



Department of
Environmental
Conservation

Perspectives on the New York State 2022-2023 Community Air Monitoring Initiative

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Disclaimer

Views expressed in this presentation are my own and do not represent those of New York State or the DEC. Any mention of companies or trade names does not constitute an endorsement of their products.

Background – Air Monitoring Initiative

- Part of New York's 2019 Climate Act
- One year of mobile air monitoring across 10 communities
- Driving every publicly accessible road
- Sensors measuring $PM_{2.5}$, BC, CO, CO_2 , O_3 , NO, NO_2 , CH_4 , C_2H_6 , TVOC, BTEX



Study
Website



Study Boundaries

December 13, 2021

CJWG releases draft DAC criteria

March 9, 2022

Public Comment Period Starts

June 1, 2022

Monitoring begins:
Bronx, Manhattan, Buffalo, Capital Region

August 5, 2022

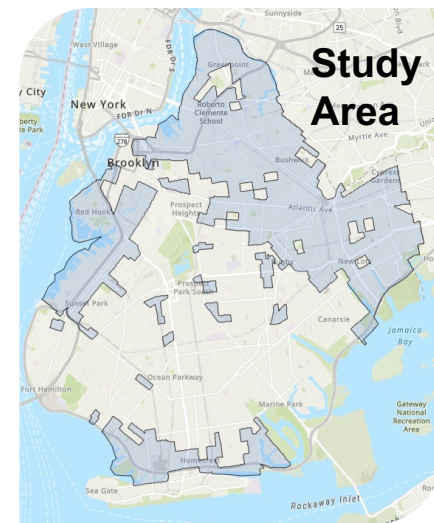
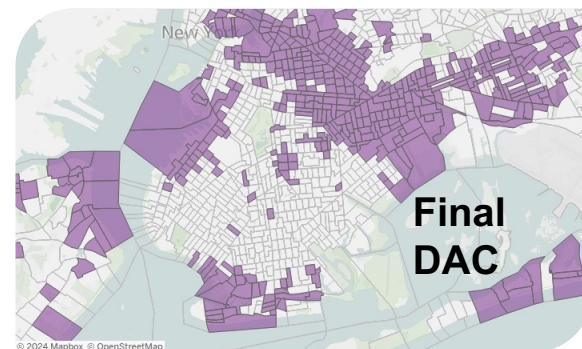
Public Comment Period Ends

September 1, 2022

Monitoring begins:
Brooklyn, Queens, Lower Westchester County, Long Island, Syracuse, Rochester

