anti-Idling**
4. **Truck Routes**
5. **Environmental Justice**
6. **Waterbody Protection**



# Buffer Space



- **Vegetative Buffers are strips of thick vegetation, including trees and shrubs, located between sources of pollution (e.g., roadways, industrial sources) and places where people spend time and may be exposed to air pollution**
- **This legislation would require vegetative buffers between polluting land uses and vulnerable land uses (e.g. schools, parks, and residences)**
- **Buffers would meet specific design requirements to ensure their effectiveness**

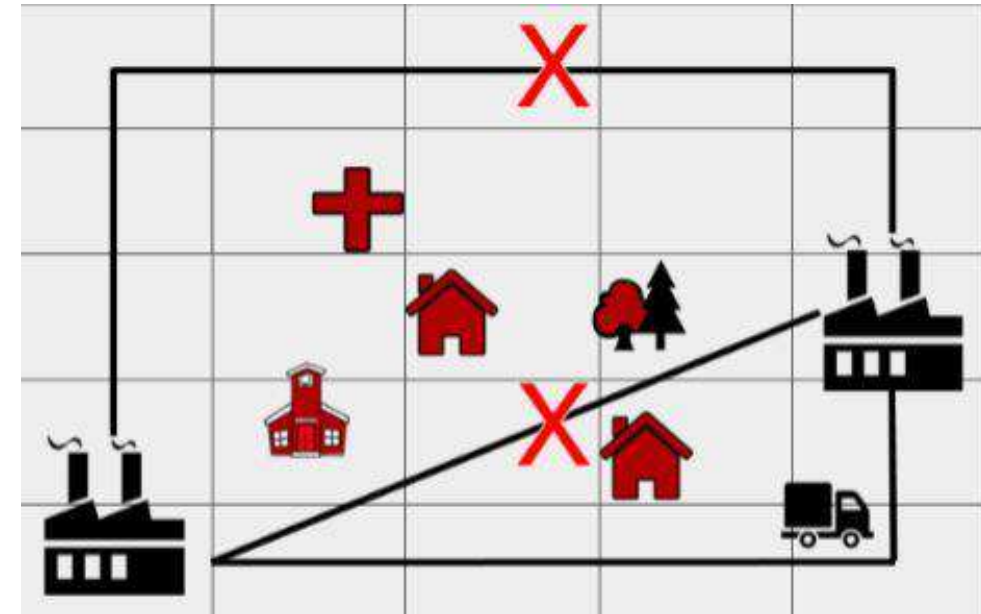


*Vegetative Buffer at Kemeny Recreation Center*

# Truck Routes

## Truck Route Pilot Study:

- **Giffels Webster Group** - Draft report completed early 2020
- **Legislative recommendations-** specific streets embedded in City Code language
- **Changes to the current policies to:**
  - Minimize traffic diversion
  - Restrict truck through traffic
  - Add a system of truck route signage.
  - Assign truck route designated streets based on roadway classification, adjacent land-use, connectivity, and physical constraints.



# Proposed Detroit EJ Ordinance



- **EJ Permits:** New facilities would be required to apply for a permit where officials (EJ Examiner or Board) determine whether the facility will have a cumulative adverse impact on the surrounding community.
- **Public Health Fund:** Expand the scope of the fund created within the fugitive dust ordinance to allow for deposit of funds from large developments or fines, and can be used toward environmental mitigations such as air filters and air quality monitors in impacted communities
- **Health Impact Assessments:** Provide vital information about public health impacts of proposed projects or programs and compel decisionmakers to consider the health of neighborhoods before greenlighting developments and other projects.
- **Green Zones:** Designated areas within a city that are shown to be overburdened with various environmental hazards. These zones receive additional support and regulations to offset the disproportionate impacts they face.

# Environmental Justice In Detroit

---





# Us, Them, You: Working Together to Cut Diesel Air Pollution

---

Southwest Detroit Environmental Vision

P.O. Box 9400, Detroit MI 48209  
313-842-1961  
info@sdevweb.org

50



## Who we are and What we do: Southwest Detroit Environmental Vision

---

- Since 1991 - improve environment & strengthen economy of Southwest Detroit
- Collaborate with residents, community organizations, government agencies, schools, small businesses, and industry
- Blight (Illegal dumping)
- Compatible neighborhood land use (including food access)
- Indoor and outdoor air quality
- Sustainability





# WHAT is in diesel exhaust?

Diesel exhaust contains more than 40 toxic chemicals

Very high numbers of tiny ultrafine particles

High levels of harmful gases, such as nitrogen dioxide



---

## SDEV Clean Diesel Initiative: Anti-Idling Campaign & Detroit Clean Transportation Collaborative

### Anti Idling Campaign (Recs 4-1 through 4-3)

- Worked to see 2010 Anti-Idling Ordinance enacted
- Worked since 2017 to see amendments to make it more effective
- Worked since 2012 to encourage fleets to comply
- Across this time, worked to keep the public engaged in the above

### Detroit Clean Transportation Collaborative (Strategy 3, 4, 6)

- Participate in City subcommittee on truck routes (2019)
- Engage fleet community to replace engines and equipment with lower emission technology

# Contact us

---

Additional information and support  
available through SDEV

- Ms. Maggie Striz Calnin,  
Director – Healthy Air  
Program
  - 313-241-6211
  - [Maggie@sdevweb.org](mailto:Maggie@sdevweb.org)
- General Inquiries
  - 313-842-1961
  - [info@sdevweb.org](mailto:info@sdevweb.org)
  - [www.sdevweb.org](http://www.sdevweb.org)



# Thank you!

---

**CAPHE Website:** <http://caphedetroit.sph.umich.edu/>

**COVID313 Website:** <https://covid313.org/>

**M-LEEd COVID-19 Resource Page:**

[http://mleead.umich.edu/Covid19\\_Resources.php](http://mleead.umich.edu/Covid19_Resources.php)

Questions not answered will be posted in the next few days.