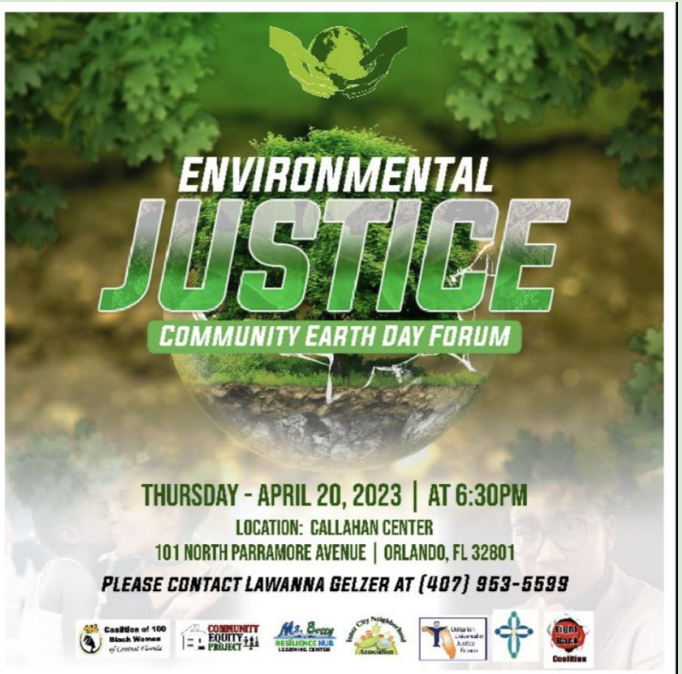


Environmental Justice

Community Earth Day Forum

Thursday, April 20, 2023 @ 6:30PM

A Seat at the Table: "Equity, Diversity and Inclusion"

Location: Callahan Center

101 North Parramore Avenue - Orlando, FL 32801

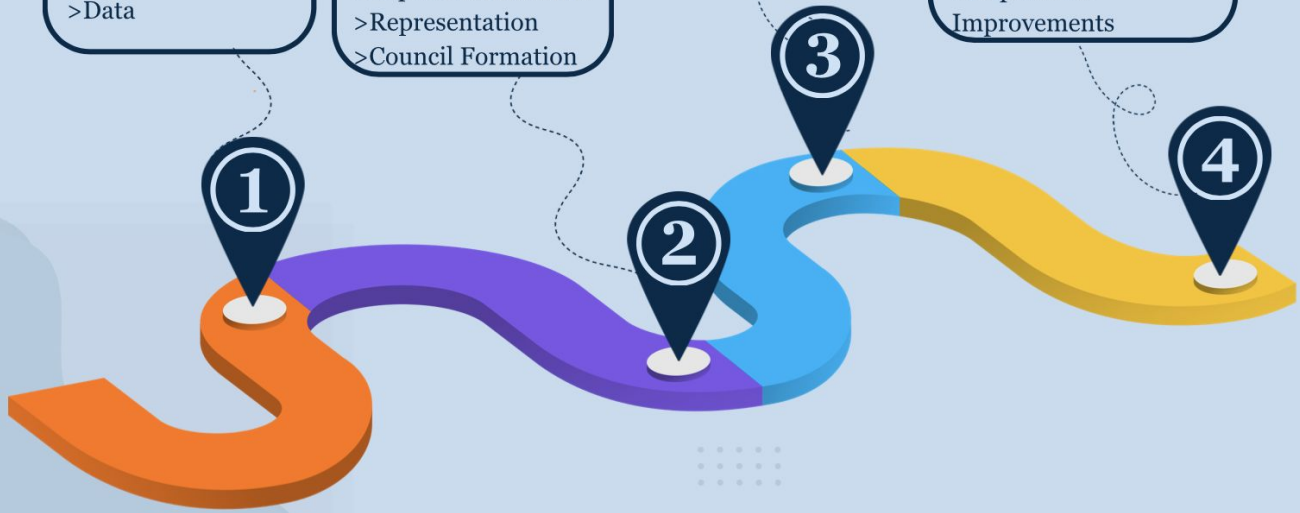
PROJECT *Milestones*

Trainings
>Air Quality
>AQ and Health
>Monitors
>Data

Community AQ Advisory Council
>Expert Consultation
>Representation
>Council Formation

