C. Environmental Considerations: Air Quality

Policies

MTP Reference #	Air Quality
AQ3-001	Pursue successful transportation conformity determinations of the Metropolitan Transportation Plan and Transportation Improvement Program consistent with federal and state guidelines.
AQ3-002	Provide technical assistance and analysis to attain and maintain National Ambient Air Quality Standards and reduce negative impacts of other air pollutants.
AQ3-003	Support and implement educational, operational, technological, and other innovative strategies that improve air quality in North Central Texas, including participation in collaborative efforts with local, regional, state, federal, and private sector stakeholders.
AQ3-004	Support and implement strategies that promote energy conservation, address public health concerns, reduce demand for energy needs, reduce petroleum consumption, and/or decrease greenhouse gas emissions.
AQ3-005	Required for clean fleet funding as contained in Regional Transportation Council Resolution R14-10. Establish a framework for reducing fleet emissions, reducing fuel consumption, partnering with the North Central Texas Council of Governments/Dallas-Fort Worth Clean Cities, and training staff.
AQ3-006	Adopt and implement an idling restriction ordinance, or any other idling restriction measure, to reduce idling within local government jurisdictions as consistent with Regional Transportation Council Resolution R21-06.
AQ3-007	Promote adoption and implementation of an ordinance or guidelines similar to an ordinance that promote sustainable tire disposal practices, including recycling.
AQ3-008	Adopt and implement a comprehensive air quality action plan or various strategies provided in the North Central Texas Council of Governments Comprehensive Air Quality Action toolkit.
F3-002	Incorporate sustainability and livability options during the project selection process. Include additional weighting or emphasis as appropriate and consistent with Regional Transportation Council policy objectives, including, but not limited to, demand management, air quality, natural environment preservation, social equity, or consideration of transportation options and accessibility to other modes (such as freight, aviation, bicycle, and pedestrian). *(While this is listed as a financial policy, it has specific implications for the air quality portion of the plan.)*

Programs

Air Quality Initiatives: Fleets	
Reference	AQ2-001
Background	Reducing emissions from public sector and private sector fleets is important to efforts to improving air quality in the region as mobile sources emit roughly two-thirds of ozone-forming nitrogen oxides emitted each day and are a major source of other air pollutants.
Related Goals	Preserve and enhance the natural environment, improve air quality, and promote active lifestyles.
Related Policies	AQ3-003; AQ3-004; AQ3-005
Implementation	Implement initiatives and strategies to increase the efficiency and reduce the emissions and energy impacts of local fleets. Efforts may target light-, medium-, and heavy-duty on-road vehicles and non-road equipment and involve multiple fuel types. Provide fleets with technical support and assistance, as well as educational webinars on advanced clean vehicle technologies. Provide financial support (e.g., grants or rebates) when resources allow, and provide application assistance to fleets seeking funding from programs offered by other agencies. Deploy publicly accessible electric charging or alternative fueling infrastructure to support adoption of alternative fuel vehicles by fleets in the region.
Performance Dimensions	• Number of fleets adopting a policy consistent with the Regional Transportation Council-recommended Clean Fleet Policy • Recognition from formal partners in the form of awards and accolades • Number of grant applications submitted to secure additional funding • Number of technical and planning assistance requests • Number of meetings and webinars hosted • Number of participants in webinars and trainings • Number of fleets participating in the Dallas-Fort Worth Clean Cities Annual Survey • Increase in gasoline gallon equivalents reductions year over year based on Dallas-Fort Worth Clean Cities Annual Survey results • Number of funding opportunities offered • Number of clean technology activities funded (e.g., diesel truck replacements) • Number of hydrogen refueling or EV charging stations funded, particularly using Charging and Fueling Infrastructure Corridor Program funds
Cost Estimate	Approximately $213 million

Air Quality Initiatives: Consumers	
Reference	AQ2-002
Background	Initiatives included in this element reduce emissions and/or improve energy efficiency through the promotion and implementation of new technologies and education to encourage consumers to adopt cleaner technologies or seek changes in consumer behavior.
Related Goals	Preserve and enhance the natural environment, improve air quality, and promote active lifestyles.
Related Policies	AQ3-003; AQ3-004
Implementation	Staff identifies and pursues opportunities to improve efficiency, reduce emissions, and increase consumer options for the cleanest available technologies, especially zero-emission vehicles. These consumer efforts are often educational in nature, either by educating consumers or educating organizations that directly interact with consumers (e.g., car dealerships, rideshares, or repair facilities). Strategies to increase enforcement of vehicle emissions-related offenses, programs, and policies to improve overall air quality. Example efforts include the North Central Texas Council of Governments Emissions Database, Regional Emissions Enforcement Program, Regional Smoking Vehicle Program, etc.
Performance Dimensions	• Number of Air North Texas Partners • Number of electric vehicle registrations in proportion to total vehicle registrations • Number of zero-emission vehicle incentive programs and projects funded in the region, as available • Number of studies conducted and/or reports written • Number of educational and awareness events attended
Cost Estimate	Approximately $37 million

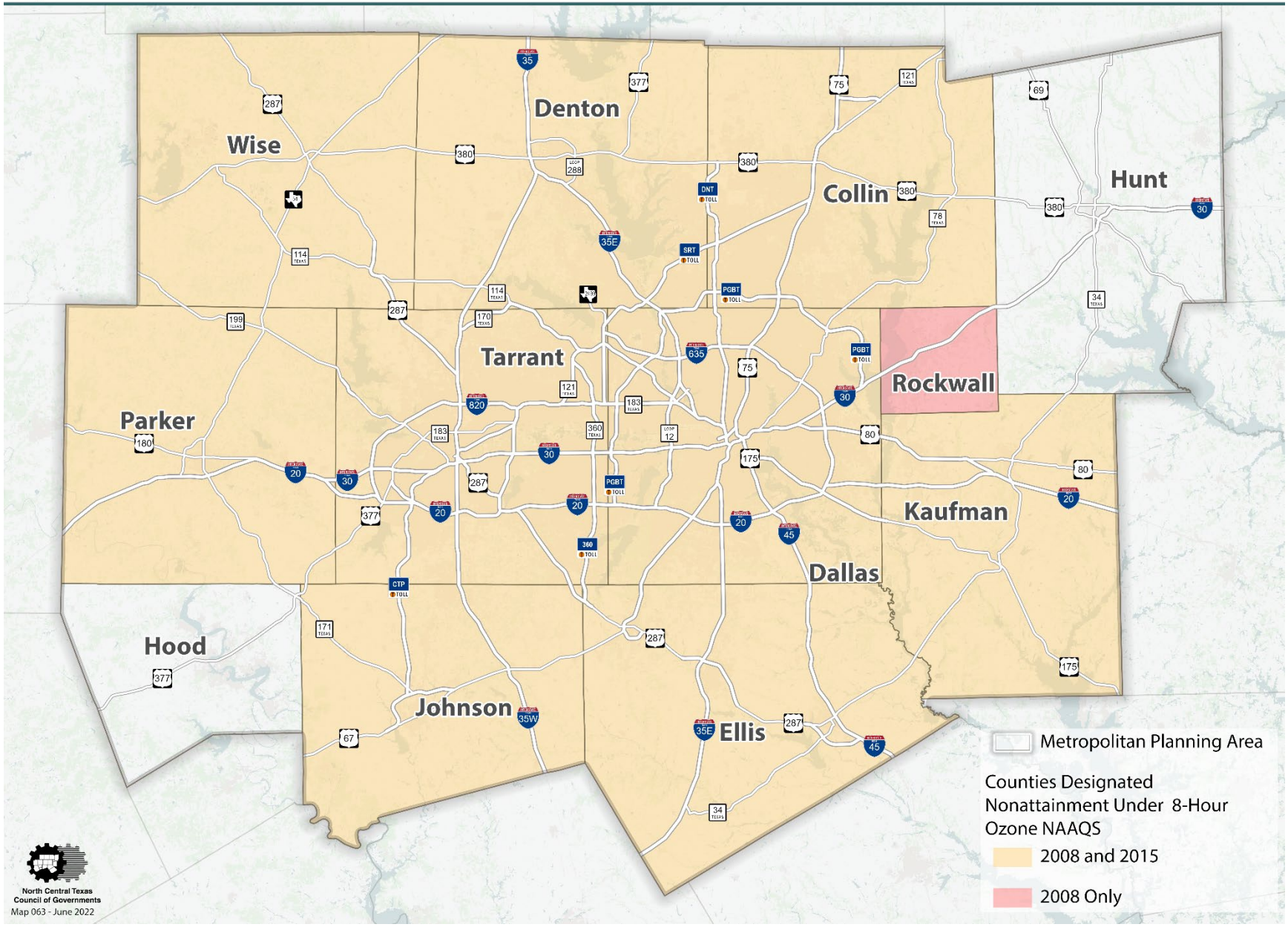
Air Quality Initiatives: Communities	
Reference	AQ2-003
Background	Initiatives in this element promote policies, contractual, infrastructure development, or regulatory measures available to local governments, utilities, and businesses that can influence deployment of and readiness for adoption of the lowest emissions and efficient technologies by consumers and fleets. Efforts also include collaborations with local governments to provide data and peer exchange related to air quality issues to help them make decisions about appropriate action steps to take within their jurisdictions.
Related Goals	Preserve and enhance the natural environment, improve air quality, and promote active lifestyles.
Related Policies	AQ3-003; AQ3-004; AQ3-006; AQ3-007; AQ3-008
Implementation	Staff works with community members, including local governments, businesses, and utilities to facilitate best practices, peer sharing, and development of initiatives that support adoption of emissions reducing technologies by consumers and fleets served by that community member. Examples include development of publicly accessible alternative fuel or electric vehicle charging infrastructure, local regulations that can facilitate build-out of infrastructure to support zero-emission vehicles (e.g., parking standards or codes related to electric vehicle-ready construction) or working with local businesses to install workplace charging. Example peer exchange efforts include the Regional Integration of Sustainability Efforts Coalition and the Air Quality Health Task Force. Example policies or ordinances include Locally Enforced Motor Vehicle Idling Restrictions. Other initiatives include construction, installation, or upgrade of publicly accessible electric vehicle charging stations throughout a community.

