



Dallas-Fort Worth  
CLEAN CITIES

## AGENDA

### **Electric Vehicles North Texas (EVNT) Stakeholder Meeting**

**North Central Texas Council of Governments  
Transportation Council Room  
Tuesday, December 16, 2016  
10:00am – 11:00am**

**1. Introduction**

*Rachel Linnewiel, NCTCOG*

**2. 2016 Ozone Season Recap**

*Jody Loza, NCTCOG*

**3. EVNT Update**

*Rachel Linnewiel, NCTCOG*

Includes updates on regional statistics, summary of annual activities, proposals for upcoming activities and strategic planning.

**4. Other Items**

*All*

**5. Adjourn**

*Rachel Linnewiel, NCTCOG*

## **EVNT Goals, 2015-2016**

1. Increase EV registration in the 10-county nonattainment area by 100% over September 2015 levels by the end of September 2016.
2. Coordinate with EVNT stakeholders to host one National Drive Electric Week event between September 10-18, 2016, with an overall goal of increasing attendance to 200 EVs and 400 total attendees.
3. Develop region-specific outreach materials with emphasis on economic benefits in addition to air quality/environmental benefits. Materials may include region-specific fact sheets; an infographic on financial return on investment, job creation through EV development and sales; and updated website resources.
4. Produce at least one video for educational/marketing purposes.
5. Identify and disseminate best management practices related to integrating EV-Ready guidelines into building codes for both residential and commercial properties, with particular focus on multifamily residential properties, with a goal of hosting at least one workshop/meeting on the topic.
6. Assess infrastructure “gaps” and coordinate with industry partners to identify solutions, with data to be presented by GIS map and a white paper addressing EV-based business case studies. This may be completed by conducting geographic information system (GIS) analysis of EV registration data versus existing EVSE sites; target analyses include evaluating the locations of major employment centers and typical EV range. Integrate feedback from EV-based businesses. DFWCC has established a goal of 2 DC fast charger EVSEs being installed at or adjacent to the airports.
7. Engage local businesses in the Workplace Charging Challenge with a goal to sign up 5 additional business, for a total of 12 partners from the DFW area. Maintain momentum on the topic in follow-up to the July 30, 2015, Workshop.
8. Establish partnerships with rental car facilities and service centers to incentivize use of EVs as rental/loaner vehicles and increase driver exposure and, consequently, adoption.
9. Identify barriers to EV adoption among regional fleets and document EV adoption among 5 local fleets. Reach out to 3 fleets that already use EVs to engage in helping relay best practices.
10. Attend at least one North Texas Electric Auto Association meeting each quarter to provide updates on EVNT activities as well as to receive feedback from members on critical issues, barriers, and opportunities and engage with other local interest groups as appropriate.
11. Goals for the next three-to-five years are: develop multiple videos for educational and marketing purposes, develop an intracity electrification network between the DFW, Houston, and Austin-San Antonio urban centers, pursue additional infrastructure deployment if needed, and engage transit agencies and universities in future infrastructure/rental/car loan projects. Additional goals will be developed as 1 year goals are completed and analysis indicates areas of additional needs.



**Meeting Summary**  
**Electric Vehicles North Texas**

**North Central Texas Council of Governments (NCTCOG)**  
**Transportation Council Room**  
**Tuesday, December 6, 2016**  
**10:00 a.m. – 11:00 a.m.**

**Attendees:**

Dave Aasheim – Chargepoint  
Kenny Bergstrom – DFW Clean Cities  
Rick Bollar – EV Owner  
Pamela Burns – DFW Clean Cities  
Lori Clark -- NCTCOG  
Yarcus Lewis – City of Plano

Rachel Linnewiel -- NCTCOG  
James Orenstein – Independent  
Tim Slifka – City of Southlake  
Jay Squyres – EV Owner  
Stanton Zeff – North Texas Electric Auto  
Association

**Agenda Items:**

1. Introduction
2. 2016 Ozone Season Recap
3. EVNT Update and Discussion
4. Conclusion

**Action Items:**

1. Distribute meeting presentations and National Drive Electric Week video by posting to EVNT website and distributing to email list – *NCTCOG Staff*
2. Draft strategic plan outline for 2017 for review and feedback from stakeholders – *NCTCOG Staff*
3. Review strategic plan outline for 2017 and provide feedback -- *Stakeholders*

**Additional Notes:**

- Question posed: What do Stakeholders see as the added value of EVNT? Stakeholders see EVNT as adding value in providing connection to local, State, and federal initiatives (particularly

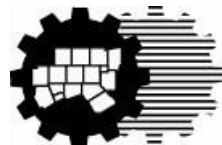
regarding workplace charging and relationships with municipalities around the region). It was also expressed that EVNT acts as a bridge between different activist/interest groups and is valuable in connecting them to industry and local government agencies. Likewise, EVNT is seen as an important partner in building public awareness due to more extensive resources and capacity than other interest groups. Participants also expressed that networking with other stakeholders and sharing best practices between industry, local government, and individual representatives is a primary motivator for attending the EVNT meetings.

- EVSE-ready residential construction was identified as a topic of top priority.
- The DFW Clean Cities website, and with it the EVNT webpage, will be undergoing some revision and migration over the next few months. Please forgive delays or snags as we work through this transition!

