

Welcome to **BREATHE**

**Bridging Research, Equity, and
Asthma Through Healthy
Environments**



**Wednesday
January 14, 2026**

**12-1:30 PM
Microsoft Teams**

What is BREATHE?

A coalition of scientists, community organizers, public servants, and Cincinnatians interested in improving air quality in the region.

Using collaborative, data-driven, systems-level approaches to improving our air quality and asthma rates by addressing the City's built environment.

Vision: Quarterly meetings to collaborate and learn about air quality research and actions to improve air quality within the Cincinnati region.

Agenda

- Introduction & Recap of September Meeting
- Coalition Victories
- Presentations
 - Data Bloom - David Mackey & Timothy NeCamp
 - CHD CLEAR Referrals - Antonio Young
 - Climate Research Incubator - Kristy Hopfensperger
- Upcoming Events or Calls to Action
- Next Meeting Info
- Feedback Poll

9/22/25 Meeting Recap

- **First meeting!**

- Many speakers to show connection between air quality, health, and greenspace actions
 - Green Cincinnati Plan - Air Quality with Amanda Testerman, Office of Environment and Sustainability
 - Cincy Air Watch with Meriel Vigran, Cincinnati Health Department
 - ALHS with Dr. Andrew Beck, Cincinnati Children's Hospital Medical Center
 - Excessive Smoke from Neighborhood Restaurants - Dr. Nick Newman, Cincinnati Children's Hospital Medical Center
 - Local Trees and Greenspace Initiatives - Rhiannon Hoeweler, MadTree
 - Remote Monitoring Efforts - Dan Divelbiss Mander Edge Solutions and Dr. Kristy Hopfensperger, Northern Kentucky University
 - Lived Experience- Moshe Seid, Cincinnati Children's Hospital Medical Center
- Bridging Barriers Exercise
- Survey
- Meeting documents available here:
<https://www.cincinnati-oh.gov/sites/oes/assets/BREATHE-9.22.25-Meeting-Documents.pdf>



Coalition Victories



- UC hosted [Environmental Justice and Advocacy Symposium](#) on December 5th, 2025
- 2 air monitor reports back from Harmon Tenants Union
- 128 Trees were planted in the West End for [Let's Grow Local](#) Initiative
 - 3 Cincy Air Watch monitors in the West End supporting this initiative
- [2025 Green Cincinnati Plan Progress Report](#)
- [Green Umbrella announces The Grassroots Collaboration Award recipients!](#)
- [Taking Root](#) grant received by Cincinnati Parks to plant microforests

Any Additional Victories?

Air Quality Data Dashboard for the Greater Cincinnati Region

Presented by: Timothy NeCamp¹

In Collaboration with: Jaeydah Edwards², Tiffany Harvey², Rachel Greenlee¹, David Mackey¹,
Kristy Hopfensperger³, Andy Long³, Josh Tunning⁴

¹Data Bloom, ²Groundwork Ohio River Valley, ³Northern Kentucky University, ⁴ReNewport



The Project and Data Collection



Groundwork Ohio River Valley is a climate justice focused organization that employs a local green youth workforce.

This project involved collecting air quality data in Cincinnati neighborhoods that previously didn't have localized monitors.



- **Station data** comes from monitors from the Environmental Protection Agency (EPA), Purple Air, and GWORV (AQMesh monitors).
- **Resident data** includes monitors in people's homes (Temtop) for about 7 days, mobile monitors (Airbeam) worn by residents for about 7 days, and monitors (Airbeam) on a bike route in Lower Price Hill.

