NCTCOG

Air Quality Health Task Force – July 2024

CHRIS KLAUS & JENNY NARVAEZ | AIR QUALITY HEALTH TASK FORCE | 7.25.2024

We are looking for Health Data!

Asthma occurrence/outpatient visits and/or COPD hospital discharge data by county/city or smaller geographic scale.

Known Data Sources

Texas Department of State Health Services (DSHS) Asthma Hospitalization and Outpatient Data – *Annual Data by County*
Asthma | Texas DSHS

Cooks Children's Hospital Data – *Hospital Discharges for Cooks Children's Hospitals* Cook Children's Health Care System (cookchildrens.org)

DFW Hospital Council Foundation Data – *Community Health Data: Adults with Asthma, COPD by County, City Zip Code, Census Tract*
Healthy North Texas :: Home (healthyntexas.org)

Smart Growth for Dallas Tool – *Annual Data for City of Dallas*
Smart Growth for Dallas : Planning and GIS (tplgis.org)

Texas Inpatient Public Use Data File (PUDF) – *Texas Health Care Information Collection Center for Health Statistics* Public Use Data File (PUDF) Inpatient Free Download | Texas DSHS

Dallas County Community Health Needs Assessment – *Annual Data for Dallas County by Zip Code (2016, 2019, 2022)* Community Health Needs Assessment | Parkland Health

Goal: One-Stop-Shop Monitoring Network

MONITORING

Facilitate and create a more localized monitoring network, bundle access to the currently available monitoring stations and resources at one website, increase monitoring

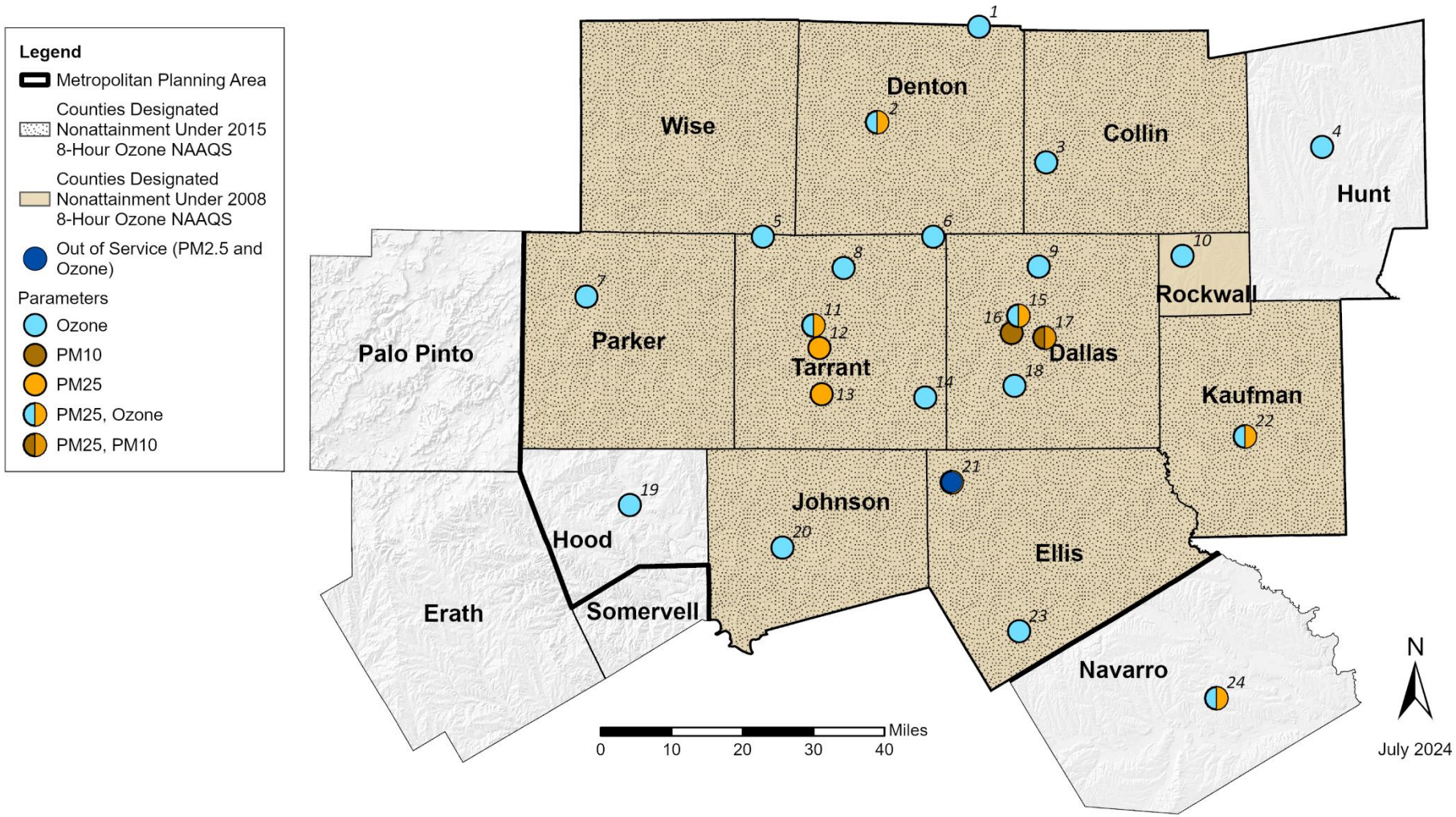
HEALTH DATA

Collect and provide access to impersonalized health data with correlate to AQ data, facilitate the understanding of AQ impact on public health

COLLABORATION

Bring all interested parties together for information exchange, create an accessible public information platform, identify sources and mechanisms of AQ impacts

Regulatory Monitoring Network



1. Pilot Point
2. Denton Airport South
3. Frisco
4. Greenville
5. Eagle Mountain Lake
6. Grapevine Fairway
7. Parker County
8. Keller
9. Dallas North
10. Rockwall Heath
11. Ft. Worth NW
12. Haws Athletic Center
13. California Pkwy
14. Arlington Municipal Airport
15. Dallas Hinton Street
16. Earhart
17. Convention Center
18. Dallas Executive Airport
19. Granbury
20. Cleburne Airport
21. Midlothian
22. Kaufman
23. Italy
24. Corsicana Airport

Vision Zero for Human Health

Umbrella Policy - Actions

- Identify Funding Sources
- Develop Partnerships: local governments and industry leaders
- Implementation and Deployment
- Public Engagement and Communication
- Evaluation and Reporting

Cornerstones

- Monitoring
- Data: Hospital and Urgent Care Admissions
- Combination with other Health Data (Asthma etc.)
- Vulnerable Population Assessment
- Hot Spot Analysis
- Low-Income and Disadvantaged Communities

FOR MORE INFORMATION

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https://www.nctcog.org/trans/quality/air

Changes to the $PM_{2.5}$ Standard and Reclassification of Three Texas Ozone Nonattainment Areas

Air Quality Health Monitoring Task Force

July 25, 2024

Changes to the National Ambient Air Quality Standard (NAAQS) for Fine Particulate Matter (PM2.5)

- On February 7, 2024, EPA strengthened the level of the primary (health-based) annual standard for PM2.5 to 9.0 micrograms per cubic meter (µg/m3).
- EPA also revised the Air Quality Index (AQI) to improve public communications about the risks from PM2.5 exposures.
- EPA also revised the monitoring network to enhance protection of air quality in communities overburdened by air pollution.

Changes to the Monitoring Network
PM2.5 NAAQS

- EPA modified the PM2.5 monitoring network design criteria to include an environmental justice factor.
  - This will account for proximity of populations at increased risk of PM2.5-related health effects to air pollution sources of concern.
- For areas with additional required State or Local Air Monitoring Stations, a monitoring station is to be sited in an at-risk community where there are anticipated effects from sources in the area (e.g., rail yard, airport).
- The network design change does not add a requirement for new monitors, rather it utilizes existing sites and ensures at risk communities are considered if existing sites need to move.

Designations for the Revised Primary Annual PM2.5 NAAQS

- Whenever EPA revises a NAAQS, the Clean Air Act (CAA) requires that designations be made within 2 years of promulgation.
  - Identifies areas that meet or do not meet the revised PM2.5 NAAQS, along with areas that contribute to violations of the revised NAAQS.
- Recommendations from the States and Tribes expected early February 2025.
- EPA performs a 5-factor analysis for each area with a violating monitor
  - Air Quality
  - Emissions/emissions related data
  - Meteorology
  - Geography/topography
  - Jurisdictional boundaries

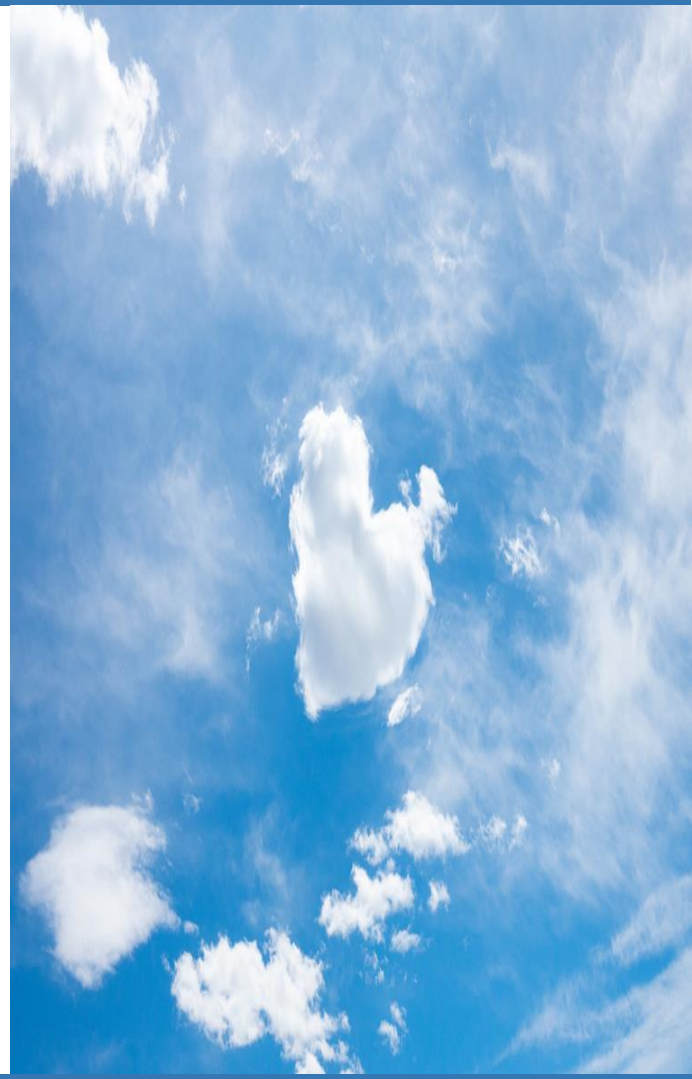
Designations for the Revised Primary Annual PM2.5 NAAQS (continued)

- Results of the 5-factor analysis form EPA's intended designations for each State.
- Federal Register announcement of EPA's intended designations, which starts 30-day public comment period.
  - Anticipated by early October 2025.
  - Electronic docket (www.regulations.gov)
  - States have 60 days to provide additional information to support their recommendations.
- After considering comments and all information, including the most current, complete, quality-assured data, EPA expects to finalize designations by February 7, 2026.
  - EPA anticipates final designations based on 2022-2024 monitoring data.

Reclassification from Moderate to Serious for the 2015 Ozone Standard

Reclassification - Background

- On October 12, 2023, Governor Abbott requested that EPA reclassify the Dallas-Fort Worth (DFW), Houston-Galveston-Brazoria (HGB), and San Antonio areas from Moderate to Serious for the 2015 ozone standard.
- On January 26, 2024, our proposal to grant Governor Abbott's request was published in the Federal Register.
  - The public comment period ran from January 26 – February 26, 2024.
- We received comments from eight entities: CPS Energy, Earthjustice, Harris County Attorney, Texas Chemistry Council, TCEQ, Texas Oil & Gas Assoc, Texas Pipeline Assoc, and a member of the public.

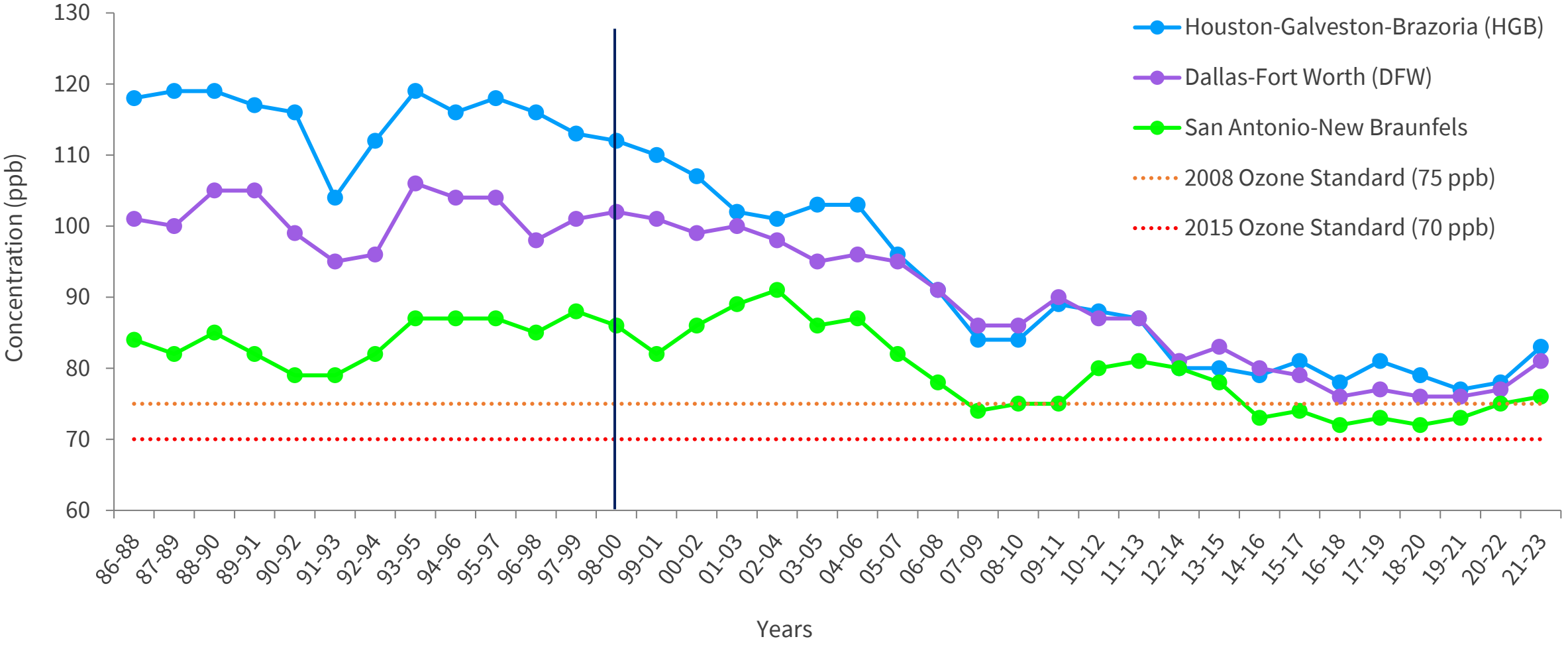


Reclassification from Moderate to Serious

- A Serious classification is one step higher than Moderate.
- Reclassification as Serious
  - Serious areas have 3 more years to attain the 2015 ozone NAAQS and must implement additional CAA requirements (in addition to the requirements for the Marginal and Moderate classifications):
  - Attainment demonstration, RACM, and contingency measures.
  - Reasonable further progress and contingency measures.
  - Milestone compliance demonstration
  - Major source threshold decreased to 50 tpy
  - NSR Offsets increase to 1.2 to 1
  - RACT for major sources of NOx and VOC
  - Enhanced I/M, enhanced monitoring plan
  - Clean fuels program, if applicable.
  - VMT offset demonstration

