

NCTCOG PRESENTATION

# Advancing Transportation Technologies and Innovative Program

Regional Transportation Council  
1.11.2024

Natalie Bettger  
Senior Program Manager

# Advanced Transportation Technology and Innovation (ATTAIN) Program

- Continuation of Advanced Transportation and Congestion Management Technologies Deployment (ATCMTD) program
- \$120M ((\$60 million for FY 2023 and \$60 million for FY 2024). Rural Set-Aside of 20%.
- 5-10 awards up to \$12M apiece
- 20 percent local match required
- NOFO issued 11/24/23
- Applications due: 02/02/24



# ATTAIN Program Goals

- Reduced fatalities and injuries and increased safety
- Reduced traffic delays/improved travel time reliability
- Reduced emissions
- Optimized multimodal system performance
- Improved access to transportation alternatives
- Integration of payment systems
- Integrated multimodal transportation information
- Transportation-related cost savings



# Regional Operations Related Issues

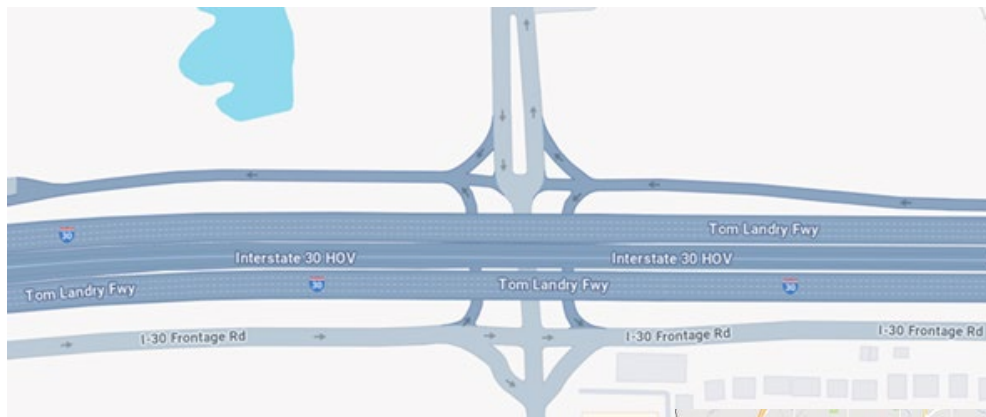
- Silo-based operations
- Minimal real time information sharing
- Lack of regional operations coordination and cooperation
- Many stand-alone proprietary systems
- Lack of coordinated regional technology deployment
- Lack of regional coordinator



# NCTCOG System of Systems Phase 1, IH 30 Digital Corridor

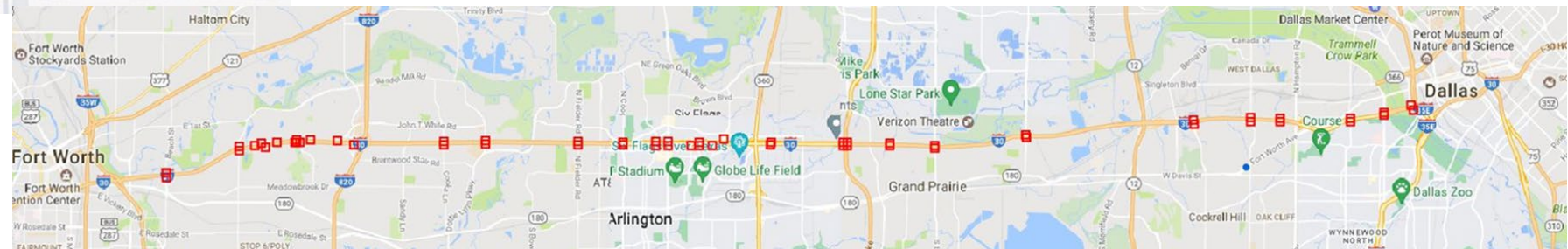
## Project Area:

- I-30 from Dallas to Fort Worth
  - Mainline freeway, frontage roads, managed lanes, and 56 intersections
  - Cities of Dallas, Grand Prairie, Arlington, and Fort Worth
  - TxDOT Dallas and Fort Worth Districts

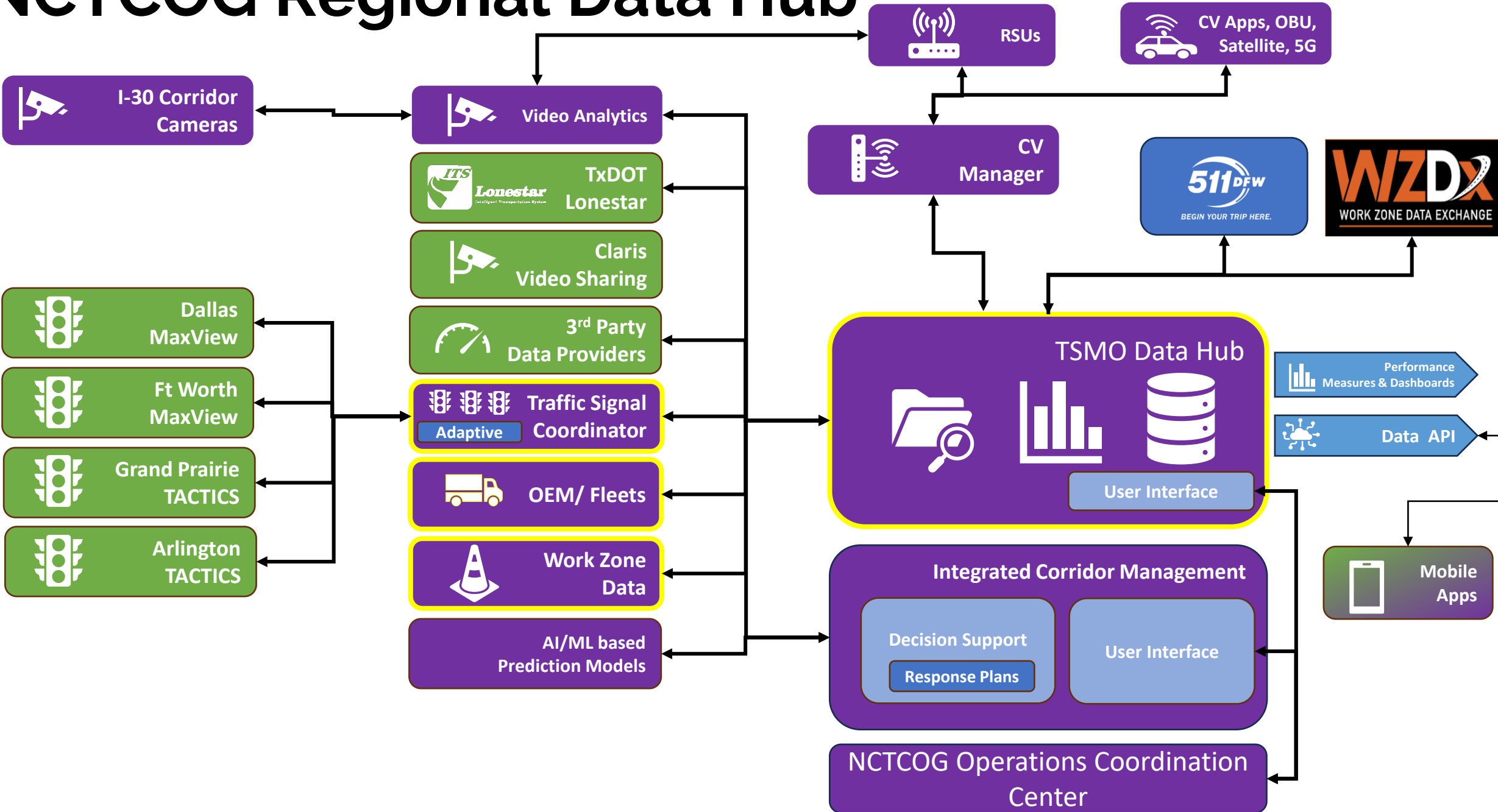


## Bigger Picture:

- Regional perspective with corridor focus
- Innovative regional operations
- Proactive management -digital infrastructure (Forecasting / AI / ML)
- Open architecture concept
- Standards compliance
- Inter-operability
- End user connectivity
- No more pilots, operational system



# NCTCOG Regional Data Hub



# Schedule

~~12/08/23: STTC Information~~

~~12/14/23: RTC Information~~

01/11/24: RTC Action

01/25/24: NCTCOG Executive Board Action

01/26/24: STTC Endorse RTC Action

NCTCOG letters of support requests due: 01/22/2024

Contact: [Nicholas Allen](#)



# REQUESTED RTC ACTION

- Request RTC approval of:

Submittal of Regional Technology Corridor and Data Hub for funding consideration through the FY23 Advanced Transportation Technology and Innovation (ATTAIN) Program (\$10M) and Regional Toll Revenue (RTR) (\$6M) for a total of (\$15M)

Administratively amend NCTCOG and State Transportation Improvement Programs (TIP / STIP), as well as other planning and administrative documents, to include the proposed project if selected for an FY23 ATTAIN Grant total award (\$16M)





# Contacts



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# REBUILDING AMERICAN INFRASTRUCTURE WITH SUSTAINABILITY & EQUITY (RAISE) GRANT PROGRAM – FY 24



