

# Franklin County Public Health and climate initiatives

Jennie McAdams, MPH, Sustainability Supervisor

Franklin County  
Public Health



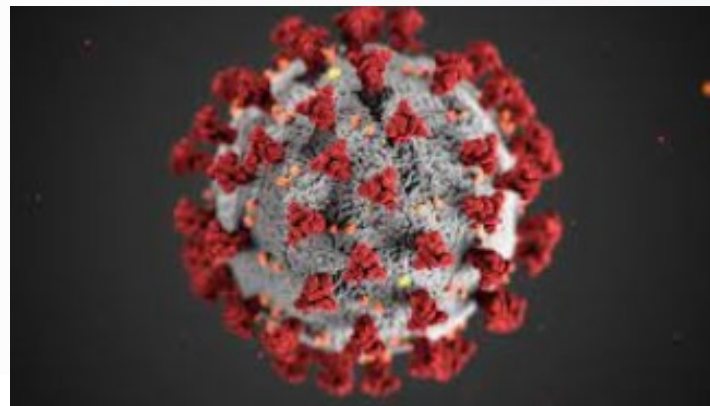
# Introduction and objectives





# Sustainability Section Background

- > Created in **October 2019** to oversee:
  - Healthy Homes
  - Solid and Infectious Waste
  - Nuisance complaints
  - Climate and Sustainability work

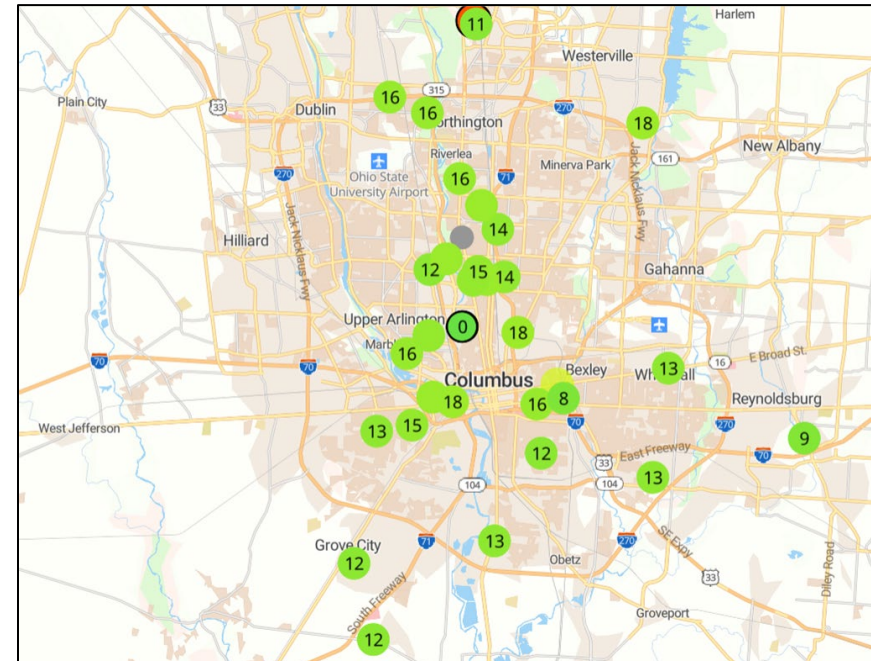


# Air Quality Monitoring Project Background



# Low-Cost Air Quality Monitors

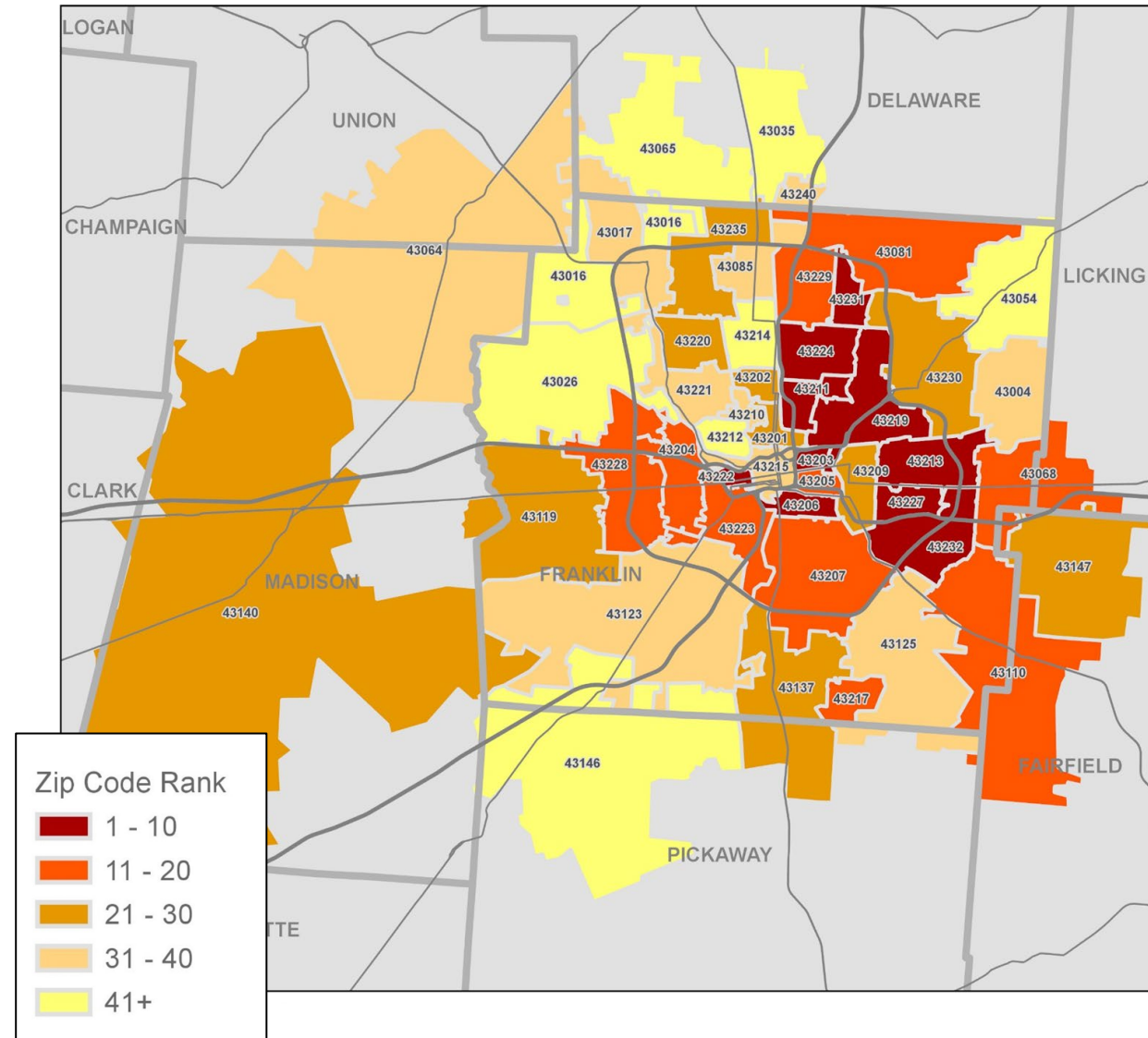
- > PurpleAir Monitors
  - Transmit PM2.5 data in real-time to an interactive map
  - Allows community members to interact with sensors
- > Collecting air quality data for 1 year

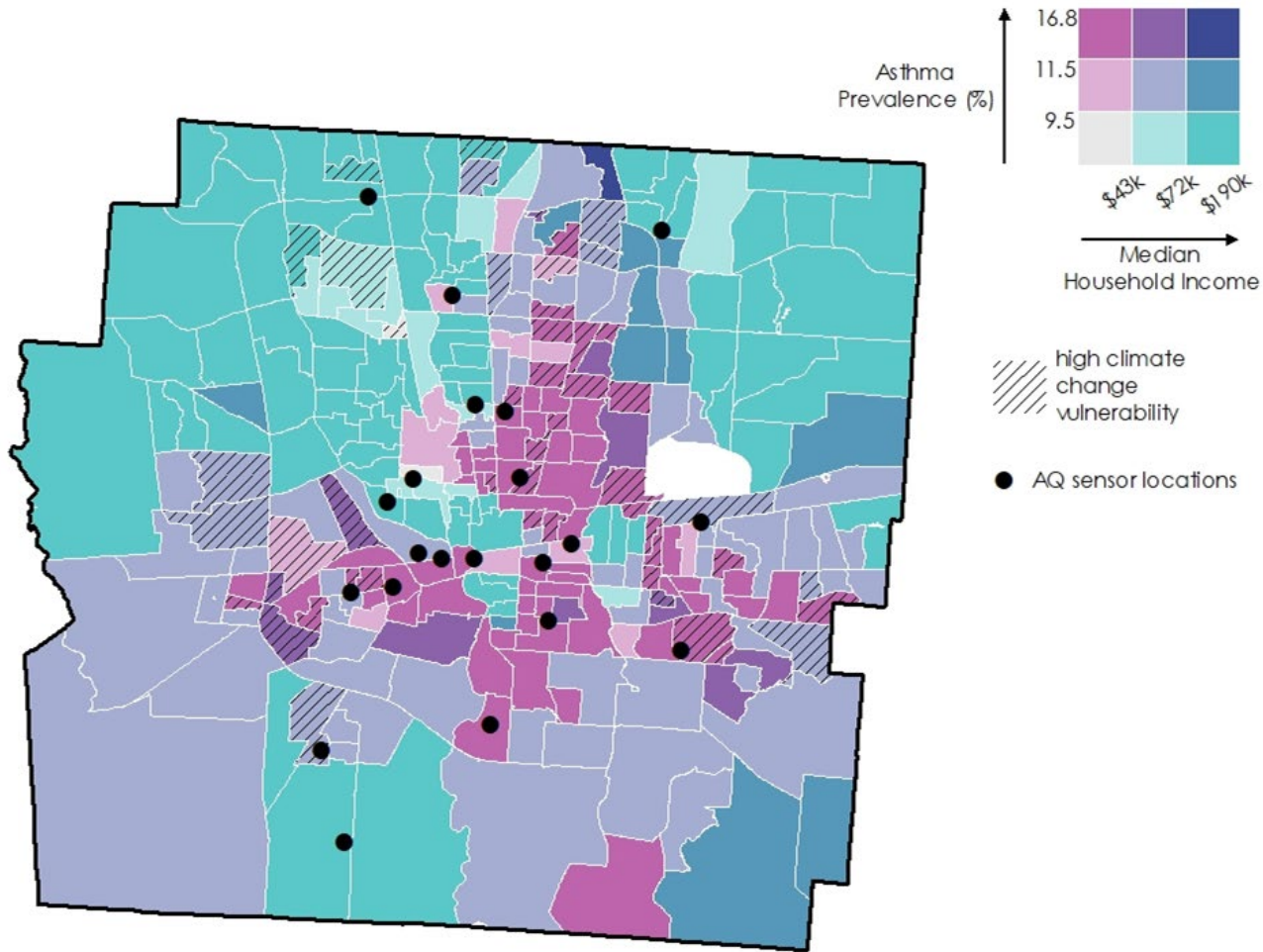


# Informing Monitor Placement

> A vulnerability map was generated based on socioeconomic & health data:

- Kids < 5 years old
- People > 65 years old
- Percent poverty rate
- Minority population
- Asthma rates
- COVID rates





# Climate Vulnerability and Monitors



# Finding Site Hosts

## Social Media

**Franklin County Public Health**  
October 21, 2021 · 🌐

In partnership with the Ohio EPA, Franklin County Public Health and the [Mid-Ohio Regional Planning Commission \(MORPC\)](#) are making significant progress on the Neighborhood Air Quality Monitoring Project!

Ohio EPA maintains a network of regulatory air pollution monitors to make sure our region is meeting federal standards. We are currently installing our low-cost PurpleAir monitors next to one of Ohio EPA's to calibrate them before setting them up across Franklin County.