2015 Ozone Standard Attainment Dates
Serious Classification
DFW & HGB Areas August 3, 2027
San Antonio Area September 24, 2027

8-Hour Ozone Design Values in Texas

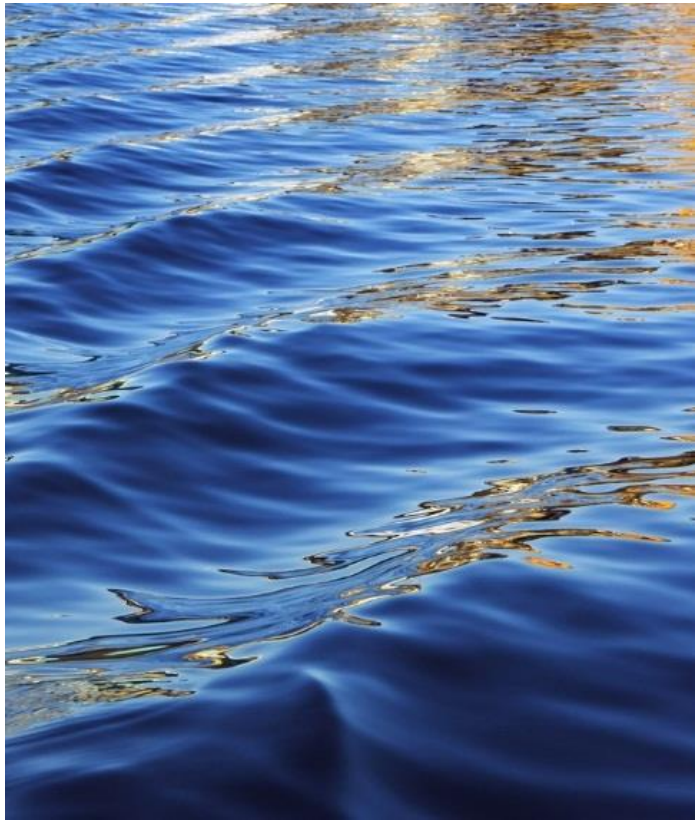


Questions?

paige.carrie@epa.gov

epa.gov/NAAQS
www.regulations.gov

www.epa.gov/clean-air-act-overview/clean-air-act-text



Texas A&M Transportation Institute

Using Non-Regulatory Monitors in Air Quality Projects

NCTCOG AIR QUALITY AND HEALTH TASK FORCE

JULY 25TH, 2024

TTI's Presence

EXTENDS TO ALL 254 COUNTIES IN TEXAS

11

LOCATIONS

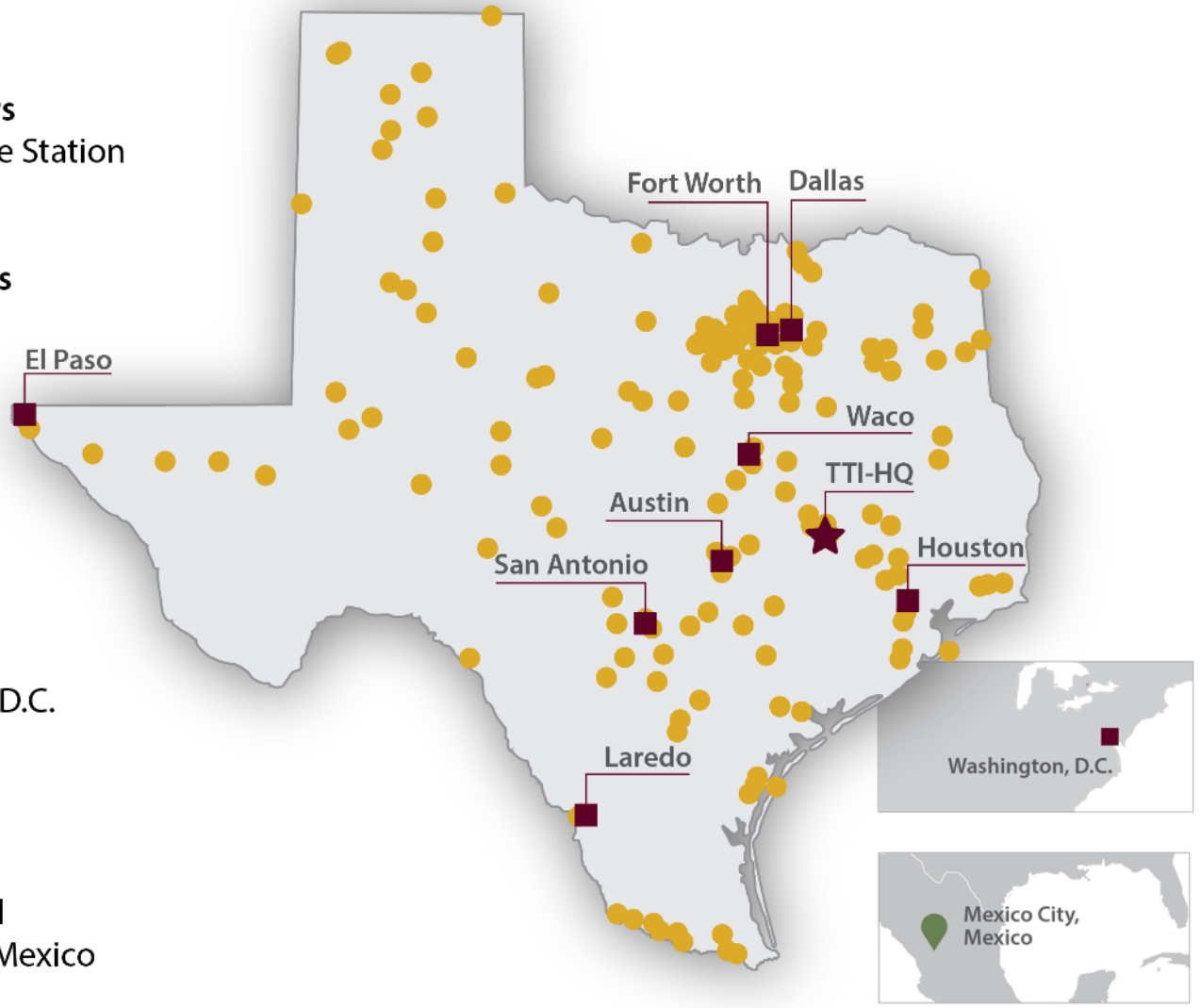
Headquarters
Bryan/College Station

Urban Offices
Austin
Dallas
El Paso
Fort Worth
Houston
Laredo
San Antonio
Waco

Washington, D.C.

TTI Presence

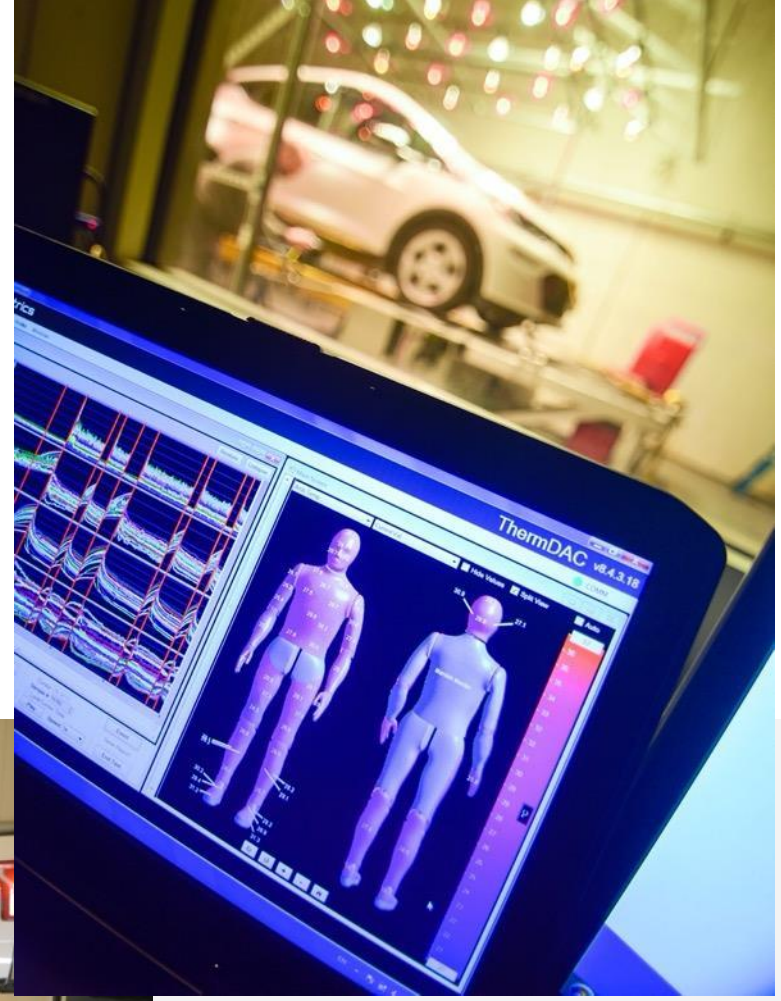
International
Mexico City, Mexico

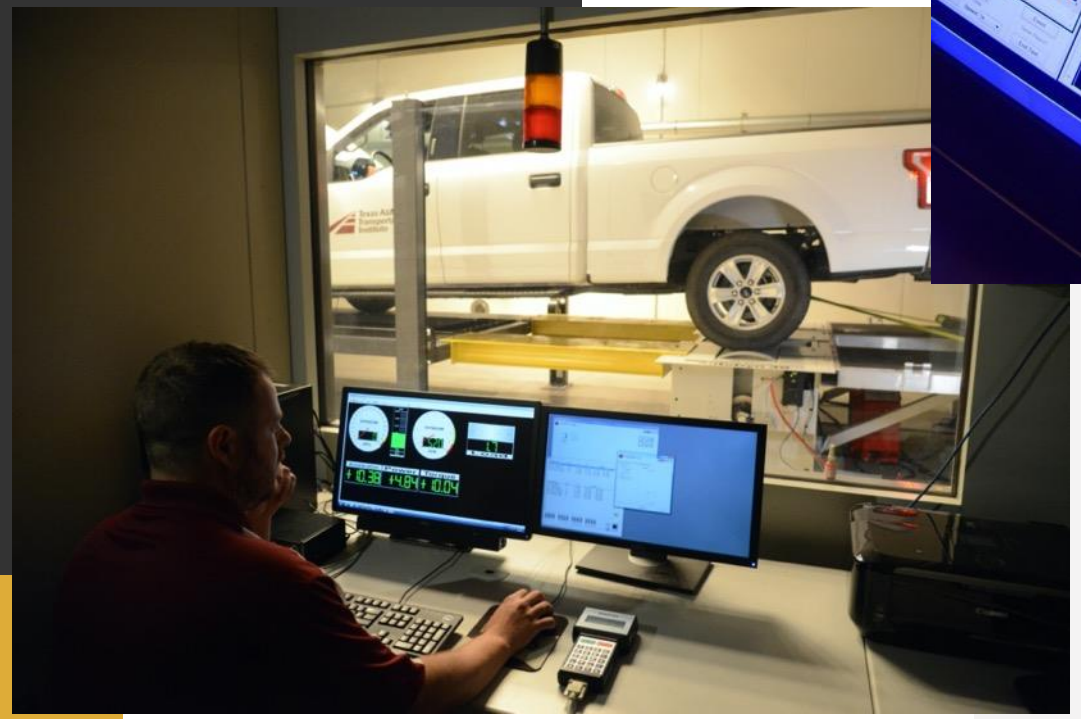


Our Research Areas

Clean Transportation

RESEARCH COMPLEX





PARTNERSHIP

Texas A&M Transportation Institute

TEES | Texas A&M Engineering Experiment Station

Using Non-Regulatory Air Quality Monitors

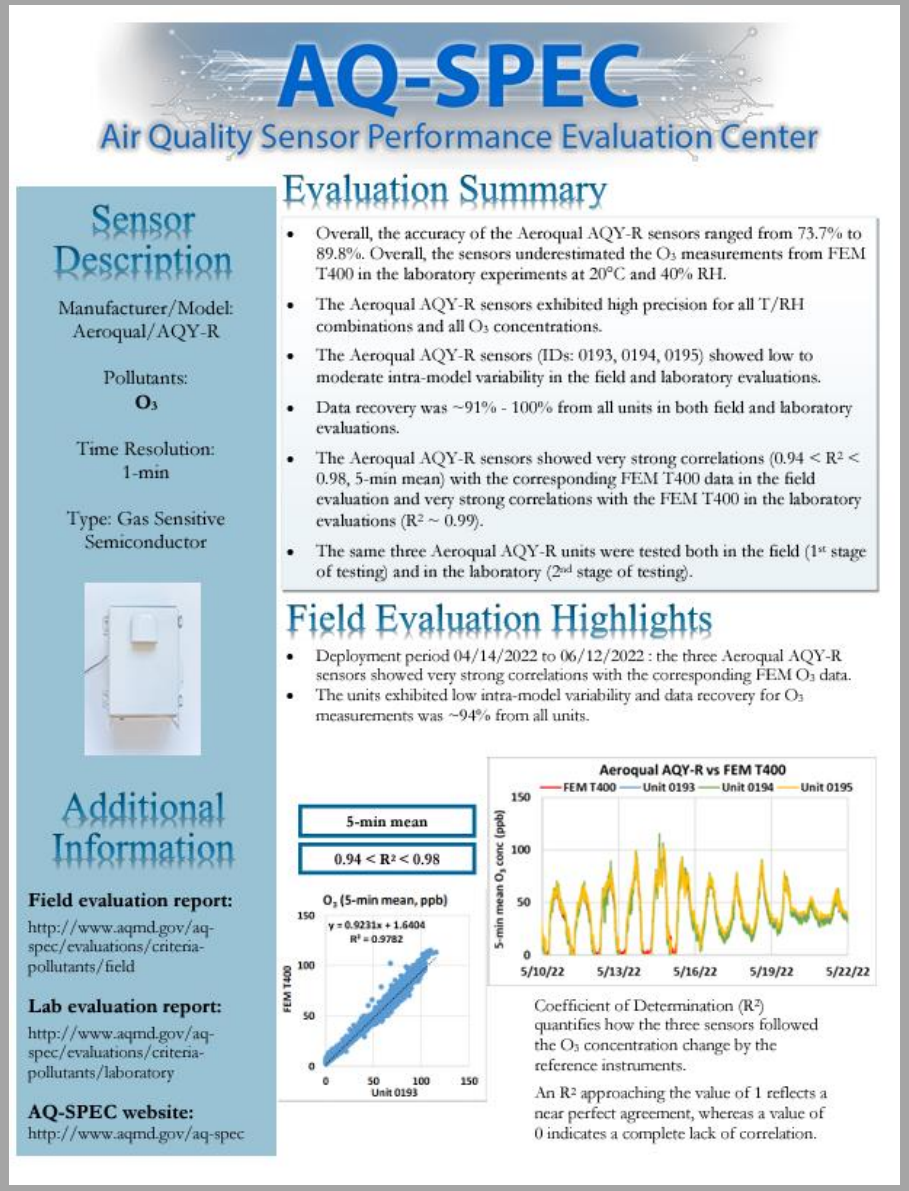
- EPA Regulates monitors to be added to the approved regulatory device list
- Regulatory monitors are generally more expensive and require more maintenance than non-regulatory monitors
- Non-Regulatory monitors allow for users to quickly install and collect air quality data, but must ensure that proper protocols are used to get the most out of the collected data

