

Air North Texas Coalition
Thursday, January 21, 2021
1:30 – 3:00 pm

Agenda

1. Introductions Kimberlin To, NCTCOG
2. Overview
 - a. November 19 Meeting Kimberlin To
3. Discussion
 - a. Air Quality Update Nick Van Hassen, NCTCOG
 - b. End of Ozone Presentation Nick Van Hassen
 - c. Administrative Announcements/Reminders Kimberlin To
 - i. Clean Air Corner
 - ii. Outreach Items
 - d. Website Quantification/Social Media Report Alissa Soto & Hilary Nguyen, NCTCOG
 - e. Air Quality Health Task Force Dorothy Gilliam, NCTCOG
4. Other/Member Updates Kimberlin To
5. Additional Items Kimberlin To
 - a. **Next Meeting Information:**
Thursday, March 18, 1:30 PM
Call in number: TBD
Participant PIN: TBD



Air Quality Update

Air North Texas Coalition

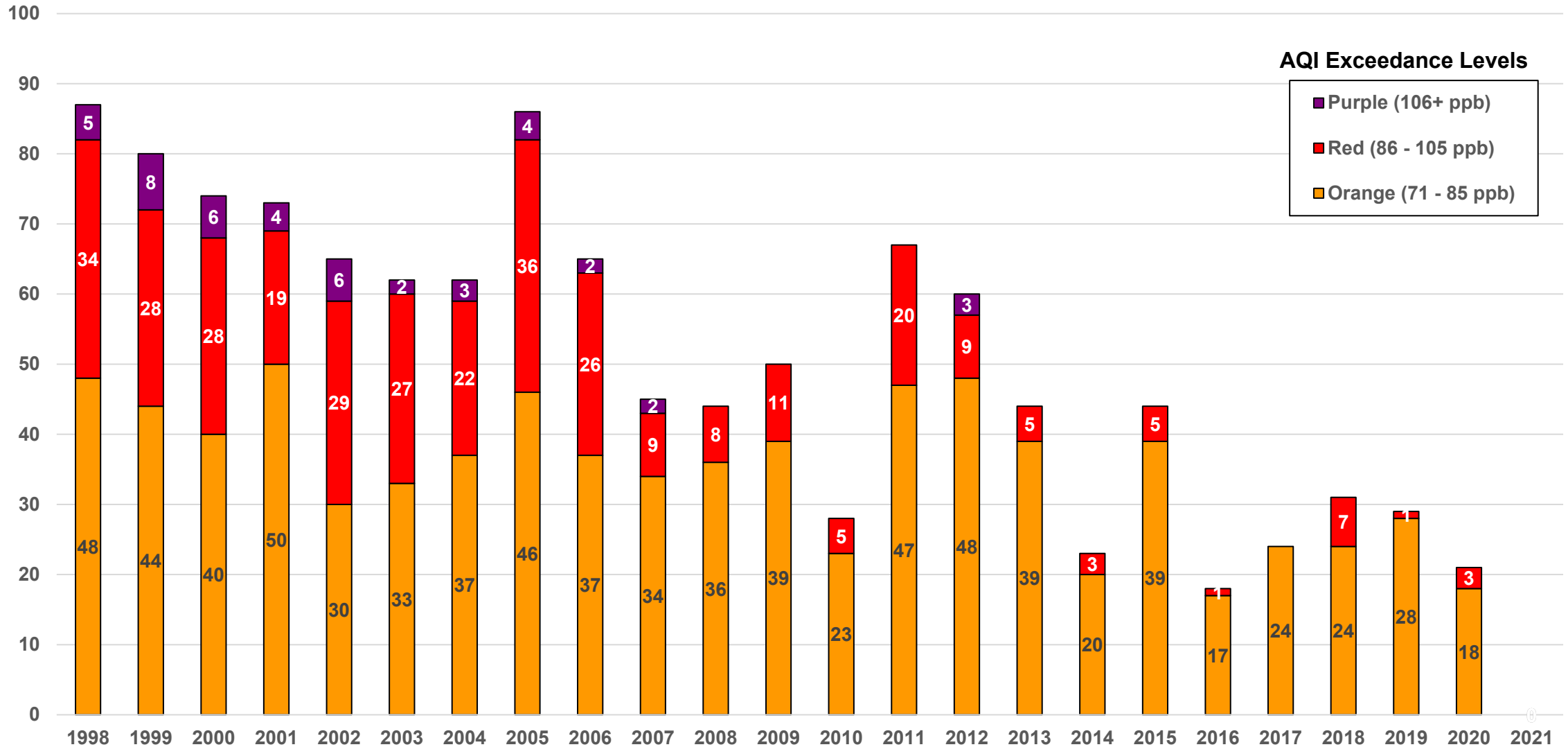
**January 21, 2021
Nick Van Haasen**



**North Central Texas
Council of Governments**

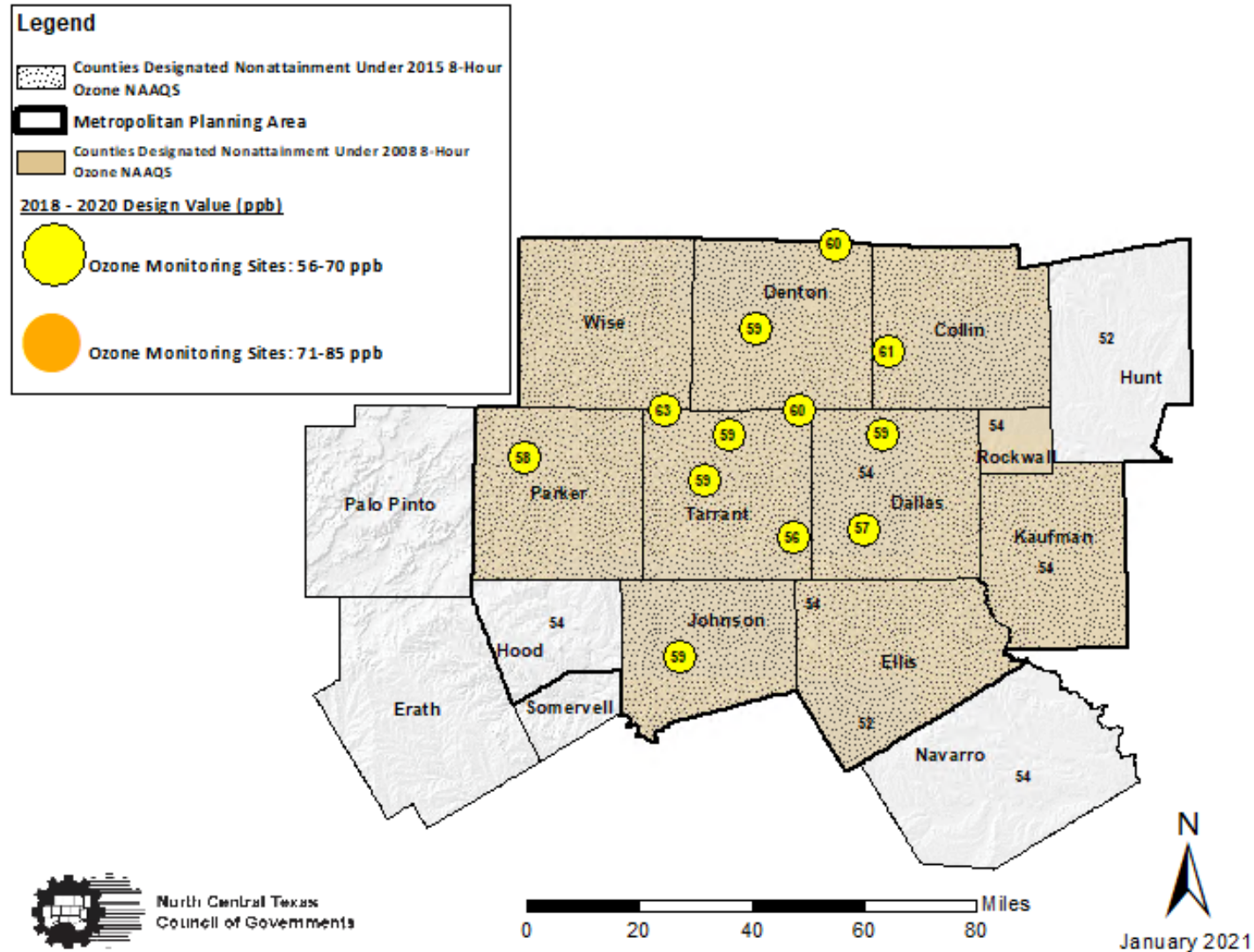
8-HOUR OZONE NAAQS HISTORICAL TRENDS

Based on ≤ 70 ppb (As of January 21, 2021)

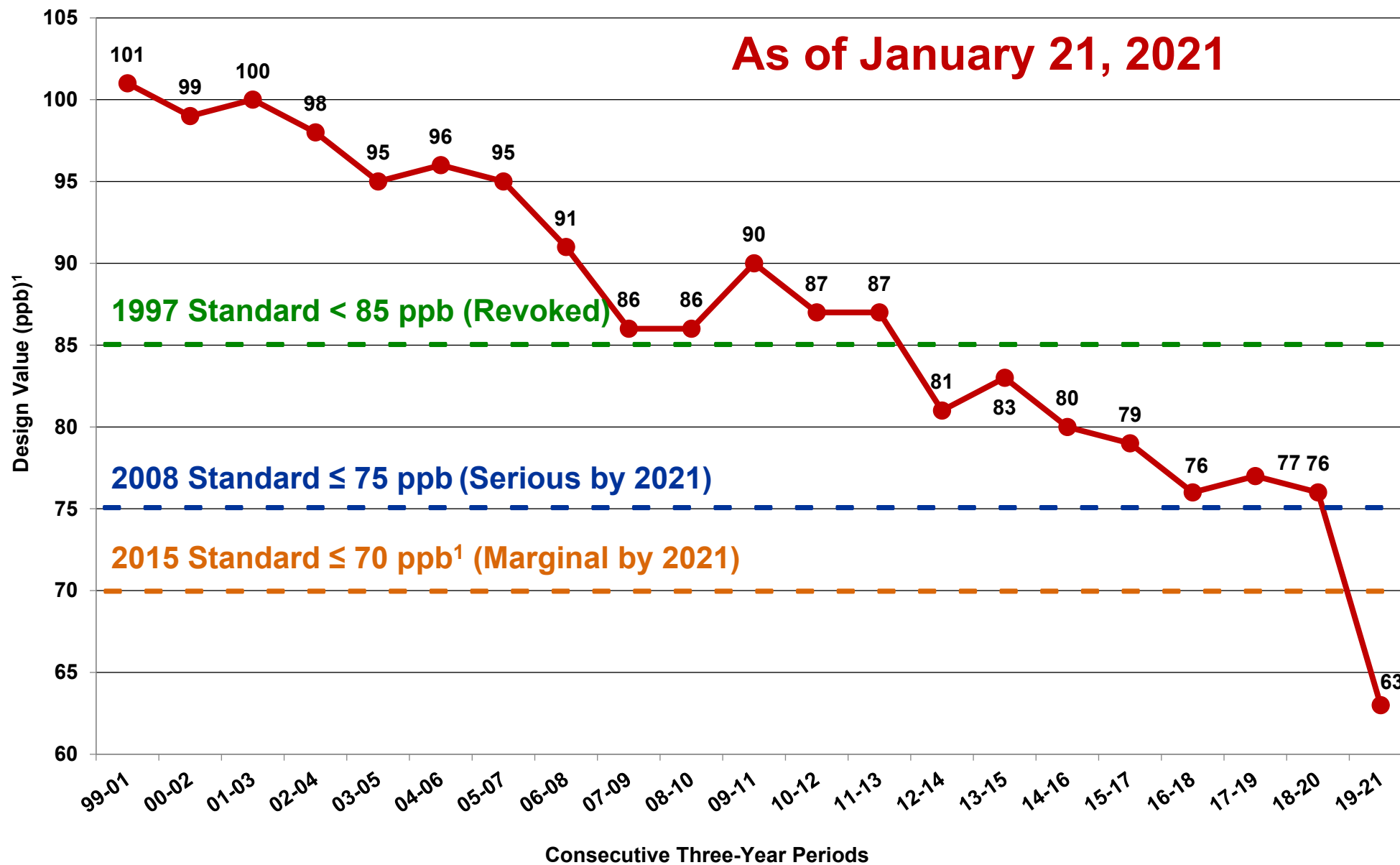


Monitor Locations

2020 Design Value Monitor Readings



8-HOUR OZONE NAAQS HISTORICAL TRENDS



¹Attainment Goal - According to the US EPA National Ambient Air Quality Standards, attainment is reached when, at each monitor, the *Design Value* (three-year average of the annual fourth-highest daily maximum eight-hour average ozone concentration) is equal to or less than 70 parts per billion (ppb).