Reporting
>From Community Science to Council
> Reports to Local Government

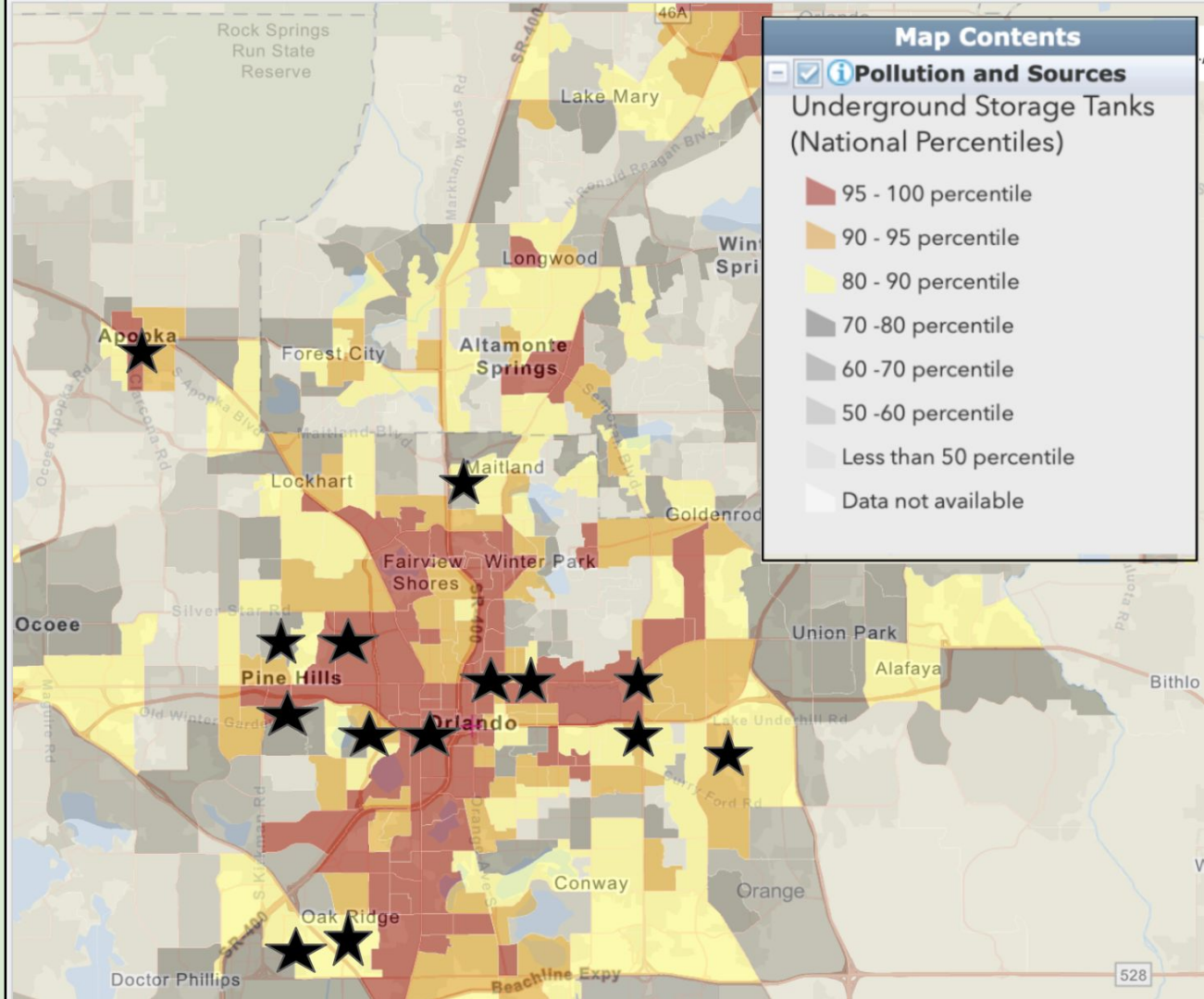
Improvements
>Review of Data
>Recommended Improvements
>Implement Improvements



