

Environmental Justice in Louisville: A Work in Progress

*Michelle King
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Louisville Metro Air Pollution Control District
NACAA Fall Meeting
October 16, 2018*



Environmental Justice (EJ)

- The **fair treatment and meaningful involvement of all people** regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.
- It's achieved when **everyone** enjoys the same degree of protection from environmental and health hazards **and** equal access to the decision-making process to have a healthy environment in which to live, learn, and work.

- [U.S. Environmental Protection Agency](#)

Rubbertown

- Industrial area located in West Louisville, KY
- **1918** – Formation of the Standard Oil Refinery; the facility set the stage for future industry in the area
- **World War II (1939-1945)** – West Louisville industrial area starts producing synthetic rubber for tires and other key components used during the war; area now called “Rubbertown”

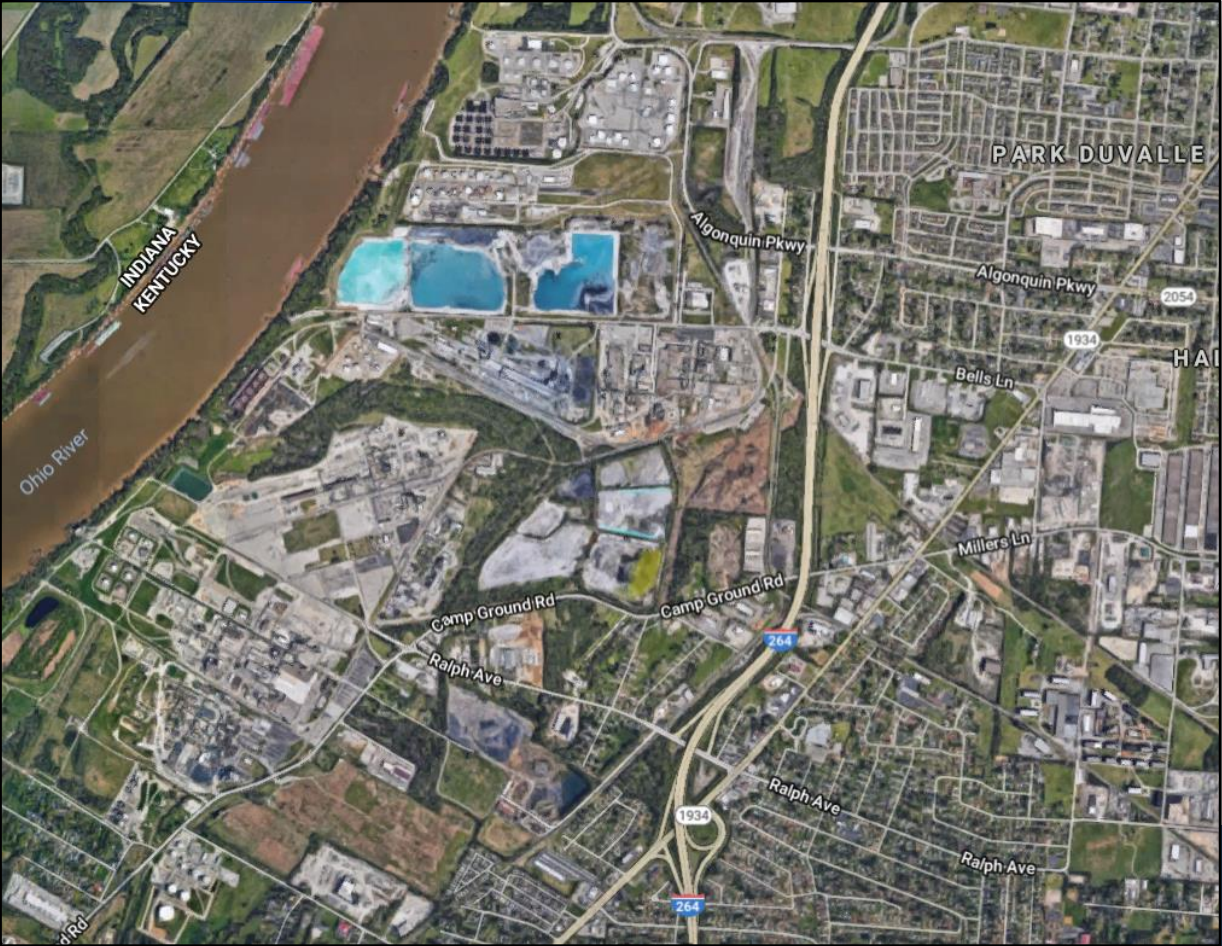
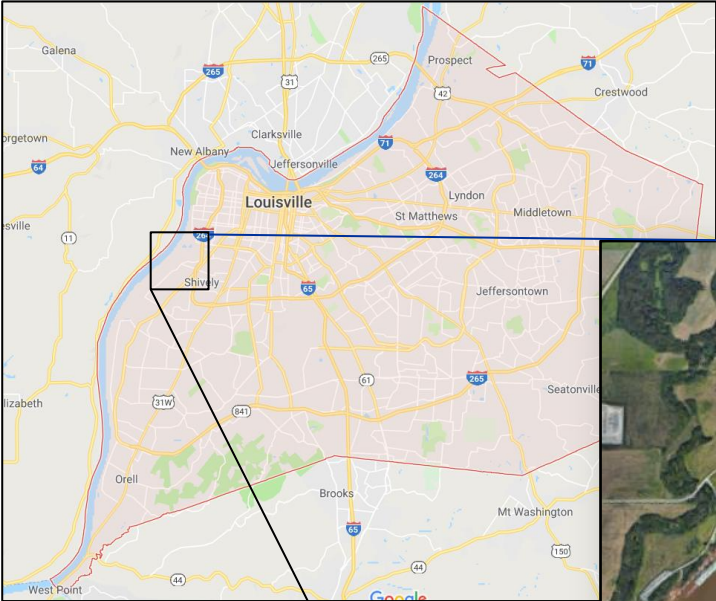


