

A photograph of a bright blue sky filled with soft, white, wispy clouds. The clouds are scattered across the frame, with some appearing as thin streaks and others as small, fluffy patches. The overall atmosphere is clear and bright.

Pittsburgh Air Quality

Oakland-Wide Meeting

January 26, 2021

BREATHE PROJECT

The Air We Share



your voice matters

**We still have a serious air quality
problem**

**Adding to our airshed burden will
only make things worse.**

Breathe Cam Videos

[Clairton Coke Works, December 24, 2018](#)

[Edgar Thomson Works, June 18, 2020](#)

[Edgar Thomson Works, June 23, 2020](#)

[Edgar Thomson Works, July 4, 2020](#)



Pennsylvania: Allegheny

Allegheny County

Pittsburgh-New Castle-Weirton, PA-OH-WV

If you live in Allegheny County, the air you breathe may put your health at risk.

Ozone



Particle Pollution 24-hour



Particle Pollution Annual

FAIL

Source: ALA SOTA2019

Air quality in the Pittsburgh Region was considered

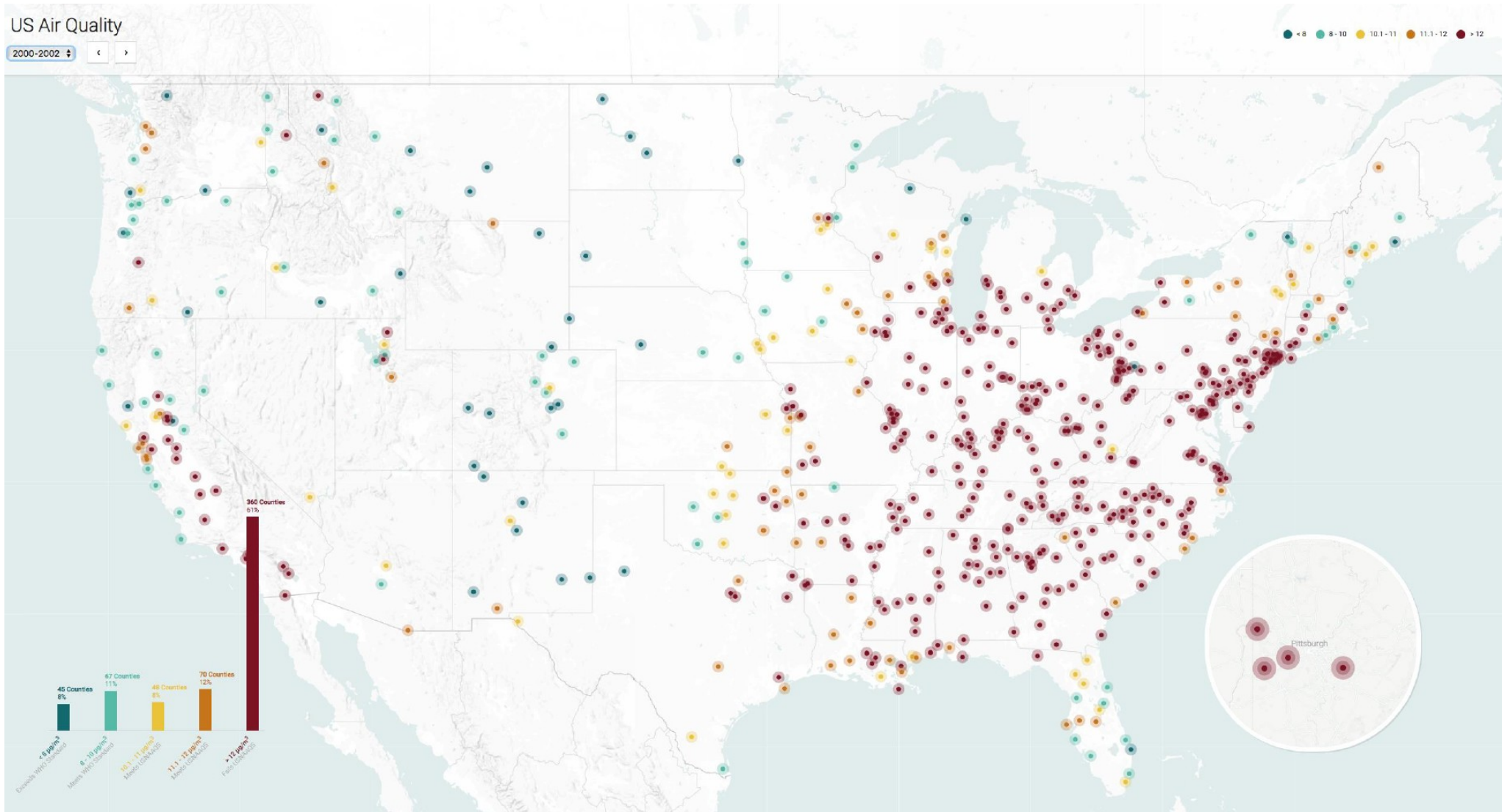
NOT GOOD

230 days (2019)

229 days (2018)

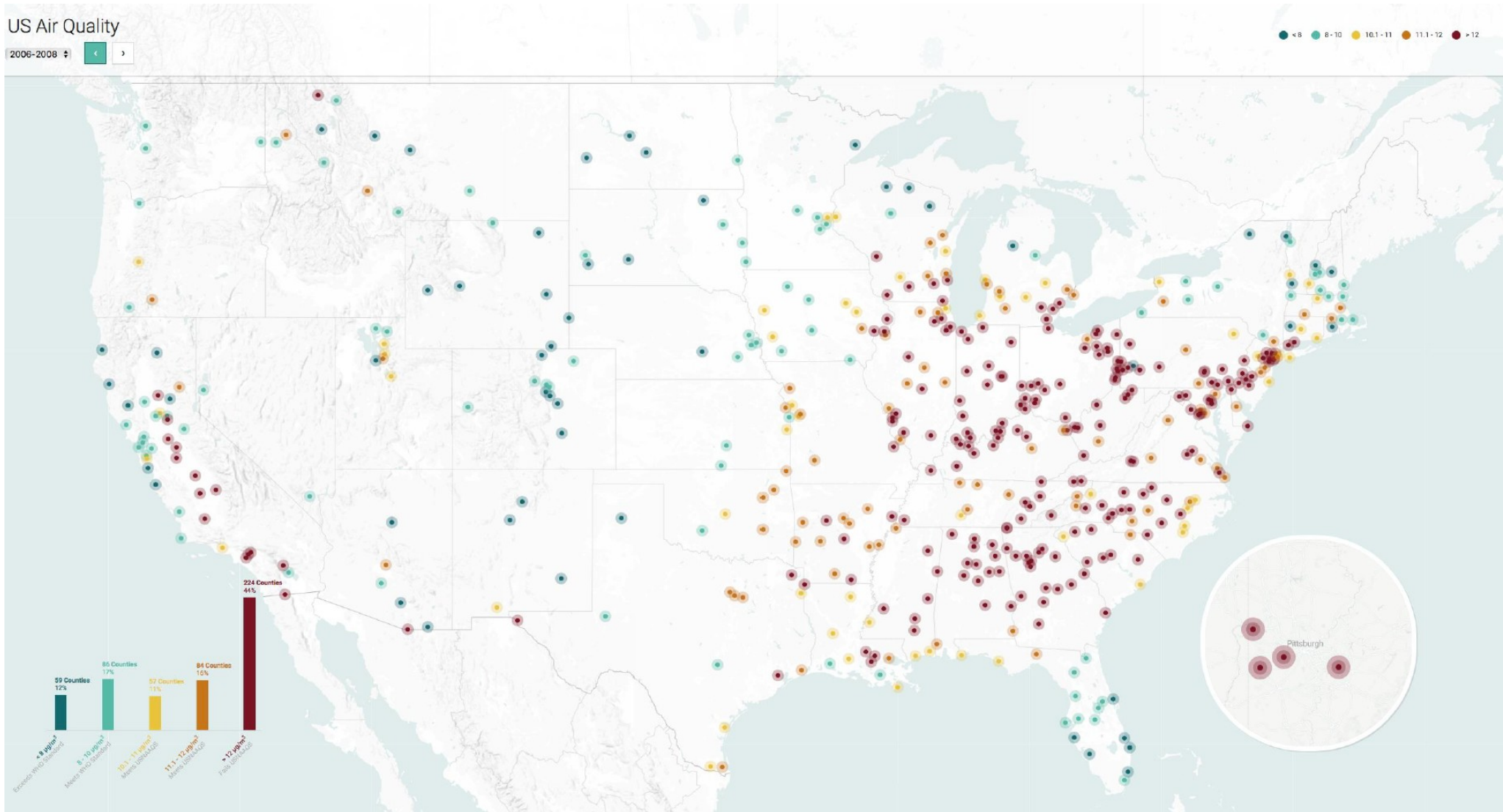
(about 2/3 of the time)