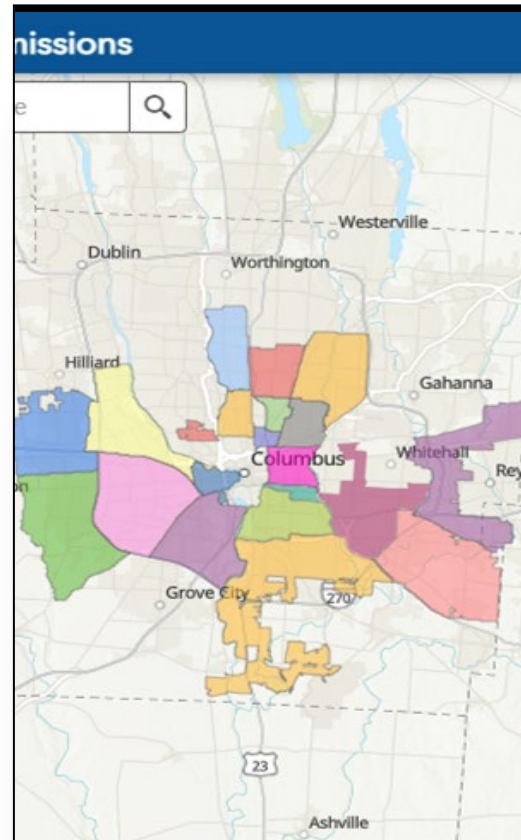
P... See more



**Neighborhood Air Quality Monitoring Project**



## Engagement & Outreach




## Local Media Coverage

LOCAL NEWS

### New neighbor level air monitoring program underway in Franklin County

—

The goal is to provide real-time data to identify the air pollution exposure by zip code and show where air quality is the worst.



Author: Lindsey Mills  
Published: 5:08 PM EDT May 5, 2021  
Updated: 5:39 PM EDT May 5, 2021

FRANKLIN COUNTY, Ohio — It's Air Quality Awareness week and there's a new effort underway to help people living in Franklin County see how well the air quality is on a neighborhood level.

It's a project with Franklin County Public Health and the Mid Ohio Regional Planning Commission.

They are installing sensors in places, such as Franklin Park Conservatory, that can connect to the web and show air quality in real time.

# Finding Site Hosts

- > Deployed 20 monitors across 10 zip codes
- > Monitor hosts included:
  - Public libraries, transit agencies, museums
  - Local businesses
  - Private citizens
  - Governmental buildings



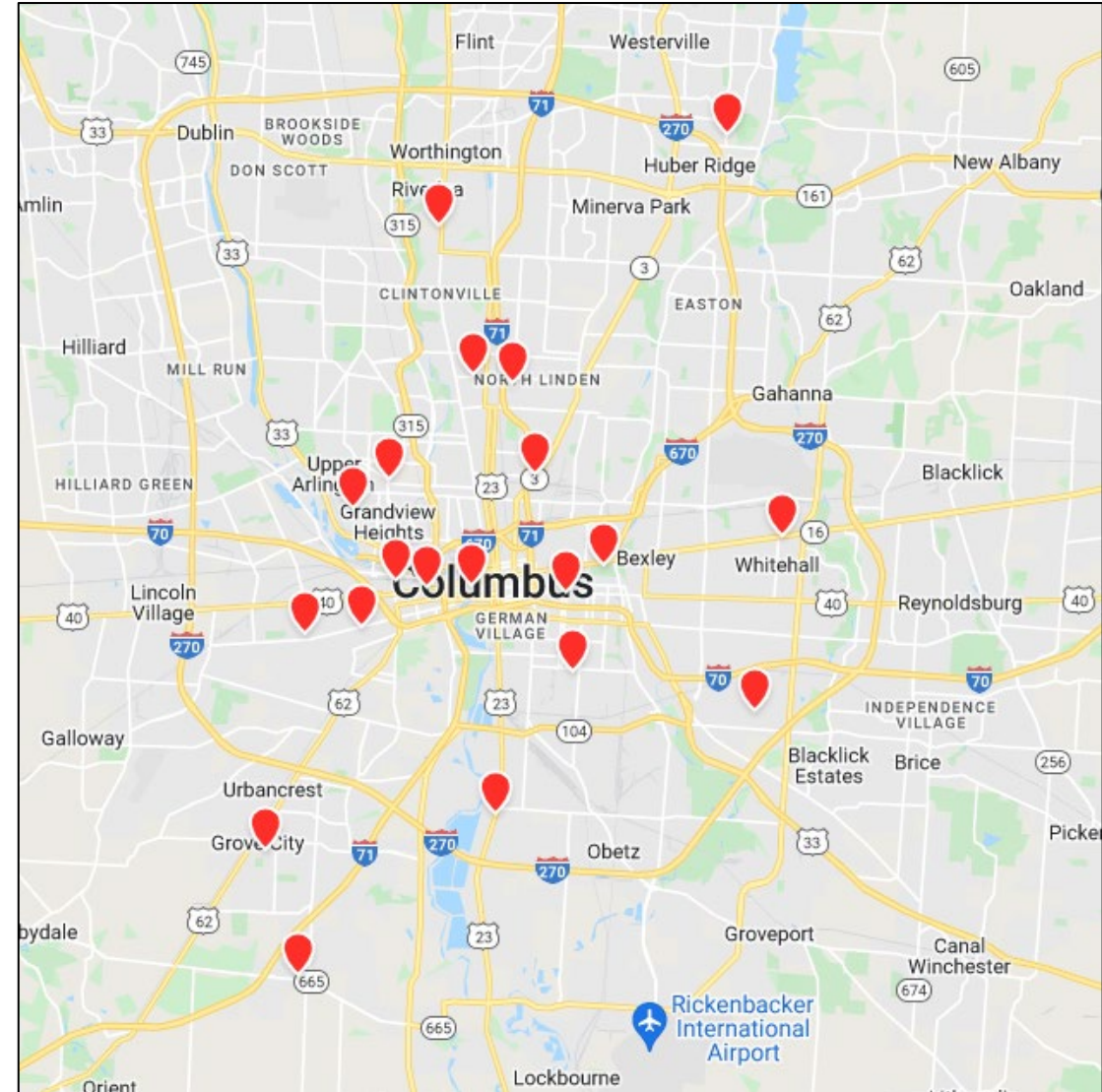
# Validating Sensor Performance

- > Compared our network of 20 PurpleAir monitors with high-quality EPA reference monitors before community deployment



# Our Air Quality Monitoring Network

- > Has been fully deployed since Earth Day 2022
- > Plan to release 6-month & 1-year reports on our findings



# Next Steps

- > Applied for additional funding to expand the network
- > Release 6-month & 12-month reports
- > Utilize additional data to form a comprehensive understanding of air quality
  - Urban heat island data
  - Canopy coverage data
  - Vulnerability data
- > Community engagement & empowerment

# Local Initiatives



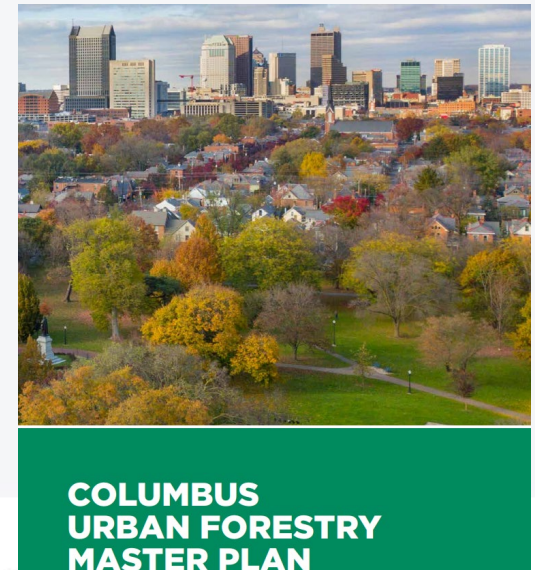
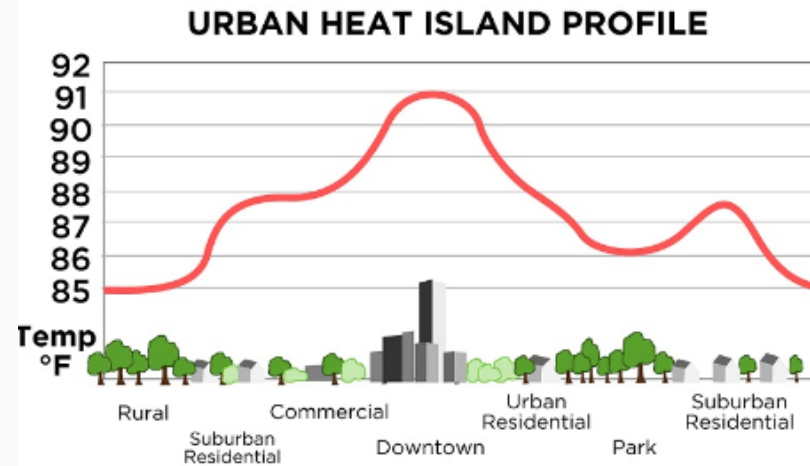
## Lawn Mower Exchange

Protect the environment - and your health - by trading in your old, polluting gas-powered mower for a new battery-powered machine!

**Saturday, April 29**  
10 a.m. - 1 p.m.

**Lowe's Home Improvement**  
2345 Silver Dr., Columbus

original price → **\$349**  
- \$75  
your price with trade-in → **\$175**



**morpc**



Mid-Ohio Regional  
Planning Commission



**The Network**  
for Public Health Law

**SWACO**  
FROM WASTE TO RESOURCES



Partnerships  
and Engagement

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**Franklin Soil and Water  
Conservation District**  
*Creating Conservation Solutions for Over 70 Years*

**NACCHO**  
National Association of County & City Health Officials

# Environmental Health, Climate Change and Funding



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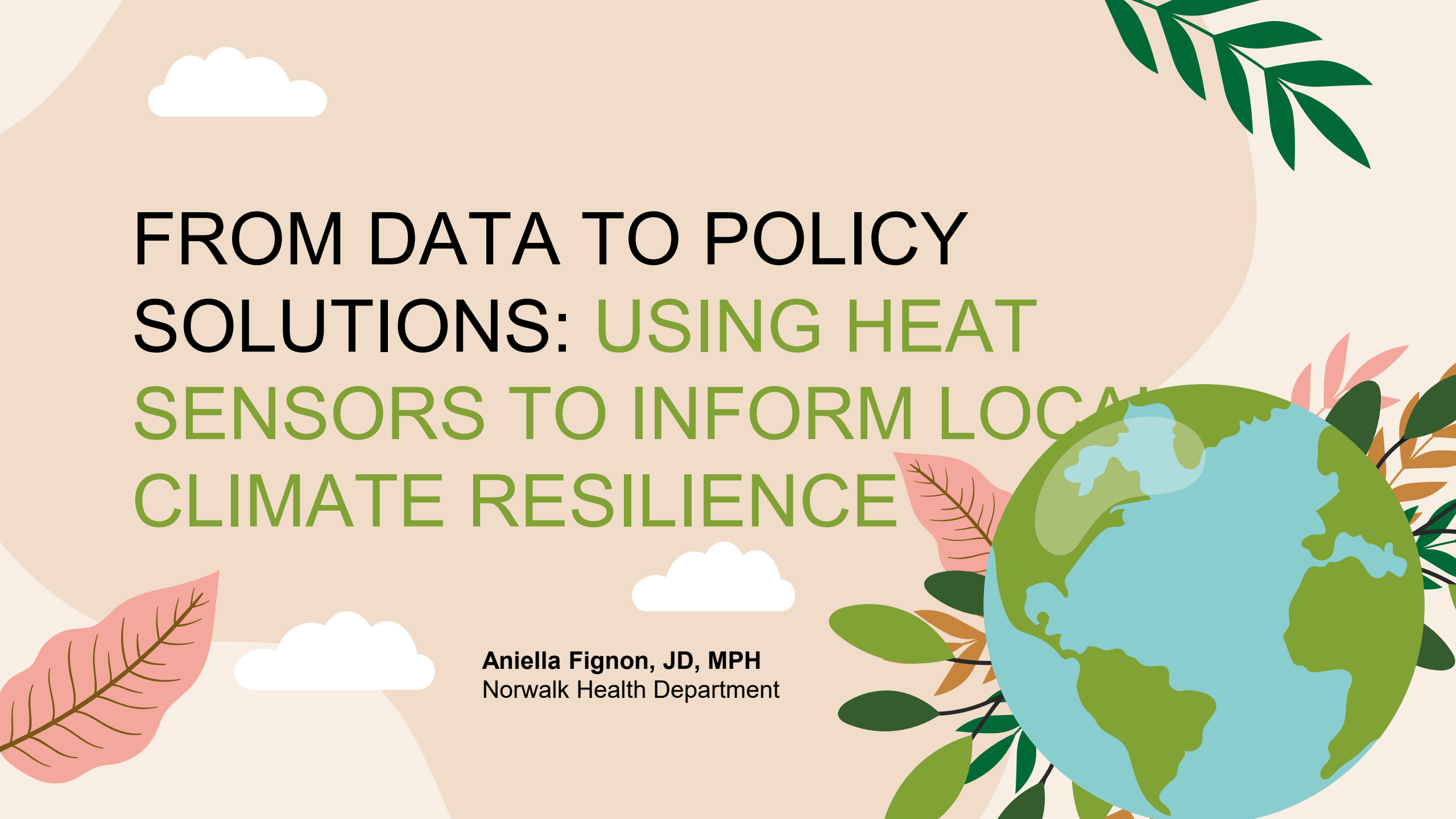