Dashboard Overview

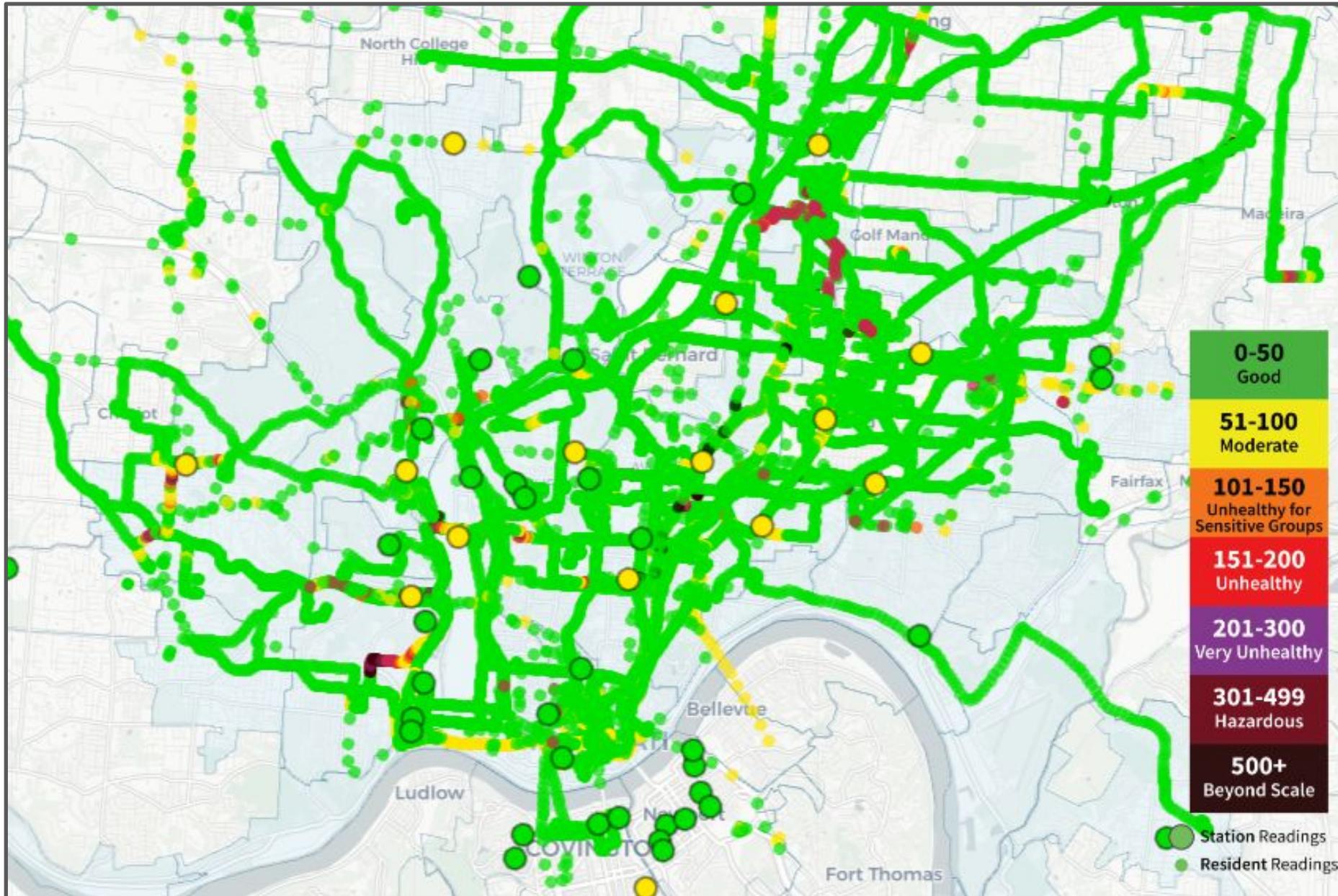
The screenshot shows the home page of the dashboard. The header includes the GROUNDWORK logo and the title "Air Quality in Greater Cincinnati". Below the header is a navigation menu with tabs: "Welcome", "Map", "Detailed Summary and Location Comparison", "How To and FAQ", and "About this Project". The main content area contains a "What is this dashboard?" section with introductory text, a "How did this dashboard come to be?" section with background information, and a "What is the Air Quality Index (AQI)?" section with a brief explanation of AQI.

The screenshot shows the "Map" view of the dashboard. On the left, there are filter controls: "Select Start Date" (2024-03-01), "Select Start Hour" (12:00 AM), "Select End Date" (2024-08-31), and "Select End Hour" (12:00 AM). Below these are "Select Reading Type" options: "All Readings" (selected), "Station Readings", and "Resident Readings". On the right, a map of Greater Cincinnati displays air quality data points color-coded by AQI. A legend on the far right shows the AQI scale: 0-50 (Good), 51-100 (Moderate), 101-150 (Unhealthy for Sensitive Groups), 151-200 (Unhealthy), 201-300 (Very Unhealthy), and 301-499 (Hazardous).

