



clean
AIRE
nc

Health and Equity in the Historic West End Green District: A Case Study of Community-Led Monitoring and Advocacy

Daisha Williams, Environmental Justice Manager

Denise Bruce, Citizen Science Manager

August 24, 2022

Presentation Roadmap

- I. Clean AIRE NC Overview
 - Clean AIRE NC Mission and Programs

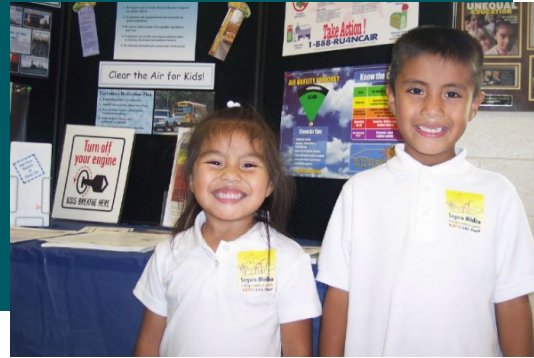
- I. Historic West End Green District
 - Community Background
 - Air Quality Sensors
 - Advocacy Activities

- I. Moving Forward
 - Clean AIRE NC continued deployment
 - AirKeeper Engagement
 - Cluster Networks

CleanAIRE NC Programs & Initiatives

We advocate for the health of North Carolinians by pursuing equitable and collaborative solutions that address climate change and air pollution.

- Environmental Justice Program
- Health Program
- Policy Program
- Citizen Science Program



Monitoring in the Historic West End

- CleanAIRE's monitoring efforts began in Charlotte's Historic West End (HWE) in the fall of 2016
- To address health inequities caused by air pollution in environmental justice communities
- Use PurpleAir & AirBeam Monitors to measure PM 2.5



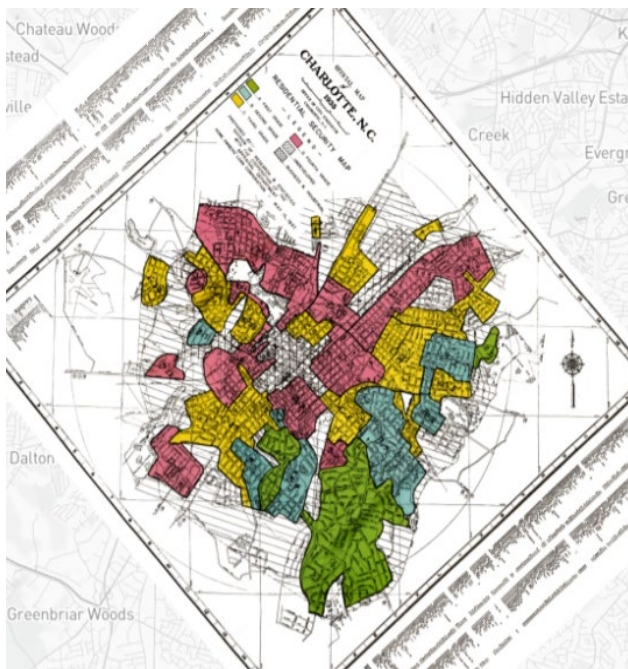
Original AirKeepers

Ron Ross, Northwood Estates (L)
Mattie Marshall, Historic Washington Heights (M)
William Hughes, Oaklawn Park (R)

