



Air Quality Health Monitoring Task Force Meeting

ANALISA GARCIA | 2.19.2026

WELCOME

Attendance: Please enter your name, title, and organization in the group chat

Bonus: What is one way you plan to stay motivated this year?



Image source: Microsoft Stock Images



RIDER 7 UPDATES



Rider 7 - Local Air Quality Planning Grants

Daniela Tower | Air Quality Health Monitoring Task Force |
2.19.2026

Rider 7 Local Air Quality Planning Grants

The Texas Commission on Environmental Quality (TCEQ) administers funds to conduct local air quality planning activities for counties that are not designated “nonattainment” for federal National Ambient Air quality Standards (NAAQS) .

This funding can be used to

- inventory emissions

- monitor pollution levels

- conduct air quality modeling

- carry out regional air quality planning activities, and

- cover administrative costs.

Activities must benefit the State Implementation Plan (SIP).

Rider 7 Local Air Quality Planning Grants

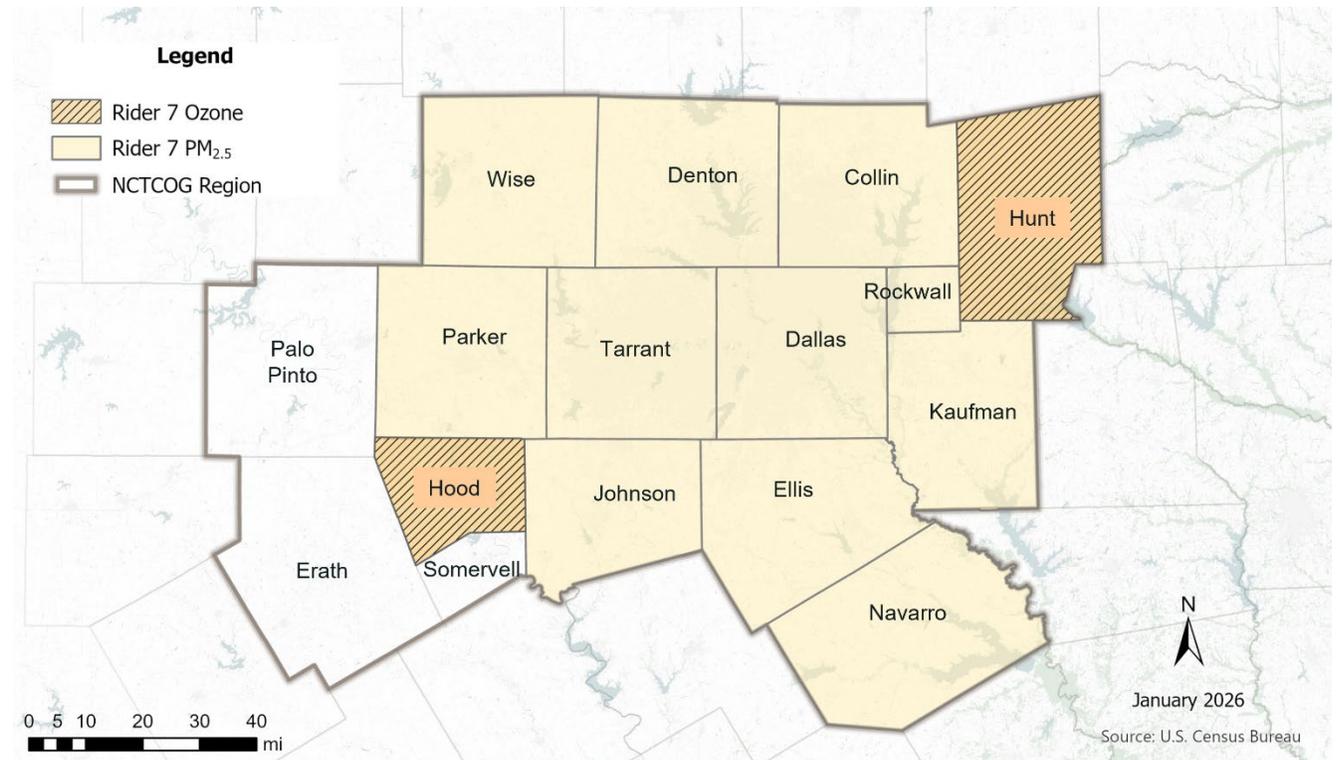
Rider 7 Ozone and PM_{2.5}

Agreement between NCTCOG and the Texas Commission on Environmental Quality (TCEQ) for air quality planning activities.

Biennium 22/23 - Ozone

Biennium 24/25 - Ozone & PM_{2.5}

Biennium 26/27 - Ozone & PM_{2.5}



Rider 7 Project Objectives

Measurement and analysis of pollutants and meteorological conditions

Better understanding of pollution sources and transport patterns

Support future pollution level forecasting

Highlight the need for more local assessment and modeling exercises conducted during the State Implementation Plan (SIP) development

Understand area boundaries and local differences

→ Evaluate the need for local control strategies

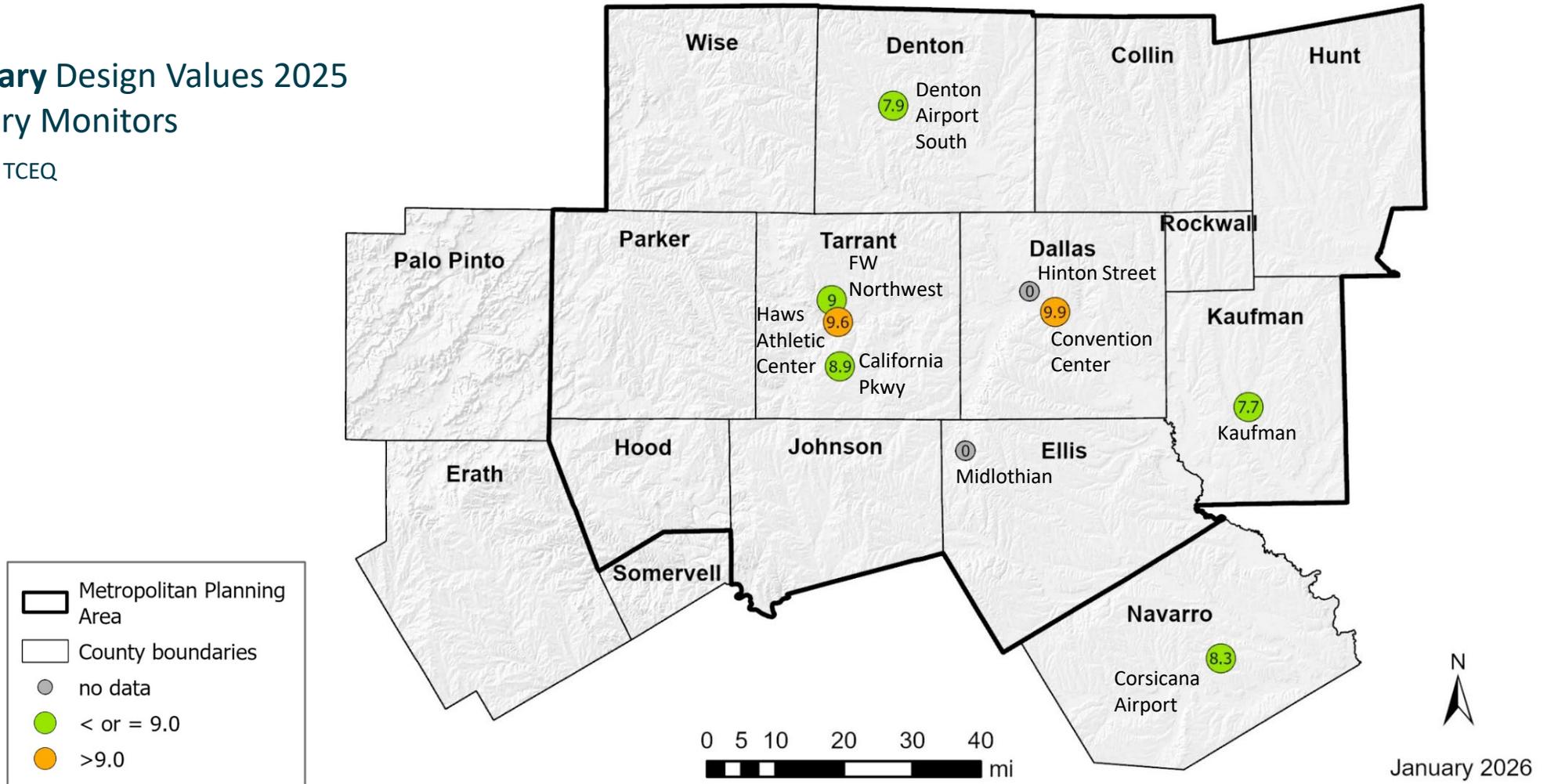
Importance of air monitoring network design

Investigation of data analysis tools (R package Openair, Power BI)

Fine Particulate Matter – PM_{2.5} Status

Preliminary Design Values 2025 Regulatory Monitors

Data Source: TCEQ



Fine Particulate Matter – Historical Values

| PM _{2.5} DVs | 2023 (2021-2023) | 2024 (2022-2024) | 2025 preliminary (2023-2025) |
|-------------------------|---------------------|---------------------|---------------------------------|
| California Parkway | 8.7 | 8.9 | 8.9 |
| Convention Center | 9.9 | 10.1 | 9.9 |
| Corsicana Airport | 8.0 | 8.3 | 8.3 |
| Dallas Hinton | 8.9 | 9.6 | no data |
| Denton Airport South | 7.7 | 7.8 | 7.9 |
| Fort Worth Northwest | 8.9 | 9.1 | 9.0 |
| Haws Athletic Center | 9.6 | 9.4 | 9.6 |
| Kaufman | 7.5 | 7.5 | 7.7 |

Grey values are based on data collected partly with a non-FEM/FRM device and are not regulatory. Dark values prior to 2025 are EPA-verified.