**Thank you!**

**Jennie McAdams, MPH, EHST**

Sustainability Supervisor

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# FROM DATA TO POLICY SOLUTIONS: USING HEAT SENSORS TO INFORM LOCAL CLIMATE RESILIENCE

**Aniella Fignon, JD, MPH**  
Norwalk Health Department




01

## INTRO & OBJECTIVES



Aniella Fignon

**Public Health Program Associate,  
Norwalk Health Department**


- Pronouns: she/her/hers
  - University of Connecticut: Juris Doctor,  
Master of Public Health
  - Passions: hiking, camping, snorkeling –  
anything outside!
- 



## INTRODUCTION

- Climate change affects municipalities at a local level.
- Climate change can pose various threats to human health based on geographic location.
- Data collection is necessary to drive informed strategies to combat the impacts of climate change on community health and wellness.





“While climate changes affects everyone, it does not affect everyone equally. Climate change is sometimes called a ‘risk amplifier,’ meaning that many existing risks to health—derived from environmental, economic, demographic, social, or genetic factors—are intensified by climate change impact.”



—YALE CENTER ON CLIMATE CHANGE AND  
HEALTH

# CITY OF NORWALK

**A THRIVING CITY IN A VIBRANT COASTAL  
COMMUNITY**





## **2020 CENSUS DATA**

- Population: **91,184**
- Median Income (2016-2020): **\$89,486**
- Persons in poverty: **9.1%**
- Non-owner-occupied housing rate (2016-2020): **42.7%**



## OBJECTIVES

The goals of this presentation are to inform on:

- Indicators of climate change's impact on health in Connecticut.
    - Temperature
  
  - Heat sensor project in Norwalk
    - Objectives
    - Heat Index
    - Collaborating Partners
    - Methodology and Locations
    - Schedule
    - Preliminary Data
  
  - Policy Solutions
- 
- 



02

CLIMATE & HEALTH



# CLIMATE-HEALTH INDICATORS

AIR QUALITY

TEMPERATURE

INFECTIOUS DISEASES

EXTREME  
EVENTS



TEMPERATURE

AVG. ANNUAL TEMPS

FROST  
DAYS

HEAT  
STRESS

HEAT-RELATED  
ILLNESS

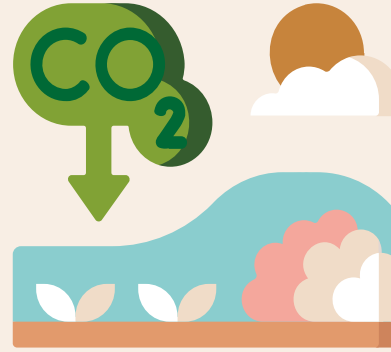
EXTREME HEAT DAYS



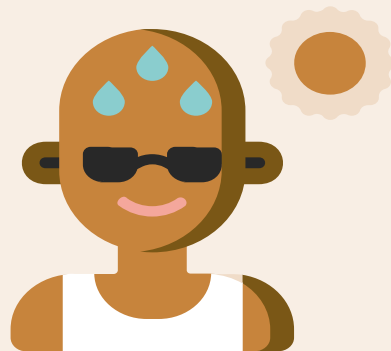
# URBAN HEAT ISLANDS



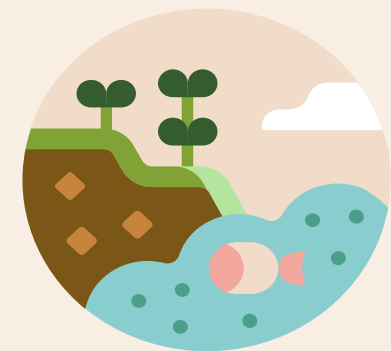
**Increases  
energy costs**



**Worsens air  
pollution levels**



**Heat-related illness  
and mortality**



**Threatens water  
quality**

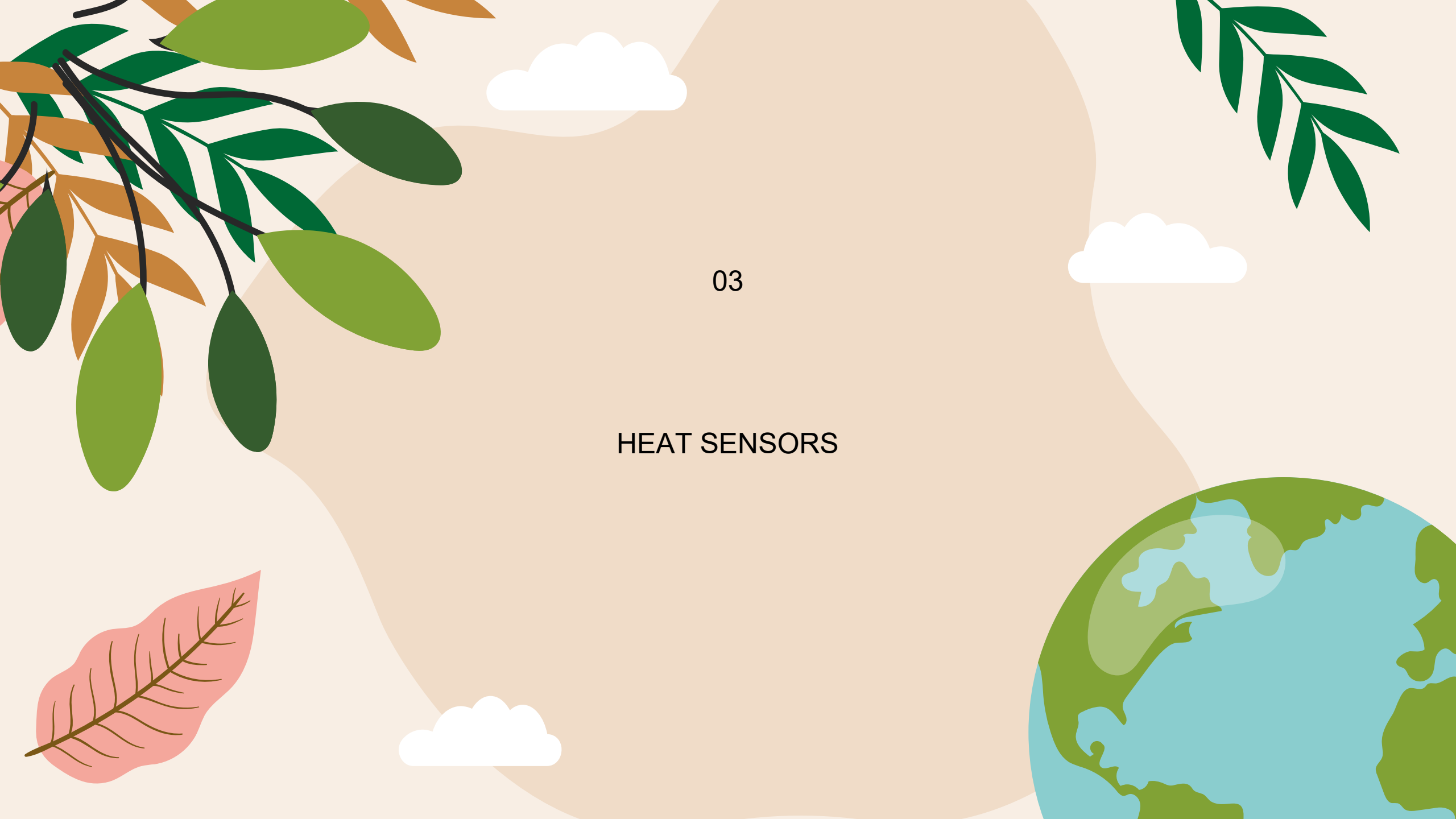



# RESILIENCE: RECOMMENDATIONS

- 1) **Monitor** current conditions and **project** trends.
- 2) Invest in **social determinants** of health.
- 3) Tackle the **upstream drivers** of climate change and health disparities.
- 4) Pursue actions that **integrate** mitigation, adaptation, and immediate health benefits.
- 5) Build the **capacity** of health professionals and decision-makers in other sectors to address climate and health.
- 6) Incorporate climate change into **decision-making across sectors**.
- 7) Incorporate **public health** into climate change decision-making.

03


## HEAT SENSORS





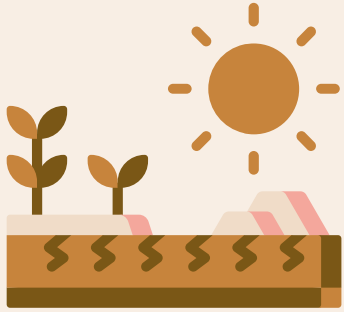
PROJECT PURPOSE:

To better understand local environmental conditions and the impact of climate change on heat vulnerability.



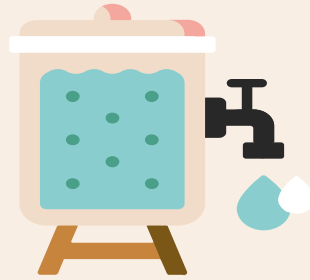
Cranbury Park in north Norwalk.