# Electric Vehicles North Texas (EVNT) Update

## EVNT Stakeholder Meeting

**Rachel Linnewiel**  
Transportation Planner  
December 6, 2016

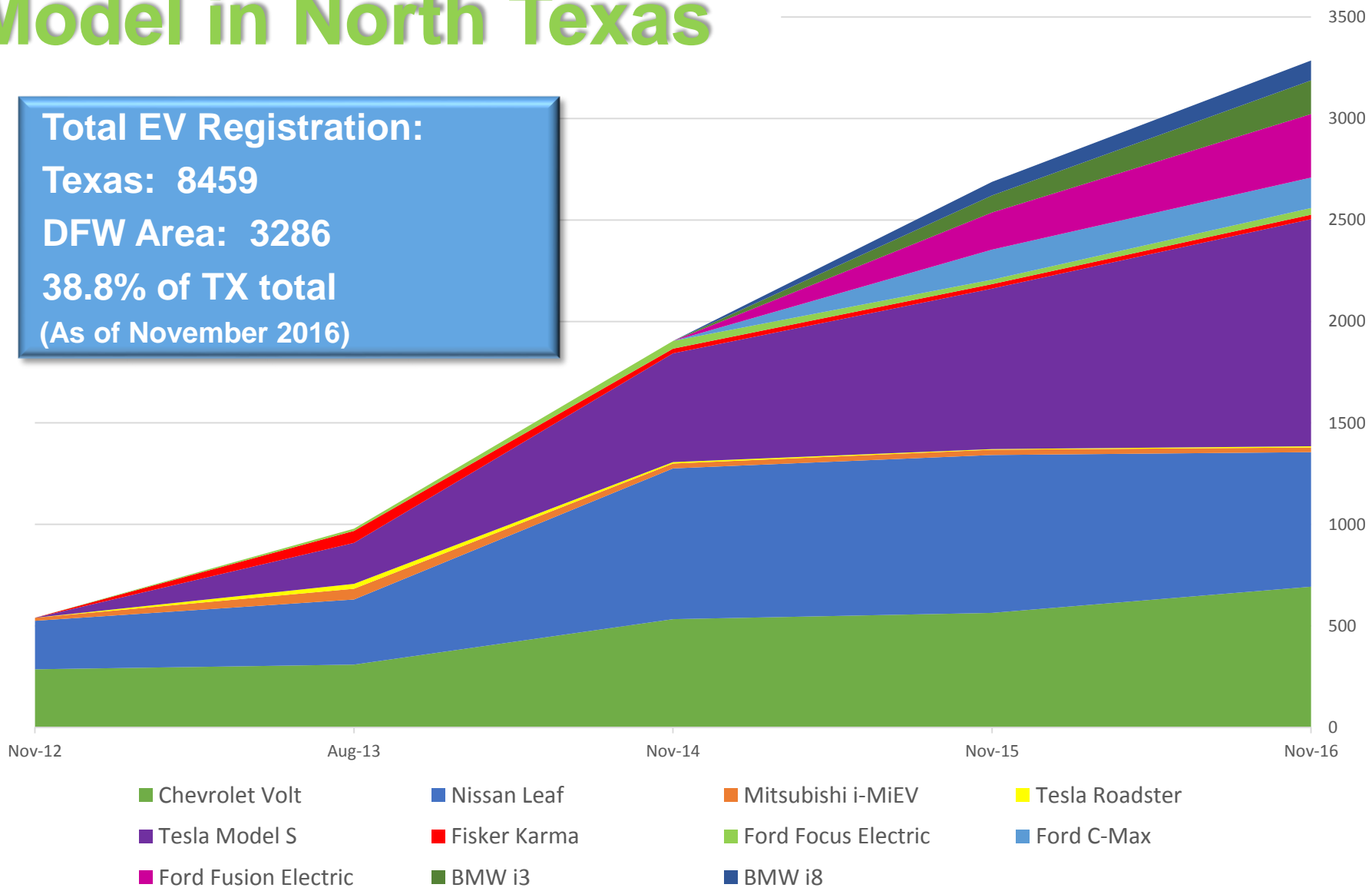


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# Registration by Electric Vehicle (EV) Model in North Texas