Rider 7 PM_{2.5} Activities- Biennium 24/25

Installation of six nonregulatory PM_{2.5} monitors and weather stations in Dallas, Ellis, and Tarrant Counties

Data collection began in June 2025 (Report analysis July – October)

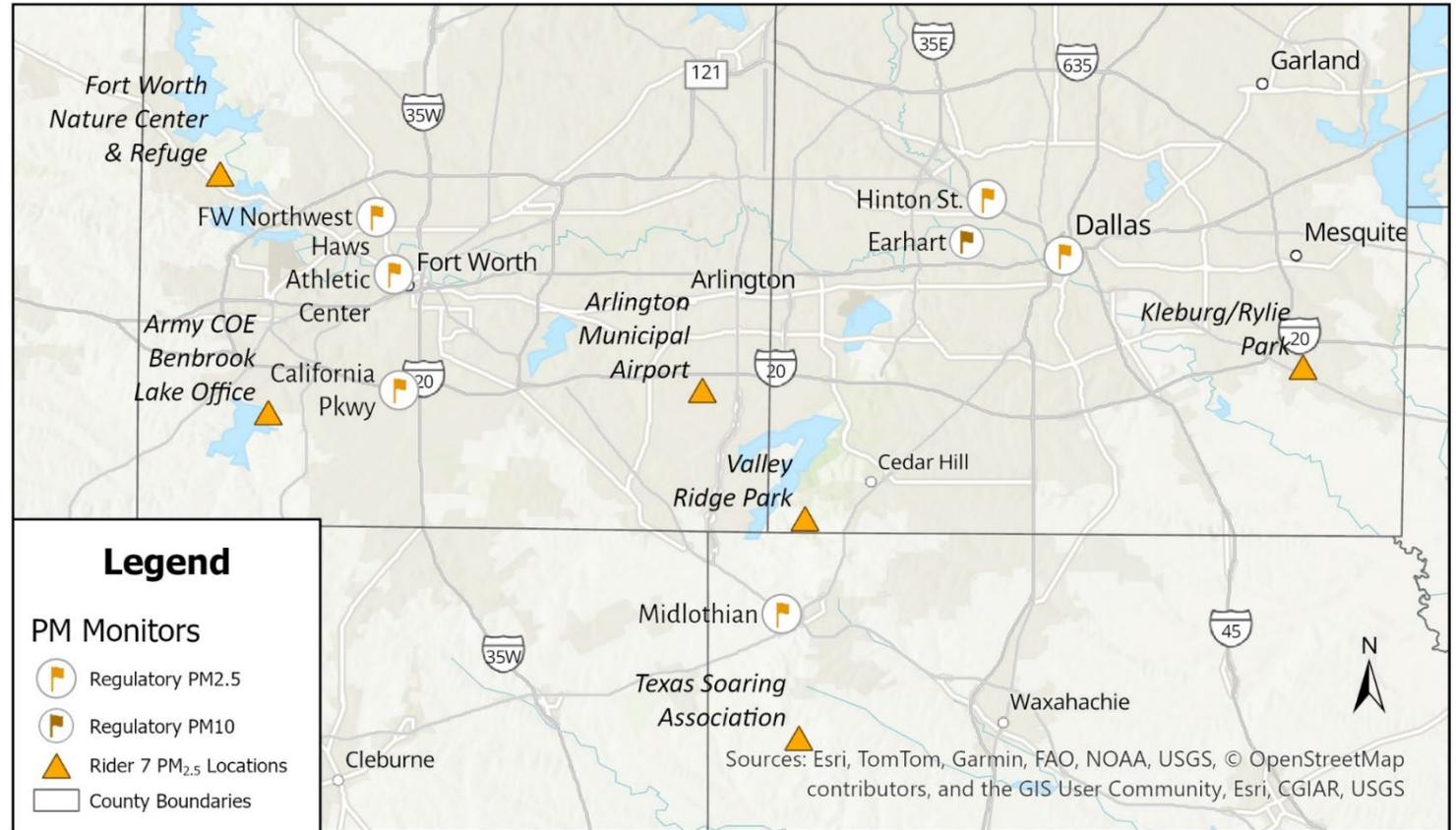
Final Report approved by the TCEQ on December 30, 2025

Project Team:

NCTCOG

Texas A&M Transportation Institute (TTI)

Kevin Overton (Personal Services Agreement)



Current Monitoring Locations

- a) Arlington Municipal Airport
- b) Benbrook Lake Office
- c) Fort Worth Nature Center & Refuge
- d) Kleberg/Rylie Recreation Center
- e) Texas Soaring Association
- f) Valley Ridge Park



(a)



(b)



(c)



(d)



(e)



(f)

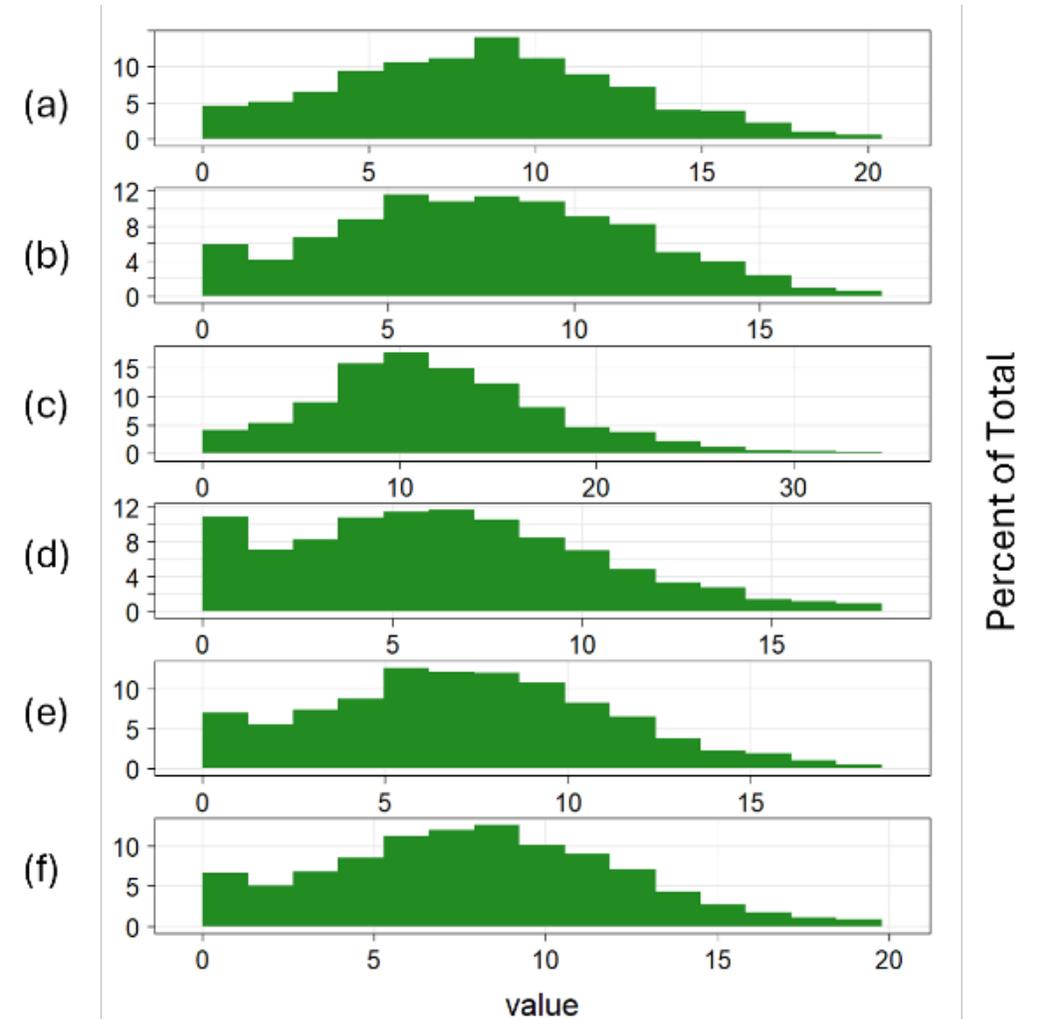
Parameters recorded:

- Temperature
- Wind Speed
- Wind Direction
- Precipitation
- Solar Radiation
- Vapor Pressure
- Atmospheric Pressure
- Wind Gusts
- Battery Information

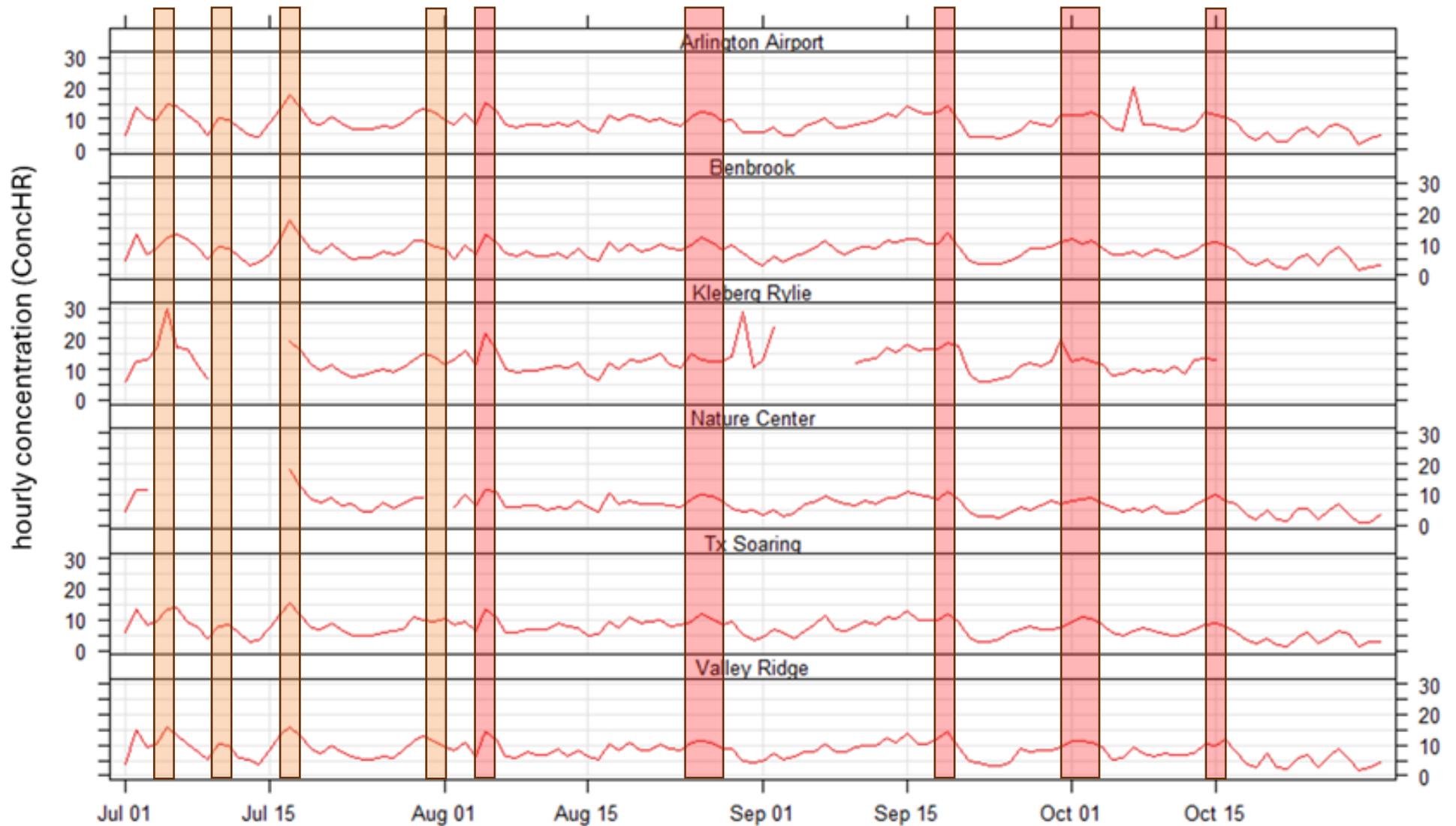
Results PM_{2.5} Overview

| | | Max* | Mean | Median | 95 th Percentile |
|-----|--------------------------------|------|------|--------|--------------------------------|
| (a) | Arlington Municipal Airport | 31.2 | 8.6 | 8.5 | 16.2 |
| (b) | Benbrook Lake | 38.6 | 7.8 | 7.6 | 14.5 |
| (c) | Kleberg Rylie | 81.1 | 12.3 | 11.4 | 23.7 |
| (d) | Nature Center | 27 | 6.5 | 6.2 | 14.1 |
| (e) | Texas Soaring | 40.7 | 7.4 | 7.1 | 14.5 |
| (f) | Valley Ridge Par | 52.2 | 8.1 | 8 | 15.6 |

