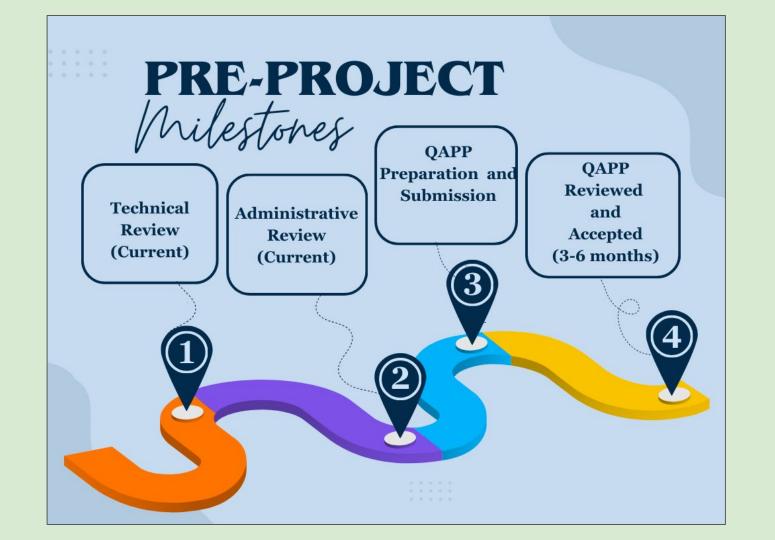


## Environmental Justice Community Earth Day Forum

Thursday, April 20, 2023 @ 6:30PM

A Seat at the Table: "Equity, Diversity and

Location: Callahan Center
101 North Parramore Avenue - Orlando, FL 32801

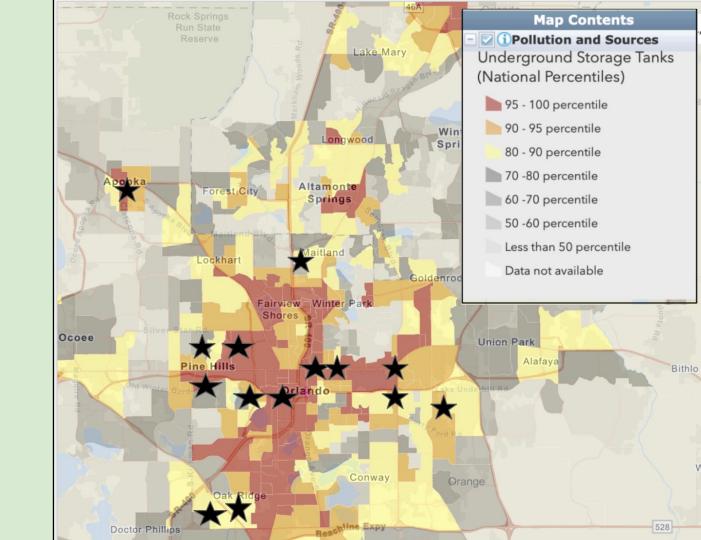


#### **PROJECT** Reporting >From Community **Improvements Trainings** Science to Council Community >Review of Data > Reports to Local >Air Quality **AQ Advisory** >Recommended Government >AQ and Health Council Improvements >Monitors >Expert Consultation >Implement >Data >Representation Improvements Council Formation

