

# **Electric Vehicle Update: What to Watch**

Rachel Linnewiel -- NCTCOG

NTEAA/NTREG Monthly Meeting

September 10, 2016



# The Basics: Who We Are

**North Central Texas Council of Governments (NCTCOG) is:**

## **Council of Governments**

- Regional Coordination



## **Metropolitan Planning Organization**

- Transportation Planning
- Air Quality



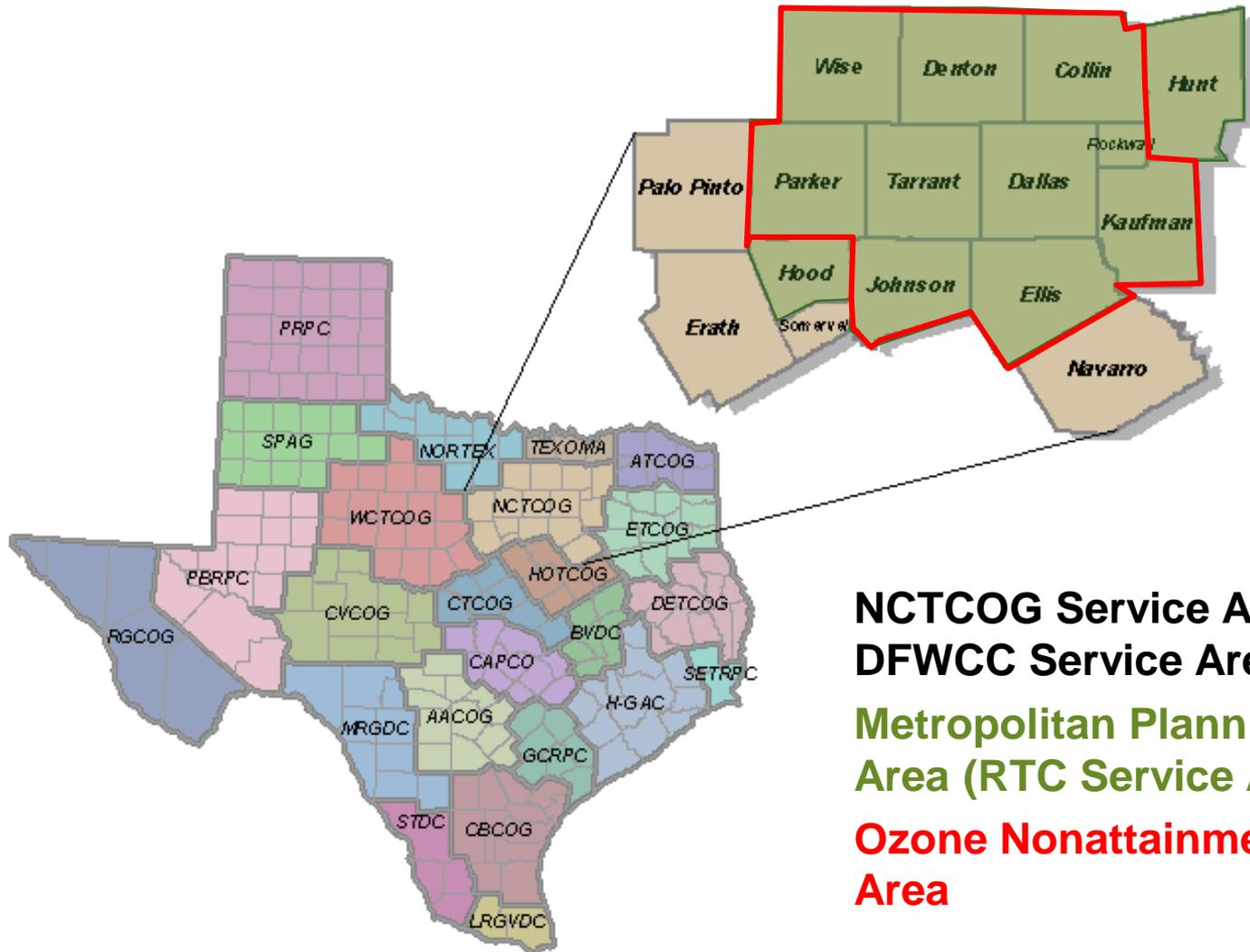
## **Dallas-Fort Worth Clean Cities Coalition (DFWCC)**

- Petroleum Reduction
- Alternative Fuels



Dallas-Fort Worth  
CLEAN CITIES

# The Basics: Who We Are



**NCTCOG Service Area**  
**DFWCC Service Area**  
**Metropolitan Planning Area (RTC Service Area)**  
**Ozone Nonattainment Area**

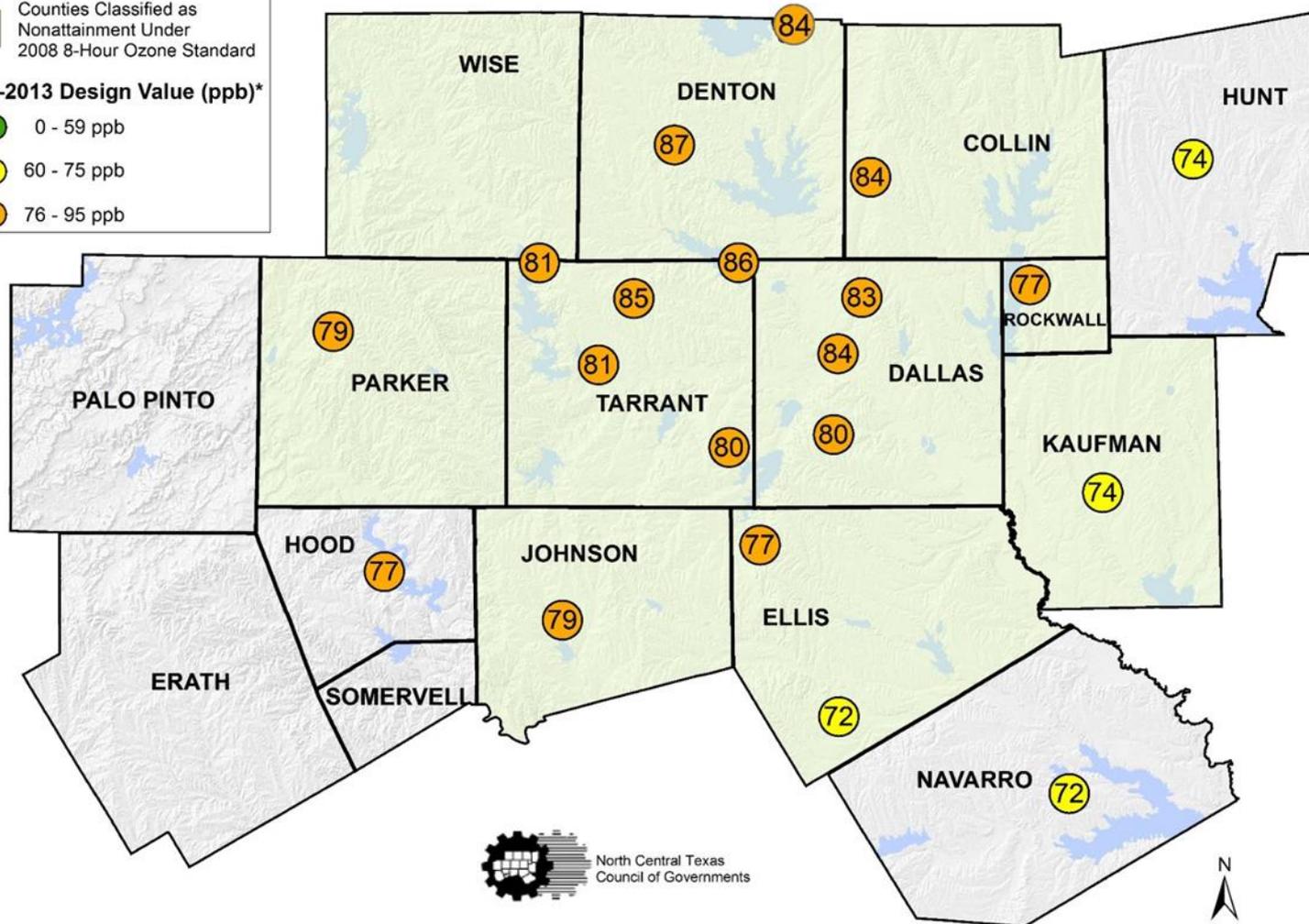
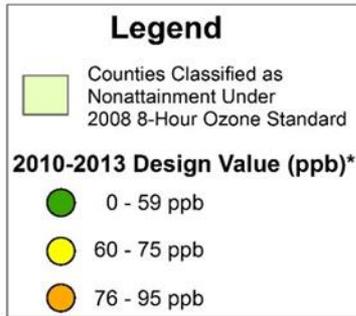
# Criteria Air Pollutants