Performance of Non-Regulatory Monitors

- Within the non-regulatory monitor category there are different levels of monitors available
  - Very low-cost citizen type monitors
    - Very Low Cost (< $500)
    - Lower performance
    - Fewer features than other non-regulatory monitors
  - Research Level Monitors
    - Higher cost than the citizen monitors, but lower than regulatory costs (< $10,000)
    - More features
      - Cloud Computing services
      - Dashboards for users to login and see data
      - Remote access (Wi-Fi or cellular) access to data

Performance of Non-Regulatory Monitors (2)

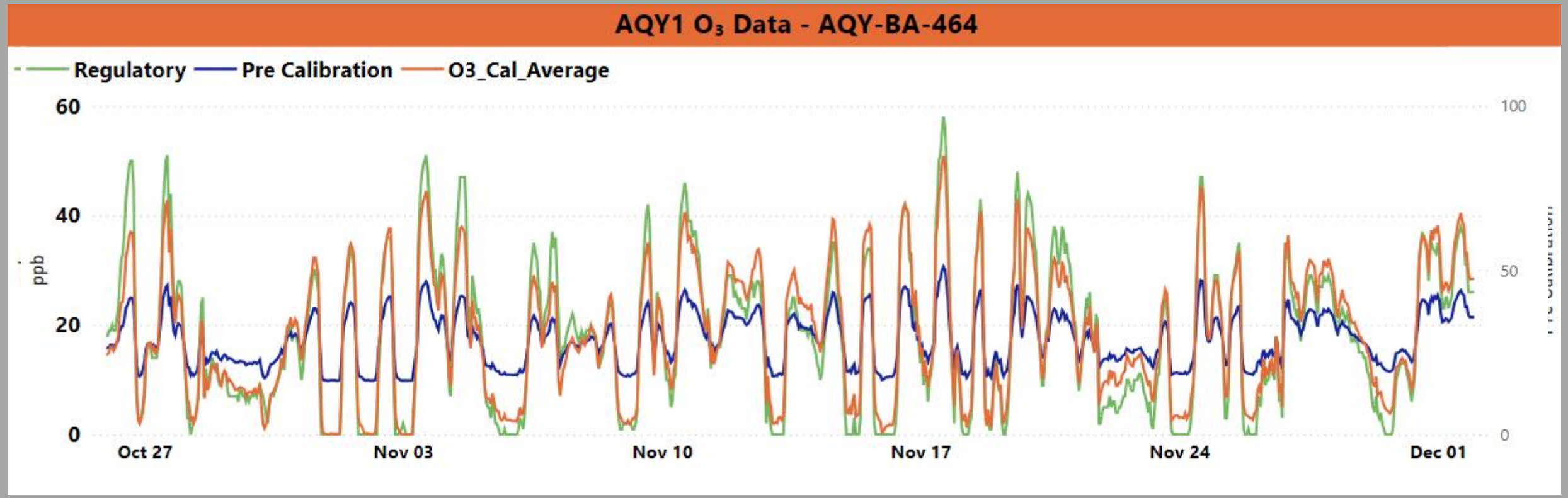
- Not all non-regulatory monitors perform the same.
  - Different pollutants are measured, and their performance is different
  - It is important that users understand the expected performance when selecting a monitor for a study
  - South Coast Air Quality Monitoring District (https://www.aqmd.gov/aq-spec/sensors) has evaluates the performance of different types of monitors. Great resource when selecting a monitor for a project.



Calibrating Non-Regulatory Monitors

- Some non-regulatory monitors come pre-calibrated from the manufacturer
- Some offer calibration tools to help better calibrate their units
- TTI uses the co-location method of calibration for all units prior to field installation.

Air Calibrating Non-Regulatory Monitors (2)



Projects

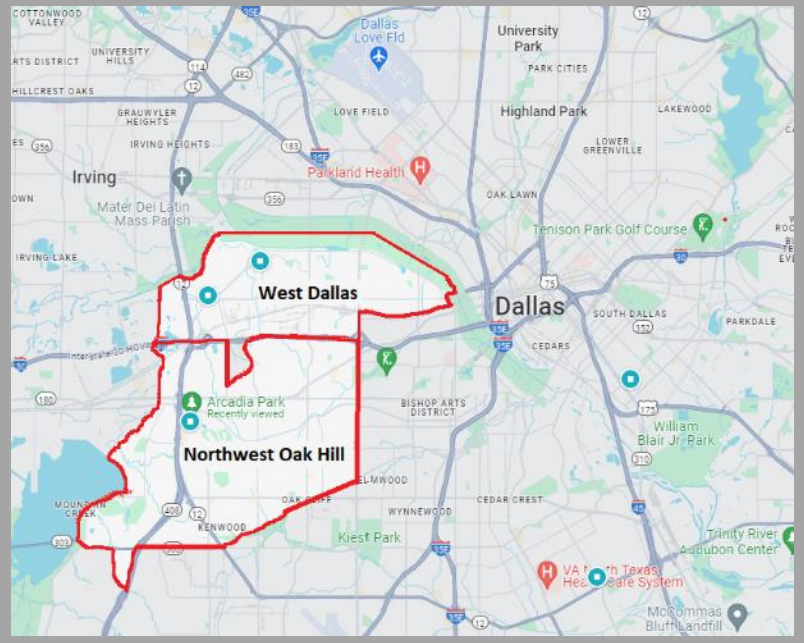
26

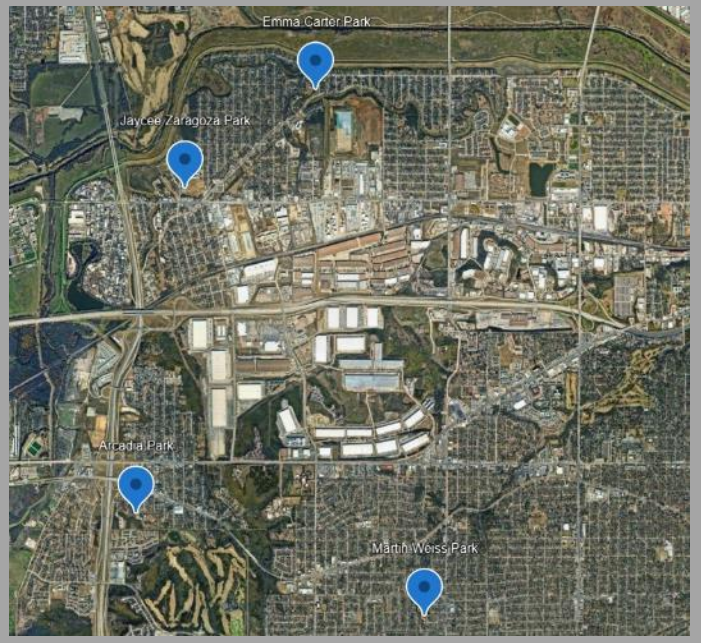
Breathe Easy Dallas

- 12 Aeroqual AQY-1 Monitors installed for long term evaluation of sensors
- 9 Installed on School Zone Flasher poles for 1 year

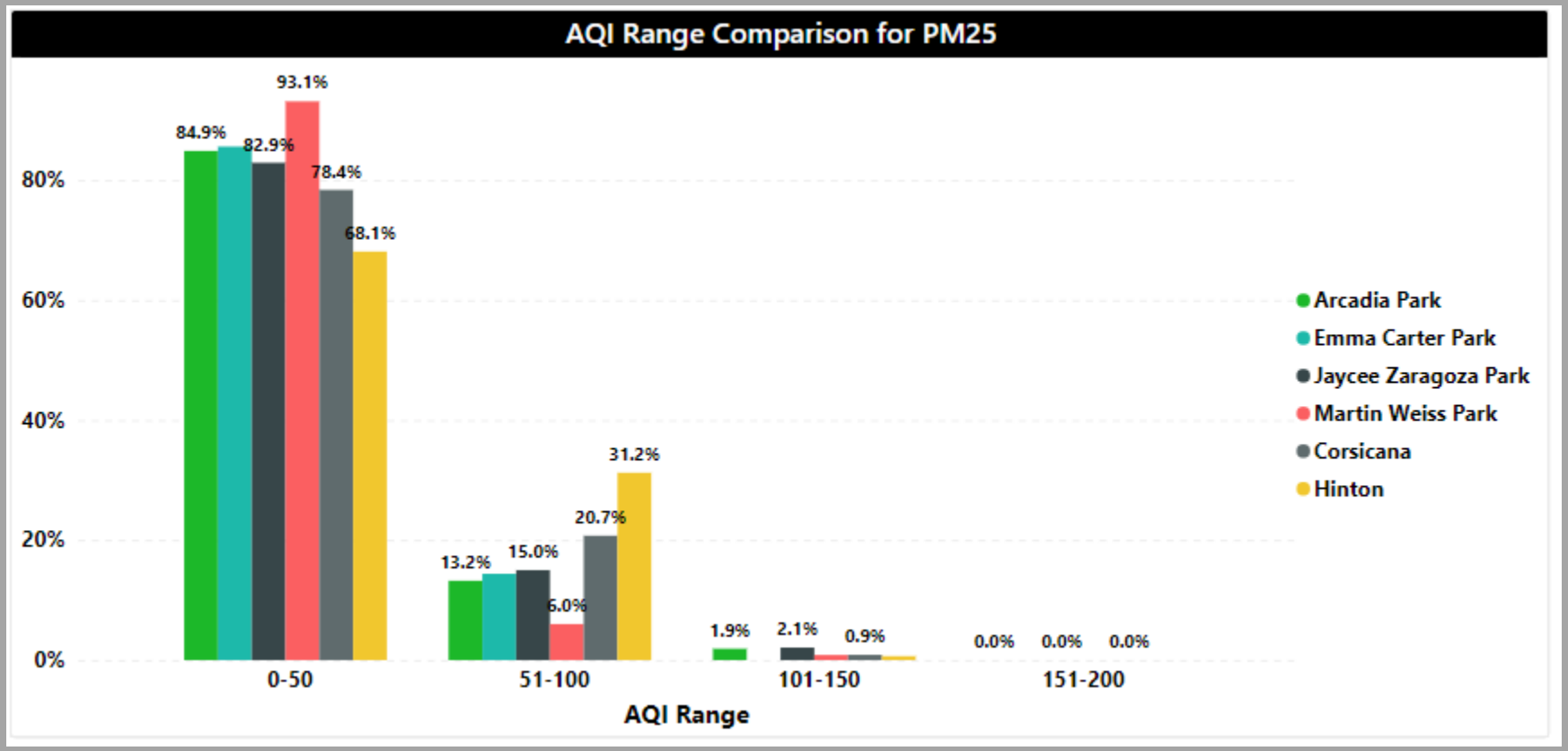
City of Dallas - Using Non-Regulatory Monitors in High-Risk Areas

- 4 Aeroqual AQY-R Monitors installed in 2 EJ locations for 1 Year
- Comparing the air quality in high-risk areas to regulatory data





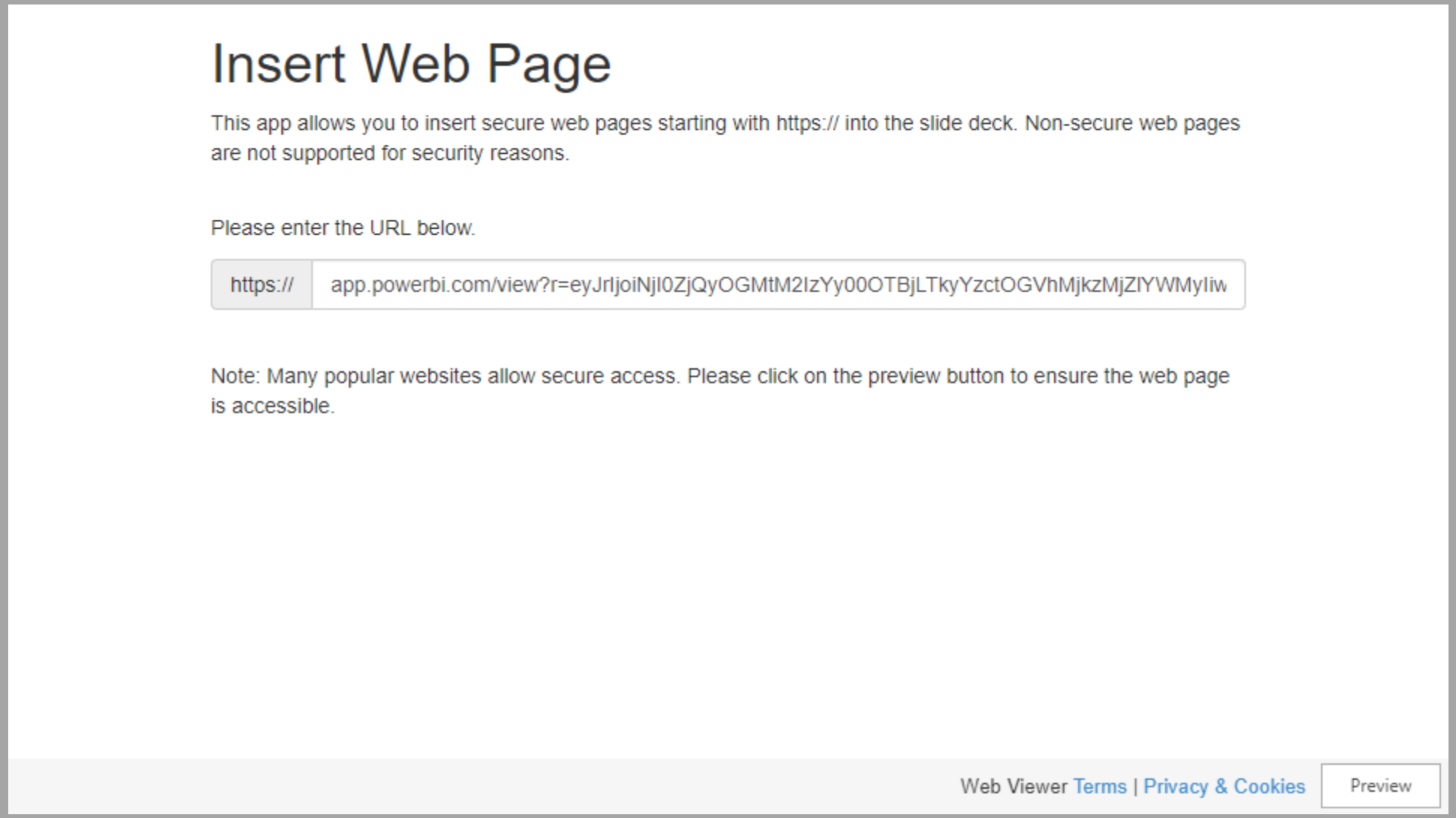
City of Dallas - Using Non-Regulatory Monitors in High-Risk Areas (2)