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<https://www.nctcog.org/trans/quality/air/ozone>

End of Ozone Season, Compliance with Federal Requirements, and Future Outlook

Air North Texas Coalition Meeting • January 21, 2020

Nick Van Haasen, Air Quality Planner



North Central Texas
Council of Governments

Attainment Deadlines

2008 NAAQS Attainment Date (≤ 75 ppb): No later than **July 20, 2021
*Serious Classification***

2015 NAAQS Attainment Date (≤ 70 ppb): No later than **August 3, 2021
*Marginal Classification***

Attainment for Both Standards will be Based on 2018-2020 Ozone Monitor Data (3-Year Average of Fourth Highest Monitor Readings)

Federal Attainment Requirements

Design Value = Regulatory test: 3-Year Average of Fourth Highest Value

Five Highest Monitors	4 th Highest Value for Season			2020 Ozone Season Design Value
	2018	2019	2020	
Grapevine Fairway	82	71	77	76
Frisco	81	76	70	75
Eagle Mountain Lake	75	75	76	75
Dallas North	81	73	69	74
Cleburne	81	73	67	73

Federal Attainment Requirements

Conditional Regulatory Test: 1-year extension

Five Highest Monitors	4 th Highest Value for Season			2020 Ozone Season Design Value
	2018	2019	2020	
Grapevine Fairway	82	71	77	76
Eagle Mountain Lake	75	75	76	75
Frisco	81	76	70	75
Dallas North	81	73	69	74
Cleburne	81	73	67	73

Reclassification Due to Failure to Attain – Stricter Standards

Going from Serious Classification to Severe:

Major source threshold decreased to 25 TPY (from 50 TPY)

Impacts businesses that require CAA permitting for new/continued operations

Penalty fee program for major sources

Per ton penalty fee increase on major sources if the area does not meet required reductions

NSR Emission Offset ratio increased to 1.3:1 (from 1.2:1)

Low VOC reformulated gas

No implications, because our region has already opted in previously

VMT growth offset required

Analysis to see if more transportation control strategies are needed

A continued and thorough assessment of regional implications is ongoing.

VMT Growth Offset

VMT Growth Offset is an additional analysis required due to the reclassification to severe category

This analysis assesses if existing transportation control strategies are sufficient to offset anticipated emission increases due to the VMT growth from a base year to the attainment year

If these do not offset, additional transportation control strategies will be required

Examples: Trip Reduction Strategies such as Telecommuting, that is proving effective during the COVID-19 pandemic, and Workplace Flexibility Programs, Public Transit, Traffic Signal Improvements, Intersection Improvements, and Bike and Pedestrian Improvements

COVID-19 IMPACTS VS AIR QUALITY



0

Bicycle/Pedestrian (+78%, May)

Truck travel time reliability

Speed of traffic and congestion* (+7%, May)

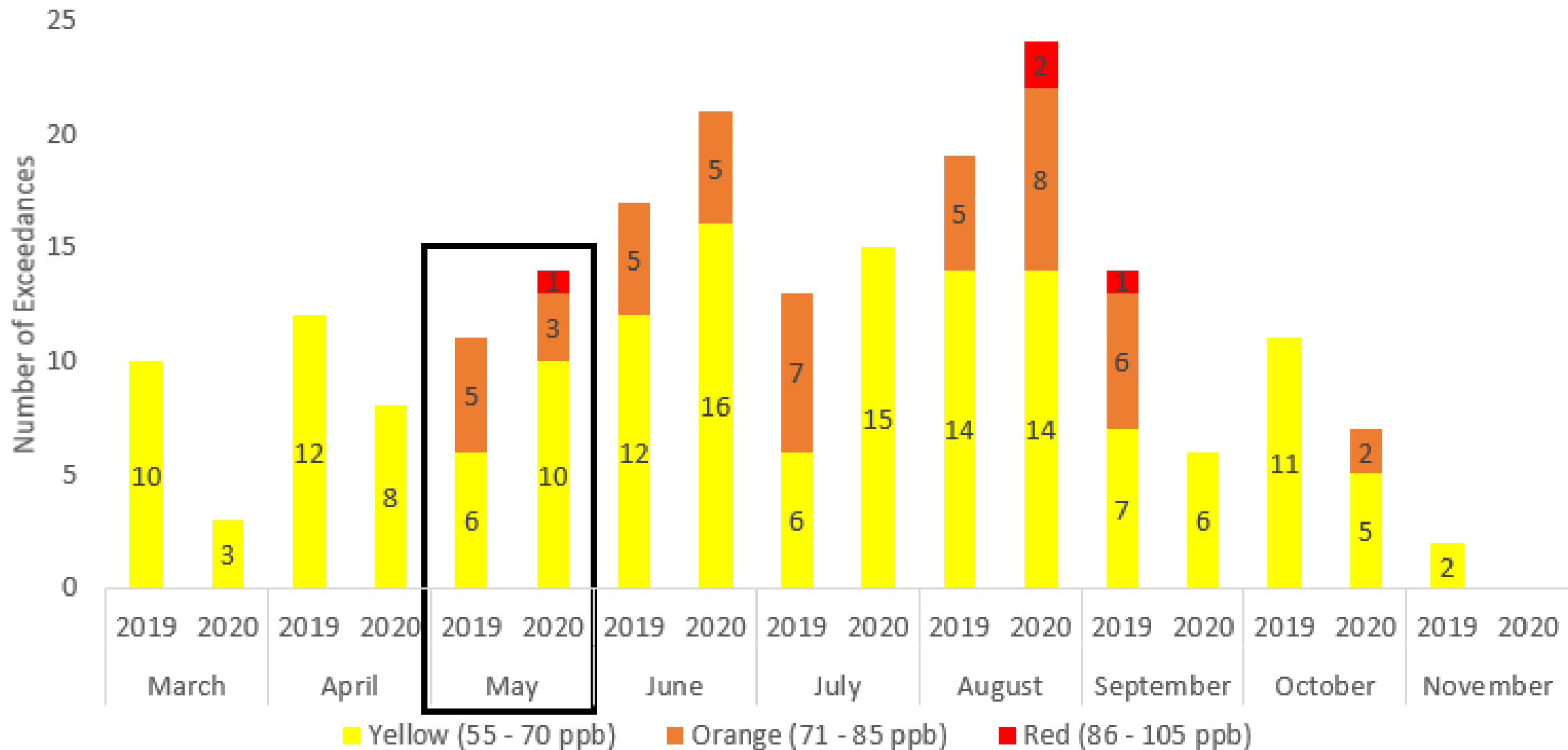
Freeway Volumes (-19%, May)

Airport Passengers (-80%, May)