*Minimum Value is 0 for all stations, all values in $\mu\text{g}/\text{m}^3$

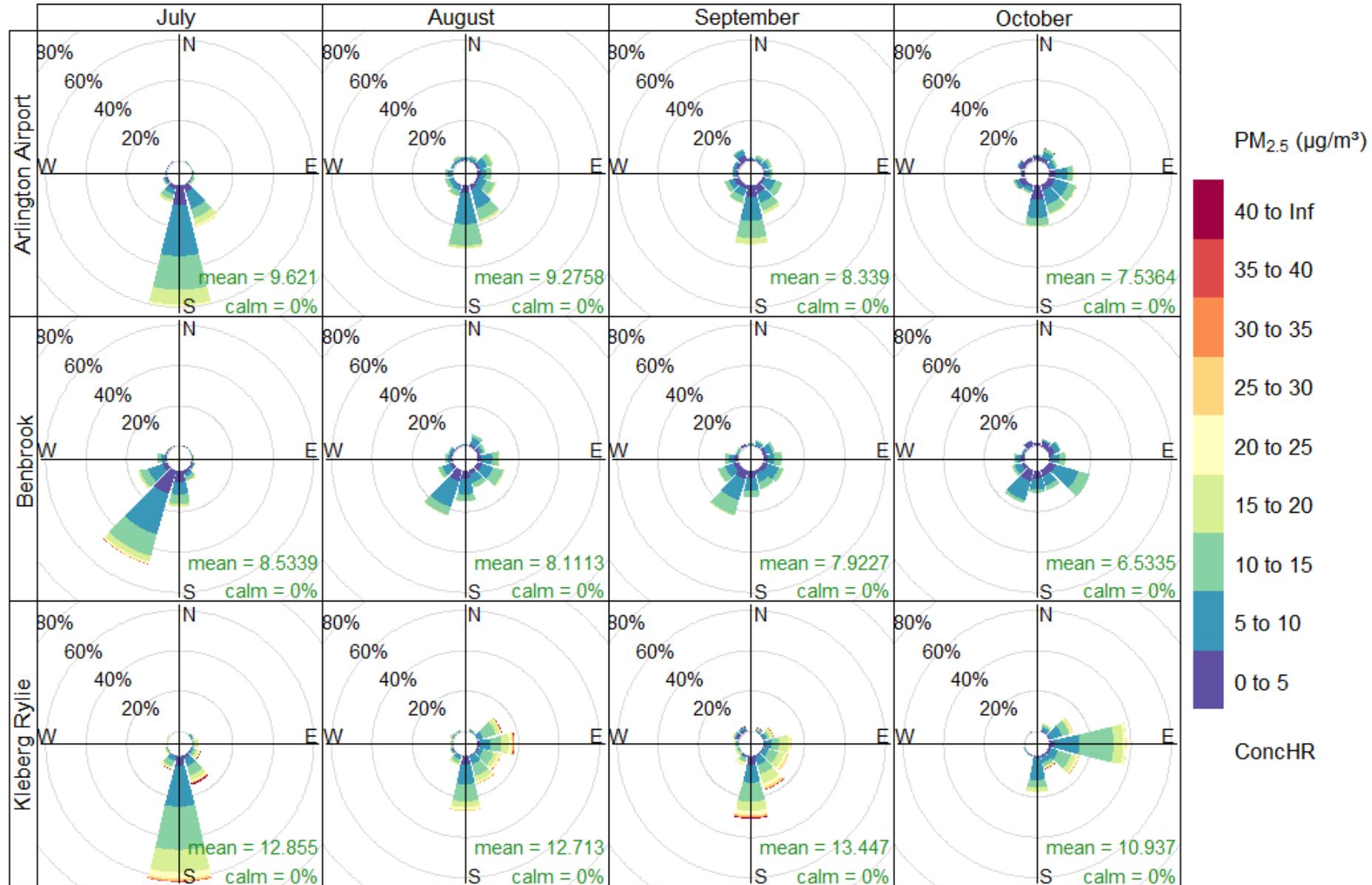


Results PM_{2.5} Overview



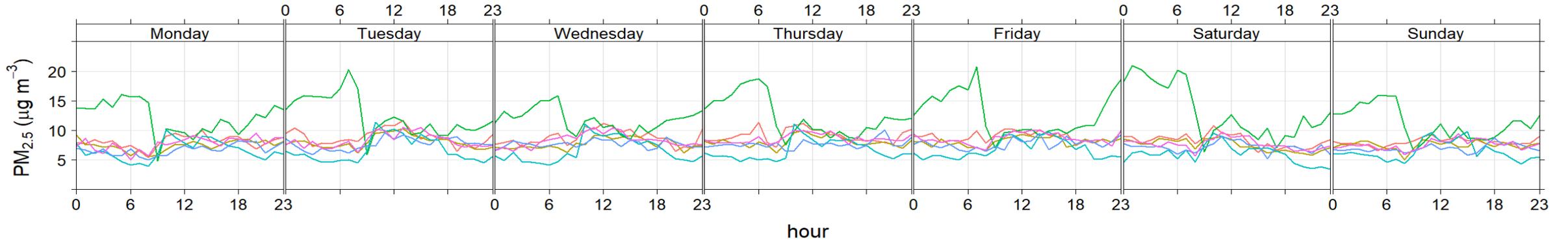
Potential Dust
Events (TCEQ)
July 2 - 4
July 9 - 10
July 16 - 18
July 28 - Aug 1

Emissions Origin: Pollution Roses PM_{2.5}

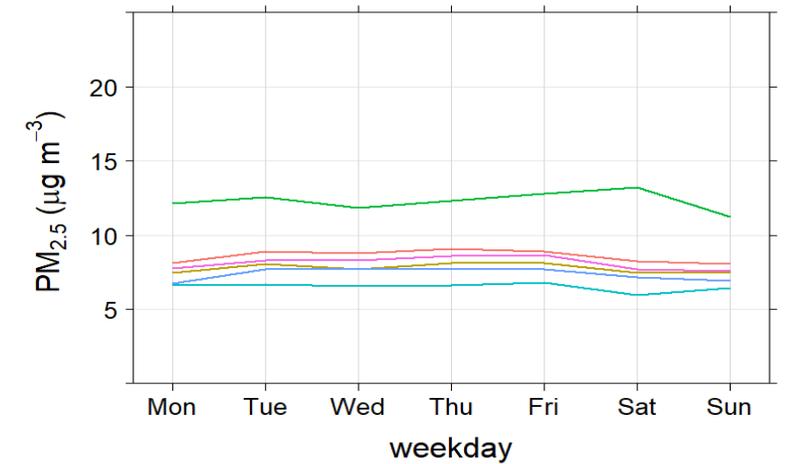
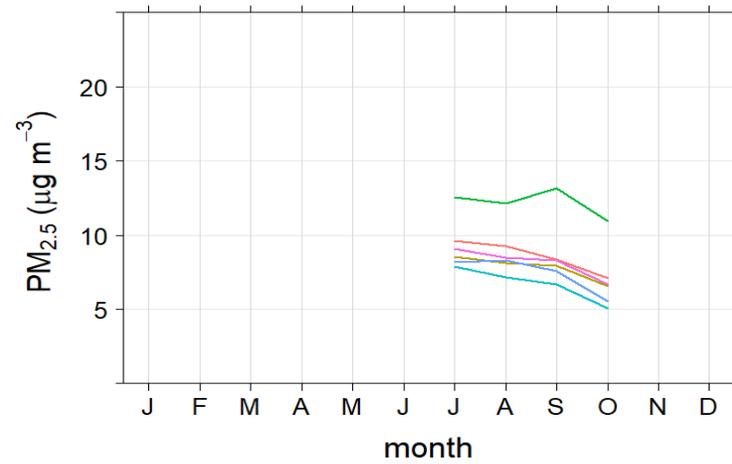
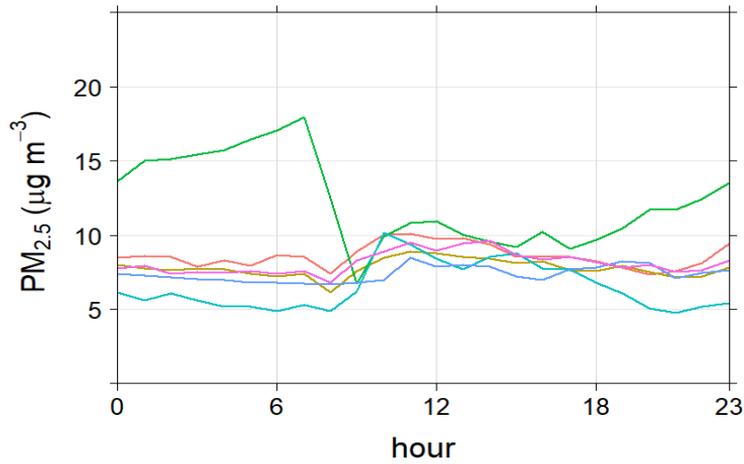


Time Variation PM_{2.5}

Time Variation for PM_{2.5} in DFW 2025

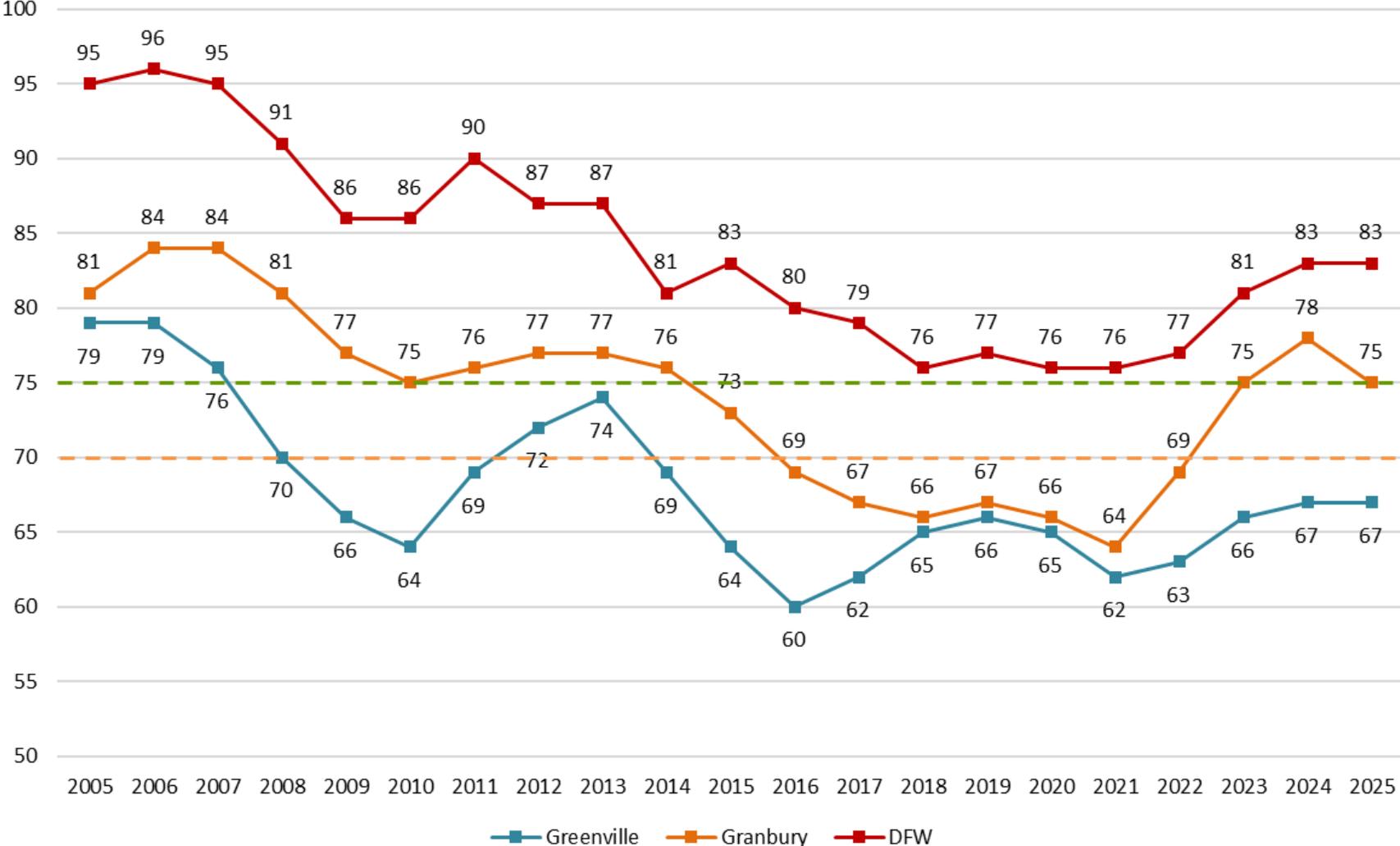


■ Arlington Airport
 ■ Benbrook
 ■ Kleberg Rylie
 ■ Nature Center
 ■ Tx Soaring
 ■ Valley Ridge