Design and Implementation of a Binational Air Quality Measurement System

- Sponsored by North American Development Bank
- Installed 4 AQY-R Monitors at the Laredo Border Crossing
- Largest Inland Port on the US/Mexico Border
- Developed a dashboard to make data publicly available with visualizations and analysis

Design and Implementation of a Binational Air Quality Measurement System



https://tinyurl.com/ttibcis

THANK YOU VERY MUCH

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Dallas Community Air Management Program *(D-CAMP)*

City of Dallas

Air Quality Task Force Meeting
NCTCOG
July 25, 2024

Freddie Ortiz, Environmental Coordinator III
Office of Environmental Quality & Sustainability
City of Dallas

Presentation Overview

- Background/History
- Sensor Deployment
- Outreach/Sensor Summits
- Challenges
- Next Steps

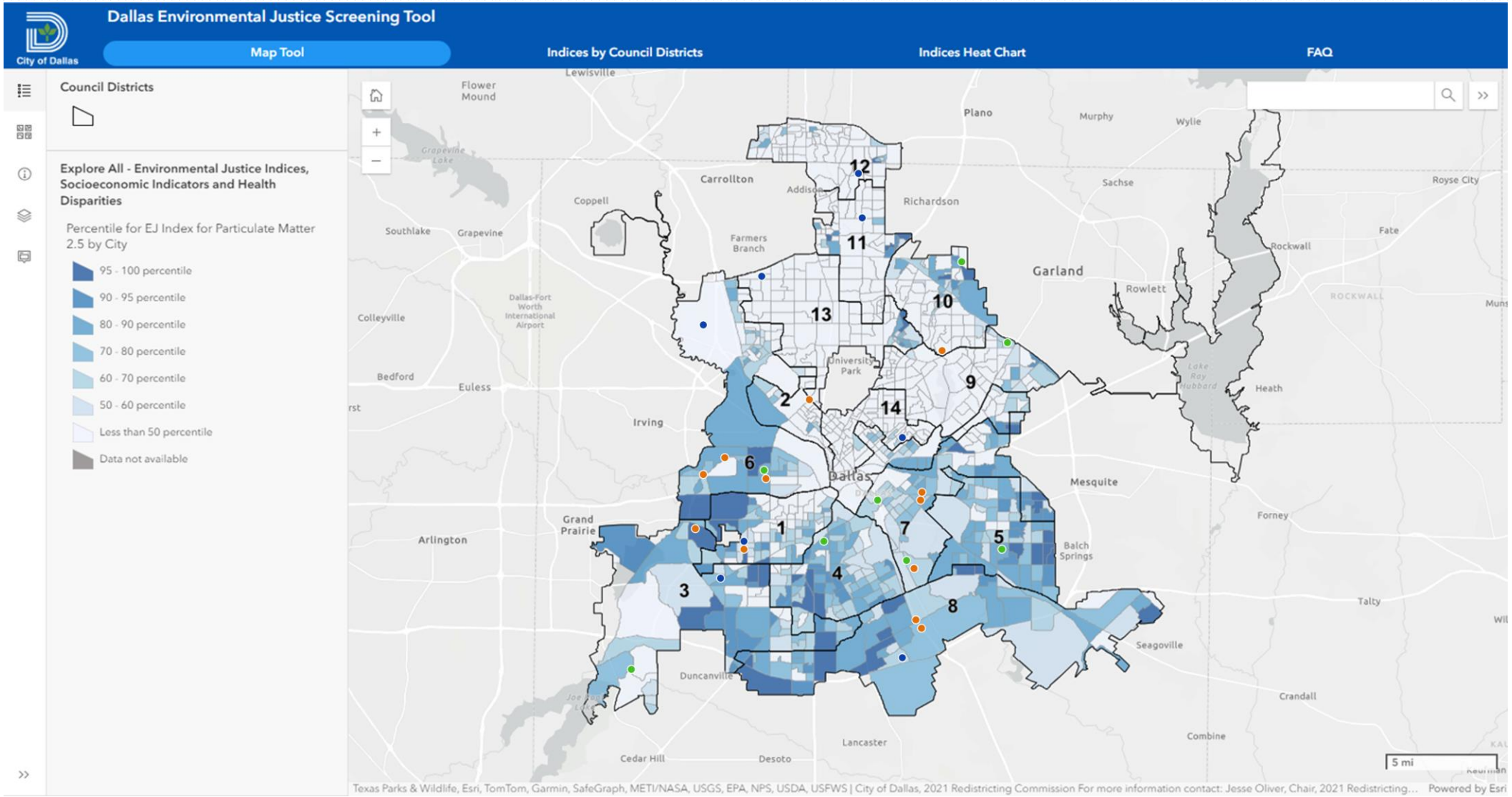
Background/History

- D-CAMP evolved from Breathe Easy, Dallas.
- 9 Sensor Pods installed near DISD elementary schools.
- Purpose
  - To better understand the performance of low-cost sensors.
  - To gather high-quality local data.
  - To contribute to local and regional datasets.
  - To better understand the role that local air quality may play in risk for asthma.

Background/History

- CECAP Goal 8: All Dallas's communities breathe clean air.
  - Action 2: Partner with nonprofits and schools to develop and implement non-regulatory monitors in neighborhoods.
- EJ considered on location selection

Dallas Environmental Justice Mapping Tool



Background/History

- Network has grown from 5 sensors deployed in February 2023 to 24 deployed across Dallas.
- Non-regulatory
  - Co-located with regulatory grade reference monitors
  - Correction factors applied to collected data
- Potential use of data collected
  - Public knowledge, land use planning, zoning cases, air quality investigations, asthma education outreach, environmental studies, urban heat island studies

Sensor Pod Locations

Pods installed February 2023

- West Dallas Multipurpose Center **[District 6]**
- Fish Trap Lake Park (replaced with pod with SO_2 sensor October 2023) **[District 6]**
- Larry Johnson Recreation Center **[District 7]**
- Mill Creek Batch Plant **[District 7]**
- South Central Park in Joppa **[District 7]**

Sensor Pod Locations

Pods installed in October & November 2023

- Mountain Creek Library **[District 3]**
- Park Forest Library **[District 13]**
- Polk Recreation Center **[District 2]**
- Myers Prosperity Park **[District 7]**
- Martin Weiss Park **[District 1]**
- Westhaven Park **[District 3]**

Sensor Pod Locations

Pods installed in October & November 2023

- Flag Pole Hill Park **[District 10]**
- MoneyGram Park **[District 6]**
- Dallas Zoo **[District 4]**
- Floral Farms I
  (Simpson Stewart Road) **[District 8]**
- Floral Farms II
  (9527 S. Central Expressway) **[District 8]**

Sensor Pod Locations

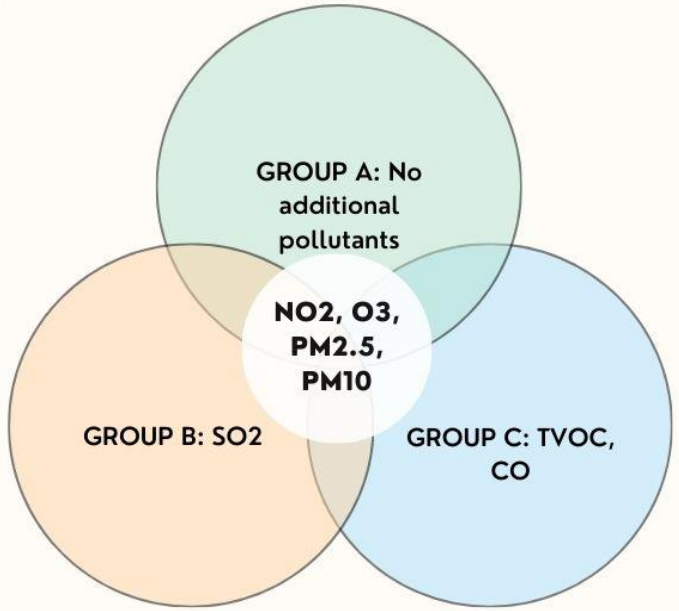
Pods installed in 2024

- Willis Winters Park **[District 14]**
- Tommie Allen Recreation Center **[District 8]**
- Holcomb Park **[District 5]**
- Samuell Garland Park **[District 9]**
- Friendship Park **[District 10]**
- Fritz Recreation Center **[District 11]**
- Campbell Green Park **[District 12]**
- Joppy Momma's Farm **[District 7]**

Air Pollutants Measured

GROUP A
- West Dallas Multipurpose Center
- South Central Park
- Larry Johnson Recreation Center
- Mill Creek Batch Plant
- Floral Farms I
- Floral Farms II
- Polk Recreation Center
- Flag Pole Hill Park

GROUP B
- Fish Trap Lake
- Friendship Park
- Joppy Momma's Farm
- Mountain Creek Library
- Myers Prosperity Park
- Samuell Garland Park
- Dallas Zoo
- Holcomb Park

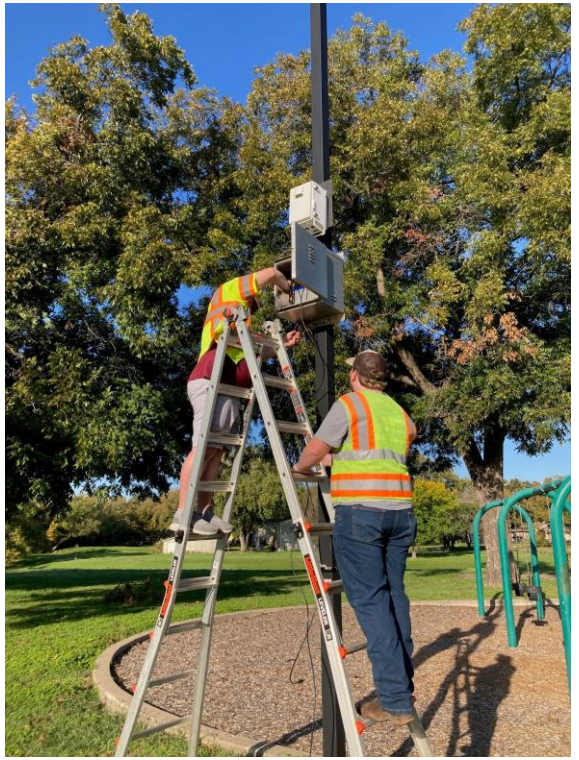


GROUP C
- Campbell Green Park
- Fretz Recreation Center
- Tommie Allen Recreation Center
- Willis Winters Park
- Westhaven Park
- MoneyGram Park
- Martin Weiss Park
- Park Forest Library

EPA State EJ Grant West Dallas

Texas A&M Texas Transportation Institute (TTI) put up 4 sensors in West Dallas zip codes 75211 & 75212

- Emma Carter Park
- Jaycee Zaragoza Recreation Center
- Arcadia Park Recreation Center
- Martin Weiss Park



TTI deployed Aeroqual AQY-R sensors.

- Ozone
- NO_2
- PM_{10}
- $PM_{2.5}$

Displayed with group A on Dashboard

EPA Government to Government Forest District Grant

- Planned 10 Aeroqual Units
- 120 months of monitoring
- OEQS to oversee installation and maintenance by Texas A&M Transportation Institute

Pollutant levels detected of note

- Seasonal trends
  - June-September: High NO2 and O3 values
    - Elevated NO2 values appeared to be an error due to extreme heat (and/or humidity) during summer having an impact on the electro chemical sensor, especially when temperatures were near 100F or above.
    - There were 50 Ozone Exceedance Days for the Season, region-wide
    - Elevated values recorded at:
      - South Central Park
        - July-September 2023, High NO2
        - August-September 2023- High O3
      - West Dallas Multipurpose Center
        - July-August 2023, High NO2
        - August 2023- High O3
      - Fish Trap Lake
        - July-August 2023, High NO2
        - June 2023- High O3
      - Mill Creek Batch Plant
        - July-August 2023, High NO2
      - Larry Johnson Recreation Center
        - July-August 2023, High NO2
- Mill Creek Batch Plant
  - March-April 2023, High NO2

    The spikes in NO2 were analyzed and discussed with DWU. The spikes were likely from parked diesel-powered heavy equipment idling adjacent to the sensors. This equipment idling issue has since been resolved.

