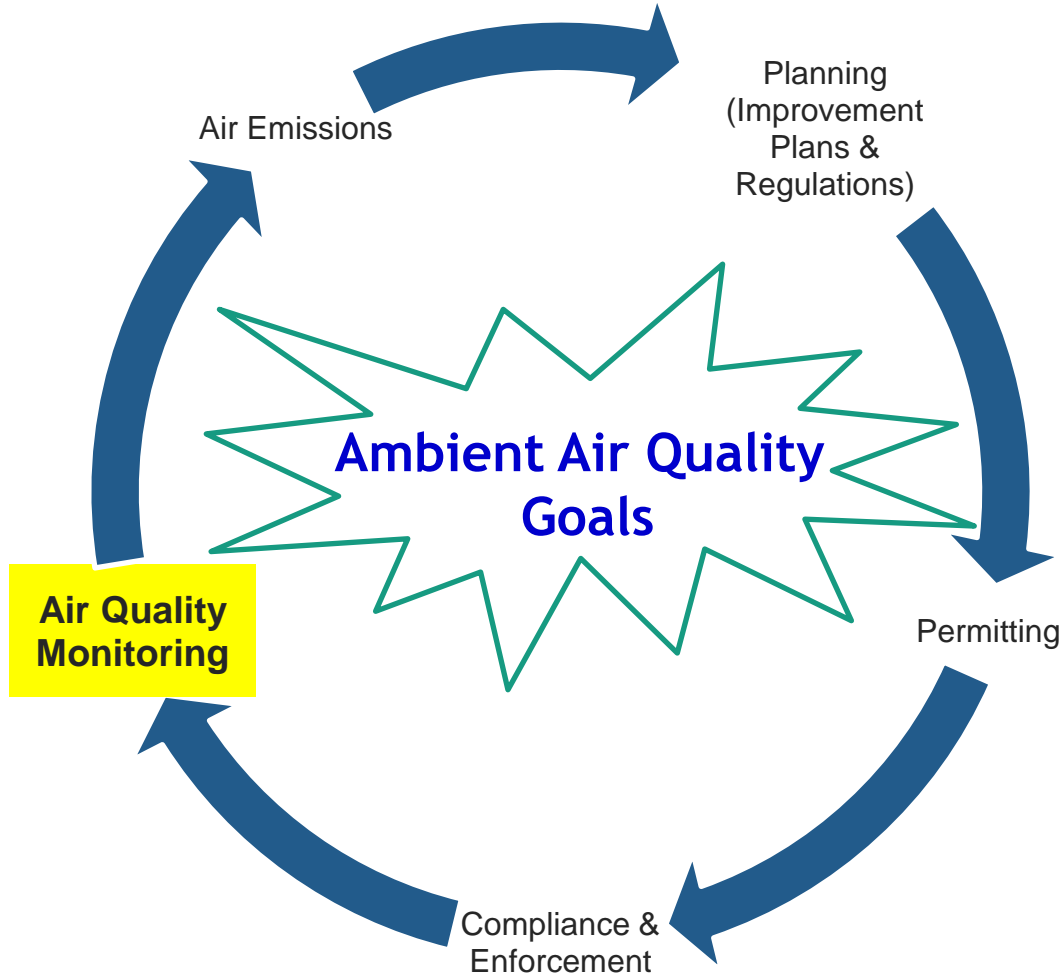


Clearing the Air: Community Meeting and Discussion on Ward 8 Air Quality Monitoring

Community Meeting: June 2023



How Does the Air Quality Program Work?

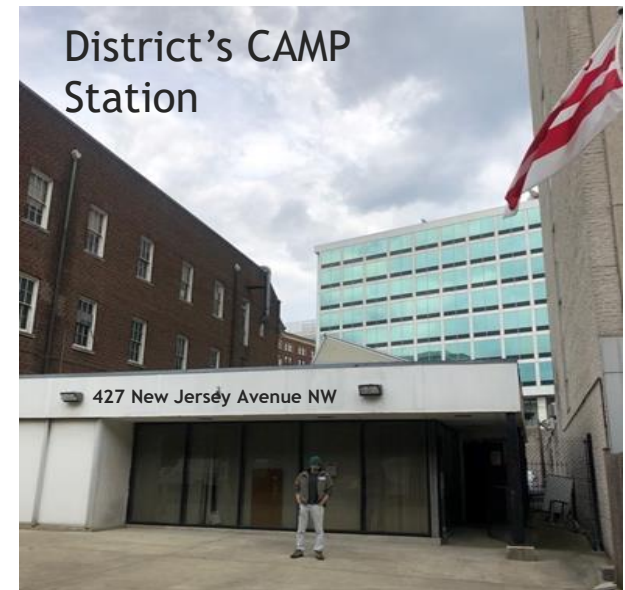
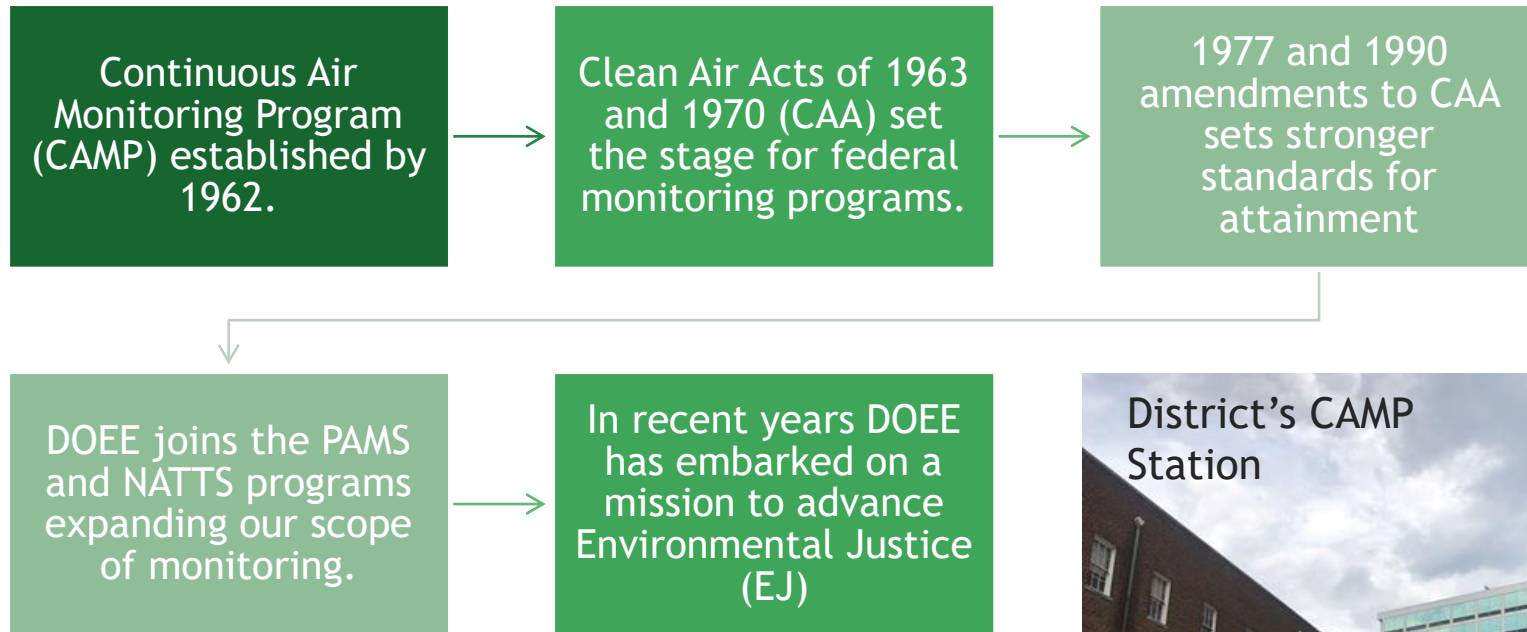


Why Monitor Ambient Air Quality?