Air Quality Initiatives: Communities	
Performance Dimensions	• Number of technical and planning assistance requests • Number of meetings and webinars hosted • Number of communities participating in the North Central Texas Council of Governments Air Quality Health Task Force • Number of communities participating in the Regional Integration of Sustainability Efforts Coalition • Number of public and private electric vehicle charging stations, including those funded through federal programs such as the Charging and Fueling Infrastructure: Community Program, National Electric Vehicle Infrastructure Program, and Electric Vehicle Charger Reliability and Accessibility Accelerator Program • Number of persons living within a walkable distance of electric vehicle charging stations • Number of corridor nominations sent to the Texas Department of Transportation for designation under the Federal Highway Administration's Alternative Fuels Corridor Program • Number of communities adopting policies, ordinances, or other local measures recommended by the North Central Texas Council of Governments and/or the Regional Transportation Council (e.g., Locally Enforced Motor Vehicle Idling Restrictions) • Number of communities adopting a goal for long-range zero-emission vehicles and infrastructure
Cost Estimate	Approximately $51 million

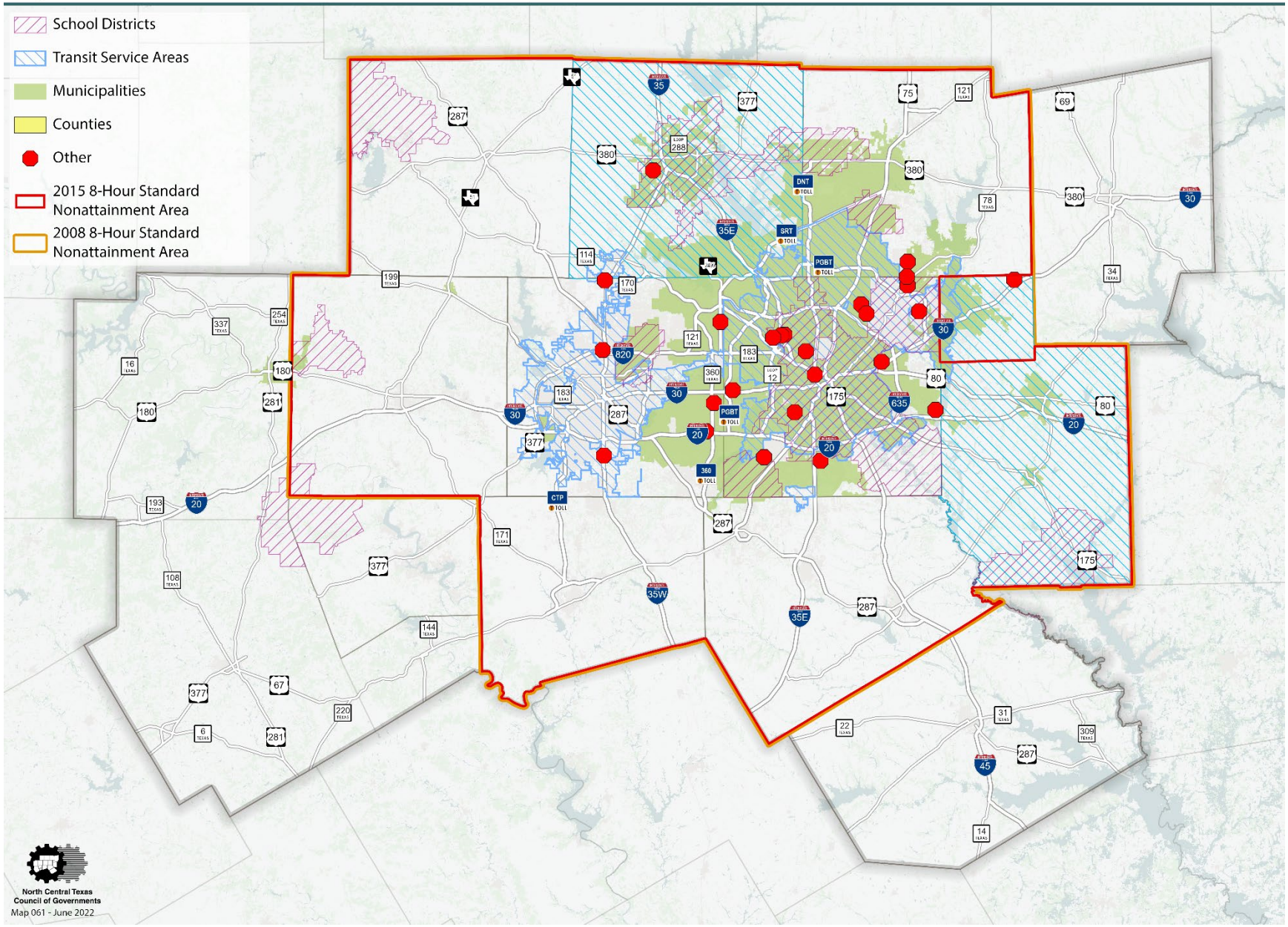
Air Quality Technical Planning and Analysis	
Reference	AQ2-004
Background	Technical analysis and planning is critical for determining progress toward improving air quality and selecting appropriate control strategies. The Metropolitan Planning Organization's role includes responsibility for air quality planning of Transportation Conformity, detailed forecasted emission inventories for inclusion into the State Implementation Plan, and technical air quality analyses to support emission reductions within the region.
Related Goals	Preserve and enhance the natural environment, improve air quality, and promote active lifestyles.
Related Policies	AQ3-001; AQ3-002; In response to applicable federal requirements, conduct necessary emissions analysis and provide technical assistance in air quality planning and control strategy evaluation.
Implementation	Provide general air quality technical assistance locally to the general public and regional governments; statewide to other nonattainment areas, the Texas Department of Transportation, and the Texas Commission on Environmental Quality; and nationally to the Federal Highway Administration, the Federal Transit Administration, and the Environmental Protection Agency. Monitor, review, and respond accordingly to federal and statewide air quality rules impacting North Central Texas. Support the state air quality planning process by developing accurate estimates of emissions through the completion of mobile emission inventories and other technical studies applicable for the region's State Implementation Plan for the 8-Hour Ozone National Ambient Air Quality Standards. Ensure, through the Transportation Conformity process, transportation plans, programs, and projects implemented in the Dallas-Fort Worth ozone nonattainment area meet federal and state air quality requirements. Ensure project and program modifications to the Transportation Improvement Program meet Transportation Conformity requirements.