County PM_{2.5} Annual Design Value (DV) 2000-2002



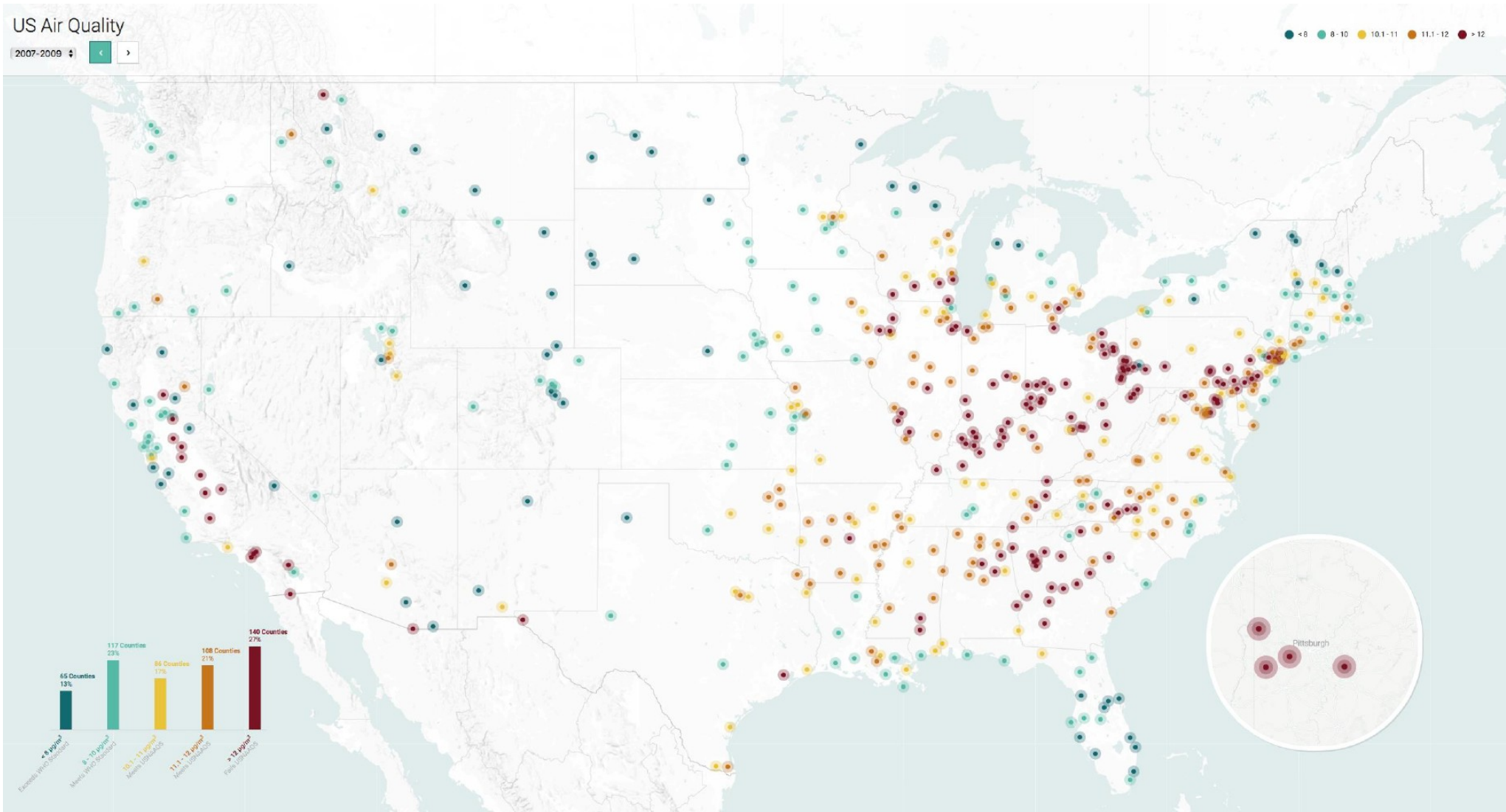
Source: Clean Air Task Force 2019

County PM_{2.5} Annual Design Value (DV) Trend 2006-2008



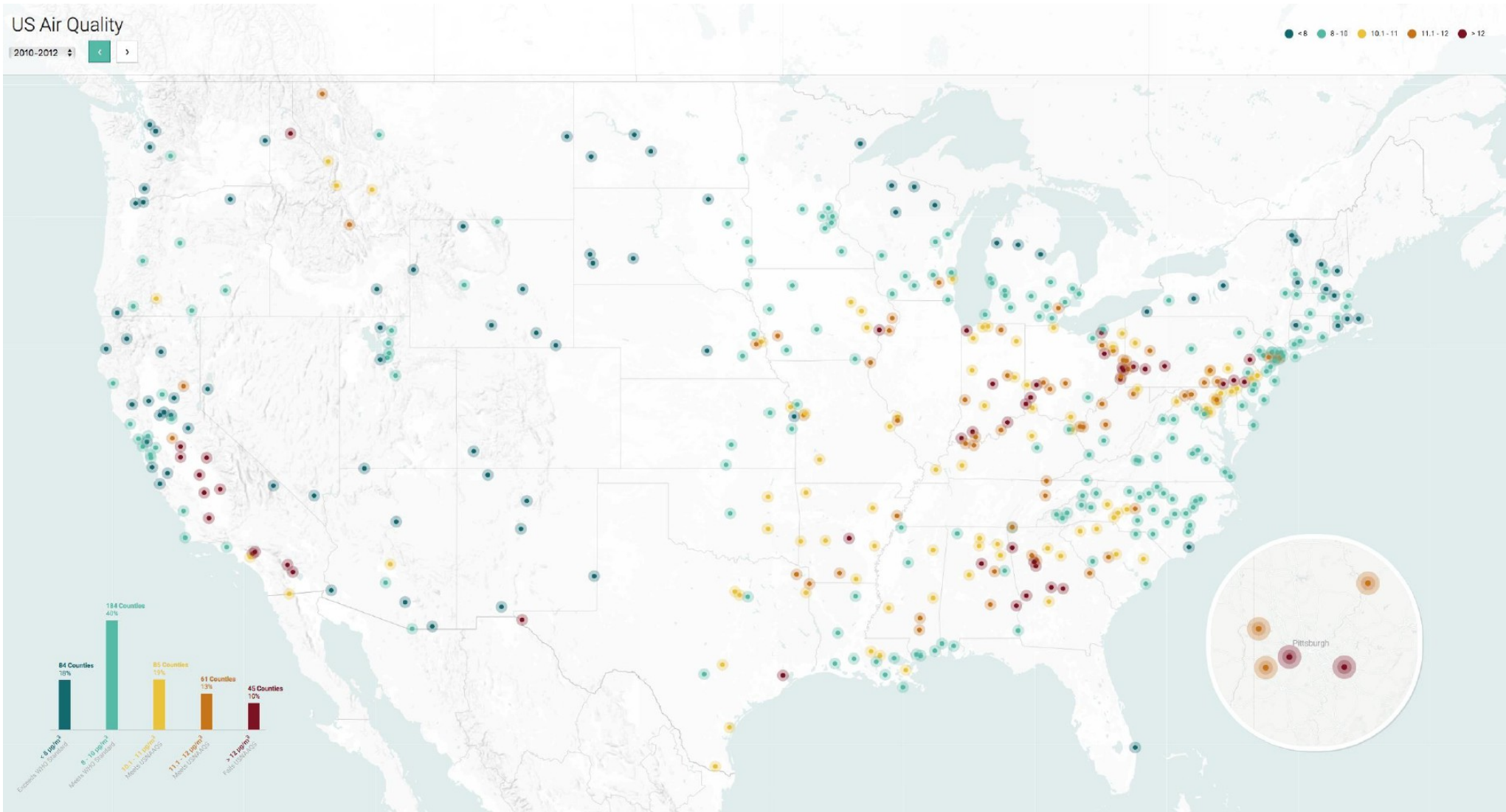
Source: Clean Air Task Force 2019

County PM_{2.5} Annual Design Value (DV) Trend 2007-2009



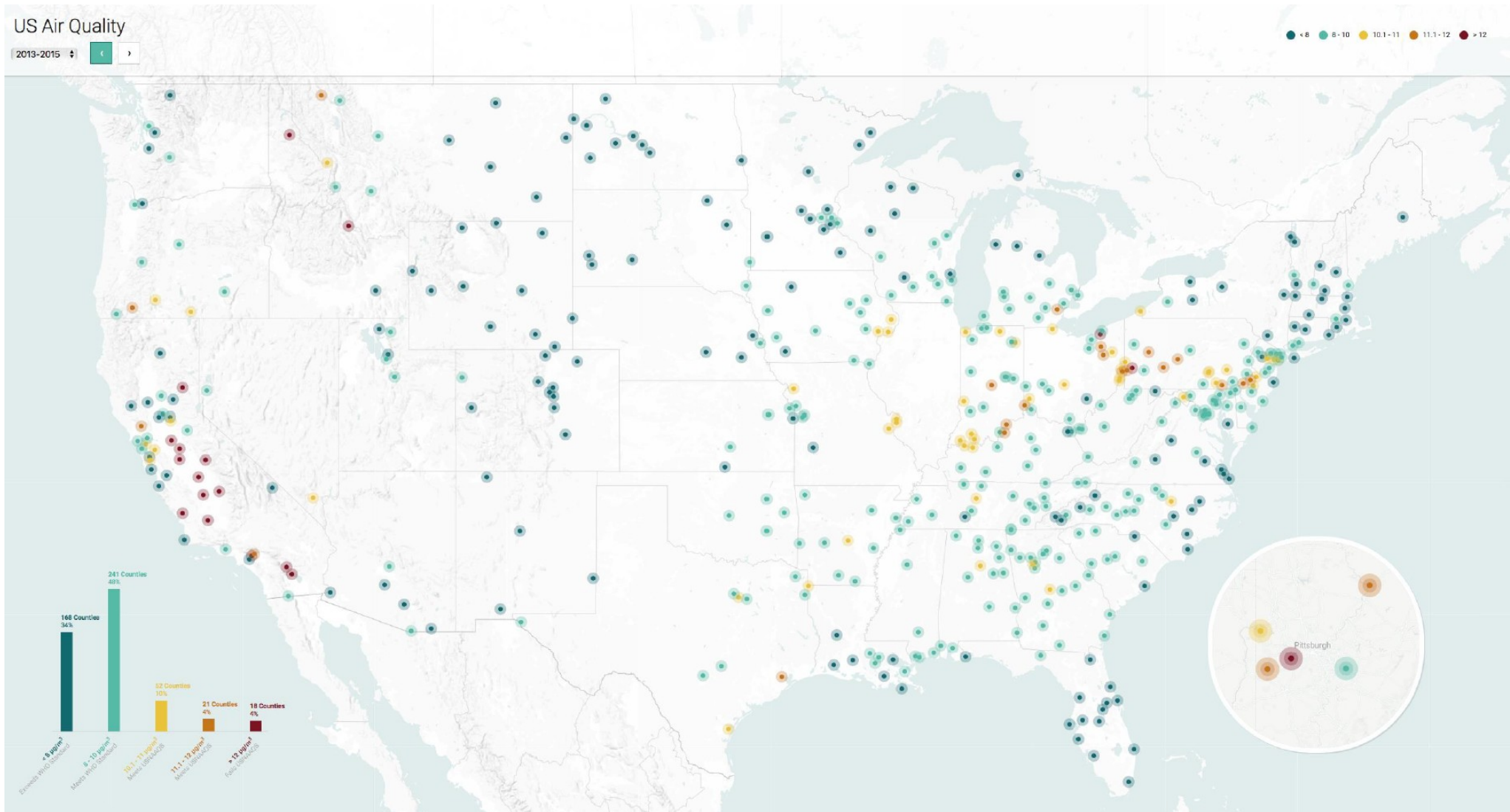
Source: Clean Air Task Force 2019

County PM_{2.5} Annual Design Value (DV) Trend 2010-2012



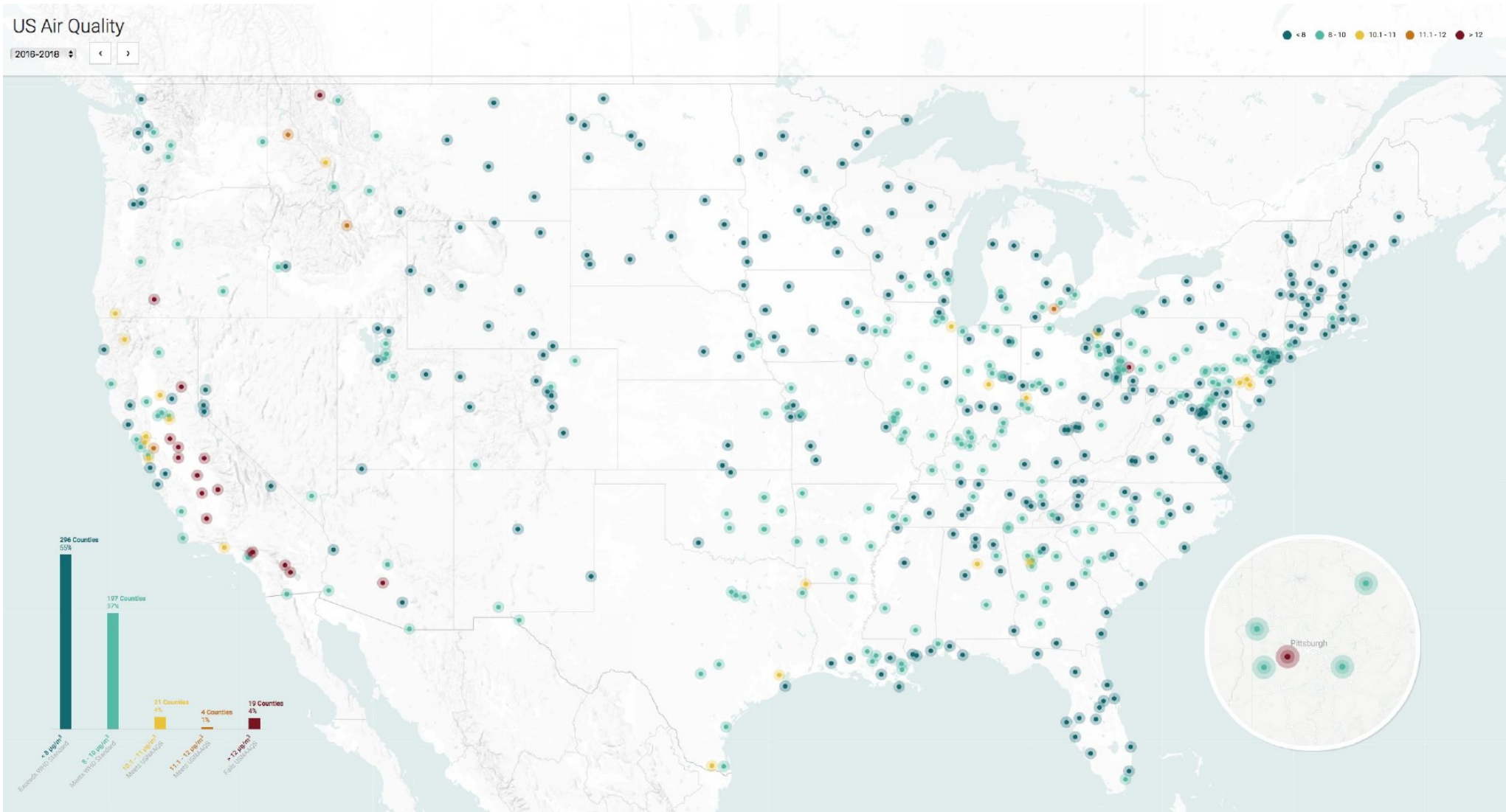
Source: Clean Air Task Force 2019

County PM_{2.5} Annual Design Value (DV) Trend 2013-2015