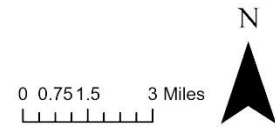
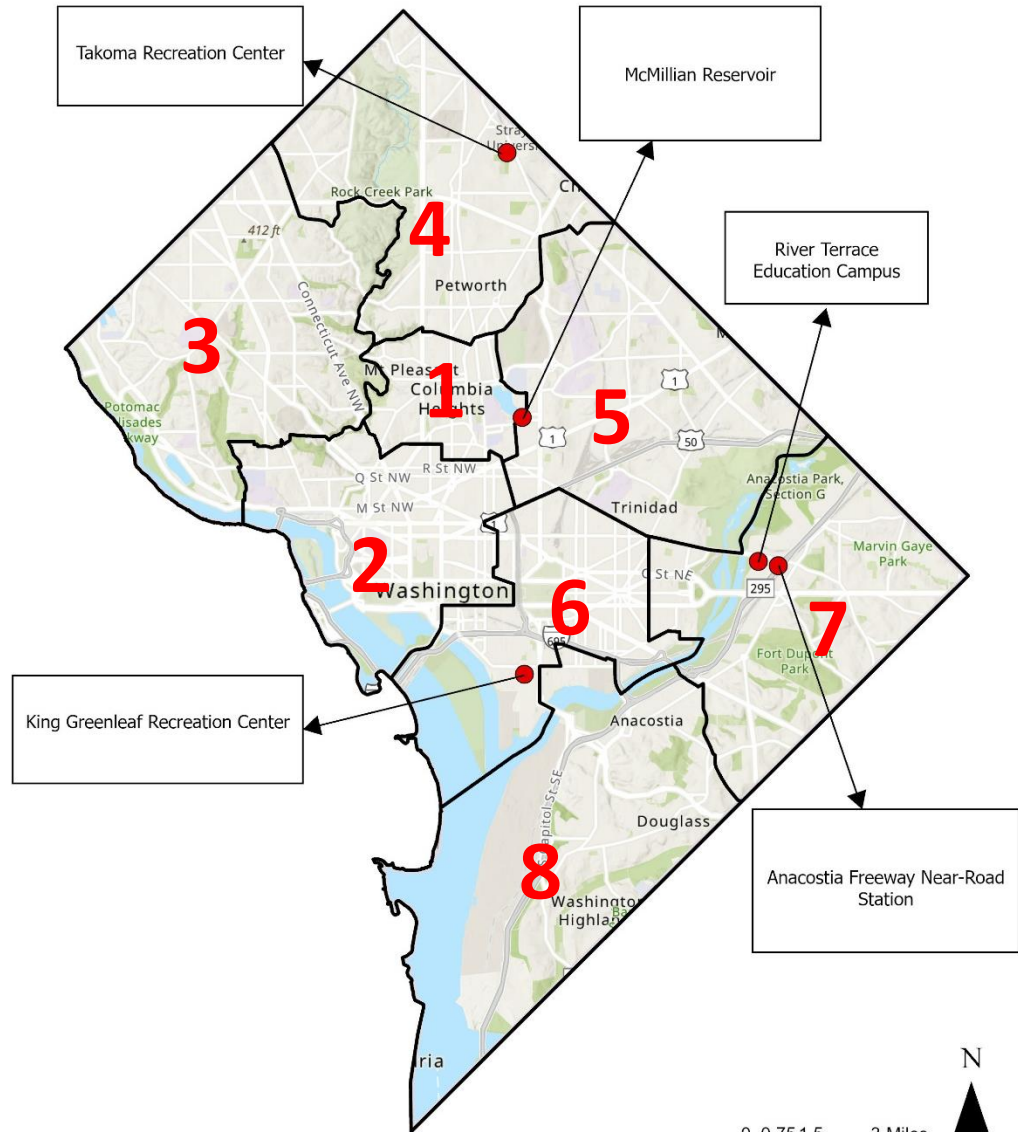
- Protecting public health
 - air quality levels vs. national standards
- Identifying air pollution sources
- Developing air pollution controls
- Science and research
- Public outreach and education



The History of D.C.'s Air Monitoring Program



Washington DC's Ambient Air Monitoring Network



DCGIS, M-NCPPC, VGIN, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, Esri, NASA, NGA, USGS, FEMA

What is the Focus: Particulate Matter









SIX pollutants monitored nationwide:

- 1.) Carbon Monoxide (CO)
- 2.) Sulfur Dioxide (SO₂)
- 3.) Nitrogen Dioxide (NO₂)
- 4.) Particulate Matter (PM₁₀ & PM_{2.5})
- 5.) Ground-Level Ozone (O₃)
- 6.) Lead (Pb)

EPA established National Ambient Air Quality Standards for these SIX “criteria” air pollutants

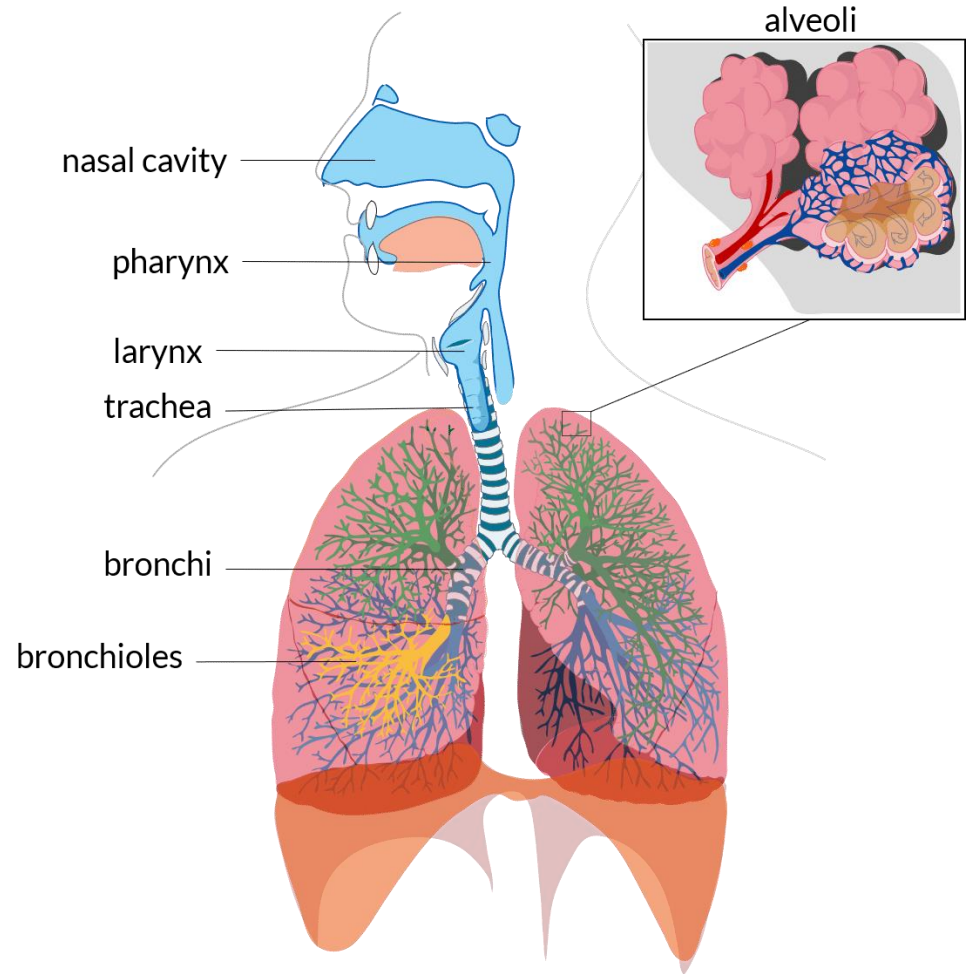
National Ambient Air Quality Standards (NAAQS)

Pollutant	NAAQS	Status
PM2.5 PM10	35 $\mu\text{g}/\text{m}^3$ & 12 $\mu\text{g}/\text{m}^3$ 150 $\mu\text{g}/\text{m}^3$	
Ozone	70 ppb	
Carbon Monoxide	35 ppm & 9 ppm	
Nitrogen Dioxide	100 ppb & 53 ppb	
Sulfur Dioxide	75 ppb	
Lead	0.15 $\mu\text{g}/\text{m}^3$	

Source: <https://www.epa.gov/criteria-air-pollutants/naaqs-table>

Public Contact With Air Pollutants

- Most air pollutants enter our bodies through the respiratory system.
- They come in the form of gaseous or particle pollutants.
- They are either exhaled, left in the lungs, or absorbed into the blood Stream.
- Children and older adults are the most vulnerable populations.