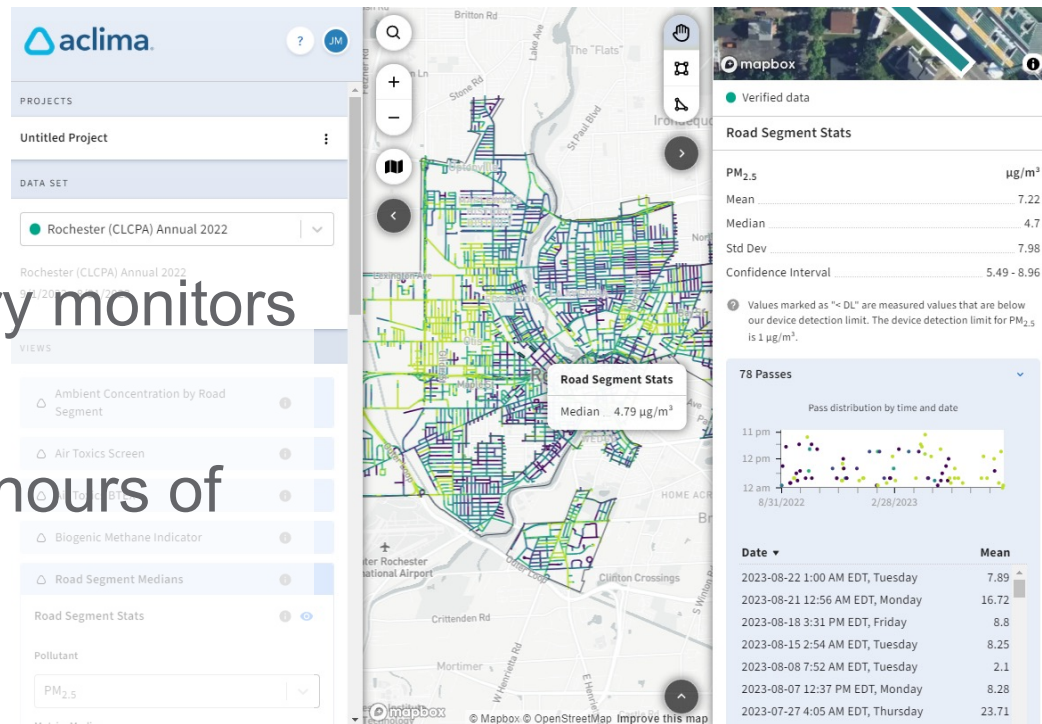
March 27, 2023

CJWG votes to approve final DAC criteria



Data Collection

- Collocation with regulatory monitors
- Access to data within 24 hours of collection
- We did our own QA/QC checks



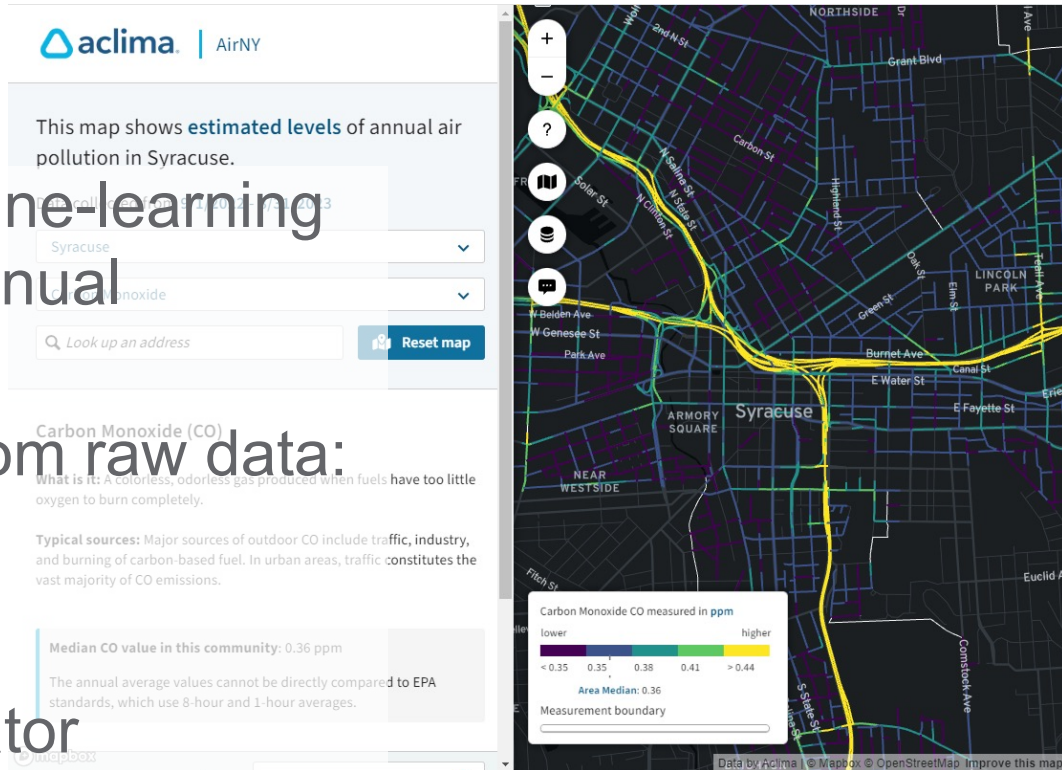
Public Outreach

- 50+ public meetings so far
- 3 fact sheets
- Showing preliminary results (!)
- Messaging is key