- Carbon Monoxide (CO)
- Lead (Pb)
- Nitrogen Oxides (NO<sub>x</sub>)
- Ozone (O<sub>3</sub>)
- Particulate Matter (PM<sub>10</sub> & PM<sub>2.5</sub>)
- Sulfur Dioxide (SO<sub>2</sub>)



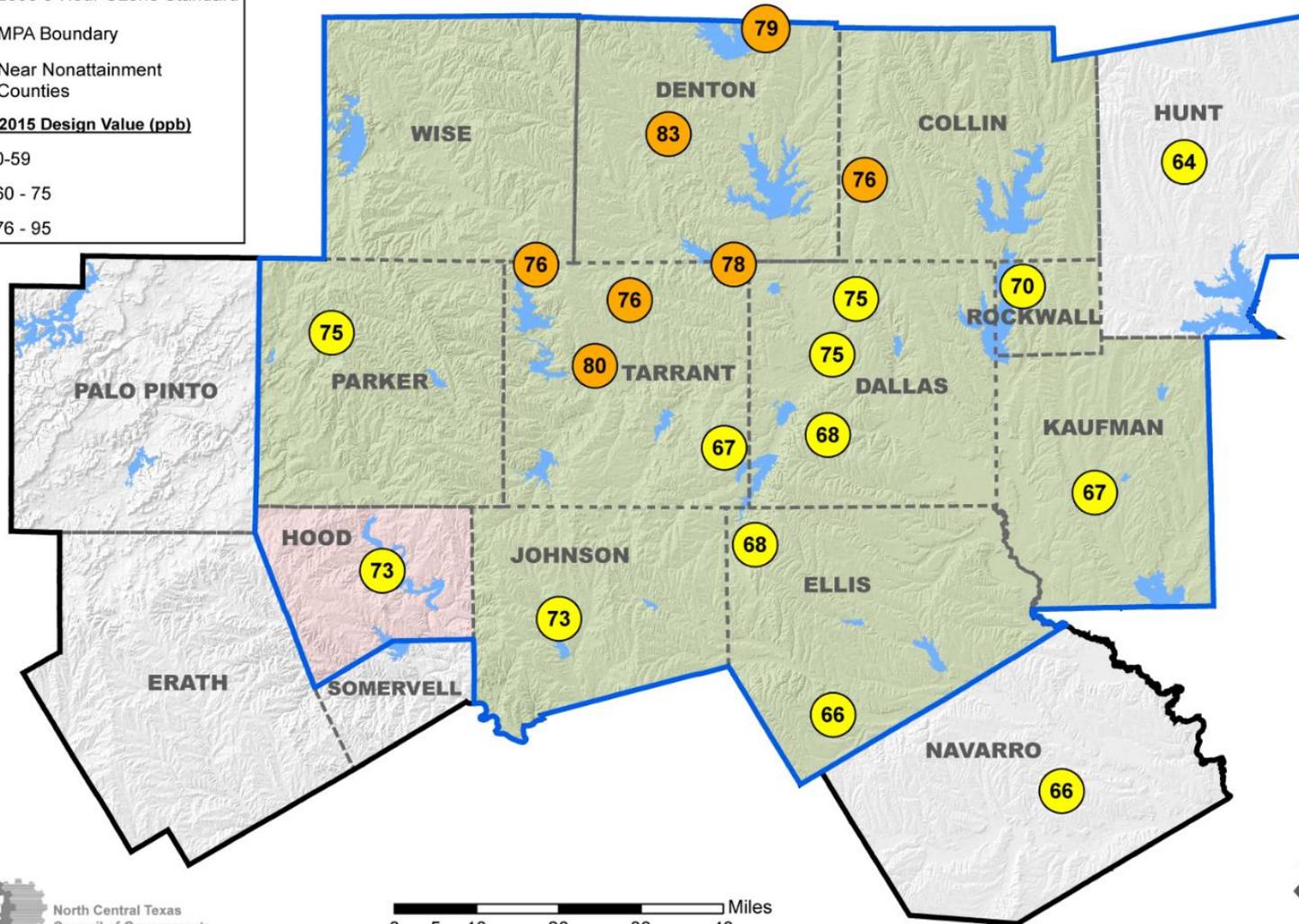
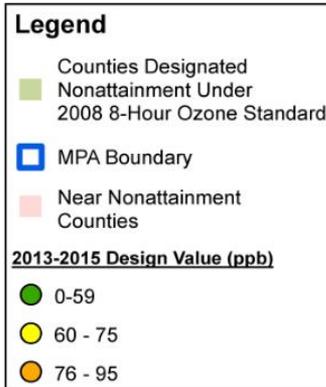
Future ? CO<sub>2</sub>, NO<sub>2</sub>, Etc.