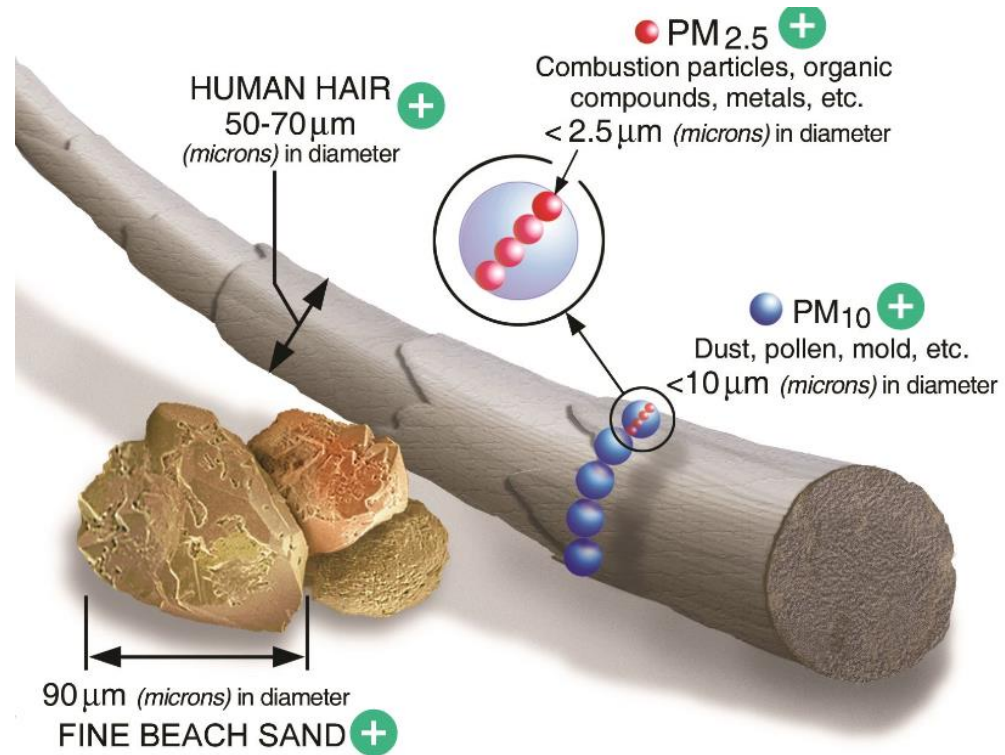
The Health Effects of Particulate Matter

Heart:

- Irregular heartbeat
- Nonfatal heart attacks
- Premature death in those with heart disease

Lungs:

- Aggravated asthma
- Decreased lung function
- Premature death in those with lung disease

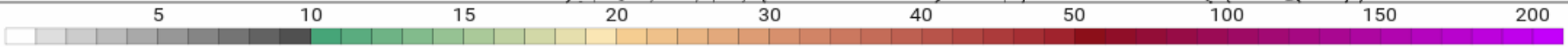


Capturing Current Events: Quebec Wildfires

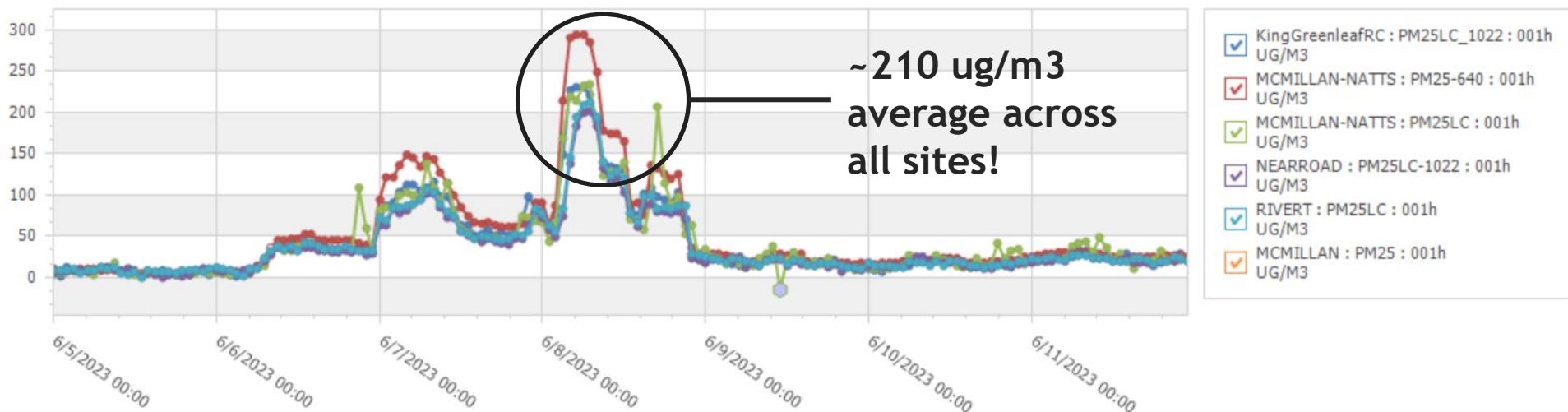
Encroaching
surface smoke
from Quebec
wildfires

www.pivotalweather.com







pivotal weather



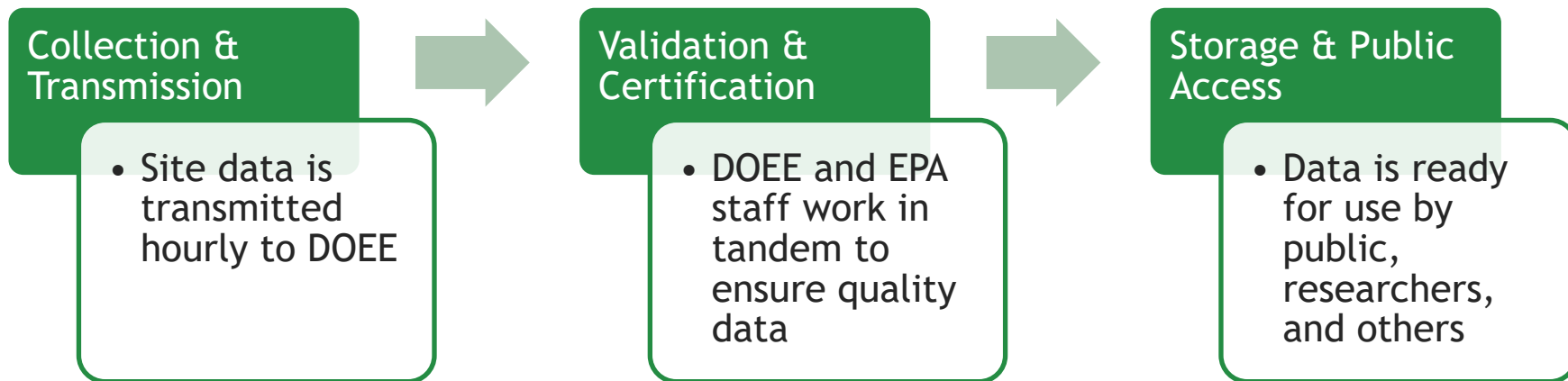
Capturing Current Events: 6/8/23



PM2.5 and the Air Quality Index (AQI)