Rubbertown

- **1996** – Formation of the West Jefferson County Community Task Force (WJCCTF)
- **Early 2000's** – Health assessments conducted in Rubbertown neighborhoods; assessments found a greater risk of cancer and other illnesses to Rubbertown residents compared to other areas in Louisville; West Louisville Air Toxics Study identified 17 carcinogens with risk greater than one in a million (1×10^{-6})

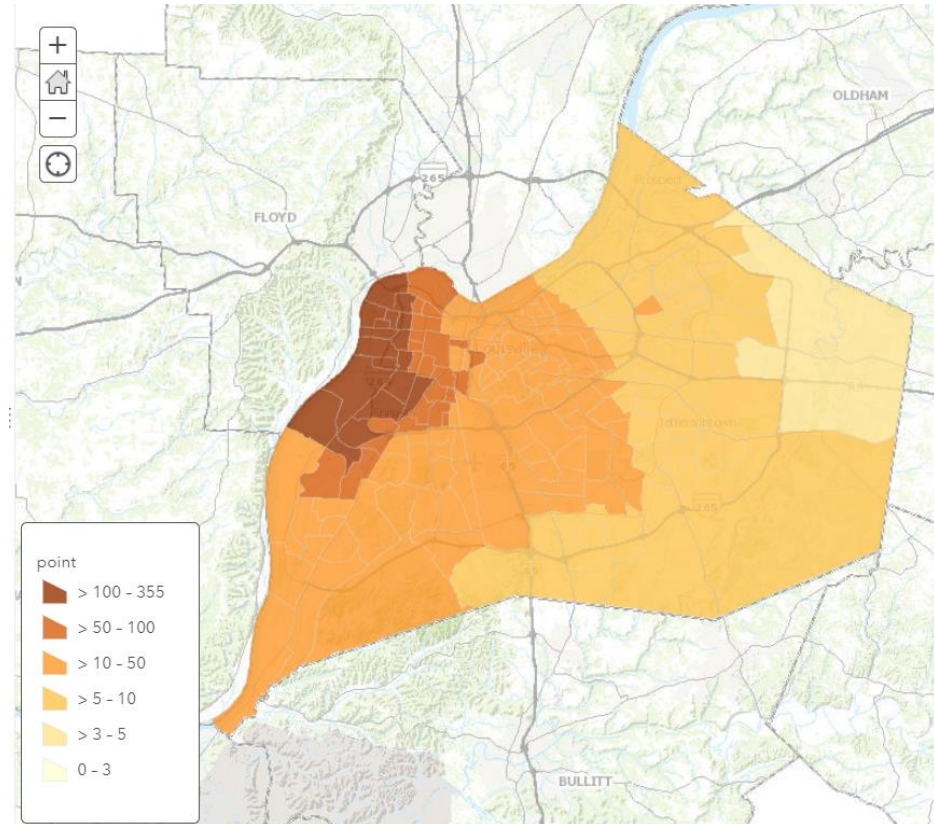
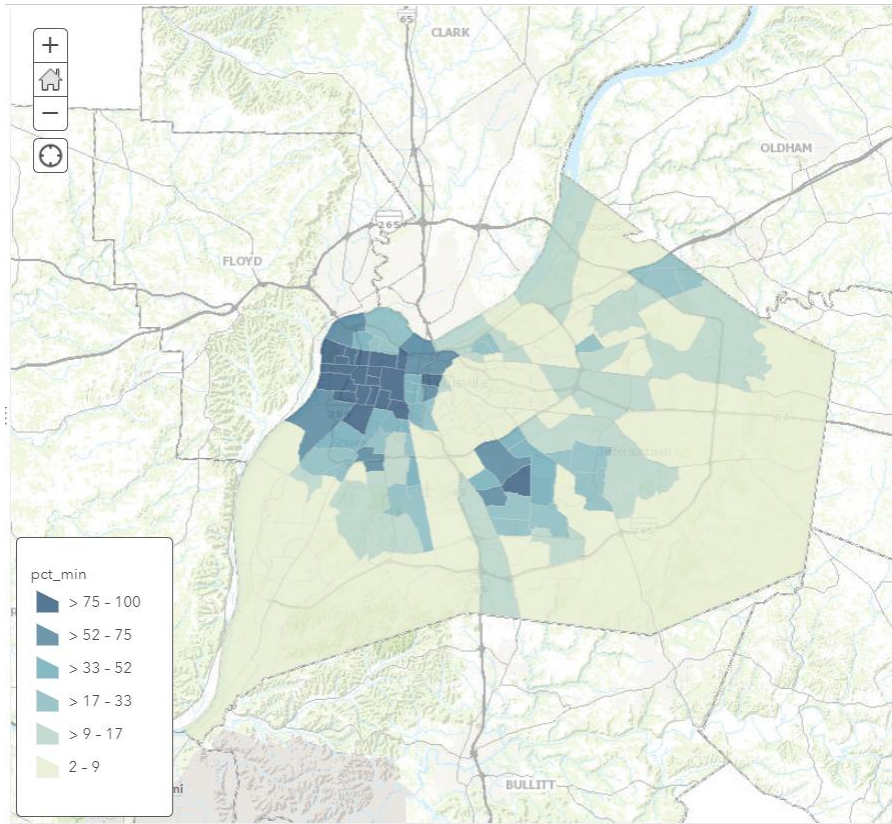