# STUDY OBJECTIVES



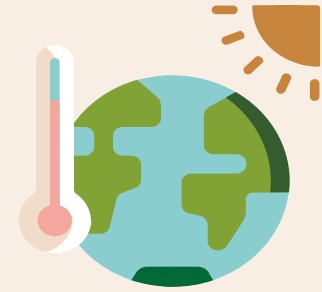
## TEMPERATURE

Identify variability in air and surface temperature over time



## RELATIVE HUMIDITY

Collect supplementary RH data to gauge what the weather “feels like”

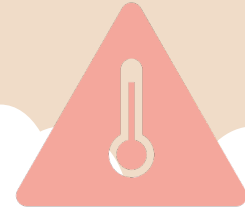


## DEW POINT

Identify levels of moisture in air



# HEAT INDEX



## RELATIVE HUMIDITY

TEMPERATURE

	0%	5%	10%	15%	20%	25%	30%	35%	40%	45%	50%	55%	60%	65%	70%	75%	80%
115	103	107	111	115	120	127	135	143	151								
110	99	102	105	108	112	117	123	130	137	143	151						
105	95	97	100	102	105	109	113	118	123	129	135	142	149				
100	91	93	95	97	99	101	104	107	110	115	120	126	132	136	144		
95	87	88	90	91	93	94	96	98	101	104	107	110	114	119	124	130	136
90	83	84	85	86	87	88	90	91	93	95	96	98	100	102	106	109	113
85	78	79	80	81	82	83	84	85	86	87	88	89	90	91	93	95	97
80	73	74	75	76	77	77	78	79	79	80	81	81	82	83	85	86	86
75	69	69	70	71	72	72	73	73	74	74	75	75	76	76	77	77	78
70	64	64	65	65	66	66	67	67	68	68	69	69	70	70	70	70	71

# VULNERABILITY

Heat Index	Possible heat disorders for people in higher risk groups
80-90	Fatigue possible with prolonged exposure and/or physical activity.
90-105	Sunstroke, heat cramps and heat exhaustion possible with prolonged exposure and/or physical activity.
105-130	Sunstroke, heat cramps or heat exhaustion likely, and heat stroke possible with prolonged exposure and/or physical activity.
130 or higher	Heatstroke/sunstroke highly likely with continued exposure.

## METHODOLOGY

### STEP 1

#### LOCATIONS

Mapped unique install sites based on numerous factors.

### STEP 2

#### COORDINATION

Collaboration between City and private partners to ensure permissions and appropriateness of sites.

### STEP 3

#### DEPLOYMENT

June 9<sup>th</sup> – CIRCA and Health Department complete install.

### STEP 4

#### DATA COLLECTION

Continuous feedback about street-level climate.

# LOCAL CLIMATE ZONE CLASSIFICATION

## LCZ 2: Compact Mid-Rise

**Pervious Surface Fraction:**  
0-20%

**Form:** Tightly packed buildings of 3 to 9 stories tall, separated by narrow streets. Sky view from street level significantly reduced. Heavy building materials (stone, brick, tile). Thick roof and walls. Landcover mostly paved. Few or no trees. Moderate to heavy traffic flow.

**Function and Location:** Residential (multi-unit housing, multi-story tenement), Commercial (office buildings, hotels, retail shops), Institutional (warehouses and factories). Core (old city, old town, inner city, central business district).



## LCZ 5: Open Mid Rise

**Pervious Surface Fraction:**  
20-40%

**Form:** Open arrangement of buildings, 3-8 stories tall. Sky view from street level slightly reduced. Heavy building materials (concrete, steel, stone, glass) and thick roofs and walls. Scattered trees and abundant plant cover. Low traffic flow.

**Function:** Residential (multi-unit housing, multi-story townhomes, apartment blocks), Commercial (office buildings, hotels), Institutional (research/business parks, campuses). Location: Periphery.



## LCZ 6: Open Low Rise

**Pervious Surface Fraction:**  
30-60%

**Form:** Attached small buildings, 1-3 stories tall, detached or attached in rows, often in a grid pattern. Sky view from street level slightly reduced. Building materials vary (wood, brick, stone, tile). Scattered trees and abundant plant cover. Low traffic flow.

**Function:** Residential (single or multi-unit housing), Commercial (small retail shops). Location: City (medium density), Periphery (suburbs).



## LCZ 8: Large Low Rise

**Pervious Surface Fraction:**  
0-20%

**Form:** Large low buildings, 1-3 stories tall, separated by extensive paved surfaces. Buildings extend outward, not upward. Roofs are flat. Few or no trees. Landcover is mostly paved. Moderate to heavy traffic flow.

**Function:** Light industrial (modern warehousing), Commercial (shopping centers, storage facilities). Location: Periphery.



## LCZ 9: Sparsely Built

**Pervious Surface Fraction:**  
60-95%

**Form:** Small or medium sized buildings, widely spaced across natural landscape. Full sky view from ground level. Building materials vary. Scattered trees and abundant plant cover. Low traffic flow.

**Function:** Residential (single or multi-unit housing), Commercial (retail shops, office buildings), Institutional (research/business parks, campuses), Agricultural (farms, estates). Location: Periphery (low density suburbs), Extended metropolitan regions, Rural towns and lightly settled countryside.



## LCZ 10: Heavy Industry

**Pervious Surface Fraction:**  
40-50%

**Form:** Highly irregular mix of low and mid-rise industrial structures (tanks, towers, stacks). Structures openly spaced on hard-packed surfaces. Sky view from ground level slightly reduced. Building materials vary (steel, concrete, metal).

Few or no trees. Large quantities of waste heat and atmospheric pollutants (smelting, pulp, distilling). Low flow traffic. Function: Industrial (factories, refineries, mills, plants). Location: Periphery.



## 101: Dense Trees

**Pervious Surface Fraction:**  
95-100%

**Form:** Heavily wooded landscape of deciduous and/or evergreen trees. Land cover mostly pervious.

**Function and Location:** Residential (multi-unit housing, multi-story tenement), Commercial (office buildings, hotels, retail shops), Institutional (warehouses and factories). Core (old city, old town, inner city, central business district).



## 102: Scattered Trees

**Pervious Surface Fraction:**  
95-100%

**Form:** Lightly wooded, scattered trees and fields.



## 104: Low Plants

**Pervious Surface Fraction:**  
95-100%

**Form:** Featureless landscape of grass or herbaceous plants/croplands/wetlands. Few or no trees.



## 107: Water

**Pervious Surface Fraction:**  
95-100%

**Form:** Water.

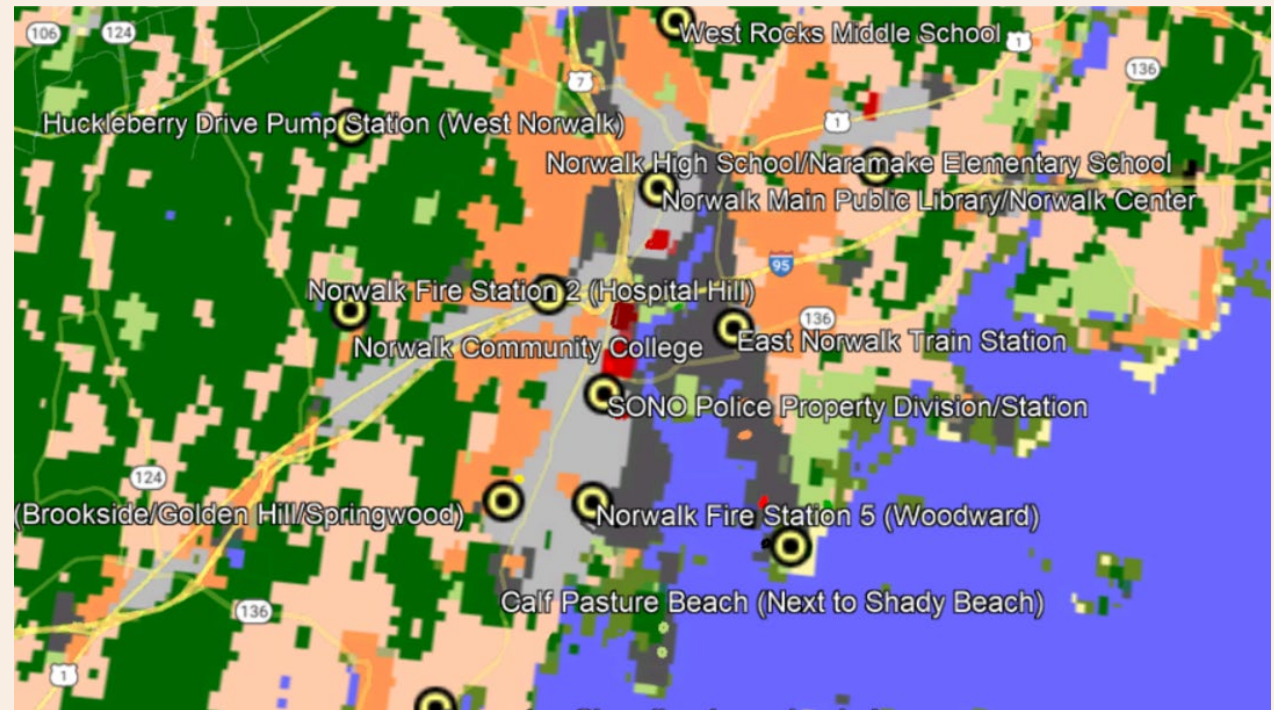


**LCZ classification framework applied to the state of Connecticut in accordance with Stewart and Oke (2012)**

**UConn**

## LOCATIONS

1. Bounton St
2. Calf Pasture Beach
3. Cranbury Park
4. East Norwalk Train Station
5. Huckleberry Drive
6. Naramake Elementary School
7. Norwalk Community College
8. Norwalk Fire Station 2
9. Norwalk Fire Station 5
10. Norwalk Main Public Library
11. Rowayton Shoreline
12. SONO Police Station
13. West Rocks Middle School



Onat (2022)

# COLLABORATING PARTNERS

Mayor's Office  
Health Department  
Planning & Zoning  
Transportation, Mobility & Parking  
Department of Public Works  
IT Department  
Fire Department (OEM)

Recreation & Parks  
Norwalk Public Library  
Police Department  
Norwalk Public Schools  
Veolia Water  
Water Pollution Control Authority  
Norwalk Community College

FUNDED & LED BY THE UCONN CONNECTICUT  
INSTITUTE FOR CLIMATE RESILIENCE AND  
ADAPTATION (CIRCA)

## DEPLOYMENT & DATA

- HOBO MX2300 series data loggers
- Temporary, non-invasive
  - Affixed with zip ties and electrical tape
- Mounted 8-10 feet above ground
- Data sent continuously to CIRCA every five minutes using cell service
- CIRCA will refine heat index and share data with City of Norwalk



# SAMPLE DATA

Date: July 21, 2022

Satellite Temperature  
(Sikorsky Airport): 93.79F



Calf Pasture  
Beach:  
96.70F



East  
Norwalk  
Train:  
104.26F



Naramake  
Elementary  
School:  
103.76F



Bouton St  
Pump  
Station:  
107.39F



04

LOCAL POLICY



The background features a stylized world map in shades of green and blue. White clouds are scattered across the top. On the left side, there is a cluster of colorful leaves in shades of pink, green, and brown, with dark brown stems. The title 'RESILIENCE: RECOMMENDATIONS' is centered at the top in a bold, dark green font.

# RESILIENCE: RECOMMENDATIONS

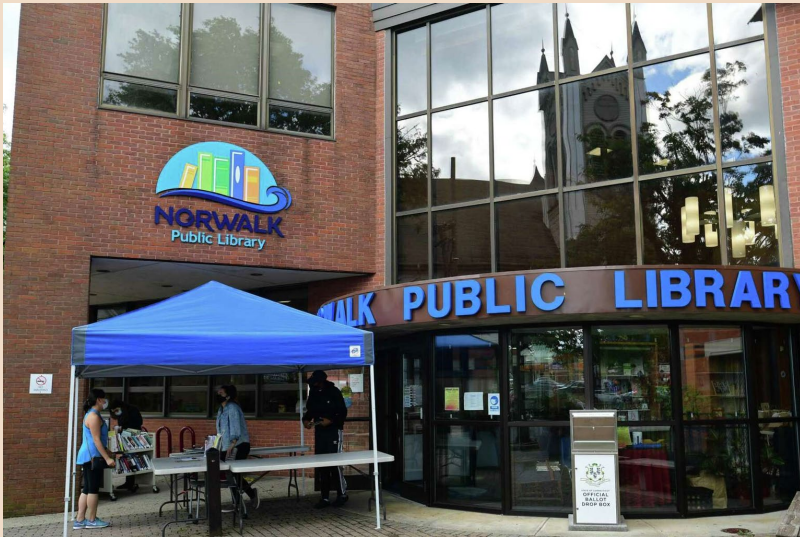
- 1) **Monitor** current conditions and **project** trends.
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The background features a stylized globe in shades of green and blue, with white clouds scattered across the top and bottom. On the left side, there is a cluster of colorful leaves in shades of green, pink, and brown, set against a light beige background.