**Total EV Registration:**  
**Texas: 8459**  
**DFW Area: 3286**  
**38.8% of TX total**  
**(As of November 2016)**



\*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

# EV Registration Density by ZIP Code with EV Recharging Station Locations

## Legend

 2008 Eight-Hour Ozone Nont attainment Area

## EV Density by ZIP Code


 1 - 6


 7 - 15

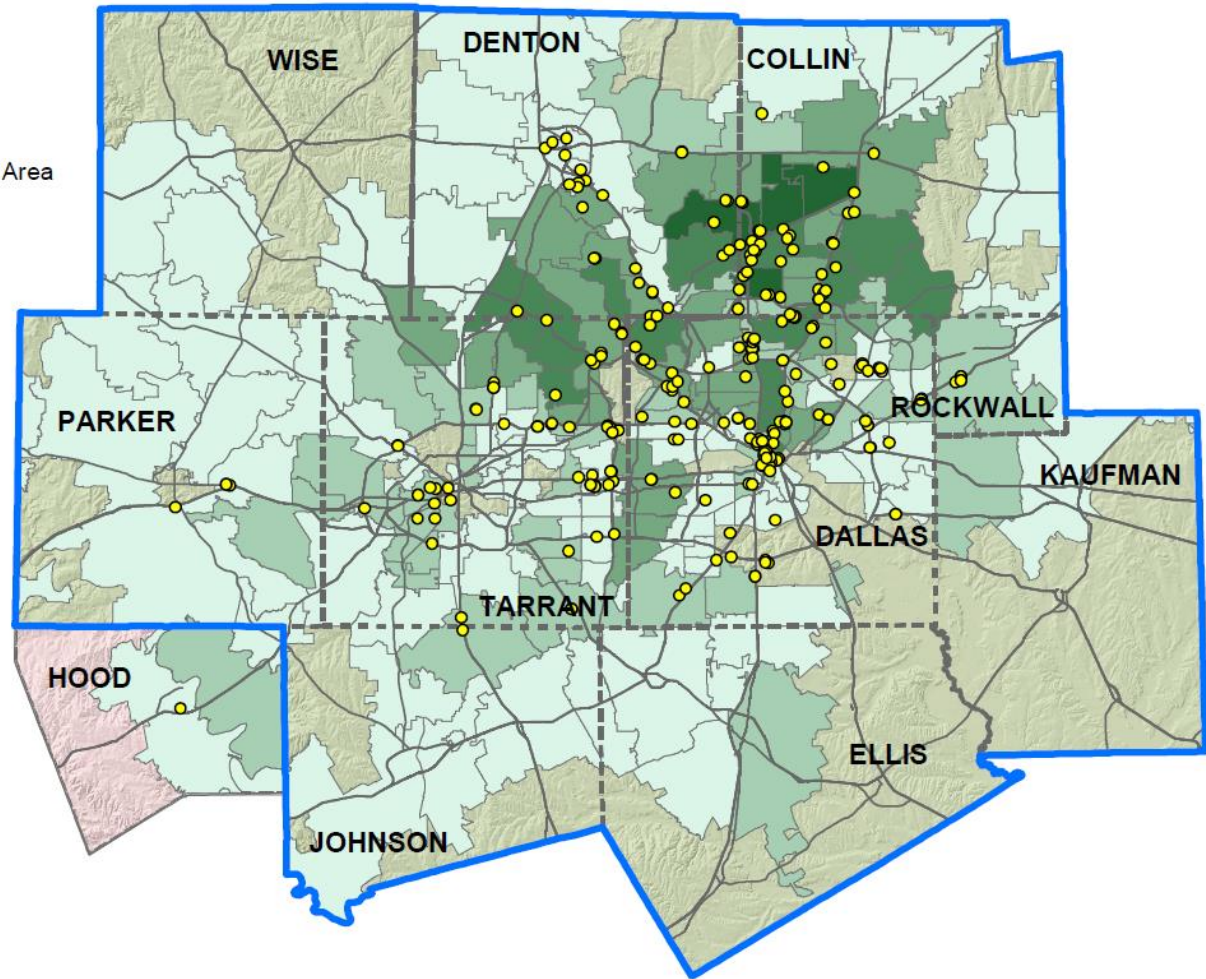
 16 - 26

 27 - 42

 43 - 78

 EV Charging Stations

 Near Nonattainment Counties



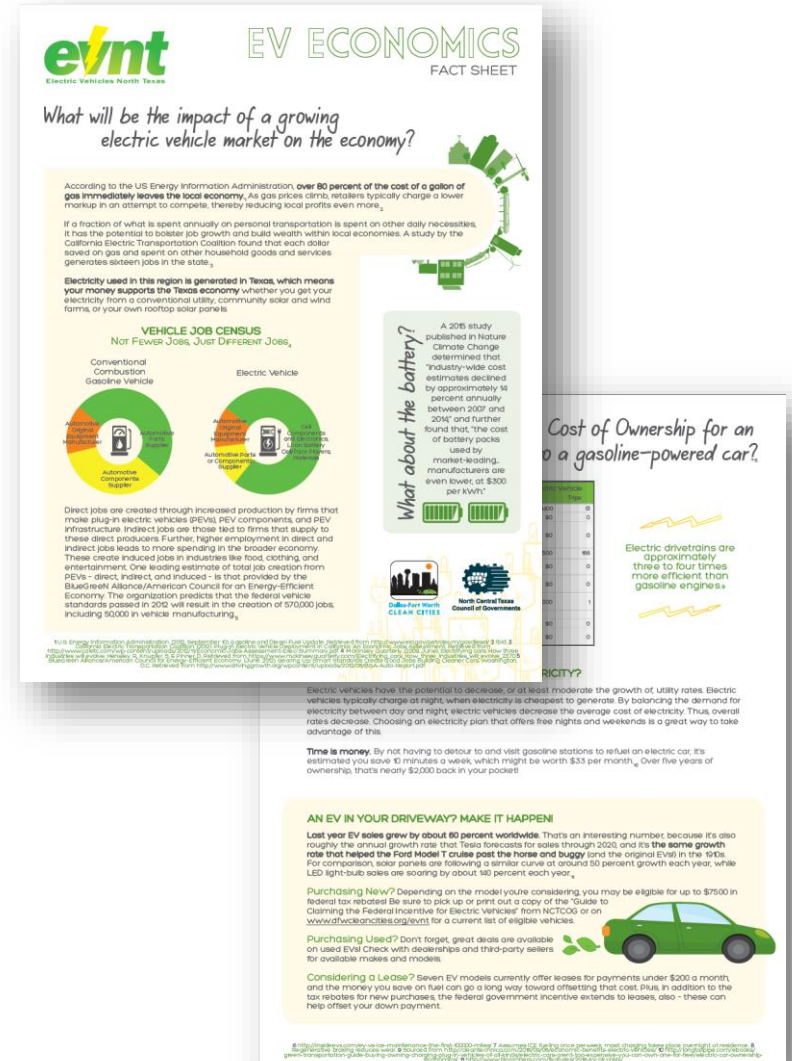
November 2016

Source: NCTCOG



# Economics-Focused Fact Sheet

- Comparison of maintenance needs/cost for ICE vs EV in first 100,000 miles