**JEFFREY C. NEAL – SENIOR PROGRAM MANAGER**

**REGIONAL TRANSPORTATION COUNCIL (RTC) – INFORMATION ITEM – January 11, 2024**

# NCTCOG Federal Grant Applications

## FY 23 Awarded Projects – Through January 2024

Grant Program	Application (Project) Name	Award Received
Rebuilding American Infrastructure with Sustainability & Equity (RAISE) Program	<b>1) East Lancaster Avenue Complete Streets &amp; Transit Technology</b> <b>2) Cotton Belt/Silver Line Trail Critical Sections (DART)</b>	1) \$ 20M 2) \$ 25M
Safe Streets & Roads for All (SS4A): Planning/Demonstration Grants	<b>Advancing Regional Safety in the Dallas-Fort Worth Region</b>	\$ 5M
Safe Streets & Roads for All (SS4A):: Implementation Grants	<b>MLK, Jr./Cedar Crest Boulevard Complete Street &amp; Safety Upgrades (City of Dallas)</b>	\$ 21.8M
Buses/Bus Facilities & Low-/No-Emissions Bus Grant Programs	<b>Compressed Natural Gas (CNG) Bus Fleet Modernization Project (DART)</b>	\$ 103M
Corridor Identification & Development (ID) Program: High-Speed Rail (HSR)	<b>1) Fort Worth – Houston HSR Corridor</b> <b>2) Texas HSR Corridor: Dallas – Houston (Amtrak)</b>	1) \$ 500K 2) \$ 500K
Corridor Identification & Development (ID) Program: Conventional Rail	<b>1) Texas Triangle: FTW-Dallas-Houston Intercity Passenger Rail (TxDOT)</b> <b>2) IH 20 Corridor Intercity Passenger Rail (Southern Rail Commission)</b>	1) \$ 500K 2) \$ 500K
Charging & Fueling Infrastructure (CFI) Program: Community	<b>North Texas Equitable Electric Vehicle Infrastructure (NTx-EEVI) Project</b>	\$ 15M
Charging & Fueling Infrastructure (CFI) Program: Corridor	<b>Texas Hydrogen &amp; Electric Freight Infrastructure (Tx-HEFTI) Project</b>	\$ 70M

# NCTCOG Federal Grant Applications *(cont.)*

## FY 23 Pending Announcements – Status Update

Grant Program	Application (Project) Name	Award Request	Status
Dept. of Energy/Transportation "Ride & Drive Electric" Program	<b><i>Planning Resilient Electric Vehicle (EV) Charging in Texas</i></b>	\$ 1.5M	Selection expected <b>Jan 2024</b>
Multimodal Projects Discretionary Grant (MPDG) Program: INFRA/MEGA/RURAL	<b><i>1) INFRA – AllianceTexas Smart Port (Fort Worth)</i></b> <b><i>2) MEGA – US 81/287 North Tarrant Reconstruction</i></b> <b><i>3) INFRA/RURAL – Dallas County Inland Port (DCIP) Multimodal Connectivity</i></b>	1) \$ 80M 2) \$ 115.44M 3) \$ 45M	Selection expected <b>Jan/Feb 2024</b>
Reconnecting Communities and Neighborhoods (RCN) Program: Implementation Grants	<b><i>Bridging Highway Divides for DFW Communities:</i></b> <i>a) Klyde Warren Park – Phase 2.0 (KWP2.0)</i> <i>b) Southern Gateway Park – Phase 2.0 (SGP2.0)</i> <i>c) IH 30 Canyon: Dallas Heritage Village/Farmers Market "Tri-Deck"</i> <i>d) SH 5 McKinney – Lower 5 Plaza</i>	\$ 95M	Selection expected <b>Jan/Feb 2024</b>
EPA Diesel Emissions Reduction Act (DERA): National Grants Program	<b><i>North Texas Diesel Emissions Reduction (NTDER) Project</i></b>	\$ 3M	Selection expected <b>Mar 2024</b>
Strengthening Mobility & Revolutionizing Transportation (SMART) Grant Program	<b><i>North Texas Minimum Viable Unmanned Traffic Management Infrastructure</i></b>	\$ 2M (Stage 1)	Selection expected <b>Apr 2024</b>

*Post-submittal inquiries from USDOT received & addressed – usually indicates advancement to higher state of review.*

# Current Programs (Eligible for MPO/Locals) – January 2024

## Notice of Funding Opportunity (NOFO) Release Has Occurred – ACTIVE

- **All Stations Accessibility Program**
  - NOFO released on 11/30/2023; *Applications due 01/30/2024*
- **Advanced Transportation Technology & Innovation (ATTAIN) Program – Item #5**
  - NOFO released on 11/20/2023; *Applications due 02/02/2024*
- **Local & Regional Project Assistance Program (RAISE)**
  - NOFO released on 11/30/2023; *Applications due 02/28/2024*
- **Bridge Investment Program (BIP) – Planning & Bridge Project (< \$100M) Grants**
  - NOFO released on 12/20/2023; *Applications due 03/19/2024*
- **Climate Pollution Reduction Grant (CPRG) Program: Implementation Grants – Item #7**
  - NOFO released on 9/20/2023; *Climate Action Plan due 03/01/2024; Applications due 04/01/2024*
- **Port Infrastructure Development Program (PIDP)**
  - NOFO released on 12/27/2023; *Applications due 04/30/2024*

**RED** – NCTCOG not anticipated to lead in project applications for the program this year.

**GREEN** – NCTCOG anticipated to lead in one or more project applications for this program. Candidate projects presented for information or action during this month's RTC meeting.

**BLACK** – Consideration by NCTCOG to lead/participate in one or more project applications is ongoing. Expect potential candidates to be discussed at upcoming meetings.

# Upcoming Programs (Eligible for MPO/Locals) – January 2024

## Expected NOFO Releases Through 1<sup>st</sup> Quarter 2024 – PENDING

- **Railroad Crossing Elimination Program (RCEP)**
  - NOFO expected January 2024; *Applications due April 2024*
- **Innovative Finance & Asset Concession Program**
  - NOFO expected January 2024; *Applications due April 2024*
- **Consolidated Rail Infrastructure & Safety Improvement (CRISI) Grant Program**
  - NOFO expected January 2024; *Applications due April 2024*
- **Buses/Bus Facilities & Low-/No-Emissions Bus Grant Programs**
  - NOFOs expected January 2024; *Applications due April 2024*
- **Active Transportation Infrastructure Investment Program (ATTIP)**
  - NOFO expected January/February 2024; *Applications due April 2024*
- **Safe Streets & Roads for All (SS4A) Grant Program**
  - NOFO expected February 2024; *Applications due May 2024*
- **Federal-State Partnership for Intercity Passenger Rail Grant Program – National**
  - NOFO expected February 2024; *Applications due May/June 2024*

# FY 24 Local & Regional Project Assistance (RAISE) Program

## Solicitation Overview – Notice of Funding Opportunity (NOFO)

### Funding Availability\*

**\$75 Million**  
Planning Grants

**\$1.425 Billion**  
Capital Grants

**50% / 50%**  
Urban / Rural Areas

### Cost Sharing (Federal)

**Up to 80%**  
Urban Areas

**Up to 100%**

- a. Rural Areas
- b. Areas of Persistent Poverty
- c. Historically Disadvantaged

### Maximum Award\*

**\$25 Million**  
– per Project (All)

**\$225 Million**  
– per State (≤ 15%)

### Minimum Award

**\$5 Million**  
Urban Areas (Capital)

**\$1 Million**  
Rural Areas (Capital)

**No Minimum**  
Planning Grants

### Other Details

FY 23 RCN “Reconnecting Extra” projects with “recommended” overall merit rating & at least one “high” merit criteria score will automatically advance to FY 24 RAISE 2<sup>nd</sup> tier review analysis.

**Application Limit** = Three (3) per Lead Agency

For planning/budget purposes, NOFO provides application, award, obligation, & expenditure deadlines for **FY 24-26 RAISE funding**:

#### FY 24:

**Application Deadline – February 28, 2024**  
**Award Announcement – June 27, 2024**  
**Obligation Deadline – September 30, 2028**  
**Expenditure Deadline – September 30, 2033**

#### FY 25:

Application Deadline – January 13, 2025  
 Award Announcement – June 28, 2025  
 Obligation Deadline – September 30, 2029  
 Expenditure Deadline – September 30, 2034

#### FY 26:

Application Deadline – January 13, 2026  
 Award Announcement – June 28, 2026  
 Obligation Deadline – September 30, 2030  
 Expenditure Deadline – September 30, 2035

### Applicant Eligibility

1. State / Territorial Government (*or political subdivision*)
2. Metropolitan Planning Organization (MPO)
3. Local / Tribal Government (*or political subdivision*)
4. Public Agency / Chartered Authority
5. Public Special Purpose District (*including Port*)
6. Multi-Jurisdictional Group of Above Entities

**BIL – Bipartisan Infrastructure Law**  
**RCN – Reconnecting Communities & Neighborhoods Grant Program**

### Project Eligibility

1. Highway, Bridge, or Road (*Title 23*)
2. Public Transportation (*Chapter 53 of Title 49*)
3. Passenger / Freight Rail / Intermodal
4. Port Infrastructure (*incl. inland / land ports of entry*)
5. Airport Surface Transportation (*pt. B, subtitle VII, Title 49*)
6. Stormwater Improvement (*aquatic species habitat*)
7. Tribal Surface Facility (*vested Federal title / maintenance*)
8. TOD / Non-Motorized / Mobility On-Demand

**\* Current NOFO only includes BIL funding/requirements. If FY 24 Appropriations, or other subsequent Acts, provide extra funding or significantly alter requirements, USDOT will release amended NOFO.**