# WHAT KINDS OF POLICIES?

- Prioritize accessibility and health equity into decision making.
- Empower community to participate in greener, healthier lifestyles.
- Adapt land use and zoning ordinances to create or improve upon resilience assets.
- Establish joint use agreements.

# PRIORITIZE HEALTH EQUITY BY MAKING RESILIENCE RESOURCES ACCESSIBLE



**Make cooling centers  
physically and socially  
accessible**



**Invest in urban parks and  
interactive water features**

# EMPOWER COMMUNITIES TO BECOME RESILIENT WITH USER-FRIENDLY TOOLS


Posted on: July 18, 2022

## Mayor Rilling Issues an Extreme Heat Advisory and Activates Cooling Centers for the City of Norwalk

**(Norwalk, Conn.)** Today, July 18, 2022, Mayor Rilling issued an extreme heat advisory for the City of Norwalk, beginning July 19<sup>th</sup> through Sunday, July 24<sup>th</sup> and shared details on cooling centers that will be available throughout the community.

Ensure public messaging  
reaches people where they are

**CITY HALL AREA**      **CITY HALL AREA**      **CITY HALL AREA**



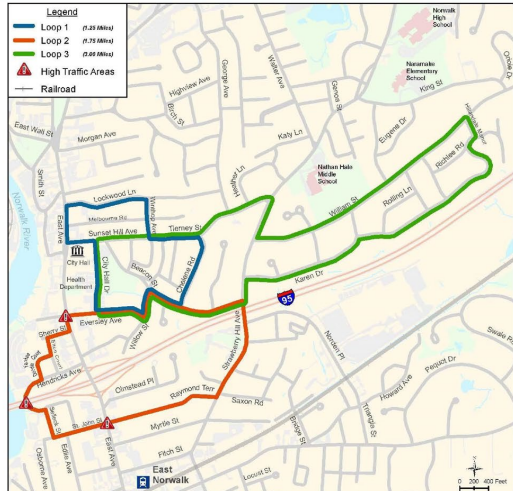
**Become a NorWALKer!**  
EXPLORE NORWALK'S CITY HALL AREA  
Visit the hilly neighborhood surrounding Norwalk's City Hall, the Norwalk Health Department, and the Norwalk Historical Society Museum.

**Loop 1**  
Start at City Hall Dr. Turn left on Eversley Ave. Turn left on Willow St. Turn right on Beacon St. Left on Chelene Rd. Left on Tierney St. Right on Winthrop Ave. Left on Lockwood Ln. Left on East Ave. Left on Sunset Hill Rd. Right on City Hall Dr.

**Loop 2**  
Start at the corner of City Hall Dr. and Eversley Ave. Turn right on Eversley Ave. Cross East Ave. and turn left. Right on Sherry St. Left on Elton Ct. Right on Yankee Doodle Ct. Right on Hendricks Ave. Right on Selleck St. Left on Saint John St. Cross East Ave. to Raymond Terr. Left on Strawberry Hill Ave. Left on Beacon St. Left on Willow St. Right on Eversley Ave. and return to City Hall.

**Loop 3**  
Exit the City Hall parking lot north to Sunset Hill Ave. Turn right on Sunset Hill and continue to Tierney St. until the end. Turn right on Strawberry Hill Ave. Turn left on William St. Continue on William St. and turn right on Hillandale Mnr. Make the first right on Richlee Rd. Make the first left on Karen Dr. Left on Dairy Farm Rd. Left on Strawberry Hill Ave. Right on Beacon St. Left on Willow St. Right on Eversley Ave. and enter the City Hall parking lot.

**Legend**  
Loop 1 0.23 MI/0.4  
Loop 2 0.79 MI/1.6  
Loop 3 0.89 MI/1.9  
High Traffic Areas  
Railroad



**PROCEED WITH CAUTION WHEN FOLLOWING NORWALKER ROUTES!**  
The Healthy for Life Project is not responsible for any injuries or accidents that may occur while following NorWALKer routes. Consult your doctor before beginning an exercise program. Use pedestrian crosswalks when available, obey all traffic laws, and if no sidewalks exist, walk against traffic. Wear proper footwear and reflective gear, and bring water with you while walking. Have fun!

Make active transportation  
easy, feasible, and fun

# ADAPT LAND USE AND ZONING ORDINANCES TO CREATE RESILIENCE ASSETS – PART 1

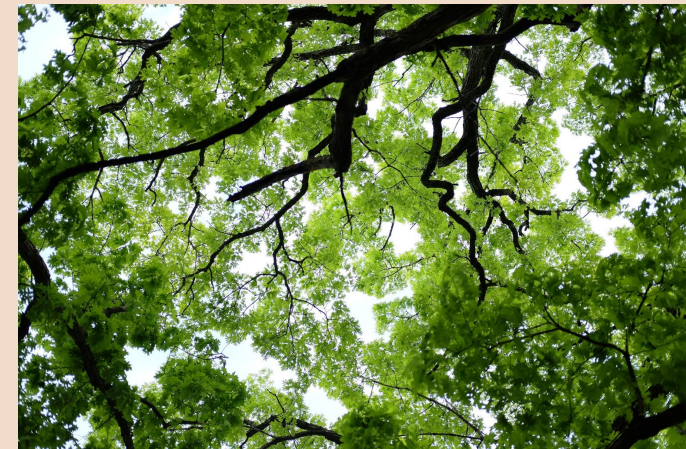


Transform small areas into green spaces

- Bioswales/rain gardens
- Pocket parks



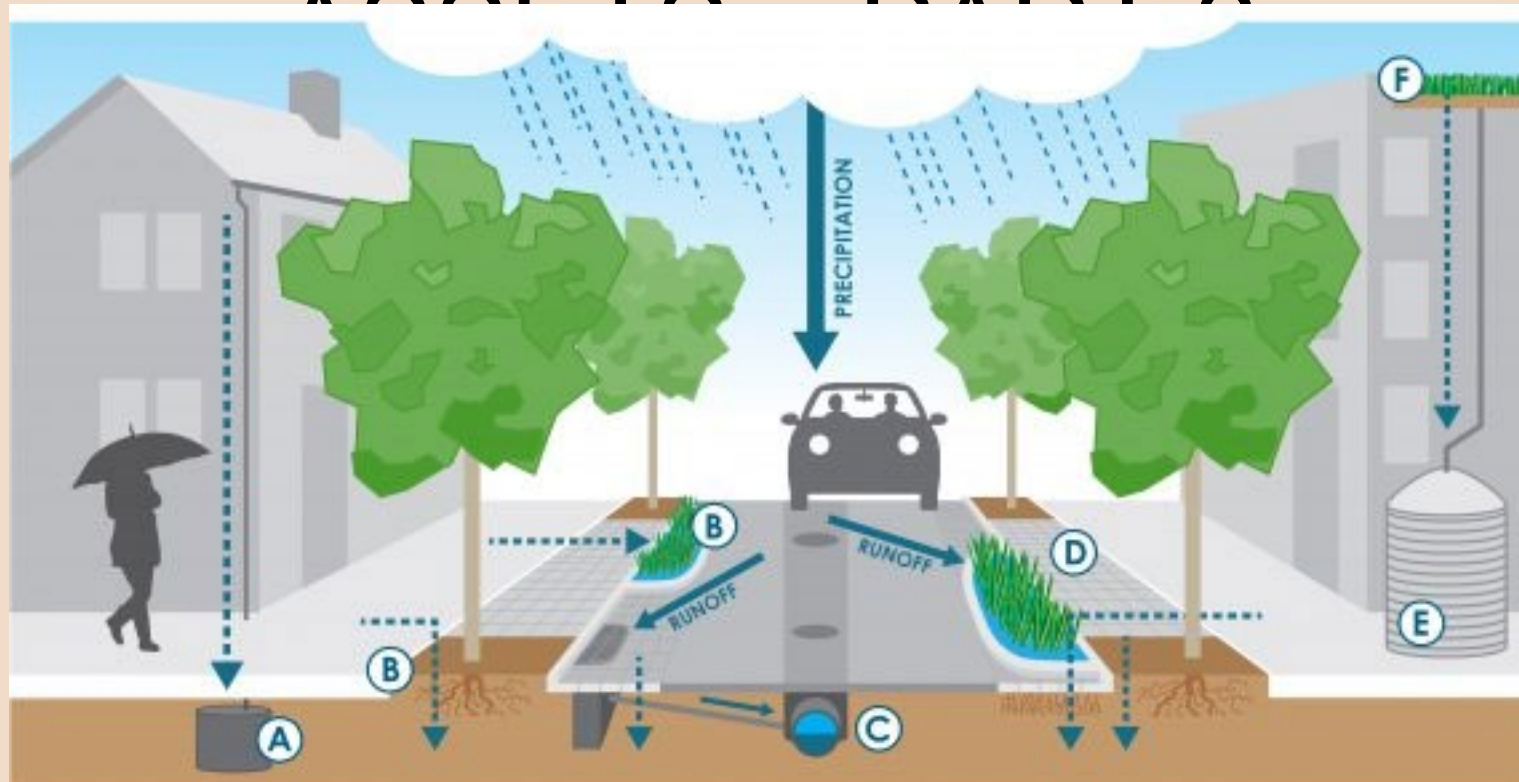
Convert recreational areas into greener spaces



Invest in tree canopies along contiguous streets and in parks

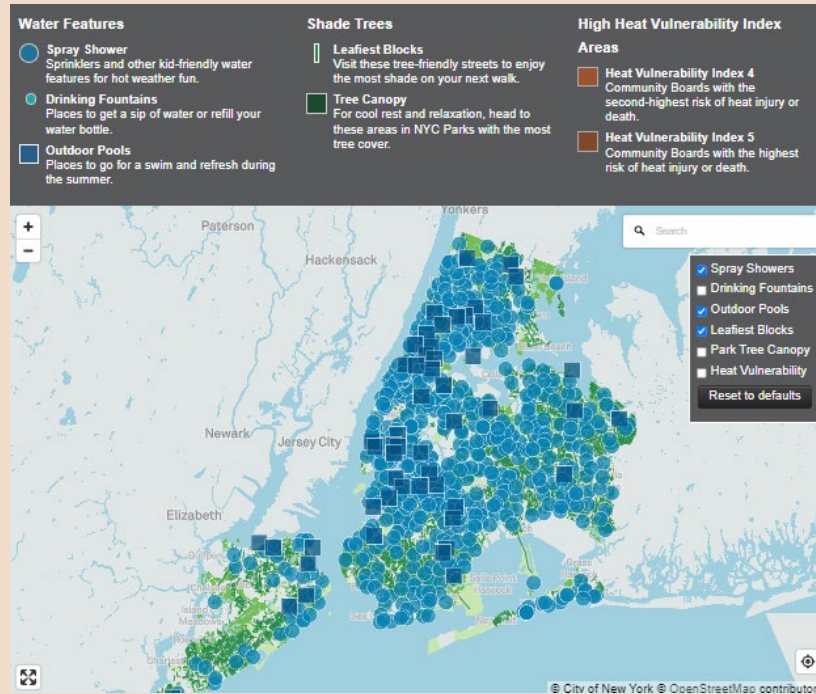
# ADAPT LAND USE AND ZONING ORDINANCES TO CREATE RESILIENCE

## ACCEPTABLE PRACTICES



A: Dry Well B: Stormwater Planter C: Storm Drain D: Permeable Paving E: Rainwater Harvesting Cistern F: Green Roof

# LEVERAGE EXISTING COOL SPACES THROUGH JOINT USE AGREEMENTS



Cool It! NYC Map



A shaded, tented event at a Norwalk Public School





# THANK YOU!

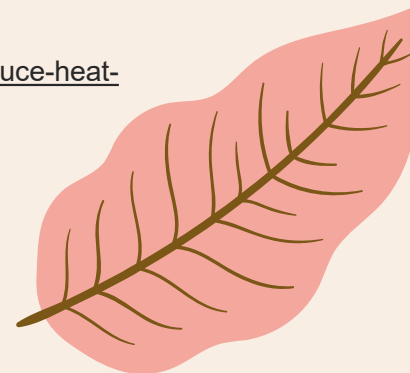
Do you have any questions?