- Statistics about job creation resulting from EV market
- Information about battery replacement technology and cost



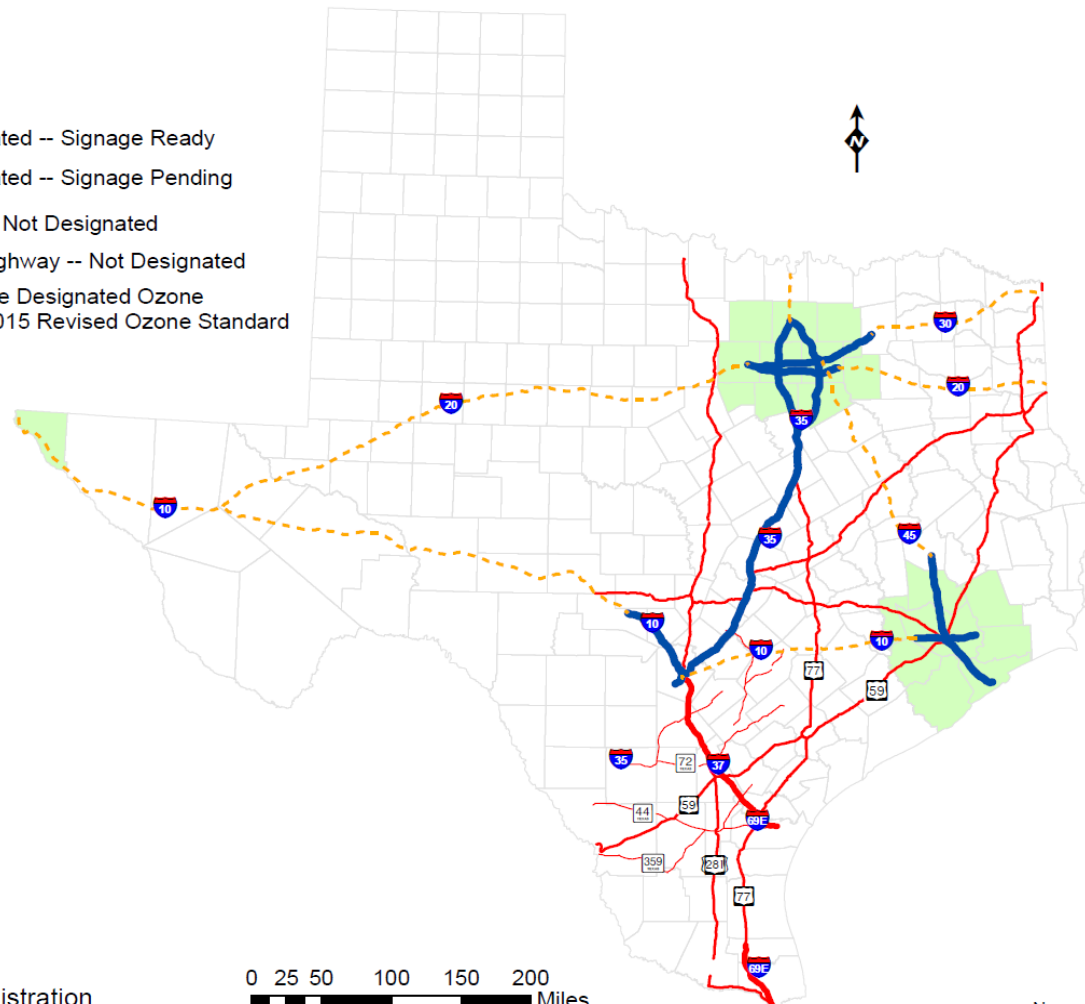


# Fixing America's Surface Transportation (FAST) Act Section 1413 Alternative Fuel Corridor Recommendations

## Comparison of FHWA\* Designated Electric Vehicle Corridors with Corridors Nominated by NCTCOG

### Legend

- Nominated and Designated -- Signage Ready
- - - Nominated and Designated -- Signage Pending
- Nominated Interstate -- Not Designated
- Nominated US/State Highway -- Not Designated
- Counties Proposed to Be Designated Ozone Nonattainment Under 2015 Revised Ozone Standard