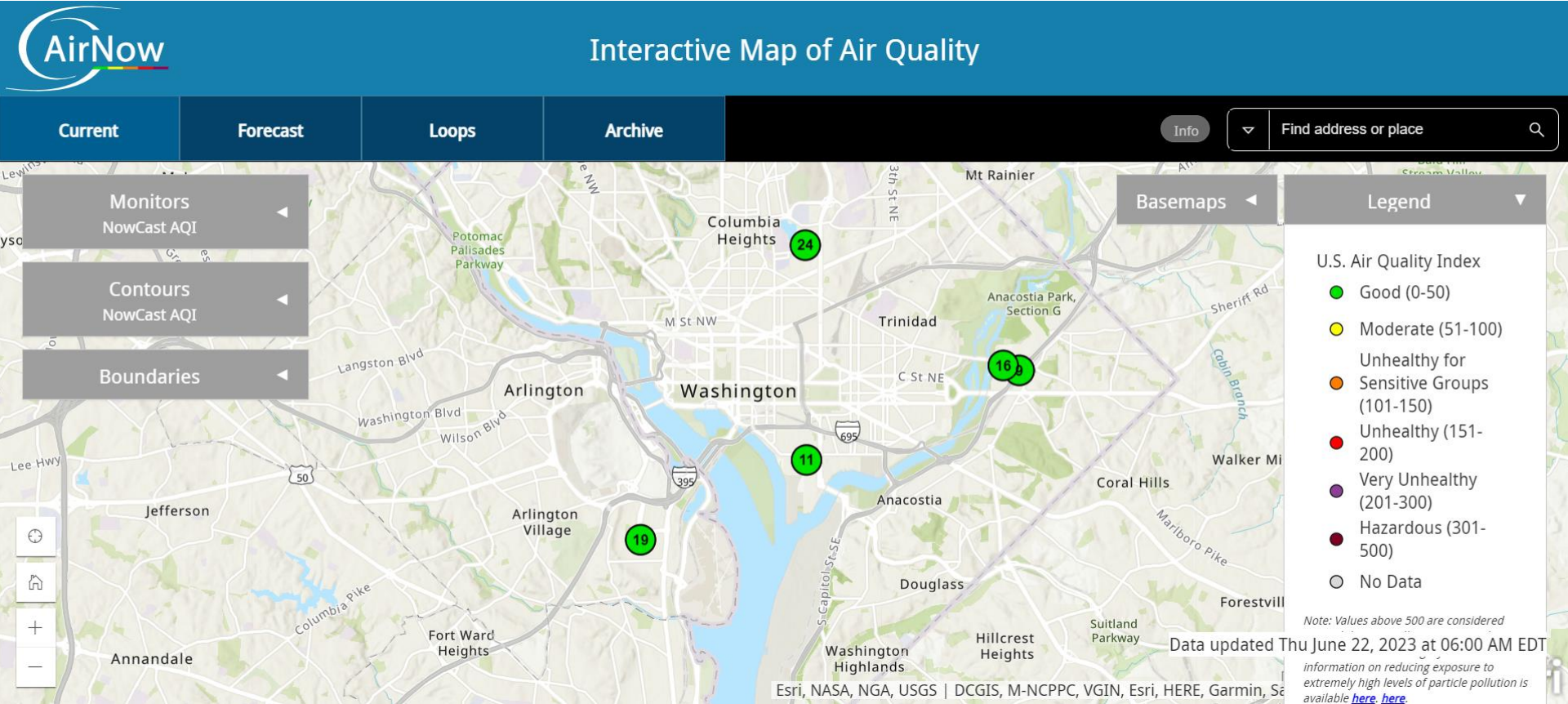
	US AQI Level	PM2.5 ($\mu\text{g}/\text{m}^3$)	Health Recommendation (for 24 hour exposure)
	Good 0-50	0-12.0	Air quality is satisfactory and poses little or no risk.
	Moderate 51-100	12.1-35.4	Sensitive individuals should avoid outdoor activity as they may experience respiratory symptoms.
	Unhealthy for Sensitive Groups 101-150	35.5-55.4	General public and sensitive individuals in particular are at risk to experience irritation and respiratory problems.
	Unhealthy 151-200	55.5-150.4	Increased likelihood of adverse effects and aggravation to the heart and lungs among general public.
	Very Unhealthy 201-300	150.5-250.4	General public will be noticeably affected. Sensitive groups should restrict outdoor activities.
	Hazardous 301+	250.5+	General public at high risk of experiencing strong irritations and adverse health effects. Should avoid outdoor activities.

Where to find Air Quality Data?



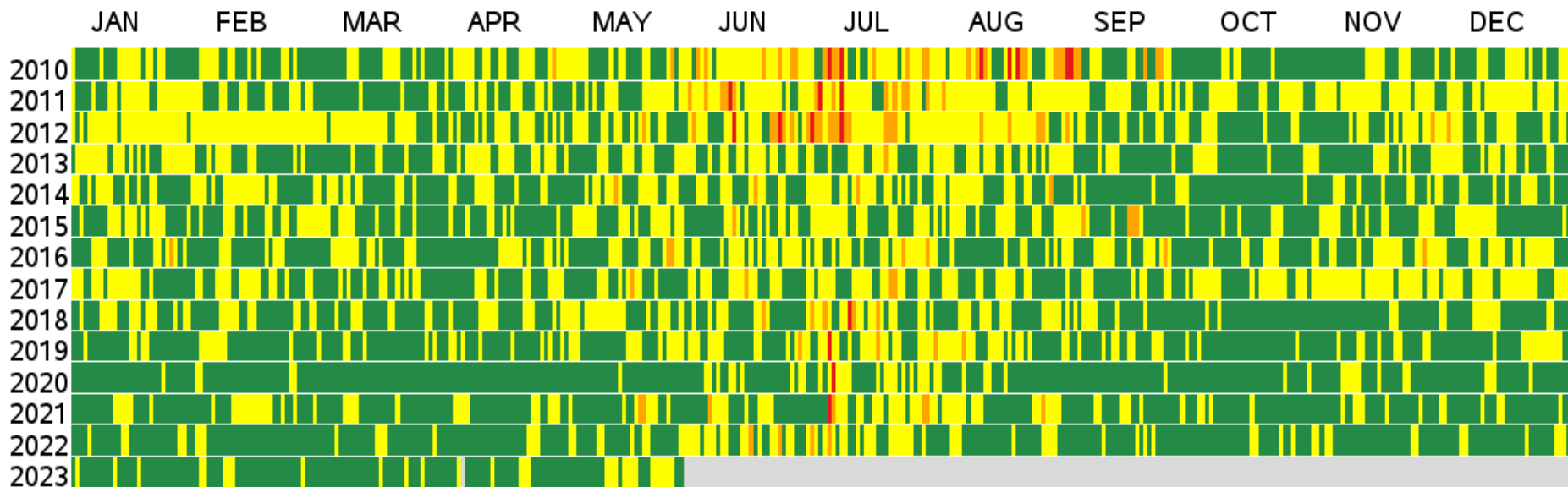
Real-Time Data	Quality-Assured Data
<p>https://www.airnow.gov/</p> <p>http://www.cleanairpartners.net/current-and-forecasted-air-quality</p>	<p>https://www.epa.gov/outdoor-air-quality-data</p>

AirNow: Air Quality Map



EPA Repository: Historical, Quality Assured Data

Daily AQI Values, 2010 to 2023 District of Columbia County, DC



AQI Category

- Good (≤ 50 AQI)
- Moderate (51-100 AQI)
- Unhealthy for Sensitive Groups (101-150 AQI)
- Unhealthy (151-200 AQI)
- Very Unhealthy (201-300 AQI)
- Hazardous (≥ 301 AQI)

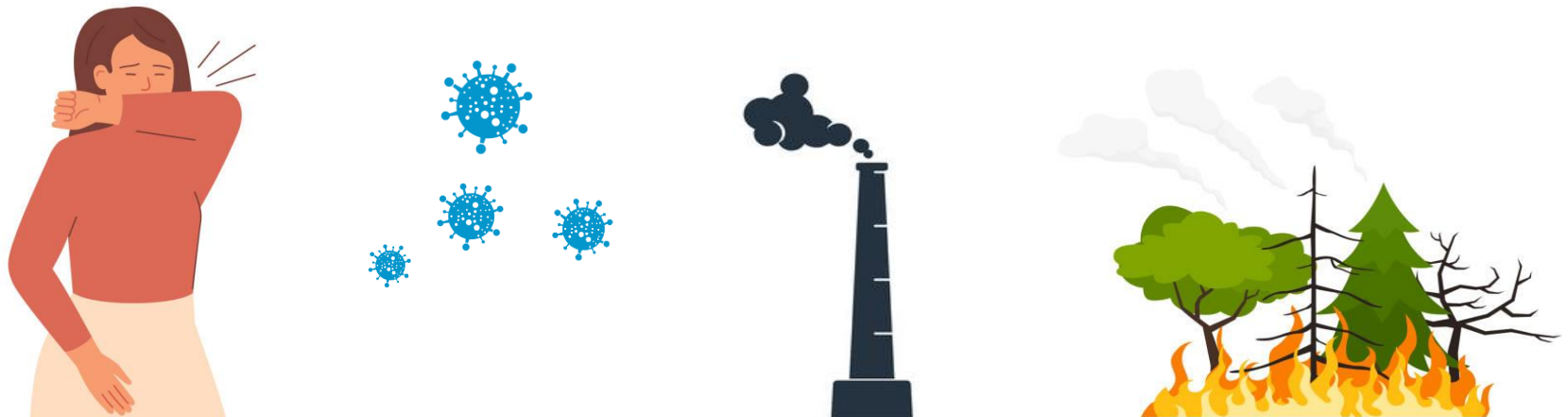
Introducing the Ward 8 ARPA Grant



- 1 What is the Grant for?
- 2 EPA Site Requirements
- 3 Environmental Justice
- 4 Site Examples
- 5 Community Feedback

New Air Monitoring Station in Ward 8: What does the Grant Provide?