Rubbertown



EJ in Louisville

2000 Census Percent Minority v 2005 NATA Risk (in a million),
Point Sources



Data sourced from [EPA EJSCREEN](#) and the [National Air Toxics Assessment \(NATA\)](#) data tools.

Strategic Toxic Air Reduction Program Timeline

1996 - 2000

WJCCTF formed;
WJCCTF begins
hosting monthly
meetings

**Sept.
2004**

First
Draft
STAR
Program

**July
2005**

Adopted
STAR
Program

**2000 -
2003**

West
Louisville
Air Toxics
Study

**Jan.
2005**

Proposed
STAR
Program

**2005 -
Present**

Implementation

STAR Program Highlights

- Provides a framework for determining the environmental acceptability of toxics
- Requires APCD to assess and address other toxic emissions
- Requires companies to assess and address



Community Involvement

BEFORE the adoption of STAR

- Multiple community meetings and public forums (**over 60**) held to discuss the STAR Program & the draft regulations
 - Monthly presentations by EPA, local industries, local agencies, community groups and citizens/Rubbertown residents
- Built consensus on key issues
 - *e.g.*, location of monitoring sites, target level risks, pollutants of concern
- Opportunities for public comment



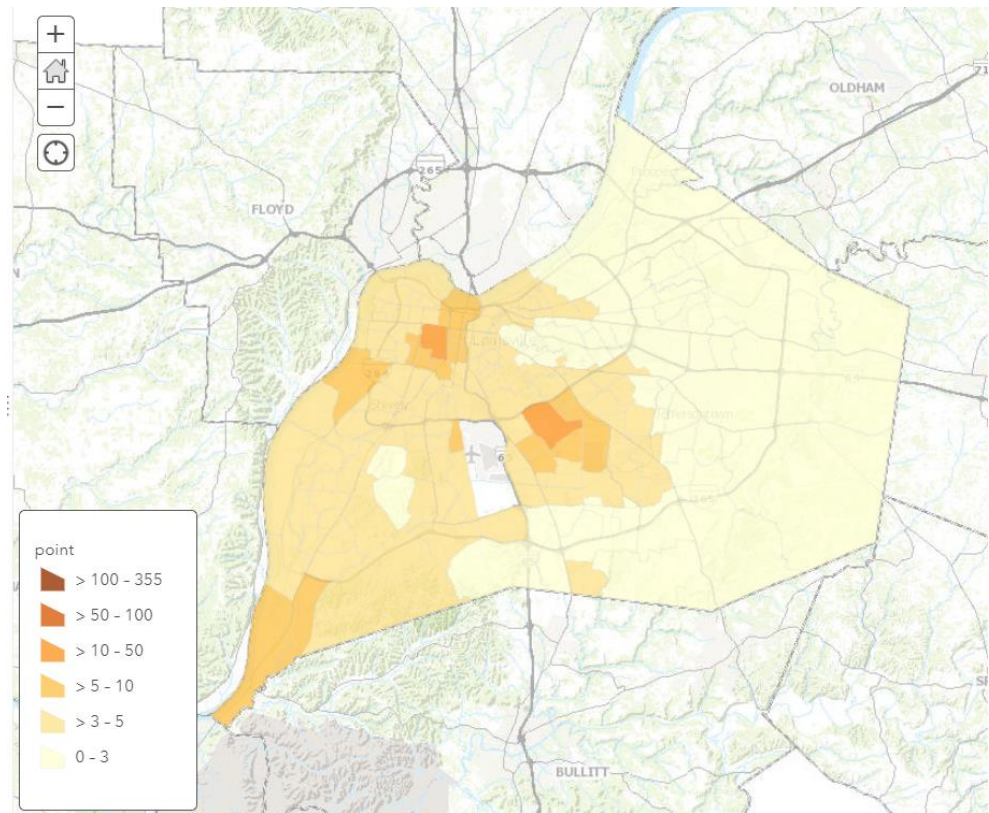
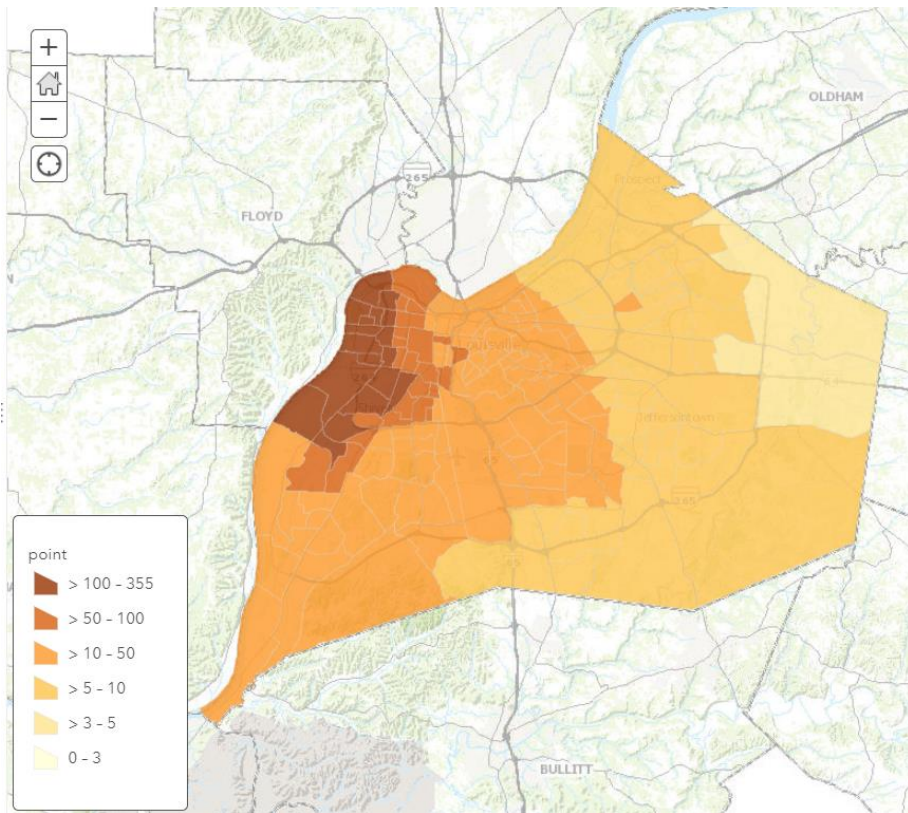
Community Involvement