# FY 24 Local & Regional Project Assistance (RAISE) Program *(cont.)*

## Candidate Project List & Details – DRAFT

PROJECT				COST/FUNDING BREAKDOWN						
TITLE	DESCRIPTION/LIMITS	NEW?	E/W	NON-FEDERAL			FEDERAL			TOTAL COST
				NCTCOG/ TxDOT	Local/Private	%	NCTCOG/ TxDOT	RAISE Grant	%	
<b>FY 24 RAISE CANDIDATE PROJECTS – NCTCOG <i>(may be lead or co-applicant)</i></b>										
<b>Southern Gateway Park – Phase 2.0 (SGP2.0)</b>	Construct foundational structural, safety, multimodal transport, & hardscape elements to expand SGP to IH 35E/Marsalis Avenue bridge.	<b>NO</b> <i>(FY 23 RAISE)</i>	<b>EAST</b>	\$5,000,000 <sup>1</sup>	\$15,000,000 <sup>2</sup>	<b>30%</b>	\$12,000,000 <sup>3</sup>	<b>\$35,000,000</b>	<b>70%</b>	<b>\$67,000,000</b>
<b>Klyde Warren Park – Phase 2.0 (KWP2.0)</b>	Construct foundational structural, safety, multimodal transport, & hardscape features for West Lawn Deck & Pavilion Deck/2 <sup>nd</sup> Level Plaza.	<b>NO</b> <i>(FY 22/23 RCN &amp; FY 23 RAISE)</i>	<b>EAST</b>	N/A	\$23,045,600 <sup>4</sup>	<b>29%</b>	\$36,800,000 <sup>5</sup>	<b>\$20,000,000</b>	<b>71%</b>	<b>\$79,845,600</b>
<b>Dallas County Inland Port (DCIP) Multimodal Connectivity</b>	Rebuild Belt Line Rd. (Lancaster Hutchins Rd. – East of Mason Rd.) & Sunrise Rd. (Belt Line Rd. – Loop g) to 4-lane arterials w/ side paths for better mobility & accessibility.	<b>NO</b> <i>(FY 23 INFRA/RURAL)</i>	<b>EAST</b>	N/A	\$16,995,000 <sup>6</sup>	<b>21%</b>	\$20,530,000 <sup>7</sup>	<b>\$45,000,000</b>	<b>79%</b>	<b>\$82,525,000</b>
<b>US 377/SH 144 Reconstruction Project - Granbury</b>	Rebuild US 377 to 6-lanes from Pirate Dr. to Overstreet Blvd., plus SH 144 interchange upgrades, serving safety, mobility, access, & drainage needs.	<b>YES</b>	<b>WEST</b>	\$25,400,000 <sup>8</sup>	N/A	<b>20%</b>	\$76,600,000 <sup>9</sup>	<b>\$25,000,000</b>	<b>80%</b>	<b>\$127,000,000</b>

**Designated by USDOT as FY 23 RAISE “Project of Merit” – Resubmittal guaranteed for automatic advancement to FY 24 RAISE 2<sup>nd</sup> tier review analysis.**

**NOTES – Engineering (E); Right-of-Way Acquisition (R); Utility Relocation (U); Construction (C):**

1-7. Same as FY 23 MPDG, RAISE, or RCN Program applications

8. RTC/TxDOT (Existing) - \$5,000,000 (E) in Category 2 funds; RTC/TxDOT (New) - \$20,400,000 (R, U, C) in Category 2/4 funds via future Unified Transportation Program (UTP) allocations

9. RTC/TxDOT (Existing) - \$20,000,000 (R, U, C) in Category 2 funds; RTC/TxDOT (New) - \$56,600,000 (R, U, C) in Category 2/4 funds via future UTP allocations



# **FY 24 Local & Regional Project Assistance (RAISE) Program** *(cont.)* **Schedule**

**November 30, 2023**      **FY 24 RAISE Program: Notice of Funding Opportunity (NOFO) Release**

**January 11, 2024**      **RTC Information**

January 19, 2024      Finalize Candidate Project Details  
*(posting of STTC Agenda)*

January 26, 2024      STTC Action

February 8, 2024      RTC Action

February 14, 2024      RTC Letter of Support Deadline  
*(for projects submitted by partnering agencies, please send requests to Nicholas Allen – [nallen@nctcog.org](mailto:nallen@nctcog.org))*

February 22, 2024      Executive Board Action

**February 28, 2024**      **FY 24 RAISE Program: Application Deadline – Grants.gov**

June 27, 2024      FY 24 RAISE Program: Award Announcement Deadline

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USDOT BIL: <https://www.transportation.gov/bipartisan-infrastructure-law>

USDOT Grant Portal: <https://www.transportation.gov/bipartisan-infrastructure-law/bipartisan-infrastructure-law-grant-programs>

USDOT (Upcoming Schedule of Grant Opportunities): <https://www.transportation.gov/bipartisan-infrastructure-law/key-notice-funding-opportunity>

USDOT RAISE Grant Program: <https://www.transportation.gov/RAISEgrants>





# State Implementation Plan Updates

REGIONAL TRANSPORTATION COUNCIL

January 11, 2024

# Timeline and Milestones – 2008 Ozone Standard

2008 Ozone Standard ( $\leq 75$ ppb)

Attainment Date:  
No later than **July 20, 2027**

*Attainment will be based on  
2024-2026 Ozone Monitor Data*

Severe designation = Section 185 fees  
if unable to reach attainment

TCEQ State Implementation Plan  
Hearing = January 11, 2024

TCEQ State Implementation Plan  
Comments End January 16, 2024

EPA Ozone Classifications

Marginal  
(3 years to attain)

Moderate  
(6 years to attain)

Serious  
(9 years to attain)

 Severe  
(15/17 years to attain)

Extreme  
(20 years to attain)

Attainment  
Date

---

2018

2021

2027



# (Future) Major Source Fees for Failure to Attain

**“Section 185” Fee Program for Major Stationary Sources of NO<sub>x</sub> and VOC  
Clean Air Act Requirement due to Reclassification from “Serious” to “Severe”  
Plan Under Development by TCEQ to propose to EPA  
Attainment Required by end of 2026 to meet Severe Attainment Date  
Design Value Based on 2024-2026 Regional Monitor Data**

**If Unable to Reach Attainment**

**Per Ton Penalty Fee as soon as 2028**

**Fees Collected Annually until Attainment of 2008 Ozone Standard**

**Implemented by TCEQ**

**Sources such as Power Plants and Cement Plants Particularly Implicated**

**Anticipated Fee for DFW ~ \$45 Million**



# 2022 Major Point Sources – Where, Who, Magnitude

DFW 10-County Nonattainment Area Major Point Sources: Nitrogen Oxides (NOx)\*

County	Number of Major Point Source Facilities				Emission Totals (tpy)	Total Percent of 10-County Major Source Point Emissions
	Cement, Hydraulic (Kilns)	Electric Services (EGUs)	Petroleum & Natural Gas	Other (91 Source Types)		
Collin	-	1	0	12	86	0.8%
Dallas	-	2	0	68	1,053	9.3%
Denton	-	2	13	13	283	2.5%
Ellis	3	2	1	21	4,773	42.2%
Johnson	-	1	18	15	1,253	11.1%
Kaufman	-	1	0	5	1,212	10.7%
Parker	-	-	7	18	278	2.5%
Rockwall	-	-	0	3	13	0.1%
Tarrant	-	1	16	51	783	6.9%
Wise	-	1	53	7	1,589	14.0%
<b>Total</b>	<b>3</b>	<b>11</b>	<b>108</b>	<b>213</b>	<b>11,321</b>	<b>100.0%</b>

Source: TCEQ - 2022 point source data extracted from the State of Texas Air Reporting System (STARS) on November 30, 2023.

\*Data maybe subject to revisions and corrections and is a snapshot of the data extracted on the date specified.

# 2021 Major Point Sources – Municipalities

**PRELIMINARY**

## **Arlington**

LANDFILL

## **Garland**

RAY OLINGER PLANT

CASTLE DRIVE LANDFILL

CHARLES M HINTON JR REGIONAL LANDFILL

SPENCER GENERATING STATION

## **Irving**

HUNTER FERRELL LANDFILL

## **Dallas**

MCCOMMAS BLUFF LANDFILL GAS PROCESSING FACILITY

MCCOMMAS BLUFF LANDFILL

## **Grand Prairie**

LANDFILL

## **Farmers Branch**

CAMELOT LANDFILL

## **Denton**

LANDFILL

DENTON ENERGY CENTER

## **Ellis County**

ECD LANDFILL

## **Fort Worth**

FORT WORTH VILLAGE CREEK WASTEWATER

SE LANDFILL



# State Implementation Plan Comments

**Technical Review of Photochemical Model Validation**

**Sensitivity Analyses to Determine Strategy Effectiveness**

**Implement Additional Control Measures and Expand Applicability of Existing Measures Beyond the 10-County Area**

**Enhance Public Engagement Efforts**

**Update Weight of Evidence**

**Include Active Programs Only**

**Concur with Motor Vehicle Emissions Budgets (MVEB)**

**Recommend Staff Identify Differences in Decimals**

**DRAFT**





# State Implementation Plan Comments

**Advocate for Local Initiative Programs Funding to Counties in TCEQ  
Legislative Appropriations Request**

**Proactive Action to Reduce Vehicle Inspection Fraud**

**DRAFT**

**Enhance the State's Vehicle Inspection and Maintenance Program**

**Research on Diesel Engine Tampering; Extent and Impacts**

**Release of Texas Emissions Reduction Plan Revenue in Fund Balance to  
Targeted Programs Specific to Severe Nonattainment Areas**

**Evaluate Trade-Offs Between Costs to Implement Reasonably  
Available Control Technology**



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# Update on Particulate Matter Standard

Regional Transportation Council  
January 11, 2024

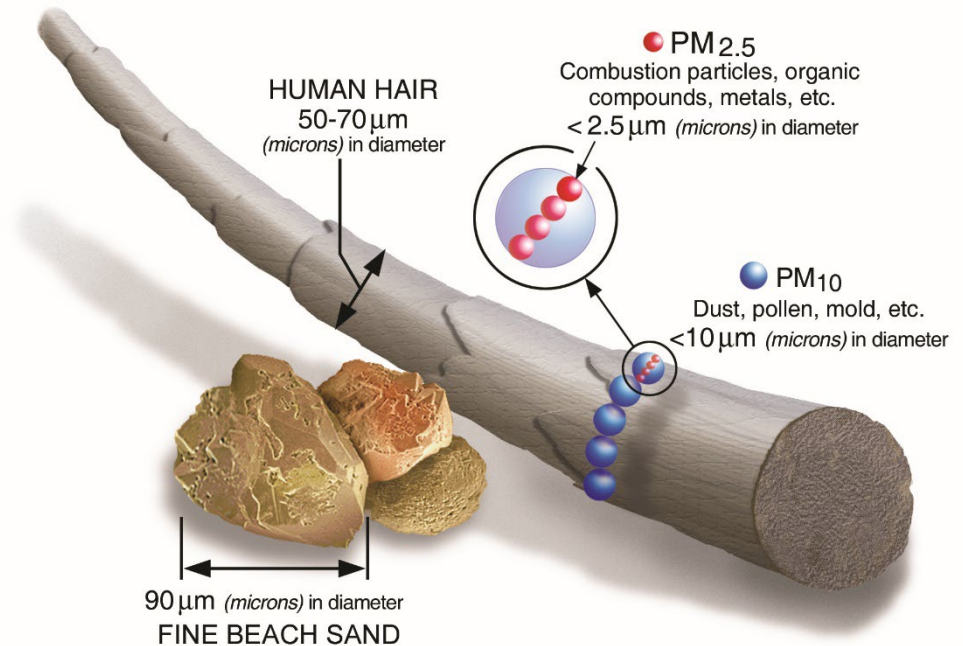
Chris Klaus

# Particulate Matter

Ambient air contains a mixture of solid particles and droplets of liquids collectively known as Particulate Matter (PM). Two notable classifications of PM have regulatory air quality standards.