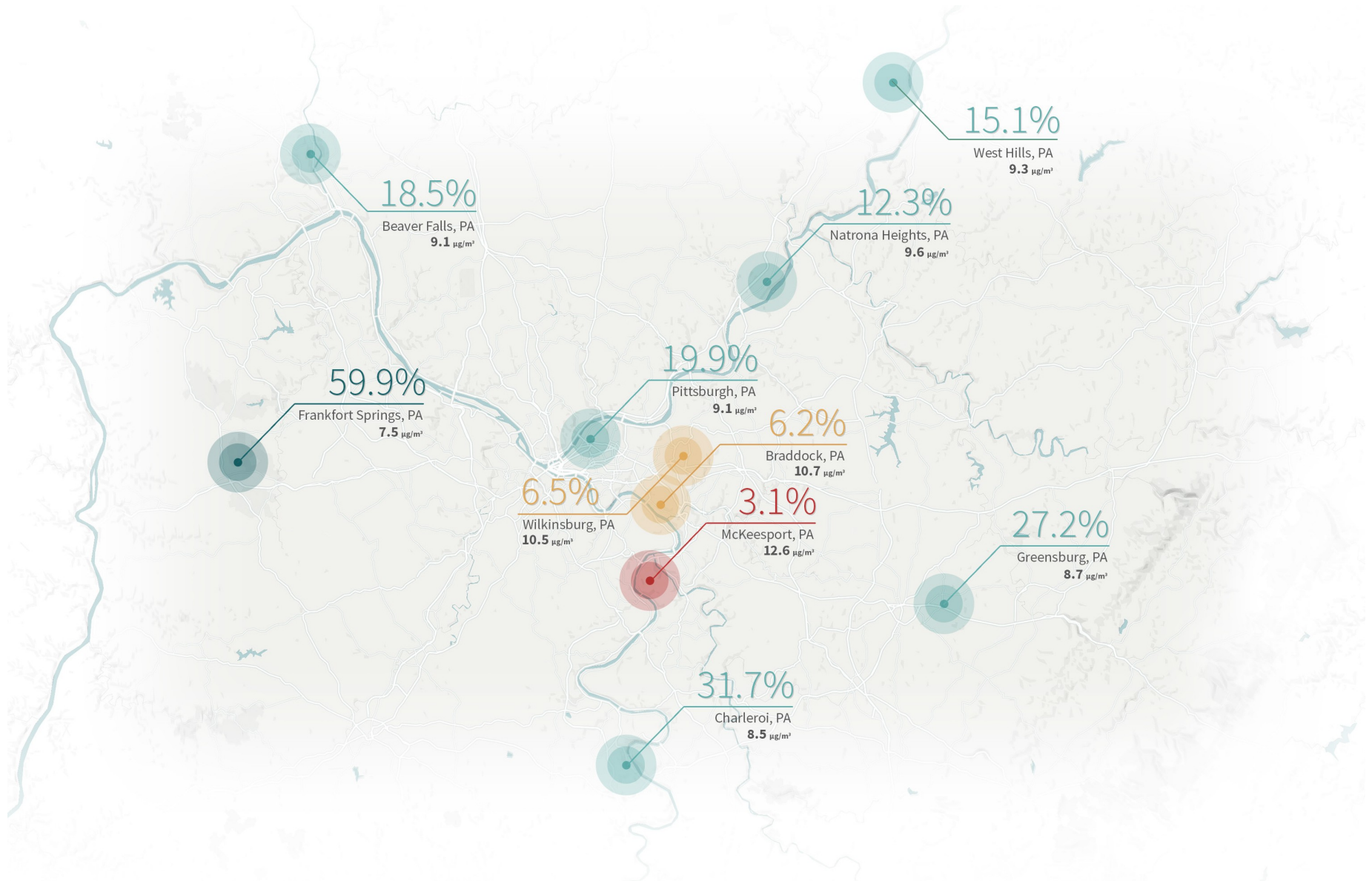
Source: Clean Air Task Force 2019

County PM_{2.5} Annual Design Value (DV) Trend 2016-2018



Source: Clean Air Task Force 2019

Pittsburgh Area PM_{2.5} Annual DVs 2016-2018



Source: Clean Air Task Force 2019

PM 2.5: It is NOI just 1 monitor:

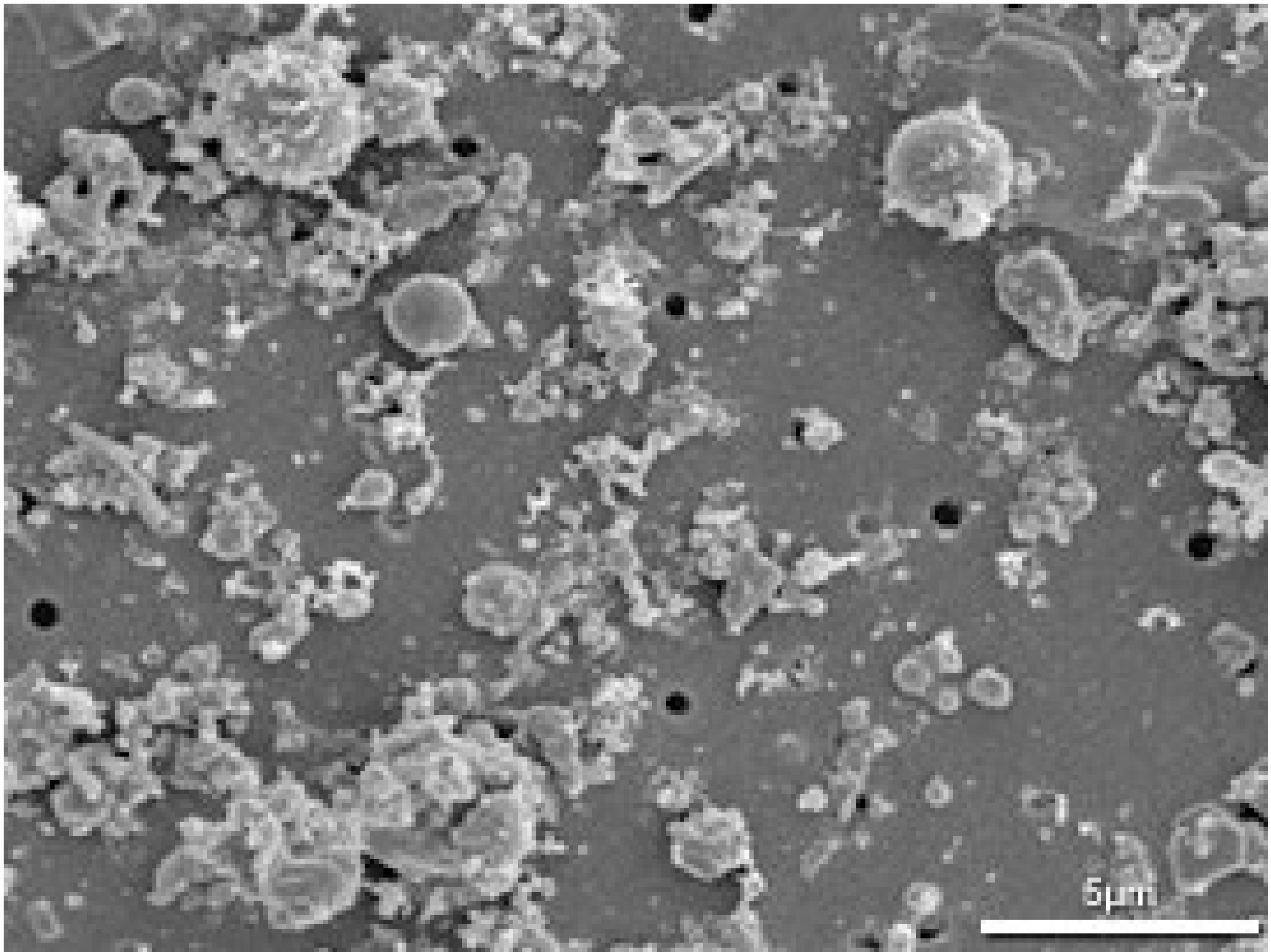
- There were eight PM 2.5 monitors in the Pittsburgh CSA with a valid annual 2017-19 DV
 - Three were in the worst 10%
 - Another two in the worst 20%
 - Two more in the worst 30%
 - One in the worst 40%.

2017 – 2019 AQI Pittsburgh MSA

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Red	1	1	4
Orange	31	24	11
Yellow	241	204	215
Green	92	136	135

(Number of Days)

Source: EPA AQI Data 2017 – 2019



Breathe Meter

Our Air Ranks in the Dirtiest 11.46% of U.S. Cities

Click to Select City

Select a city from the dropdown on the right to compare our air.

PITTSBURGH

11.46%

CLEANEST (100%)

NEW YORK, NY

51.4%

DIRTIEST (0%)

Percentile rank for average annual particle pollution out of 328 urban areas using U.S. EPA data from 2017-2019 (Clean Air Task Force, 2020).