# North Texas Ozone Monitors

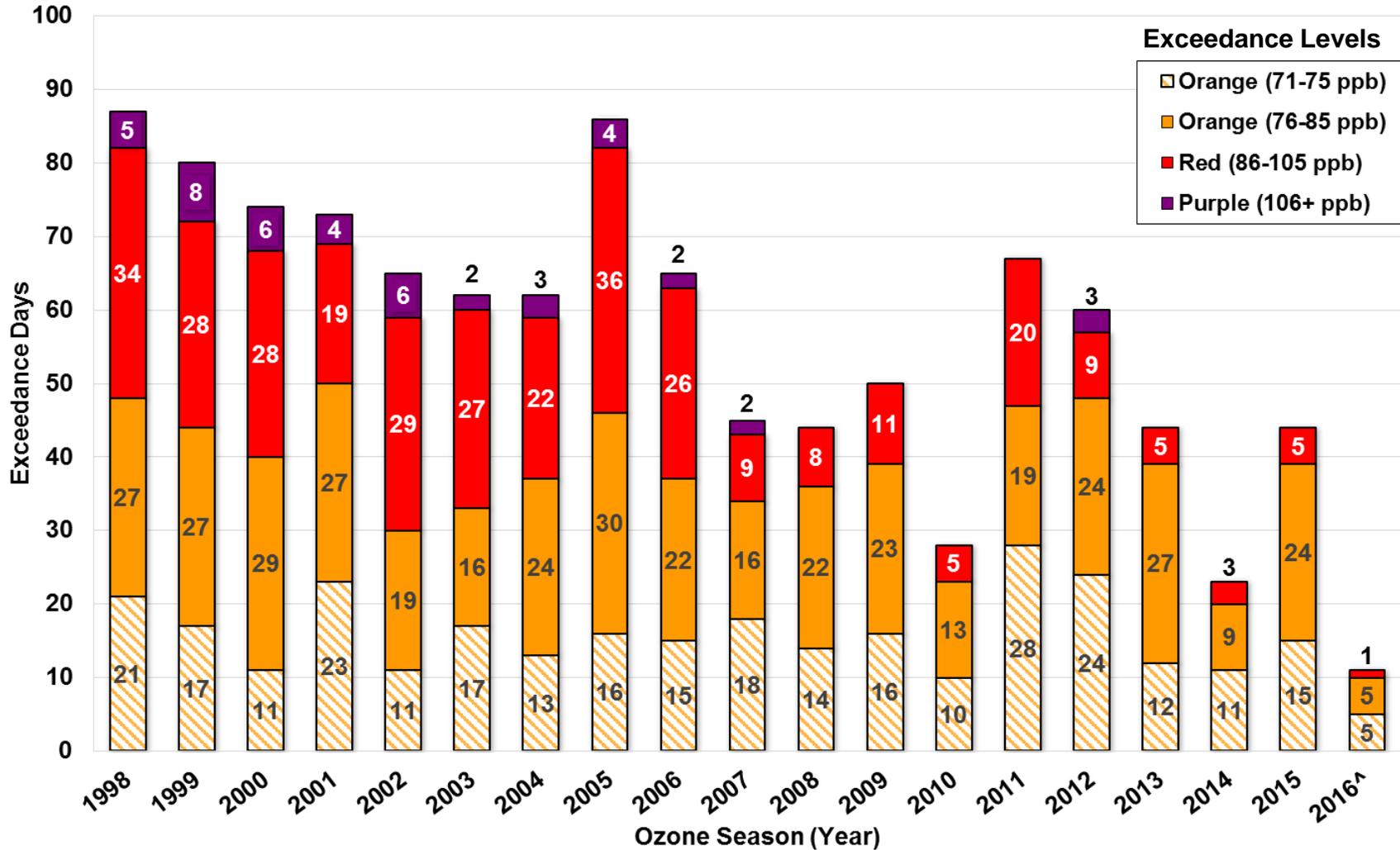


\* Not a full year of data, current as of October 15, 2013.

# North Texas Ozone Monitors



# 2016 Ozone Season Exceedance Days



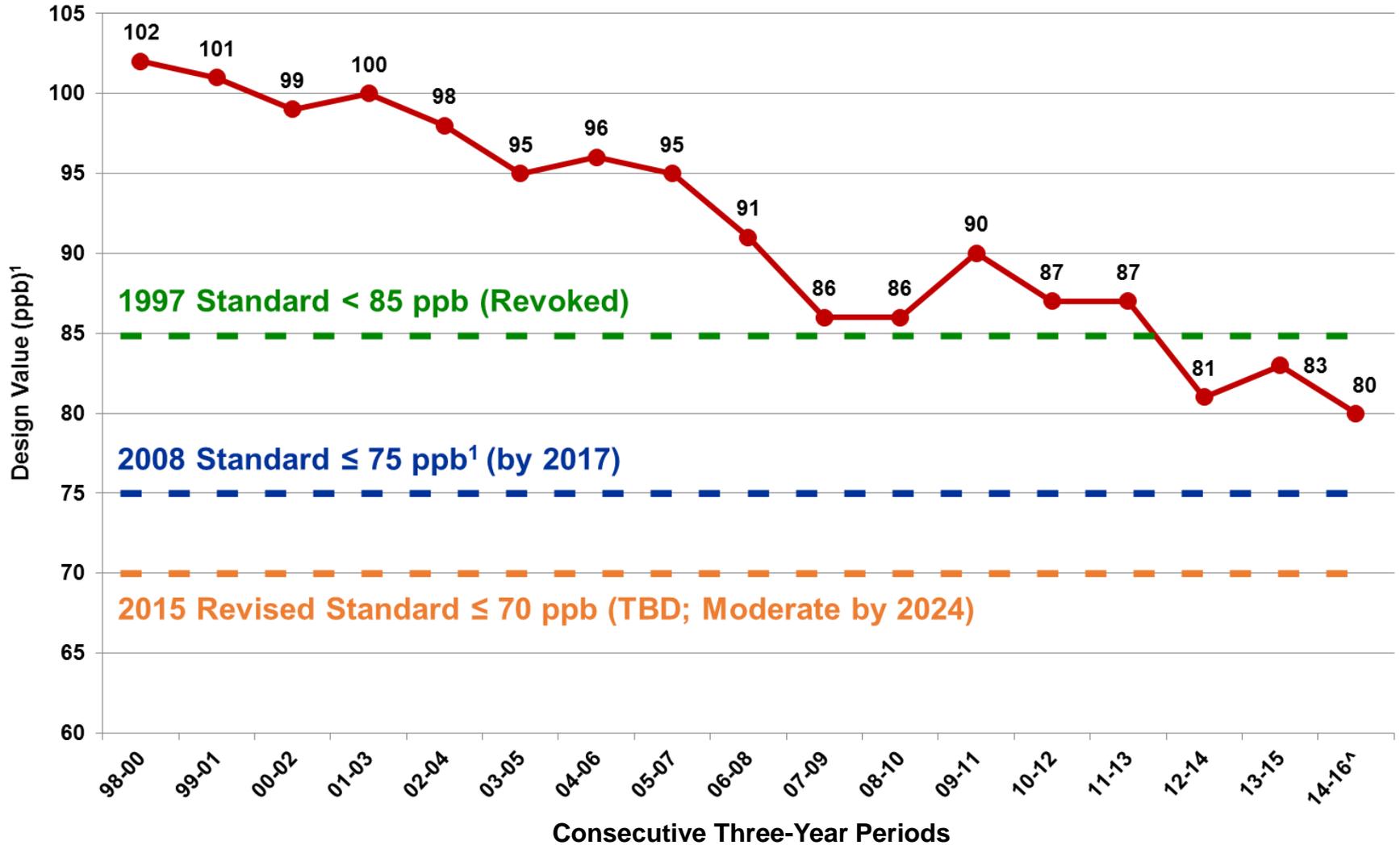
Exceedance Level indicates daily maximum eight-hour average ozone concentration. Exceedance Levels are based on Air Quality Index (AQI) thresholds established by the EPA for the revised ozone standard of 70 ppb.

 = Additional level orange exceedance days under the revised standard that were not exceedances under the previous 75 ppb standard. (AQI level orange = 71-75 ppb)

<sup>^</sup>Not a full year of data, current as of 8/25/2016

Source: TCEQ, [http://www.tceq.state.tx.us/cgi-bin/compliance/monops/8hr\\_monthly.pl](http://www.tceq.state.tx.us/cgi-bin/compliance/monops/8hr_monthly.pl)  
ppb = parts per billion

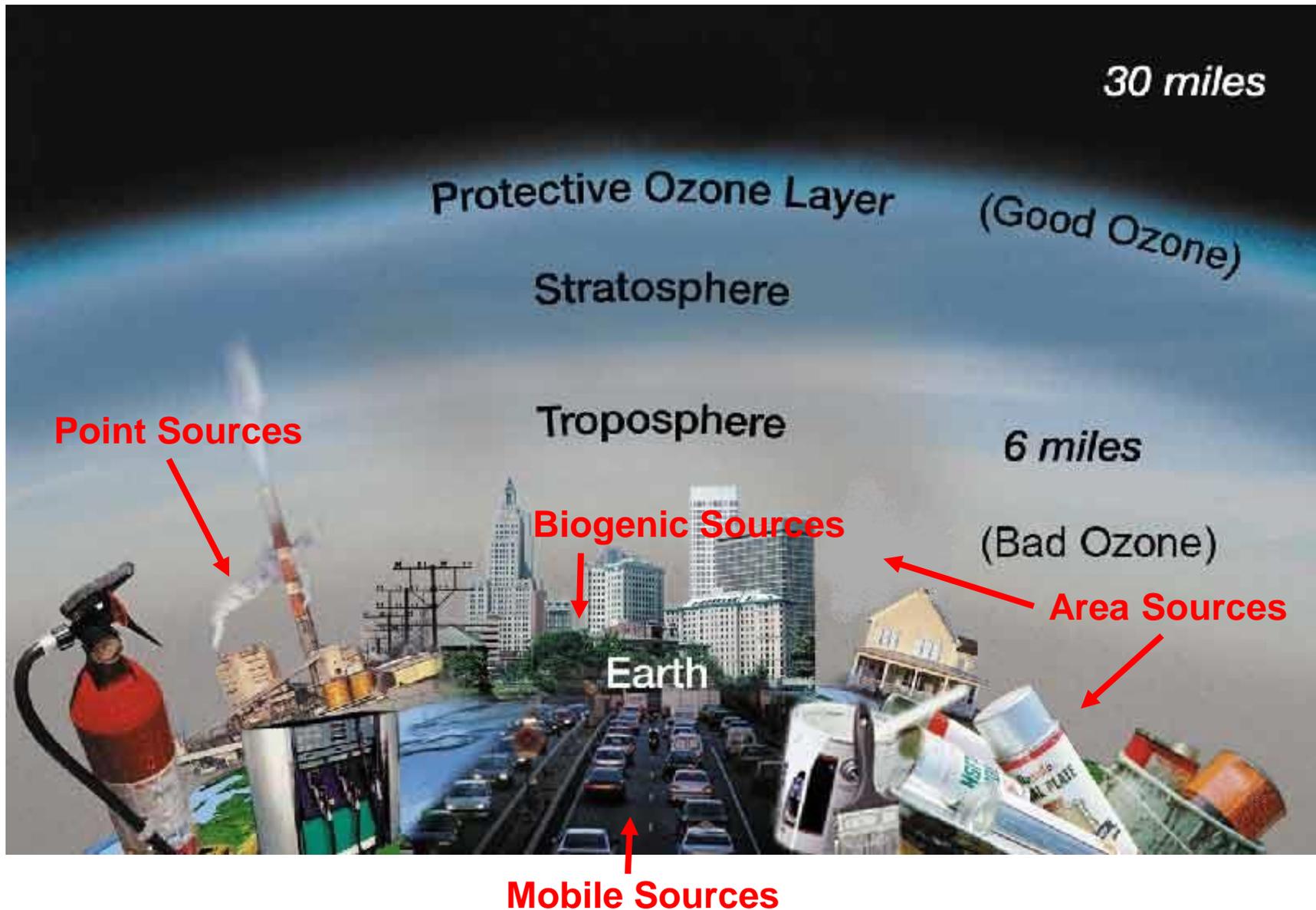
# 2016 Ozone Season Eight-Hour Ozone Historical Trends