14 Zip Codes

Underground Storage Tanks

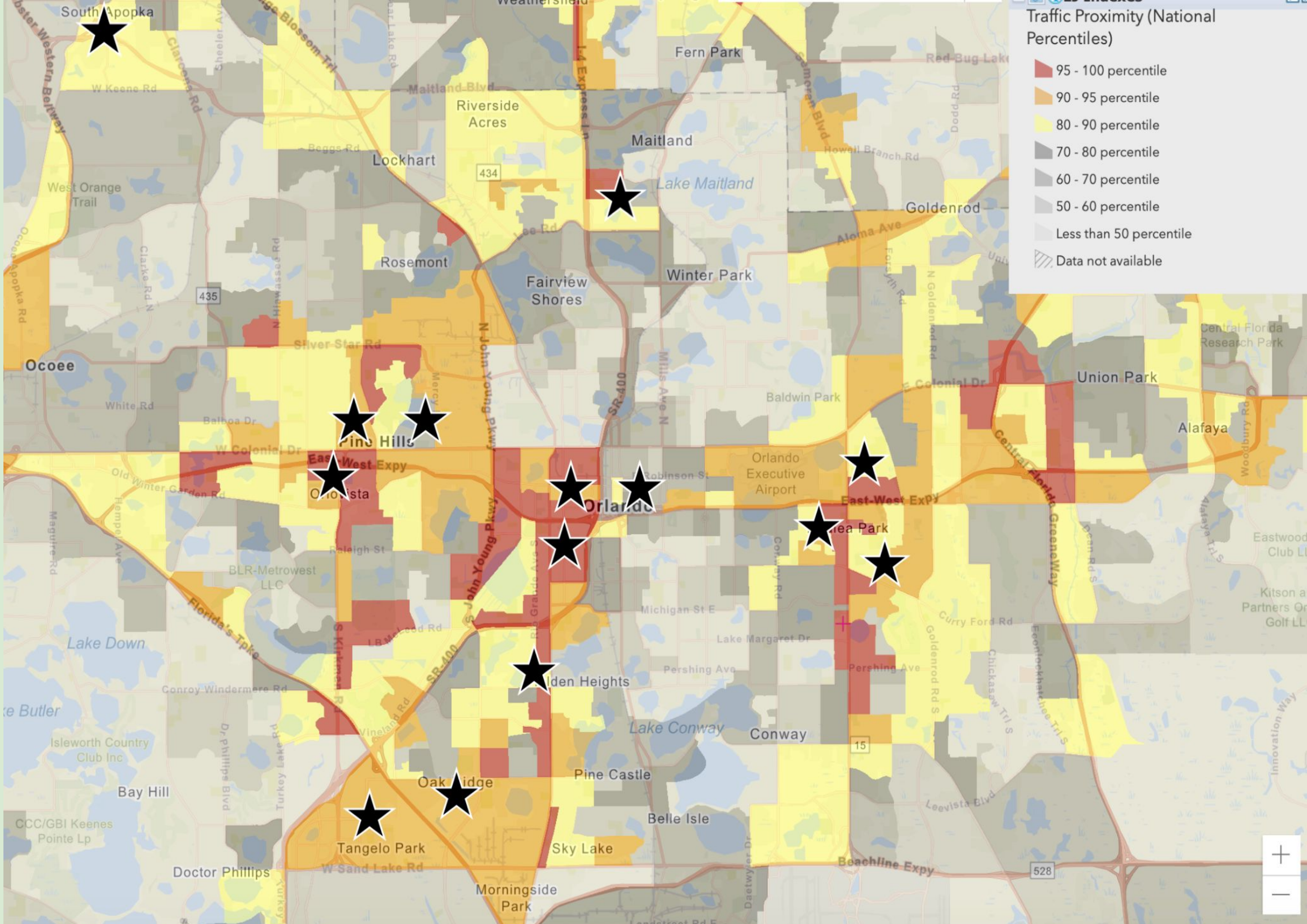
80th percentile in the nation and above



14 Zip Codes

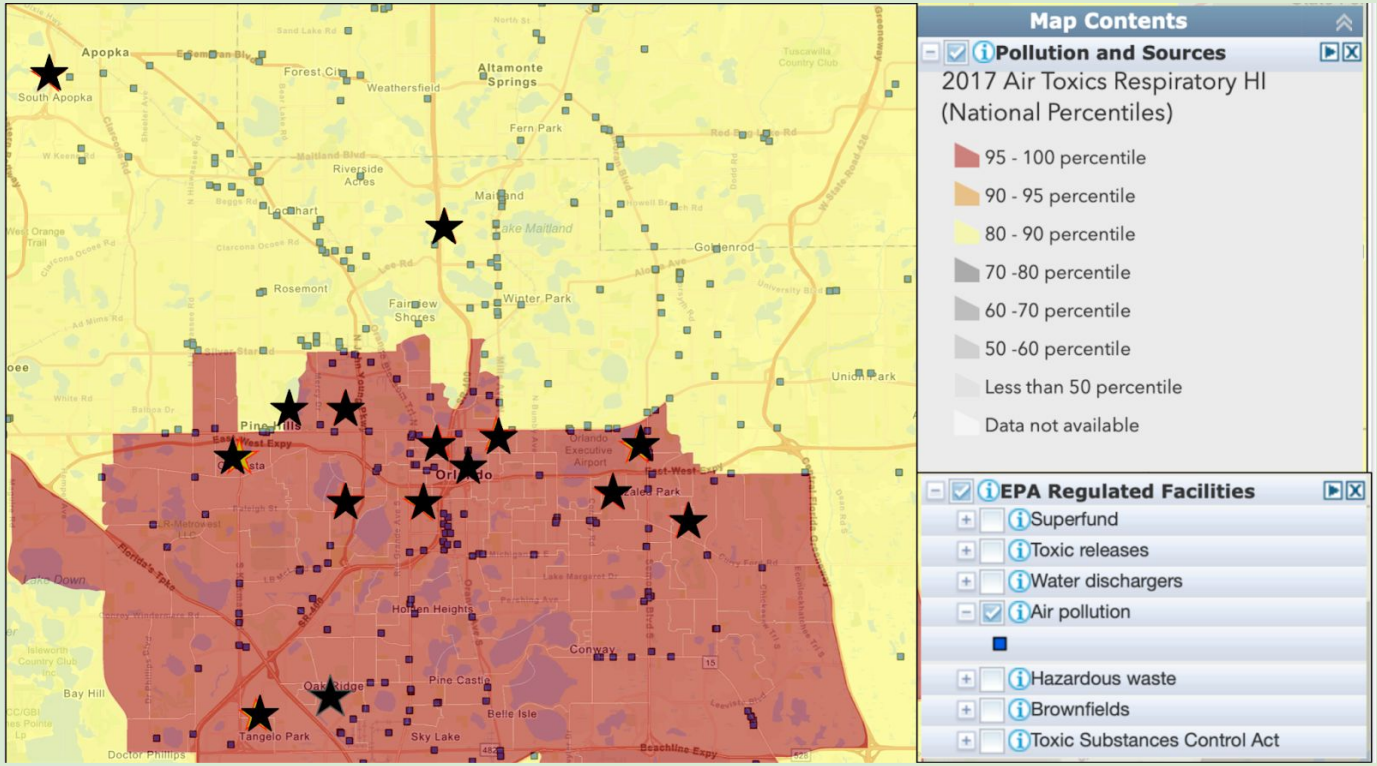
Traffic Proximity

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 95th - 100th 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 LawannaGelzer@aol.com	Community Equity Project
Shaniqua Rose changeforthecommunity@gmail.com	Change for the Community
Aston Mack, Community Activist Aston@offoutreach.com	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

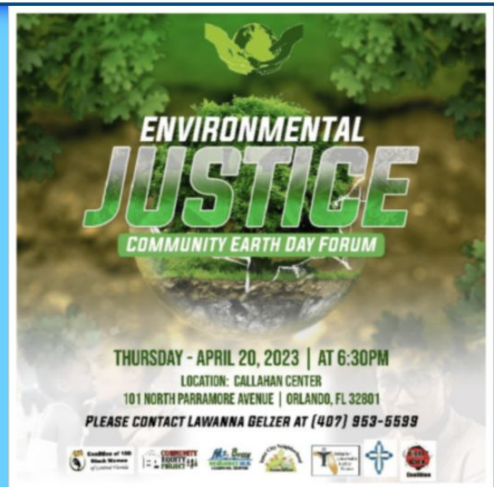
Home About RAC Centers of Excellence States AL – ID States IL-MO States MT – RI States SC – WY Starting a RAC site RAC Training Videos