### 14 Zip Codes

**Underground Storage Tanks** 

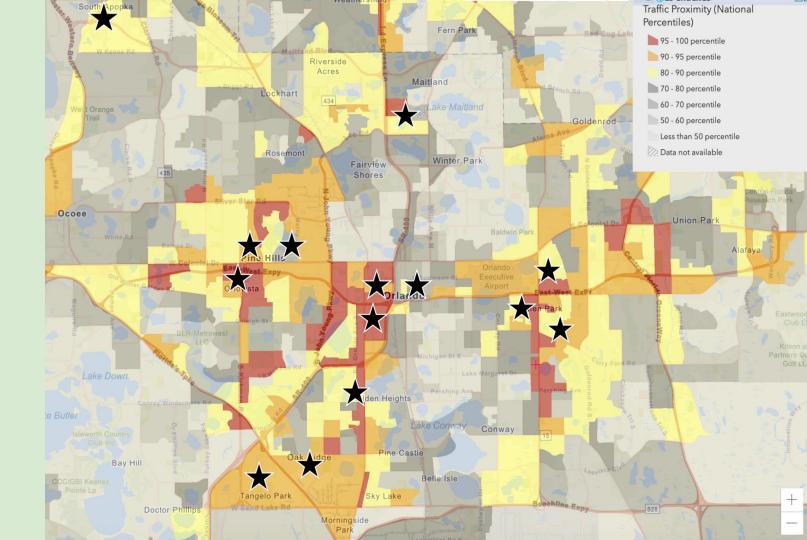
80th percentile in the nation and above



#### 14 Zip Codes

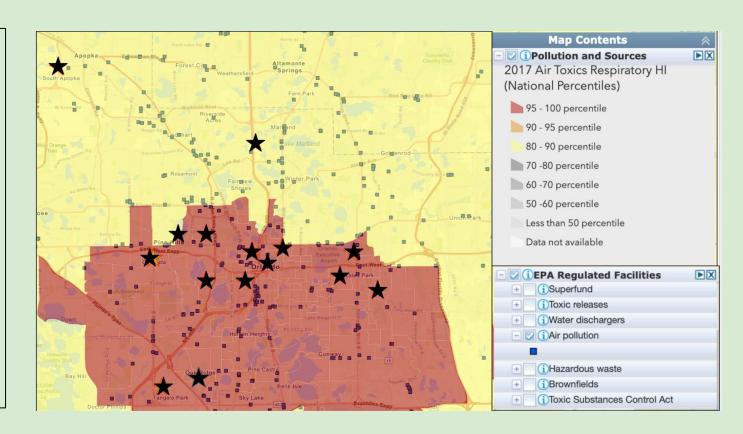
Traffic Proximity

80th percentile in the nation and above



Map 3: 2017 Air Toxics Respiratory Hazard Index & EPA Regulated Air Pollution Sources.

All but 2 of the
participating
communities are in
locations in the
national 95<sup>th</sup> - 100<sup>th</sup>
percentile of the 2017
Air Toxics Respiratory
Hazard Index.



#### **Representatives Team**

Debbie Reinhart reinhart.debra@gmail.com Joan Erwin joanerwin13@gmail.com	First Unitarian Church Of Orlando Green Team
Rev. Dr. José Rodriguez padre@iglesiaorlando.com	Christ the King Episcopal Church
Henry Mendoza, Outreach Manager and Quality Assurance Engineer outreach@iglesiaorlando.com	Iglesia Episcopal Jésus de Nazaret
Lawanna Gelzer, Social Justice Advocate <u>LawannaGelzer@aol.com</u>	Community Equity Project
Shaniqua Rose <a href="mailto:changeforthecommunity@gmail.com">changeforthecommunity@gmail.com</a>	Change for the Community
Aston Mack, Community Activist <u>Aston@offoutreach.com</u>	Orlando Freedom Fighters
Marty Melton, Vice President	Inner City Neighborhood Association
Stella Lewis	Washington Shores Neighborhood Association
Justin H. Fortune, President and CEO info@pinehilldpartnership.org	Pine Hills Partnership, Inc.

Team Member	Responsibilities
Lawanna Gelzer President, Coalition of 100 Black Women - CFL LawannaGelzer@gmail.com	Project administration, Fiduciary, hiring & firing, coordination of BIPOC communities, equitable process & dialogue with local government, forming Community Air Quality Advisory Council
Rev. Dr. Jose Rodriguez Christ the King Episcopal Church  Jose.Rodriguez.fl@gmail.com	Coordination of participating Hispanic communities, 1 or 2 environmental engineers, translation & interpretation, equitable process & dialogue with local government, forming Community Air Quality Advisory Council
Jennifer Sankey, Ph.D., MHA, BSN, RN, CPPS  President, Central FL Black Nurses Association of Orlando, Inc.  Jennicoop@embarqmail.com	Education Regarding Health Effects of Air Pollution & Pork with the Community Air Quality Advisory Council on Health Implications of the Data
Dr. Haofei Yu  Department of Civil, Environmental & Construction Engineering. University of Central FL haofei.yu@ucf.edu	Education Regarding Air Quality & Interpretation of Air Quality Data consulting with the Community Air Quality Advisory Council
Heather Vickery, MPA  Unitarian Universalist Service Committee (UUSC) - Equity Committere  hvickery@uucsj.org	Equitable process facilitation, Deliberative dialogue consultation, coordination of the Community Air Quality Advisory Council formation & mgmt process
Josephine Balzac-Arroyo, J.D., LL.M  Rollins College Dept. of Social Entrepreneurship jbalzac@rollins.edu	Drafting documents, process guidance & dialogue mediation with local government, consulting with the Community Air Quality Advisory Council
Janice T. Booher, MS  Director of Civic Engagement and Training Resilient American Communities Health Initiatives Foundation, Inc. JanBooherHBE@gmail.com	Coordination with Environmental Engineers & Academic partners, Reporting Oversight including QAPP, Dashboard maintenance, Data Librarian, consulting with Community Air Quality Advisory Council