Outreach

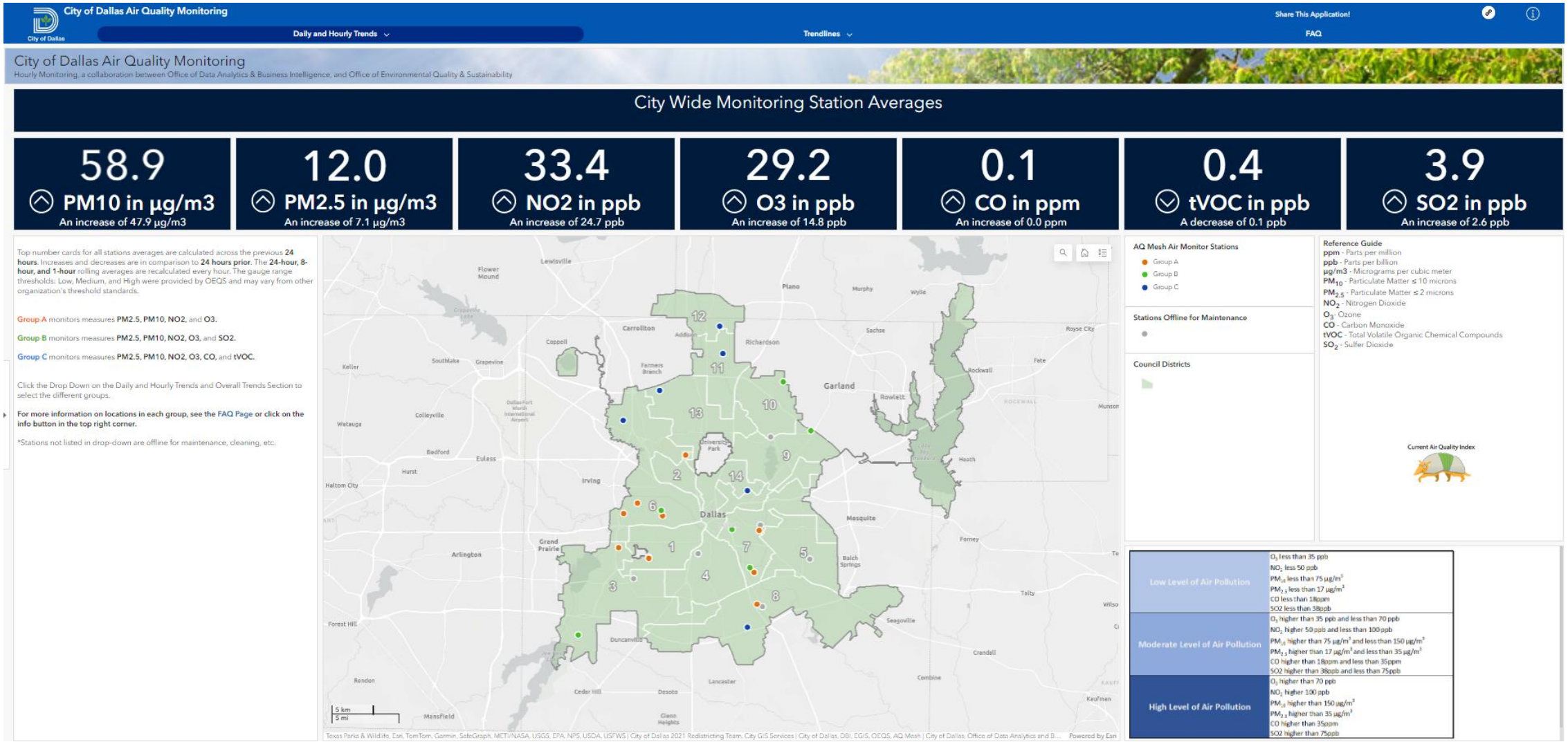
- Dashboard
- Data reports on dallasclimateaction.com
- Community engagement
- Sensor Summit

D-CAMP Dashboard

- Collaboration with Office of Data Analytics & BI
- Version 2
  - Better UX/UI
  - Displays all air pollutants measured
- Access Dashboard via
  - greendallas.net
  - dallasclimateaction.com
  - https://experience.arcgis.com/experience/f5da4054747748d9951d66ddf529158d

Dallas Community Air Management Program Dashboard

D-CAMP Dashboard

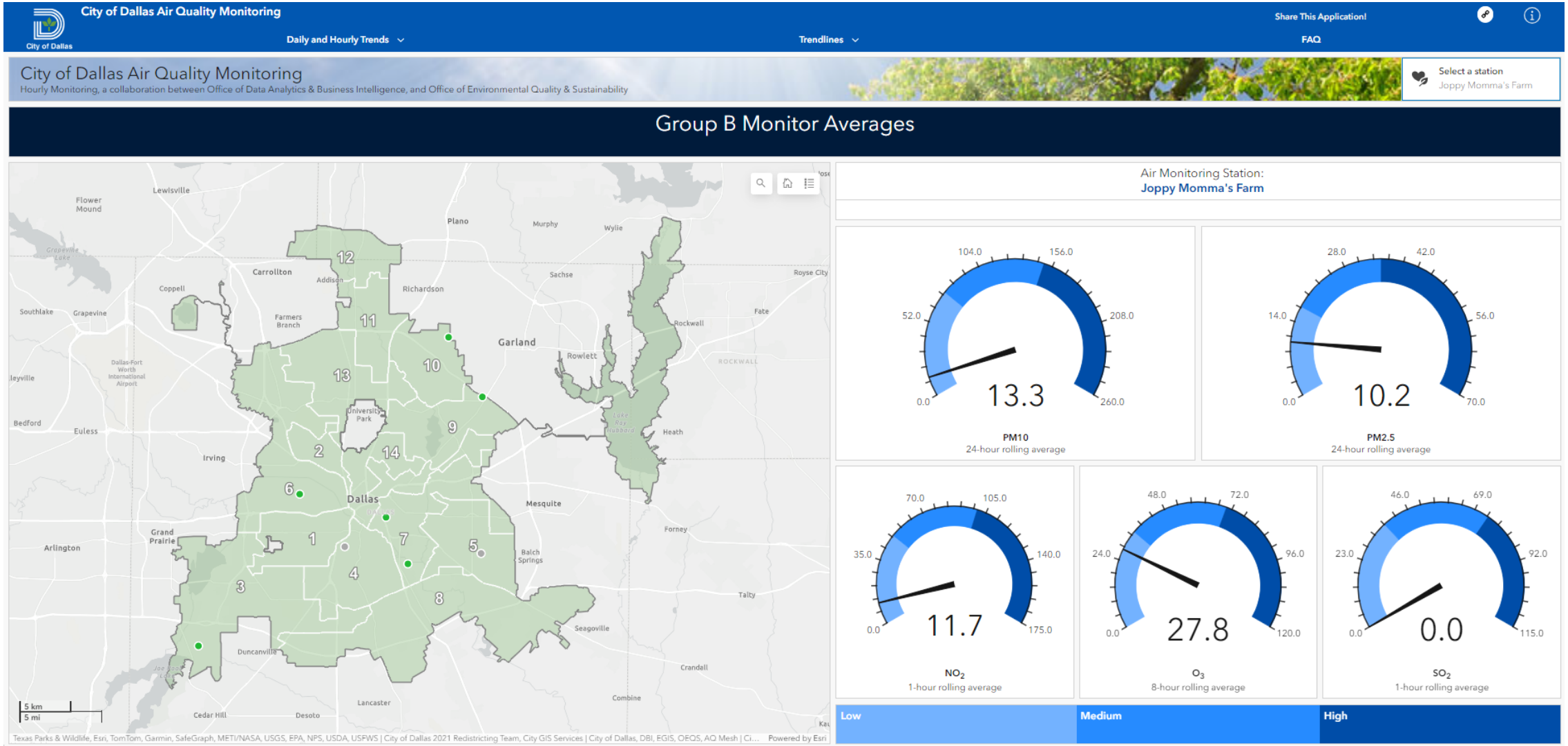


Air Quality Levels on Dashboard

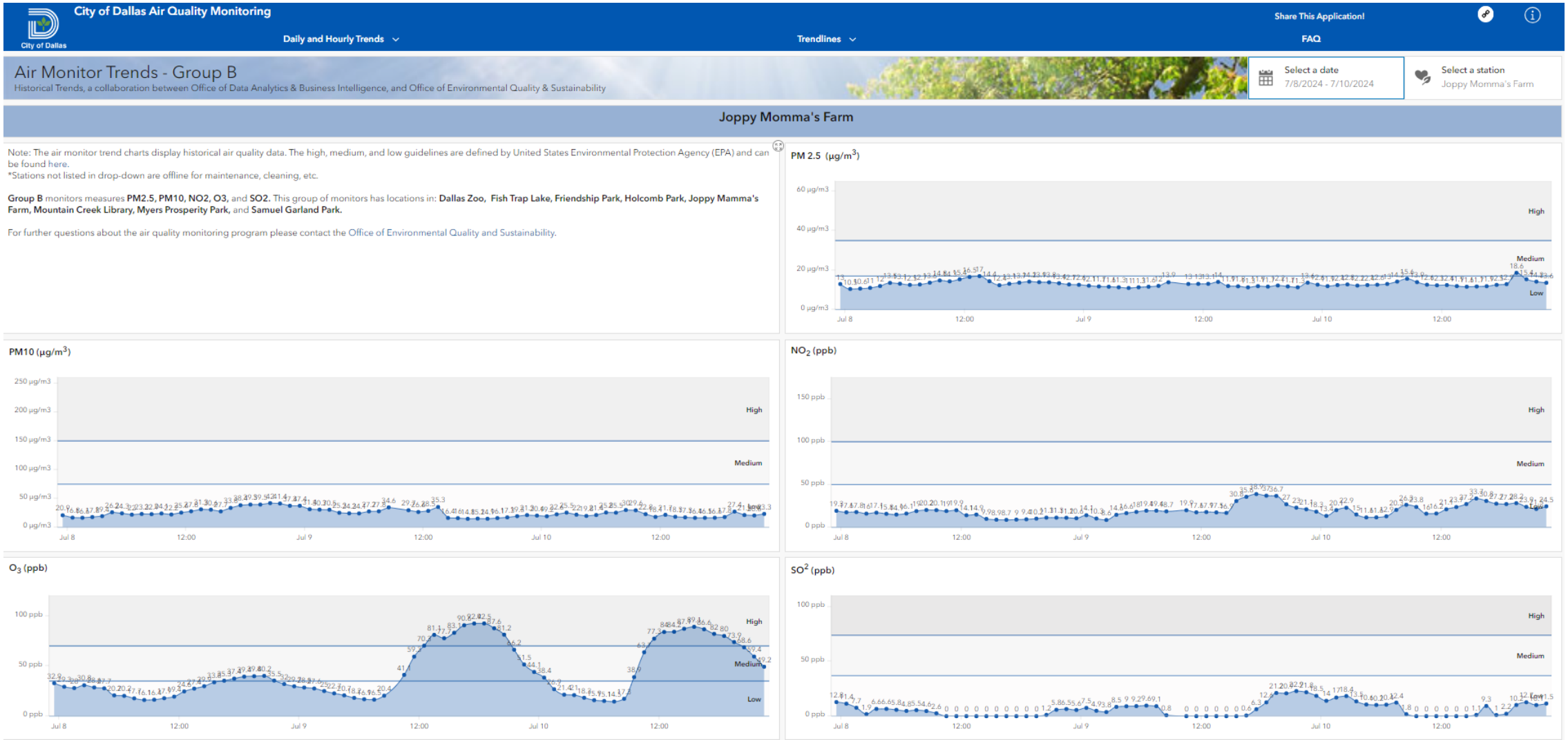
- Air sensors continuously monitor air quality.
- Dark Blue = Pollutant concentration over NAAQS standard
- Lighter shades of Blue = Below NAAQS standard

Low Level of Air Pollution	O_3 less than 35 ppb NO_2 less 50 ppb PM_{10} less than 75 µg/m^3 $PM_{2.5}$ less than 17 µg/m^3 CO less than 18ppm SO2 less than 38ppb
Moderate Level of Air Pollution	O_3 higher than 35 ppb and less than 70 ppb NO_2 higher 50 ppb and less than 100 ppb PM_{10} higher than 75 µg/m^3 and less than 150 µg/m^3 $PM_{2.5}$ higher than 17 µg/m^3 and less than 35 µg/m^3 CO higher than 18ppm and less than 35ppm SO2 higher than 38ppb and less than 75ppb
High Level of Air Pollution	O_3 higher than 70 ppb NO_2 higher 100 ppb PM_{10} higher than 150 µg/m^3 $PM_{2.5}$ higher than 35 µg/m^3 CO higher than 35ppm SO2 higher than 75ppb

D-CAMP Dashboard



D-CAMP Dashboard



Sensor Summit

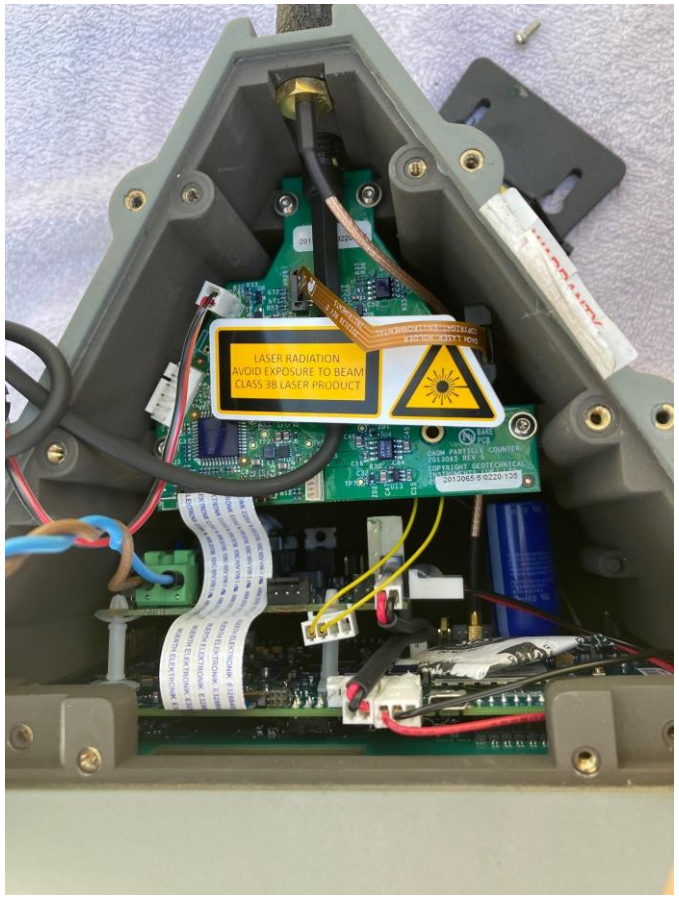
- September 2023, March 2024
- Upcoming meeting: September 19, 2024
  - Tarrant County Community College: Trinity River Campus near downtown Ft. Worth
  - 9am-1pm
  - Topics of interest: community impacts, updates from sensor users, health, education on pollutants

Challenges

- NO_2 skewed high in summer high temp and humidity
- Pod security
- Battery may struggle to power pod through the night
- PM pump failures
- Software glitches
- Recall updates
- Staff capacity
  - General maintenance
  - Data analysis

Next Steps

- Data analysis and publication
  - Dashboard mobile device friendly
- West Dallas Grant data analysis
- Forest District grant ramp up
- Ongoing O&M
  - Buying spare parts
  - Buying extra sensors
  - Rebuilding sensor pods
  - Cellular communication plan renewal
- Outreach/engaging the community



Questions?