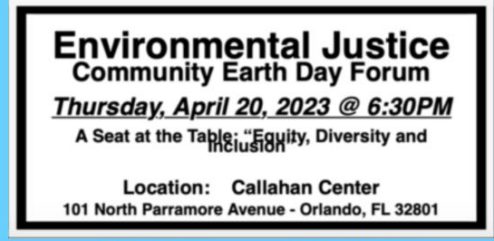
RESILIENT AMERICAN COMMUNITIES

CENTRAL FLORIDA COUNTIES

CENTRAL FLORIDA RESILIENCE SYSTEM ›

RECURSOS EN ESPAÑOL ›





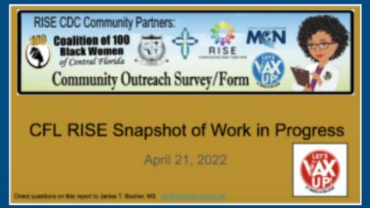
English Survey Spanish Survey

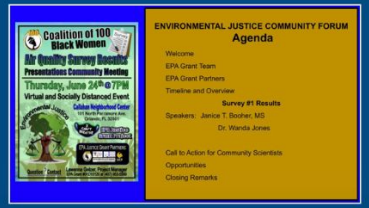
Congratulations!

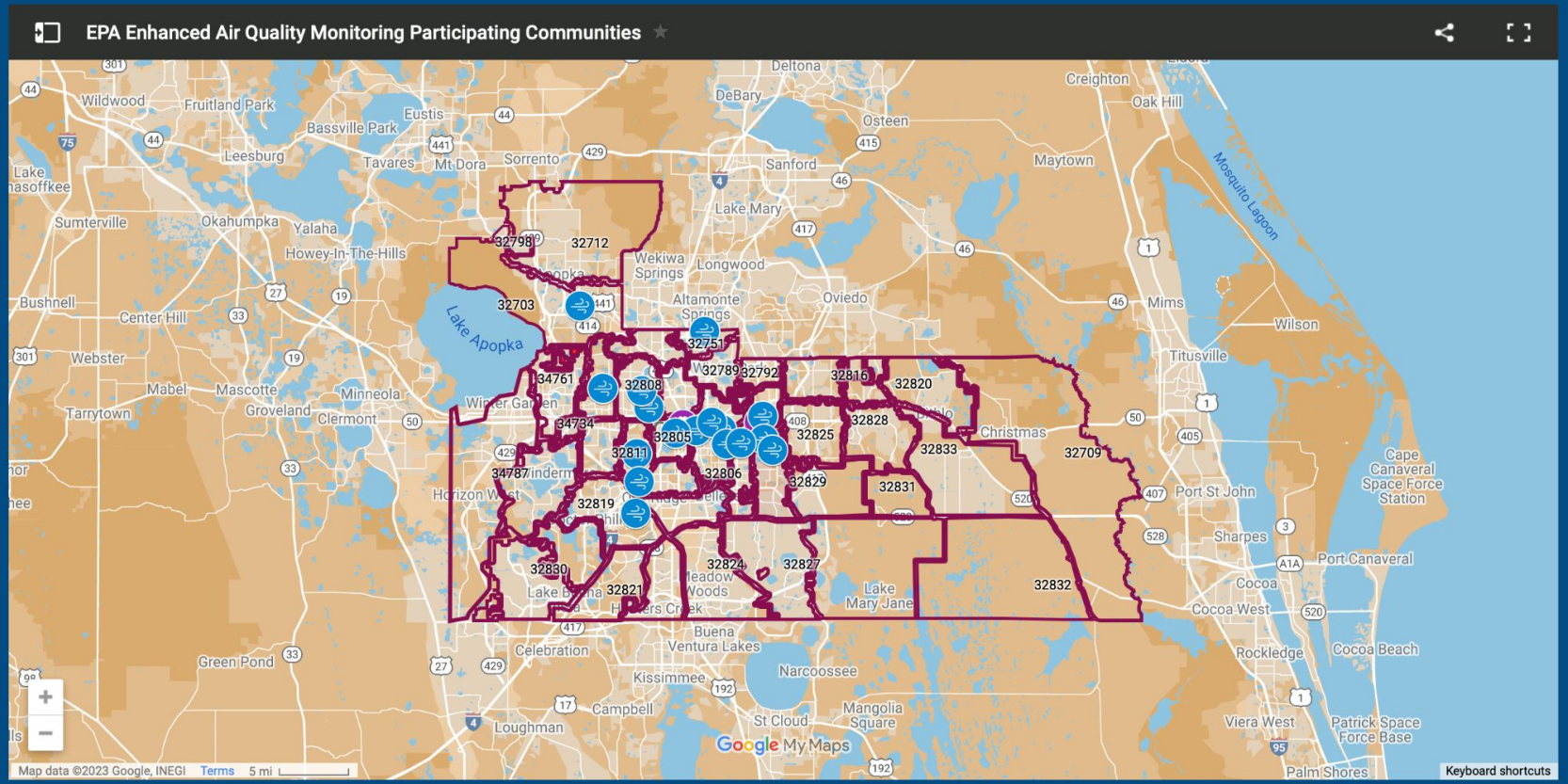
We are pleased to announce that the Coalition of 100 Black Women of Central Florida was awarded another EPA grant titled *Enhancing Community AQ Monitoring in Underserved Black & Hispanic Communities in Orange County, FL.* Please see the White House Press Statement regarding grants awarded to understand 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 **ALL** of our Community Partners as we hold an introductory meeting this **Thursday, April 20, 2023 @6:30PM** 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