Rider 7 - Ozone

Ozone Design Values in Hood and Hunt Counties 2005 - 2025



2008 Standard ≤ 75 ppb
(Severe, attainment by 2027)

2015 Standard ≤ 70 ppb
(Serious, attainment by 2027)

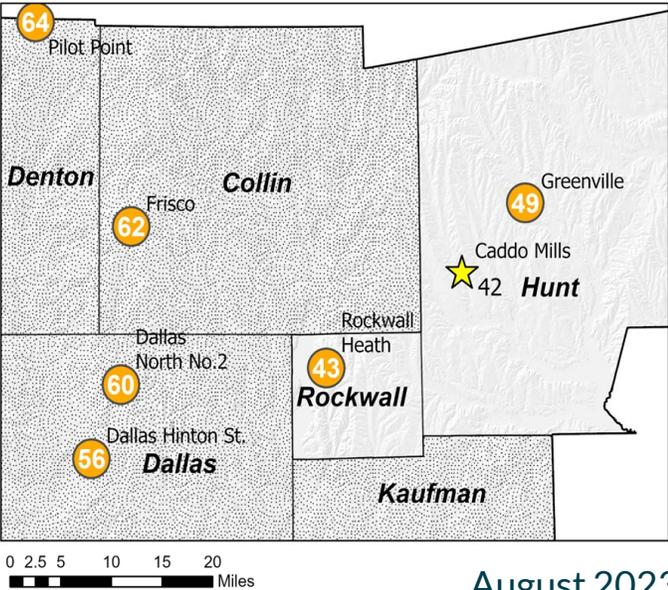
Rider 7 - Ozone

Biennium 22/23 Activities: Ambient monitoring

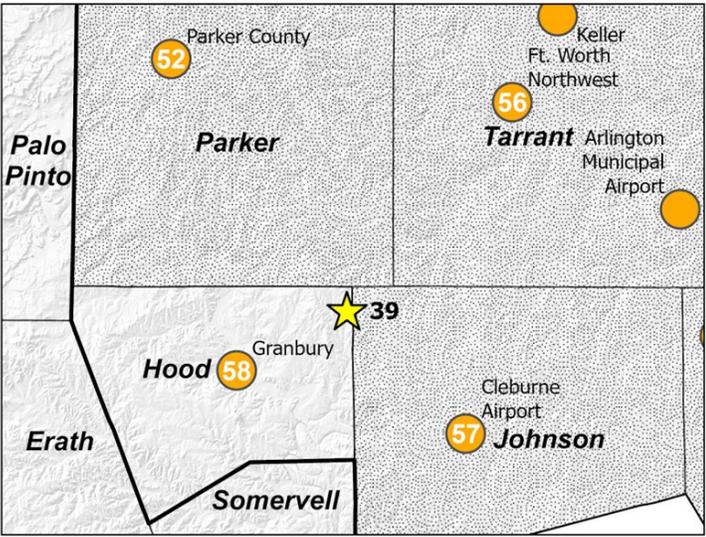
Hunt County (Caddo Mills, June 16 – Sept. 13, 2023) and
 Hood County (City of Cresson, Sept. 15 – Nov. 15, 2023)

- Nitric Oxide (NO)
- Nitrogen Dioxide (NO₂)
- Ozone (O₃)
- Volatile Organic Compounds (VOC)

- Wind Speed
- Wind Direction
- Relative Humidity
- Ambient Pressure
- Ambient Temperature



August 2023



Sept. 2023

- Counties Designated Nonattainment Under 2015 8-Hour Ozone NAAQS
- Metropolitan Planning Area
- County boundaries
- TCEQ Ozone Monitors
- Mobile Monitor

Rider 7 - Ozone

Biennium 24/25 Activities: Ambient Monitoring

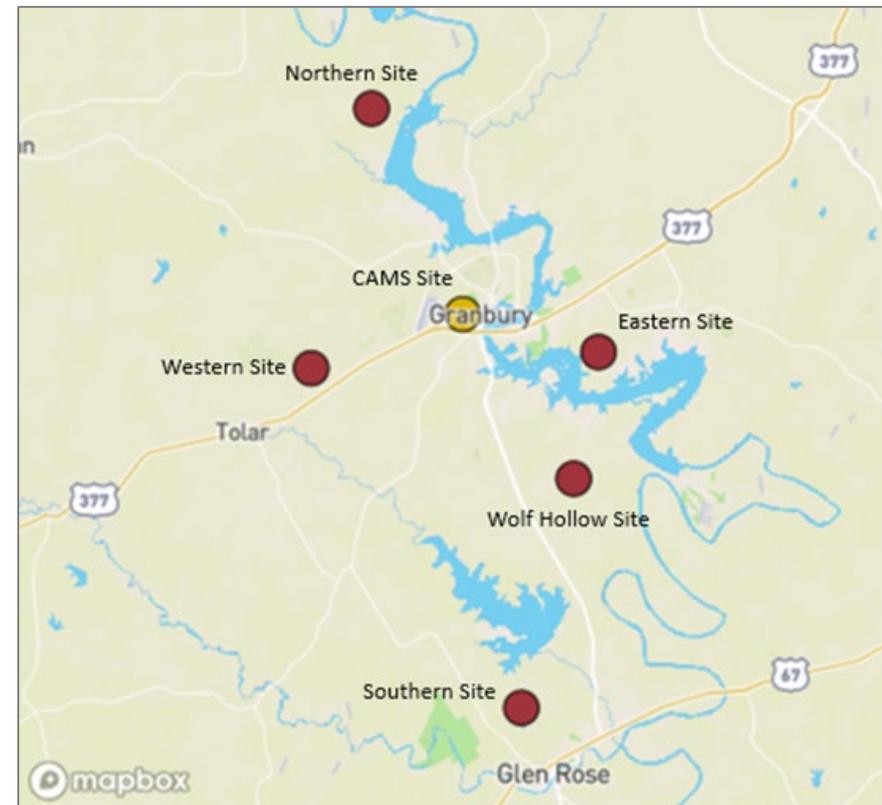
Installation of five ozone monitors, NO₂ reference monitors, and weather stations in Hood and Somervell Counties - TTI

Data collection from end of June – October 31, 2025

Final Report Monitoring approved by the TCEQ on December 30, 2025

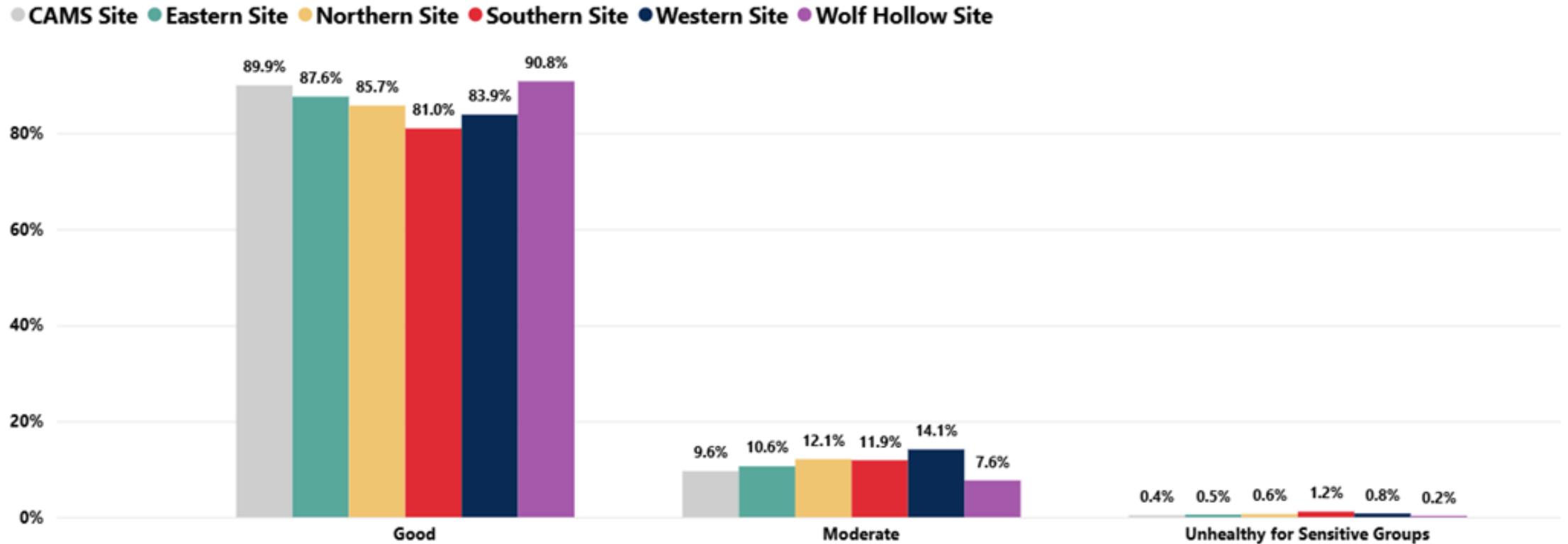
Updated Emissions Inventory for Hood County – Ramboll