AFTER the adoption of STAR...

- Stakeholder Groups
 - STAR Implementation Advisory Group (2005 – 2007)
 - Reviewed “nuts and bolts” of the newly implemented STAR Program
 - [STAR Regulation 5.30 Stakeholder Group](#) (2005 – 2007)
 - Developed, reviewed and commented on, the “Report” assessing the risk to human health and welfare and the “Plan of Action” to reduce risk from “smaller sources” emitting toxic emissions throughout the community
 - STAR Advisory Group

Progress to Date

2005 v 2014 National Air Toxics Assessment – Point Sources



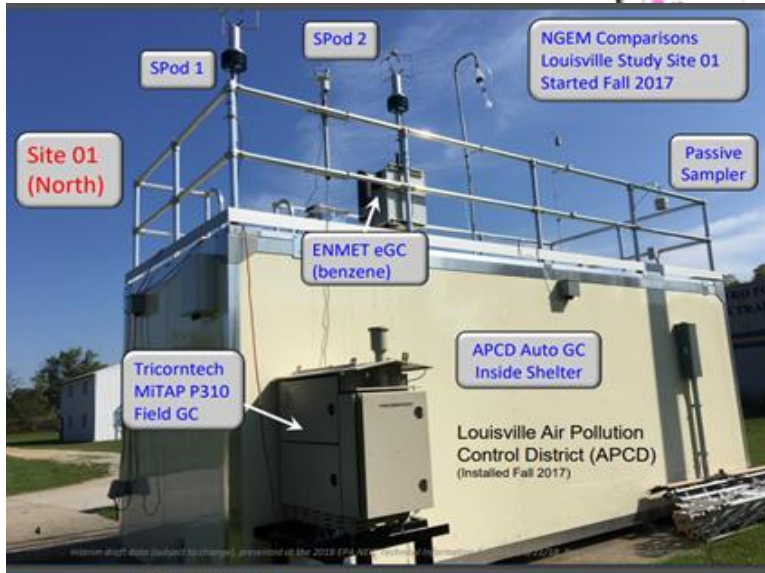
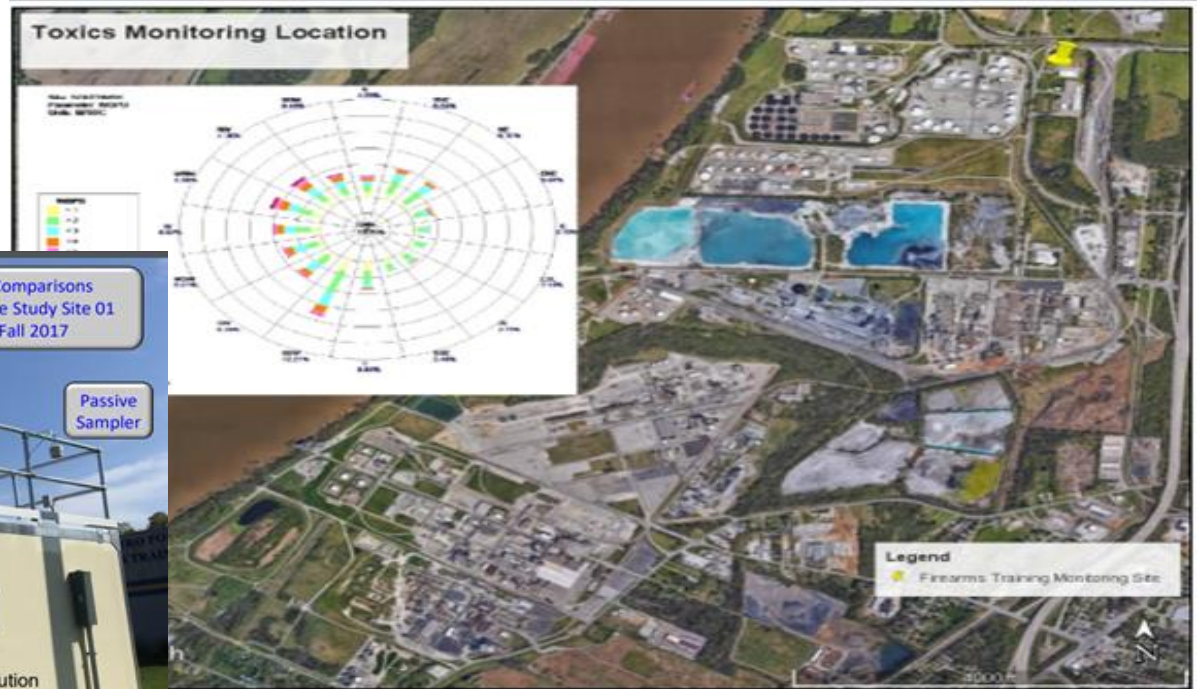
Continued Efforts: Air Toxics Monitoring

