

It Takes a Village: Making Community- Gathered Air Quality Data Actually Count

Jan-Michael Archer, MS

University of Maryland School of Public Health

2023 Air Sensors Quality Assurance Workshop

7/27/2023





Or.....

*Community-Based Air
Quality Monitoring &
Quality Assurance:
A Cautionary Tale*

A woman with long dark hair, wearing a dark patterned top and a light-colored cardigan, stands in front of a large fire. She has a serious expression. The background is filled with bright orange and yellow flames.

“Bernadine did that, so you won’t have to.”

What Do We Want?

- **EJ Principle #6:**
“Environmental Justice demands the cessation of the production of all toxins, hazardous wastes, and radioactive materials, and that all past and current producers be held strictly accountable to the people for detoxification and the containment at the point of production.”
- Healthy environments that are free of air pollution.

Healthy Communities in
Healthy Environments

Minimal Air Pollution Exposure

Emissions Reductions

Better Understanding
of Current Exposure

More Air Quality Data

Hyperlocal Community-
Gathered Data



*The
“Dream”*



March 25, 2019
Prince George's District Council DENIES Ernest
Maier Application SE/VSE-4792 to build a
Concrete Batching Plant in the Port Towns!

Environmental racism case: EPA rejects Alabama town's claim over toxic landfill

Agency reports 'insufficient evidence' that Civil Rights Act was breached in case of huge landfill near mostly African American town

The Guardian, 2018

EPA closes civil rights investigation into Louisiana pollution

In court filings, the agency said it will end probe of state agencies accused of failing to protect Black neighborhoods in the state's 'Cancer Alley'

Washington Post, 2023

Reality Check: It's Damn Hard to Stop Pollution

Environmental Justice Advocates Urge California to Stop Issuing New Drilling Permits in Neighborhoods

Inside Climate News, 2023

Maryland declares Energy Answers' Fairfield incinerator permit expired

Decision is a victory for student, resident and environmental groups who opposed the project for years

Baltimore Brew, 2016

A Major Setback for Climate: West Virginia v. EPA

Sierra Club, 2022



5. Enjoy nationwide coverage on America's Largest and Most Dependable Network.

Data Service Plans
Service plans available at participating Walmart locations, Walmart.com and

<p>1GB Data Wireless Internet Connection \$15 30-Day Service Plan</p>	<p>2GB Data Wireless Internet Connection \$25 30-Day Service Plan</p>	<p>4GB Data Wireless Internet Connection \$40 30-Day Service Plan</p>	<p>5GB Data Wireless Internet Connection \$50 30-Day Service Plan</p>
---	---	---	---

..... 30-Day Plans 60-Day Plans

These Service cards will not work with Straight Talk Wireless cell phones.
Straight Talk Mobile Hotspot will not work with the Straight Talk Unlimited!



Case 1: Uniontown, Alabama

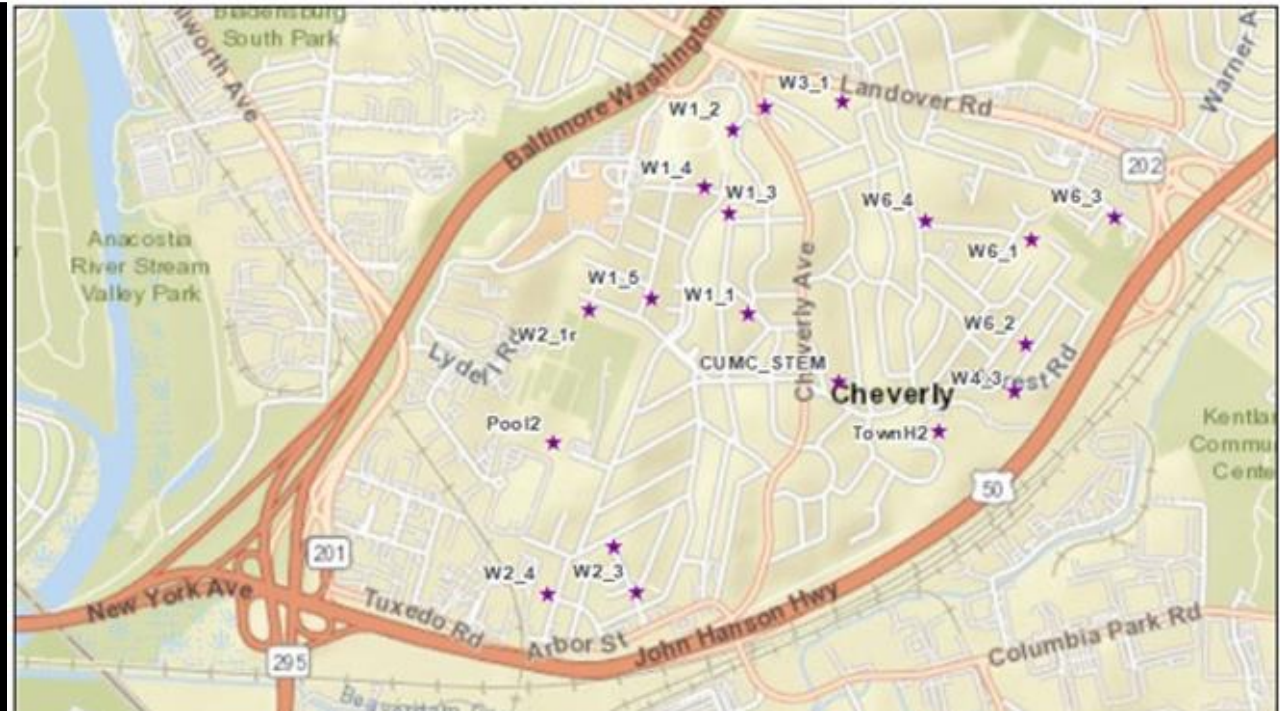
EXPECTATION

- Site 15 monitors throughout community at fence line locations
- Collect Daily "Odor Diary" entries and compare to emissions data

REALITY

- MOU, but no QAPP
- Limited Access to Sites
- Wi-Fi Connectivity Issues
- Alabama Summer
- Science Communication
- Participant Fatigue = Inconsistent Results

this package includes:



Case 2: Cheverly, Maryland

EXPECTATION

- Suburban landscape and collaboration with City and State offices will remove barriers

REALITY

- QAPP, but no MOU
- Better results, better outcomes
- Project sustainability still a major issue
- Had to work around City/MDE schedule



Case 3: Atlanta, Georgia

- **Multiple stakeholder group approach**
 - Community-based Organizations
 - AQ Consultants
 - Sensor Manufacturer
 - Government
 - Higher Education
- **Dual purpose monitoring**
 - FEM stationary monitoring for comparison to State data
 - Low-Cost personal monitoring for participatory science, community engagement



MAKE IT COUNT! Start with the *community's* end in mind.

- Know what policy ACTIONS are desired, possible, and likely
- MOU's are like QAPPs for community partnerships (co-create!)
- Low-Cost ≠ No Cost esp. for EJ communities – failure can be expensive

It Takes A Village. Build A Diverse Team.

- Successful community monitoring programs are based on relationships between sector and stakeholder groups

Beware: QA & Community-based Monitoring is Easier in Affluent Communities

- ...but these are not the communities that need it most!

QUESTIONS?