Final Report Emissions Inventory approved by the TCEQ on September 12, 2025



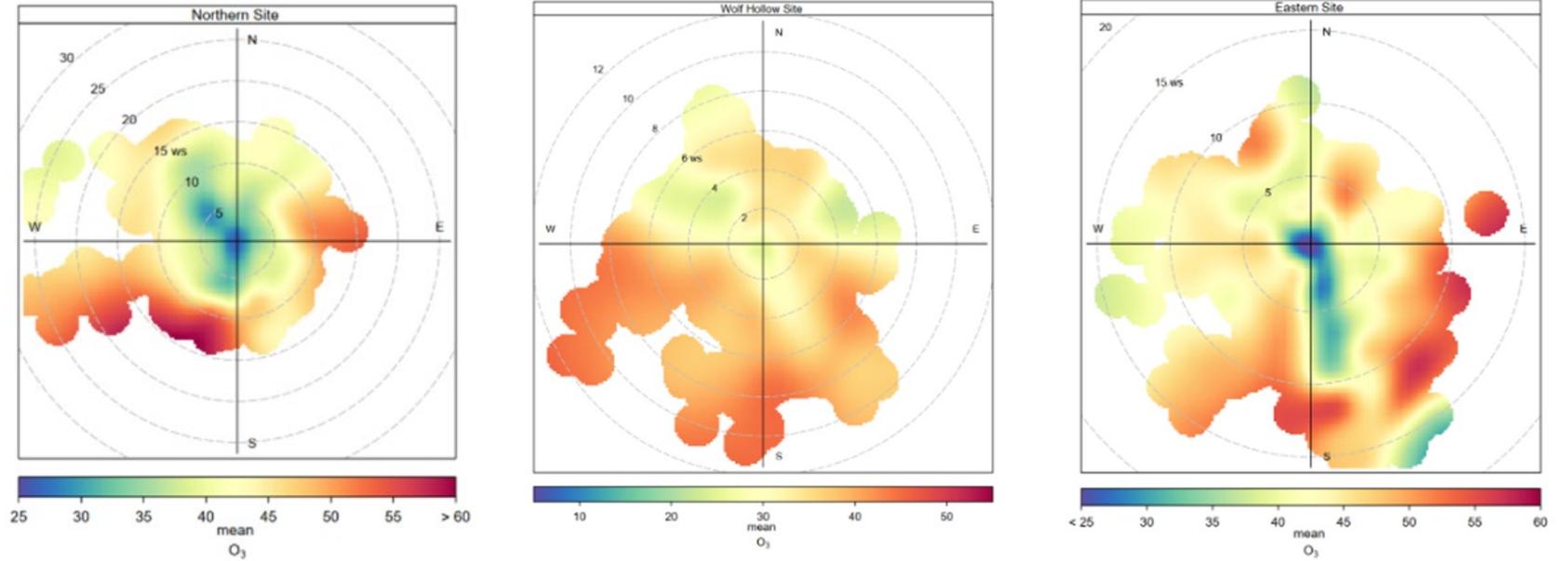
FEM Monitor: Ozone
Reference Aeroqual: Ozone, NO₂, PM_{2.5}
Meteorological station: Wind speed, wind direction, temperature, precipitation, solar radiation

Rider 7 Ozone Monitoring Results



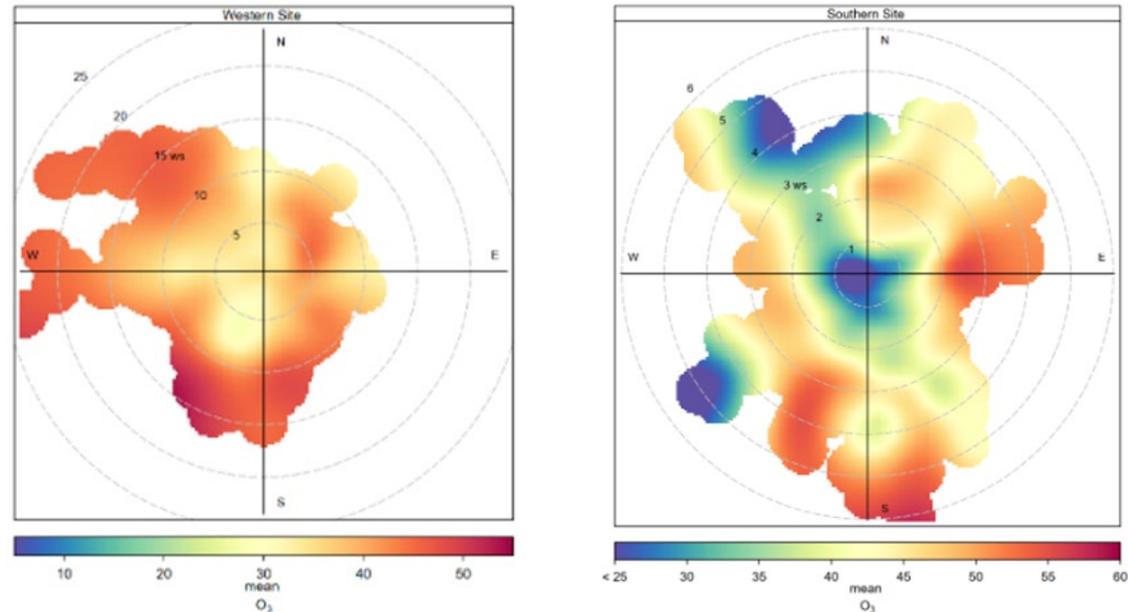
Bivariate Polarplots

Averaged pollutant concentration plotted by wind speed categories and wind direction.



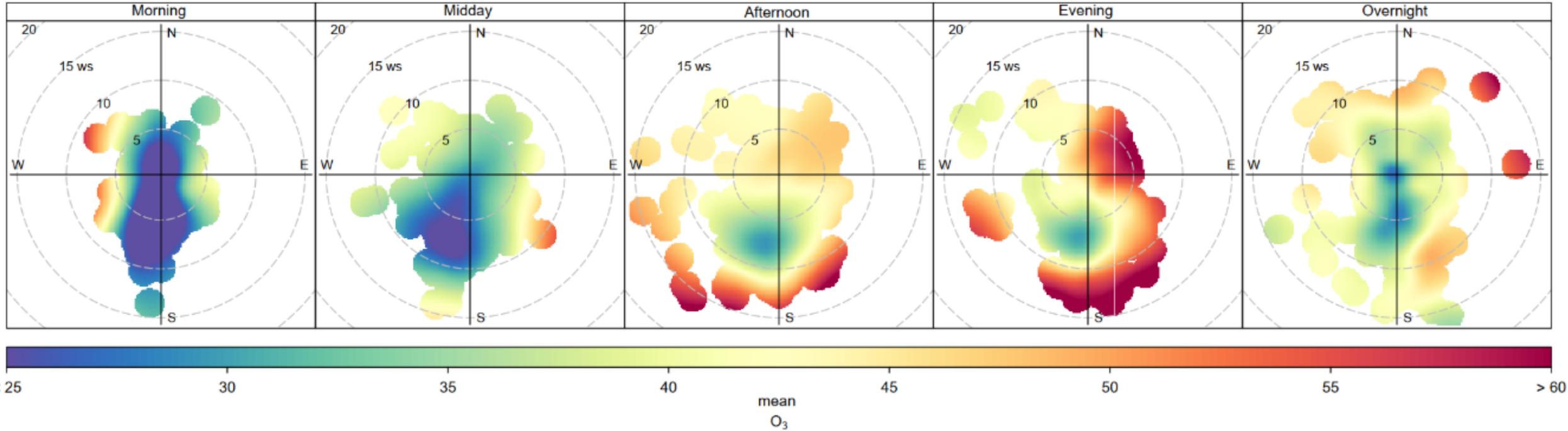
Investigate emission sources of air pollutants

Dependence of pollutants on wind speed and wind direction



Units: m/s

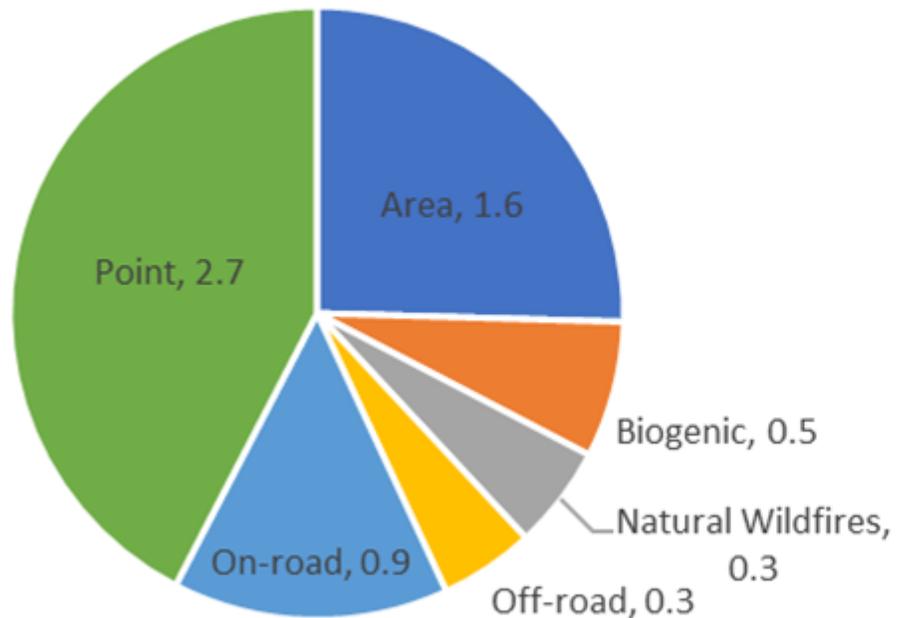
Variation by Time of Day – Project Monitor



Eastern Site - Tolar

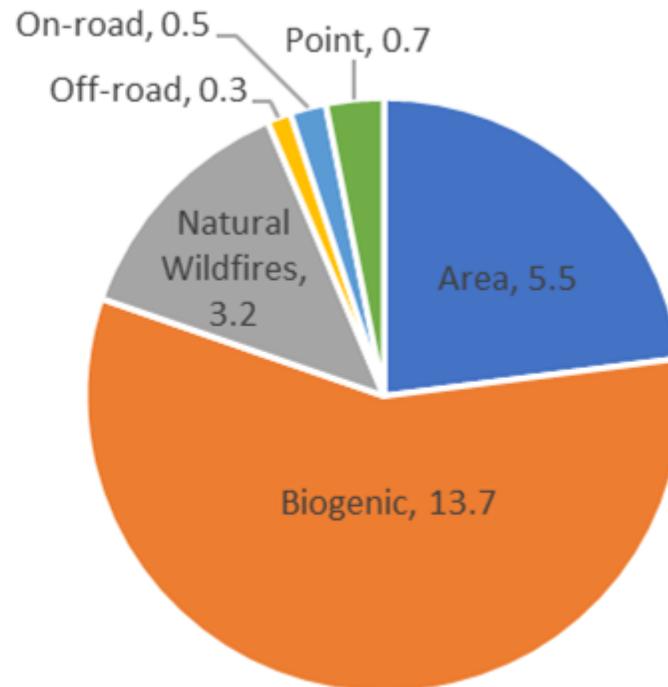
Hood County Emission Inventory Overview

2022 NOx



Total NOx Emissions: 6.3 tpd

2022 VOC



Total VOC Emissions: 23.8 tpd

- **NOx**
 - Dominated by anthropogenic sources
 - Highest contributions from point sources (EGUs and industrial sources), area sources, and on-road vehicles