Air Quality Technical Planning and Analysis	
Performance Dimensions	• Receipt of favorable conformity determinations • Environmental Protection Agency approval of State Implementation Plan revisions • Actively responding to federal and statewide proposed rules
Cost Estimate	Approximately $19 million

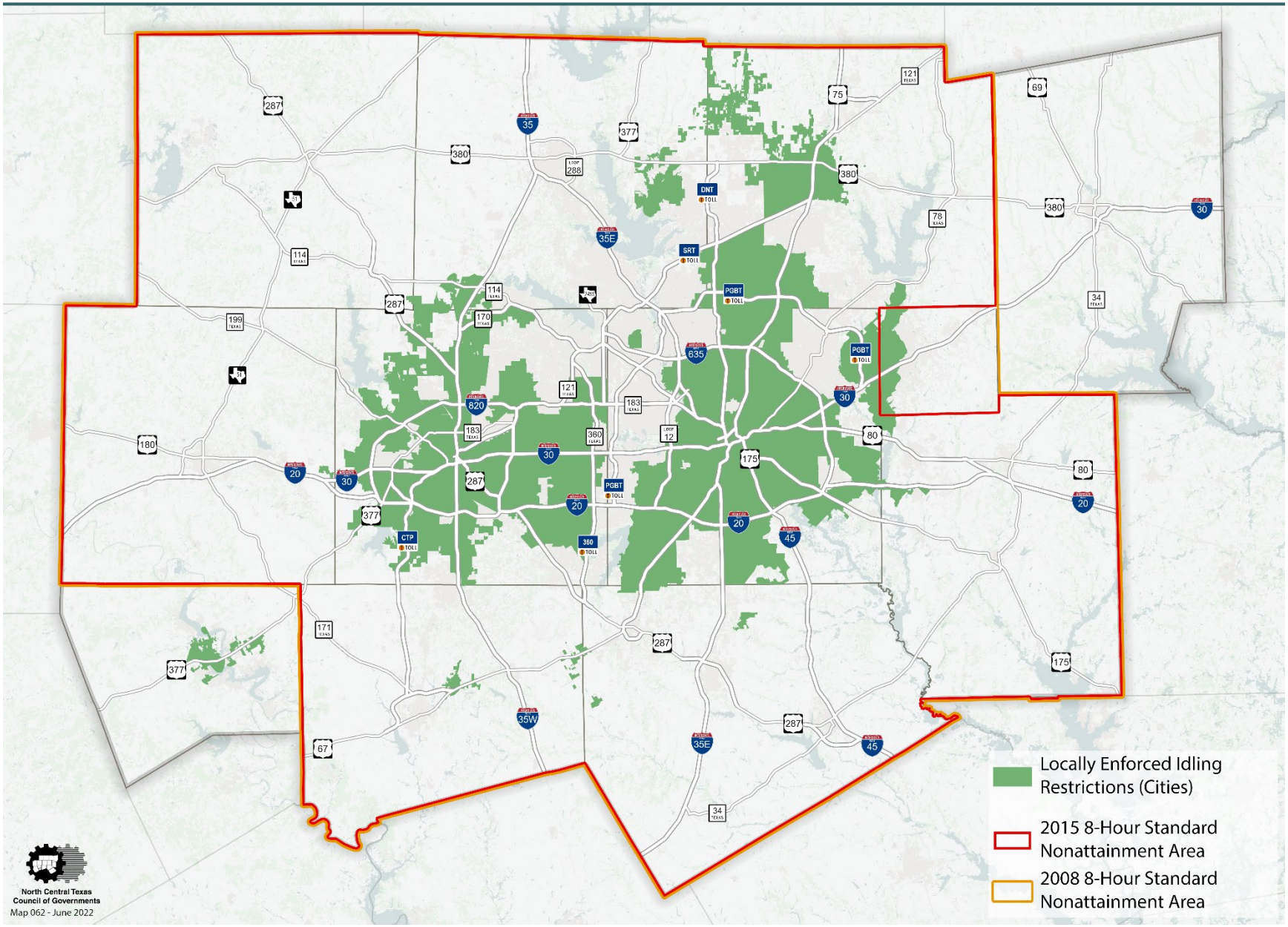
8-Hour Ozone NAAQS Nonattainment Areas



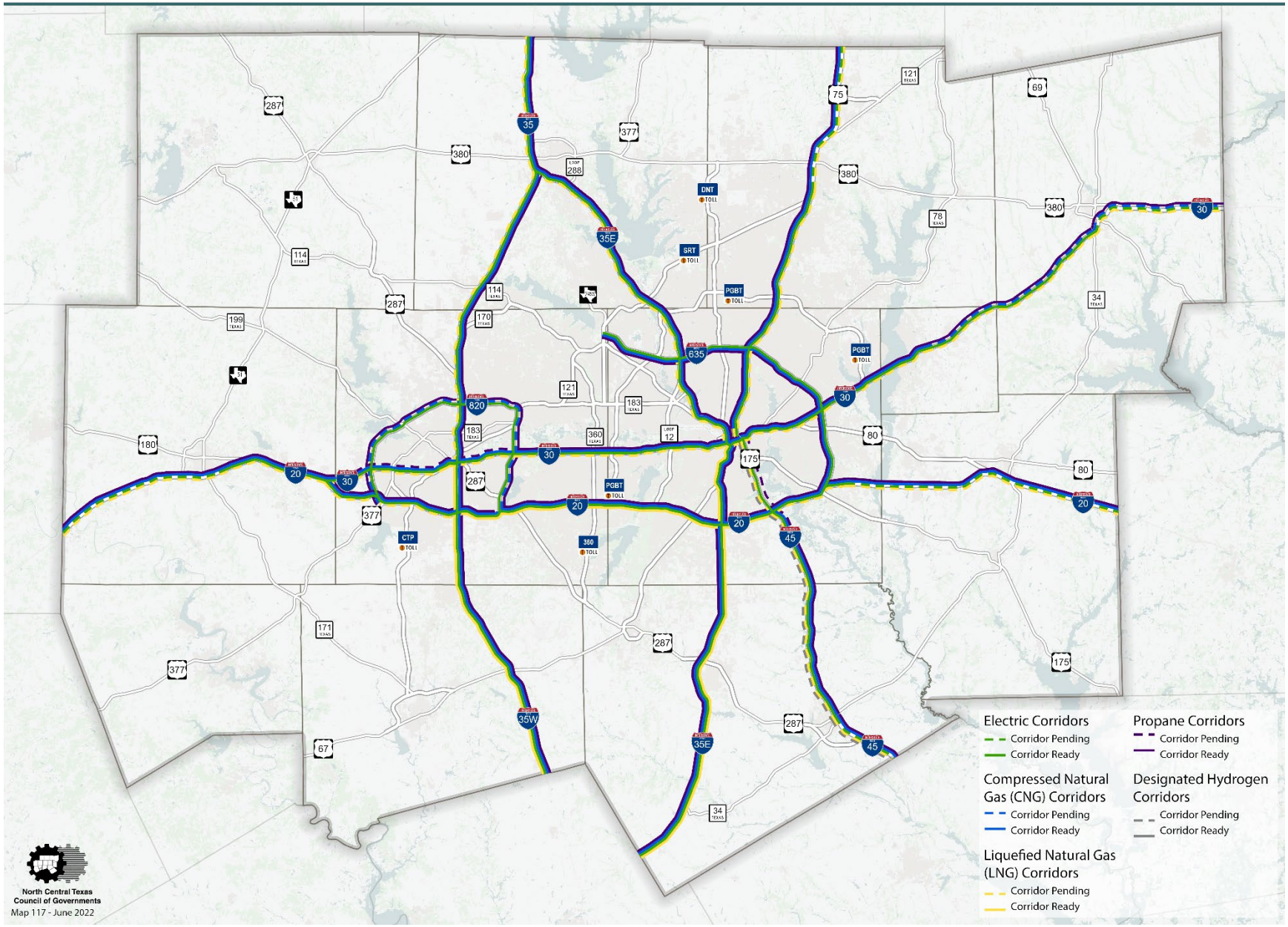
Clean Fleet Policy Adoptees