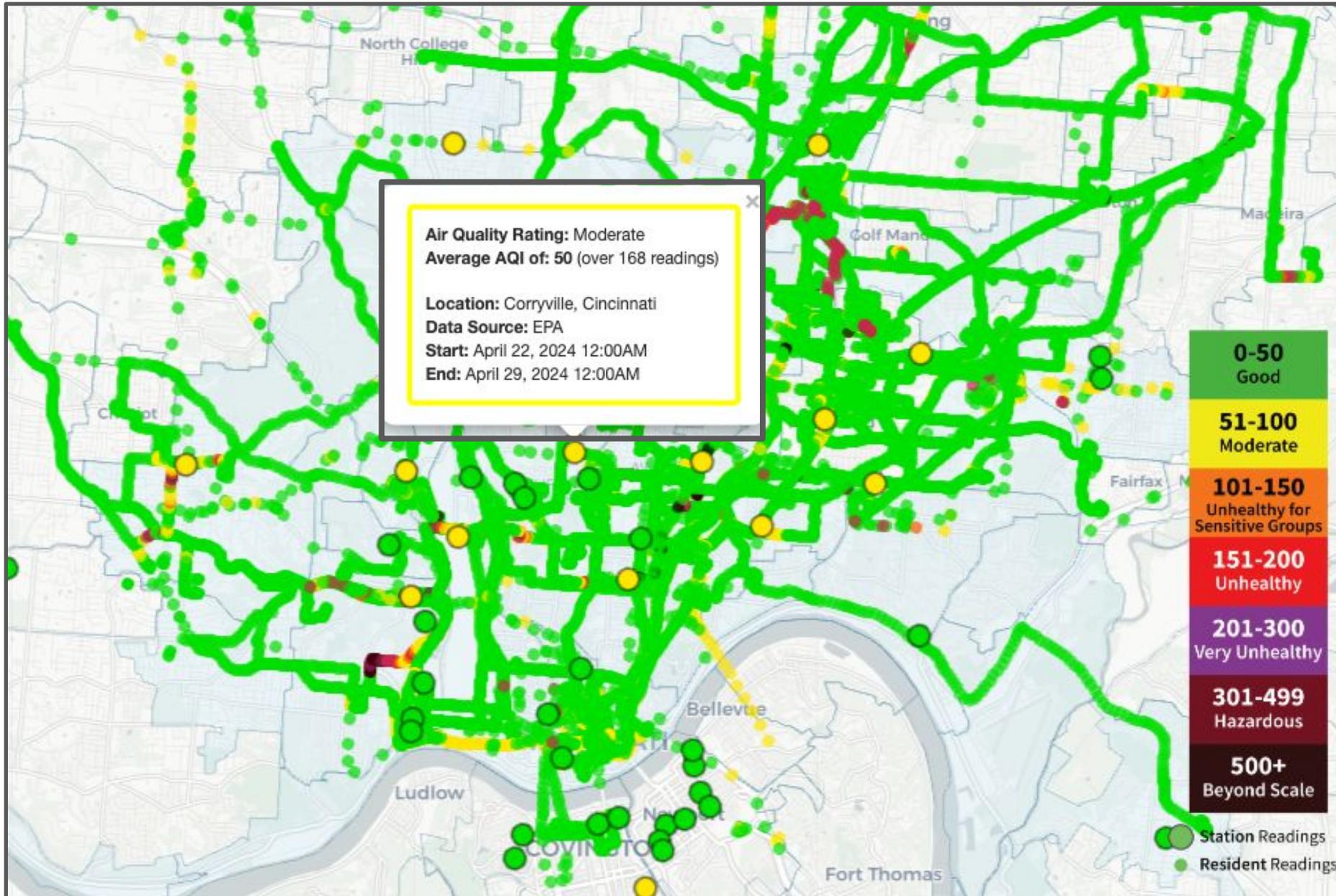
This screenshot shows the dashboard map view with a detailed legend on the left side. The legend lists AQI ranges and their corresponding health risk levels: 0-50 (GOOD), 51-100 (MODERATE), 101-150 (UNHEALTHY FOR SENSITIVE GROUPS), 151-200 (UNHEALTHY), 201-300 (VERY UNHEALTHY), 301-499 (HAZARDOUS), and 500+ (BEYOND SCALE). Below the legend, there is a section titled "Where does this data come from" and "This dashboard's air quality data comes from". The main map area shows a map of Greater Cincinnati with a large green line plot overlaid, representing air quality trends over time. The legend also includes a "Station Readings" icon (green circle) and a "Resident Readings" icon (yellow circle).