Transit Ridership (-55%, May)

For more information, please see the Changing Mobility Dashboard:
<https://www.nctcog.org/trans/data/info/measures/transportation-trends-related-to-covid-19>

North Central Texas Ozone Exceedance Comparison: 2019-2020



Ongoing and Future Investigations

Inaccurate ozone alerts for predicted exceedances

Of the 30 ozone action days issued, only 7 of the forecasts were correct

State forecasted 72 ppb for 2020 – actual is 76 ppb

Impacts of background emissions

Nonattainment Boundaries – Multistate air quality plans

Comprehensive Multipollutant Interactions

Unexplained emission increases (May, June, and August)

Potential changing of NOX:VOC stoichiometric ratio

COVID-19 research - Transportation Review Board (TRB), TCEQ, TxDOT

NCTCOG is dedicated to continuing the pursuit of additional and innovative transportation and emission control strategies

Timeline and Milestones

November 30, 2020 – End of 2020 ozone season

March 1, 2021 – Beginning of 2021 ozone season

Official Reclassification of both 2008 and 2015 standards to be determined

Compliance with VMT offsets must be determined by SIP submittal

2008 NAAQS Attainment Date (≤ 75 ppb): No later than **July 20, 2027**

Severe Classification

2015 NAAQS Attainment Date (≤ 70 ppb): No later than **August 3, 2024**

Moderate Classification

FOR MORE INFORMATION

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AIR NORTH TEXAS

CAMPAIGN BI-MONTHLY QUANTIFICATION & SOCIAL MEDIA REPORT

NOVEMBER 5, 2020 – JANUARY 5, 2021

Air North Texas Coalition
January 21, 2021
Zaria Turner, NCTCOG



AIR NORTH TEXAS WEB ANALYTICS

Visits

1,379

Increased

By 10% compared to 2020.

Avg. Time

1:00

Decreased

By 1:54 seconds compared to 2020.

Pageviews

1,927

Decreased

By 18% compared to 2020.

New Visits

1,134

Increased

By 48% compared to 2020.