Expanded air monitoring network; added Auto GC in Rubbertown to monitor air toxics of concern and select volatile organic compounds with high photochemical reactivity

- **Monitoring objectives include:**
 - Generating near real time, quality-assured data
 - Providing air pollution data to the community in a timely way
 - Supporting academic and scientific research
 - Improving access to data via APCD's website and U.S. EPA's Air Quality System (AQS) database

<u>CAS No.</u>	<u>Compound</u>	<u>TAC No.</u>	<u>CAS No.</u>	<u>Compound</u>	<u>TAC No.</u>
107-13-1	Acrylonitrile	1	127-18-4	Perchloroethylene (Tetrachloroethylene)	1
71-43-2	Benzene	1	79-01-6	Trichloroethylene	1
75-25-2	Bromoform	1	75-01-4	Vinyl Chloride	1
106-99-0	1,3 Butadiene	1	108-88-3	Toluene	1
56-23-5	Carbon tetrachloride	1	100-41-4	Ethylbenzene	2
67-66-3	Chloroform	1	108-10-1	Methyl isobutyl ketone (4-Methyl-2-pentanone)	4
106-46-7	1,4 Dichlorobenzene	1	100-42-5	Styrene	4
75-09-2	Methylene chloride (Dichloromethane)	1	80-62-6	Methyl methacrylate	4
			140-88-5	Ethyl acrylate	4

Continued Efforts: Air Toxics Monitoring Firearms Training Air Monitoring Site



Collaborations with EPA: RARE Project

EPA
United States
Environmental Protection
Agency

**Air Pollutant Source Investigation using Next Generation
Emission Measurements and Models;
Early Case Studies of 1,3-Butadiene Emissions in Louisville, KY**

NEIC 2018 Tech Summit, Denver CO, August 21, 2018

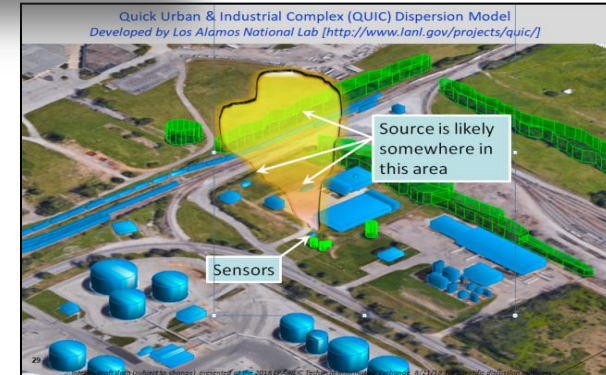
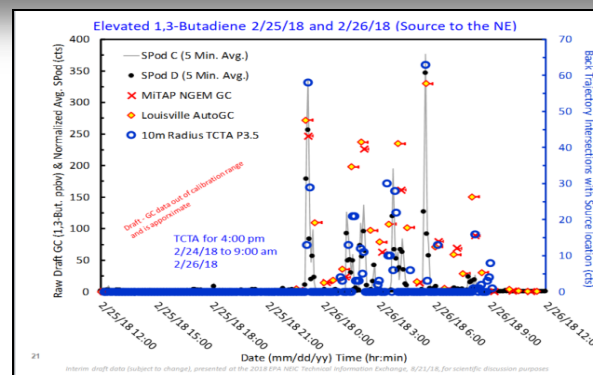
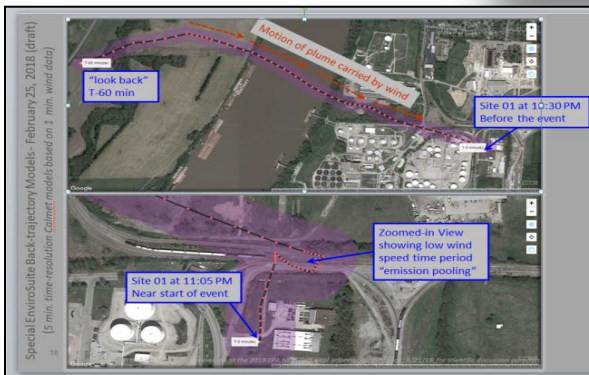
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Office of Research and Development
National Risk Management Research Laboratory, Air and Energy Management Division

NRMRL Fugitive and Area Source Group
Source and Fenceline Measurements
Methods and Technology Development