\*Federal Highway Administration

November 2016

# DFW National Drive Electric Week (NDEW) Event Video



# DFW National Drive Electric Week (NDEW) Event Statistics/Ranking

Rank:	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>
Attendees by State	CA	TX	NY	FL	WA
Attendees by Event	San Diego (1122)	Los Angeles (922)	Cupertino (487)	DFW (404)	Delmar, NY (317)
Vehicles by Event	San Diego (165)	Cupertino (135)	DFW (128)	Los Angeles (118)	Poolesville, MD (91)
Tesla Model S by State	CA (93)	TX (88)	FL (55)	WA (31)	NY (26)
Tesla Model S by Event	DFW (47)	San Diego (20)	Austin (18)	Oldsmar, FL (16)	Houston (15)

# Plug-In EV Readiness Scorecard

[BACK TO QUEST](#)



**Overall Score**  
**On the Right Track**  
Based on 97% of questions answered

Score



**Long-Term Vehicle and Infrastructure Planning**



**Plug-In Vehicle Market Conditions**



**Utility Involvement**



**Education and Outreach**

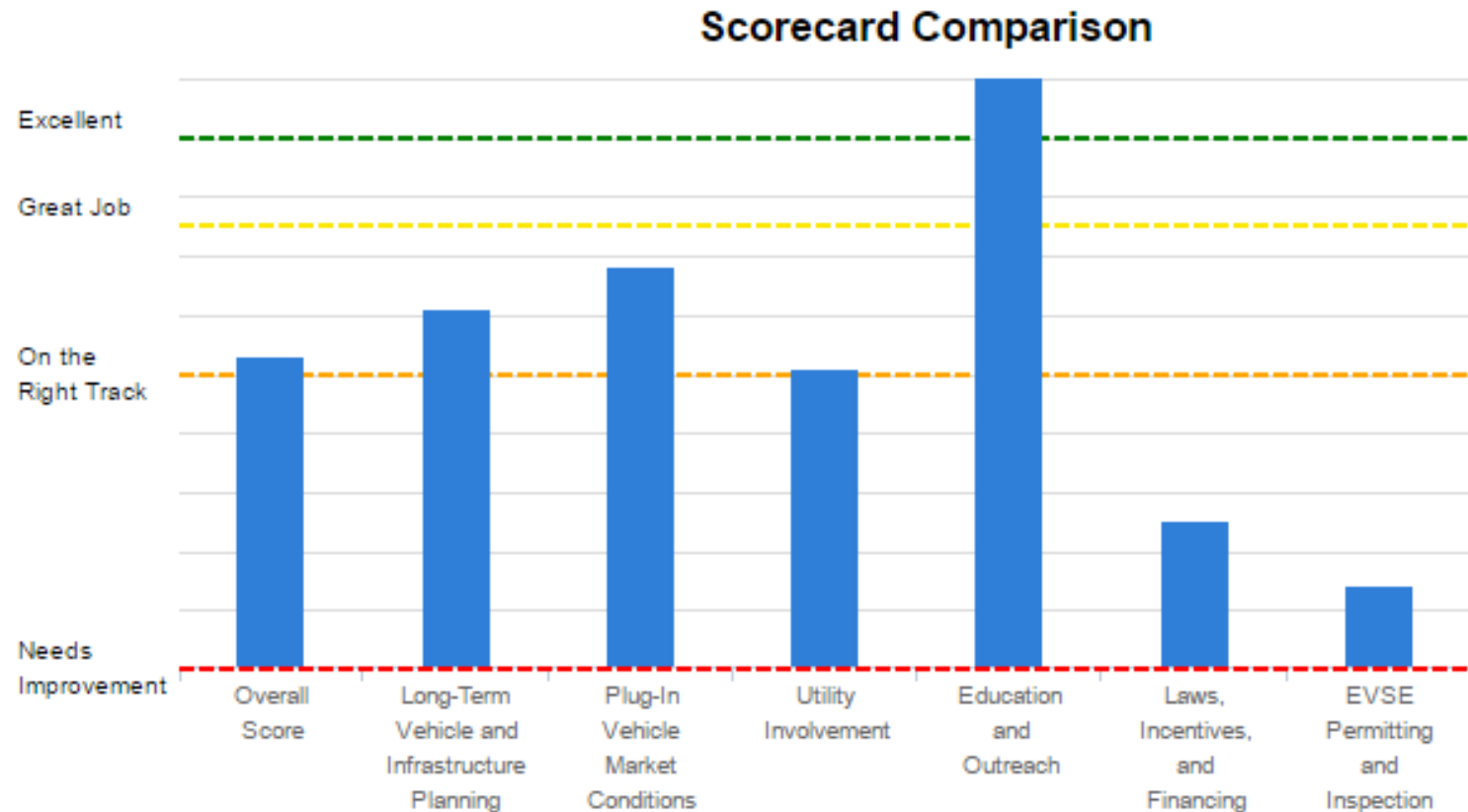


**Laws, Incentives, and Financing**



**Electric Vehicle Supply Equipment (EVSE) Permitting and Inspection Process**

# Plug-In EV Readiness Scorecard



# Plug-In EV Readiness Scorecard

## City A



**Overall Score**  
**Needs Improvement**

Based on 100% of questions answered.