Associations quantified between PM exposure and acute health effects with no apparent lower bound

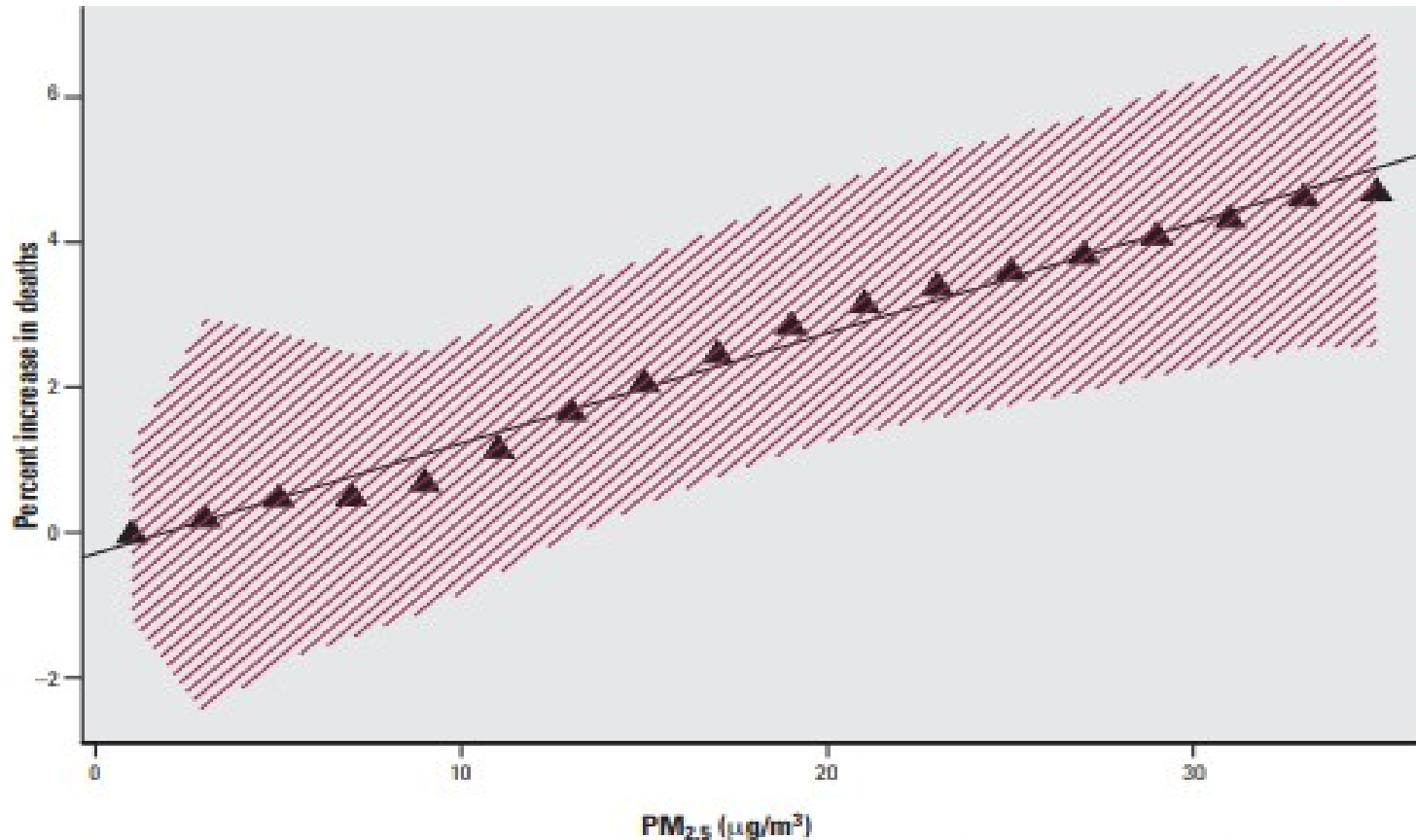
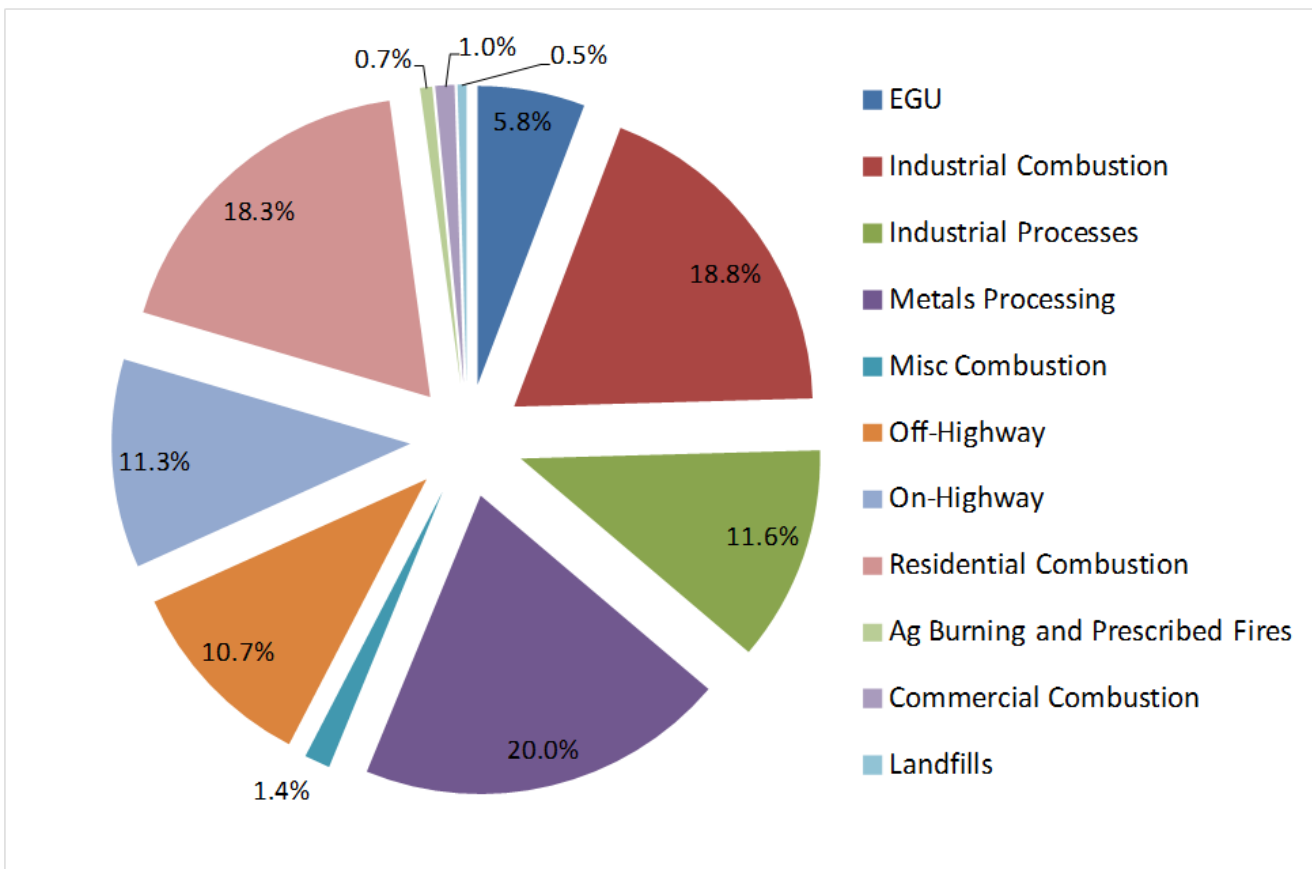


Figure 1. Overall estimated dose–response relation between total PM_{2.5} and daily deaths in six U.S. cities. The estimate is obtained by combining the estimated smoothed curves in each of the cities, after controlling for weather, season, and day of the week. The shaded area indicates the pointwise 95% confidence intervals at each point. The line shown is a least-squares regression line through the estimated points.

Source: Schwartz et al, The Concentration Response Relation between PM 2.5 and Daily Deaths, EHP, 2002