**Aniella Fignon, JD, MPH**  
Norwalk Health Department  
[afignon@norwalkct.org](mailto:afignon@norwalkct.org)

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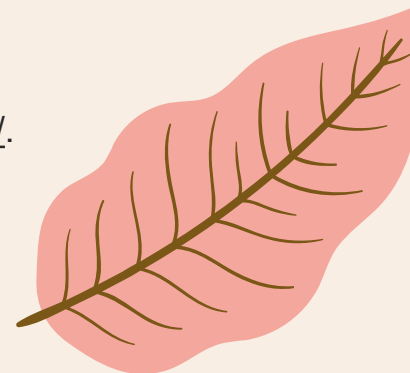
## REFERENCES – PART 1

- Brand, C. et al. (April 2021). *The climate change mitigation effects of daily active travel in cities*. Transportation Research Part D: Transport and Environment (93).  
<https://www.sciencedirect.com/science/article/pii/S1361920921000687>.
- Climate ADAPT. (2016). *Water uses to cope with heat waves in cities*.  
<https://climate-adapt.eea.europa.eu/en/metadata/adaptation-options/water-uses-to-cope-with-heat-waves-in-cities>.
- Environmental Protection Agency.
  - *Heat Island Impacts*. <https://www.epa.gov/heatislands/heat-island-impacts>.
  - *Reduce Urban Heat Island Effect*. <https://www.epa.gov/green-infrastructure/reduce-urban-heat-island-effect>.
  - *Using Trees and Vegetation to Reduce Heat Islands*.  
<https://www.epa.gov/heatislands/using-trees-and-vegetation-reduce-heat-islands>.



## REFERENCES – PART 2

- L. Bozzi & R. Dubrow. (2020). *Climate change and health in Connecticut: 2020 report*. Yale Center on Climate Change and Health.
- NYC Parks. *Cool It! NYC*. <https://www.nycgovparks.org/about/health-and-safety-guide/cool-it-nyc>.
- P. Russo. (2022). *Three local policy solutions that can advance park equity*. Robert Wood Johnson Foundation. <https://www.rwjf.org/en/blog/2022/07/three-local-policy-solutions-that-can-advance-park-equity.html>.
- Schottland, T. (2018). *Parks as a climate solution*. The Trust for Public Land. [https://www.tpl.org/wp-content/uploads/2019/01/Climate-Smart-Cities-Report\\_GCAS-report-2018\\_R6.pdf](https://www.tpl.org/wp-content/uploads/2019/01/Climate-Smart-Cities-Report_GCAS-report-2018_R6.pdf).
- UConn CIRCA Resilient Connecticut, Norwalk Heat Study: <https://resilientconnecticut.uconn.edu/norwalk-heat-study-2/>.
- Weather.gov: [https://www.weather.gov/arx/heat\\_index](https://www.weather.gov/arx/heat_index).



## MEDIA

- The Hour:  
<https://www.thehour.com/news/article/Why-13-heat-sensors-have-been-installed-around-17239242.php>.
- Nancy on Norwalk:  
<https://www.nancyonnorwalk.com/norwalk-installs-heat-sensors-as-proactive-step-toward-dealing-with-climate-change/>.
- New Jersey News 12:  
<https://newjersey.news12.com/norwalk-officials-use-13-heat-sensors-to-help-identify-climate-conditions-around-city>.
- Norwalk Tomorrow:  
<https://tomorrow.norwalkct.org/tag/norwalk-ct-heat-sensor-project/>.
- Patch:  
<https://patch.com/connecticut/norwalk/norwalk-install-heat-sensors-across-city>.
- The CT Mirror:  
<https://ctmirror.org/2022/09/25/heat-affects-health-overlooked-outcome-of-climate-change-health-connecticut/>



# Climate and Health Equity: a Policy Approach

Judy Olsen, REHS, AEC  
Bloomberg American Health Initiative Fellow  
Johns Hopkins University, School of Public Health  
October 2022



# Agenda:

## Pierce County, WA

- Climate
- Communities of Focus
- South Tacoma

## State Environmental Protection Act

- Usual approach
- Revised approach

## Health Impact Assessment

- Board of Health Resolution
- Climate and Health Equity criteria

# What really makes us healthy?



## RWJF County Health Rankings:





# City of Tacoma and Pierce County, WA


- Pierce County
  - 2nd Largest County, Pop 950,000
  - 14% over age 65, 6% under age 5
  - 36% people of color
  - 9% poverty
- Tacoma
  - Pop 220,000
  - 42% people of color
  - 14% poverty



# Extreme Heat

## Health Advisory

July 2022 • Information for Pierce County Medical Providers  
Kathy Ross, HPC II [kross@tpchd.org](mailto:kross@tpchd.org); (253) 405-6617



Environmental Health Division  
3629 South D Street, Tacoma, WA 98418  
(253) 649-1500 (phone)

### Hot weather guidance for childcares and summer camps

National Weather Service forecasts high temperatures in the Puget Sound region from Monday, July 25 through Friday, July 29. Temperatures will rise into the low to mid 90s, possibly higher later in the week. When outside temperatures are high, your risk for heat-related illnesses rises. Older adults, young children, pregnant women, people experiencing homelessness, and people with mental illness and chronic diseases are at greater high risk.

If the National Weather Service issues a [heat watch or heat warning](#), consider the following so children in your care can stay cool and safe.

**Stay cool**

- Plan for the children in your care to spend more time in air-conditioned or shady places. For larger groups, rotate groups of children through times in shady spots outdoors and time inside buildings.
- Cover windows that receive morning or afternoon sun.
- Use fans when indoors.
- Encourage caregivers to dress children in lightweight clothing.
- Provide cooling towels or water activities in the shade.
- Provide frequent rest periods to avoid heat illnesses like heat exhaustion or heat stroke.
- Provide info about [Cooling centers](#) to caregivers. [Pierce Transit will provide free rides](#) to families traveling to or from cooling centers.

**Drink liquids**

- Encourage children to drink plenty of water. Avoid drinks with caffeine and large amounts of sugar because they can dehydrate you.
- Have beverages available to the children whenever possible so they can sip or drink frequently. Don't wait until they are thirsty to drink.

**If you go outside**

- Limit the time the children are in direct sunlight when outdoors.
- Do not leave infants or children in parked cars, vans, or buses, even with the windows rolled down.
- Avoid or reduce activities that are tiring or take a lot of energy.
- Do outdoor activities in the cooler morning and evening hours.
- Avoid sunburn. Make sure children use a sunscreen lotion with a high SPF (sun protection factor) rating.

**Water safety**

- If you take children to swim, choose a safe location—visit a local pool or beach with lifeguards. Have children wear personal flotation devices (PFDs) while in the water.

**Know the signs of heat cramps, heat exhaustion and heat stroke and take appropriate actions**

- View our [heat exhaustion vs heat stroke infographic](#).

7/22/2022
1 of 2
page 1 of 2

## Be Careful in Hot Weather



### High temperatures can be dangerous.

Know the signs of heat exhaustion and heat stroke and how to help.

**Heat exhaustion**

Take action now to prevent heat stroke.



**Heat stroke**

This is an emergency. Call 911 immediately.



Head	Faint or dizzy.	Throbbing headache, confused or unconscious.
Sweat	Excessive.	None.
Pulse	Weak, rapid.	Strong, rapid.
Stomach	Nausea or vomiting.	Nausea or vomiting.
Body	Muscle cramps, weakness.	Temperature 103° or higher.
Skin	Pale, cool, clammy.	Red, hot, dry.

**How you can help.**



Move to a cooler, air-conditioned place.

Sip water, if fully conscious.

Call 911 if a person is not fully conscious or their condition worsens.

Call 911 or go to the hospital immediately.

Cool down rapidly. Lay in cool water or douse with water.



Find prevention tips and more info at [tpchd.org/keepcool](http://tpchd.org/keepcool).

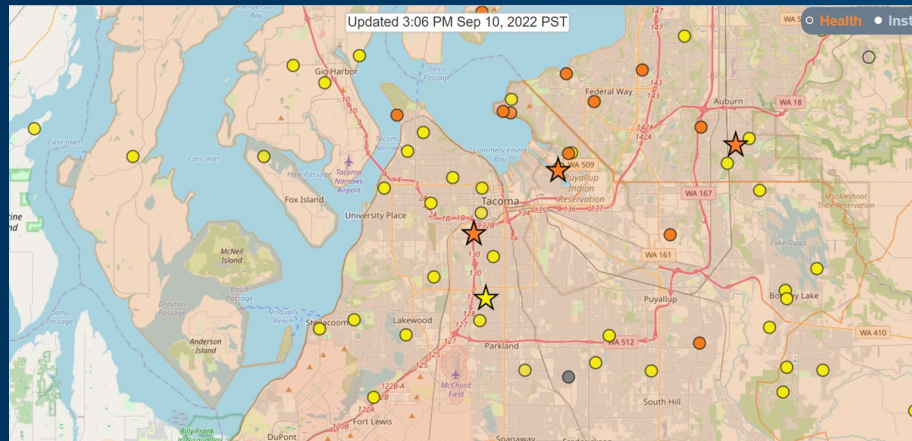
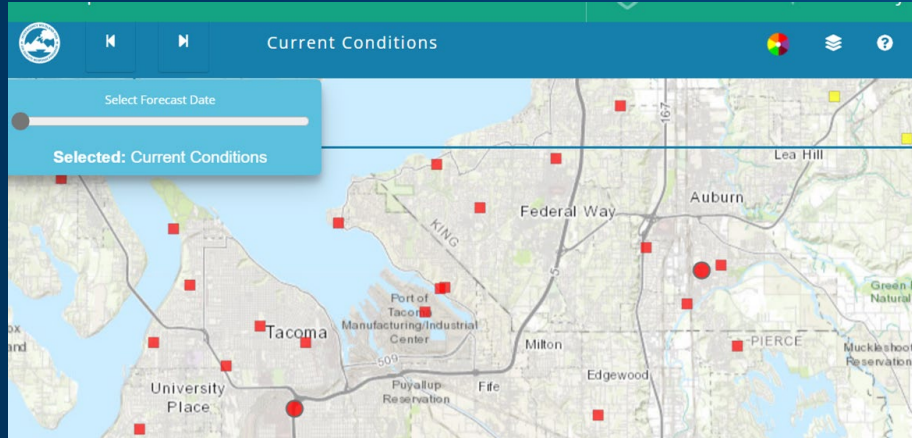
# The “Super Massive” Plume