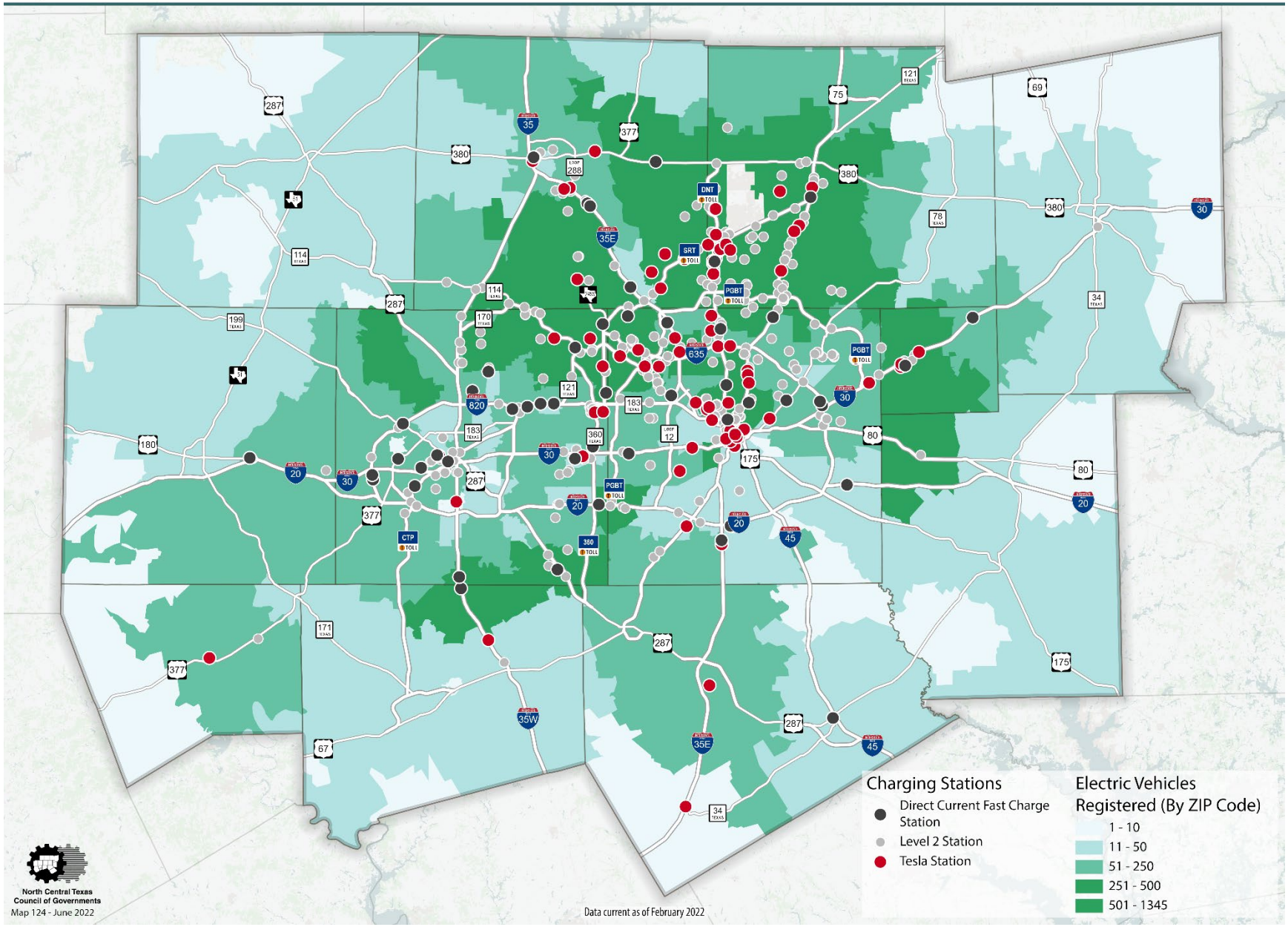
Locally Enforced Idling Restrictions



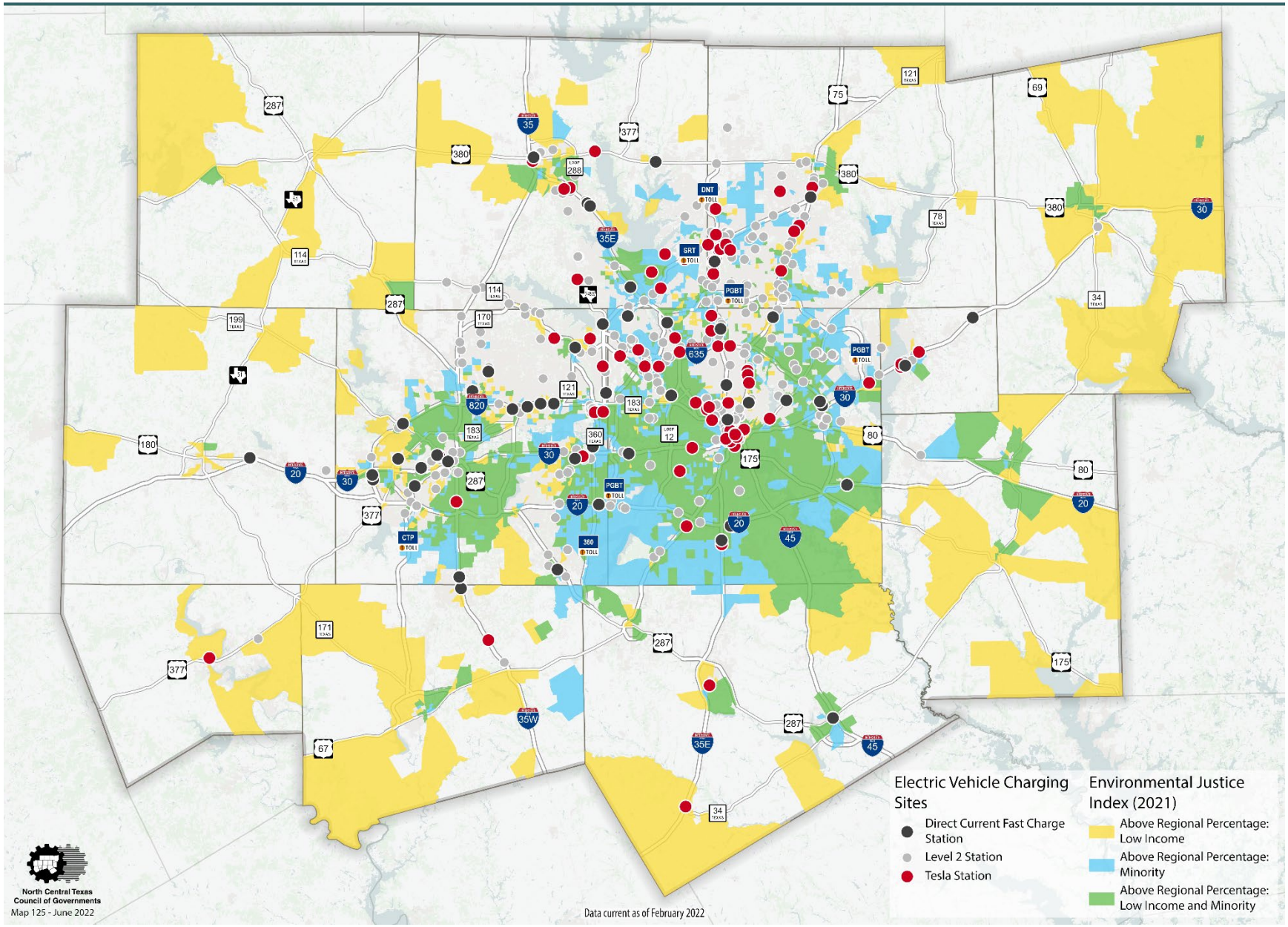
Currently Designated Alternative Fuel Corridors



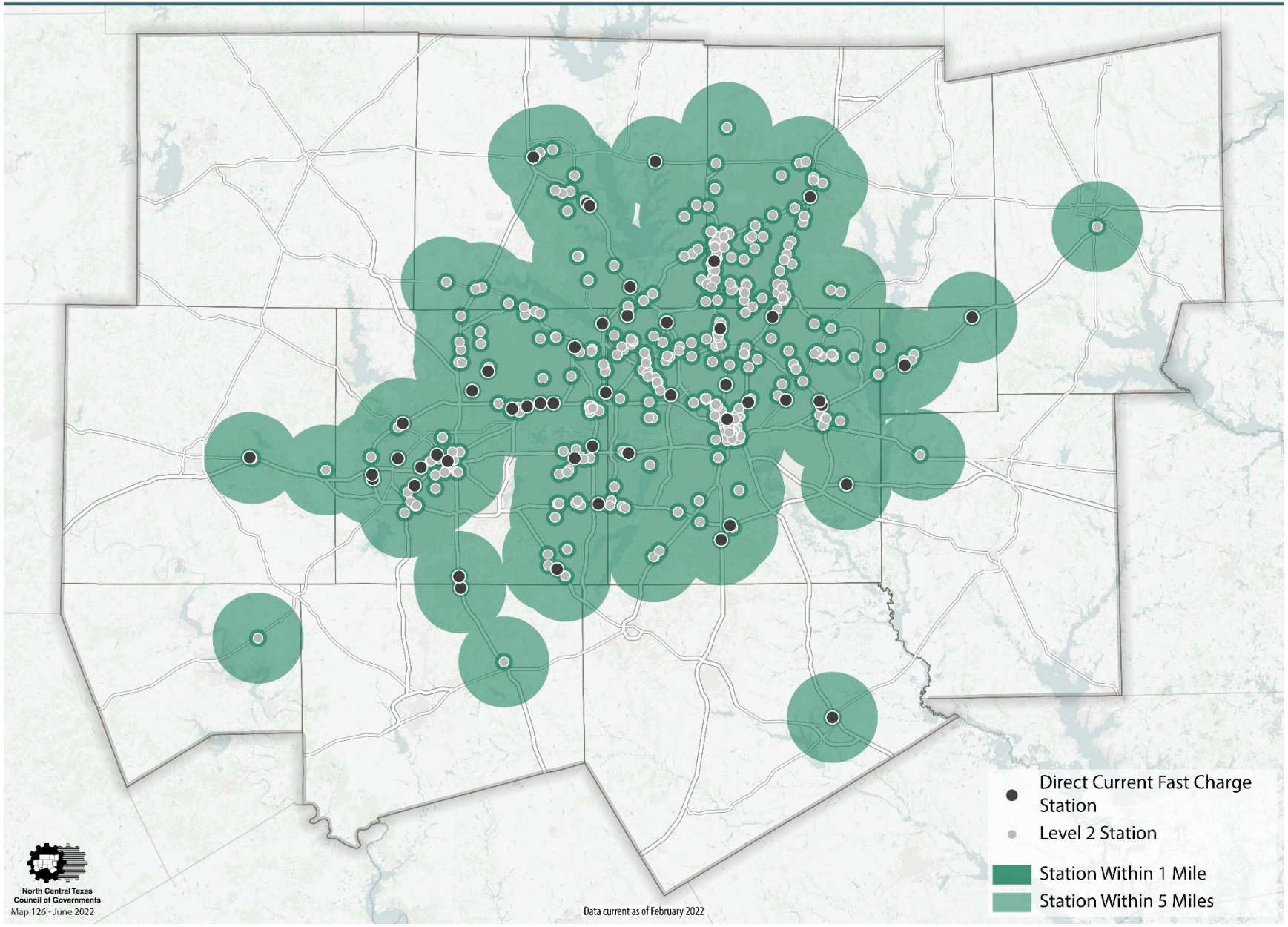
Electric Vehicle Registration by Zip Code