<sup>1</sup>Attainment 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 less than or equal to 70 parts per billion (ppb).

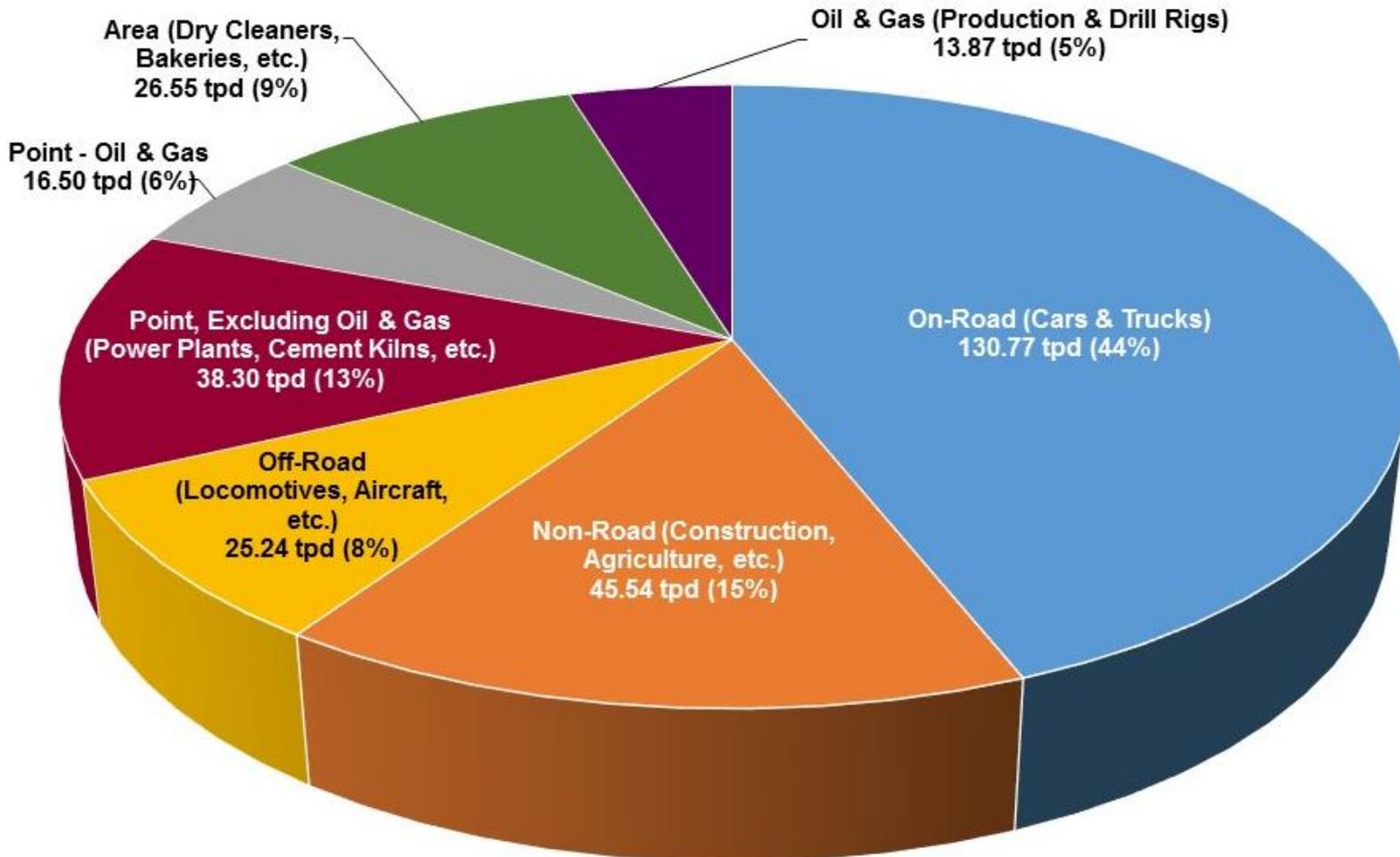
<sup>^</sup>Not a full year of data, current as of 8/25/2016.