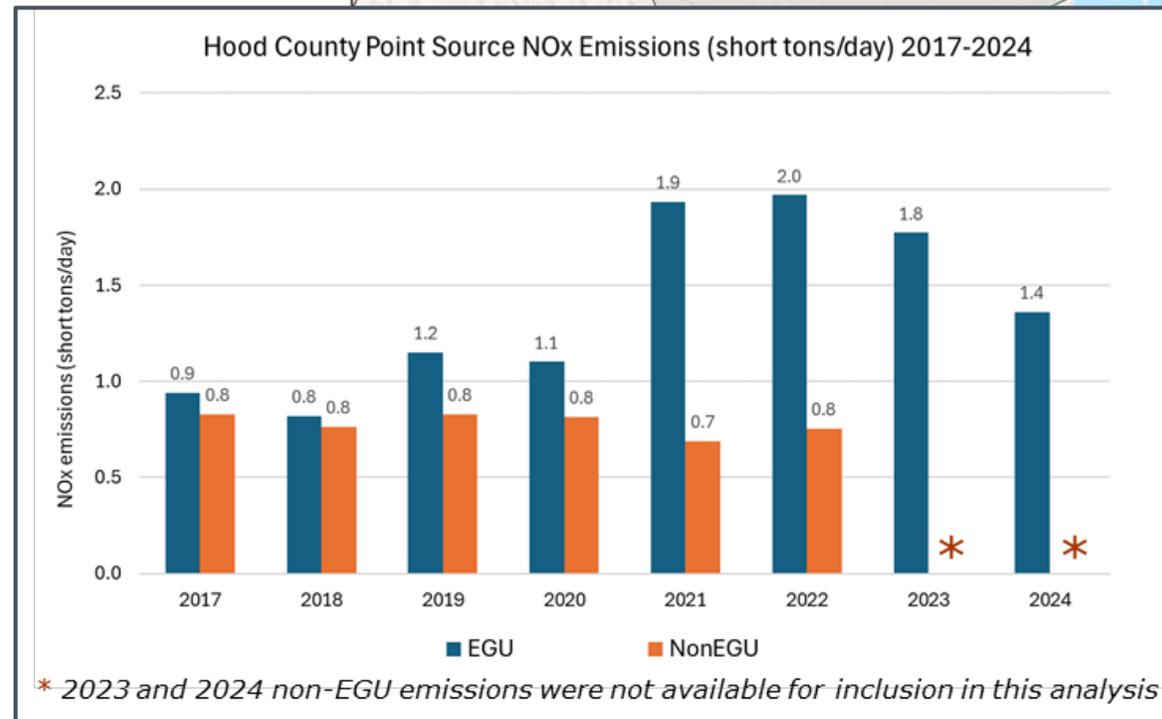
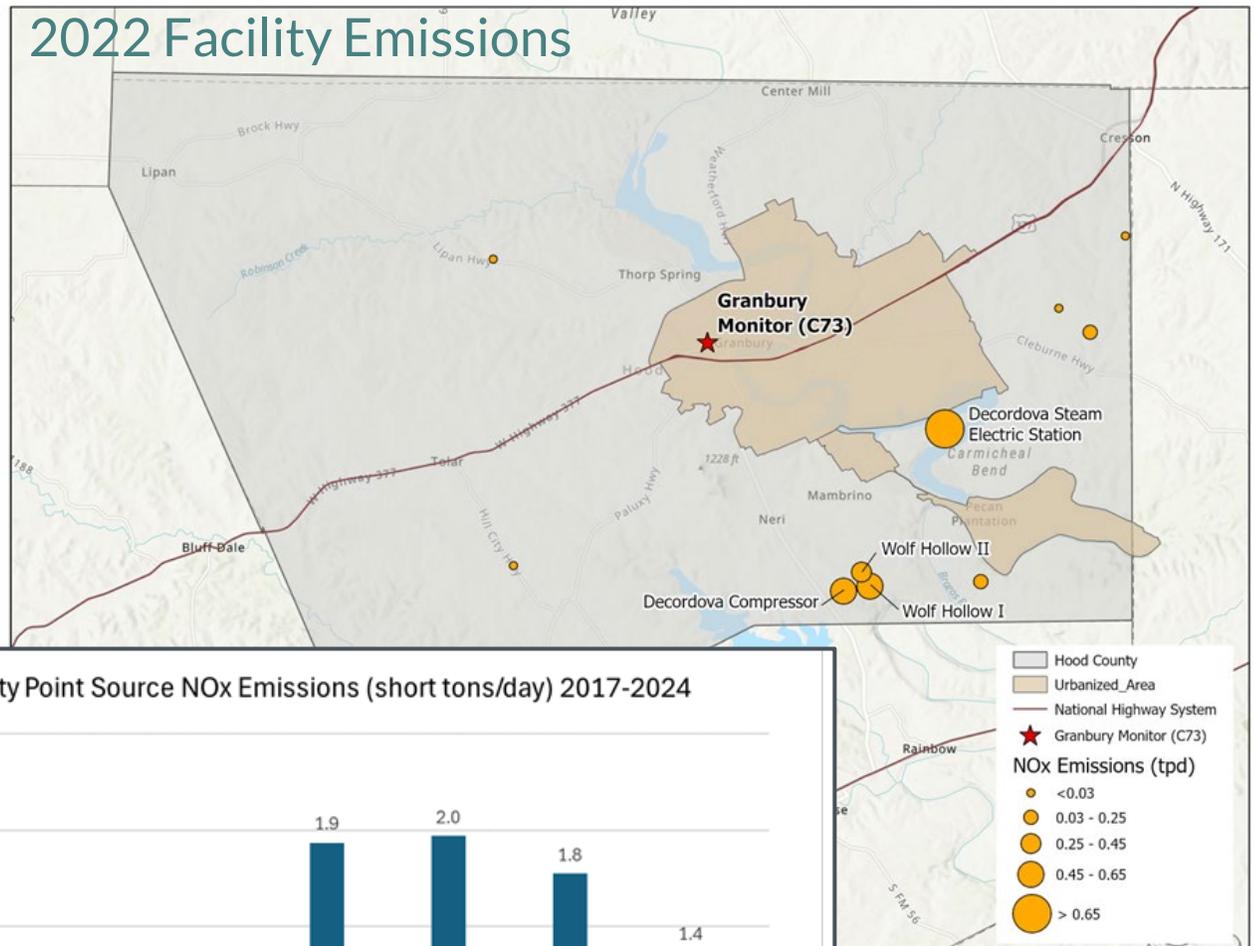
- **VOC**
 - Majority of emissions from natural sources (biogenic¹ and natural wildfires)
 - Substantial contributions from area sources

- **NOx:VOC ratio of 12 ppbC/ppb indicative of NOx limited regime**

¹ Biogenic emissions are not measured, they are modeled based on plant species, density, distribution and weather parameters. Model results are highly uncertain and vary substantially between models.

Overview of Point Sources NOx Emissions

- 10 facilities
 - 3 Electrical Generating Units (EGUs); close to 75% of 2022 NOx emissions
 - 7 oil and gas-related facilities; just over 25% of 2022 NOx emissions



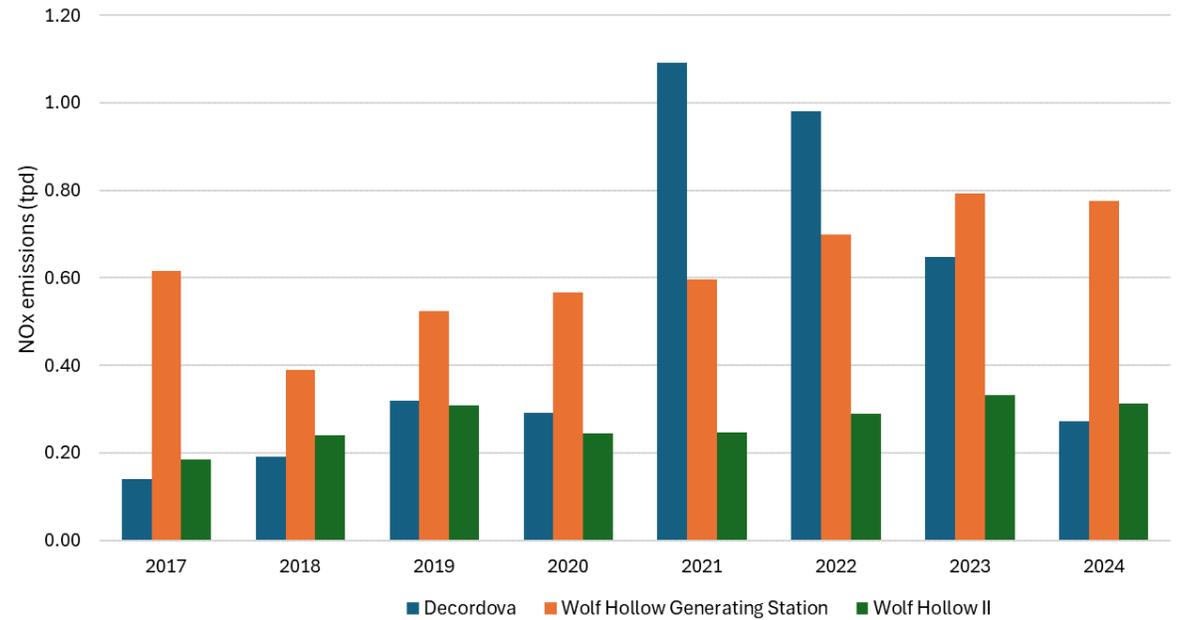
Source: Ramboll, EI Result Presentation, Oct 2025

EGUs

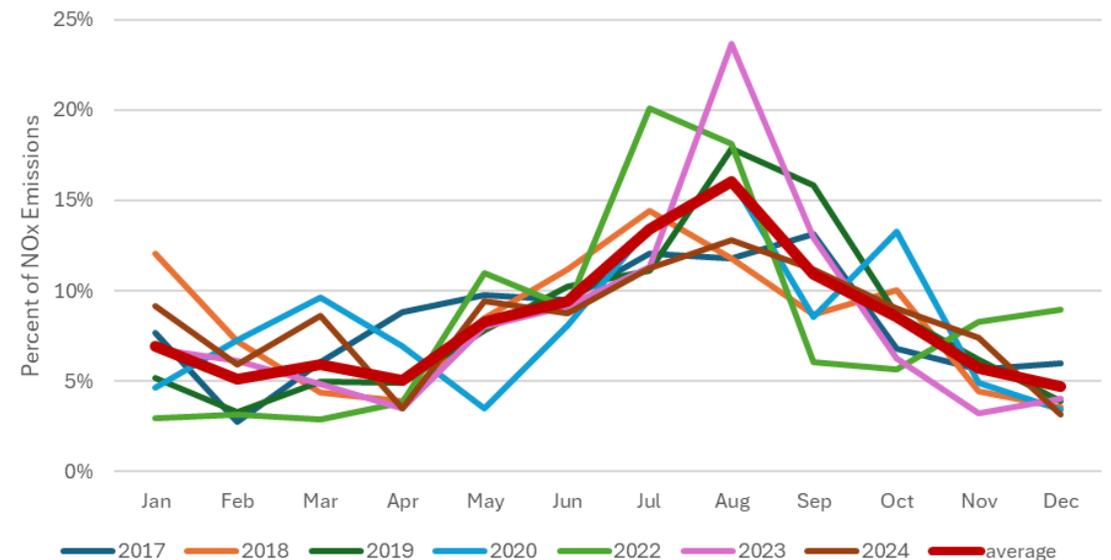
- **Decordova**
 - 4 Simple Cycle NG Turbines
 - Emission Controls: Water Injection
 - Annual NOx Rate: 3.68 to 13.12 lb/MWh
- **Wolf Hollow Generating Station**
 - 2 Combined Cycle NG Turbines
 - Emission Controls: SCR
 - Annual NOx Rate: 0.17 to 0.20 lb/MWh
- **Wolf Hollow II**
 - 2 Combined Cycle NG Turbines
 - Emission Controls: SCR, Ammonia Injection
 - Annual NOx Rate: 0.03 to 0.04 lb/MWh