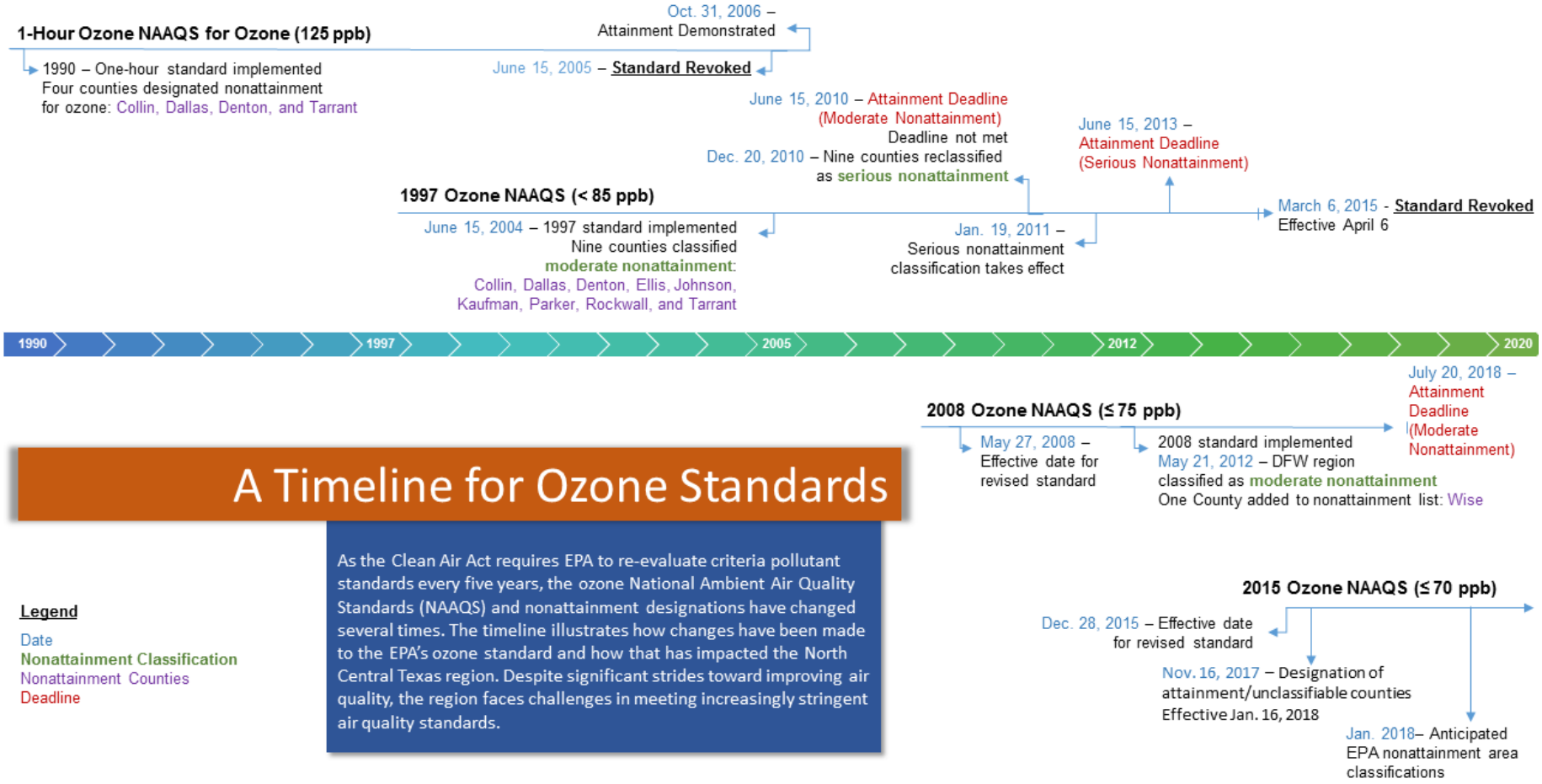


EV Charging Stations and Environmental Justice Areas



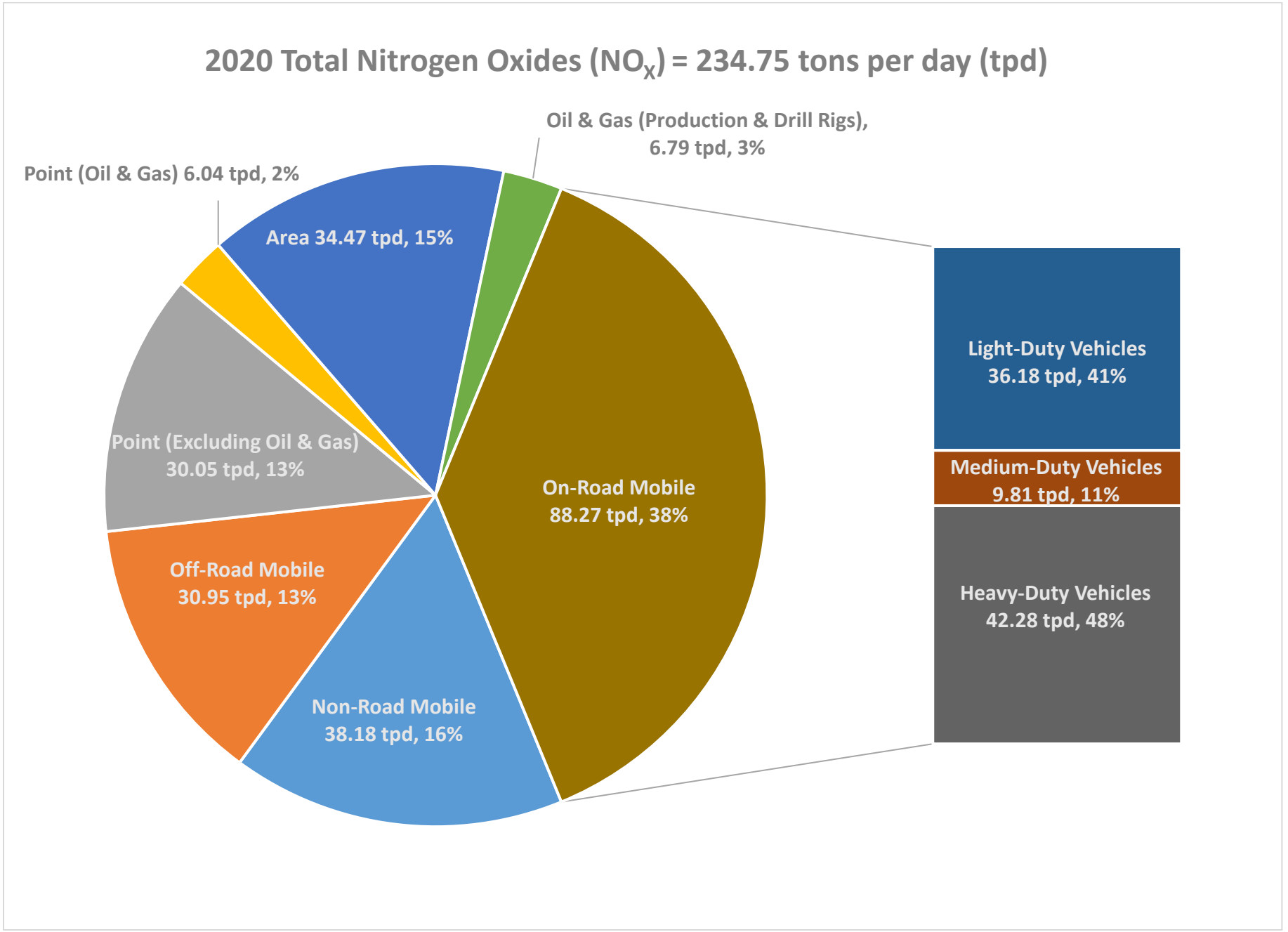
EV Charging Station Gap Analysis





A Timeline for Ozone Standards

As the Clean Air Act requires EPA to re-evaluate criteria pollutant standards every five years, the ozone National Ambient Air Quality Standards (NAAQS) and nonattainment designations have changed several times. The timeline illustrates how changes have been made to the EPA's ozone standard and how that has impacted the North Central Texas region. Despite significant strides toward improving air quality, the region faces challenges in meeting increasingly stringent air quality standards.