The screenshot shows the "How To and FAQ" page of the dashboard. The page has a green header with the title "How To and FAQ". Below the header, there are two main sections: "How To Use: Map Page" and "How To Use: Detailed Summary and Location Comparison Page". The "How To Use: Detailed Summary and Location Comparison Page" section contains a paragraph explaining the page's purpose and a list of three sections: 1) The calendar plot shows the average AQI for each day in the group(s) you selected. 2) The line plot displays the average hourly AQI over time as colored points. 3) The summary table gives useful insights, like the percentage of hours with good air quality, the worst day of the week for air quality, and the best week for air quality during your selected time range. Below this, there is a note about "Station Readings" and "Resident Readings". The bottom of the page features a list of frequently asked questions, such as "What health hazards are associated with poor air quality?" and "How can I protect my health when the air quality is poor?".

Dashboard Features - Map



Dashboard Features - Map Pop Ups



Dashboard Features - Summary table comparing Cincinnati (Group 1) to Lower Price Hill (Group 2)

Compare Summarized Air Quality Data for your Selected Time Range			
Summary	Group 1 Details	Group 2 Details	
Percentage of Hours with Good Air Quality (AQI ≤ 50)	70.22 %	81.56 %	
Percentage of Hours with Unhealthy Air Quality (AQI > 100)	0.05 %	0.09 %	
Best hour of the day for air quality	6pm with an average 35 AQI 7pm with an average 35 AQI	7pm with an average 26 AQI	
Worst hour of the day for air quality	8am with an average 49 AQI	8am with an average 39 AQI	
Best day of the week for air quality	Wed with an average 40 AQI	Wed with an average 30 AQI Fri with an average 30 AQI	
Worst day of the week for air quality	Sat with an average 44 AQI	Thu with an average 33 AQI Sat with an average 33 AQI	
Best air quality week	Week of: April 01, 2024 with an average 17 AQI	Week of: April 01, 2024 with an average 12 AQI	
Worst air quality week	Week of: June 17, 2024 with an average 63 AQI	Week of: June 17, 2024 with an average 59 AQI	
Best air quality day	March 17, 2024 with an average 6 AQI	April 03, 2024 with an average 4 AQI April 04, 2024 with an average 4 AQI	
Worst air quality day	August 05, 2024 with an average 73 AQI	June 19, 2024 with an average 64 AQI June 20, 2024 with an average 64 AQI June 21, 2024 with an average 64 AQI August 05, 2024 with an average 64 AQI	
Best single hour for air quality	Apr 3, 2024 at 3am with 1 AQI	Apr 3, 2024 at 1am with 1 AQI	
Worst single hour for air quality	Jul 4, 2024 at 11pm with 151 AQI	Jul 4, 2024 at 11pm with 199 AQI	
3 worst air quality hours (station specific)	Jul 4, 2024 at 11pm with 273 AQI at a station in: Lower Price Hill Queensgate, Cincinnati by EPA Jul 4, 2024 at 10pm with 246 AQI at a station in: Millvale, Cincinnati by AQMesh	Jul 4, 2024 at 11pm with 273 AQI at a station in: Lower Price Hill Queensgate, Cincinnati by EPA Mar 22, 2024 at 3pm with 189 AQI at a station in: Lower Price Hill Queensgate, Cincinnati by Purple Air	

Dashboard Features - Calendar plot comparing Cincinnati (Group 1) to Millvale (Group 2)