**PM<sub>10</sub>**: “coarse” particulate matter; Includes particles  $\leq 10$  micrometers in diameter (pollen, mold, dust, etc.)

**PM<sub>2.5</sub>**: “fine” particulate matter; includes particles  $\leq 2.5$  micrometers in diameter (smoke, haze, metals, combustion particles, etc.)



Source: Environmental Protection Agency (EPA) - (<https://www.epa.gov/pm-pollution/particulate-matter-pm-basics>)



# Current and Proposed PM Standards

## PM<sub>2.5</sub> Primary Annual Standard

- Current: 12.0 µg/m<sup>3</sup> – annual mean, averaged over 3 years
- Clean Air Scientific Advisory Committee (CASAC) Recommendation: 8-10 µg/m<sup>3</sup>
- EPA Proposal: 9-10 µg/m<sup>3</sup>

## PM<sub>2.5</sub> 24-hour Standard

- Current: 35 µg/m<sup>3</sup> – 98<sup>th</sup> percentile, averaged over 3 years
- CASAC Recommendation: 25-30 µg/m<sup>3</sup>
- EPA Proposal: Retain standard but soliciting comments on lowering

## PM<sub>10</sub> 24-hour Standard

- Current: 150 µg/m<sup>3</sup> – 98<sup>th</sup> percentile, averaged over 3 years
- CASAC Recommendation: Retain Standard
- EPA Proposal: Retain Standard



# EPA recognized PM 2.5 Monitors in the DFW Region 2020 - 2022

Annual Design Values

● No Data available

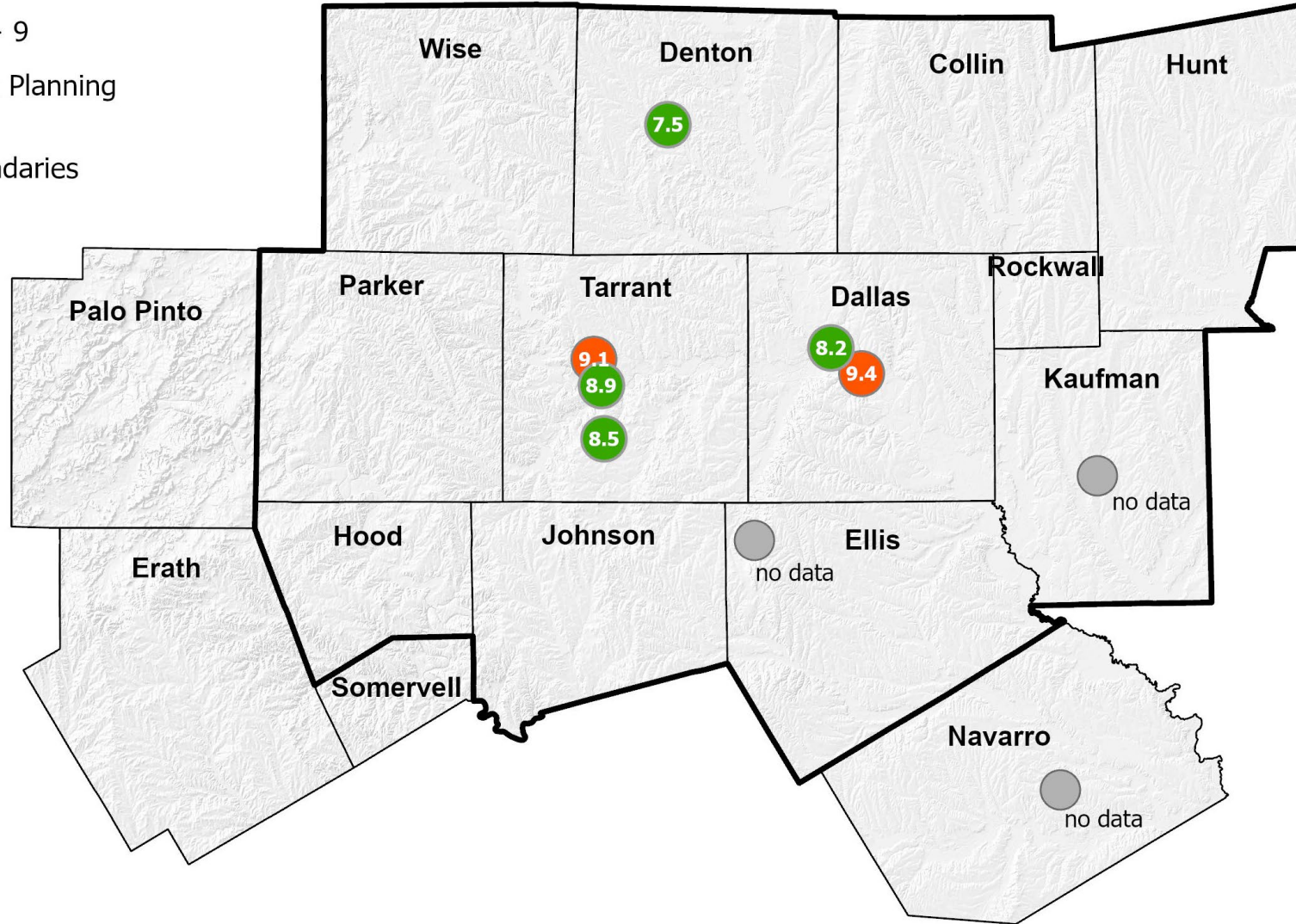
● PM 2.5 DV < 8.9

● PM 2.5 DV > 9

▭ Metropolitan Planning Area

▭ County boundaries

Annual DV in  $\mu\text{g}/\text{m}^3$



North Central Texas  
Council of Governments



January 2024

# Implications of Proposed Decision

## PM<sub>2.5</sub> Primary Annual Standard

- Potential for Dallas and Tarrant Counties to be in nonattainment (2020 – 2022 data)
  - Dallas = Convention Center @ 9.4 µg/m<sup>3</sup>
  - Tarrant = Fort Worth Northwest @ 9.1 µg/m<sup>3</sup>
- 112 counties do not meet 9 µg/m<sup>3</sup>
  - EPA projections show 51 would not meet 9 µg/m<sup>3</sup> in 2032

## PM<sub>2.5</sub> 24-hour Standard

- None

## PM<sub>10</sub> 24-hour Standard

- None



# Impacts and Opportunities

**Final rules from EPA is anticipated by Spring 2024**

**Area designations 2 years after final rules**

**State Implementation Plan revisions (18 months after area designations)**  
**Updated Emission Inventories, Control Strategies**

**Rider 7 Planning Funds (Texas Commission on Environmental Quality)**  
**Modeling, Monitoring**

**PM Advance Program (EPA)**  
**Voluntary Support, Technical Assistance**





# For More Information

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# GREENHOUSE GAS EMISSION INVENTORY RESULTS

Regional Transportation Council

January 11, 2024

# 2019 Greenhouse Gas Emissions Inventory

## Regional Greenhouse Gas (GHG) Inventory

Contracted with Local Governments for Sustainability (ICLEI), formally known as the International Council for Local Environmental Initiatives, thanks to contribution from Burlington-Northern Santa Fe (BNSF) railroad