The image displays three overlapping screenshots from a Zoom meeting, illustrating public outreach materials. The top screenshot shows a slide titled "Progress & Preliminary Data" with a timeline from June 2019 to July 2022. The middle screenshot shows a slide titled "Progress & Preliminary Data" with sections for "Manhattan Methane Data" and "Elevated Manhattan Methane". The bottom screenshot shows a slide titled "Pollutant Levels by Mobile Source Type" with sections for "Diesel Index" and "Non-Diesel Index", each accompanied by a map of Manhattan. The Diesel Index map shows higher concentrations in the southern part of Manhattan (Chelsea, Midtown, Lower East Side), while the Non-Diesel Index map shows higher concentrations in the northern part (Harlem and northward).

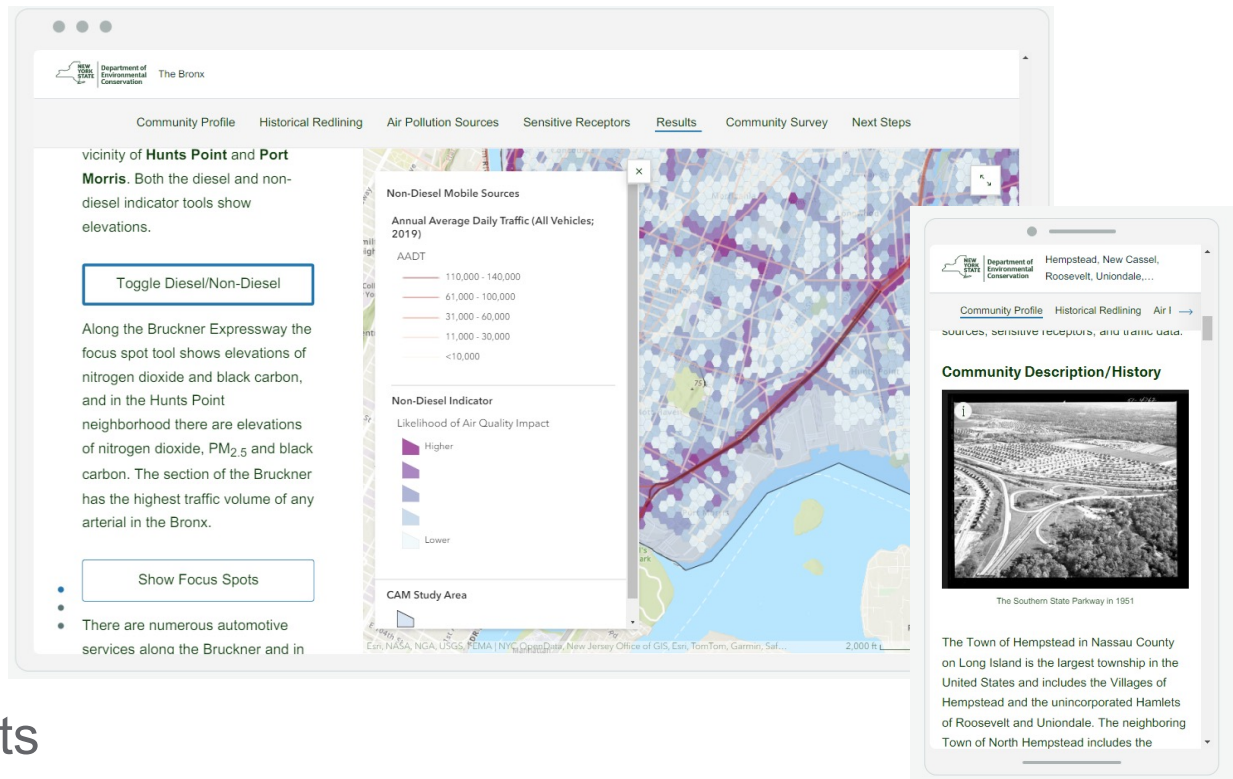
Analysis

- Contractor used a machine-learning algorithm to generate annual concentration estimates
- We developed 3 tools from raw data:
 - Peaks Analysis
 - Focus Spots
 - Mobile Source Indicator