Dallas Community Air Management Program *(D-CAMP)*

City of Dallas

Air Quality Task Force Meeting
NCTCOG
July 25, 2024

Freddie Ortiz, Environmental Coordinator III
Office of Environmental Quality & Sustainability
City of Dallas

Dallas-Fort Worth Air Quality Improvement Plan

Juliana VandenBorn|North Central Texas Council of Governments|07.25.2024

Agenda

Who We Are

Air Quality in North Texas

Dallas-Fort Worth Air Quality Improvement Plan (DFW AQIP)

- Greenhouse Gas Emissions
- Development of DFW AQIP
- DFW AQIP-Priority Climate Action Plan Measures

Texas Priority Climate Action Plan Measures

Discussion & Questions

Who We Are

Regional Planning Agency

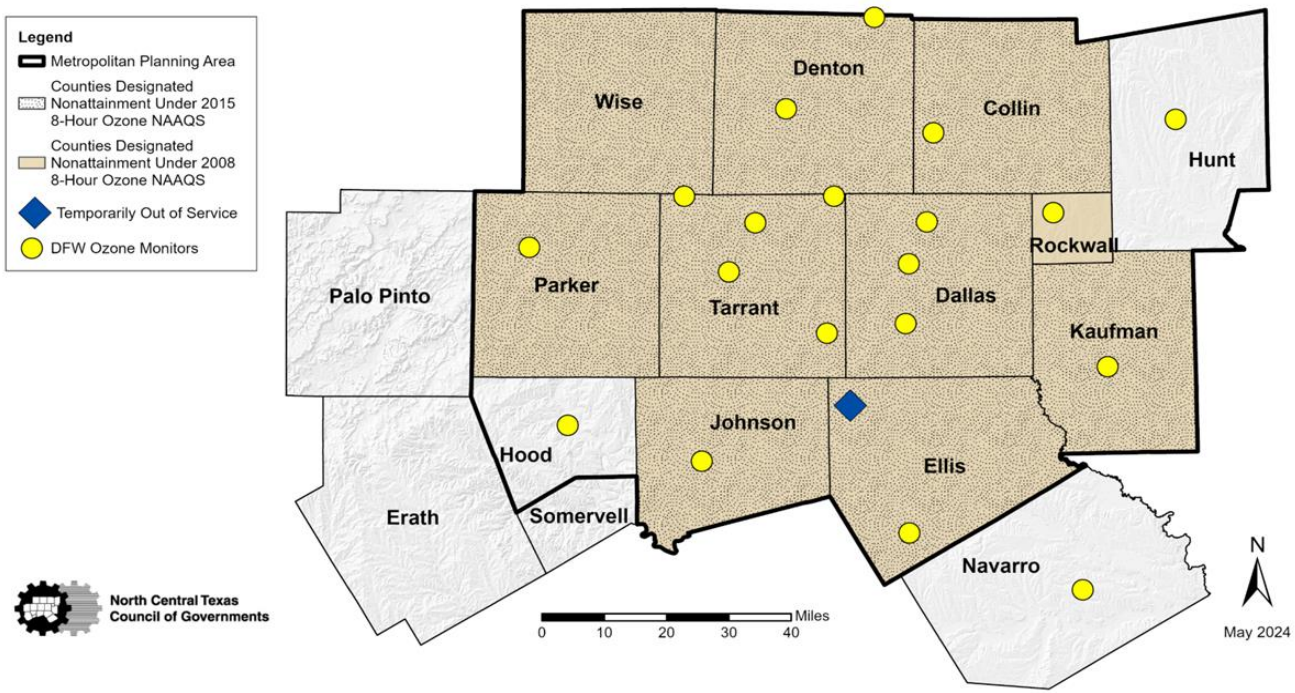
North Central Texas Council of Governments

Metropolitan Planning Organization (MPO)

Regional Transportation Council

Department of Energy-Designated Clean Cities Coalition

Dallas-Fort Worth CLEAN CITIES



Air Pollution

Local Air Pollution

The Clean Air Act requires Environmental Protection Agency (EPA) to set National Ambient Air Quality Standards (NAAQS) for six criteria pollutants which are harmful to human health:

Criteria Pollutant	DFW Attainment Status
Ozone	✗
Lead	✓
Carbon Monoxide	✓
Nitrogen Dioxide	✓
Particulate Matter	?
Sulfur Dioxide	

Partial nonattainment in Navarro County due to aggregate plant

Greenhouse Gases (GHG)

Gases that trap heat in the atmosphere, resulting in the warming on the surface

Carbon Dioxide (CO_2)

Burning fossil fuels, solid waste, trees, and other biological materials, and as a byproduct in certain chemical reactions

Methane (CH_4)

Production and transport of coal, natural gas, and oil, the decay of organic waste and agricultural practices

Nitrous Oxide (N_2O)

Agricultural, land use, industrial activities, treatment of wastewater, combustion of fossil fuels

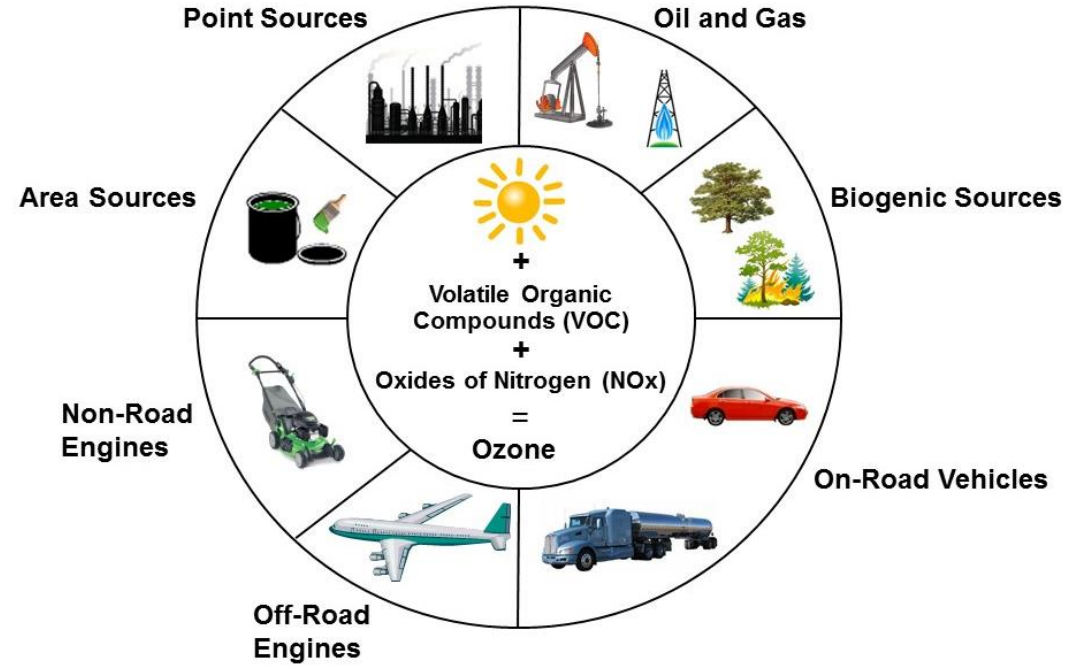
Fluorinated Gases

Synthetic gases emitted from household, commercial, and industrial applications and processes

www.epa.gov/ghgemissions/overview-greenhouse-gases

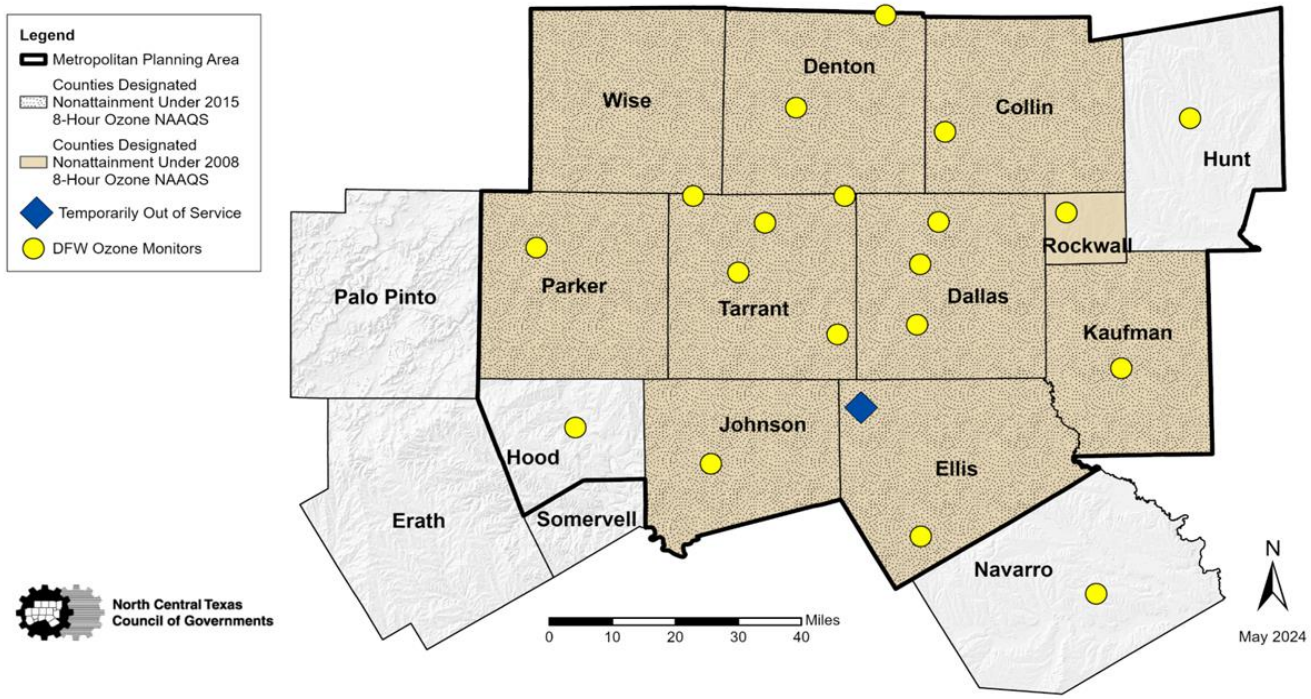
Ground-Level Ozone

How Ozone is Formed:



Optimum conditions for the formation of ozone include high temperatures and low winds.
Sections are not to scale and are for illustrative purposes only.

Ozone Nonattainment Area



Health Impacts of Ground-Level Ozone[1]:

- Coughing and sore throat
- Inflame and damage airways
- Aggravate lung diseases (asthma, bronchitis, etc.)

1: Health Effects of Ozone Pollution | Ground-level Ozone Pollution | US EPA

Particulate Matter

Mixture of solid particles and liquid droplets found in the air that can be inhaled:

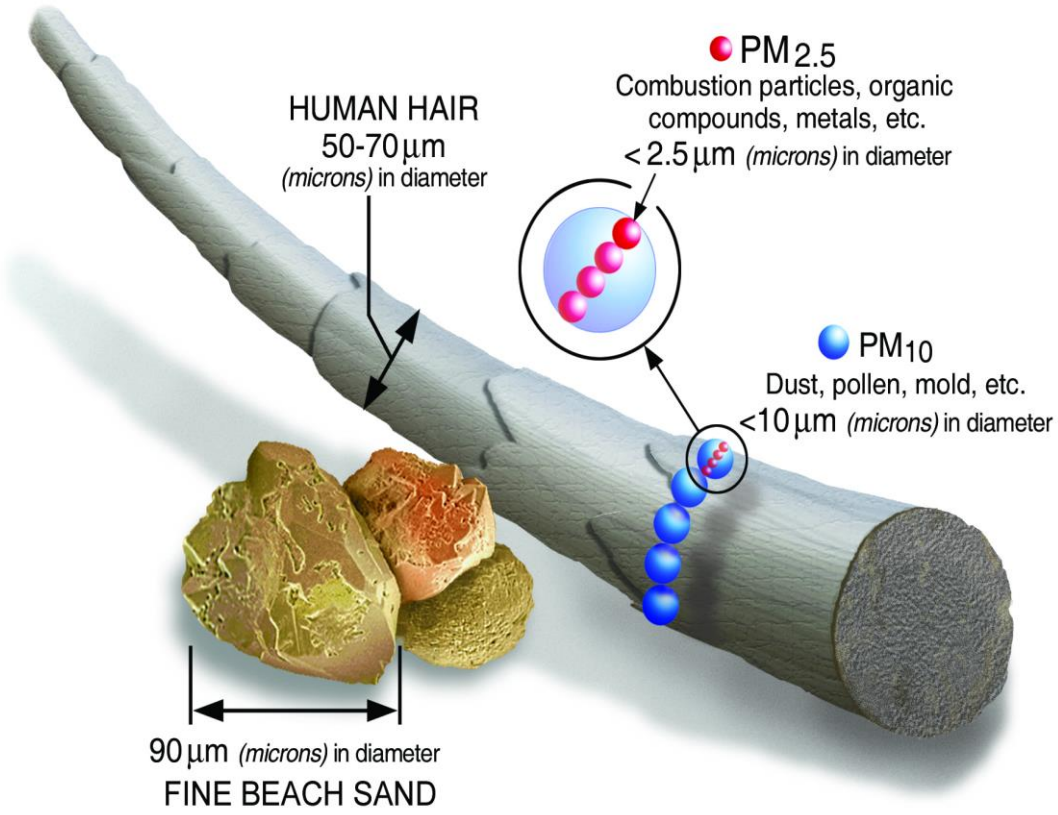
- Soot
- Spores
- Pollen

Particle pollution includes:

- PM_{10}: inhalable particles ≤10 micrometers
- $PM_{2.5}$: fine inhalable particles that are ≤2.5 micrometers

Health Impacts:

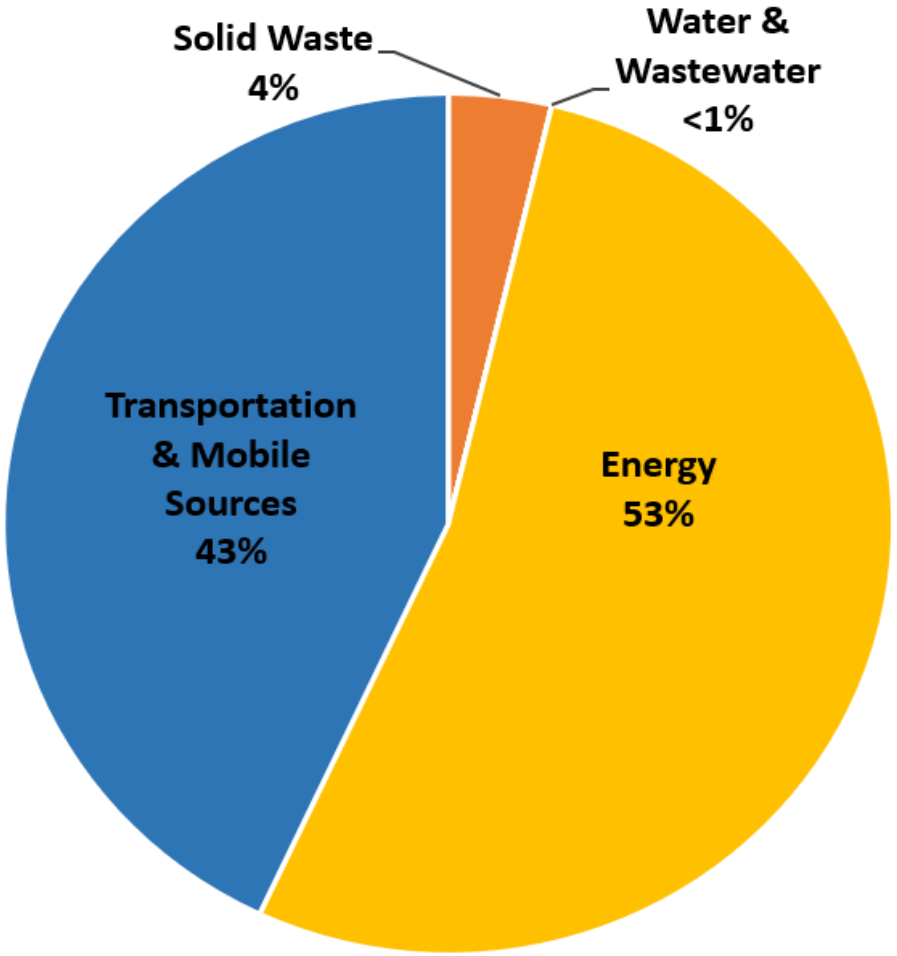
- Premature death in people with heart or lung disease
- Irregular heartbeat
- Decreased lung function
- Respiratory symptoms[1]