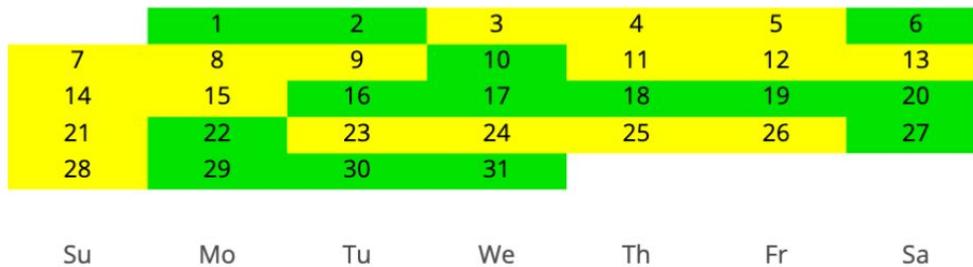
June
Group 1



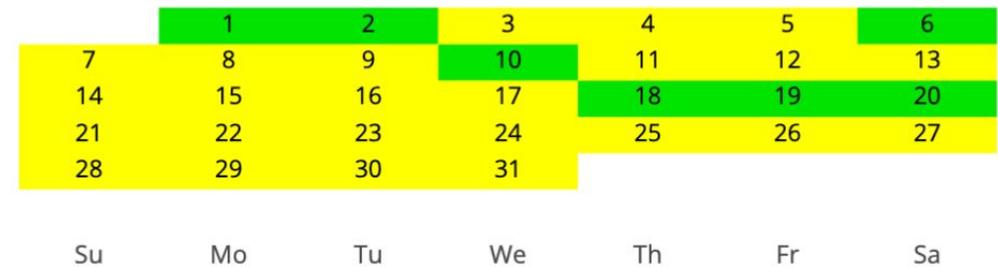
June
Group 2



July
Group 1



July
Group 2



August
Group 1



August
Group 2



Access the live dashboard at

<https://cincinnatiairquality.thedatabloom.com/>

Questions or feedback

Please contact us at tnecamp@thedatabloom.com





Environmental Health Housing Code Enforcement & Asthma

Antonio Young
Cincinnati Health Department

1/14/2026



Environmental Offices Overview

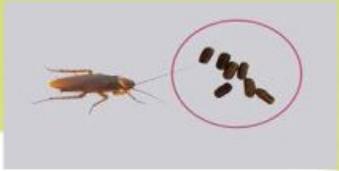
- 1. Food Inspection Program**
- 2. Environmental Waste Unit**
- 3. Technical Environmental**
- 4. Healthy Homes Program**



Healthy Homes Programs



- Defective plumbing, and no heat
- Unsanitary living conditions
- School and hotels /motel
- Public smoking complaints



Environmental Asthma Triggers

- **Mold:** Airborne spores, worsens asthma
- **Insect Infestations:** Droppings/skins trigger symptoms
- **Rodent Infestations:** Allergens from urine/saliva; persistent in homes





Complaint Enforcement Process

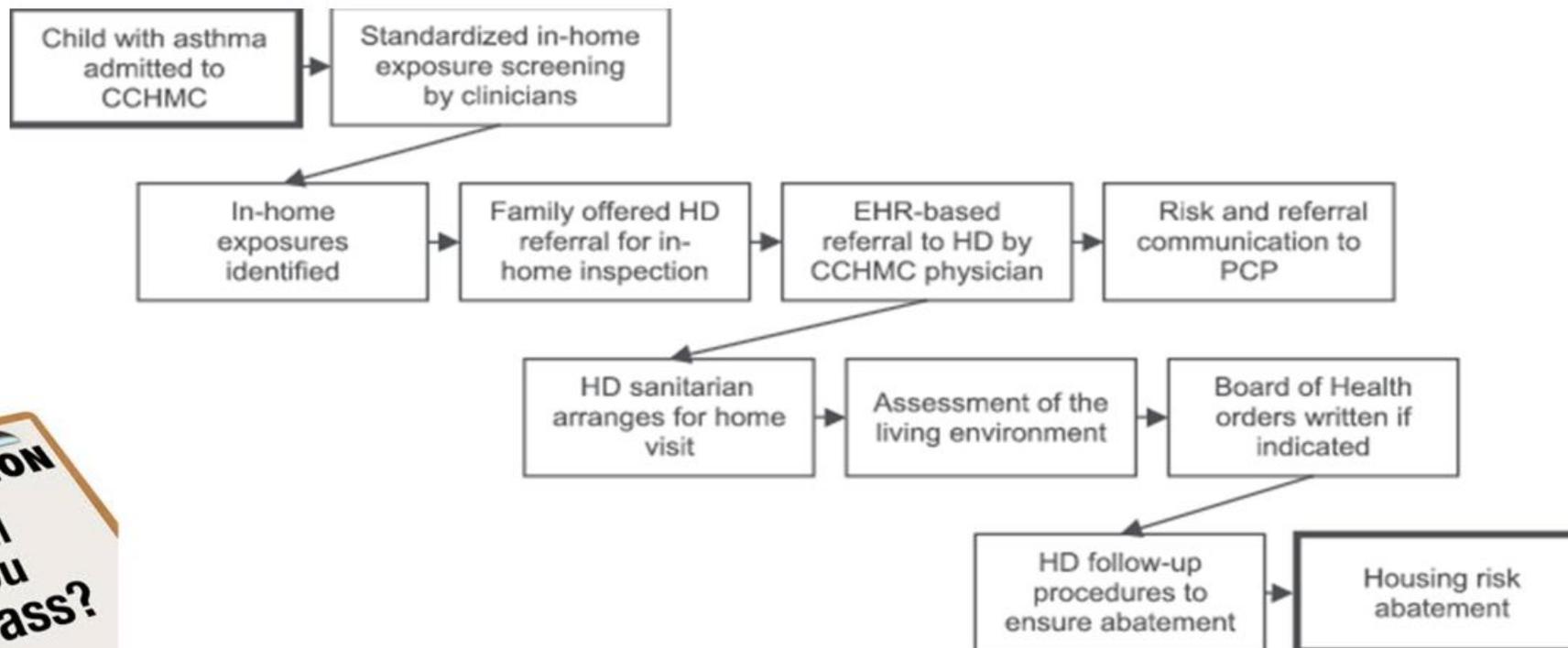
- **Tenant Files Complaint:** If no action by landlord, tenant files complaint via phone, online, or 311 app
- **Inspection:** Inspector visits home to confirm health threat
- **Order Issued:** Order sent to property owner to correct the condition in specified time period
- **Reinspection:** Revisit property to verify if order has been rectified until abated.