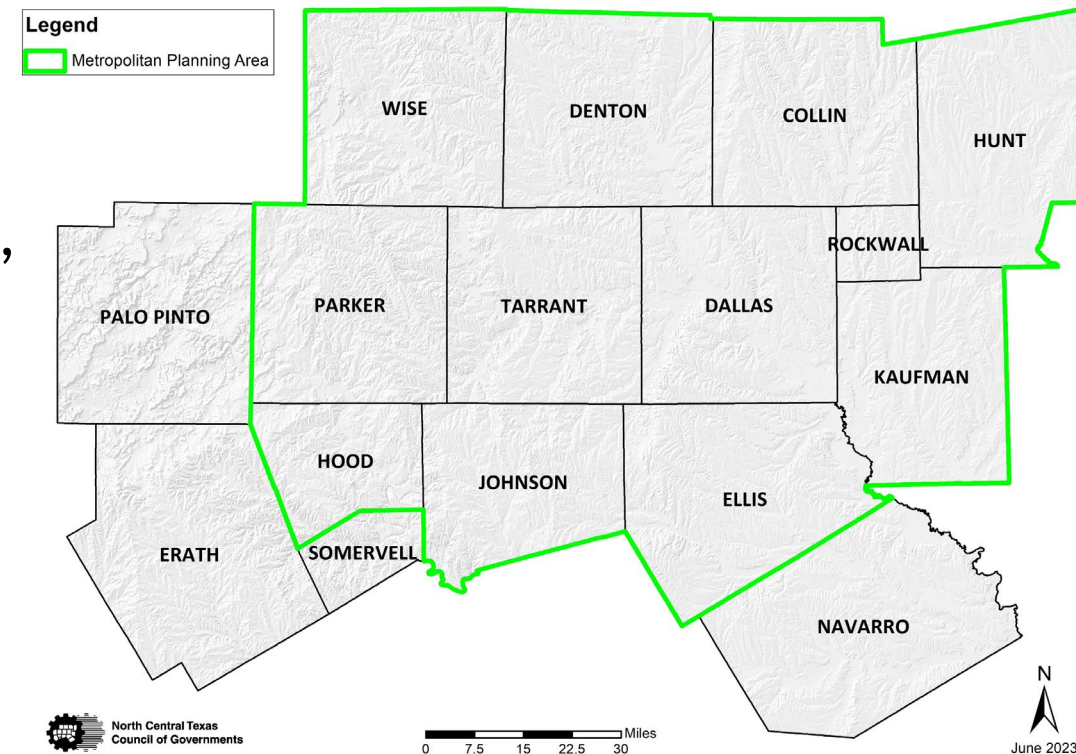
Multi-municipal Collaboration

2019 baseline

Energy, Transportation, Solid Waste, Water,  
and Wastewater sectors for region

Community Protocol

County-based breakdown



# Sectors (Community-Wide GHG Inventory)

## Energy

Electricity  
Natural Gas  
Other Fuels

## Water

## Waste

Solid Waste  
Wastewater

## Transportation & Mobile Sources

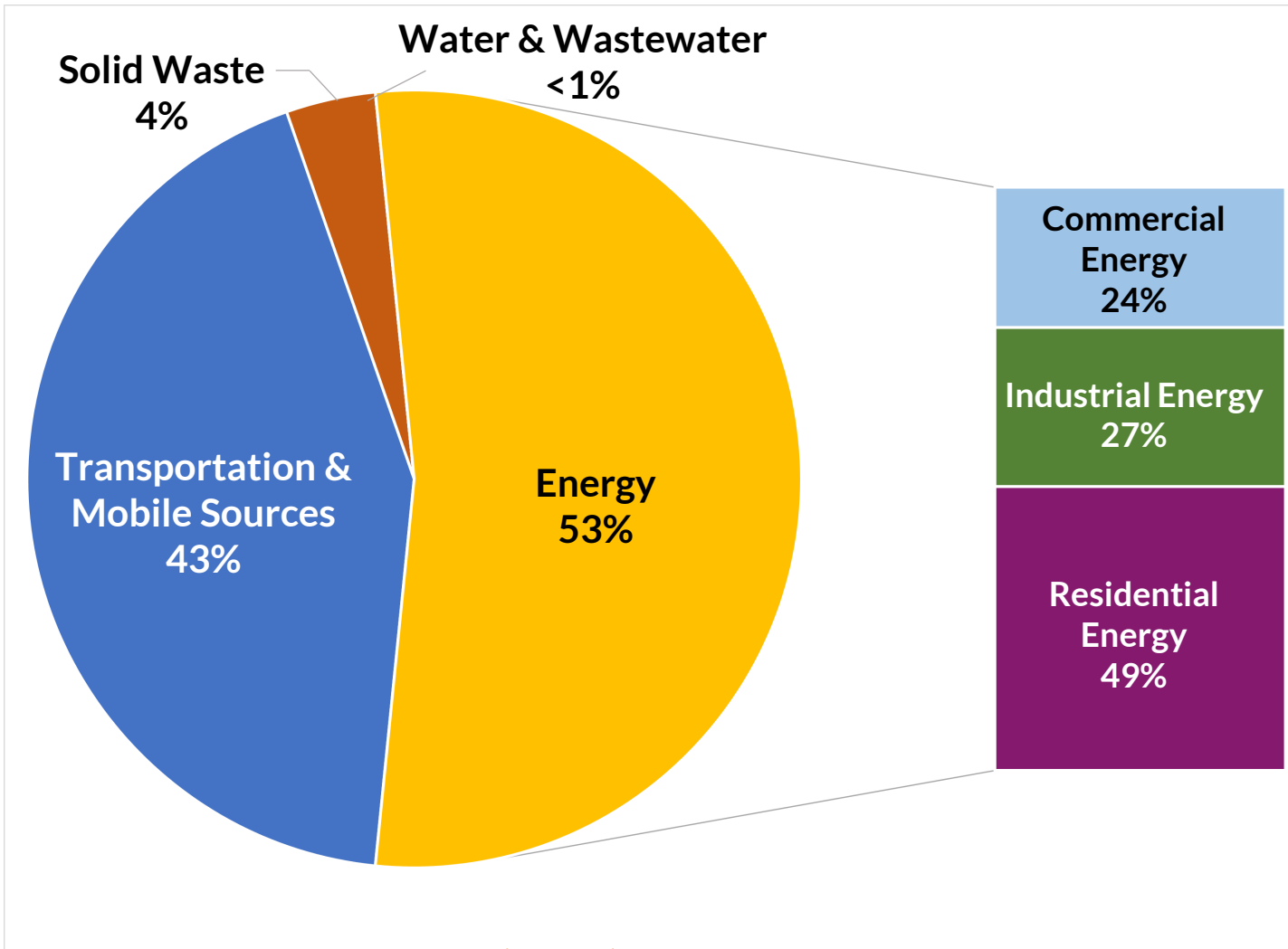
Aviation  
Rail  
Water/Pleasure Craft  
On-Road  
Off-Road

## Agriculture, Forestry, and Other Land use

## Process and Fugitive



# 2019 Greenhouse Gas Emissions Inventory



$$\begin{aligned} &\text{Carbon Dioxide Equivalent} \\ &\text{CO}_2\text{e} \\ &= \\ &\text{Greenhouse Gases} \\ &\text{(Carbon Dioxide CO}_2\text{,} \\ &\text{Methane CH}_4\text{,} \\ &\text{Nitrous Oxide N}_2\text{O)} \\ &\times \\ &\text{Respective} \\ &\text{Global Warming Potentials} \\ &\text{(GWP)} \end{aligned}$$

*Note: The agricultural emissions, process & fugitive emissions were not part of this inventory*

Dallas-Fort Worth (DFW) 12-County MPA Carbon Dioxide Equivalent (CO<sub>2</sub>e) = 102,856,587 Metric Tons



# 2019 Greenhouse Gas Emissions Inventory- Carbon Dioxide Equivalent (CO<sub>2</sub>e)

Carbon dioxide (CO<sub>2</sub>): Carbon dioxide enters the atmosphere through burning fossil fuels (coal, natural gas, and oil), solid waste, trees and other biological materials, and because of certain chemical reactions (e.g., cement production). Carbon dioxide is removed from the atmosphere (or "sequestered") when it is absorbed by plants as part of the biological carbon cycle.

Methane (CH<sub>4</sub>): Methane is emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from livestock and other agricultural practices, land use, and by the decay of organic waste in municipal solid waste landfills.

Nitrous oxide (N<sub>2</sub>O): Nitrous oxide is emitted during agricultural, land use, and industrial activities; combustion of fossil fuels and solid waste; as well as during treatment of wastewater.

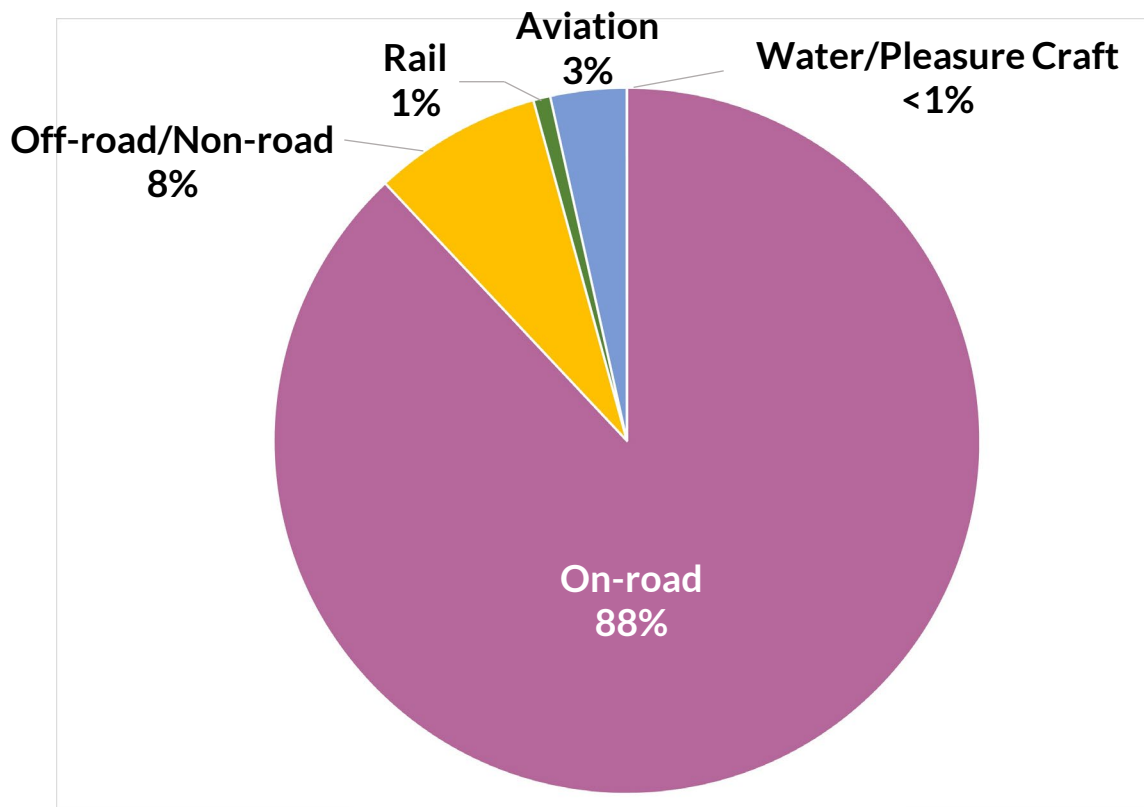
**DFW 12-County MPA On-road  
CO<sub>2</sub>e = 39,006,087 Metric Tons**

Greenhouse Gas	Global Warming Potential	% to Total On-road CO <sub>2</sub> e
CO <sub>2</sub>	1	99.53%
CH <sub>4</sub>	28	0.11%
N <sub>2</sub> O	265	0.36%

Source: [EPA](#)



# 2019 Greenhouse Gas Emissions Inventory - Transportation



Vehicle Types	Fuel	On-road CO <sub>2</sub> e
Light-Duty	Gas	70.02%
Light-Duty	Diesel	0.94%
Medium-Duty	Gas	4.54%
Medium-Duty	Diesel	0.48%
Heavy-Duty	Gas	3.65%
Heavy-Duty	Diesel	20.37%