1. Source: US EPA Particulate Matter

2019 Greenhouse Gas Emissions Inventory

DFW **16-County MPA** Carbon Dioxide Equivalent (CO_2e) = 103,035,792 Metric Tons



Carbon Dioxide Equivalent CO_2e

=

Greenhouse Gases

(Carbon Dioxide CO_2

Methane CH_4

Nitrous Oxide N_2O)

x

Respective

Global Warming Potentials (GWP)

North Central Texas Council of Governments

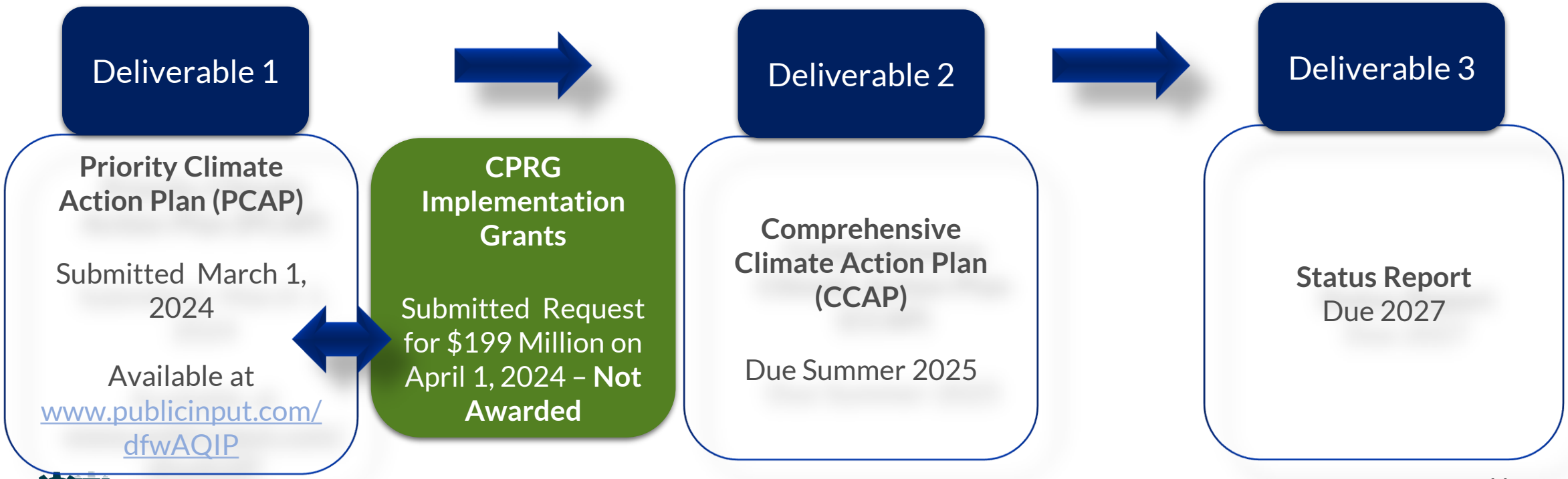
DALLAS-FORT WORTH AIR QUALITY IMPROVEMENT PLAN

Funded through the Environmental Protection Agency's Climate Pollution Reduction Grants

Dallas-Fort Worth Air Quality Improvement Plan

Local governments in the region are collaborating with the North Central Texas Council of Governments (NCTCOG) to develop the **Dallas-Fort Worth (DFW) Air Quality Improvement Plan (AQIP)**

Plan development is supported by funding from the Environmental Protection Agency's (EPA) Climate Pollution Reduction Grants (CPRG): Planning Grants



DFW AQIP-PCAP Development

DFW AQIP: PCAP was developed with the feedback from :

- Members of the public
- Local governments
- Non-profits
- NCTCOG committees
- Other stakeholders

Phase 1: Brainstorm Measures

August to October 2023

- 3 meetings to discuss potential measures with the region
- Drafting of surveys

Phase 2: Refine Measures

October 2023 to January 2024

- 9 meetings with community members
- Surveys open
- 4 meetings with collaborating agencies

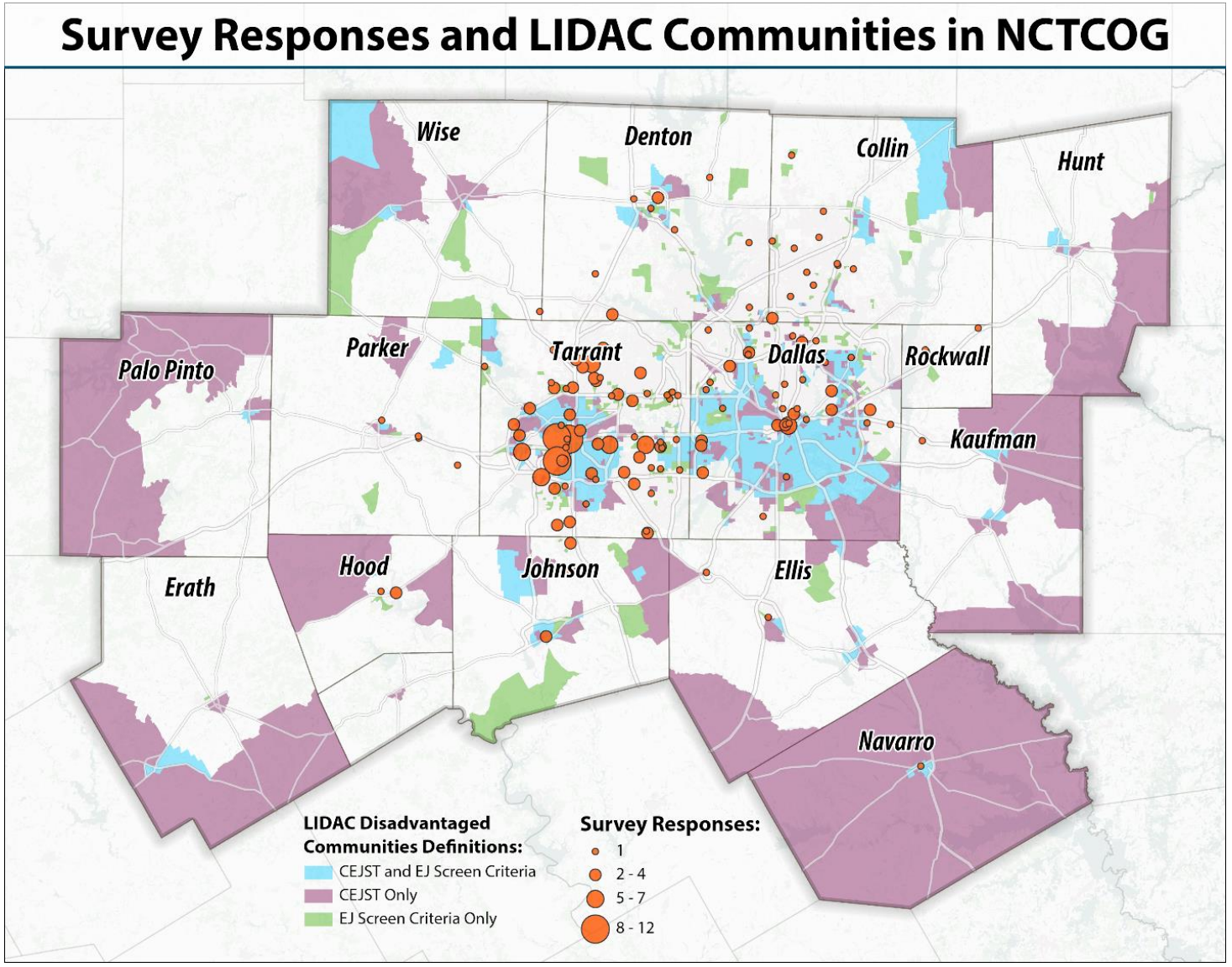
Phase 3: Finalize

January 2024 to February 2024

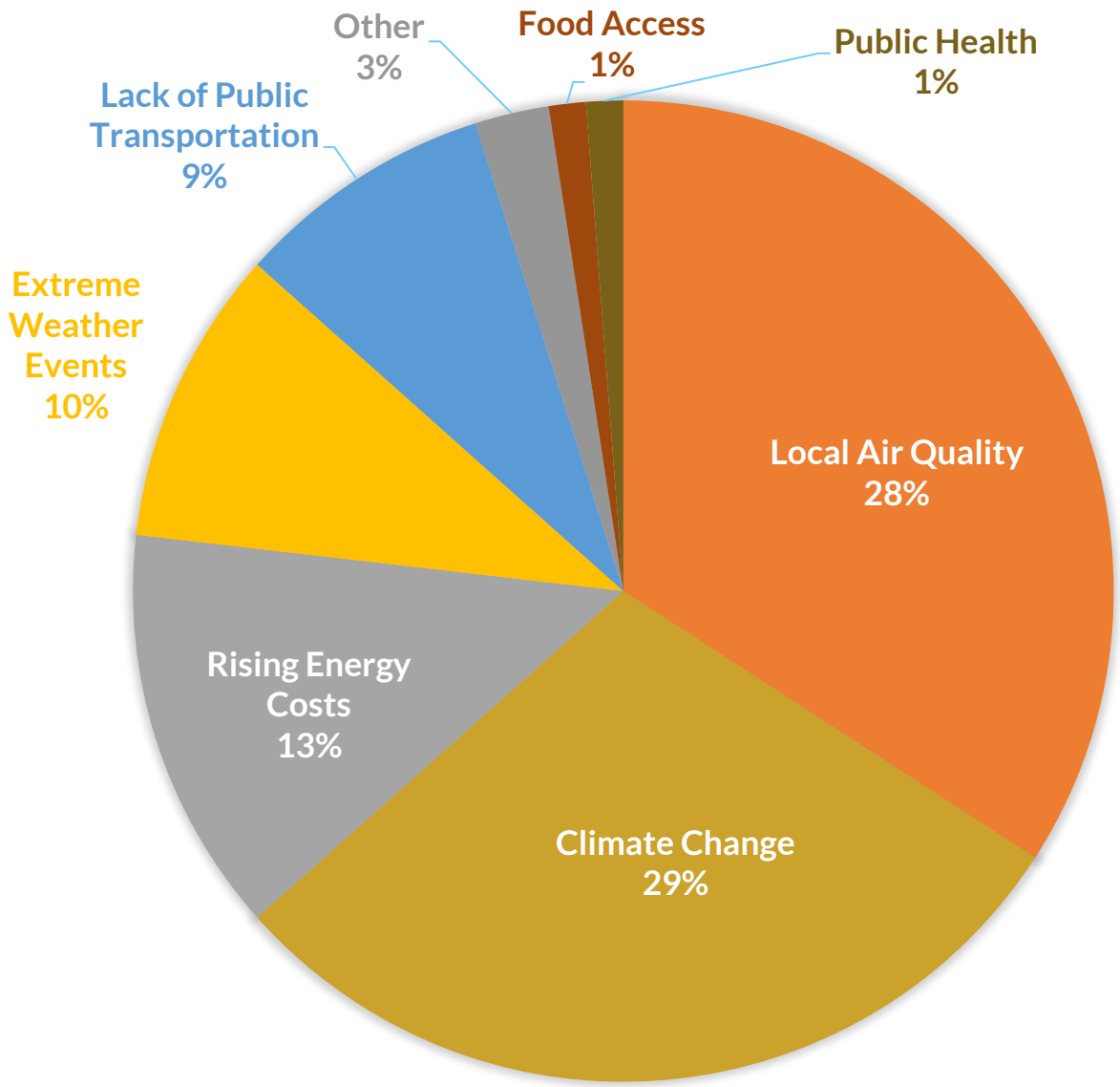
- Incorporate feedback
- Post draft plan
- Submit to EPA

Public Survey: Key Takeaways

- ~280 responses
- 45% of respondents in our region represent a low-income or disadvantaged community
- ~20 responses were outside of our region
- 12 counties represented
- ~400 comments in open text fields



Public & Stakeholder Survey Reponses

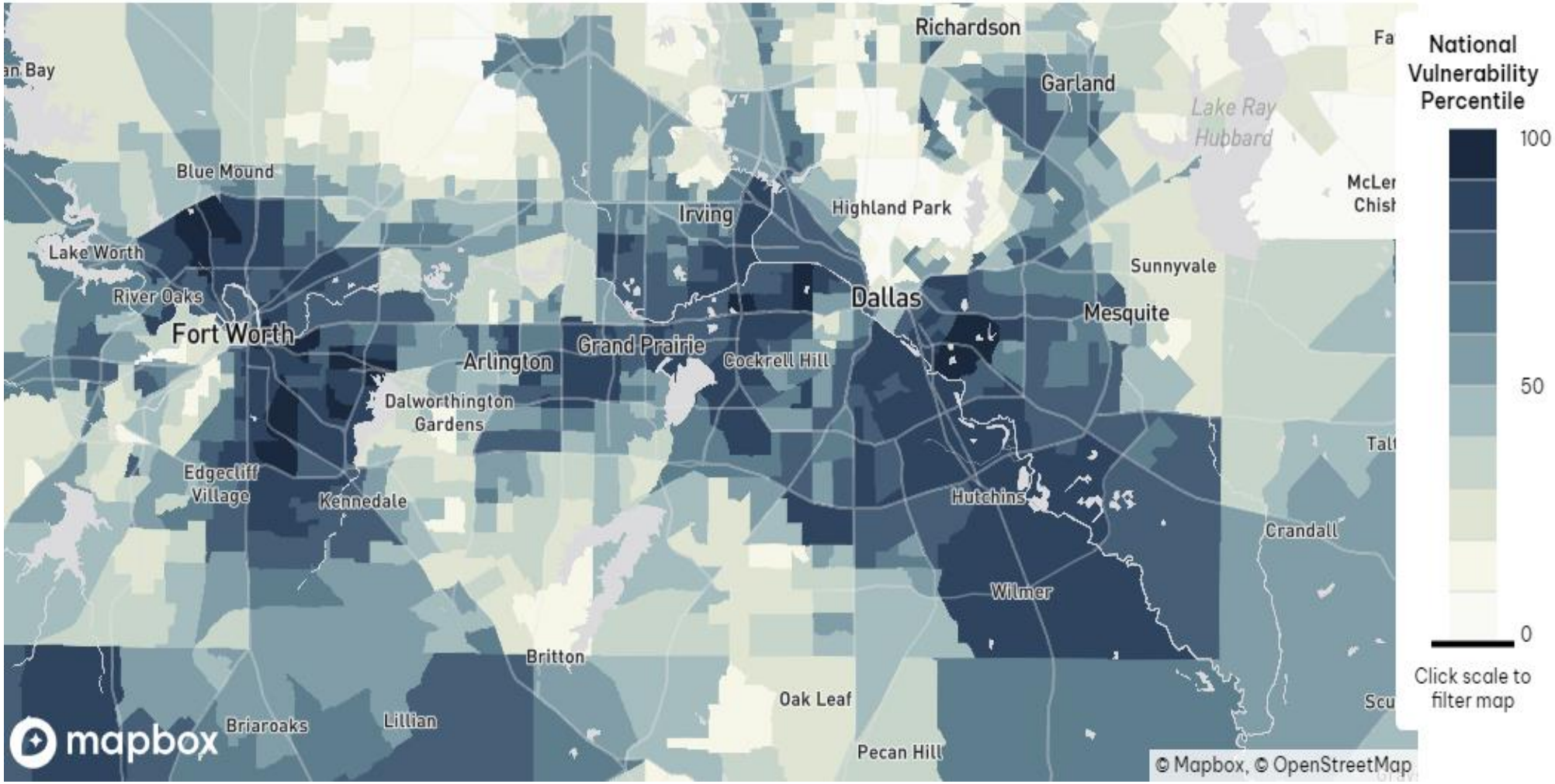


Number of Responses per Topic	Organization Type			Total Responses
	Local Govts	Nonprofits	Private Company	
Transportation	21	6	10	47
Energy	12	5	8	27
Water, Wastewater, and Solid Waste	13	4	3	22
Agriculture, Forestry, and Land Use	11	7	1	17
Carbon Removal	8	6	4	18