Historic West End Challenges

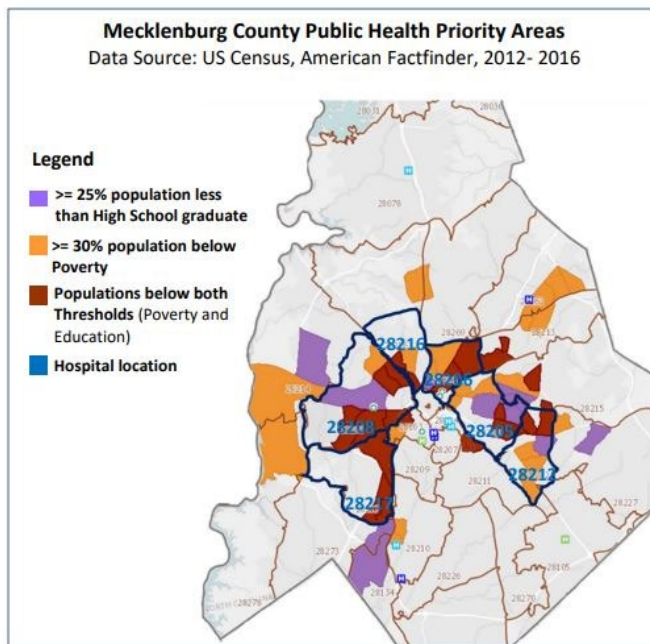
Historical Place Based Social Exclusion

1935 Redlining
Disinvestment Map Crescent



Social Determinants of Health

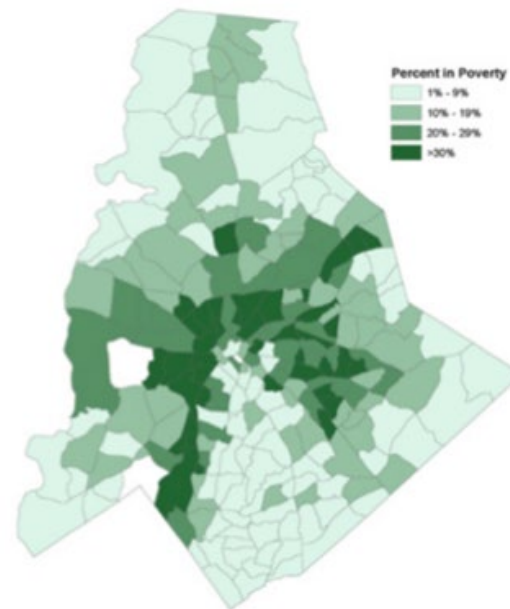
2012-2016 Public Health
Priority Areas



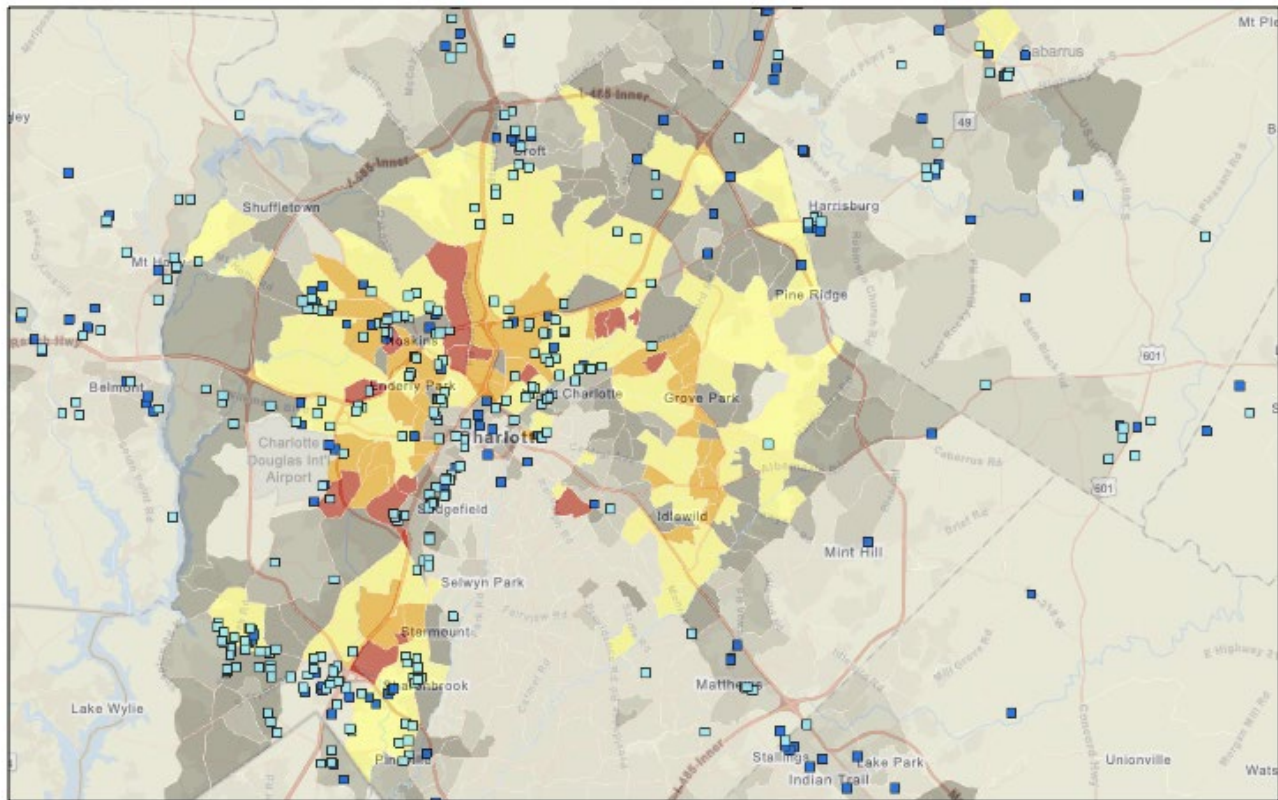
Continued Economic Segregation

2020 Poverty

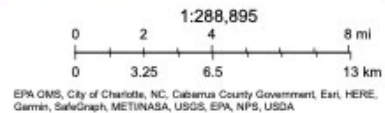