VISITS BY DEVICE



647

2% decrease
compared to 2020



53

83% increase
compared to 2020



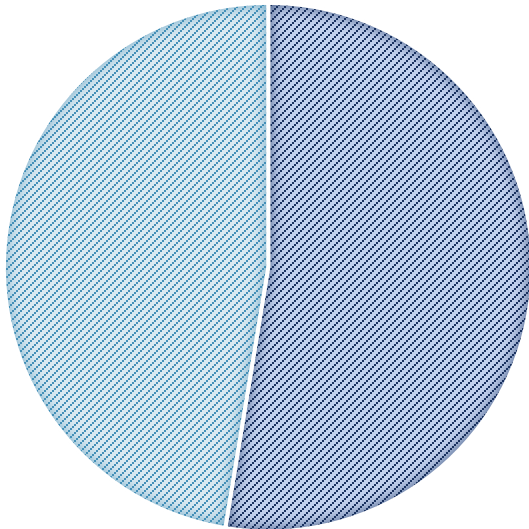
679

22% increase
compared to 2020

VISITOR DEMOGRAPHICS

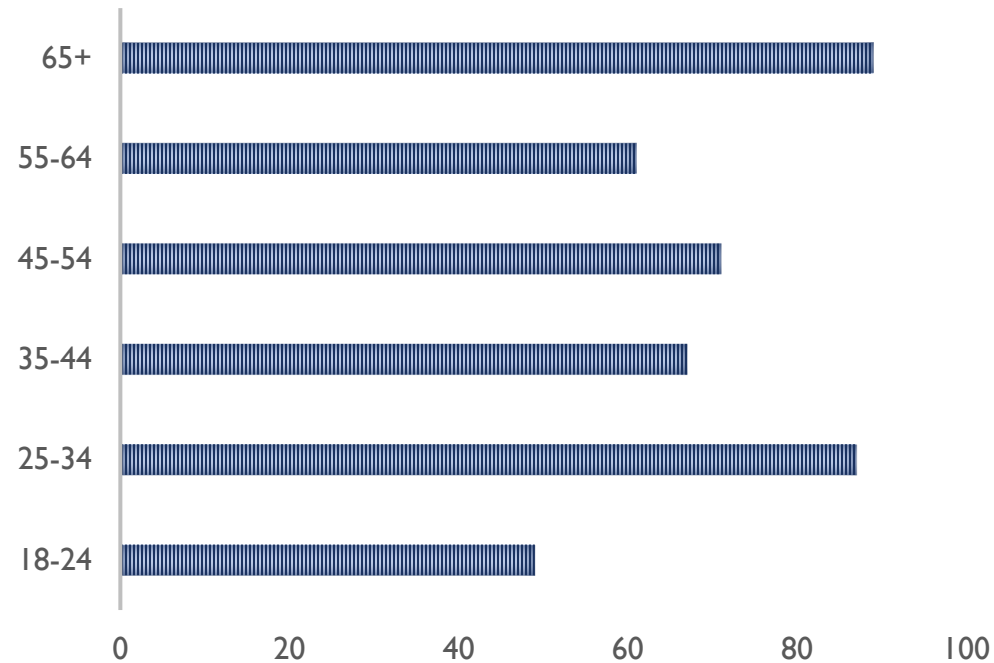
GENDER

■ Women ■ Men



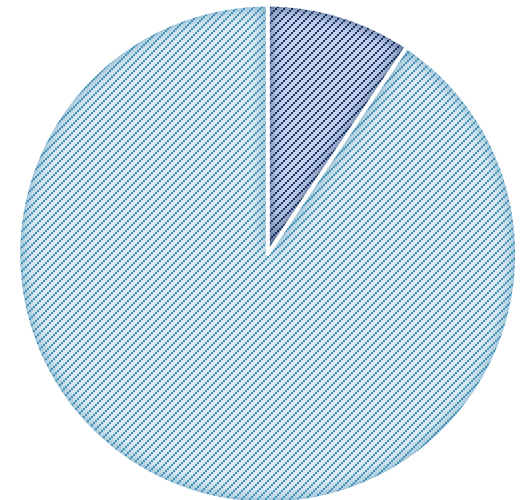
AGE

■ Age

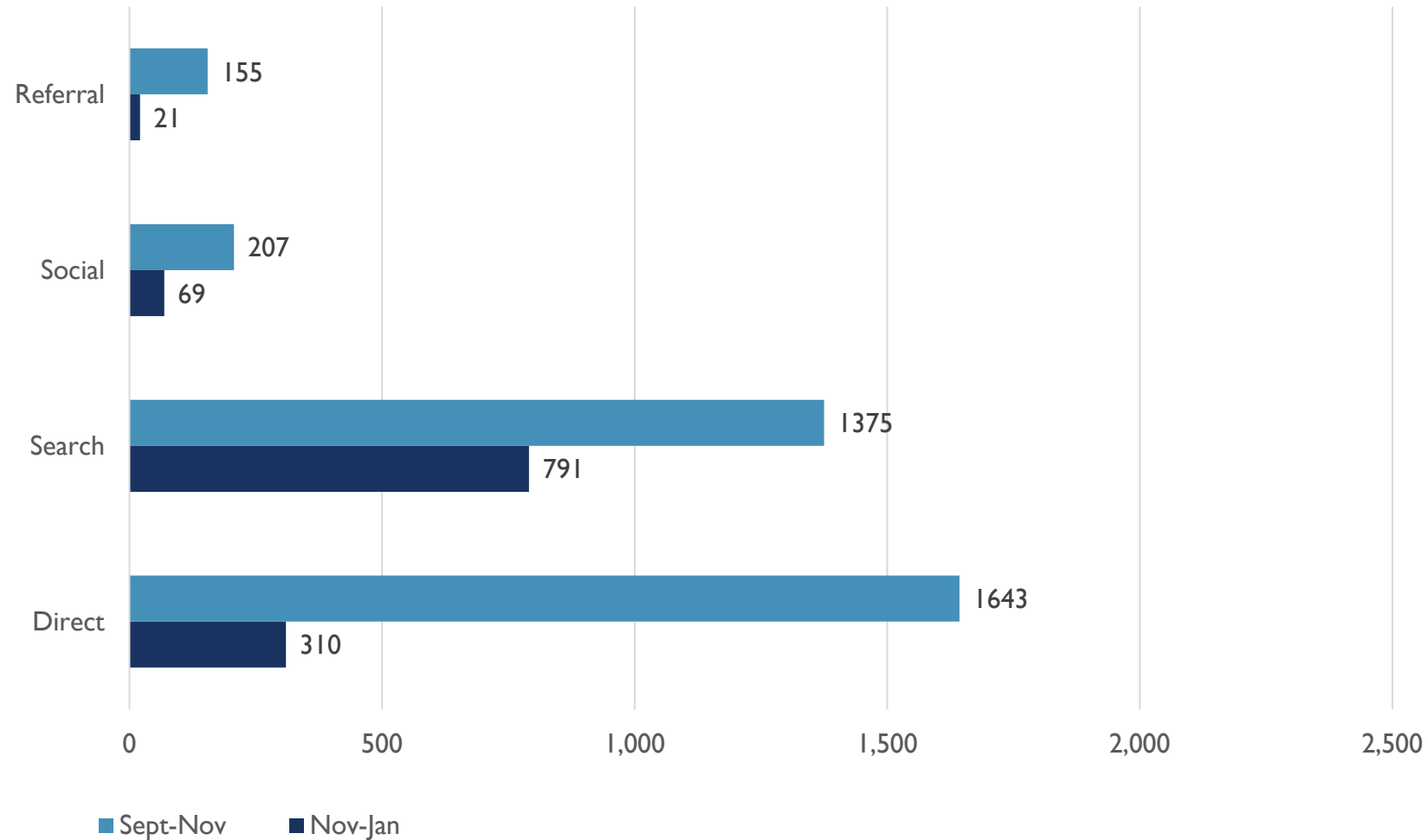


VISITORS

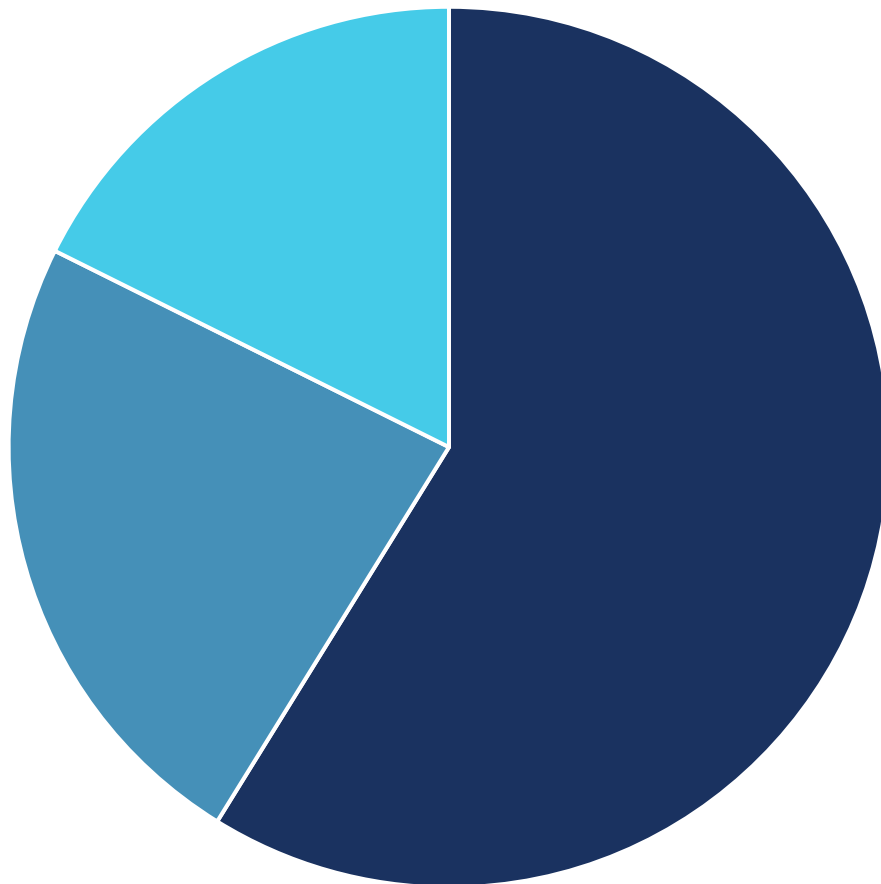
■ Returning Visitors ■ New Visitors



HOW VISITORS FOUND AIR NORTH TEXAS

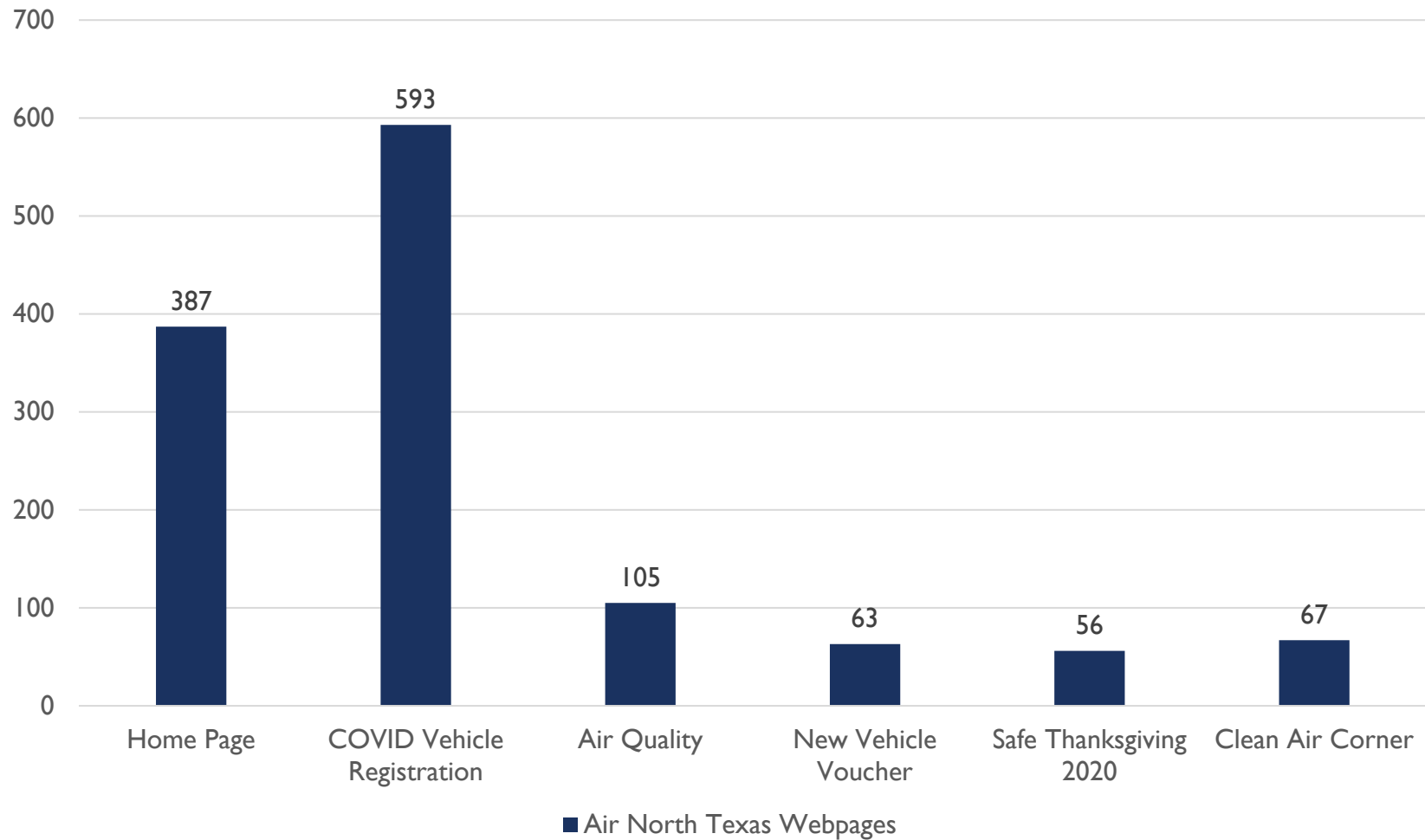


TOP DIRECTED SITES



- City of Dallas
- City of Garland
- Denton County

TOP PAGES VIEWED





GoGreenGarland
@GoGreenGarland

Have you or will you purchase or lease an electric vehicle between 09/01/2019 and 01/07/2021? You may be eligible for rebates! Visit bit.ly/34jCaHC and bit.ly/388VsAs to learn more and take advantage of this awesome program.

#AirNTX #ElectricVehicles

**Ready for an
Electric Vehicle?**



Texans can save
an additional \$10,000*

Learn More At



GoGreenGarland

@GoGreenGarland Follows you





City of Denton Sustainability

November 23, 2020 · 🌐

...

Colder temperatures reduce the risk of Ozone Action Days because the chemical reactions that create ground level Ozone are less likely to occur. Other types of air pollution can still occur so do your part to improve air quality by driving less, planting trees, conserving water and energy. #AirNTX #Arlo #sustainabledenton



City of Denton Sustainability

@sustainabledenton · Government Organization





City of Grand Prairie - Municipal Government

@cityofgptx · Government Building



As winter arrives, indoor air pollution is a major concern. Gas from boilers and cookers releases nitrogen oxides (NOx) that can exacerbate respiratory conditions. It's important to maintain boilers regularly and always use an extractor fan when cooking. #AirNTX #StaySafe