DFW Regional Climate Vulnerability

Climate Risks May Include:

- Extreme heat
- Urban heat island
- Extreme drought
- Wildfires



DFW AQIP- PCAP Measures

The DFW AQIP- PCAP measures focus on measures that can be implemented in the near-term to reduce GHG and criteria air pollutants

Sector	Number of Measures
Transportation	13
Energy	6
Water, Wastewater, and Watershed Management	9
Materials Management (Solid Waste)	6
Agriculture, Forestry, and Land Use (Green Space)	5
Cross-Sector	5

Dallas-Fort Worth Air Quality Improvement Plan - PublicInput

DFW AQIP Community Benefits

Community Benefits: Other benefits beyond air quality improvements that will occur because of implementation of measures

- Improve Health and Well-Being
- Reduced costs
- Green Spaces and Community Beautification
- Water Conservation
- Increase Access to Service and Amenities
- Increased Resiliency and Adaptability
- Job Creation and Economic Development
- Increased Safety
- Reduced Noise Pollution
- Increased Awareness and Engagement

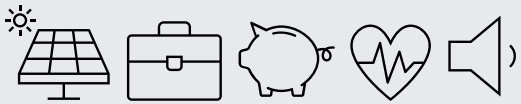
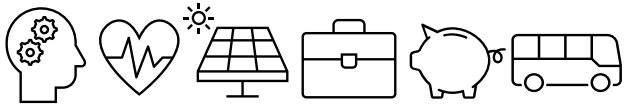
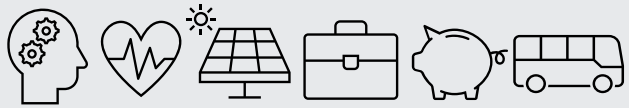
DFW AQIP Benefits

Benefits:

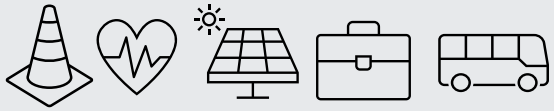
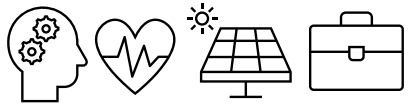
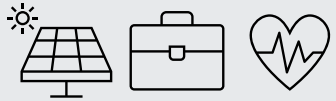
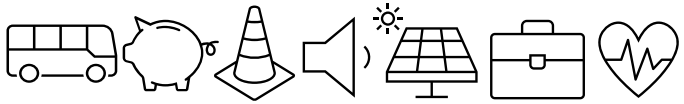
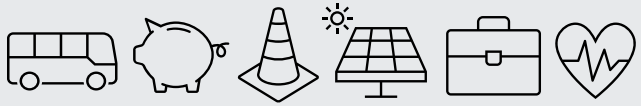
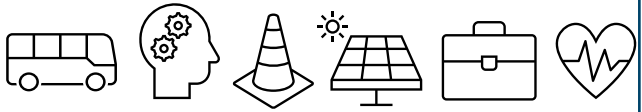
Direct Climate Change Benefits

Direct Benefits for Nonattainment Issues

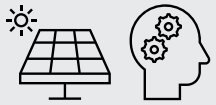
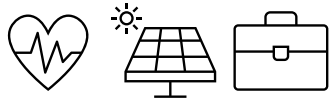
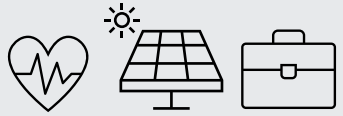
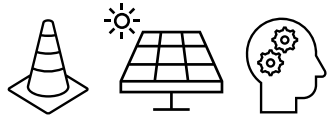
Transportation Sector Measures

Measure	Includes	Community Benefits	Benefits
Clean Vehicles and Equipment Program	Heavy-Duty Hydrogen Pilot Program Zero- and Near-Zero Freight and Work Low-Emission Non-Road Equipment Program		
Low Carbon Liquid Fuels Program	Build infrastructure Provide incentives for utilizing biofuels		
Regional Emissions Compliance Program	Fund Emissions Compliance Activities and Operations		N/A
LED Streetlighting Program	Retrofit Streetlights with Light-Emitting Diodes (LEDs)		
Green Airport Planning Program	Increase Education/Best Practices for Green Airports		
Transit Enhancement Program	Increase Transit Frequency Enhance Mobility Hubs & Transit-Oriented Developments		N/A
Transit Planning Program	Develop Regional Transit Plan		N/A

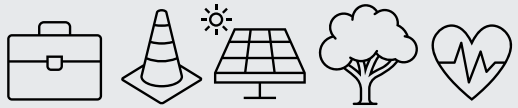
Transportation Sector Measures

Measure	Includes	Community Benefits	Benefits
Active Transportation Program	Improve/Expand Bicycle and Pedestrian Facilities		N/A
Green Purchasing/Green Construction Program	Use Low Carbon, Recycled Content, and/or High-Efficiency Materials Employ Reduced-Emission Construction Methods		
Urban Heat Island and Green Spaces Program	Expand Use of Landscaping, Vegetation, and Tree Cover Develop Parks/Plazas/Open Spaces Preserve Existing Green Spaces		
Enhanced Regional Traffic Signal Timing Program	Bus Signal Prioritization Improve Signal Timing in the Region		
Transportation System and Truck/Rail Optimization Program	Technology and Multimodal Connectivity Improvements Road/Rail Grade Separations		
Vehicle Miles Traveled Reduction Program	Improve Job-housing-transportation balance Utilize Smart Infrastructure		

Energy Sector Measures

Measure	Includes	Community Benefits	Benefits
Public Sector Energy Efficiency and Refrigerant Transition Program	Increase energy efficiency LED lighting retrofits		
Residential Efficiency Rebate Program	Residential energy audits Incentives for residential solar		
Energy Plans/Audits/Policies	Building energy performance management Energy audits for organizations		
Green/Cool Roof Replacements	Cool/Green Roofs		
Distributed Energy and Resilience for Public Entities	Resilient building improvements Increase grid resiliency		
Advancing Energy Elements in Building Codes	Expand Regional Codes program		N/A

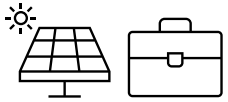
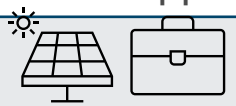
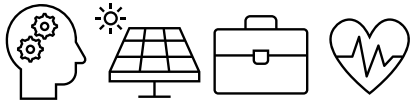
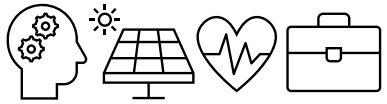
Water, Wastewater, and Watershed Management Sector Measures

Measure	Includes	Community Benefits	Benefits
Implement Integrated Stormwater Management, Low-Impact Development, Green Stormwater Infrastructure, and Other Nature-Based Solutions	Rebates for green infrastructure Update local policy, codes, drainage criteria Bioswales and organic stormwater collection Install smart controls and sensors Restore, protect and maintain riparian corridor		
Expand Contamination Detection and Pollution Prevention Measures	Provide discharge detection and sampling kits for illicit discharge investigations	 Local MS4 Compliance;	N/A
Update Stormwater and Wastewater Conveyance Infrastructure	Install smart manhole covers Utilize trenchless pipe rehabilitation		
Increase Available Stormwater Detention Volumes	Augment stormwater detention basin storage		N/A

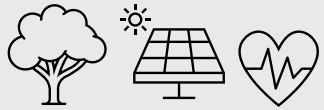
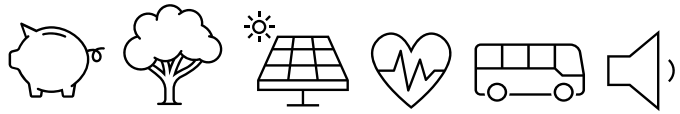
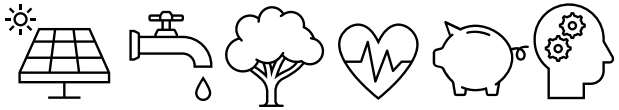
Water, Wastewater, and Watershed Management Sector Measures

Measure	Includes	Community Benefits	Benefits
Improve Water and Wastewater Treatment Process Efficiency	Increase on-site renewable energy Pursue energy-efficient disinfection Install water-source heat-pumps Biogas capture		
Address On-Site Sewage Facility System	Repair aging on-site sewage facility Sanitary sewer upgrades Financial rebates to upgrade on-site sewage	 Reduction in Bacteria-Related Discharges in Area with Related Total Maximum Daily Loads;	
Improve Biosolids Management	Thermal waste-to-energy facilities Waste-to-energy facilities		
Support Effluent Reuse	Support water effluent reuse programs		
Improve Local Water Conservation	Explore aquifer storage Automated metering infrastructure		

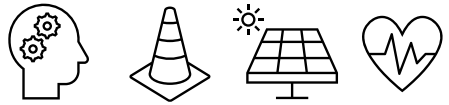
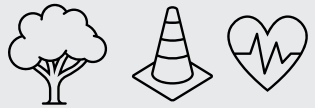
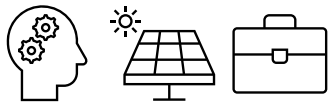
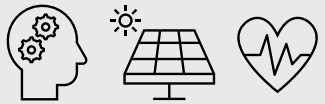
Materials Management Sector Measures

Measure	Includes	Community Benefits	Benefits
Expand Local Compost Opportunities to Reduce Organic Disposal	Residential organics pickup and commercial compost Incentivize space for community compost and recycling	 Limited Impacts in Other Areas (See Appendix 13)	
Divert Organic Waste into Waste-to-Energy Systems	Divert waste and other organic materials to Anaerobic Digestors to be converted into energy	 Other Benefits in Appendix 13	
Divert Construction and Demolition Debris (C&D)	Expand regional construction material Prioritize low-waste construction techniques Prioritize deconstruction methods	 Other Benefits in Appendix 13	N/A
Upgrade Waste Disposal Facilities	Western regional materials resource Landfill gas collection & management Efficient landfill seals and cover		
Implement Recycling and Transfer Facilities	Upgrade facilities to optimize load weight Construct additional recycling centers		
Improve Waste Collection	Expand waste diversion collection networks Policy to require trip planning Waste trucks to lower-emission vehicles		

Agriculture/Forestry/Land Use Sector Measures

Measure	Includes	Community Benefits	Benefits
Promote the Expansion of Green Space	Regional green space project Incentives for commercial property owners to create or maintain green space	 Other Benefits in Appendix 14	
Support Park Management and Maintenance	Municipal park and recreation plan Lawn Care Equipment Replacement Program	 Other Benefits in Appendix 14	
Increased Forest Canopy	Increase tree shading Urban forestry floodplain and floodway Urban tree canopy assessments	 Other Benefits in Appendix 14	
Update Agricultural Management Practices	Manure and livestock management for methane reduction Convert electric irrigation pumps		
Update Codes and Zoning Requirements to Promote Green Space Conservation and Preservation	Air quality review into zoning and permitting review Upgrade landscaping ordinances Tree ordinances that promote urban forestry		N/A

Cross Sector Measures

Measure	Includes	Community Benefits	Benefits
Carbon Footprint App	Carbon footprint smartphone application and rewards program		N/A
Regional Air Quality Monitoring Program	Deploy air quality monitors		N/A
Tire Recycling Initiatives	Adopt Tire Recycling Policy		N/A
Workforce Development	Develop local workforce to enable clean energy Water system improvements, operations, and maintenance Support “Green Program” implementation		N/A
Education and Outreach	Group renewable energy purchase Promote renewable energy and energy efficiency		N/A

Dallas-Fort Worth Air Quality Improvement Plan

Deliverable 2: Comprehensive Climate Action Plan (CCAP) Requirements

- GHG Inventory
- GHG Emissions Projections
- GHG Reduction Targets
- Quantified GHG Reduction Measures – short and long term
- Benefits Analysis for the Full Geographic Scope and Population Covered by the Plan
- Low-Income and Disadvantaged Communities Benefit Analysis
- Review of Authority to Implement
- Plan to Leverage Other Federal Funding
- Workforce Planning Analysis

Due June 17, 2025

Open Discussion Questions

What measure/s do you consider a high priority for the next 25 years?

What are the potential negatives of measures?

What are we missing?

State Priority Climate Actions Plan Measures

Texas Commission on Environmental Quality estimates of emission reductions for individual co-pollutants:

Co-Pollutant	2025-2030 Cumulative Reduction (metric tons)	2025-2050 Cumulative Reduction (metric tons)
NO_x	13,810	673,810
$PM_{2.5}$	8,838	47,304
PM_{10}	11,516	78,571
Black Carbon	1,197	6,628
Organic Carbon	3,273	15,378
VOC	93,420	560,666
SO_x	18,203	122,715
CO	307,981	1,471,422

Sector	2025-203 Cumulative GHG Reductions (MMT CO_2e)	2025-2050 Cumulative GHG Reductions (MMT CO_2e)
Industry	115.95	362.23
Electric Power Industry	17.87	33.51
Transportation	24.86	130.612
Other	11.07	65.83

Climate Pollution Reduction Grants Program - Texas Commission on Environmental Quality - www.tceq.texas.gov

Additional Information

Upcoming Meeting: Dallas-Fort Worth Air Quality Improvement Plan Listening Session

Purpose:	Receive feedback from residents, community groups, and organizations on the DFW AQIP-Priority Climate Action Plan
Date:	Wednesday, August 7 at 6 PM (CST) –
Location:	Virtual Zoom Meeting
Register:	www.publicinput.com/dfwaqip

Other Funding: EPA Clean Heavy Duty Vehicle (CHDV) Grant Program

- $932 million available funding; $400 million for nonattainment areas
- Class 6/7 battery-electric and hydrogen fuel cell vocational vehicles

NCTCOG Application requests up to $60 million from EPA CHDV Grant Vocational Vehicle Sub-Program on behalf of the region

Other Questions?

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