# Ground Level Ozone Formation



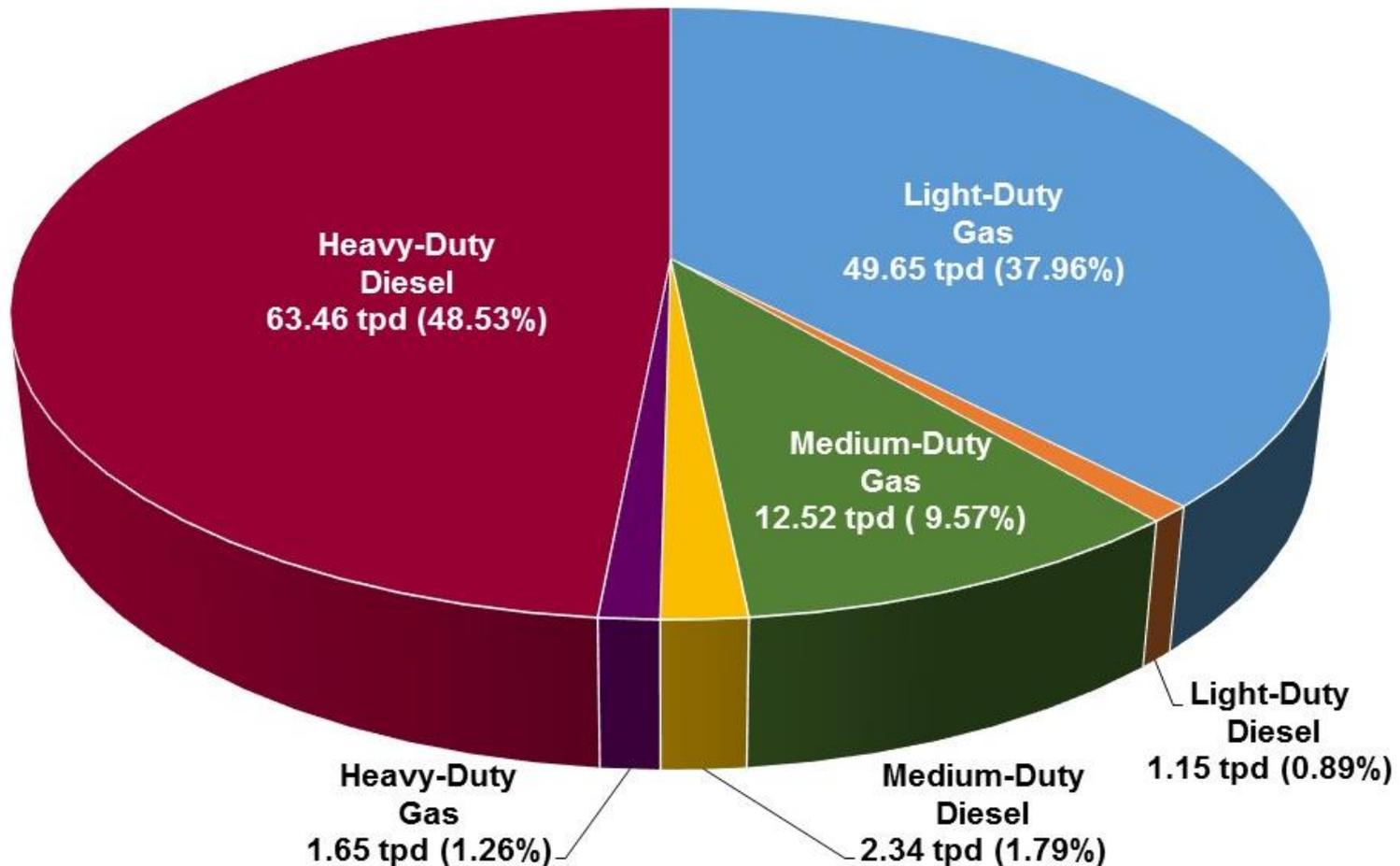
# DFW Nonattainment Area Inventory

Estimated 2017 Nitrogen Oxides (NO<sub>x</sub>) Emissions Inventory  
Source Category Estimates = 296.77 tons per day (tpd)



# DFW Nonattainment Area Inventory

Estimated 2017 Nitrogen Oxides (NO<sub>x</sub>) On-Road Emissions Inventory  
Source Category Estimates = 130.77 tons per day (tpd)



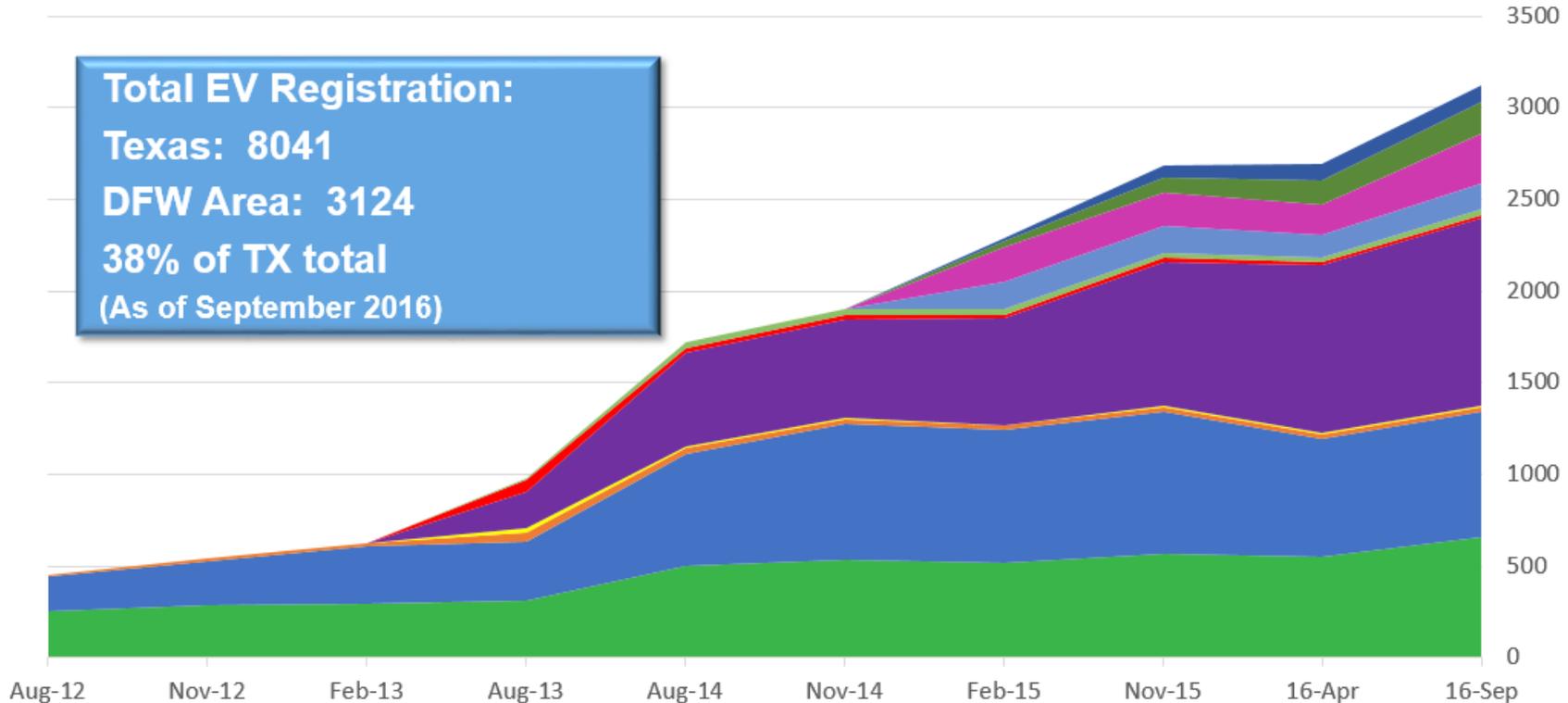
# Electric Vehicles North Texas (EVNT)

- **Initial Areas of Focus**
  - Establish Stakeholder Group
  - Vehicles
    - Establish DFW Area as Launch Market
    - Implement Incentives for Purchase
  - Infrastructure
    - Implement Public Recharging Infrastructure
    - Streamline PEV Purchase and In-Home Charging Installation Process