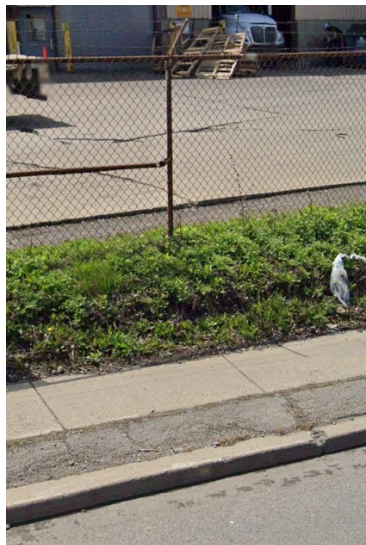


Report 1

- Story Maps
 - Study Overview
 - 10 Communities
 - 3 Methods
 - Mapping Tool
- Community Survey
- Additional Fact Sheets



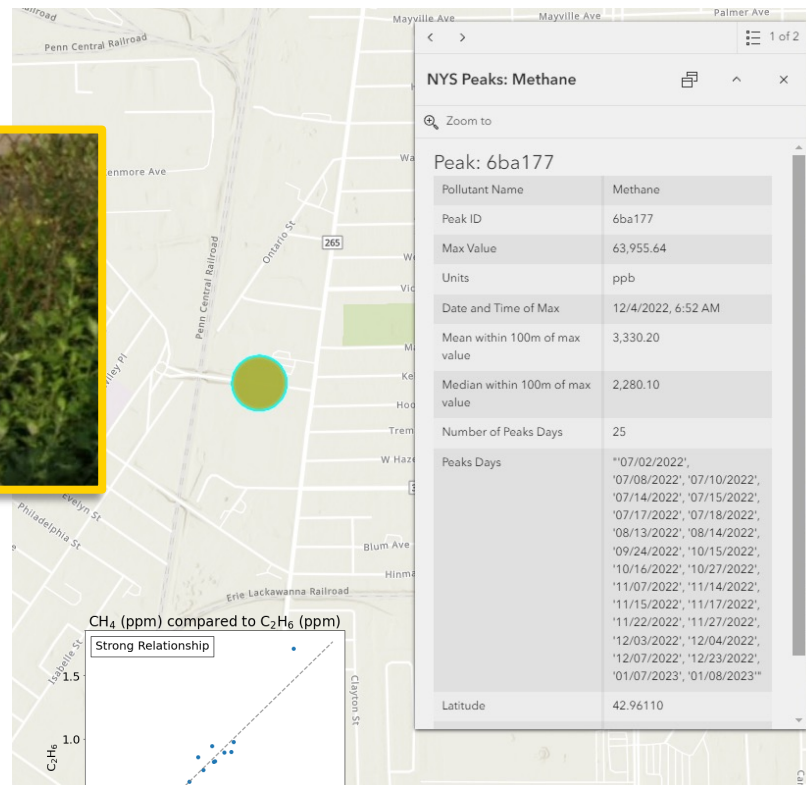
Peaks Analysis



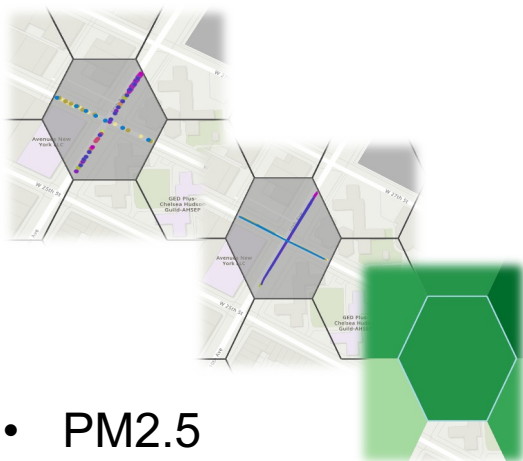
May 2022



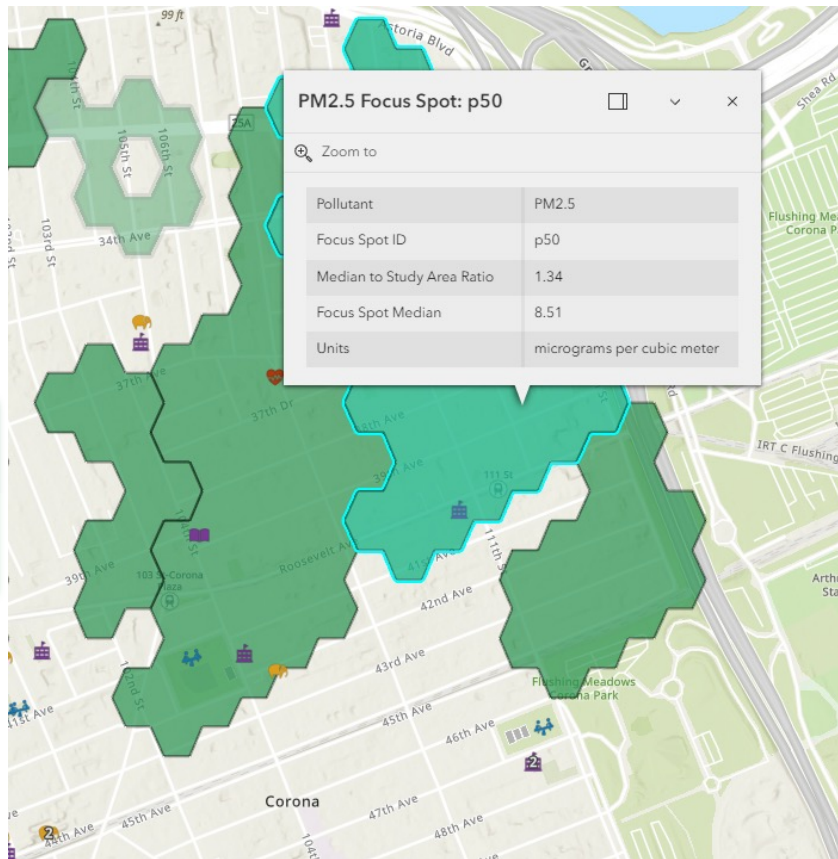
July 2023



Focus Spots



- PM2.5
- Black Carbon
- CO
- NO₂