Score



Long-Term Vehicle and Infrastructure Planning



Plug-In Vehicle Market Conditions



Utility Involvement



Education and Outreach

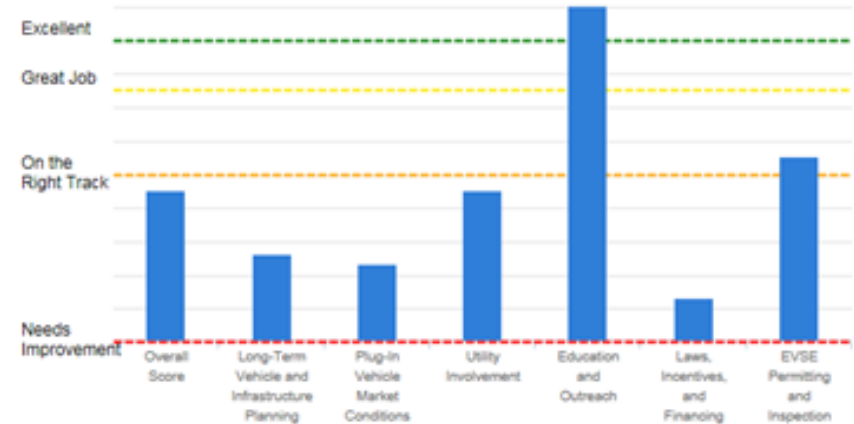


Laws, Incentives, and Financing



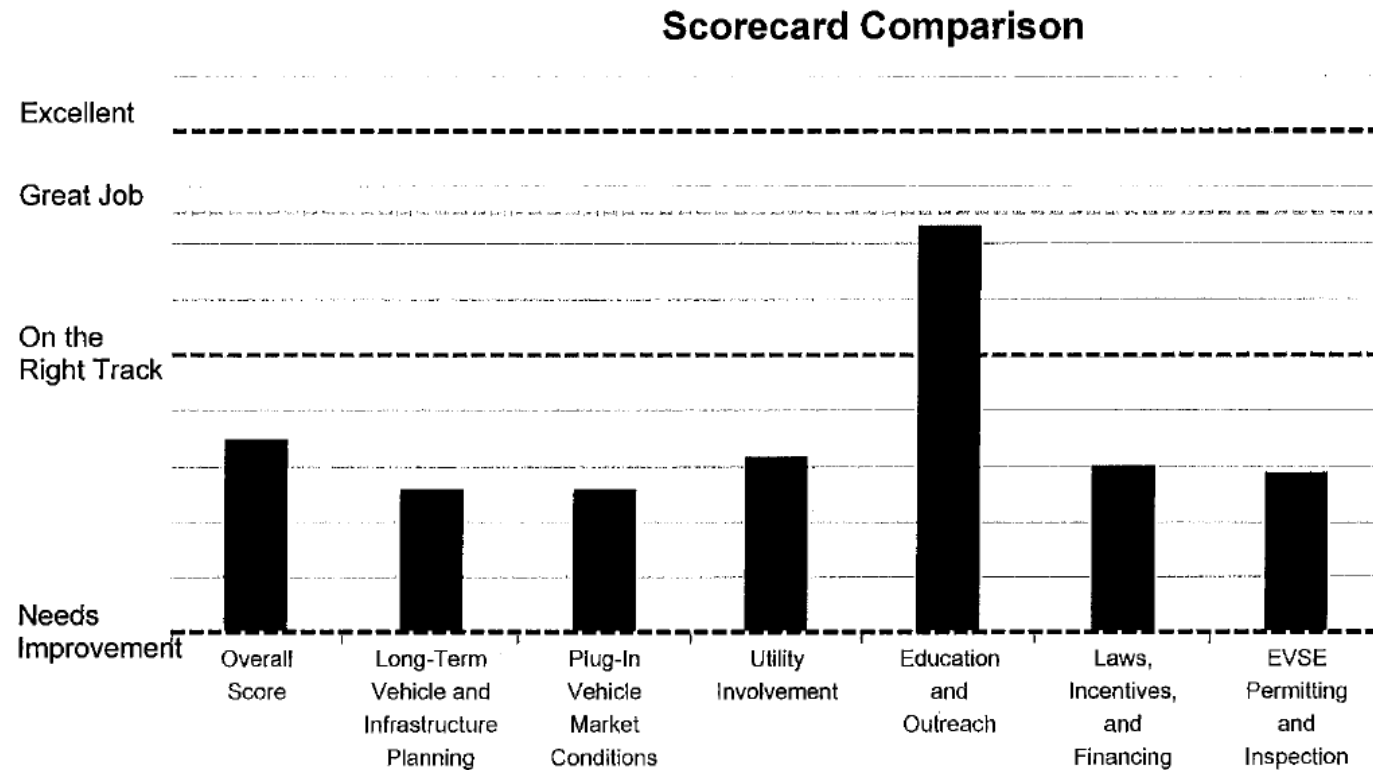
Electric Vehicle Supply Equipment (EVSE) Permitting and Inspection Process

**Scorecard Comparison**



# Plug-In EV Readiness Scorecard

## City B





# Fleets for the Future



- **National** partnership between regional councils, Clean Cities coalitions, and industry leaders.
- **Dedicated** to advancing fuel-efficient vehicle technologies through targeted outreach, education, and deployment of best practices.
- **Coordinates** regional and national scale procurement initiative designed to consolidate bulk orders of alternative fuel vehicles.
- **Focuses** on reducing the incremental costs of alternative fuel vehicles and supporting infrastructure.
- **Creates** best practices and templates on vehicle procurement strategies and policies.