Segregation by Poverty



Meck Co EPA Polluting Sites

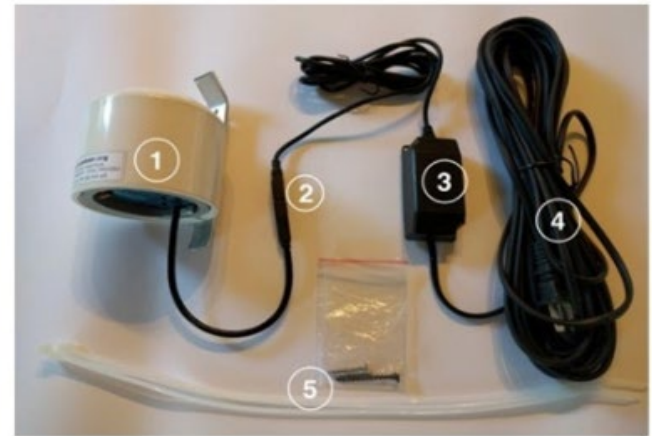


3/28/2022



Understanding & Addressing Challenges Through Community Monitoring

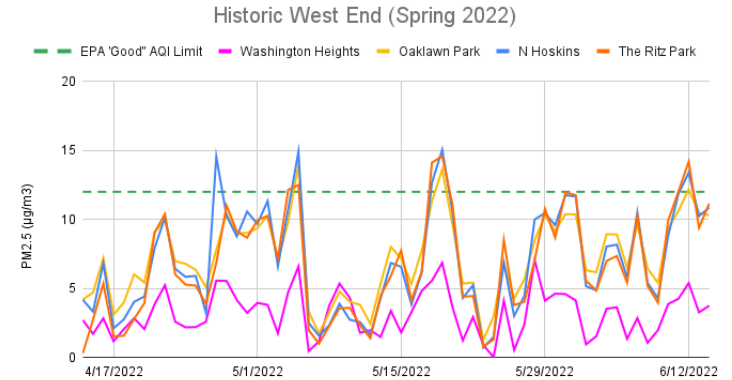
- 2017: Community monitoring efforts begin
- Measured levels of PM_{2.5}
- Connections between social determinants of health and exposure to air pollution