EPA Enhanced Air Quality Monitoring Participating Communities
Lake Apopka
Mosquito Lagoon
32798
32712
32703
32751
32789
32792
32816
32820
34761
32808
34734
32805
32825
32828
32811
32833
32709
34787
32806
32829
32831
32819
32830
32824
32827
32821
32832
Deltona
DeBary
Creighton
Oak Hill
Osteen
Sanford
Maytown
Leesburg
Tavares
Mt Dora
Sorrento
Lake Mary
Sumterville
Okahumpka
Yalaha
Howey-In-The-Hills
Wekiwa Springs
Longwood
Altamonte Springs
Oviedo
Bushnell
Center Hill
Webster
Mabel
Mascotte
Groveland
Clermont
Minneola
Tarrytown
Winter Garden
Mims
Wilson
Titusville
Christmas
Cape Canaveral Space Force Station
Port St John
Sharpes
Port Canaveral
Cocoa
Cocoa West
Cocoa Beach
Rockledge
Viera West
Patrick Space Force Base
Palm Shores
Lake Mary Jane
Meadow Woods
Buena Ventura Lakes
Celebration
Kissimmee
Narcoossee
Campbell
St Cloud
Mangolia Square
Loughman
Green Pond
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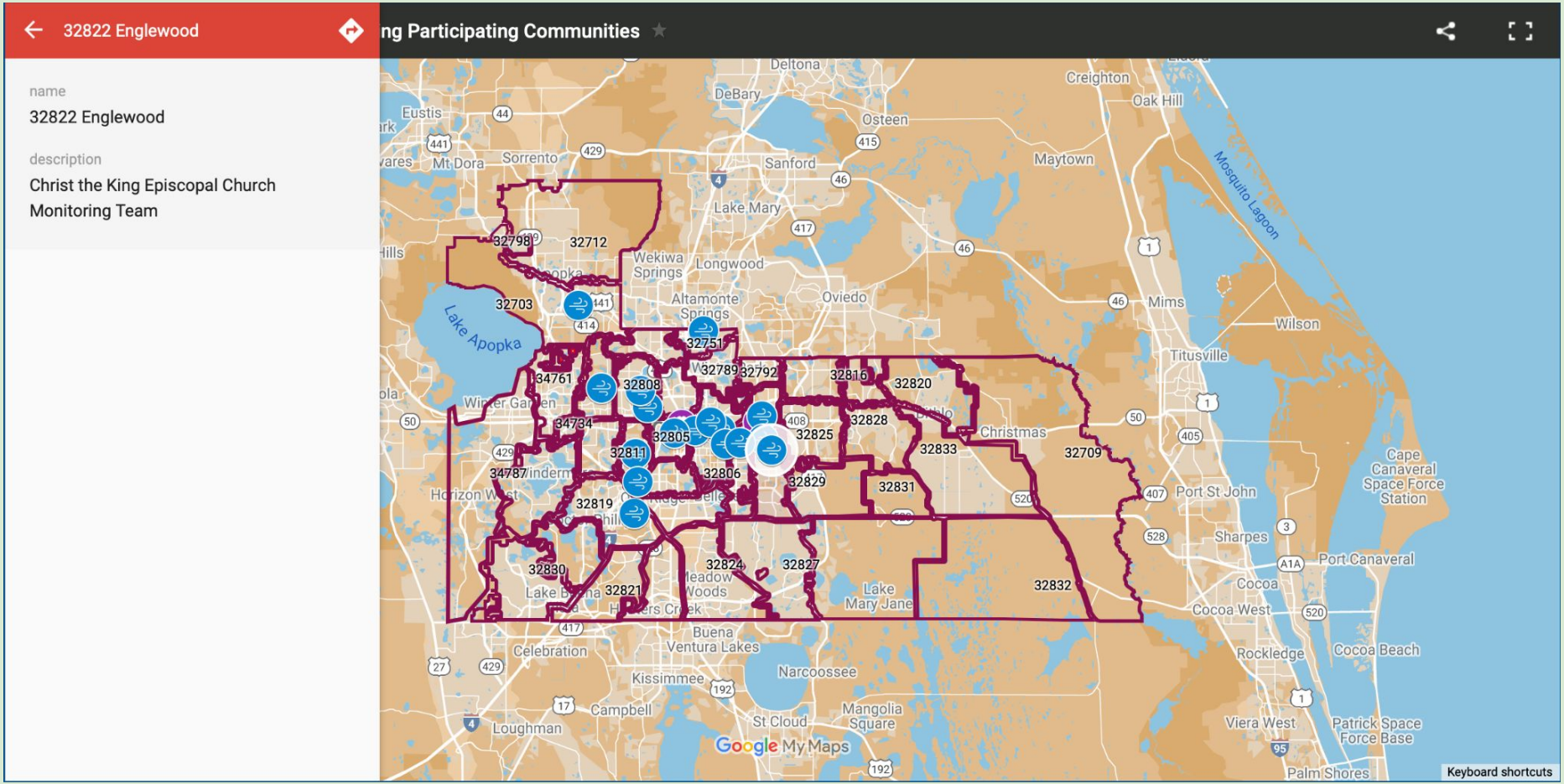
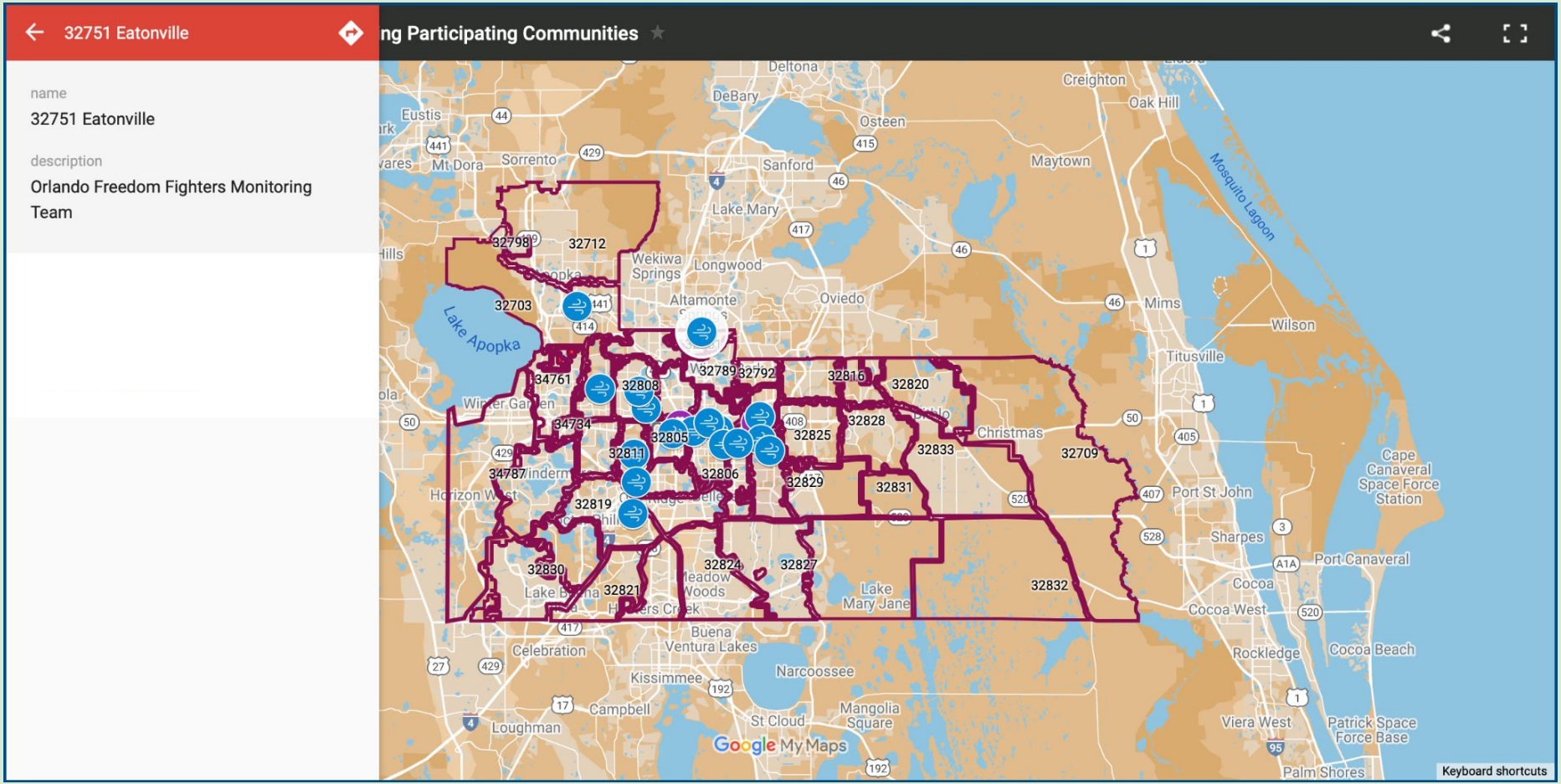