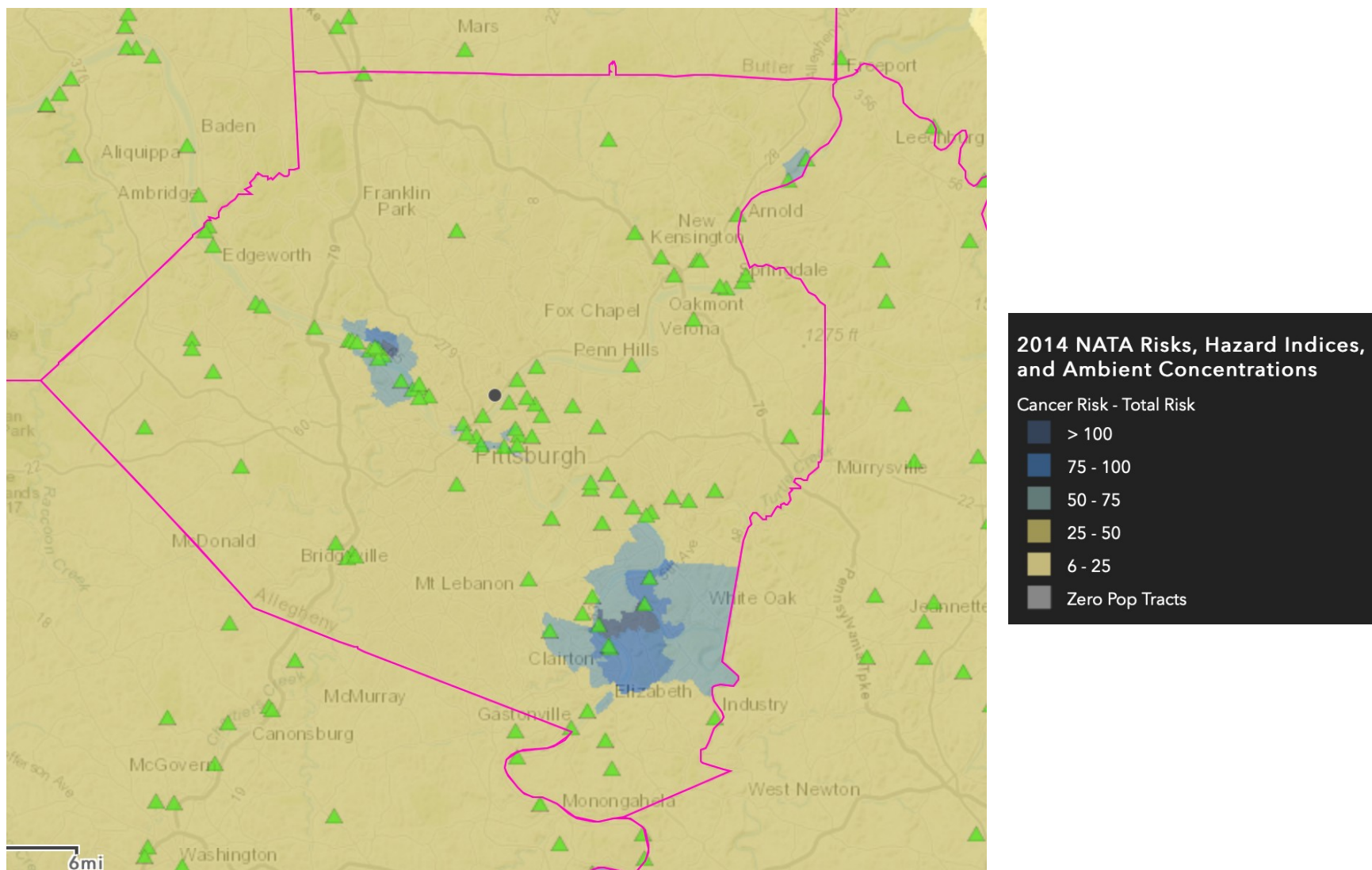


Industry: 58 %
Mobiles: 22 %
Other: 20 %

Source: CATF 2015

Allegheny County Emissions from NEI 2011 v.2 PM2.5
 (filterable + condensable)

Allegheny County: Cancer Risk



Source: 2014 National Air Toxics Assessment

Breathe Cam Videos

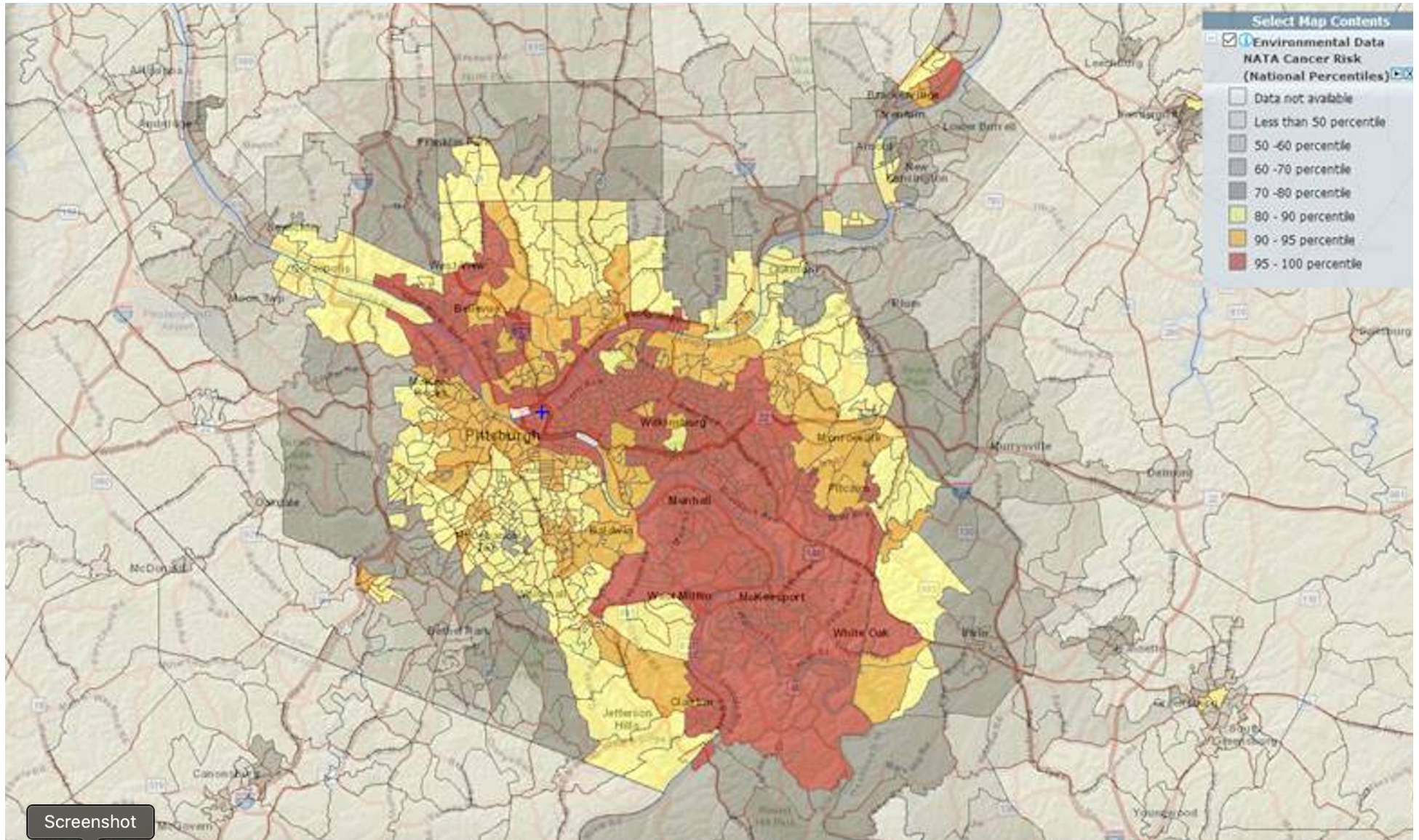
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Allegheny County: Cancer Risk



Source: 2014 National Air Toxics Assessment

Allegheny County, PA

Groups At Risk		
Total Population:	1,223,048	Risks to the population
Pediatric Asthma:	20,456	Risks to people with Asthma
Adult Asthma:	101,079	Risks to people with Asthma
COPD:	65,853	Risks to people with COPD
Lung Cancer:	786	Risks to people with lung cancer
Cardiovascular Disease:	101,907	Risks to people with Cardiovascular Disease
Diabetes:	103,941	Risks to people with Diabetes
Children Under 18:	230,313	Risks to children and teens
Adults 65 & Over:	225,605	Risks to older adults
Poverty Estimate:	132,929	Risks to people with low incomes

**We still have a serious air quality
problem**

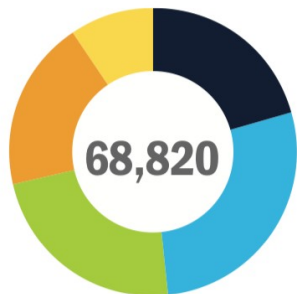
**Adding to our airshed burden will
only make things worse.**



CLEAN JOBS PENNSYLVANIA

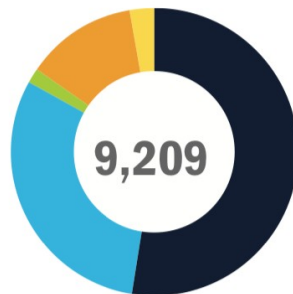
90,772 CLEAN ENERGY JOBS ACROSS PENNSYLVANIA¹

2019



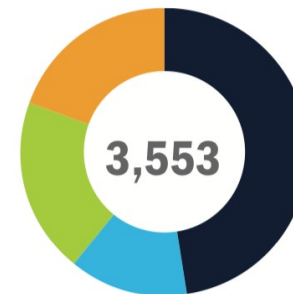
ENERGY EFFICIENCY:

- ENERGY STAR & Lighting: **14,286**
- Trad. HVAC: **19,008**
- High-Efficiency HVAC & Renewable H&C: **15,986**
- Adv Materials: **13,105**
- Other: **6,435**



RENEWABLE ENERGY:

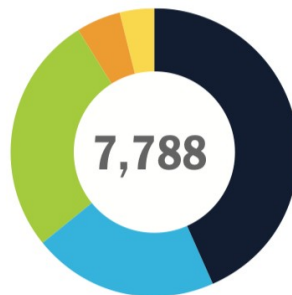
- Solar: **4,846**
- Wind: **2,815**
- Geothermal: **151**
- Bioenergy/CHP: **1,166**
- Low-Impact Hydro: **232**



GRID & STORAGE:

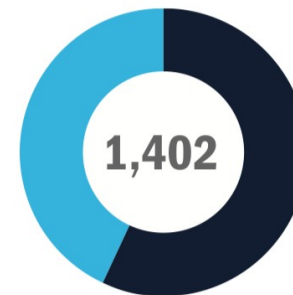
- Storage: **1,692***
- Smart Grid: **473**
- Micro-Grid: **700**
- Other Grid Modernization: **688**

* Storage includes pumped hydro storage, battery storage, thermal storage, and mechanical storage detailed technologies.