- The primary objective of this project is to enhance monitoring of PM2.5 and other National Ambient Air Quality Standard (NAAQS) pollutants in and near communities with environmental justice concerns, who face disproportionate exposure to these pollutants and health risks which are also associated with increased vulnerability to COVID-19.



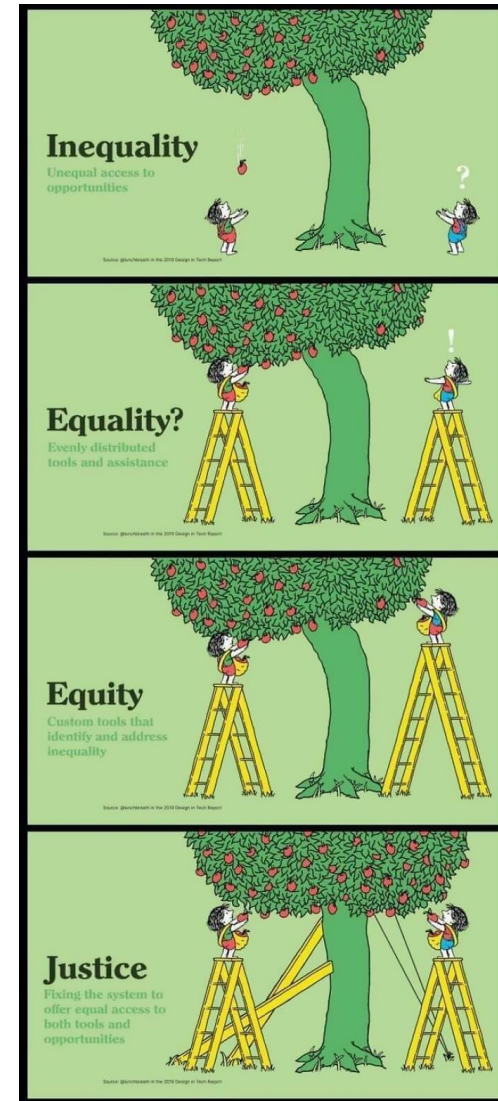
New Air Monitoring Station in Ward 8: EPA Siting Requirements

The monitor must be:

- Between 2m and 15m above ground level
- Have at least 1m of space on all sides
- Avoid minor sources
- Have unrestricted airflow
- >10m distance from the drip line of trees
- 100m-250m minimum distance from major roadways

New Air Monitoring Station in Ward 8: What is Environmental Justice (EJ)?

The EPA and DOEE define EJ as the **fair treatment** and **meaningful involvement** of all people with respect to the development, implementation and enforcement of environmental laws, regulations and policies.

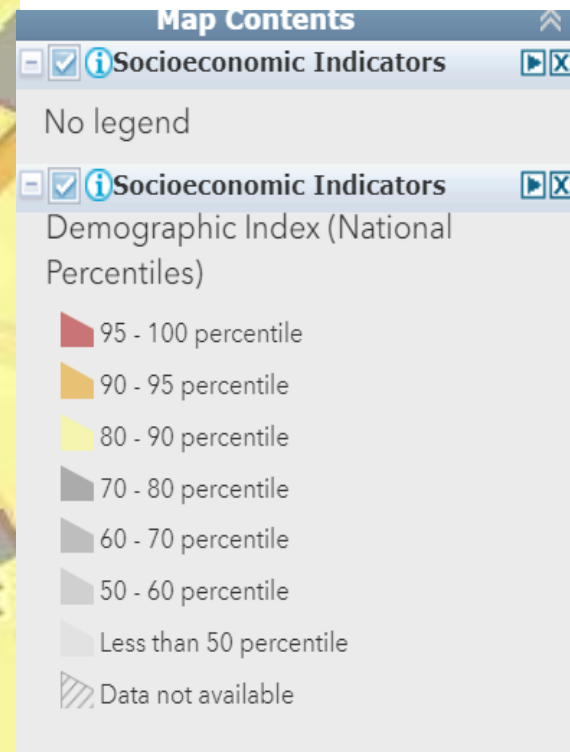
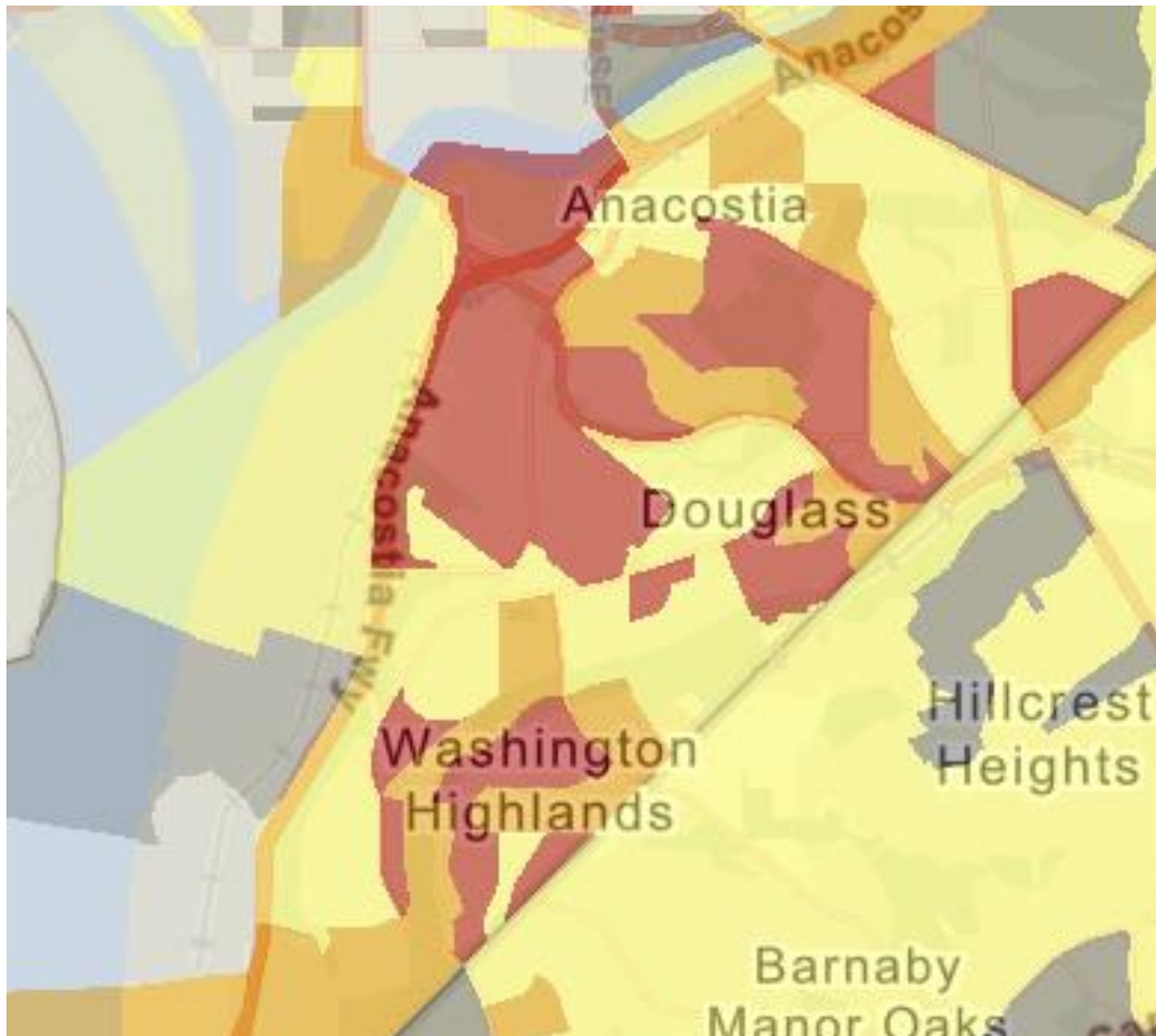