Common Indoor Air Problems



6:05 PM · Nov 23, 2020 · Hootsuite Inc.



Grand Prairie, TX
@gp_tx

Arlo is excited about the turn of a New Year and a chance to live a new, healthy lifestyle. Find ways to make clean air choices at airnorthtexas.org. #AirNTX

January



Happy New Year!

Resolve to live a more sustainable lifestyle this new year, with help from Arlo!

1:00 PM · Jan 1, 2021 · Hootsuite Inc.



Grand Prairie, TX
@gp_tx

Arlo the Armadillo reminds you to use LED lights instead of incandescent for your holiday décor. LEDs consume far less electricity than incandescent bulbs. #AirNTX

December



It's the most wonderful time of the year! Make it even better by using LED lights instead of incandescent for your holiday décor.



Grand Prairie, TX
@gp_tx

Lately, the world's biggest threats have been microscopic in size, not giving our lungs a break! Air pollution continues to be one of the leading causes of death worldwide. This image shows how coronavirus compares to the world's smallest particles. #AirNTX #StaySafe



12:02 PM · Nov 13, 2020 · Hootsuite Inc.





#AirNTX

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Air North Texas Coalition Web Page:

<https://www.nctcog.org/trans/about/committees/air-north-texas-coalition>





Air Quality Health Monitoring Task Force

January 21, 2021

Dorothy Gilliam – North Central Texas Council of Governments (NCTCOG)



North Central Texas
Council of Governments

Goals & Objectives



- ▶ Convene a task force of government representatives, health officials, academic representatives and air quality experts to evaluate regional data that may indicate areas of need for additional air quality improvement or strategies.



- ▶ Through the task force we hope to facilitate peer exchange and evaluate where more work associated with the health implications of traffic-related air pollution may be needed.