Source: Ramboll, EI Result Presentation, Oct 2025

EGU Facility-level NOx Emissions (tpd) Trends, 2017-2024

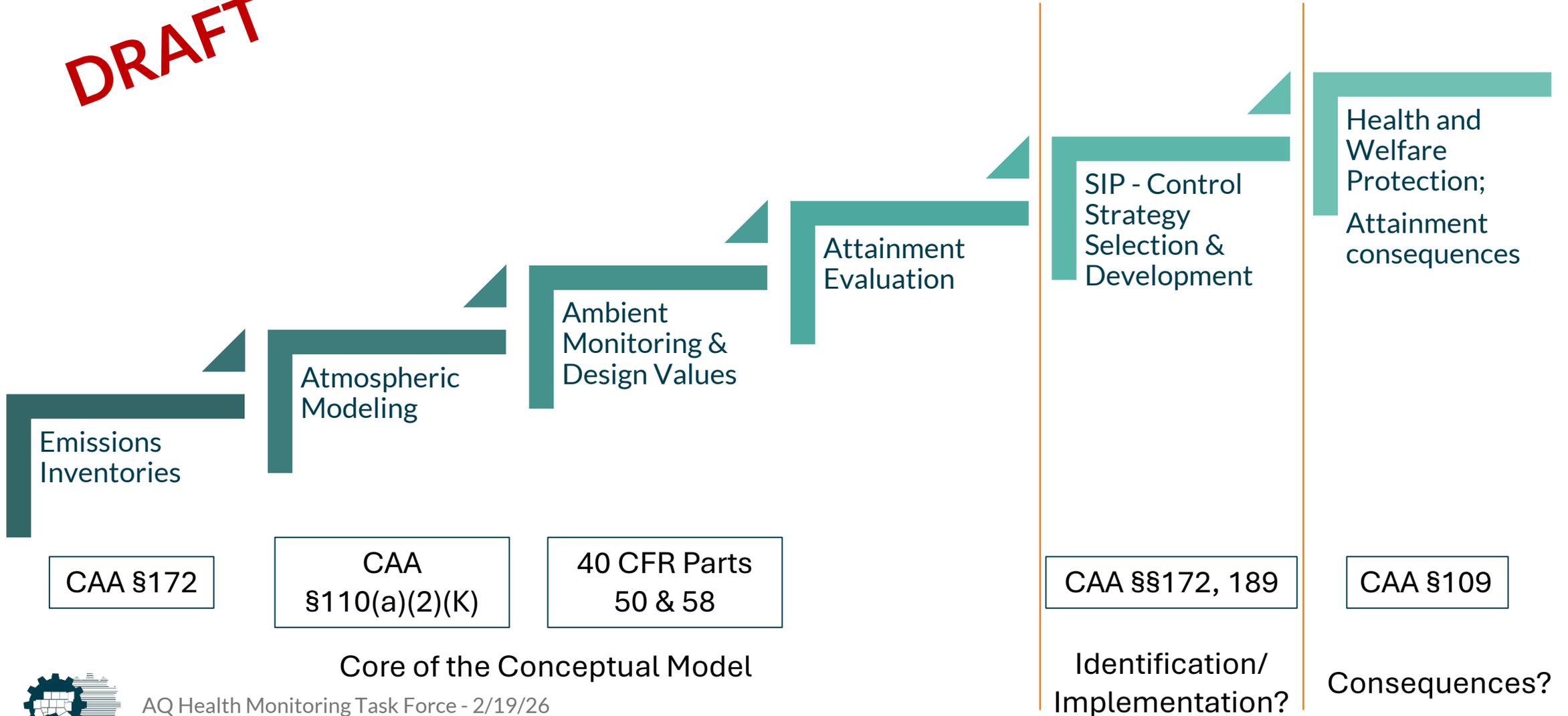


Hood County EGUs: Monthly Percentage of NOx Emissions



Conceptual Model - Regulatory Flow Summary

DRAFT



Core of the Conceptual Model

Identification/
Implementation?

Consequences?



Rider 7 Activities – Biennium 26/27

Planned Activities PM_{2.5}

Continuation of current monitoring activities

Installation of four additional PM_{2.5} monitors in Collin, Denton, and Tarrant Counties

Conceptual model of PM_{2.5} pollution for the region

Planned Activities Ozone

Continuation of current monitoring activities (Hood and Somervell Counties)

Addition of a reference NO₂ monitor at the Western Site

Update of the 2015 Conceptual Model for Hood County

CONTACT US



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AIR QUALITY NEWS

Image Provided By Getty

AIR QUALITY NEWS



E.P.A. to Stop Considering Lives Saved When Setting Rules on Air Pollution – *New York Times, January 12, 2026*



Experts warn TCEQ is not equipped to enforce regulations on rapidly emerging AI data centers – *KERA News, January 12, 2026*



Trump's EPA revokes scientific finding that underpinned US fight against climate change – *AP News, February 12, 2026*



NEW YORK TIMES

E.P.A. to Stop Considering Lives Saved When Setting Rules on Air Pollution

January 12, 2026

- “In a reversal, the agency plans to calculate only the cost to industry when setting pollution limits, and not the monetary value of saving human lives, documents show.”
- Fine particulate matter and ozone
- Concerns and questions regarding the legitimacy and accuracy of the estimate monetary value of human life in cost-benefit analyses
- Every administration since the EPA’s founding has considered these estimates. This move would make the current administration the first to abstain from including estimate in their cost-benefit calculations



NEW YORK TIMES

E.P.A. to Stop Considering Lives Saved When Setting Rules on Air Pollution

January 12, 2026

- “Carolyn Holran, an E.P.A. spokeswoman, said in an email that the agency was still weighing the health effects of PM_{2.5} and ozone, but wouldn’t be assigning them a dollar value in cost-benefit analyses. ‘E.P.A., like the agency always has, is still considering the impacts that PM_{2.5} and ozone emissions have on human health,’ Ms. Holran said. ‘Not monetizing does not equal not considering or not valuing the human health impact.’”



KERA NEWS

Experts warn TCEQ is not equipped to enforce regulations on rapidly emerging AI data centers

January 12, 2026

- TCEQ provides permitting and environmental regulation enforcement
- TCEQ currently lacks funding, resources, and ability to enforce in a timely manner
- “A 2024 study examining data center’s impacts of public health shows the centers like the one’s in Ellis County are already creating hidden health risks from air pollution that industry reports often overlook.”
- Study says, “Our findings reveal that training a large AI model comparable to the Llama-3.1 scale can produce air pollutants equivalent to more than 10,000 round trips by car between Los Angeles and New York City.”



What are data centers?

Specialized infrastructure to house processing servers, data storage systems, and networking equipment, built to keep these servers clean, cool, and powered.

Data centers are not new, dating back to the invention of the first computing systems.

As computers have become more mainstream and attainable, more data centers have been needed to meet these demands.

AI – multiple demands at once, requires a lot of computing power.
Increase in AI across the country.



How do data centers impact air quality and health?

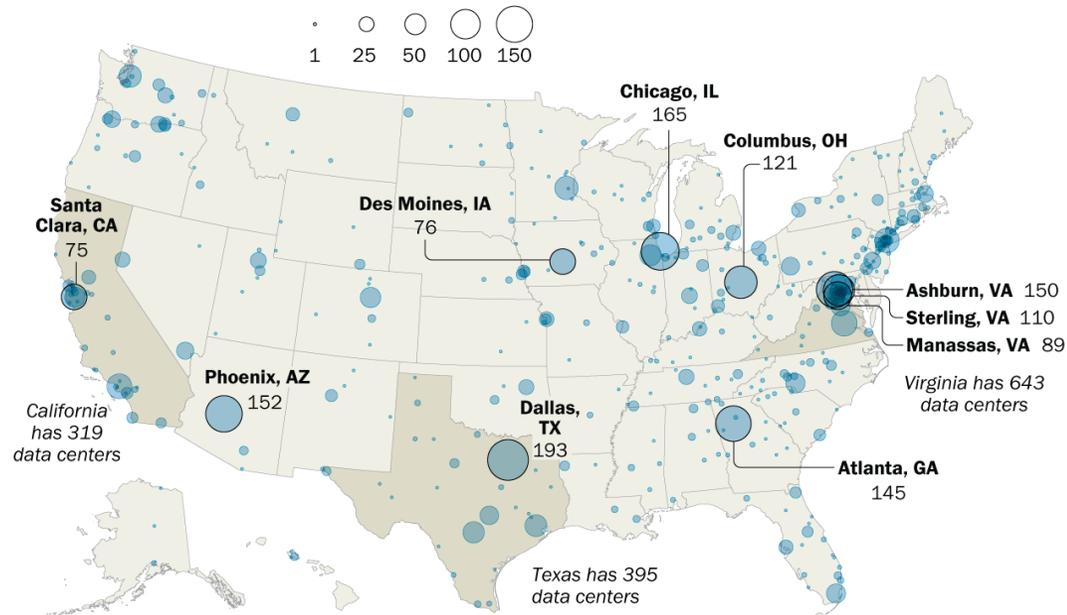
- Power plants being built to meet extensive electricity demand
- Power plants are gas-powered because solar and wind energy are inconsistent, while servers are operating 24/7
- Data centers typically have gas-powered back up generators
- As of 2024, natural gas was used for approximately 40% of electricity for US data centers
- Noise – generators, HVAC systems



DATA CENTERS IN NCTCOG REGION

Virginia, Texas and California lead in number of data centers

Number of data centers, by market



Note: Includes operational data centers and those in development. Refer to the Data Center Map methodology for more details.
Source: Data Center Map, accessed Oct. 20, 2025.