#### The Project Will Be Covered on the RAC Central Florida Counties Dashboard

Home About RAC Centers of Excellence > States AL - ID > States IL-MO > States MT - RI > States SC - WY > Starting a RAC site RAC Training Videos 🔎

#### RESILIENT AMERICAN COMMUNITIES

# CENTRAL FLORIDA COUNTIES

CENTRAL FLORIDA RESILIENCE SYSTEM >

RECURSOS EN ESPAÑOL >



English Survey

Spanish Survey

#### Congratulations!

We are pleased to announce that the Coalition of 100 Black Women of Central Florida was awarded another EPA grant titled *Enhancing Community AQ Monitoring in Underserved Black & Hispanic Communities in Orange County, FL.* Please see the White House Press Statement regarding grants awarded to understand how this work is part of the Justice40 commitment for 40% of the benefits of federal investments to address climate change to accrue to Justice40 disadvantaged communities. You may also be interested in the EPA's Selections for the ARP Enhanced Air Quality Monitoring Competitive Grant to see the quality of your colleagues from around the country who have also received these grants. Our listing is on the first page of this EPA table. This is the short summary of the work we will be doing together:

Please join the Coalition of 100 Black Women of Central Florida and <u>ALL</u> of our Community Partners as we hold an introductory meeting this <u>Thursday, April 20, 2023 @6:30PM</u> so you may learn about the grant work plan, timeline and milestones. The main body of our work will begin in May of 2023.













#### Measurement









Pollutant	Symbol	Emitted By Vehicles?
Carbon monoxide	СО	Yes
Nitrogen dioxide	NO <sub>2</sub>	Yes
Ozone	O <sub>3</sub>	Ozone (photochemical smog) is produced by the reaction of volatile organic compounds and nitrogen oxides in the presence of sunlight.
Particulate matter	PM <sub>2.5</sub>	Yes
Particulate matter	PM <sub>10</sub>	Yes
Sulfur dioxide	SO <sub>2</sub>	Yes
Carbon dioxide	CO <sub>2</sub>	Yes
Methane	CH <sub>4</sub>	Yes
Volatile Organic Compounds	VOCs	Yes
Non Methane Hydrocarbons	NMHCs	Yes
Formaldehyde	CH <sub>2</sub> O	Yes

### Vehicle Emissions and Their Health Impacts

Pollutant	Emissions Source	Health Effects	
Particulate Matter 2.5 microns (PM <sub>2.5</sub> )	Planes, cars, trucks and buses	>heart and lung diseases, cancers, cognitive disorders, and low birth weights; >Chronic exposure in children: slowed lung-function growth, development of asthma*	
Nitrogen Dioxide (NO <sub>2</sub> )		>lung irritation >weakens the body's defenses against respiratory infections such as pneumonia and influenza	
Volatile Organic Compounds		> Certain VOCs (benzene, acetaldehyde, and 1,3-butadiene) — are linked to different types of cancer	

### Handheld Monitors from the Previous EPA AQ Air Monitoring Grant

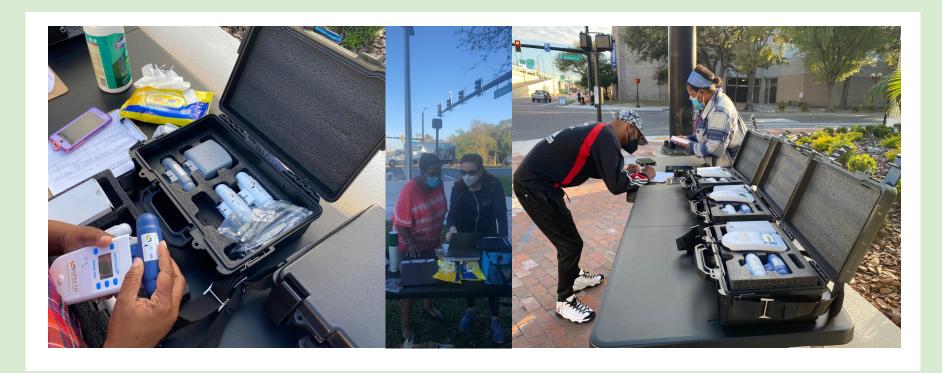
### Portable Aeroqual 500 series air quality monitors