# Electric Vehicles North Texas (EVNT)

## Registration by Electric Vehicle (EV) Model in North Texas

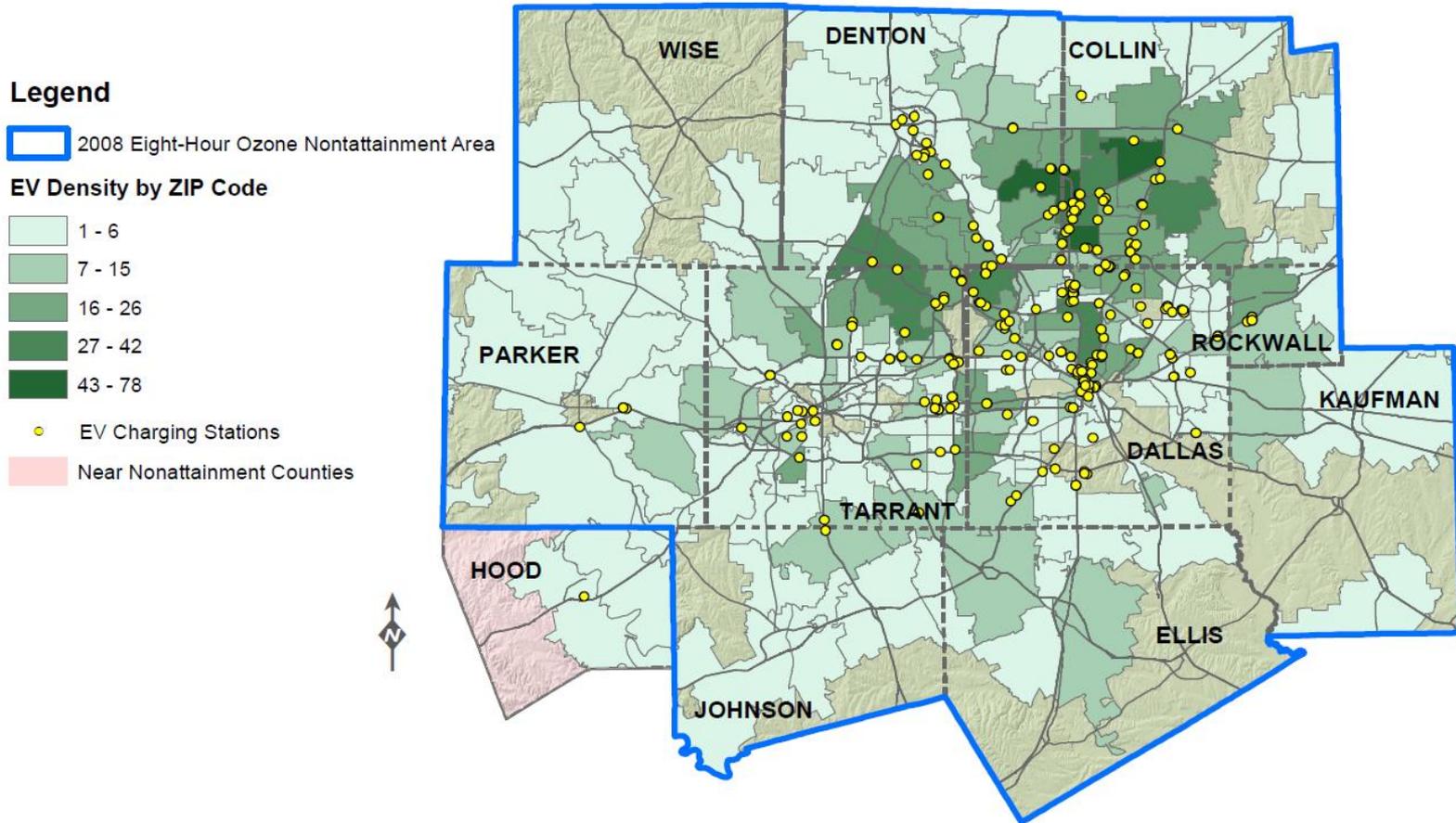


- Chevrolet Volt
 ■ Nissan Leaf
 ■ Mitsubishi i-MiEV
 ■ Tesla Roadster
 ■ Tesla Model S
 ■ Fisker Karma
- Ford Focus Electric
 ■ Ford C-Max
 ■ Ford Fusion Electric
 ■ BMW i3
 ■ BMW i8

\*NCTCOG staff plans to include additional models including: Cadillac ELR, Chevrolet Spark, Fiat 500e, Honda Accord Plug-In & Fit EV, Toyota Plug In Prius, & RAV4 EV

# Electric Vehicles North Texas (EVNT)

## Electric Vehicle (EV) Registration Density by ZIP Code with EV Recharging Station Locations



September 2016

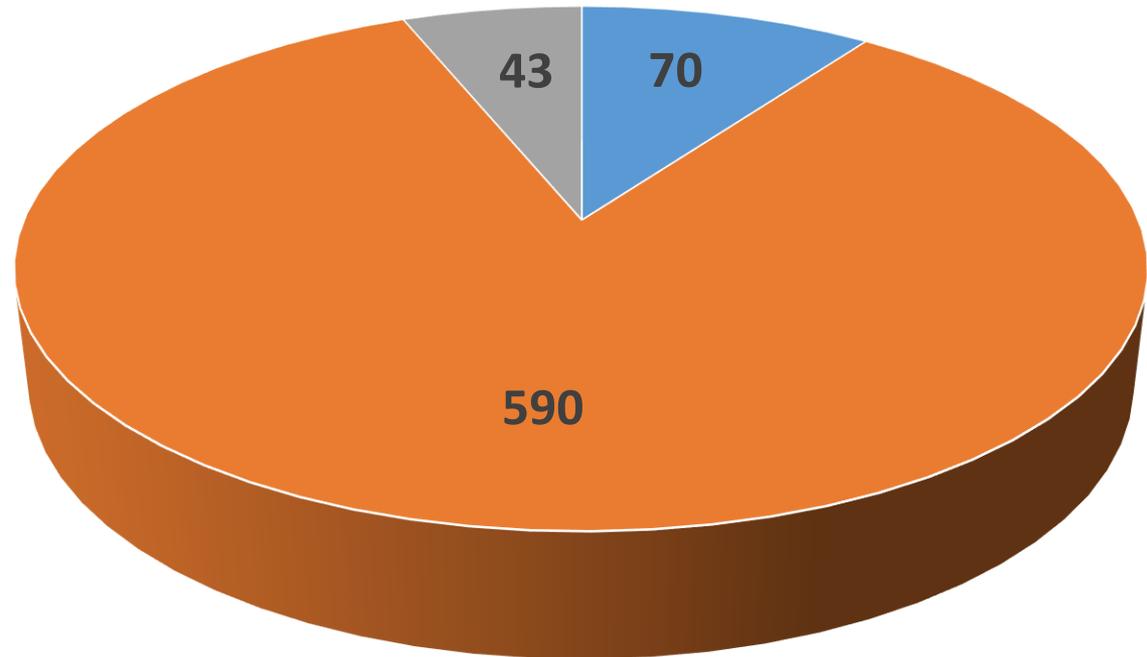
Source: NCTCOG

# Electric Vehicles North Texas (EVNT)

DFW EVSE Deployment

Total Charging  
Portals: 703

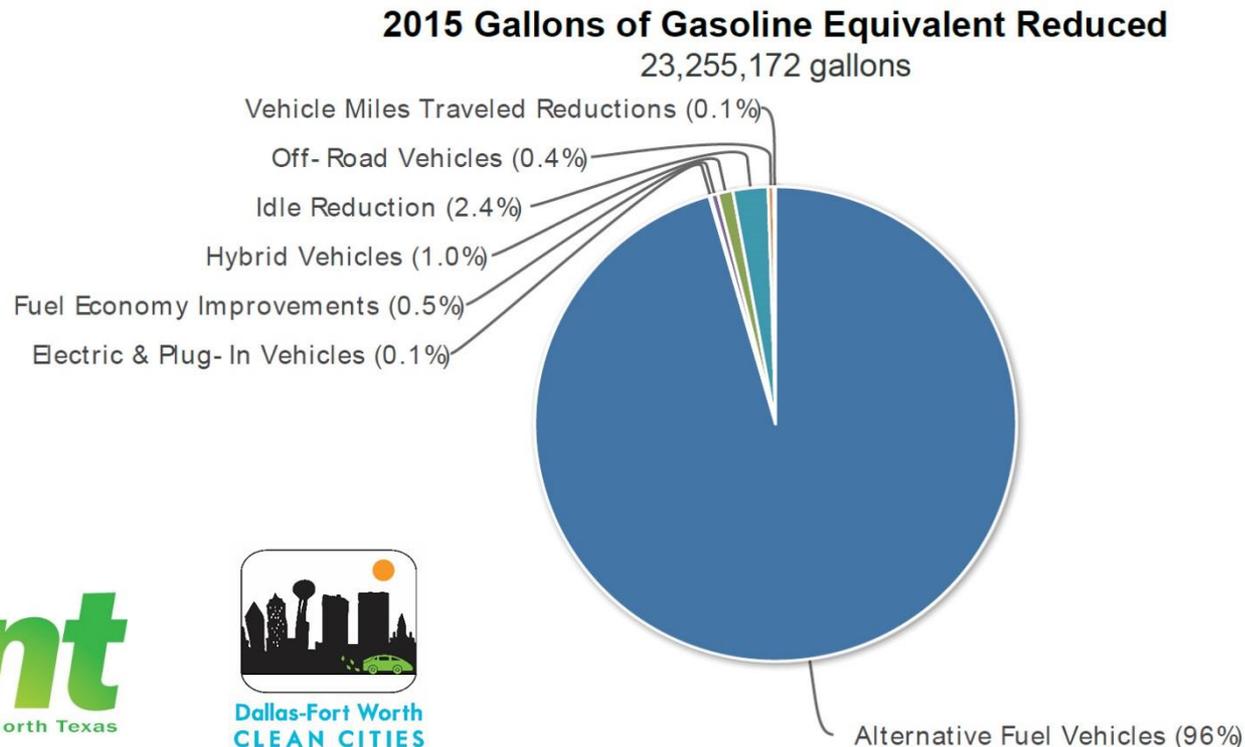
2013 Total: 462



■ Level 1   ■ Level 2   ■ Level 3/DC FastCharger

# Electric Vehicles North Texas (EVNT)

- **DFW Clean Cities Coalition Petroleum Reduction Goal**
  - Reduce Petroleum Consumption by 15% Year Over Year
  - 2015 Displacement: 23.26 Million Gasoline Gallon Equivalents (GGE)
  - 2016 Reduction Goal: 26.74 Million GGEs Displaced