New Air Monitoring Station in Ward 8: EJ Considerations in the District

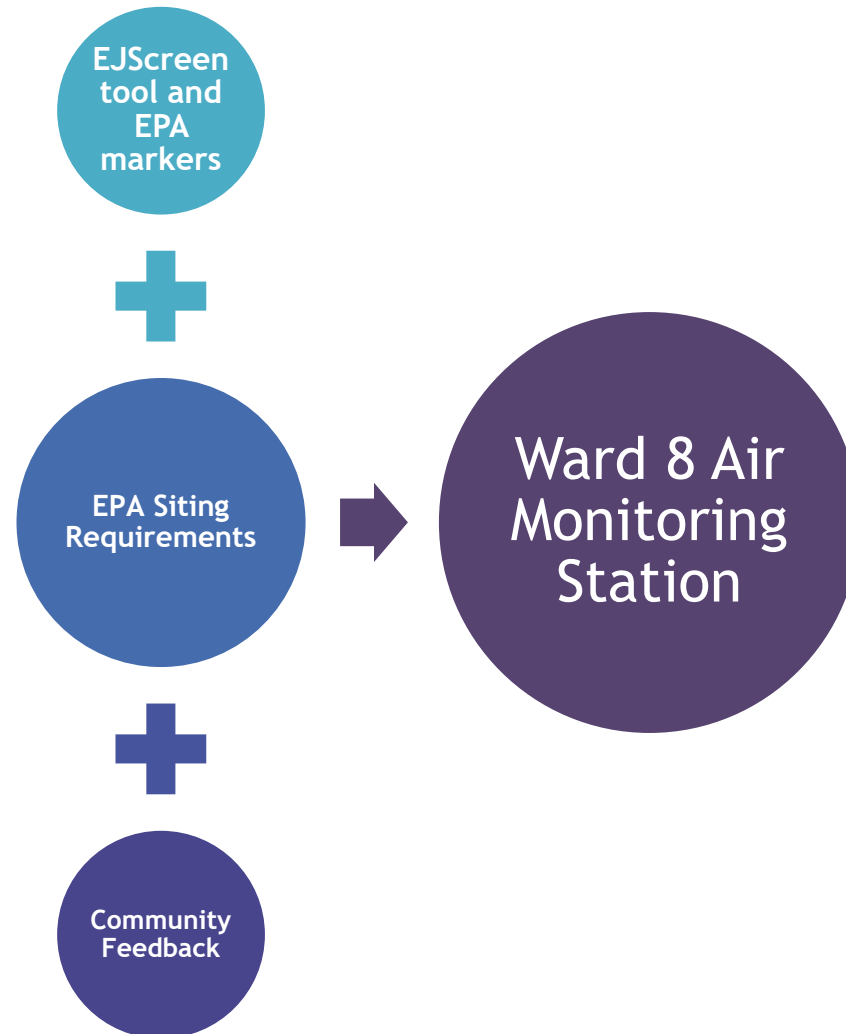
Some indicators we look for includes:

- If an area is above the 80th percentile or higher in the EPA's demographic index
- Is an area historically affected by redlining or FHA grading systems
- A disparity in health problems or life expectancy with other areas
- A lack of monitoring stations for pollutants key to calculating local AQIs

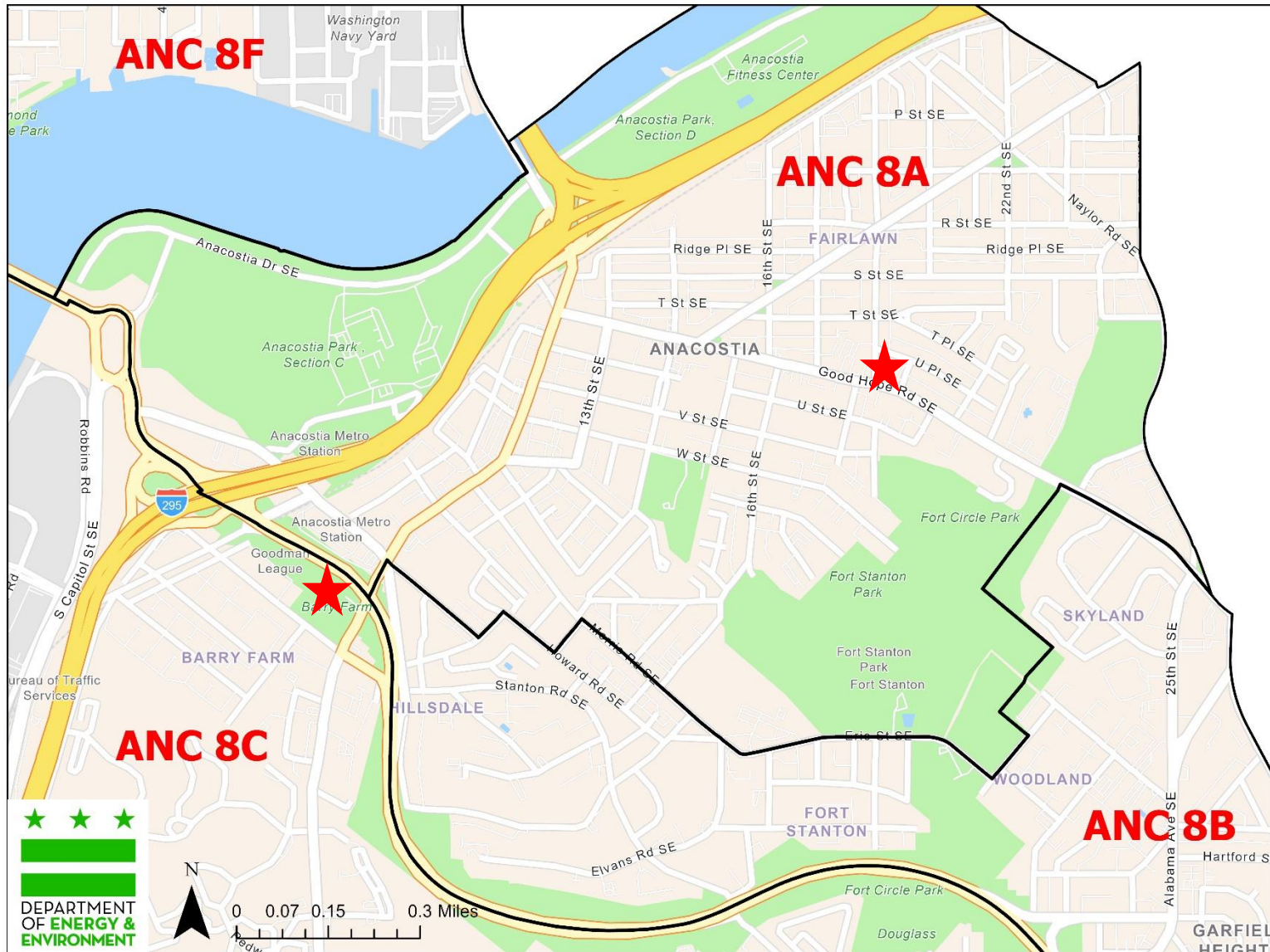
New Air Monitoring Station in Ward 8: EPA EJScreen Tool



New Air Monitoring Station in Ward 8: What Makes a Good Site?