**DFW 12-County MPA On-road CO<sub>2</sub>e = 39,006,087 Metric Tons**

County	On-road CO <sub>2</sub> e
Collin	11.25%
Dallas	37.54%
Denton	8.91%
Ellis	3.55%
Hood	0.89%
Hunt	2.46%
Johnson	2.47%
Kaufman	3.11%
Parker	2.59%
Rockwall	1.13%
Tarrant	24.30%
Wise	1.79%

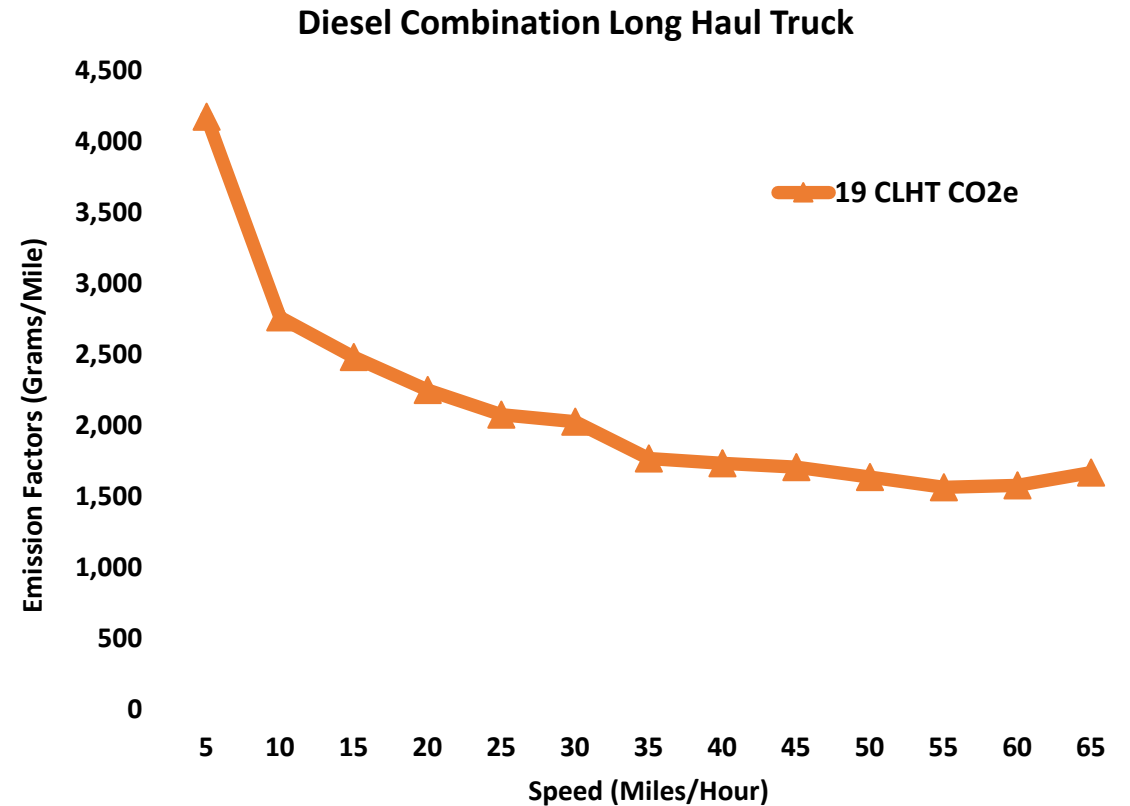
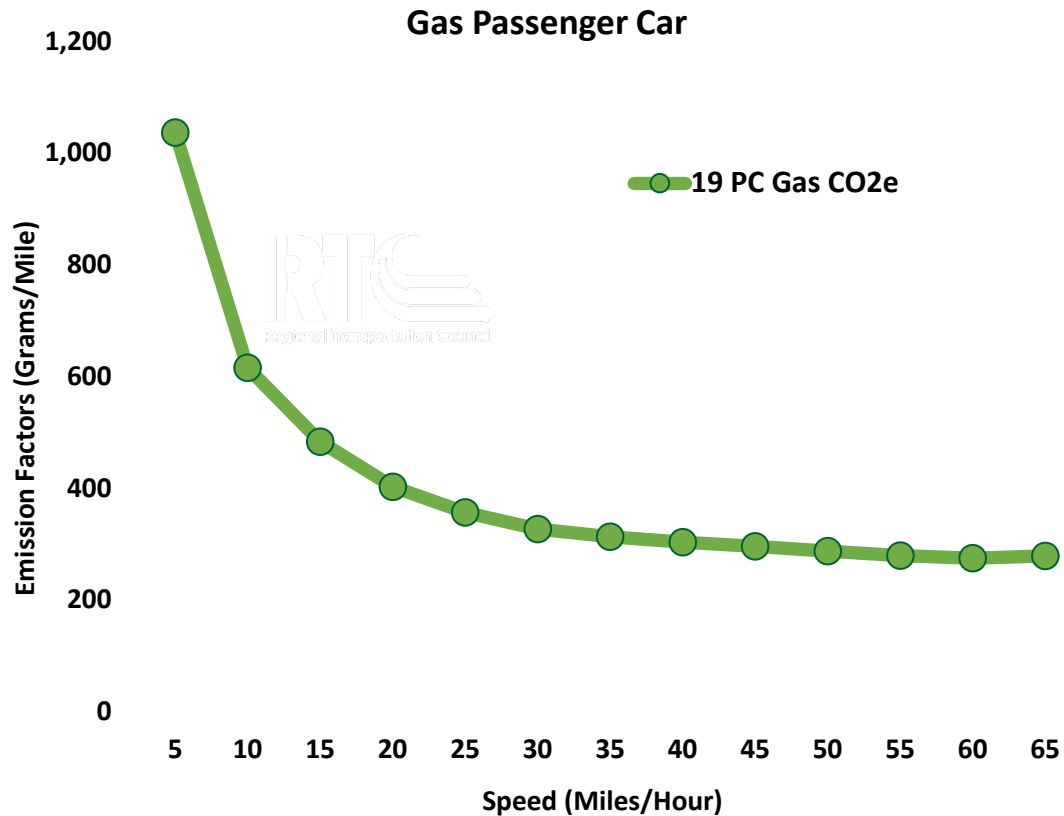
**DFW 12-County MPA Transportation and Mobile Sources CO<sub>2</sub>e = 44,179,160 Metric Tons**

NCTCOG On-road CO <sub>2</sub> e (2019) Metric Tons	EPA NEI On-road CO <sub>2</sub> e (2020) Metric Tons
39,006,087	27,739,859



# 2019 Greenhouse Gas Emissions Inventory - On-Road Transportation

## Dallas County, Freeway, CO<sub>2</sub>e Emission Rates, Year 2019





# Greenhouse Gas Emissions Inventory Area Expansion

## What we are doing:

2019 baseline

Utilizing existing data from 2019 inventory

Collect data for new counties:

Erath

Navarro

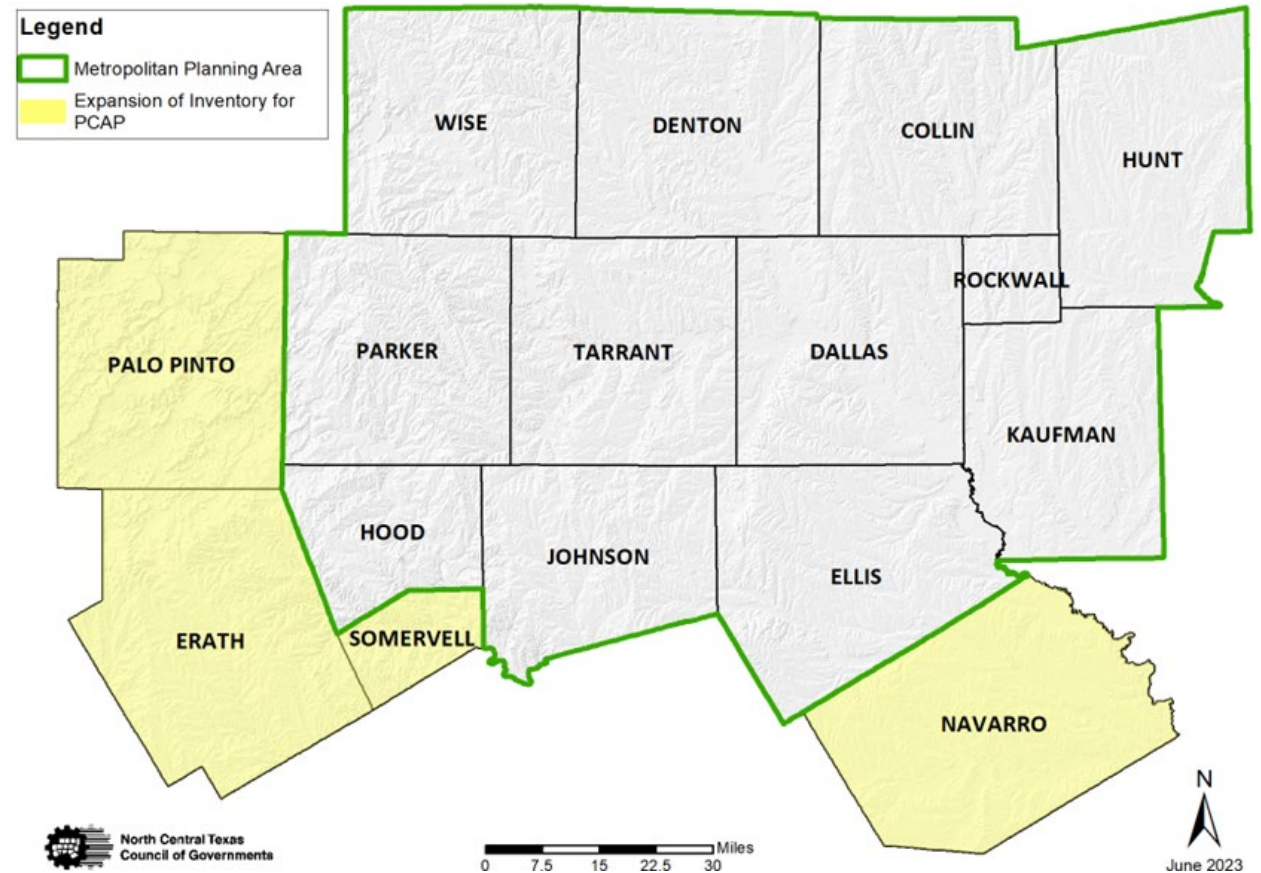
Palo Pinto

Somervell

ICLEI – ClearPath Tool

Community Protocol

County-based breakdown



# For More Information



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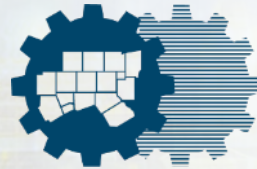
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<https://nctcog.org/trans/quality/air/emissions-inventories/local-regional-greenhouse-gas-emission-inventory>