AIR
POLLUTION
CONTROL
DISTRICT



<https://louisvilleky.gov/government/air-pollution-control-district/epa-air-toxics-monitoring-project-louisville>

U.S. EPA RARE Project




EPA Citizen Science Project Mobile App for Reporting Odors

Rachelle Duvall (for the project team)
US EPA, Office of Research and Development, Durham, NC 27711

Community Leader Meeting August 20, 2018


Office of Research and Development
National Risk Management Research Laboratory, Air and Energy Management Division

Next Generation Emission Measurement (NGEM) and Fenceline Research



EPA Citizen Science/Mobile App Project


- Some of the app features include...
 - Automatic date/time stamp
 - Automatic location stamp (anonymous)
 - Automatic collection of temp, wind speed, etc.
 - User enters information about the odor
 - Description of odor (using odor wheel)
 - Duration of odor
 - Intensity of odor (mild, moderate, severe)
 - Health symptoms experienced (anonymous)
 - Map to view all odor reports on current day or in the past
 - We are still brainstorming on specific features to include



Odor Wheel Example

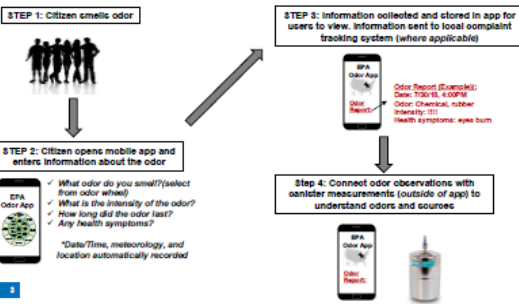
1. Natural gas odor
2. New / processed odor
3. Gas source
4. Sweet
5. Sour
6. Bitter
7. Metallic
8. Rusty
9. Chemical
10. Acrid
11. Sharp
12. Pungent
13. Clean
14. Clean
15. Clean
16. Clean
17. Clean
18. Clean
19. Clean
20. Clean

2 **Community feedback and participation is welcome and encouraged!**



EPA Citizen Science/Mobile App Project

How would an odor app be used?



STEP 1: Citizen smells odor

STEP 2: Citizen opens mobile app and enters information about the odor

STEP 3: Information collected and stored in app for users to view. Information sent to local complaint tracking system (where applicable)

Step 4: Connect odor observations with on-site measurements (outside of app) to understand odors and sources

What odor do you smell? (select from odor wheel)
What is the intensity of the odor?
How long did the odor last?
Any health symptoms?
*Date/Time, meteorology, and location automatically recorded

3



EPA Citizen Science/Mobile App Project

Next Steps...

- Paperwork, lots of paperwork!
- Figuring out technical approach for developing app (coding, build into existing apps, etc.)
- Meet with community members (likely Fall 2018) and LMAPCD to obtain feedback on mobile app features
- Recruit small focus group to test the app for 6 months (pilot testing starting Spring/Summer 2019)
- Make app available community wide

Contacts:
Rachelle Duvall, EPA/ORD (duvall.rachelle@epa.gov)
Sheryl Good, EPA/RA (good.sheryl@epa.gov)
Eben Thoma, EPA/ORD (thoma.eben@epa.gov)



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Continuing the Conversation

- To support opportunities for **meaningful involvement by all people**, APCD will continue to offer **transparent and frequent** opportunities for our community to learn about our work – the tools that we use and the processes through which those are applied.
- We will continue to highlight the **public participation opportunities** built into those processes, from reg development to implementation to enforcement.



Community Engagement Improvement Goals

- Increase **accessibility of information** – electronic, print, and in-person
- Increase **understanding** of APCD functions and regulatory obligations
- Add forums for **informal discussion** with community
- Provide **accurate** picture of current air quality, including challenges and successes, providing a foundation for future air quality improvement strategies



Outreach → Engagement



Community Presence

- Continued engagement with community partners



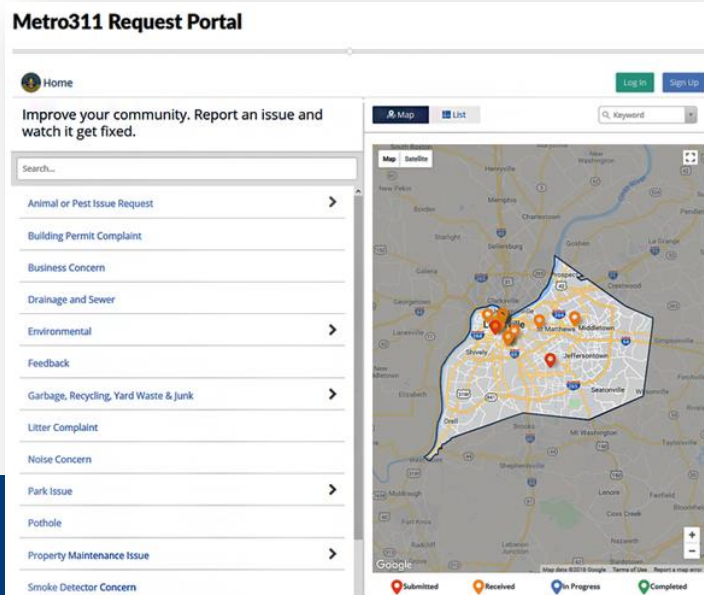
Superfund
Research
Center

- Sponsorship/support of partner events, including **WJCCTF Environmental Justice Conference**
- Increased agency presence at community events



Community Presence

- Finding additional ways to communicate:
 - Door hanger for Compliance Officers
 - Odor reporting flyers
 - Odor tracking log
 - New Metro311 system!