Potential Sites for the Ward 8 Monitor

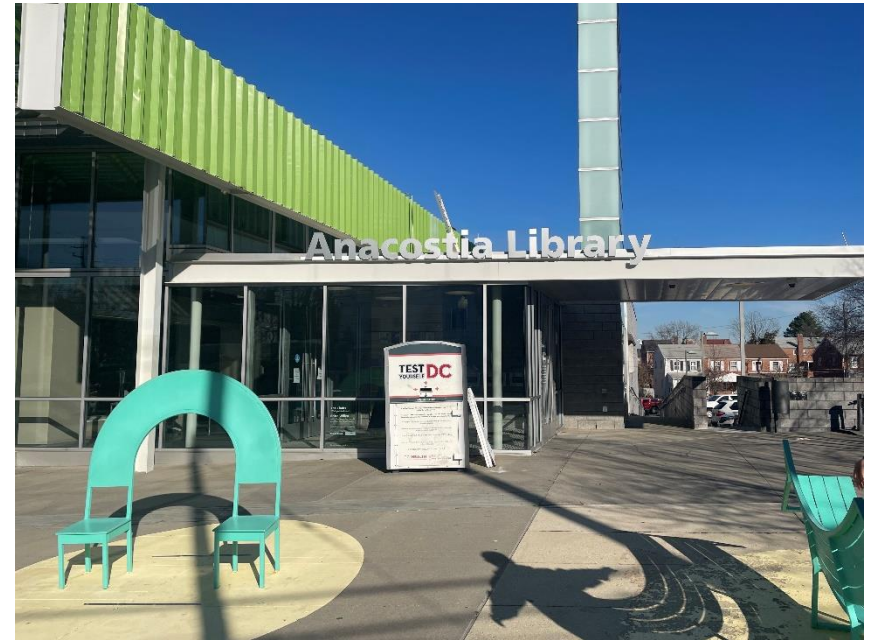


New Air Monitoring Station in Ward 8: Our Favorite Sites

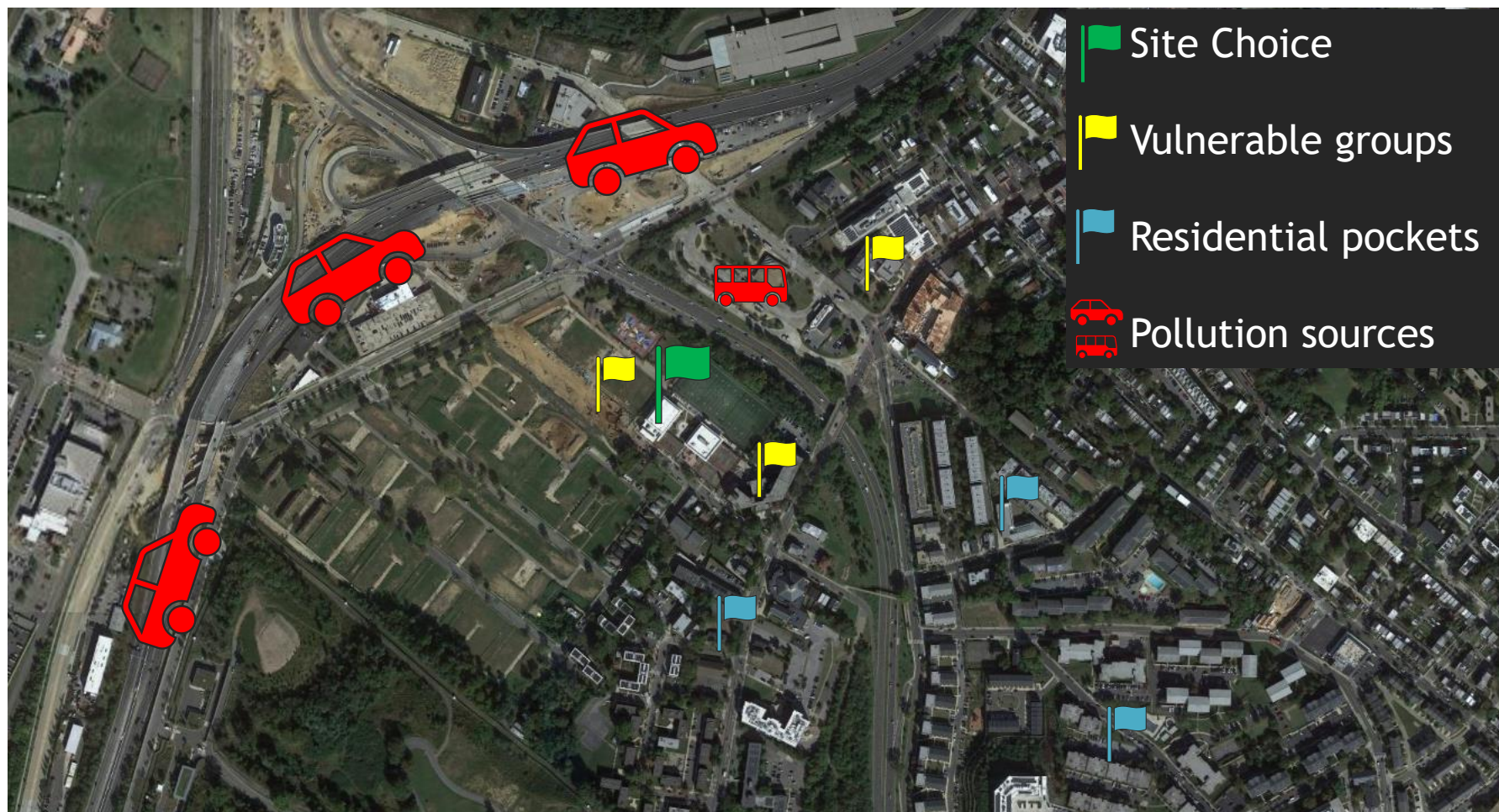
Barry Farm Recreation Center



Anacostia Neighborhood Library



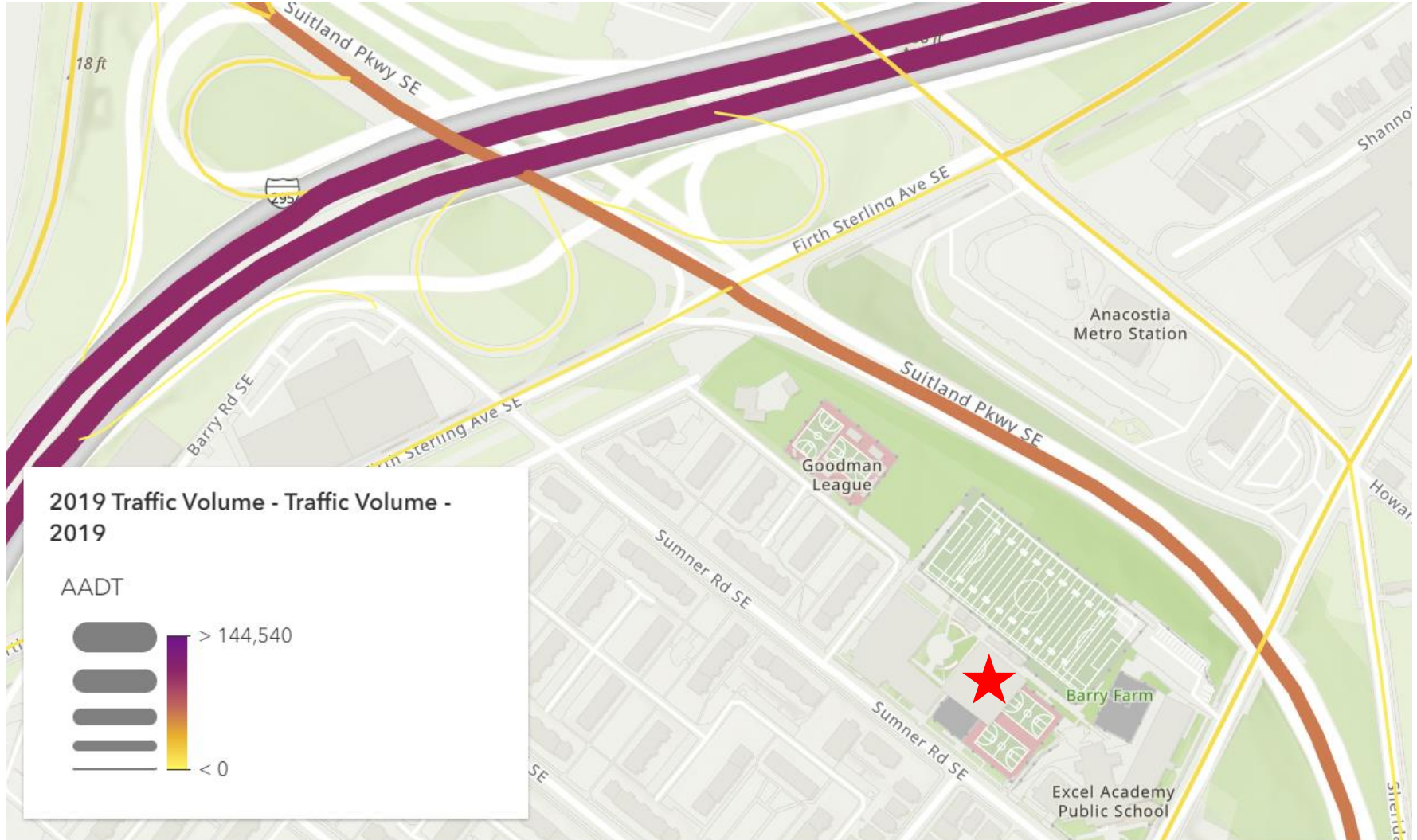
Barry Farm Recreation Center



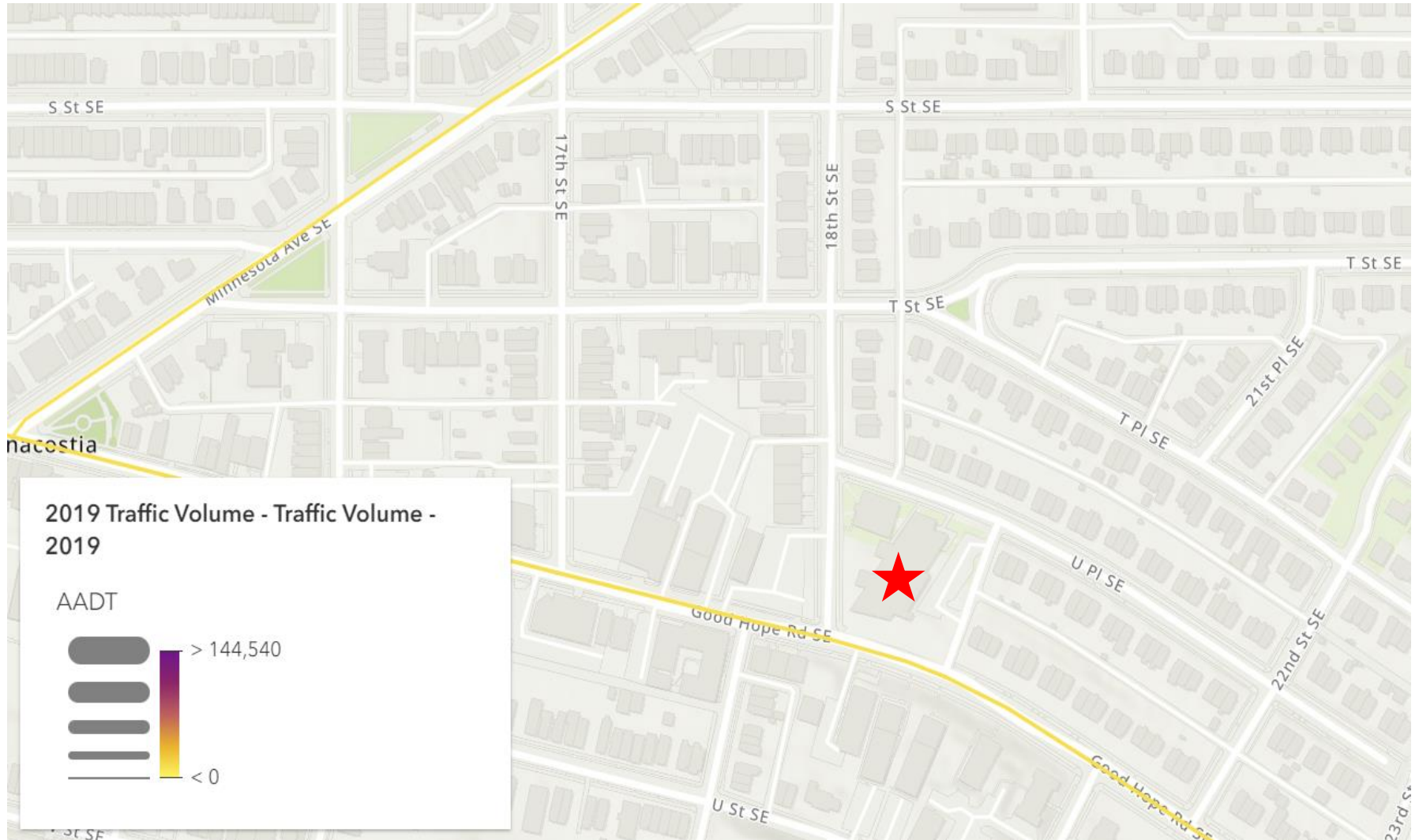
Anacostia Neighborhood Library



Barry Farm Recreation Center



Anacostia Neighborhood Library



DOEE's Recommendation for Ward 8

The Barry Farm Recreation Center, due to its proximity to a major source of PM in the area and vulnerable groups such as children and the elderly, is a prime example of a PM monitoring site.



Located in a historic area of ward 8



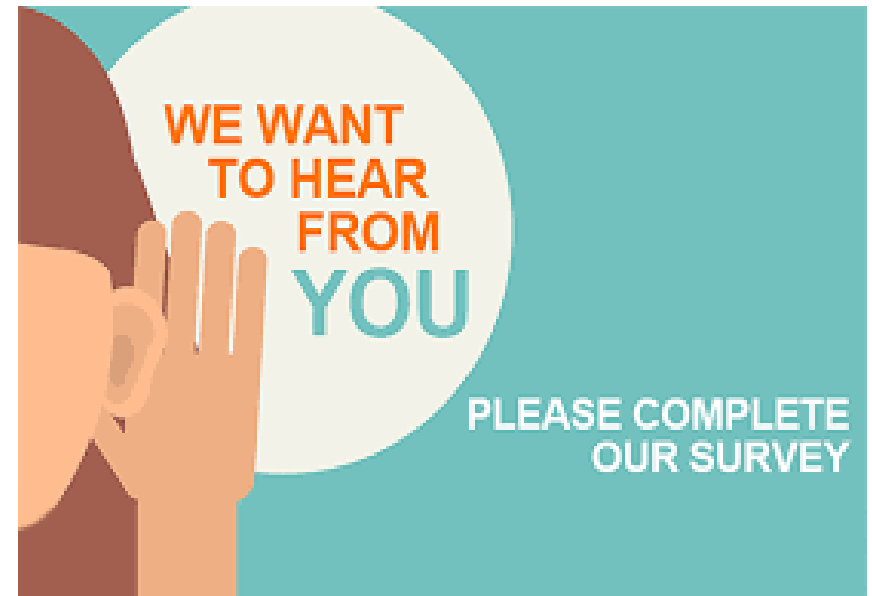
Meets all grant and EPA requirements



Near vulnerable groups and significant sources

Your recommendation for Ward 8

- You know your community better than we do!
- Are there any locations you'd like us to examine?
- Even if you don't have suggestions, tell us which example you preferred?
 - Barry Farm Recreation Center
 - Anacostia Neighborhood Library



Your recommendation for Ward 8

How?

- Scan the QR code at the end of the presentation
- Use the link shared in the chat
- Email: airquality.planning@dc.gov

What?

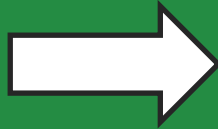
- **Location:** Address, street/building name, or coordinates
- **Attributes:** What makes this a good spot?

When?

- Submissions will be taken until July 31st

We Would Love To Hear From You!

SCAN THE
QR CODE*



*All Responses are Confidential

Other DOEE Air Quality Monitoring Projects

- Hyperlocal monitoring pilot with Aclima (6/15 - 6/28/23)
 - ▶ Pilot program is in Ivy City/Brentwood, Buzzard Point, and Mayfair
 - ▶ Planning to expand to other parts of the District in 2024
 - ▶ Will use data to identify sites for additional stationary sensors
- EPA Grant - Enhancing air quality data with community storytelling to advance environmental justice
 - ▶ DOEE received the grant award from the EPA in June and will soon convene our partners

Stay connected with our resources

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If you would like to know more, please follow us!

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Clearing the Air
Community
Workshops