# Dallas-Fort Worth Air Quality Improvement Plan

**Savana Nance,  
Senior Air Quality Planner  
Regional Transportation Council  
1.11.2024**

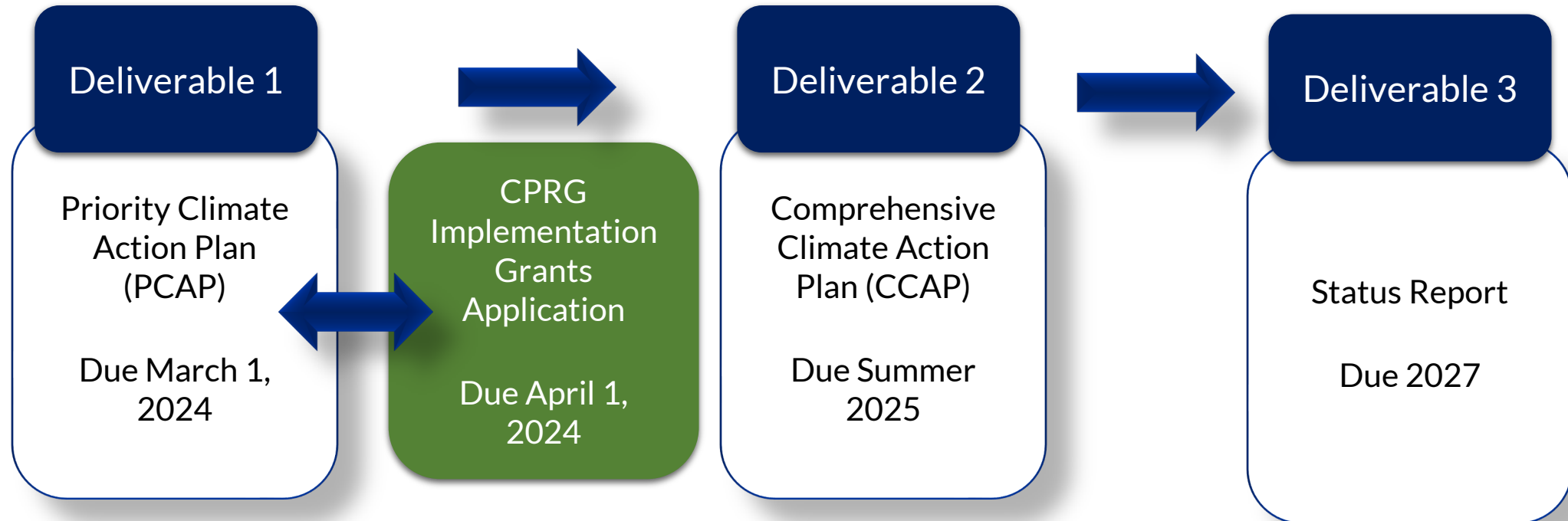
# Background on Planning Grant

## Funding:

\$1 million in Environmental Protection Agency (EPA) Funds From Climate Pollution Reduction Grant (CPRG) Planning Grant Program

## Scope:

Develop and implement plans to reduce greenhouse gases (GHGs) and other pollutants of local concern North Central Texas Council of Governments (NCTCOG) serving as lead for the region



# EPA Planning Grants Deliverable 1

“A narrative report focused on near-term high-priority, implementation-ready measures to reduce GHG pollution and an analysis of GHG emissions reductions that would be achieved through implementation.” - [CPRG Planning Grants Guidance](#)

Task	Description	Completion Date
GHG Emissions Inventory	Calculate the GHGs produced in the 16 counties in North Texas	January 2024
Quantified GHG Reduction Measures	Identify short-term projects, programs, and policies to reduce GHG emissions ( <b>targeting emissions benefits in 2025-2030</b> ) Quantify the benefits of projects, programs, and policies	January 2024
Low-Income/Disadvantaged Communities Benefits Analysis	Calculate the potential benefits to disadvantaged communities through the deployment of GHG reduction measures	February 2024
Review of Authority to Implement	Review GHG reduction measures to ensure they can be implemented <i>NCTCOG anticipates measures will be voluntary/incentive</i>	February 2024
Funding Analysis	Identify funding to implement the GHG reduction measures	February 2024



# CPRG Implementation Grants

## Will Provide Funding to Implement Strategies Included in PCAPs Submitted under Planning Grants

Eligible applicants include Lead Agencies for CPRG Planning Grants, States, Municipalities, Tribes  
Any measures that improve air quality are likely eligible

## Competition Incentivizes Collaborative Applications

30-115 awards anticipated nationwide

Scoring based on cumulative benefits of proposed initiatives

EPA will not award multiple grants for the same initiative in the same area

Tier	Grant Ranges	Potential Transportation Allocation if Proportional to GHG Emissions Inventory	Anticipated Number of Grants to be Awarded
Tier A	\$200M - \$500M	\$86M - \$215M	4-10
Tier B	\$100M - \$199M	\$43M - \$85M	6-13
Tier C	\$50M - \$99M	\$22M - \$42M	6-12
Tier D	\$10M - \$49M	\$4.3M - \$21M	6-30
Tier E	\$2M - \$9.9M	\$1M - \$4.2M	10-50



# EPA Scoring Criteria for CPRG Implementation Grant Proposals

Evaluation Criteria	Points
Overall Project Summary and Approach	45
Impact of GHG Reduction Measures	60
Environmental Results - Outputs, Outcomes, and Performance Measures	30
Low Income and Disadvantaged Communities	35
Job Quality	5
Programmatic Capability and Past Performance	30
Budget and Timely Expenditure of Grant Funds	45



# Process to Select Measures for PCAP

## Brainstorm Measures

- 3 Workshops to Identify Strategies to Improve Air Quality
- 5 Meetings with Collaborating Agencies/Local Governments
- 1 Workshop with Entities Subject to Section 185 Fees
- 55 Responses to Survey for Implementing Agencies

## Refine Measures

- ~200 Responses to Public Survey
- ~6 Public Meetings
- Local Governments Submit Proposed Measures

## Finalize Measures





# Selecting Measures and Projects

## Review NCTCOG Screening Criteria:

- Is there interest in the region?
- Is someone willing to implement? (local governments, us (NCTCOG), third party entity)?
- Can it be done in the next five years?
- Does it provide broad, quantifiable greenhouse gas and criteria pollutant reductions?
- Does it need funding?



## Review EPA Scoring Criteria:

- Reduces GHGs and Criteria Pollutants
- Benefits DACs
- Can be Implemented in 2025-2030
- Funds a Strategy for Which Other Funding is Unavailable or Insufficient
- Is Cost-Effective
- Advances Decarbonization
- Is Innovative



# Measures

## Sector:

Includes Transportation, Energy, Water/Wastewater, Solid Waste, Agriculture/Forestry/Land-Use

## Program Areas Within Sector:

Transportation: Transit, Clean Fuels and Fuel Efficiency, Congestion Management, Sustainable Development, Other

Plan will include information on existing and ongoing regional efforts in Program Area writeup

## Measures:

EX: Enhanced Regional Traffic Signal Program

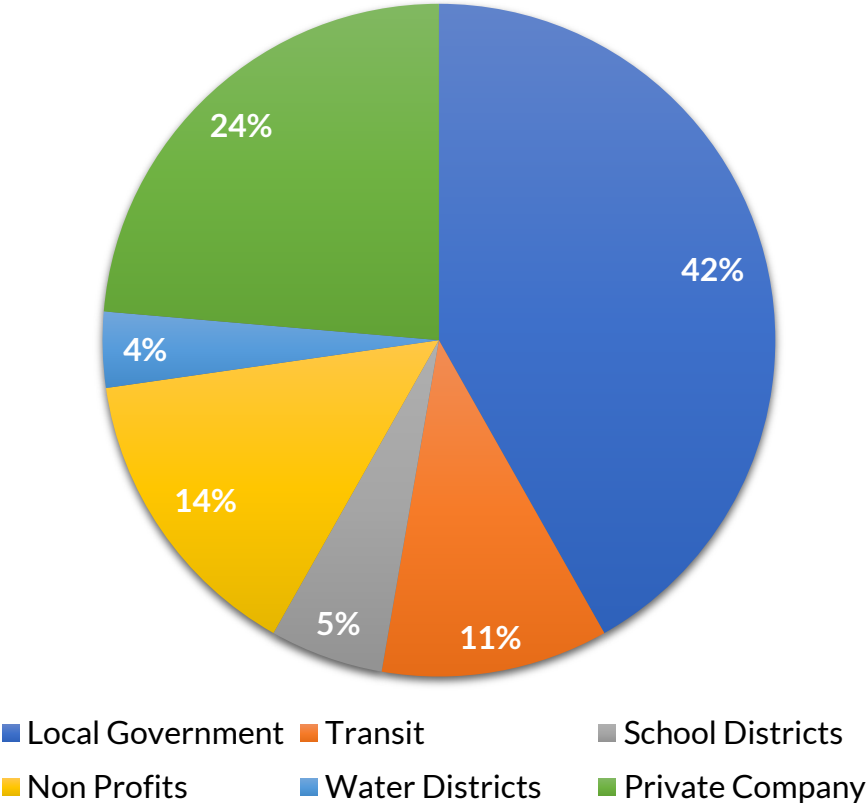
## Projects:

EX: Upgrade Traffic Signal Equipment, Improve Signal Timing in the Region

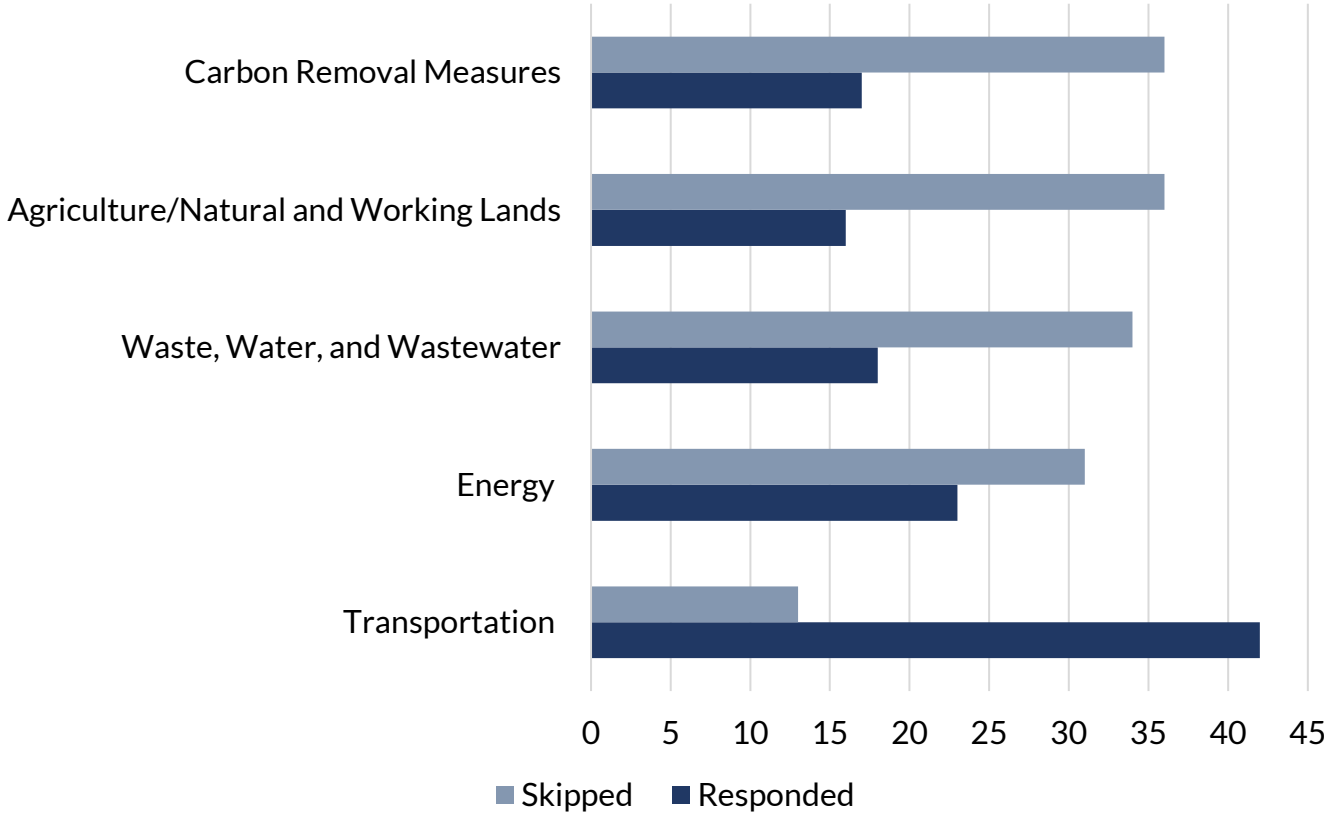


# Preliminary Implementing Agency Survey Feedback

Survey Response by Agency Type



Number of Responses for Each Sector



# Public Involvement and Outreach

## “Open House” Public Meetings

## Meetings with Nonprofits/Community Groups

## Existing Feedback (e.g., Map Your Experience)

## Virtual Engagement/Online Survey

- Contact Information/City of Residence/Representation
- Rank Areas of Concerns
- Rank Level of Agreement with Key Statements
  - Transportation Statements Received Strong Support Except for Electric Vehicle Charging Stations and Transit Costing Too Much
- Open Text Field for Free Form Comments

[www.publicinput.com/dfwAQIP-survey](http://www.publicinput.com/dfwAQIP-survey)



**DALLAS-FORT WORTH  
AIR QUALITY  
IMPROVEMENT PLAN**

**The North Central Texas Council of Governments (NCTCOG) is seeking recommendations on air quality improvement projects for your community!**

NCTCOG is collaborating with local stakeholders in the Dallas-Fort Worth region to develop a comprehensive Air Quality Improvement Plan (DFW AQIP). The plan will create a roadmap to improve air quality, protect public health, and reduce the impacts of extreme weather events.

Your input is requested and important! Please go to [www.publicinput.com/dfwAQIP](http://www.publicinput.com/dfwAQIP) to make recommendations, attend an open house, and more.

**FOCUS AREAS:**

 <p><b>Energy</b></p> <ul style="list-style-type: none"><li>• Reduce energy use and costs</li><li>• Facilitate the use of energy efficient products</li><li>• Improve reliability of the Texas electrical grid</li><li>• Generate more power from low-emitting or renewable energy sources</li></ul>	 <p><b>Water, Wastewater, and Solid Waste</b></p> <ul style="list-style-type: none"><li>• Improve water quality and reduce flooding</li><li>• Conserve water</li><li>• Encourage expansion of local recycling and composting</li></ul>	 <p><b>Transportation</b></p> <ul style="list-style-type: none"><li>• Increase use of cleaner vehicles, such as electric and natural gas</li><li>• Create walkable communities</li><li>• Provide more public transit options</li><li>• Build a more efficient and safer roadway system</li></ul>
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North Central Texas Council of Governments

This work is funded by the Environmental Protection Agency's Climate Pollution Reduction Grants Planning Grants. Written feedback can be mailed to Irieta Hermosillo, Air Quality Planner, at P.O. Box 5888, Arlington, TX 76010-2888.

f t v o i @nctcogtrans



# Potential Transit Measures

Transit Service Enhancement Program

Transit Planning Program

Enhanced Commuter Rail Program



# Potential Sustainable Development Measures

Active Transportation Investment Program

Green Infrastructure Program

Regional Green Spaces Initiative



# Potential Congestion Management Measures

Enhanced Regional Traffic Signal Program

Transportation System Optimization and Connectivity

Vehicle Miles Traveled Reduction Program

Freight Flow Optimization Program



# Potential Clean Fuels and Fuel Efficiency Measures

Green Airport Planning Program

Regional LED Streetlight Program

Regional Clean Vehicle Education Program

Regional Low Carbon Liquid Fuels Program

Regional Emissions Compliance Program





# Potential Other Measures

Adopt Tire Recycling Policy

Carbon Footprint Tool

Regional Air Quality Monitoring Program



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# Federal Highway Administration Greenhouse Gas Performance Measures

Regional Transportation Council  
January 11, 2024

Chris Klaus

# Greenhouse Gas Transportation Performance Measures (TPM)

State Departments of Transportation (DOTs) and Metropolitan Planning Organizations (MPOs) are required to report tailpipe carbon dioxide (CO<sub>2</sub>) emissions

Final Rule published on December 7, 2023; Effective January 8, 2024

Applicable only to the National Highway System (NHS)

Targets based on percent change relative to 2022 baseline levels

*There are no specific penalties for failing to achieve GHG targets*

If fail to achieve targets, can satisfy regulatory requirements by documenting actions to achieve that target in next biennial report

Generally consistent with existing Federal Performance Measures (see next slide)



## Transportation Performance Management (TPM) Performance Measures

Performance Area	Performance Measure
Safety	<ul style="list-style-type: none"> <li>• Number of fatalities.</li> <li>• Rate of fatalities per 100 million vehicle miles traveled (VMT).</li> <li>• Number of serious injuries.</li> <li>• Rate of serious injuries per 100 million vehicle miles traveled.</li> <li>• Number of non-motorized fatalities and non-motorized serious injuries.</li> </ul>
Pavement Condition	<ul style="list-style-type: none"> <li>• Percentage of pavements of the Interstate System in Good condition.</li> <li>• Percentage of pavements of the Interstate System in Poor condition.</li> <li>• Percentage of pavements of the non-Interstate National Highway System (NHS) in Good condition.</li> <li>• Percentage of pavements of the non-Interstate NHS in Poor condition.</li> </ul>
Bridge Condition	<ul style="list-style-type: none"> <li>• Percentage of NHS bridges classified as in Good condition.</li> <li>• Percentage of NHS bridges classified as in Poor condition.</li> </ul>
System Performance	<ul style="list-style-type: none"> <li>• Percent of person-miles traveled on the Interstate that are reliable.</li> <li>• Percent of person-miles traveled on the non-Interstate NHS that are reliable.</li> <li>• <b>NEW: Percent change in tailpipe carbon dioxide (CO<sub>2</sub>) emissions on the NHS compared to the reference year (calendar year 2022).</b></li> </ul>
Freight Movement	<ul style="list-style-type: none"> <li>• Truck Travel Time Reliability (TTTR) Index.</li> </ul>
Traffic Congestion	<ul style="list-style-type: none"> <li>• Annual Hours of Peak Hour Excessive Delay (PHED) Per Capita.</li> <li>• Percent of Non-Single Occupancy Vehicle (SOV) Travel.</li> </ul>
On-Road Mobile Source Emissions	<ul style="list-style-type: none"> <li>• Total Emission Reductions for applicable criteria pollutants.</li> </ul>

6



# Greenhouse Gas Transportation Performance Measures (TPM)

## § 490.105(e) & (f): Establishment of Performance Targets

### State DOTs

- Establish declining 2-year\* and 4-year statewide targets.
- \* Begins in 2026

### MPOs

- Establish declining 4-year target for the metropolitan planning area (MPA).
- Option to commit to support the State DOT target or establish a unique quantifiable target.
- Have up to 180 days from when the State DOT established their targets.

February 1, 2024: Deadline for State DOTs to submit tailpipe CO2 targets

Summer 2024: RTC Information/Action on MPA tailpipe CO2 targets



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