# Electric Vehicles North Texas (EVNT)

- **Under Consideration: Shifting Focus**
  - Solar Ready II Program Model
    - Focus on Cities
      - PEV Readiness in City Boundaries
      - Municipal Fleet Adoption
      - Case Studies
      - Workplace Charging Challenge
    - Best Management Practices
    - Resources/Deliverables



# National Drive Electric Week (NDEW)

Join us for

## NATIONAL DRIVE ELECTRIC WEEK



Saturday, September 17, 2016  
10 am - 2 pm



Grapevine Mills Mall  
3000 Grapevine Mills Pkwy  
Grapevine, TX 76051



Activities, entertainment, giveaways,  
ride & drives, and much more!

Learn how you can drive electric  
at the largest gathering of EVs in  
North Texas!

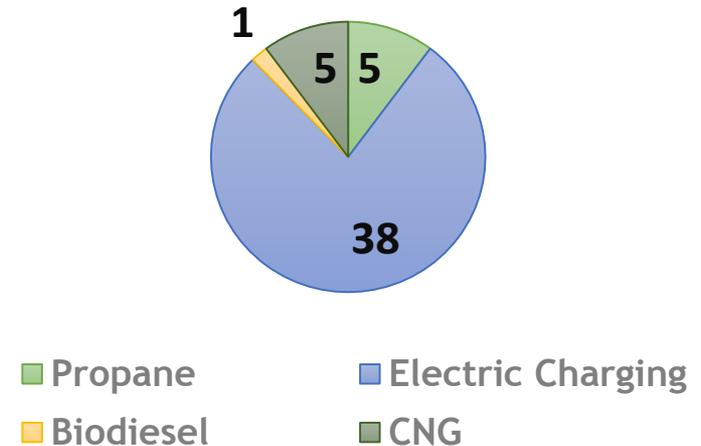
Calling all EV owners: come show  
off your electric vehicle! #texasEV



# Available EV Incentives

- Texas Commission on Environmental Quality (TCEQ) Texas Emission Reduction Plan (TERP) **Alternative Fueling Facilities Program (AFFP)**
  - Provides grants of up to 50% of total eligible costs or a max. of \$600,000 for the construction or expansion of alternative fueling stations in specific counties
  - Deadline for Applications: November 8, 2016 at 5 pm

AFFP 2016 Awarded Project Types (Fuel Stations)



[www.terpgrants.org](http://www.terpgrants.org)

# Available EV Incentives

- **TERP Texas Clean Fleet Program (TCFP)**
  - Provides reimbursements of up to 80% of the incremental cost of purchasing an eligible vehicle.
  - **Eligible Applicants:** Fleets of 75 or More On-Road Vehicles
  - **Vehicles Eligible for Replacement:** Diesel-Powered, Operated in Texas (2 Year Minimum)
  - **Vehicles Eligible for Purchase:** Powered by Alternative Fuel (Hybrid and Electricity Included)
  - **Minimum Activity Number:** 20 Vehicles
  - **Deadline for Applications:** October 18, 2016 at 5 pm

[www.terpgrants.org](http://www.terpgrants.org)

# Fixing America's Surface Transportation (FAST) Act Section 1413 Nominations

- Criteria for Nomination
  - Existing Alternative Fuel Facilities and Gaps
  - Corridor Scale/Impact
  - Emissions Reductions
  - Development of Team and Degree of Collaboration and Support
- Justification for Nominations
  - National Highway System
  - National Highway Freight Network
  - NCTCOG Proposed Critical Urban Freight Corridor Network
  - TCEQ TERP “Eligible Roadways”
  - US Highway 287

# Fixing America's Surface Transportation (FAST) Act Section 1413 Nominations

## Legend

### Alternative Fuel Centers Types

- Compressed Natural Gas
- Electric Charging
- Hydrogen
- Liquefied Natural Gas
- Liquefied Propane Gas

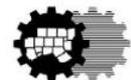
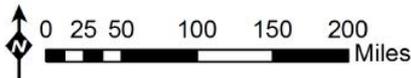
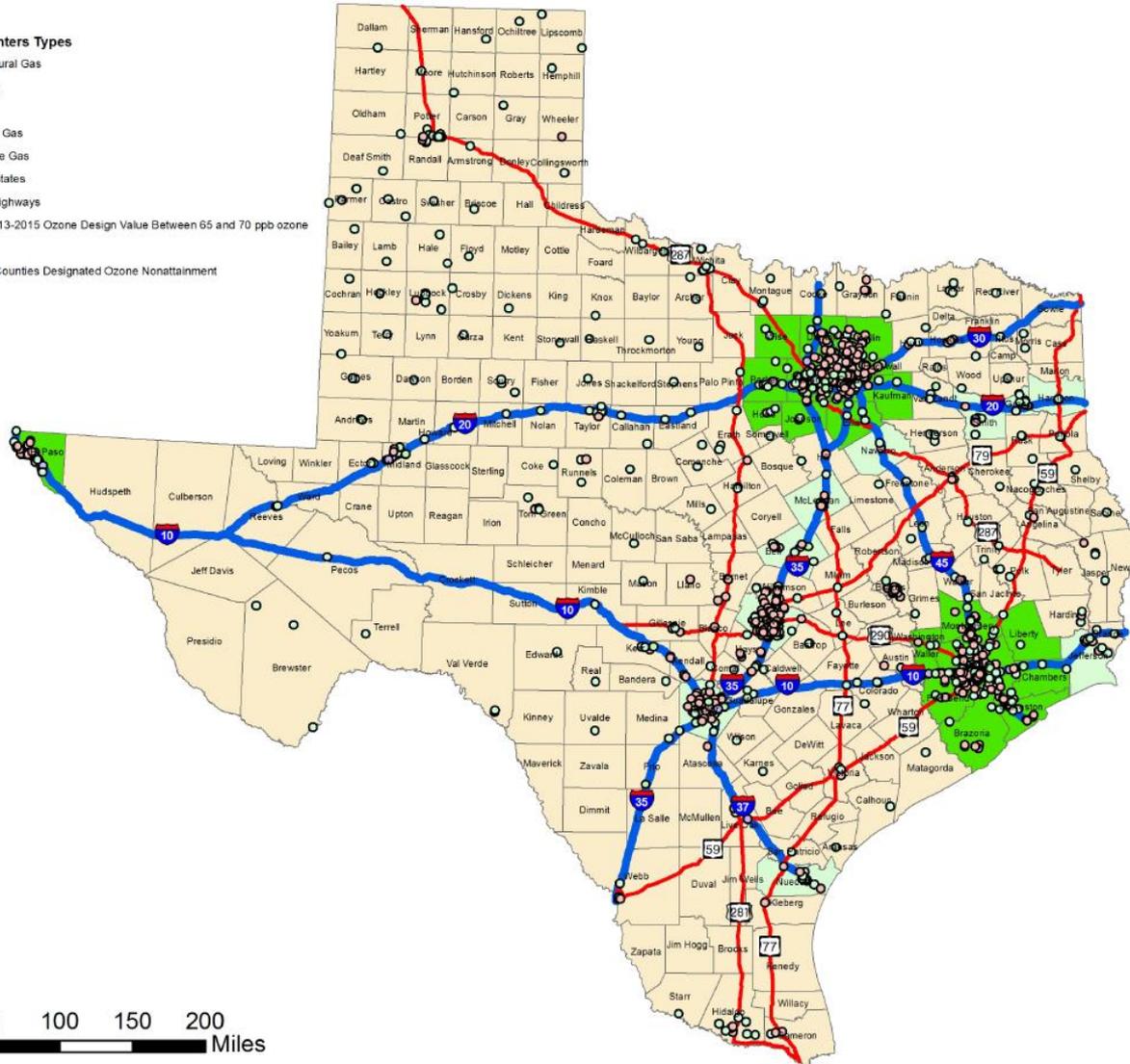
— Nominated Interstates