2020 Total Nitrogen Oxides (NO_X) = 234.75 tons per day (tpd)
Oil & Gas (Production & Drill Rigs), 6.79 tpd, 3%
Point (Oil & Gas) 6.04 tpd, 2%
Area 34.47 tpd, 15%
Point (Excluding Oil & Gas) 30.05 tpd, 13%
Off-Road Mobile 30.95 tpd, 13%
Non-Road Mobile 38.18 tpd, 16%
On-Road Mobile 88.27 tpd, 38%
Light-Duty Vehicles 36.18 tpd, 41%
Medium-Duty Vehicles 9.81 tpd, 11%
Heavy-Duty Vehicles 42.28 tpd, 48%

DFW Clean Cities Impacts – Results from 2020 Survey

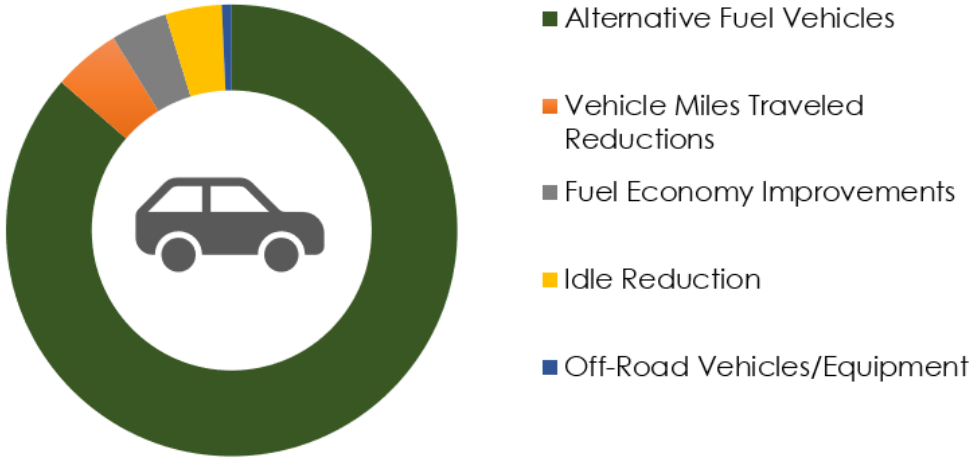
55 Fleets Reporting

10,165 Alternative Fuel Vehicles and Equipment

*Impacts Over Calendar Year 2020

dfwcleancities.org/annualreport

~23.95 Million Gasoline Gallon Equivalent (GGE) Reduced*



~367 Tons Ozone-Forming Nitrogen Oxides (NO_X) Reduced*

~1 Ton/Day

For Comparison: RTC Initiatives Credited in Conformity = ~2.12 Tons/Day

125,058 Tons Greenhouse Gas (GHG) Emissions Reduced*

Equivalent to Eliminating

5,306

Tanker Trucks of Gasoline

NCTCOG Air Quality Projects and Initiatives

The projects and initiatives listed in the table below are ongoing as of 2021. Status of these initiatives may change over time, and new efforts may develop in future years.

	Air Quality Emphasis Areas Addressed							Pollutants/Emissions Addressed			
Project/Initiative	**High Emitting Vehicles/ Equipment**	**Low Speeds**	**Cold Starts**	**Hard Accelerations**	**Idling**	**VMT**	**Energy/ Fuel Use**	**NO_X**	**VOC**	**$PM_{2.5}$**	**CO_2**
Air North Texas Impacts: Consumers and Communities www.airnorthtexas.org Encourages participation and support of key elements in the State Implementation Plan and other air quality improvement strategies, as well as the reduction of energy use. Promotes simple things that people can do to help make a difference in the region's air quality.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Air Quality Funding Opportunities Impacts: Fleets, Consumers, and Communities www.nctcog.org/aqfunding Offers funding assistance periodically and promotes use of incentives available from other agencies (e.g., Environmental Protection Agency, Texas Commission on Environmental Quality).	✓				✓		✓	✓	✓	✓	✓
Clean Construction Specifications & Equipment Program Impacts: Communities and Fleets www.nctcog.org/construction Encourages use of equipment with lower emissions by encouraging use of existing incentives and promoting emissions-related contract requirements.	✓				✓		✓	✓		✓	✓
Clean Fleet Policy Impacts: Fleets www.nctcog.org/fleetpolicy Regional Transportation Council Resolution: See 'Clean Fleet Policy' map. Outlines emissions, fuel saving, and partnership goals for local fleets to help reduce environmental impact and increase collaboration and best-practice sharing.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

VMT: vehicle miles traveled; NO_x: nitrogen oxides; VOC: volatile organic compounds; $PM_{2.5}$: particulate matter; CO_2: carbon dioxide

	Air Quality Emphasis Areas Addressed							Pollutants/Emissions Addressed			
Project/Initiative	**High Emitting Vehicles/ Equipment**	**Low Speeds**	**Cold Starts**	**Hard Accelerations**	**Idling**	**VMT**	**Energy/ Fuel Use**	**NO_X**	**VOC**	**$PM_{2.5}$**	**CO_2**
Dallas-Fort Worth Clean Cities Coalition Impacts: Communities, Consumers, and Fleets www.dfwcleancities.org Seeks to advance energy security, protect environmental and public health, and stimulate economic development by promoting practices and decisions to reduce fuel consumption and improve air quality, primarily in the transportation sector, and through public-private partnerships. Incorporates promotion of other clean vehicle initiatives such as Electric Vehicles North Texas and Engine Off North Texas.	✓				✓	✓	✓	✓	✓	✓	✓
Electric Vehicles North Texas Impacts: Communities, Consumers, and Fleets www.dfwcleancities.org/evnt Encourages and supports the transition to electric vehicles in North Texas through industry partnerships, fleet education, and consumer outreach; is part of the Dallas-Fort Worth Clean Cities Coalition.	✓				✓		✓	✓	✓	✓	✓
Regional Integration of Sustainability Efforts Impacts: Communities www.nctcog.org/envir/development-excellence/rise-coalition Supports collaboration among North Texas local governments on regional sustainability projects and initiatives. This coalition explores topic areas that provide participants opportunities to leverage regional resources and share best practices to achieve environmental and sustainability goals. Collaboration with the North Central Texas Council of Governments Environment & Development Department.							✓				

VMT: vehicle miles traveled; NO_x: nitrogen oxides; VOC: volatile organic compounds; $PM_{2.5}$: particulate matter; CO_2: carbon dioxide

	Air Quality Emphasis Areas Addressed							Pollutants/Emissions Addressed			
Project/Initiative	**High Emitting Vehicles/ Equipment**	**Low Speeds**	**Cold Starts**	**Hard Accelerations**	**Idling**	**VMT**	**Energy/ Fuel Use**	**NO_X**	**VOC**	**$PM_{2.5}$**	**CO_2**
Regional Energy Management Impacts: Communities and Fleets https://www.nctcog.org/envir/natural-resources/energy-efficiency Provide education and resources to local stakeholders on the topic of energy management in an effort to increase efficiency and reduce energy consumption, which can reduce air pollution associated with energy generation. Acknowledge the growing connection between the transportation system and energy sectors as fuels diversify, especially with regard to electric vehicles. Work to increase use of renewable natural gas and promote electric vehicle grid integration as a grid resiliency tool. Collaboration with the North Central Texas Council of Governments Environment & Development Department.	✓				✓		✓	✓	✓	✓	✓
NCTCOG Air Quality Health Task Force Impacts: Communities https://nctcog.org/trans/about/committees/aq-health-monitoring-task-force Supports collaboration among government representatives, health officials, academic representatives, and air quality experts to evaluate data that may indicate a need for additional air quality improvement strategies to address concerns over localized air pollution, with a focus on transportation sources.							✓	✓		✓	

VMT: vehicle miles traveled; NO_x: nitrogen oxides; VOC: volatile organic compounds; $PM_{2.5}$: particulate matter; CO_2: carbon dioxide