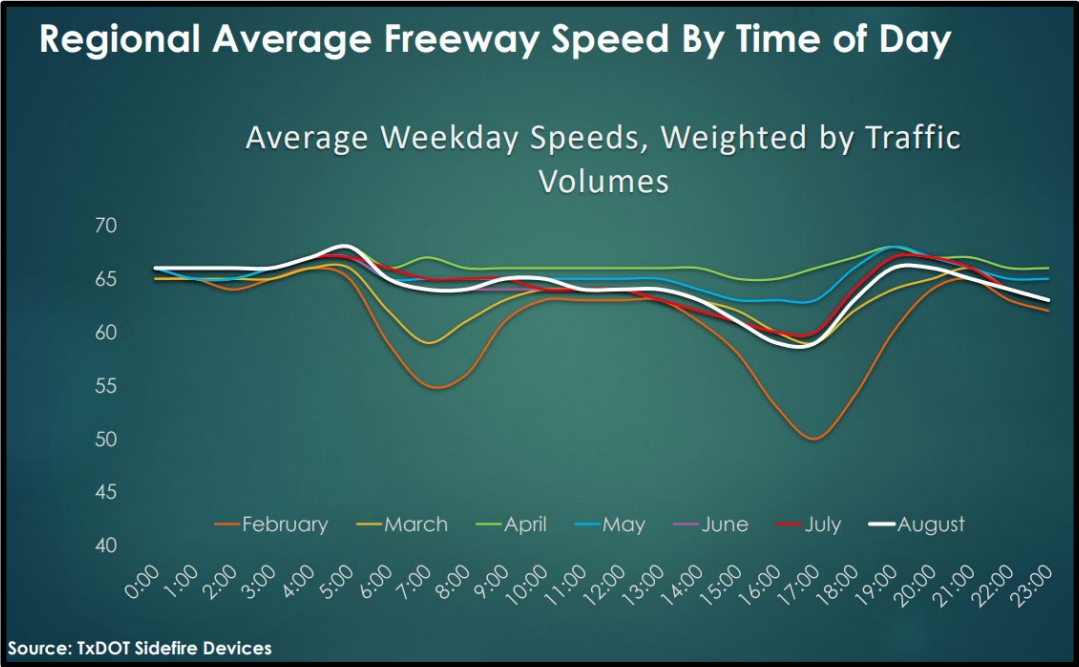
2021 Quarterly Task Force Meeting Schedule*			
February 26	May 21	August 20	November 12

***virtual meetings from 9:30 am – 11:30 am CST**

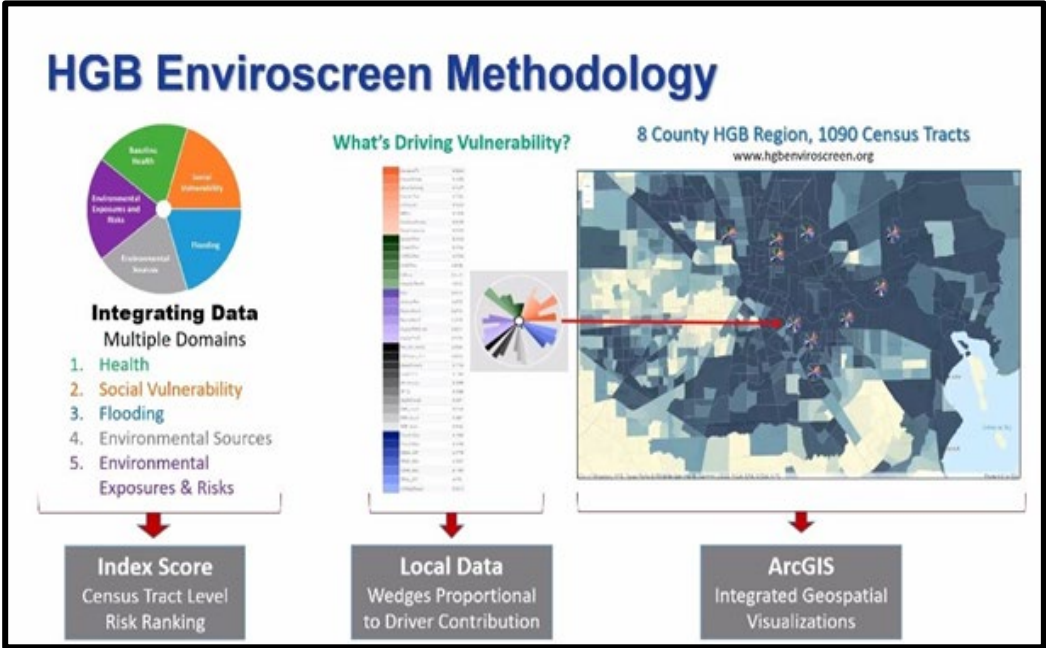
Previous Task Force Meetings

Content of our previous task force meetings included the following topics:

Effects of COVID-19 on Transportation and Air Quality Trends NCTCOG




HGB EnviroScreen Tool Environmental Defense Fund (EDF)




Previous Task Force Meetings

EPA Co-Benefits Risk Assessment (COBRA) Tool Environmental Protection Agency (EPA)



What health effects does COBRA estimate and what are their economic values?

Health Incidence Avoided	Economic Value (\$2017)	
	3% discount rate	7% discount rate
Adult Mortality*	\$10,040,738	\$8,943,125
Infant Mortality	\$11,191,541	\$11,191,541
Non-Fatal Heart Attacks*	\$39,174 - \$309,825	\$37,2038 - \$297,494
Hospital Admissions	\$17,707 - \$47,652	\$17,707 - \$47,652
Asthma ER Visits	\$457 - \$547	\$457 - \$547
Acute Bronchitis	\$556	\$556
Respiratory Symptoms (upper + lower)	\$24 - \$39	\$24 - \$39
Asthma Exacerbations	\$67	\$67
Minor Restricted Activity Days	\$77	\$77
Work Loss Days	\$178	\$178



*Discounted due to time lag between PM_{2.5} exposure and health outcome.