ODOR

Sometimes, a city is a smelly place. Odors are part of life in a major metropolitan area. But when a smell becomes unbearable, the Air Pollution Control District will try to help.

1. If you believe an odor is affecting your health and safety, call 911 immediately.
2. Otherwise, contact APCD to report an offensive odor. Use the phone number or email below.
3. Help us track the odor. Tell us where and when you noticed it, and how long it lasted.
4. Note characteristics like "strong," "sewer-like," "chemical," "burnt," "flowery," etc.
5. Write down your observations, if possible.

APCD investigators will check out your complaint and, if warranted, can cite violators who fail to address the problem.

(502) 574-7321
air@louisvilleky.gov

AIR POLLUTION CONTROL DISTRICT

Hello,

A representative from the Louisville Metro Air Pollution Control District has been here in response to a complaint about this address. Please contact the APCD via the information below to discuss this issue.

Thanks!

ODOR LOG

INTENSITY SCALE

- 1 Slight: Odor is detectable and can be described by its characteristics or can be distinguished from other odors.
- 2 Moderate: Odor is strong enough to block the other odors, but is not so strong as to make someone try to avoid the odor.
- 3 Strong: A person would take a positive action to attempt to avoid the odor.
- 4 Very Strong: The odor produces physiological effects, such as nausea, difficulty of breathing, irritation of the eyes, nose, throat, or the level at which a residual level remains after the odor is gone.

REPORT ODORS IMMEDIATELY TO APCD (502) 574-6000

Date	Start Time	End Time	Location (address, street intersection, etc.)	Type of Odor	Intensity	Impact on People	Other Observations	Date/Time Reported to APCD

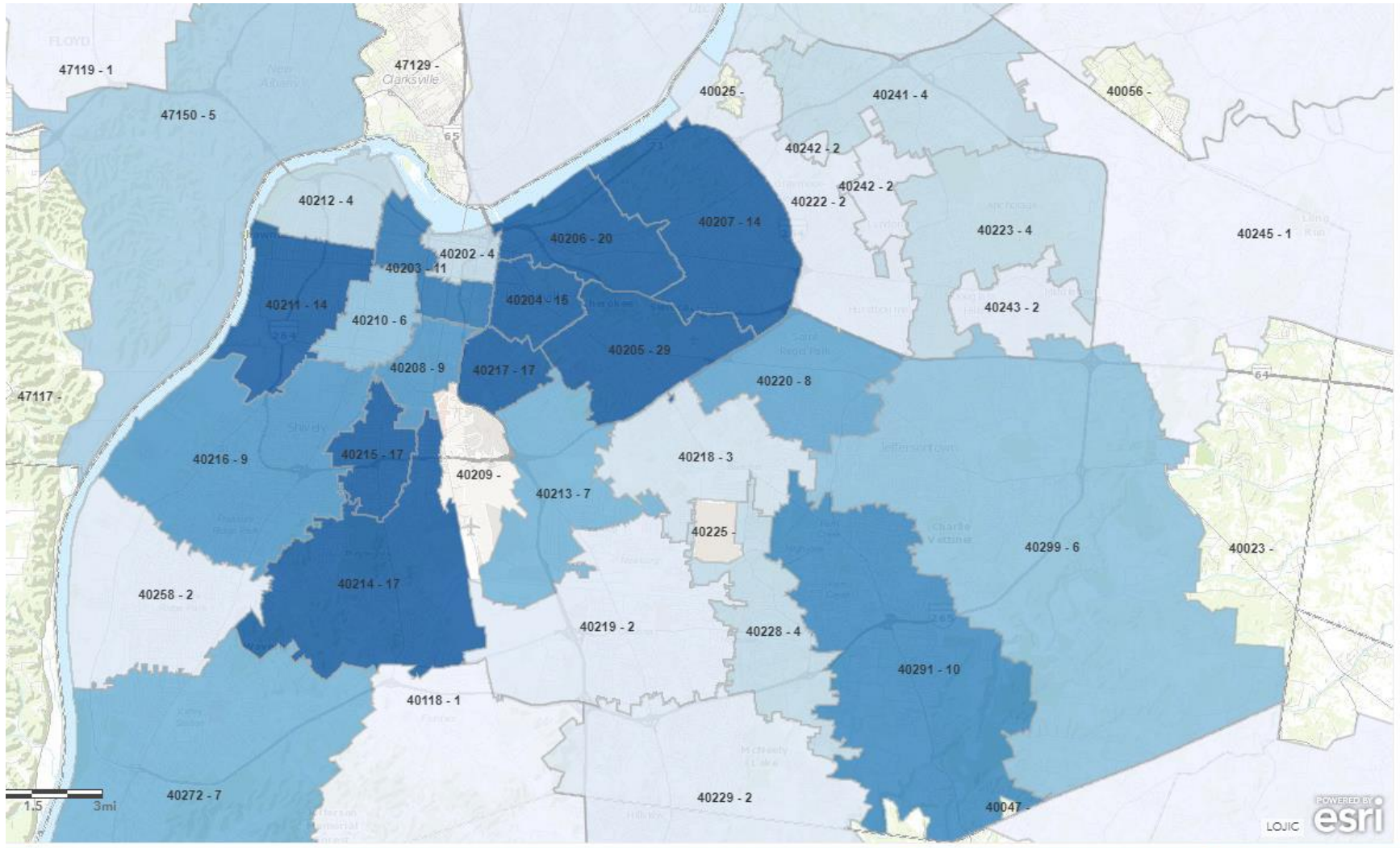
www.louisvilleky.gov/APCD

Community Workshop Series

- Started with brief community survey
 - Prioritize topics from frequently discussed issues
 - Select locations and times best suited for interested community members
 - Snapshot of current perceptions
- Distributed electronically through APCD lists, social media, partner programs, peer agencies, community groups, any and all avenues