	Air Quality Emphasis Areas Addressed							Pollutants/Emissions Addressed			
Project/Initiative	**High Emitting Vehicles/ Equipment**	**Low Speeds**	**Cold Starts**	**Hard Accelerations**	**Idling**	**VMT**	**Energy/ Fuel Use**	**NO_X**	**VOC**	**$PM_{2.5}$**	**CO_2**
Engine Off North Texas (Idling) Impacts: Communities, Consumers, and Fleets www.engineoffnorthtexas.org Regional Transportation Council Resolution (Locally Enforced Motor Vehicle Idling Restrictions): See 'Locally Enforced Idling Restrictions' map. Addresses vehicle idling through a comprehensive anti-idling campaign that includes grant funding elements, promotion of idling restrictions for heavy-duty vehicles, and education on the various benefits of idle reduction.					✓		✓	✓	✓	✓	✓
Heavy-Duty Diesel Inspection and Maintenance Program Impacts: Fleets www.nctcog.org/dieselim Identifies emissions testing program for this currently exempt class of vehicles. Facilitates the Heavy-Duty Diesel Inspection and Maintenance Working Group.	✓				✓		✓	✓	✓		✓
Regional Emissions Enforcement Program Impacts: Consumers and Fleets www.nctcog.org/reep Identifies high-emitting vehicles with fictitious/counterfeit inspections and/or registrations.	✓				✓		✓	✓	✓		✓
Regional Smoking Vehicle Program Impacts: Consumers www.smokingvehicle.net Allows North Central Texas drivers to anonymously report vehicles emitting visible smoke and encourages reported drivers to voluntarily repair their vehicles by providing information and educational material.	✓				✓		✓	✓	✓	✓	✓

VMT: vehicle miles traveled; NO_X: nitrogen oxides; VOC: volatile organic compounds; $PM_{2.5}$: particulate matter; CO_2: carbon dioxide

	Air Quality Emphasis Areas Addressed							Pollutants/Emissions Addressed			
Project/Initiative	**High Emitting Vehicles/ Equipment**	**Low Speeds**	**Cold Starts**	**Hard Accelerations**	**Idling**	**VMT**	**Energy/ Fuel Use**	**NO_X**	**VOC**	**$PM_{2.5}$**	**CO_2**
Car Care Awareness Impacts: Consumers http://www.ntxcarcare.org Partners with local nonprofit organizations and vehicle repair facilities to inform and educate the local community on vehicle maintenance related to emissions inspections.	✓				✓		✓	✓	✓	✓	✓
Saving Money and Reducing Truck Emissions/Freight Efficiency Outreach Program Impacts: Fleets www.nctcog.org/smarte Provides outreach and information to the trucking industry to improve awareness of strategies and technologies that help reduce fuel consumption and emissions while saving money on operating costs. This initiative incorporates elements of the Environmental Protection Agency SmartWay Transport Program, Dallas-Fort Worth Clean Cities Coalition, idling restrictions, and the Clean Fleet Policy in a way that is specifically catered to the trucking industry.	✓			✓	✓		✓	✓	✓	✓	✓
On-Road Vehicle Emissions Project Impacts: Consumers and Fleets Develop air quality planning strategies and emissions modeling comparisons through collecting on-road vehicle emissions data in the nonattainment area. Establish mobile emissions enforcement task forces.	✓				✓		✓	✓	✓	✓	✓
Alternative Fuel Corridor Study: IH 45 Corridor Communities Develops a plan for deployment of infrastructure that supports the use of zero-emission vehicles along Interstate 45 and supports an emphasis on the transition of medium- and heavy-duty vehicles in goods movement.	✓						✓	✓	✓	✓	✓

VMT: vehicle miles traveled; NO_x: nitrogen oxides; VOC: volatile organic compounds; $PM_{2.5}$: particulate matter; CO_2: carbon dioxide

NCTCOG Projects and Initiatives with Air Quality Benefits

	Air Quality Emphasis Areas Addressed							Pollutants/Emissions Addressed			
Project/Initiative	**High Emitting Vehicles/ Equipment**	**Low Speeds**	**Cold Starts**	**Hard Accelerations**	**Idling**	**VMT**	**Energy/ Fuel Use**	**NO_X**	**VOC**	**$PM_{2.5}$**	**CO_2**
Congestion Management Process Impacts: Communities http://www.nctcog.org/trans/cmp/ Identifies and expands alternate modes of transportation available within congestion corridors before adding single-occupancy vehicle capacity. Includes, but is not limited to, the following projects: • High-Occupancy Vehicle/Managed Lanes • Intelligent Transportation Systems/Remote Sensing • Intersection Improvement Projects • Park-and-Ride Facilities • Parking Management/Way-Finding Signs • Traffic Signalization • Autonomous Vehicle Integration		✓	✓		✓	✓	✓	✓	✓	✓	✓
Employer Trip Reduction Program Impacts: Communities, Consumers http://www.nctcog.org/trans/cmp/tdm/ETR.asp Educates and encourages the use of alternative commute options such as rideshare programs (carpool and vanpool), transit, flexible work hours, telecommuting, bicycling, and walking.						✓	✓	✓	✓	✓	✓
Freeway Incident Management Training Impacts: Communities http://www.nctcog.org/trans/safety/FIM.asp Provides specific courses designed for first responders, managers, and executive-level policymakers in order to initiate a common, coordinated response to traffic incidents that will build partnerships, enhance safety for emergency personnel, reduce upstream traffic accidents, improve the efficiency of the transportation system, and improve air quality.		✓			✓	✓		✓	✓	✓	✓

VMT: vehicle miles traveled; NO_X: nitrogen oxides; VOC: volatile organic compounds; $PM_{2.5}$: particulate matter; CO_2: carbon dioxide

	Air Quality Emphasis Areas Addressed							Pollutants/Emissions Addressed			
Project/Initiative	**High Emitting Vehicles/ Equipment**	**Low Speeds**	**Cold Starts**	**Hard Accelerations**	**Idling**	**VMT**	**Energy/ Fuel Use**	**NO_X**	**VOC**	**$PM_{2.5}$**	**CO_2**
Light-Emitting Diode Streetlight and Traffic Signal Replacement Program Impacts: Communities http://www.nctcog.org/trans/cmp/led/ Promotes conversion of streetlights and traffic signals to light-emitting diode lighting to save energy and reduce ozone precursor pollutants emitted from electric power generator plants within the region.							✓	✓		✓	✓
NCTCOG Try Parking It Website Impacts: Communities and Consumers https://www.tryparkingit.com/public/home.aspx Allows commuters to record information about alternative commute trips and to locate traditional carpool or vanpool matches. Offers buddy/mentor matches for transit, biking, and walking. Also includes the Regional Vanpool programs.			✓			✓	✓	✓	✓	✓	✓
Passenger Rail Transit Impacts: Consumers, Communities Coordinates with local transit authorities to identify corridors suitable for regional passenger rail transit lines.					✓	✓	✓	✓	✓	✓	✓
Sustainable Development Impacts: Communities http://www.nctcog.org/trans/sustdev/ Develops communities to be independent of vehicle travel through consideration of the interface between land use and transportation, planning for bicycle and pedestrian modes of transportation, and transit-oriented development.			✓		✓	✓	✓	✓	✓	✓	✓

VMT: vehicle miles traveled; NO_X: nitrogen oxides; VOC: volatile organic compounds; $PM_{2.5}$: particulate matter; CO_2: carbon dioxide

	Air Quality Emphasis Areas Addressed							Pollutants/Emissions Addressed			
Project/Initiative	**High Emitting Vehicles/ Equipment**	**Low Speeds**	**Cold Starts**	**Hard Accelerations**	**Idling**	**VMT**	**Energy/ Fuel Use**	**NO_X**	**VOC**	**$PM_{2.5}$**	**CO_2**
Truck Lane Restriction Program Impacts: Fleets, Communities http://www.nctcog.org/trans/goods/trucks/tlp.asp Improves mobility, safety, and air quality by identifying suitable transportation corridors for truck lane restrictions where trucks with three or more axles are prohibited from using the inside left lane, except when passing traffic. Works with local municipalities to implement enforcement ordinances.		✓			✓		✓	✓	✓	✓	✓

VMT: vehicle miles traveled; NO_x: nitrogen oxides; VOC: volatile organic compounds; $PM_{2.5}$: particulate matter; CO_2: carbon dioxide