CLEAN VEHICLES:

- Hybrid Electric Vehicles: **3,389**
- Plug-In Hybrid Vehicles: **1,626**
- Electric Vehicles: **2,087**
- Natural Gas Vehicles: **385**
- Hydrogen & Fuel Cell: **301**




FUELS:

- Other Ethanol/Non-Woody Biomass: **802**
- Other Biofuels: **600**

Source: <https://www.e2.org/reports/clean-jobs-pennsylvania-2019/>

JUNE 2, 2017 | Albany, NY



Governor Cuomo Announces Major Climate and Jobs Initiative in Partnership with the Worker Institute at Cornell University ILR's School and Climate Jobs NY to Help Create 40,000 Clean Energy Jobs by 2020

Initiative Will Accelerate Renewable Energy Growth With up to \$1.5 Billion Investment in Renewable Energy Projects

Largest Clean Energy Procurement by a State in U.S. History Strengthens New York's Position as National Leader on Climate Change



Thank You

mmehalik@breatheproject.org

Site of concern

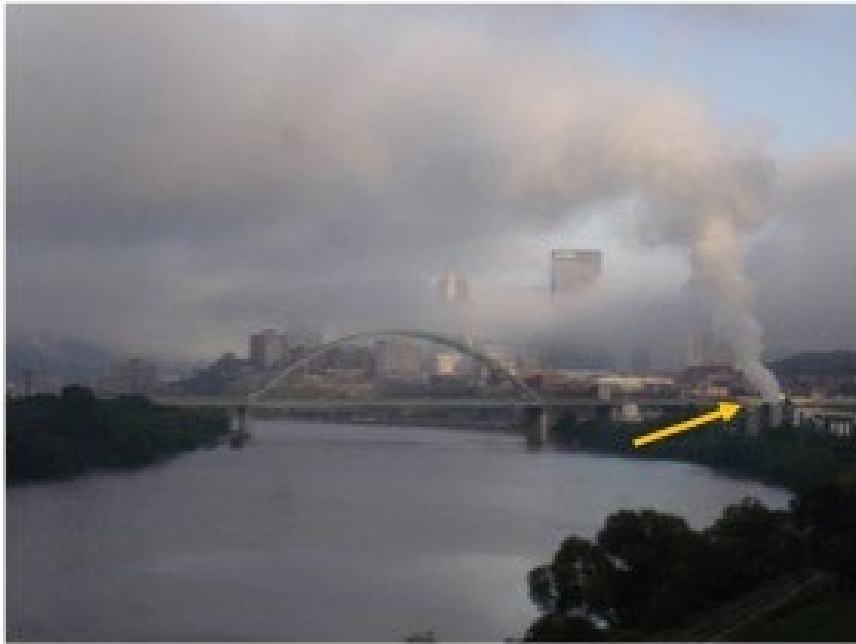
Under the Birmingham Bridge: Lindy Paving, Lehigh Hanson

Possible Emission Sources within the Lindy Paving Facility, Second Ave.



Pictures taken on October 23, 2020 as described on last slide. Possible problematic emission source include the Significant amount of diesel truck traffic. Arrows denote a dump truck in process of being loaded with asphalt (#1) and column of 5-6 more waiting behind (#2). Idling is a likely possibility. #3 points to a an obvious stack of some sort where hot emissions emerge as evident by greater opacity and upward movement.

Generalized Emissions from Lindy Paving, Second Ave., Pittsburgh PA Visible from a Distance.



September 24, 2013

Pictures shot from the location of 100 Technology Dr/
Hot Metal bridge looking north. Arrows indicate visible
emission plumes on 2 separate days.



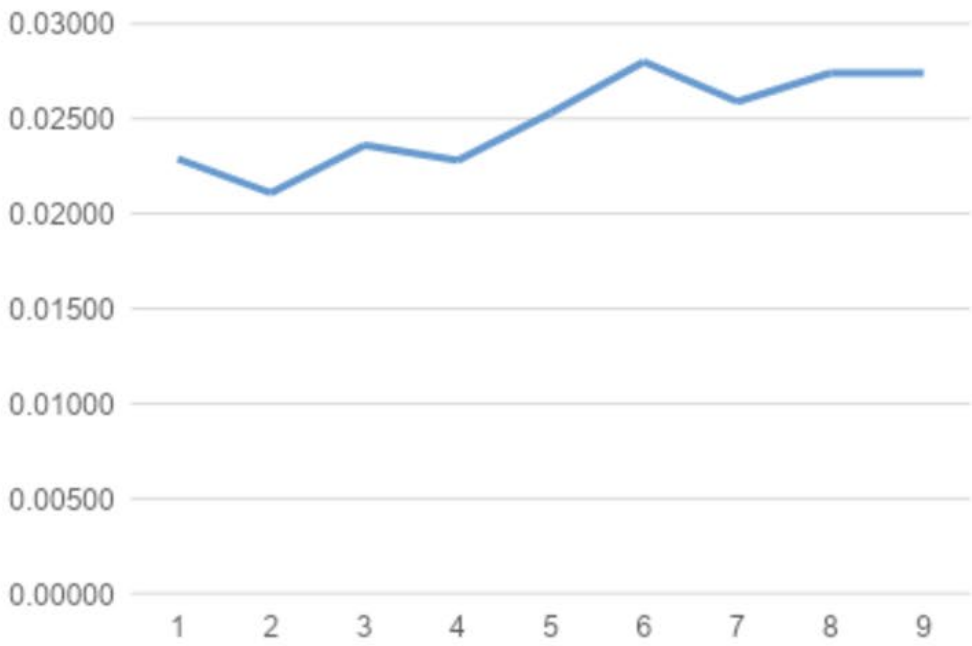
November 20, 2014

NOx
CO
Particulate Matter
PM (filterable)
PM10
PM2.5
SOx
VOC
Hexane
Formaldehyde
Benzene
Toluene
Naphthalene
1,3-Butadiene
HAP
Ammonia
CO2e
VOC (ERC)

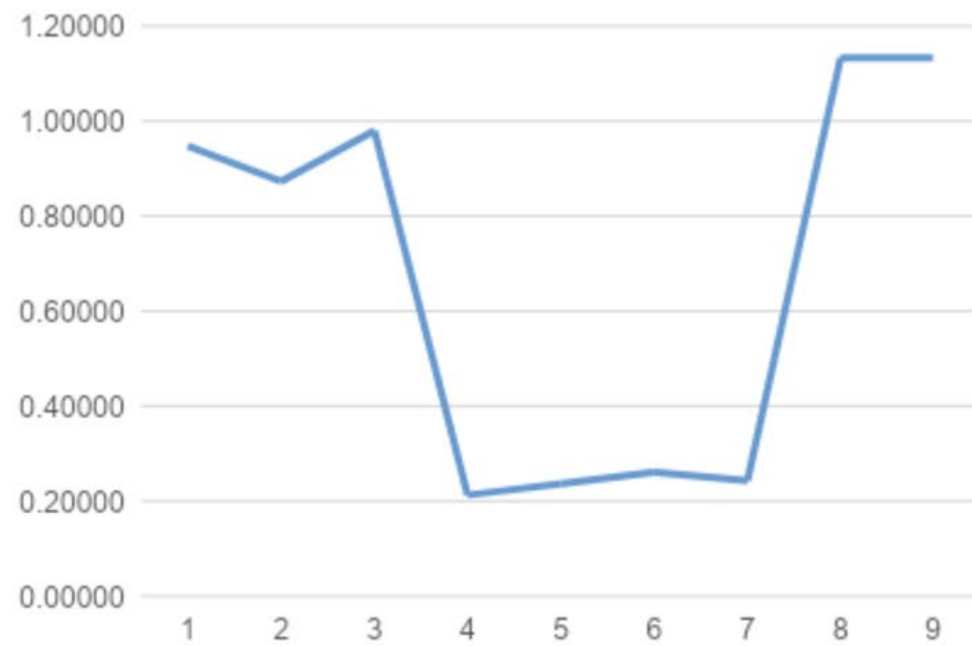
[Center for Health and Environmental Justice
Asphalt Plant work](#)