Community Survey Results



Clearing the Air Workshop Series

"Well organized & digestible. Not over-the-head. Thanks!"

"Do some YouTube videos of modules."

"I appreciate the central location of these events."

CLEARING THE AIR

An APCD Workshop Series



- July 16** APCD 101/Louisville's Air Quality
- July 30** Air Quality & Health/Reducing My Pollution Impact
- Aug. 13** Odors: Reporting and Responding
- Aug. 27** The APCD Regulatory Process
- Sept. 10** How We Monitor Air Quality
- Sept. 22** Understanding Risk: A Technical Workshop*
(How to use EJ Screen, TRI, and other EPA data tools)
- Sept. 24** The STAR Program/Environmental Justice

QUESTIONS?
Call us at
(502) 574-6000



"Great intro overview, but lots of info – a bit overwhelming."

"Great Presentation! Actually learned some info I thought I already knew!"

Workshops held at the Louisville Free Public Library, 301 York St.
Each session is 5:30-7 p.m.
*(*Technical Workshop 10 a.m.-2 p.m. Registration Required. Send email to ClearingTheAir@louisvilleky.gov)*
www.louisvilleky.gov/APCD

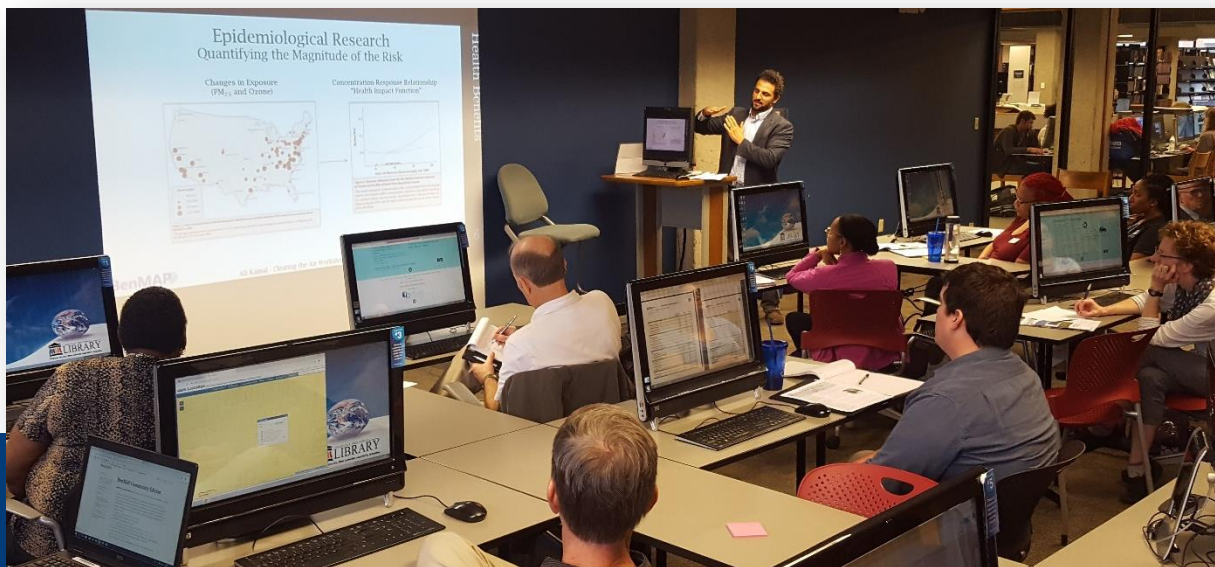


Clearing the Air Technical Workshop

- EPA staff came to Louisville to provide training on topics including: Understanding Risk, EJ Screen, Toxics Release Inventory (TRI), & BenMap



AIR POLLUTION
CONTROL DISTRICT



Clearing the Air Workshop Series

- 2019 series to be announced!
 - Stakeholders help us find new topics of interest and decide which should be repeated: ClearingTheAir@louisvilleky.gov
- Additional group-specific presentations scheduled
 - Additional presentations scheduled and seeking more



Resources

Air Pollution Control District

Louisvilleky.gov/APCD

[Open Records Request](#)

[STAR Program](#)

[APCD Clearing the Air Community](#)

[Workshop Series](#)

Local Community Groups

[West Jefferson County Community Task Force \(WJCCTF\)](#)

[Rubbertown Emergency ACTION \(REACT\)](#)

[Rubbertown Community Advisory](#)

[Council \(RCAC\)](#)

Environmental Protection Agency

[EJSCREEN](#)

[National Air Toxics Assessment \(NATA\)](#)

[Environmental Justice](#)

[Toxic Release Inventory \(TRI\)](#)

Thank You

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Keith H. Talley Sr., Director