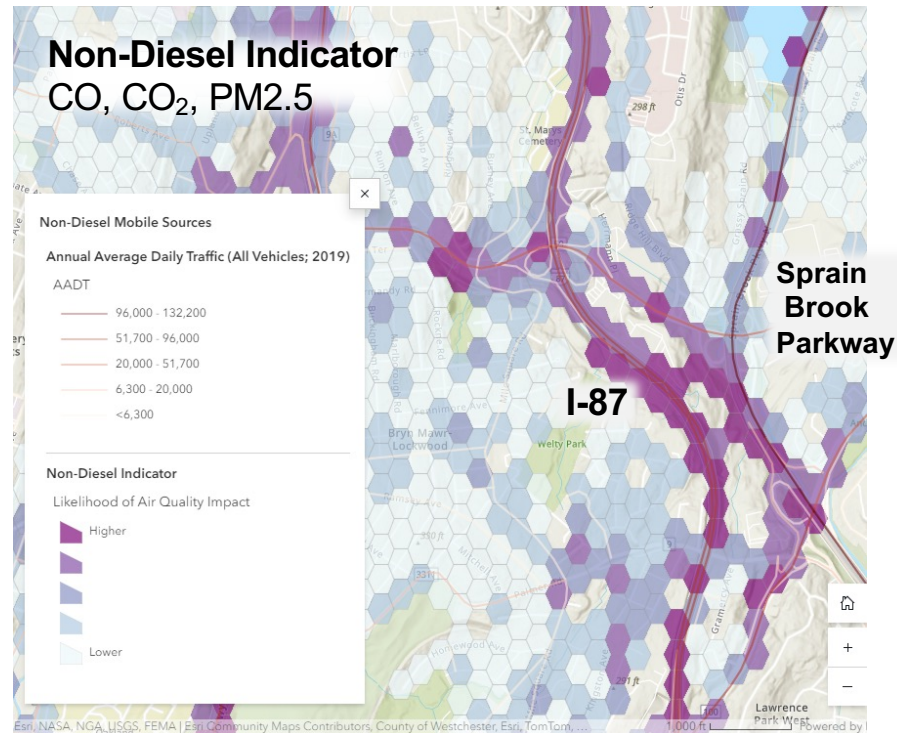
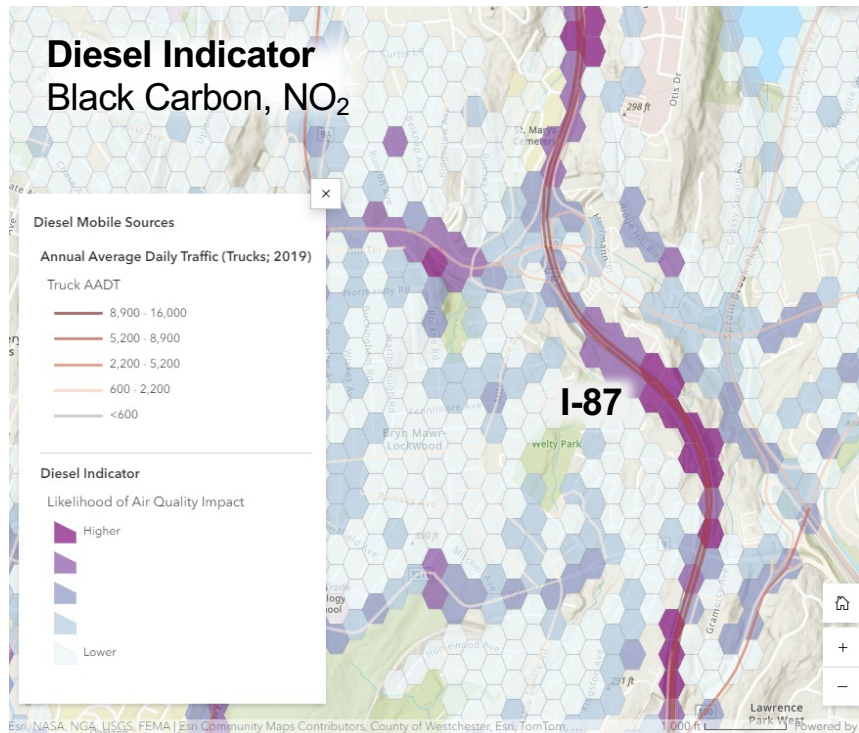


Clustering Categories

- High Values & Strong Clustering
- High Values & Moderate Clustering
- No Clustering
- Low Values & Strong Clustering
- Low Values & Moderate Clustering



Mobile Source Indicator



Next Steps

- In-Person Public Meetings
- Community Advisory Committee Meetings
- DEC, CJWG, State/Local Government Collaboration

- Report 2
 - Mitigation strategies

Some Reflections

- Must play with the cards you're dealt
- 'Working with third parties for air quality programs' document
- At the end of the day, it's the community members that matter

Thank You

Study
Website



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June 7, 2023

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