# Fleets for the Future



- Approach
  - Regional-scale Cooperative Procurement
  - Best Practices and Templates
- Technologies of Focus
  - Propane
  - Electric
  - Natural Gas
  - Bio-diesel/Ethanol
  - Related Infrastructure

# EVNT Annual Operating Plan 2017

- What is the added value of EVNT?
- Stakeholders vs Audience

# EVNT Annual Operating Plan 2017

- Focus on Local Government
  - One-on-One Meetings with City Staff
  - Region-Specific Templates
  - Municipal Fleet
- Stakeholder Guidance
  - Establishment of Strategic Priorities
  - Technical Guidance
- Best Management Practices

# EVNT Annual Operating Plan 2017

- Best Management Practices
  - EVSE in Zoning/Ordinance
    - Incentives
    - Parking
  - Codes
  - Streamline Permitting Processes
  - EVSE Partnerships and Procurement
  - Fleet Procurement

# **Alternative Fuel Vehicle Preferred Parking Signs Available**



**Other Items?**



# Contact Information

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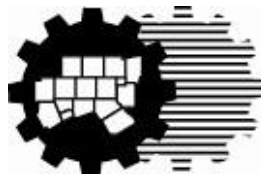
**Lori Clark**

Principal Air Quality Planner

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(817) 695-9232

[www.dfwcleancities.org/evnt](http://www.dfwcleancities.org/evnt)



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# **END OF 2016 OZONE SEASON & 2015 OZONE NAAQS UPDATES**