PEW RESEARCH CENTER

Source: <https://www.pewresearch.org/short-reads/2025/10/24/what-we-know-about-energy-use-at-us-data-centers-amid-the-ai-boom/>

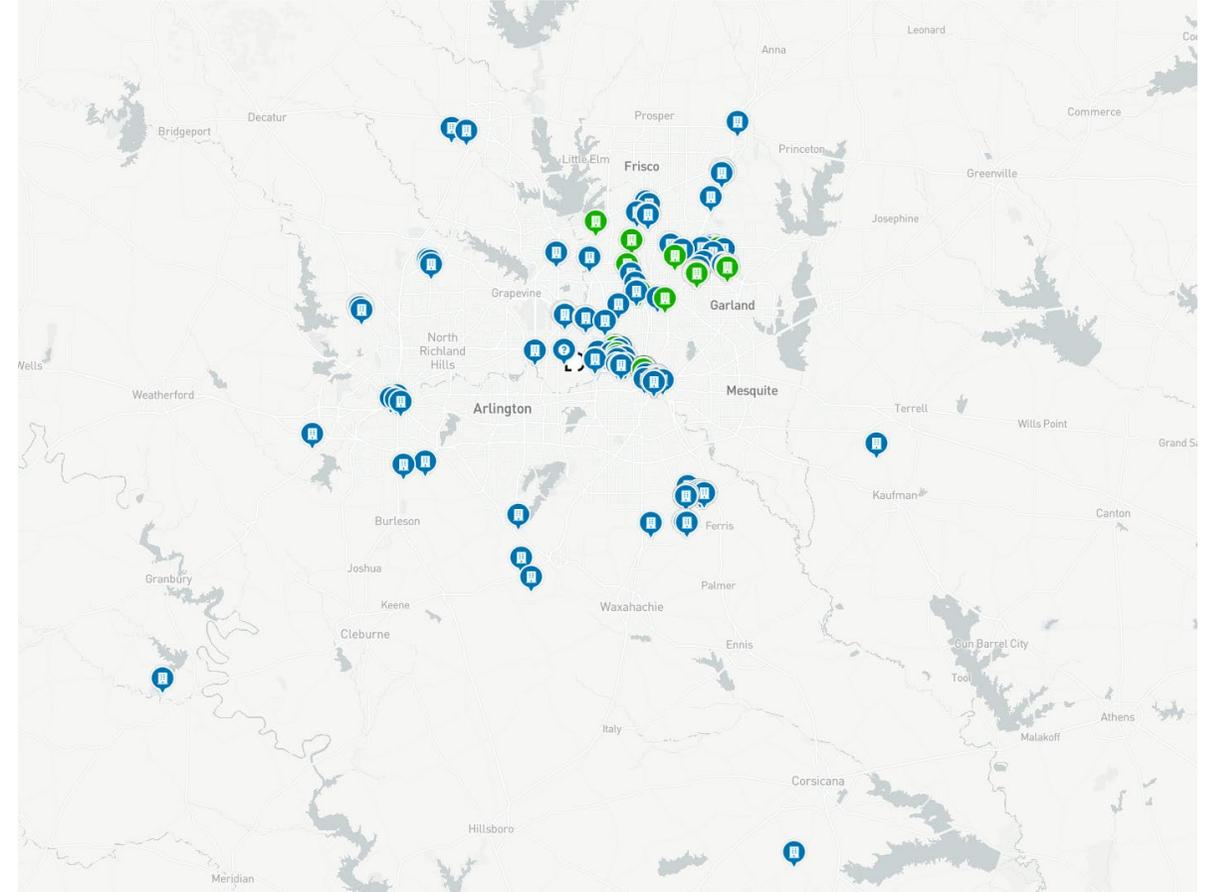


Image source: <https://www.datacentermap.com/usa/texas/dallas/>



AP NEWS

Trump's EPA revokes scientific finding that underpinned US fight against climate change

February 12, 2026

- “The rule finalized by the Environmental Protection Agency rescinds a 2009 government declaration known as the endangerment finding that determined that carbon dioxide and other greenhouse gases threaten public health and welfare. The Obama-era finding is the legal underpinning of nearly all climate regulations under the Clean Air Act for motor vehicles, power plants and other pollution sources that are heating the planet.”



What is the Endangerment Finding?

- 2007 - *Massachusetts v. EPA* – Supreme Court finds GHGs are air pollutants covered by the Clean Air Act (CAA)
 - EPA Administrator must determine if the air pollution from the GHG emissions from new motor vehicles fall under the CAA.
 - Using CAA 202(a) – EPA required to develop standards for air pollutants from motor vehicles/engines that would cause air pollution and “which may reasonably be anticipated to endanger public health or welfare”



What is the Endangerment Finding?

- “2009 – EPA Administrator signs two distinct findings regarding GHGs under CAA, Section 202(a)
 - **Endangerment Finding:** The Administrator finds that the current and projected concentrations of the six key well-mixed greenhouse gases—carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆)—in the atmosphere threaten the public health and welfare of current and future generations.
 - **Cause or Contribute Finding:** The Administrator finds that the combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor vehicle engines contribute to the greenhouse gas pollution that threatens public health and welfare.”



What is the Endangerment Finding?

- 2026 – EPA rescinds 2009 Endangerment Finding
 - Repeals all GHG Emission standards for light-duty, medium-duty, and heavy-duty vehicles and engines manufactured or imported into the United States for model years 2012 to 2027 and beyond.
 - “The EPA concludes we lack statutory authority to maintain this novel and transformative regulatory program. The appropriate policy response to global climate change concerns is a decision vested in Congress, and Congress did not decide the Nation’s policy concerns when it enacted CAA section 202(a) to address domestic air pollution problems nearly sixty years ago, or in any subsequent amendment thereto.”



AIR QUALITY NEWS

Insights? Perspectives? Considerations moving forward?



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Trump's EPA revokes scientific finding that underpinned US fight against climate change – *AP News, February 12, 2026*





RESOURCE PAGE UPDATES

AQHMTF RESOURCE PAGE IS LIVE!

The screenshot shows the website for the North Central Texas Council of Governments. The header includes the organization's logo and name, navigation links for 'About Us / Contact Us' and a language selection dropdown, and three main menu categories: 'I WANT TO...', 'I'M LOOKING FOR...', and 'I NEED TO CONTACT...'. A secondary navigation bar lists various departments such as Agency Administration, Aging Services, Economic Development, Emergency Preparedness, Environment & Development, Executive Director, NCT 9-1-1, Public Safety, Regional Data, Workforce Solutions, and Transportation. Below this is a search bar. The breadcrumb trail reads: Home > Transportation > Quality of Life > Air Quality > Current Ozone Activity > Air Quality Health Monitoring Resources. The main heading is 'Air Quality Health Monitoring Resources'. A paragraph of text states: 'Below is a non-exhaustive list of air quality resources for Air Quality Health Monitoring Task Force members to reference. The inclusion of a resource on this page does not necessarily reflect the endorsement of the resource by NCTCOG. For more information or to recommend an additional air quality resource, please contact Analisa Garcia at agarcia@nctcog.org.' Below the text are eight blue horizontal buttons with white text, each representing a resource category: 'Local Air Quality Websites', 'Air Monitoring Websites', 'Educational & Teaching Material', 'Air Monitoring & Modeling', 'Health Data & Dashboards', 'Remote Sensing', and 'Examples of Air Monitoring Networks Outside the NCTCOG Region'.

ACCESS THROUGH AQHMTF PAGE

The screenshot shows the website for the North Central Texas Council of Governments. The header includes the organization's name, a logo, and navigation links such as 'About Us / Contact Us' and a language selection dropdown. A search bar is located below the navigation menu. The main content area features a breadcrumb trail: Home > Transportation > About Transportation > Committees > Air Quality Health Monitoring Projects and Task Force. The title of the page is 'Air Quality Health Monitoring Projects and Task Force'. The introductory text states that NCTCOG initiated the task force in response to requests from local governments regarding air pollution. The 'Objective' section describes the task force's goal to evaluate data and address localized air pollution. A red rectangular box highlights a link titled 'Inventory of Air Quality Networks, Webpages, and Supplementary Information'. Below this, there is a section for a 'Virtual Meeting via Zoom' for the 'Air Quality Health Monitoring Task Force' on February 19, 2026, from 9:30 AM to 11:00 AM. A 'View Meeting Dates' button is also visible.



GRANT OPPORTUNITY

NASA's ROSES-2025

ROSES-2026 anticipated to open July 2026

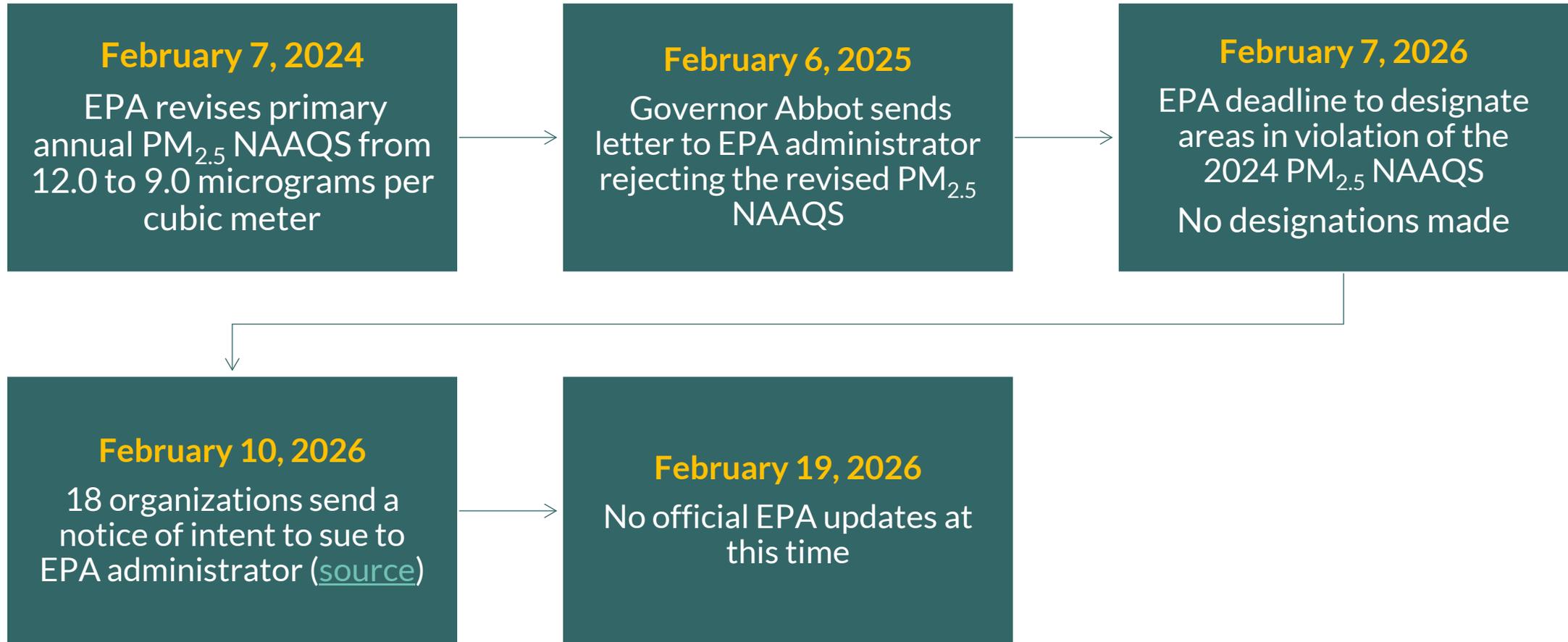
| | |
|---------------|---|
| ROSES | Research Opportunities in Space and Earth Sciences |
| Dates | Opened July 10, 2025 Closes August 31, 2026 |
| Eligibility | All organizations, domestic and foreign, government and private, for-profit, and non-for-profit may submit proposals without restriction on teaming arrangements. |
| Scope | This program element supports any topic advancing Key Results 2.2 'Co-designed solutions and tools to support users' and 2.3 'Science-based information that we can trust and act on' of NASA's Earth Science to Action Strategy. |
| Subject Areas | Include but are not limited to the discipline programs in the Earth Science Division's (ESD) Earth Action element (Agriculture, Climate Resilience, A.10-3 Disasters, Ecological Conservation, Energy, Health & Air Quality, Water Resources, and Wildland Fires) |
| Budget | Up to \$1 million Year 1: \$200,000 Year 2: \$500,000 Year 3: \$300,000 |





EPA 2024 PM_{2.5} DESIGNATIONS

PM_{2.5} DESIGNATIONS





MEMBER ANNOUNCEMENTS

THANK YOU!

Next meeting: May 21, 2026 @ 10:00 AM
In-person meeting (with virtual option)

Please reach out should you have any additional feedback or questions!



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