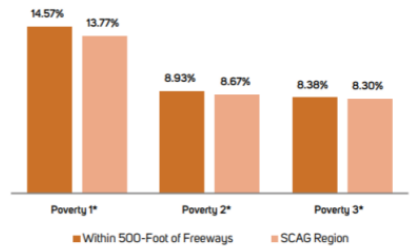
Nondiscrimination Analysis for Long-Range Planning NCTCOG

Reference for selecting 125,000 VPD metric

Population neighboring roadways with >125,000 VPD – focus on PM, CO

2012

FIGURE 72 Breakdown of Poverty Households along Freeways and Highly Traveled Corridors (Base Year 2012)

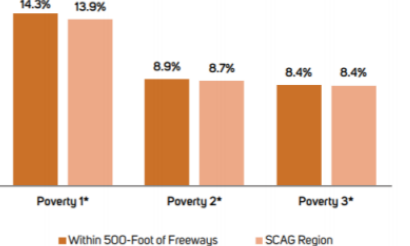


Poverty Category	Within 500-Foot of Freeways	SCAG Region
Poverty 1*	14.57%	13.77%
Poverty 2*	8.93%	8.67%
Poverty 3*	8.38%	8.30%

Source: SCAG

2040

FIGURE 73 Breakdown of Poverty Households along Freeways and Highly Traveled Corridors (2040 Plan)



Poverty Category	Within 500-Foot of Freeways	SCAG Region
Poverty 1*	14.3%	13.9%
Poverty 2*	8.9%	8.7%
Poverty 3*	8.4%	8.4%

Source: SCAG

Poverty 1 is households < poverty; Poverty 2 is households 100%-149% poverty; Poverty 3 is households 150%-199% poverty

http://scagrtpsc.net/Documents/2016/final/f2016RTPSCS_EnvironmentalJustice.pdf

Request for Health Data

NCTCOG Known Data Sources:

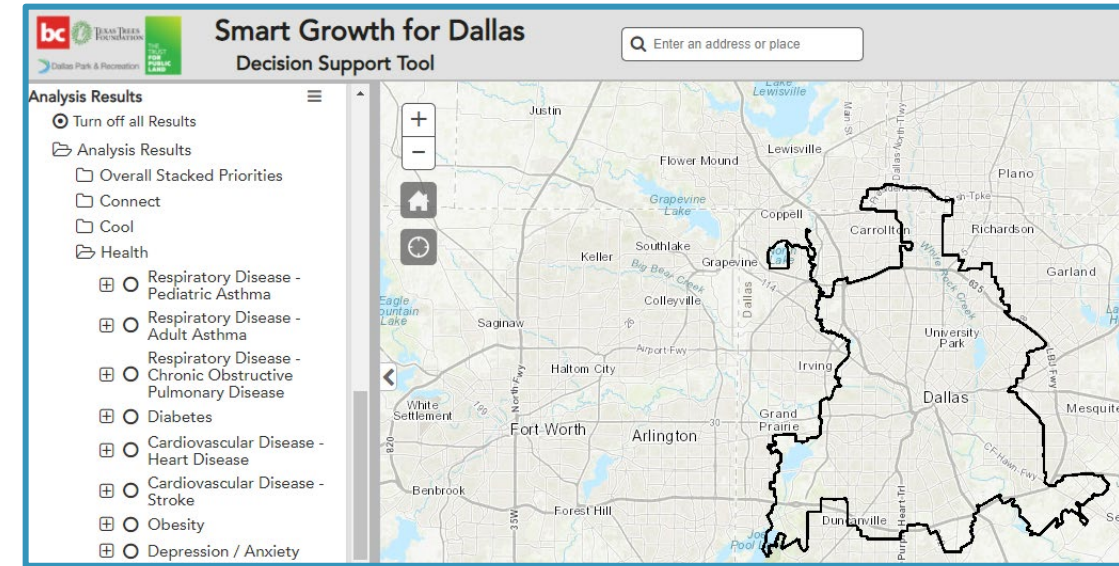
★ Texas Department of State Health Services
Asthma Hospitalization and Outpatient Data

★ Smart Growth for Dallas Tool

- https://web.tplgis.org/smart_growth_dallas/

★ Dallas County Community Health
Needs Assessment

- <https://www.parklandhospital.com/Uploads/Public/Documents/PDFs/Health-Dashboard/CHNA%202019.pdf>



We are look for Health Data!

Daily, weekly or monthly asthma occurrence
data by city or smaller geographic scale

University Partnership Project

Through the NCTCOG University Partnership Program, the University of Texas Arlington is contracted to conduct a study over Air Quality Monitoring Strategies and Modeling of Chronic Health Risks Related to Traffic-Related Air Pollution. Project updates are presented at various Task Force meetings for participant feedback on project efforts.



Project Goals

- *Identify state-of-the art tools and state-of-the-practice strategies for crowd-sourced or dispersed air quality monitoring*
- *Identify data sources to synthesize with air quality data to assess health outcomes*
- *Model health outcomes using air quality, transportation, and other confounding effects*
- *Analyze implementation issues and recommend strategies for future data collection and analysis*

PM low-cost sensors

Vendors and Sensors	PurpleAir PA-II	Alphasense OPC-N3	Dylos DC1100-PRO	Sensirion Nubo	Clarity Node	Sensirion SPS30
Technology	Optical particle counting + laser beams to figure PM type			Laser scattering from advanced	Laser Particle Counter	
Agency	11 states	AQSPEC* EPA	WI AQSPEC EPA	AQSPEC Washington State Department of Ecology		
Data records	Wifi	USB or micro-SD to PC	USB to PC	2G/3G cellular modem to cloud	Wifi or cellular	Connect to PC
Linearity (PM _{2.5})	> 96%	41% to 69%	45%	91%	75%	80%
Maintenance	Not required but visual inspection recommended (removal of spider web)	Minimal maintenance (OPC-N2)	Ease of operation	Low system costs with reliable technology and maintenance (may be required once per year)	Easy to use \$600 annual subscription to access data	-Long lifetime (> a decade) -No need for cleaning and maintenance
Capital Cost	\$229	\$338	\$289.99	\$2000	\$1300	\$100

*Air Quality Sensor Performance Evaluation Center

Our recommendation

<https://www.sensirion.com/de/umwelt/low-cost-sensors/> (accessed on Aug 19, 2020)
 <http://www.aqmd.gov/aq-spec/evaluations/summary-pm> (accessed on Jun 9, 2020)
 <https://www2.purpleair.com/collections/air-quality-sensors/products/purpleair-pa-ii> (accessed on Jun 9, 2020)
 <https://www.isweek.com/product/alphasense-pm2-5-particle-sensor-opc-n2-1828.html> (accessed on Aug 18, 2020)
 EPA (2014), Evaluation of Field-Deployed Low Cost PM Sensors
 Alphasense (2019), OPC-N3 Particle Monitor Technical Specification

<http://www.aqmd.gov/aq-spec/evaluations/summary-pm> (accessed on Apr 23, 2020)

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**Access
Previous Meeting
Materials!**

Visit the **NCTCOG Air Quality Health Task Force** Webpage

<https://nctcog.org/trans/about/committees/aq-health-monitoring-task-force>