— Nominated US Highways

□ Counties with 2013-2015 Ozone Design Value Between 65 and 70 ppb ozone

□ Texas Counties

□ Proposed to be Counties Designated Ozone Nonattainment

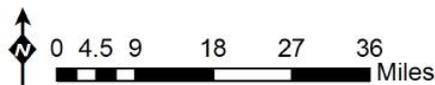
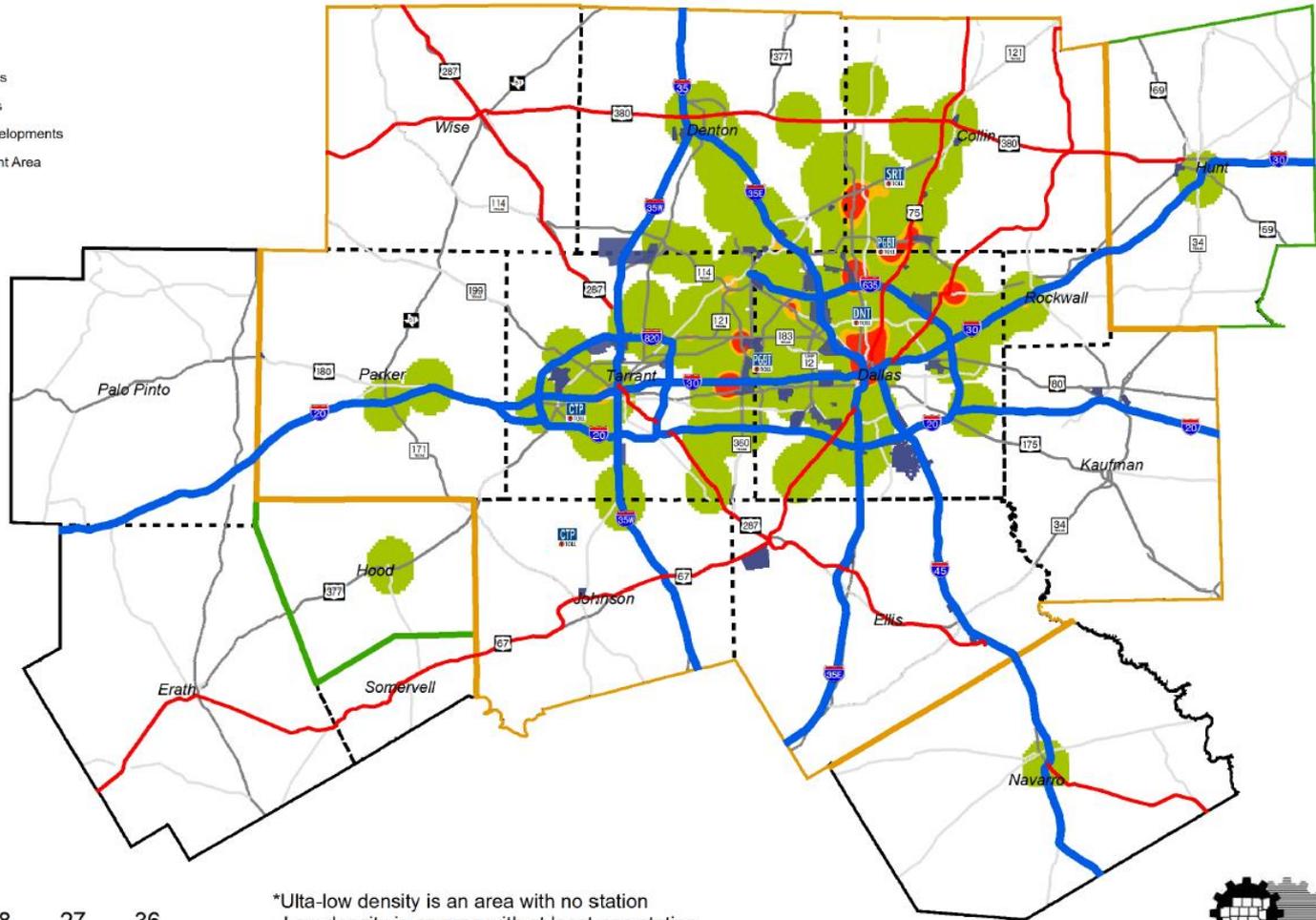


# Fixing America's Surface Transportation (FAST) Act Section 1413 Nominations

## Legend

### Electric Charging Station Density\*

- Ultra-low Density
- Low Density
- Medium Density
- High Density
- Nominated Interstates
- Nominated Highways
- Freight Oriented Developments
- Ozone Nontainment Area
- MPA Boundary
- Region Boundary
- Counties



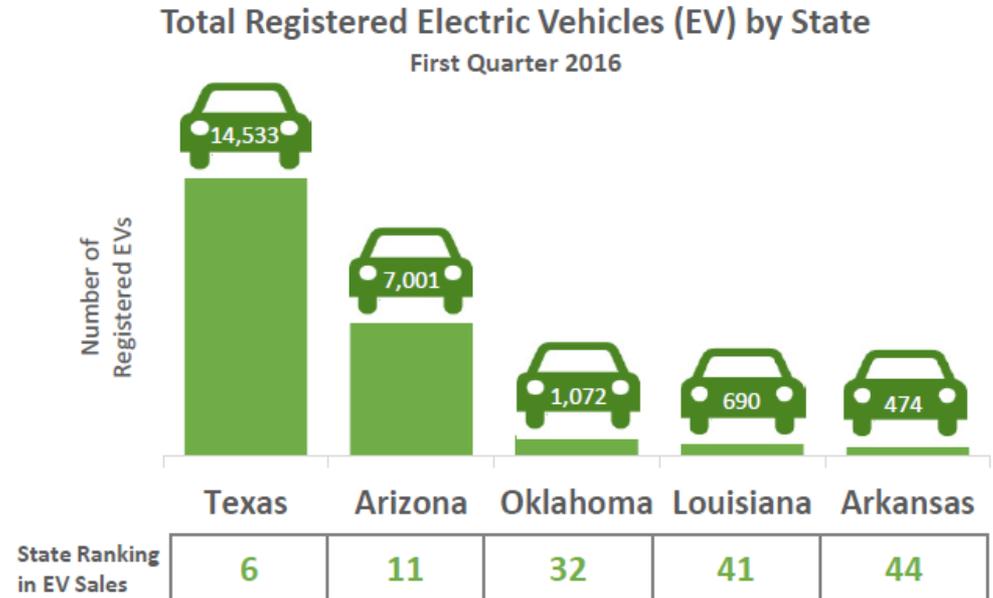
\*Ultra-low density is an area with no station  
 Low density is an area with at least one station  
 Medium Density is an area with multiple stations near each other  
 High Density is an area with clusters of stations near each other

# HB 735 Update

- Legislation to Require Establishment of Program to Track Fuel Type During Vehicle Registration
- Fuel Types to Be Tracked (At a Minimum):
  - Electric Plug-In Drives
  - Hybrid Electric Drives
  - Compressed Natural Gas Drives
  - Liquefied Natural Gas Drives
- Rulemaking Announcement Anticipated – NCTCOG Will Submit Comments

# Going Mainstream: Driving Large Scale Electric Vehicle Adoption in South Central Region

- Department of Energy (DOE) Funding Opportunity Announcement (FOA)
  - Area of Interest 1 – Plug-in Electric Drive Vehicle Program
    - Objective: Research, Develop, Demonstrate Plug-in Electric Vehicles (PEVs)
- Increase exposure to and adoption of EVs in the Clean Cities South Central Region



# Questions?

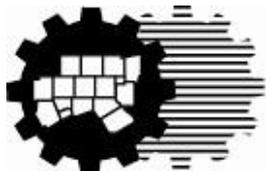
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North Central Texas  
Council of Governments