CLEAR Referral Program

CLEAR = Collaboration to Lessen Environmental Asthma Risks

- Partnership with Cincinnati Children's
- Children's identifies triggers via questionnaire
- CHD EHS inspect homes, address triggers, issue work orders



ImpactU Improvement Project



Reducing Environmental Hazards in the Living Space of Asthmatic Children

(A Space to Breathe Easy)

ImpactU project Beginning September 21, 2022

Goal:

Improves home access for CHD inspections

The Problem:

CHD had only a 40% access rate into homes following a CLEAR referral.

Improvement Measurement



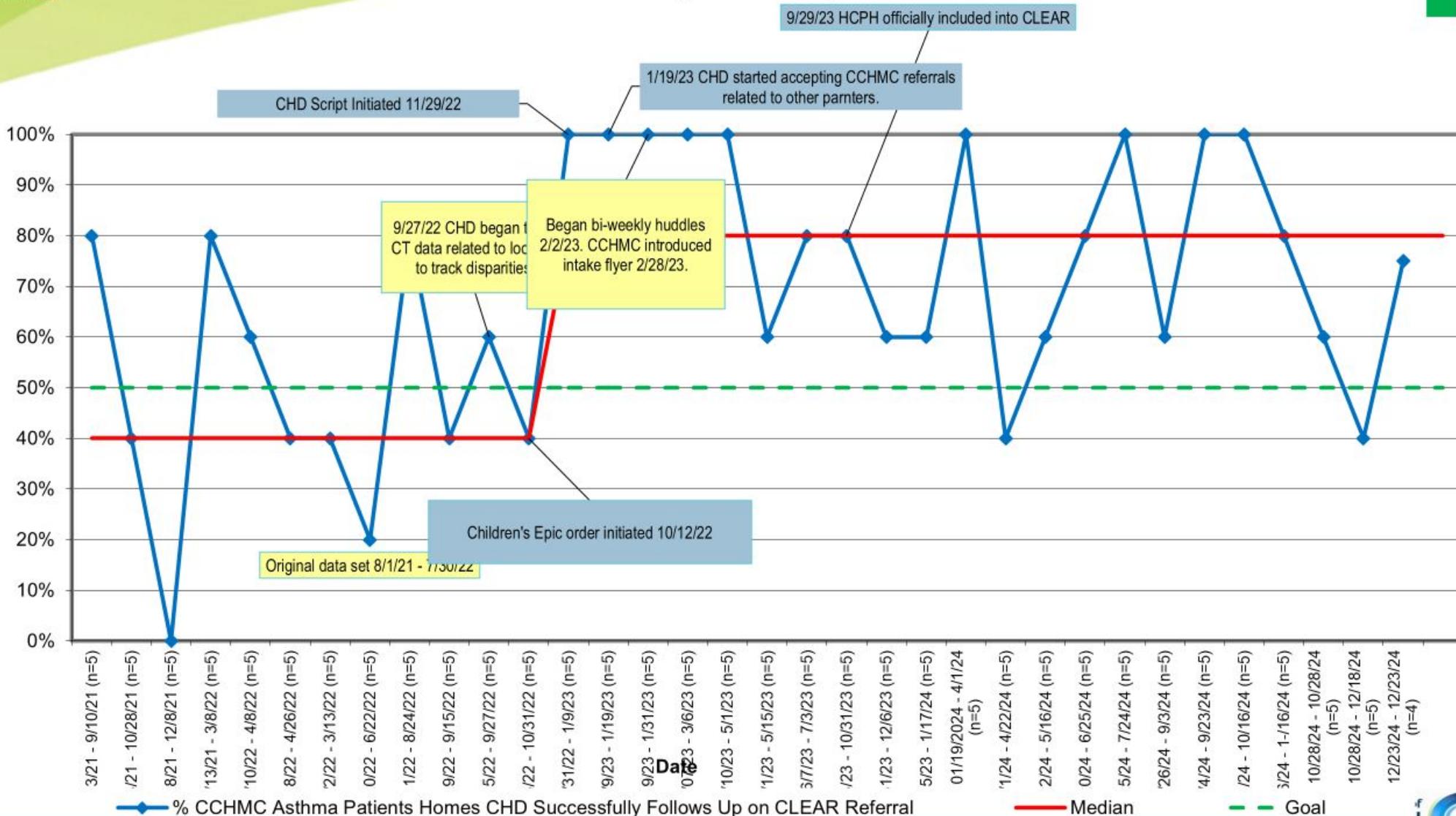
% CCHMC Asthma Patients Homes

Successfully Follows Up on CLEAR Referrals

CHD



% CCHMC Asthma Patients Homes
CHD Successfully Follows Up on CLEAR Referral



KEY SUCCESSES AND CHALLENGES

Successes

- ✓ Improved home access rate: 40% → 100% → sustained 80%
- ✓ Collaboration with PWC & HCPH/Northern Kentucky

Challenges

- ✓• Manual, cumbersome data collection
- ✓• Need consistent system for tracking

KEY NEXT STEPS

Continued broadening:

- ✓ Team will continue to focus on partnerships with other agencies.
- ✓ Begin to lay the framework for capturing CLEAR data in the new CAGIS Edge system.

Q and A

city of
CINCINNATI
HEALTH DEPARTMENT

CLIMATE RESEARCH INCUBATOR

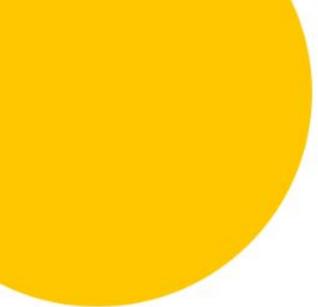


KRISTY HOPFENSBERGER, PHD

Professor & Director, Environmental Science Program
Northern Kentucky University

Email
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January 2026



Agenda

- 1 Purpose & Benefits of the CRI
- 2 Structure of the CRI
- 3 Current Projects from the CRI
- 4 How to Get Involved
- 5 Questions



● **Green Umbrella**

Greater Cincinnati's Regional Climate Collaborative
"Green Umbrella leads a network committed to taking decisive action in the face of climate change. We help our communities become more climate resilient and equitable, and work collectively to decrease our region's emissions."

● **Climate Research Incubator**

One of Green Umbrella's nine programs, focused on equitable, collaborative research. Launched in 2023.

Long-term vision: A known entity in the region where people go to find partners to begin collaborative research on climate-related topics.

CRI: Purpose & Goals

Purpose



Leveraging local knowledge and expertise to create a community of practice to respond to climate-related challenges and rise to opportunities.

Mission



Facilitate the coming together of community partners, scholars, and government officials to co-create useful projects that move forward climate resilience in the region to reach climate goals.

Goals



1. Provide training necessary in science communication and public engagement
2. Foster opportunity for relationship building among participants
3. Support actionable seed projects developed in partnership with communities

CRI: Benefits to Participation

When all parties collaborate through democratic partnership and with minimal power differentials, then truly successful projects will emerge

Researcher

Collaborating across disciplines and sectors helps researchers:

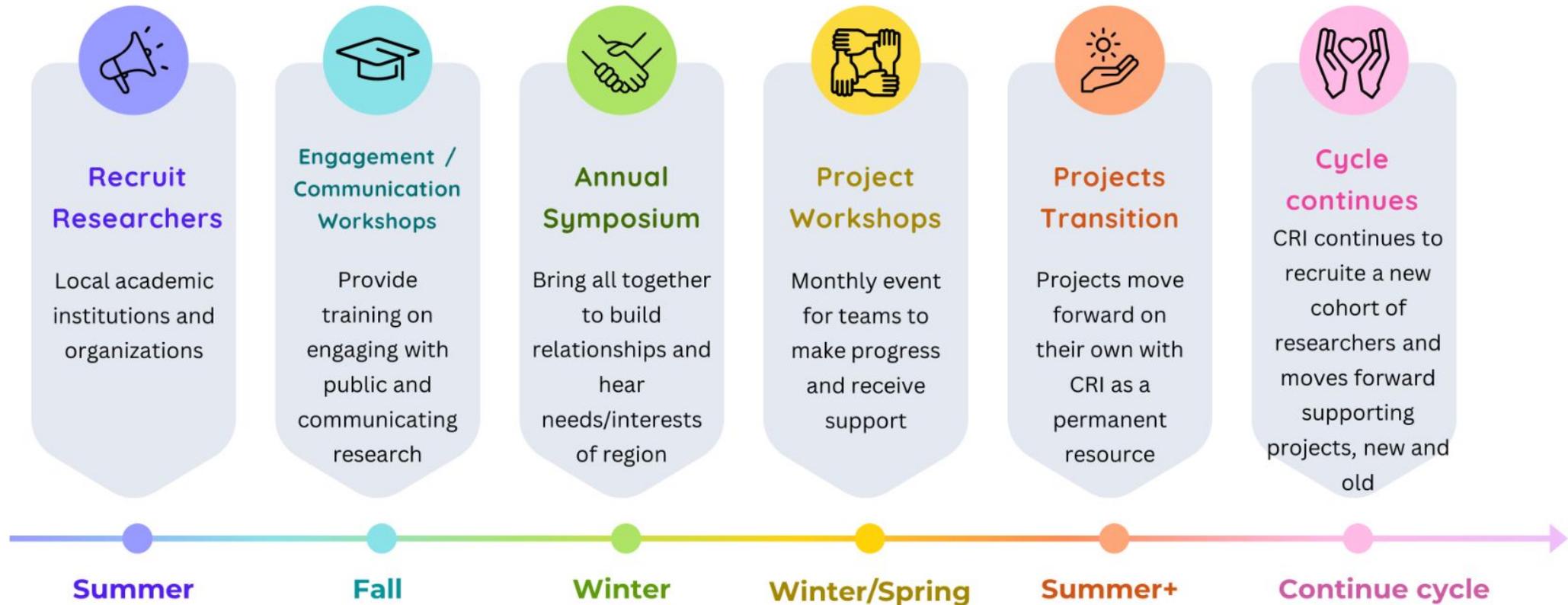
- Refine questions and understanding of findings,
- Deepen policy relevance of your work,
- Access new resources that make new research possible, and
- Build trusted relationships that strengthen public support for science, inspire public action and increase public involvement in decision making.

Community / Government Partners

Collaborating across disciplines and sectors helps community and government partners:

- Build scientific and technical understanding,
- Integrate fresh and diverse perspectives into the research,
- Ability to quickly capitalize on funding opportunities from existing relationships, and
- Improve access to data and increase credibility with decision-makers and funders.

Structure of the CRI



Current CRI Projects

- Ground yourself in greenspace: Avondale
 - Numerous partners
 - Multiple subprojects focused on: air quality, biodiversity, community gathering space, mental health, environmental narratives
- Litterless in Covington
 - CRI idea generation led to larger collab
 - Pilot study created focused on needs
 - Current focus: education & outreach
- Sustainability Hack-a-thon
 - Developed via Symposium & Workshops
 - Leveraged resources to maximize output
- Understanding mental health needs of those experiencing climate change in Bond Hill
 - Newly funded via CRI/C4H



CRI: How to Get Involved



Attend the Annual Symposium

Wed., Jan. 21, 9:30-3:30
Email me today!



Reach out for connections or with project idea

Want to be considered for projects? Complete our community / government partner form
Have a project idea and in need of specific partners? Email me



Apply for the 2026-27 Researcher Cohort

We will begin accepting applications in August 2026
Email me for the link!

THANK YOU



 QUESTIONS?

E-mail
hopfenspek1@nku.edu

January 2026

Upcoming Events



- [Midwest Regional Sustainability Summit](#) June 12th, Sharonville Convention Center
- [Air Sensor International Conference](#), May 4th-8th, Los Angeles CA
- [Let's Grow Local](#) October 27th, 2026, Madisonville
- [RISE Communities](#) Call for 2026 Applications
- Reference CRI Slides
- Releaf is giving away 1000 trees, celebrating with a Night in the Trees in October, 2026.
- [Indiana Sustainability & Resilience Conference](#), Feb 6th, 2026

Let's Discuss Future Meetings

2026

- Q1: Wednesday, January 14th (Today)
 - Virtual
- Q2: Week of April 13th
 - In person, location TBD
- Q3: Week of July 13th
 - Virtual
- Q4: Week of October 12th
 - In person, location TBD

Interested in hosting a meeting or field trip? Let us know!

Polls