Find the Project Air Quality Monitoring Map [Here]



Find the Project Air Quality Monitoring Map [Here](#).

Pollutant	Symbol	Emitted By Vehicles?
Carbon monoxide	CO	Yes
Nitrogen dioxide	NO_2	Yes
Ozone	O_3	Ozone (photochemical smog) is produced by the reaction of volatile organic compounds and nitrogen oxides in the presence of sunlight.
Particulate matter	$PM_{2.5}$	Yes
Particulate matter	PM_{10}	Yes
Sulfur dioxide	SO_2	Yes
Carbon dioxide	CO_2	Yes
Methane	CH_4	Yes
Volatile Organic Compounds	VOCs	Yes
Non Methane Hydrocarbons	NMHCs	Yes
Formaldehyde	CH_2O	Yes

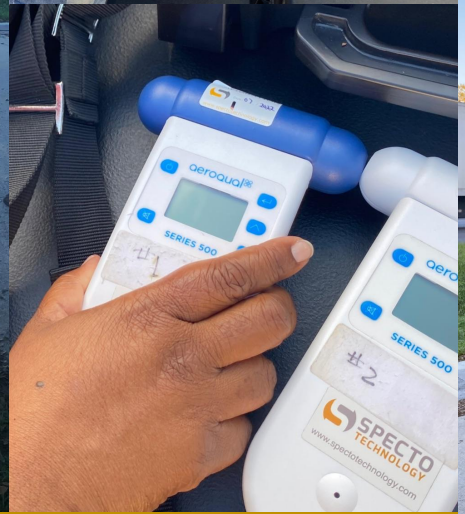
Vehicle Emissions and Their Health Impacts

Pollutant	Emissions Source	Health Effects
Particulate Matter 2.5 microns ($PM_{2.5}$)	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_2)		>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

Portable Aeroqual 500 series air quality monitors

Field Work


aeroaqual
SERIES 500
SPECTO TECHNOLOGY
www.spectotechnology.com

aeroqual
AQS1

aeroqual
AQS1

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

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

	$PM_{2.5}$	PM_{10}	O_3	NO_2	CO	SO_2
	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_2	CH_4	VOCs	NMHC	CH_2O
	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**

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

1. 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.
2. 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.