From WA Smokeblog, Washington Dept. of Ecology, Air Quality Program 2020

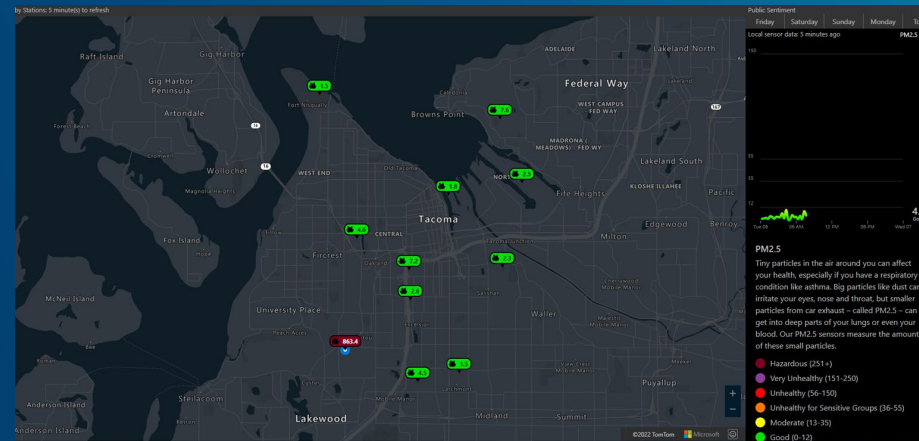
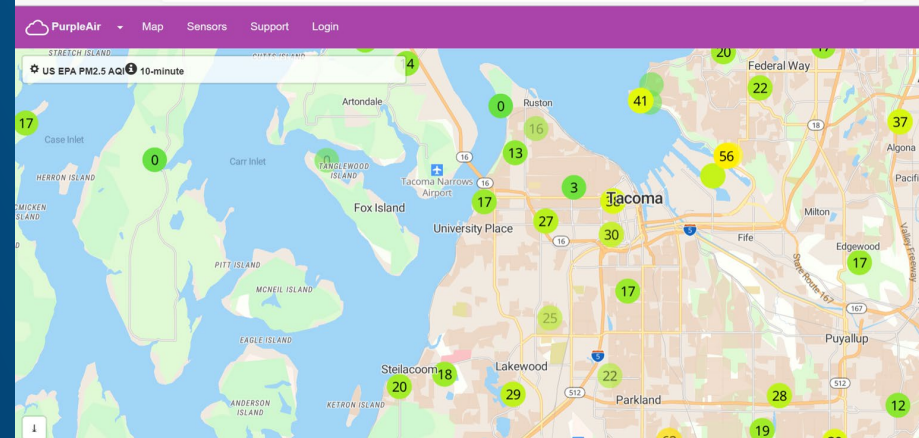
# Wildfire Smoke

## Washington Smoke Blog:



## Puget Sound Clean Air Agency

## MapPurple Air



## Urban Air Map

# Harmful Algae Blooms



# Pierce County Communities of Focus



# Communities of Focus Strategies

- Increase investments in the community.
- Form new, and strengthen existing, partnerships.
- Improve customer service between the Health Department, residents and partners.
- Increase opportunities for civic engagement, i.e., training, leadership, community involvement, etc.

# South Tacoma Community

- Housing and homelessness.
- Access to healthy food.
- Transportation and road safety.
- Crime prevention.
- Healthy environment.



Asian Pacific Cultural Center,  
2022 Samoa Cultural Week



# South Tacoma Socioeconomic Factors

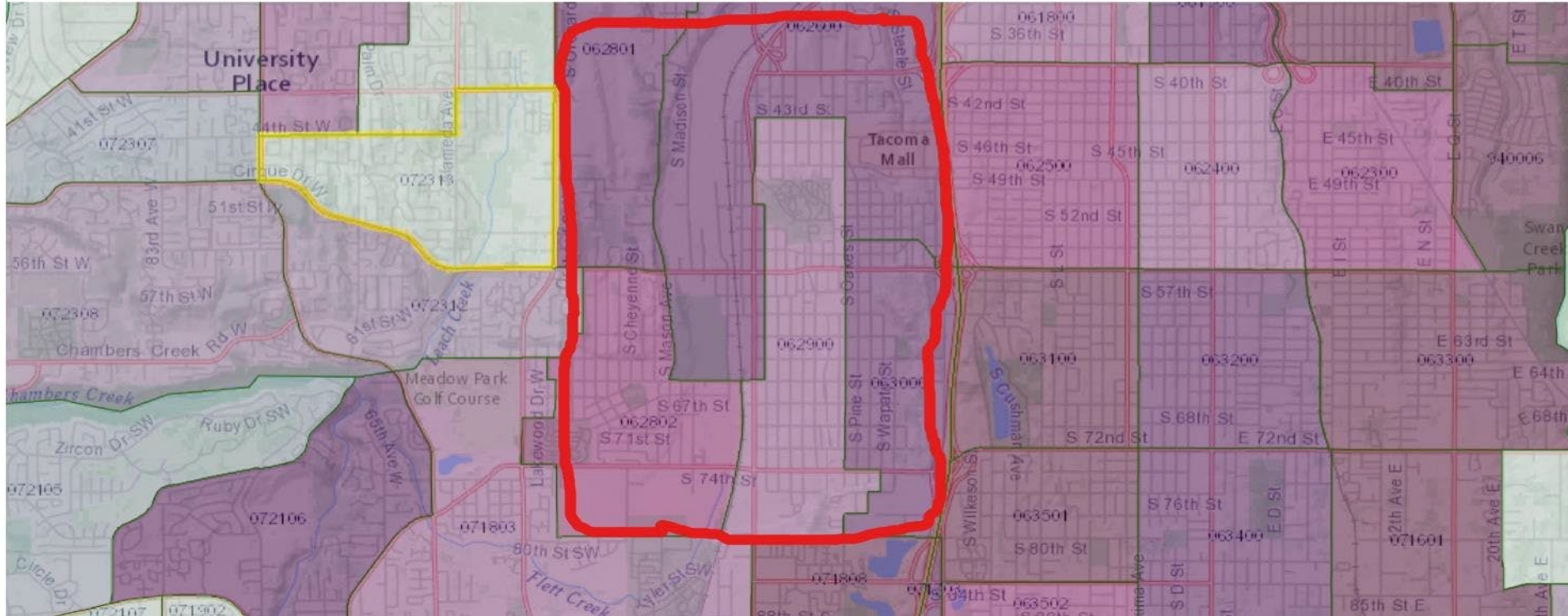


Selection: Environmental Health Disparities V 2.0 -> Socioeconomic Factors

Date: 10/09/2022 at 9:09 PM

ACS: Limited English (LEP), No High School Diploma (%), People of Color (Race/Ethnicity), Population Living in Poverty <=185% of Federal Poverty Level (%), Transportation Expense, Unaffordable Housing (>30% of Income), Unemployed (%)

Legend: (High) 10 9 8 7 6 5 4 3 2 1 (Low)



# South Tacoma Sensitive Populations

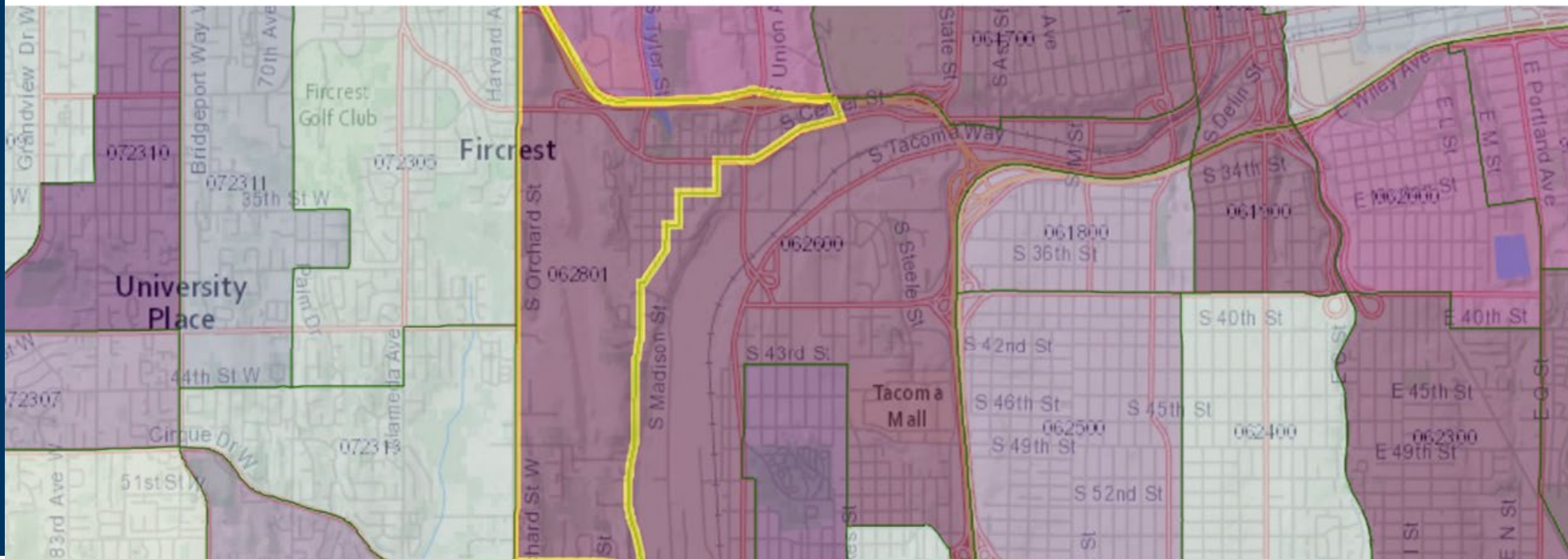
Washington State Department of  
*Health*

Selection: Environmental Health Disparities V 2.0 -> Sensitive Populations

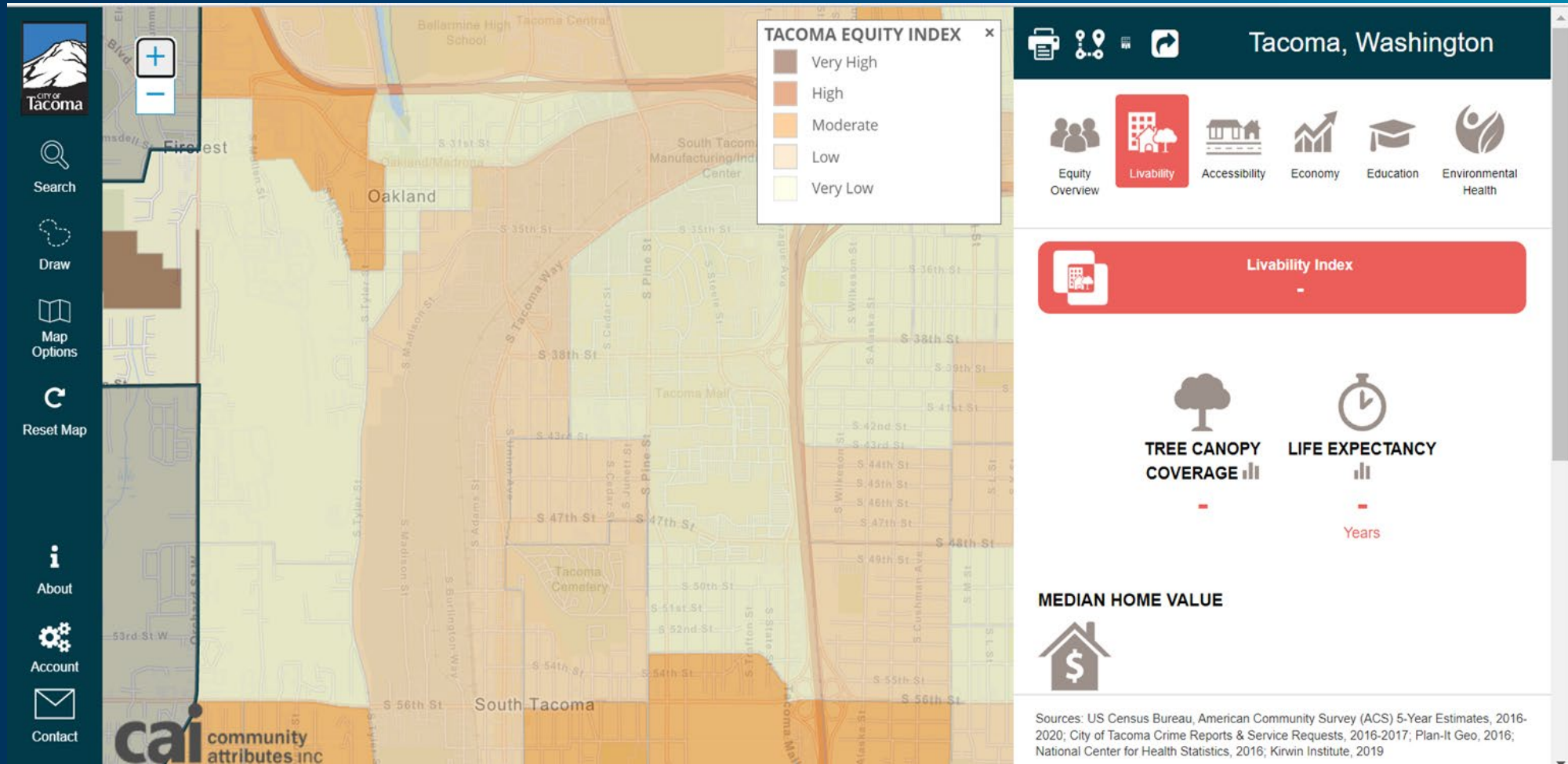
Date: 10/09/2022 at

Death from Cardiovascular Disease, Low Birth Weight - Combined (%)