Emissions SnapShot

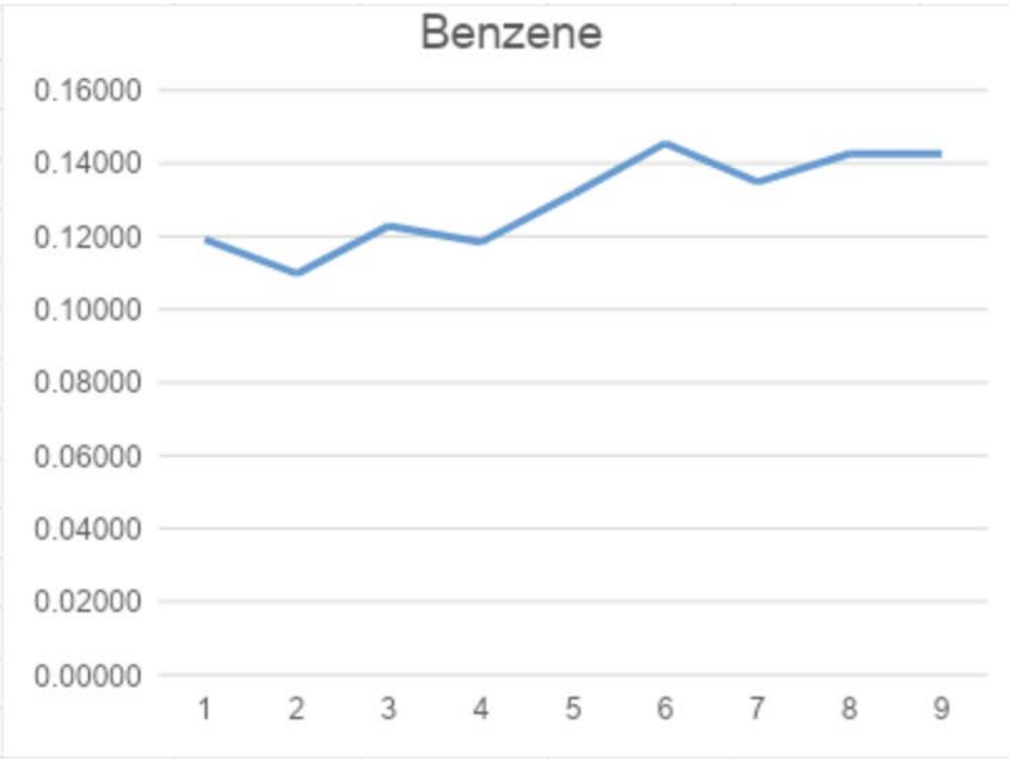
Ethyl Benzene



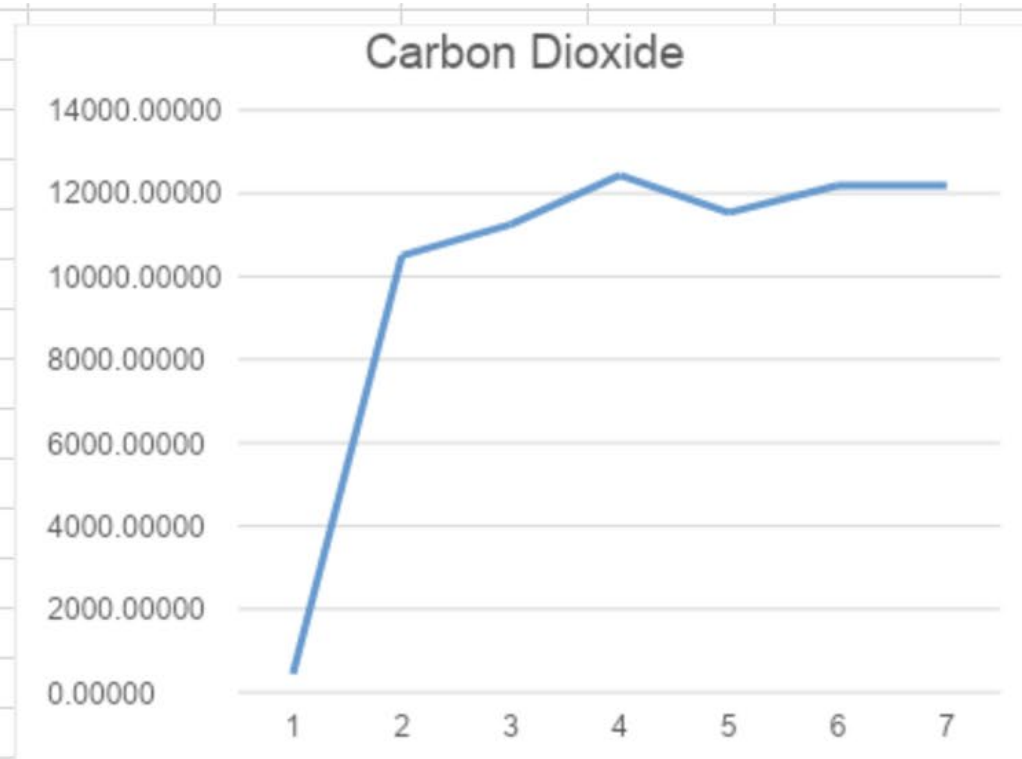
Formaldehyde



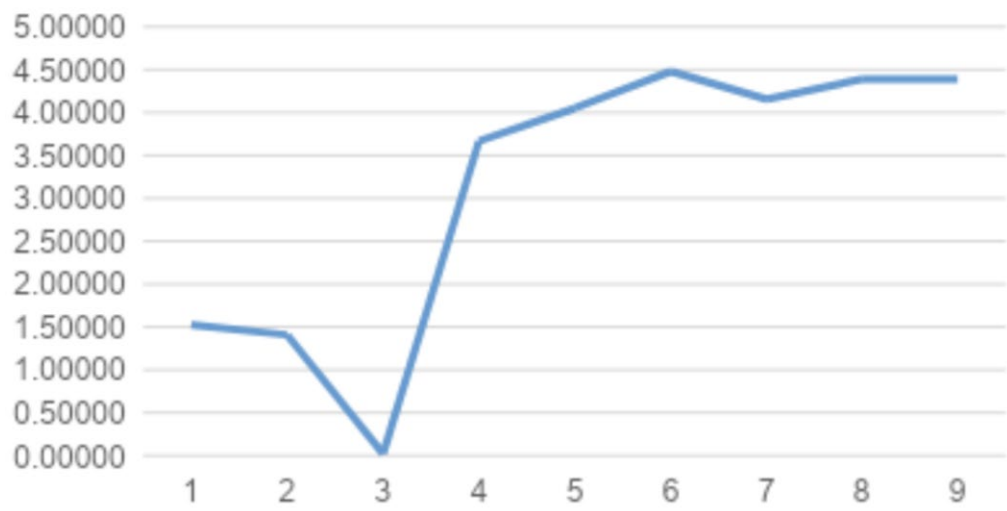
Benzene



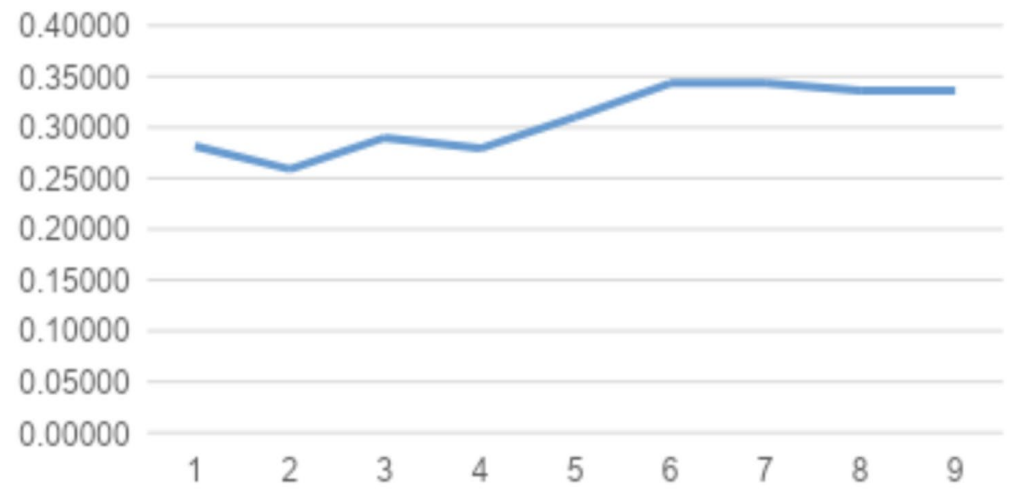
Carbon Dioxide



Methane



Hexane



Permit Renewal / Public Input

- What do we want to know before then?

Interim Actions

- SmellPgh App Sign-ups and Use
- Monitor host sign-ups and acquisitions
- Photographic Observation and Documentation
- Story/Experiential recordings and sharing out
- Look for project opportunities to integrate air quality data collection and improvements
- Communicate with City and Council representatives

Be Proactive

smellpgh.org

www.purpleair.com

airvizinc.com

environmentaldata.org

Monitoring Network; Filling Gaps