Historic West End Monitors



10/15 PurpleAir
Monitors across 6
Historic West End
Neighborhoods



Source: https://www.epa.gov/sites/default/files/2016-04/documents/2012_aq_factsheet.pdf

Mecklenburg County Commission Approves EPA Monitor in Historic West End as a result of Citizen Science Monitoring

CLEARING THE AIR

CHARLOTTE'S
HISTORIC WEST END

*Historic Washington Heights
Northwood Estates
Oaklawn Park*

Clean Air
Carolina

FALL 2018



Friendship Missionary Baptist Church,
EPA Federal PM 2.5 Air Monitor



Ron Ross (L), Calvin Cupini (R)

Historic West End Green District: Strategic Tree Planting



Goal #1

Increasing, preserving and improving **tree canopy and green infrastructure** along the corridor and in sensitive areas

- Installing green roofs, green walls, and other green infrastructure
- Mitigate and reduce health and pollution impacts

Current Projects & Outcomes:

- Wells Fargo ATM Clean Air Garden
- Tree adoption with TreesCharlotte
- Charlotte 2022 Placemaking: HWEGD Green Pillars
- Monitoring around high polluting areas



Historic West End Green District: EV Expansion



Goal #2

Advocating for **electric vehicle charging stations and more walking, biking, and clean transit** throughout the Historic West End, while also providing economic benefits and career opportunities for the community around EV expansion

Current Projects & Outcomes:

- PoleVolt and associated **PurpleAir** monitor
- EV Ride and Drive Event (**May 21st**)
- Deployment of other EV charging sites: Allegra Westbrooks Library



Historic West End Green District AirKeepers with Gov. Roy Cooper and Charlotte Mayor Vi Lyles at the Pole Volt Unveiling

Historic West End Green District: Education & Advocacy



Goal #3

Increasing **education** around air quality impacts to propel **advocacy** solutions

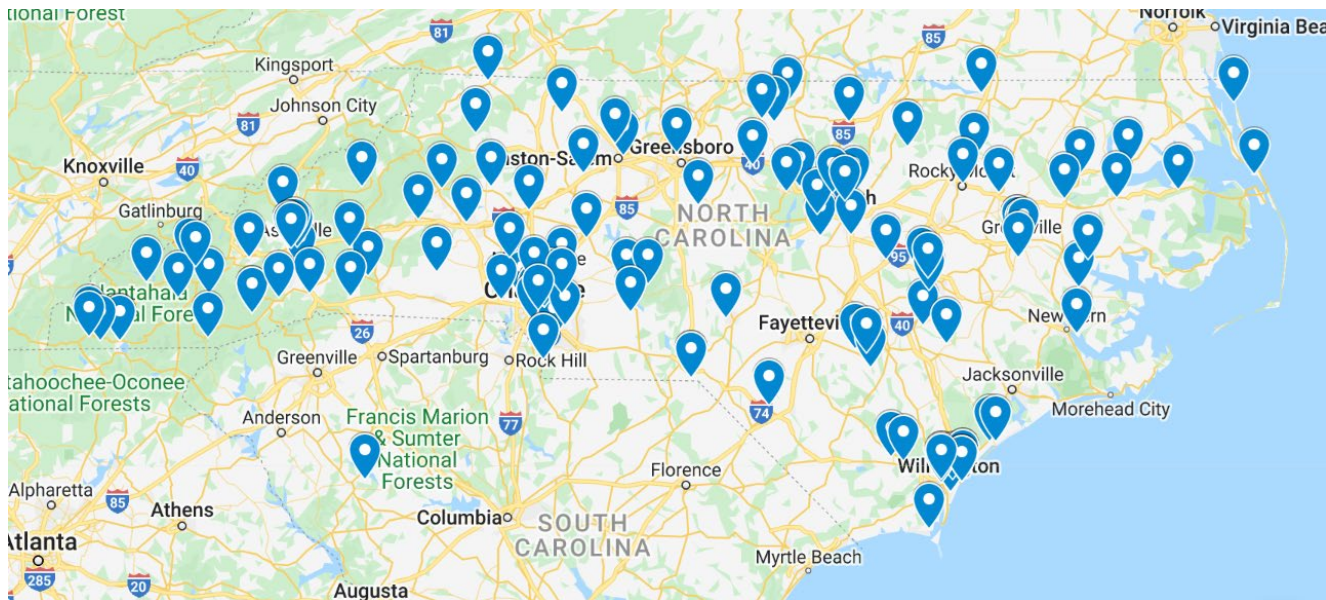
Current Projects & Outcomes:

- Clean Air Advocacy Trainings (July 2022): covered zoning, permitting, community and regulatory monitoring, and community benefits agreements.
- Healthy Air Education Series (September 2022)
- City, County and other organizational partnerships to advance goals



Clean Air Advocacy Training FY 2018

Statewide Deployment Status



164 Total Sensors
74 Counties

ERG Network
Assessment



Moving Forward: AirKeeper Engagement

Ask Me Anything
Quarterly Events

Regular Newsletters

Community Level
Emissions Reporting

Report Backs

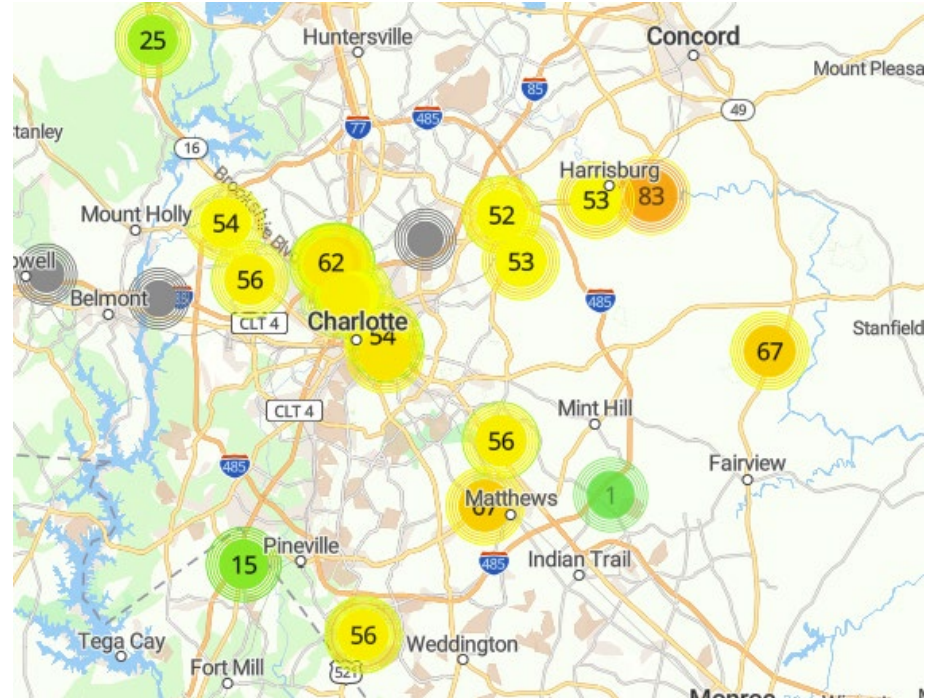
Cluster Networks



Cluster Networks

Implementing **cluster networks** of 15- 20 sensors near pollution sources in a single county affecting environmental justice communities.

- Charlotte/Historic West End
- Sampson County
- Wilmington/New Hanover County



THANK YOU!

<https://cleanairenc.org/>

Daisha Williams
Environmental Justice Manager
daisha@cleanairenc.org

Denise Bruce
Citizen Science Manager
denise@cleanairenc.org