### Field Work with Handheld Monitors











## Public Health Concerns

Quartile of
Death Counts
in Florida from some of
the pre-existing
conditions that make
residents more
vulnerable to air pollution

Zip Code	Chronic Lower Respiratory Disease Deaths Quartile	Emphysema Deaths Quartile	Asthma Deaths Quartile	Heart Disease Deaths Quartile	Diabetes Deaths Quartile	Cancer Deaths Quartile
32703	4th Quartile	4th Quartile	1st Quartile	4th Quartile	4th Quartile	4th Quartile
32751	3rd Quartile	4th Quartile	1st Quartile	3rd Quartile	4th Quartile	3rd Quartile
32801	4th Quartile	1st Quartile	3rd Quartile	4th Quartile	3rd Quartile	3rd Quartile
32803	3rd Quartile	4th Quartile	1st Quartile	3rd Quartile	3rd Quartile	3rd Quartile
32805	4th Quartile	4th Quartile	4th Quartile	4th Quartile	4th Quartile	4th Quartile
32806	4th Quartile	4th Quartile	4th Quartile	4th Quartile	4th Quartile	4th Quartile
32807	4th Quartile	4th Quartile	3rd Quartile	4th Quartile	4th Quartile	4th Quartile
32808	4th Quartile	4th Quartile	4th Quartile	4th Quartile	4th Quartile	4th Quartile
32811	4th Quartile	4th Quartile	4th Quartile	4th Quartile	4th Quartile	4th Quartile
32812	4th Quartile	4th Quartile	3rd Quartile	4th Quartile	4th Quartile	4th Quartile
32818	4th Quartile	3rd Quartile	4th Quartile	4th Quartile	4th Quartile	4th Quartile
32819	3rd Quartile	1st Quartile	3rd Quartile	3rd Quartile	3rd Quartile	3rd Quartile
32822	4th Quartile	4th Quartile	4th Quartile	4th Quartile	4th Quartile	4th Quartile
32839	4th Quartile	4th Quartile	4th Quartile	4th Quartile	4th Quartile	4th Quartile

Key Learnings from Prior AQ Monitoring with

**Handheld Monitors** 

Table 1. Incidence of Critical Air Pollutant Readings Exceeding Primary Standards NAAQS

	PM <sub>2.5</sub>	PM <sub>10</sub>	O <sub>3</sub>	NO <sub>2</sub>	СО	SO <sub>2</sub>
	2.5 micron particulate matter	10 micron particulate matter	Ozone	Nitrogen Dioxide	Carbon monoxide	Sulfur Dioxide
Parramore	0	0	0	0	0	0
Mercy Drive	0	0	0	0	0	0
Holden Heights	0	0	0	0	1	0
Overall	0	0	0	0	1	0

Table 3. Incidence of Additional Air Pollutants in Vehicle Emissions Measured Exceeding Typical Ambient Concentrations

	CO <sub>2</sub>	CH₄	VOCs	NMHC	CH <sub>2</sub> O
	Carbon dioxide	Methane	Volatile Organic Compounds	Non Methane Hydrocarbons	Formaldehyde
Parramore	10	7	0	5	3
Mercy Drive	14	3	0	2	2
Holden Heights	11	2	2	2	1
Overall	35	12	2	9	6

### **Completeness: Percent Acceptable Data and Information**

Type of Measurement	Acceptable Measurements Reported	Total Measurements Reported	% Valid Submission of Monitor Data
Geospatial (latitude/longitude)	126	252	50.0%
Physical	864	1,638	52.7%
Chemical	500	938	53.3%

### Recommendations

- The protocol must be simplified to increase reliability of data collected by Community Scientists. It would be advisable to have a real time monitor with continuous data capture using monitors that are directly connected to a computer interface with an online air quality management account.
- Time stamps and geospatial positioning of monitors should be captured on autofill.
- 3. Budget must be increased to improve the accuracy and precision of the monitors.
- 4. Obtain more authoritative guidance on permissible levels of non-criteria air pollutants.