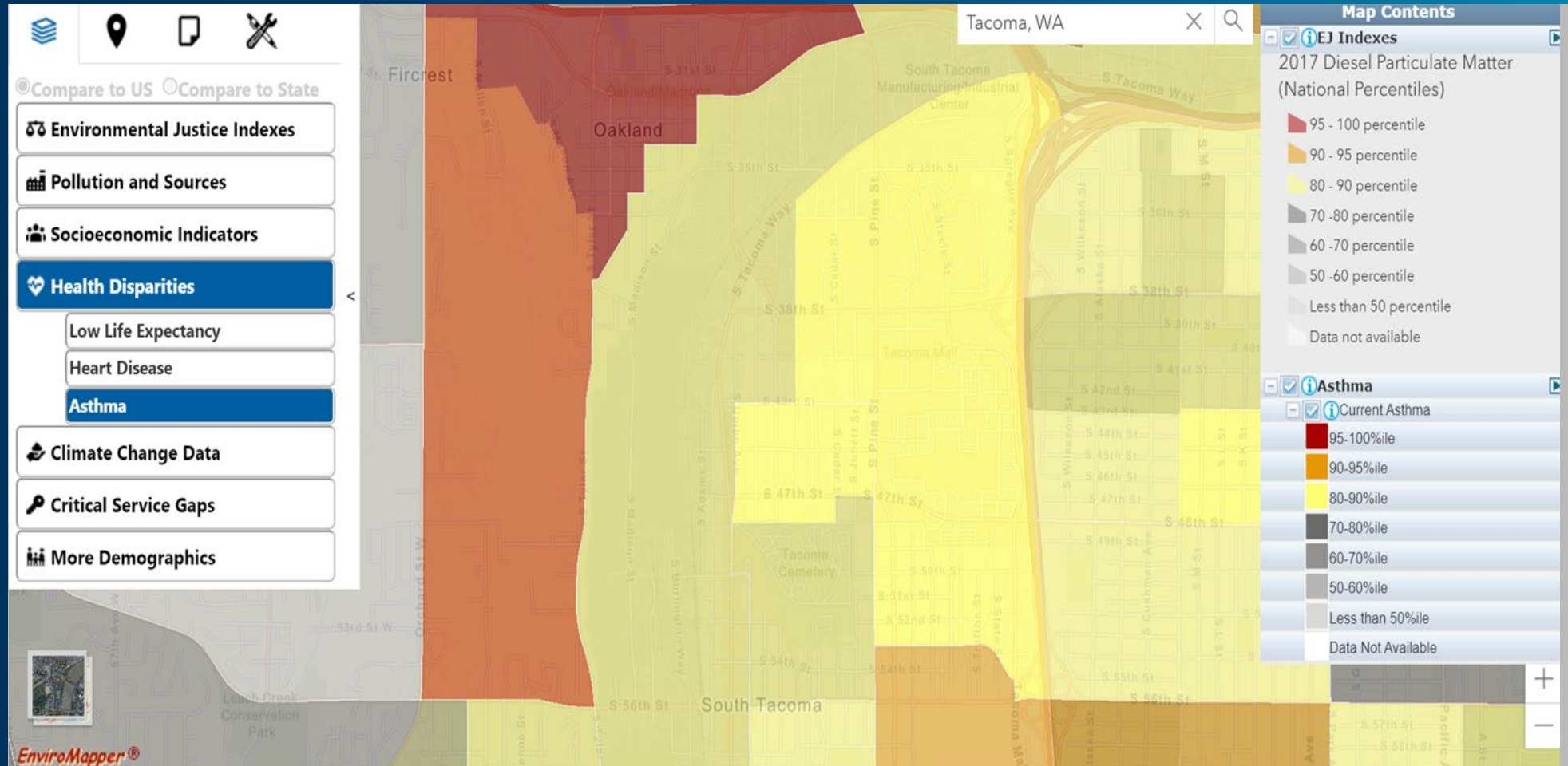
Legend: (High) 10 9 8 7 6 5 4 3 2 1 (Low)



# South Tacoma Livability Score



# South Tacoma Poor Health Outcomes



# State Environmental Protection Act (SEPA)

- Identifies and analyzes environmental impacts
  - Private projects
  - Public facilities
  - Regulations
  - Policies
  - Plans

*SEPA can be used to modify or deny a proposal to avoid, reduce, or compensate for probable impacts.*

# SEPA- Regulatory Response

- Historically focused on areas of regulatory influence.
  - Grade and fill (contaminated soils).
  - Onsite septic systems.
  - Drinking water wells.
  - Surface water.

*Contamination may be present in the soil at this site and require remediation or removal, per Chapter 173-340 WAC, Model Toxics Control Act Cleanup Regulation. Soil removed from the site requires proper disposal at a permitted facility. Soil that designates as a solid waste must be disposed at a WAC 173-351 or WAC 173-350 permitted facility. Soil that designates as a dangerous waste must be disposed at a WAC 173-303 permitted facility. The subject site remains on WA Department of Ecology's (Ecology) Confirmed and Suspected Contaminated Sites List. Here is a link to Ecology documents:*

*This project is proposing to utilize onsite sewage systems as the method of sewage disposal. Density, lot size and soil conditions must be shown to meet WAC 246-272A (The State Board of Health Onsite Sewage System Regulations) and Environmental Health Code, Chapter 2, On-Site Sewage. Please contact George Waun at (253) 798-6485 for further information.*

# Bridge Industrial Warehouse Proposal

- 160 Acres.
- 2.5 Million Sq Ft.
- 1,349 Parking spaces.
- 891 Tractor Trailer parking spaces.
- 486 Door positions.
- Transportation and Road Safety
- Healthy Environment



# South Tacoma Community Concerns

- Air pollution.
- Traffic congestion.
- Pedestrian and vehicle safety.
- Noise.
- Lights.
- Proximity to schools and playfields.
- Groundwater protection.





# South Tacoma Schools and Childcares



# Health Impact Assessment- Board of Health Resolution

## **Tacoma-Pierce County** ***Board of Health***



### **RESOLUTION NO. 2016-4483**

#### **A RESOLUTION OF THE TACOMA-PIERCE COUNTY BOARD OF HEALTH RECOMMENDING PIERCE COUNTY, AND THE CITIES AND TOWNS THEREIN, USE HEALTH IMPACT ASSESSMENTS IN CONJUNCTION WITH THE REVIEW OF PROPOSED ACTIONS UNDER THE STATE ENVIRONMENTAL POLICY ACT.**

**WHEREAS**, assessing public health starts by examining where we live, learn, and work, and environmental and socio-economic factors play a significant role in determining our health; and

**WHEREAS**, private and public projects, regulations, policies, or plans can have unintended consequences for public health which may not be adequately assessed under the State Environmental Policy Act (SEPA) (Chapter 43.21C RWC) and implementing rules (Chapter 197-11 WAC); and

**WHEREAS**, Health Impact Assessments are a nationally and internationally accepted practice to evaluate the potential health effects of proposed projects, regulations, policies and plans; and

**WHEREAS**, Health Impact Assessments can identify cumulative impacts on the community and public health, including potential impacts to vulnerable and underserved communities; and

# 2021 -22 Environmental Public Health \$\$\$

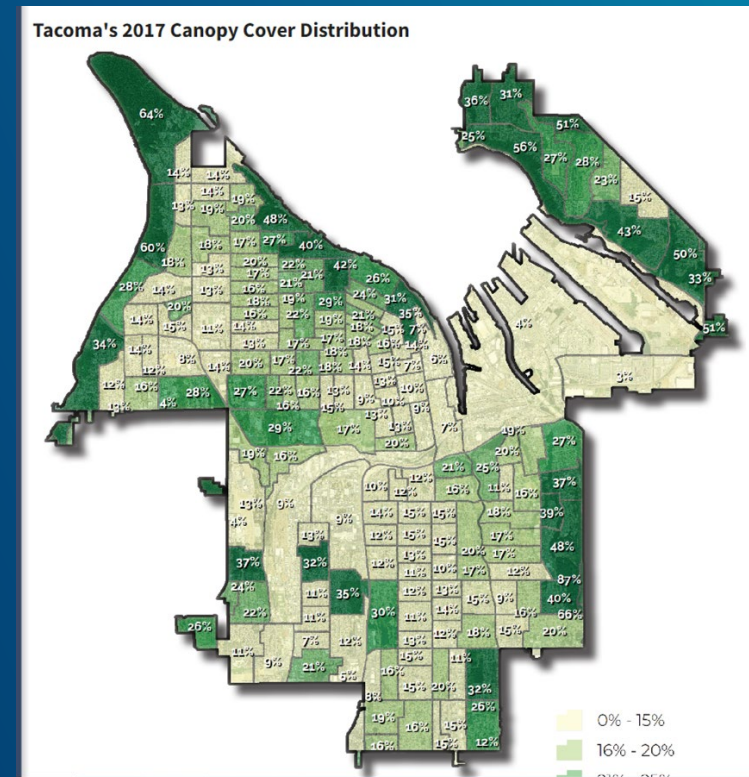
- Lead Exposure
- Homelessness
- Schools and Air Quality
- Climate Change
- Safe and Healthy Communities

*“Establish model program for State Environmental Policy Act (SEPA) reviews – policy work related to environmental and health impacts. Initial staffing will develop a process for receiving, prioritizing, and completing SEPA reviews and Health Impact Assessments. A key aspect of year one will be building relationships within the selected region with LHJs, Tribes, community partners, and academic institutions .”*

# SEPA 2.0- Climate and Health Equity

## New SEPA screening criteria and 'violations'.

- Community of Focus.
- Environmental Justice.
  - Health outcomes.
  - Urban heat island.
  - Air pollution.
  - Traffic safety.
  - Contaminated sites.
- Climate considerations.
  - Greenhouse gas contributions.
  - Tree canopy and green space.
  - Surface water and drinking water.



# Bridge Industrial Current Status

- Increase investments in the community.
- Form new, and strengthen existing, partnerships.
- Improve customer service between Health Department, residents and partners.
- Increase opportunities for civic engagement, i.e., training, leadership, community involvement, etc



# Bridge Industrial Current Status

- Likely MDNS.
- Intermediate HIA.
  - Community engagement.
  - Mitigation
    - Health
    - Climate

*“Issuing an MDNS and permit for this project instead of requiring a full EIS would....undermine environmental justice by cutting off an opportunity for impacted community members to meaningfully engage in the City’s land use decisions... result in cumulative harms being imposed on a community that has already disproportionately suffered many other environmental harms.”*

***-Earth Justice, NW Regional Office***

# Contact information:

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Social, Economic, and Environmental Conditions for Health  
Environmental Health Division  
(253) 377-4390  
[jolsen@tpchd.org](mailto:jolsen@tpchd.org)