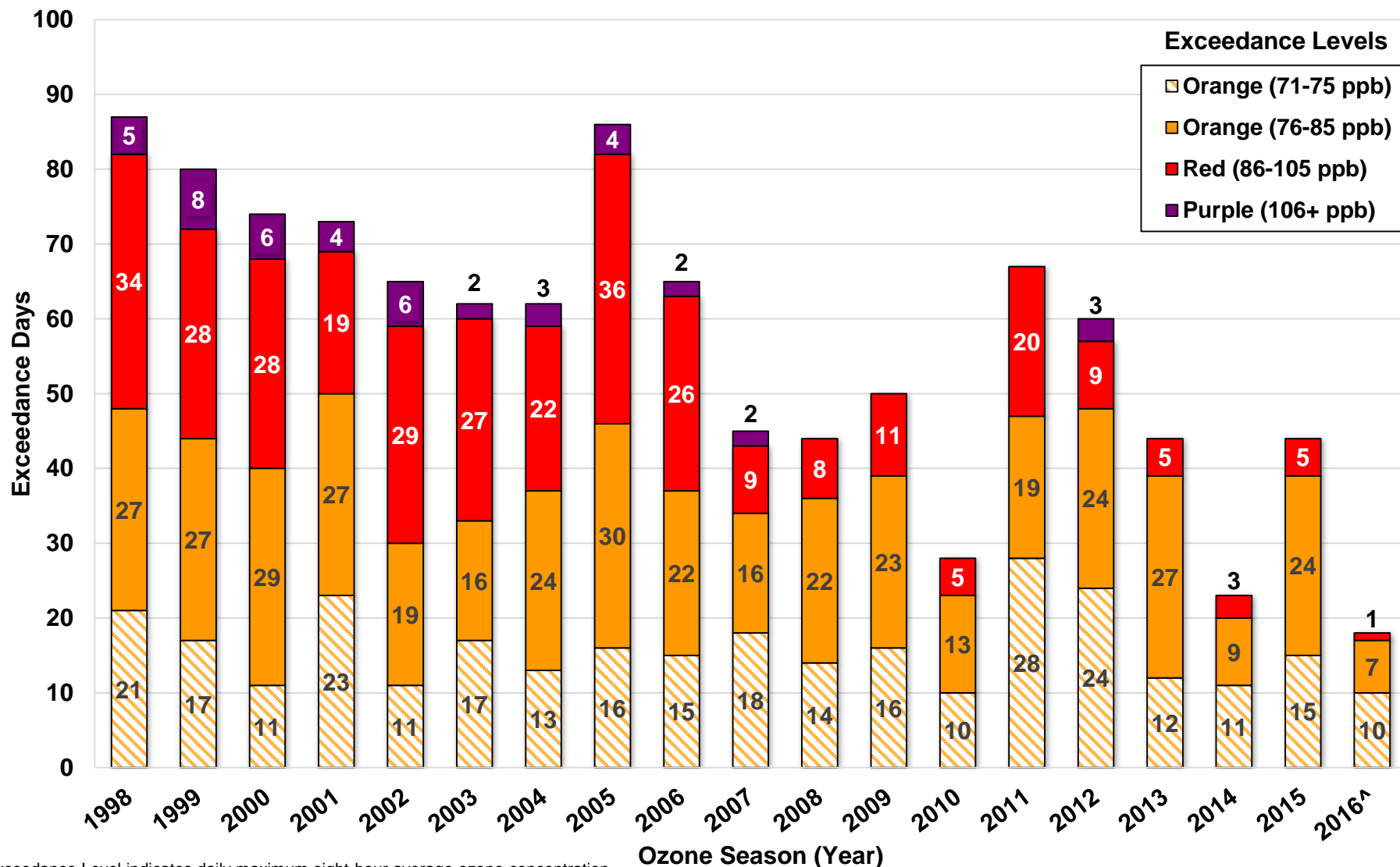
## **EVNT Stakeholder Meeting**

**Jody Loza, Senior Air Quality Planner  
December 6, 2016**




# END OF OZONE SEASON

## Eight-Hour Ozone Exceedance Days Based on 70 ppb Standard



Exceedance Level indicates daily maximum eight-hour average ozone concentration and 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 70 ppb standard. (AQI level orange = 71-75 ppb)

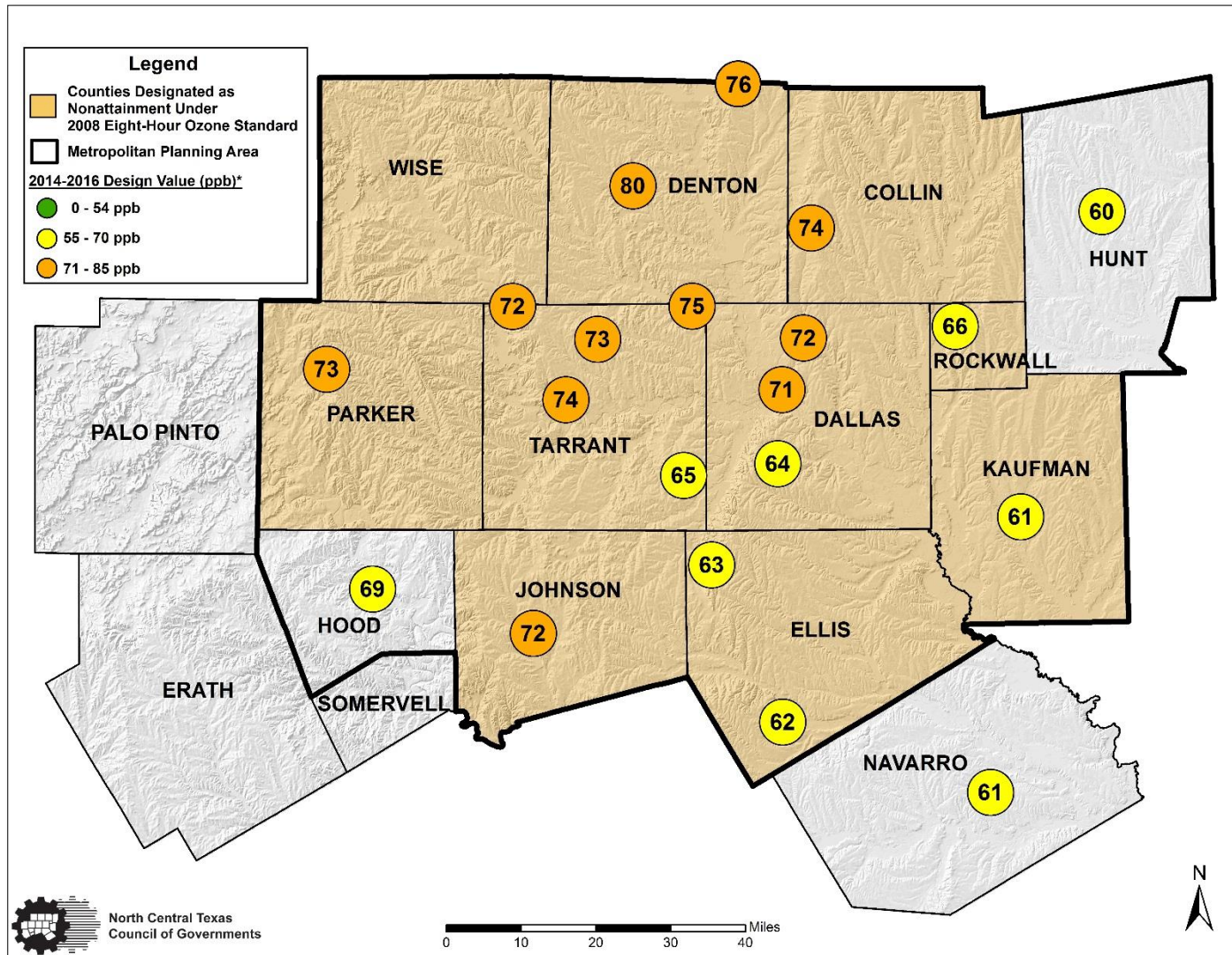
^2016 data not certified by the TCEQ.

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

# END OF OZONE SEASON

## Eight-Hour Ozone Design Values Based on 70 ppb Standard

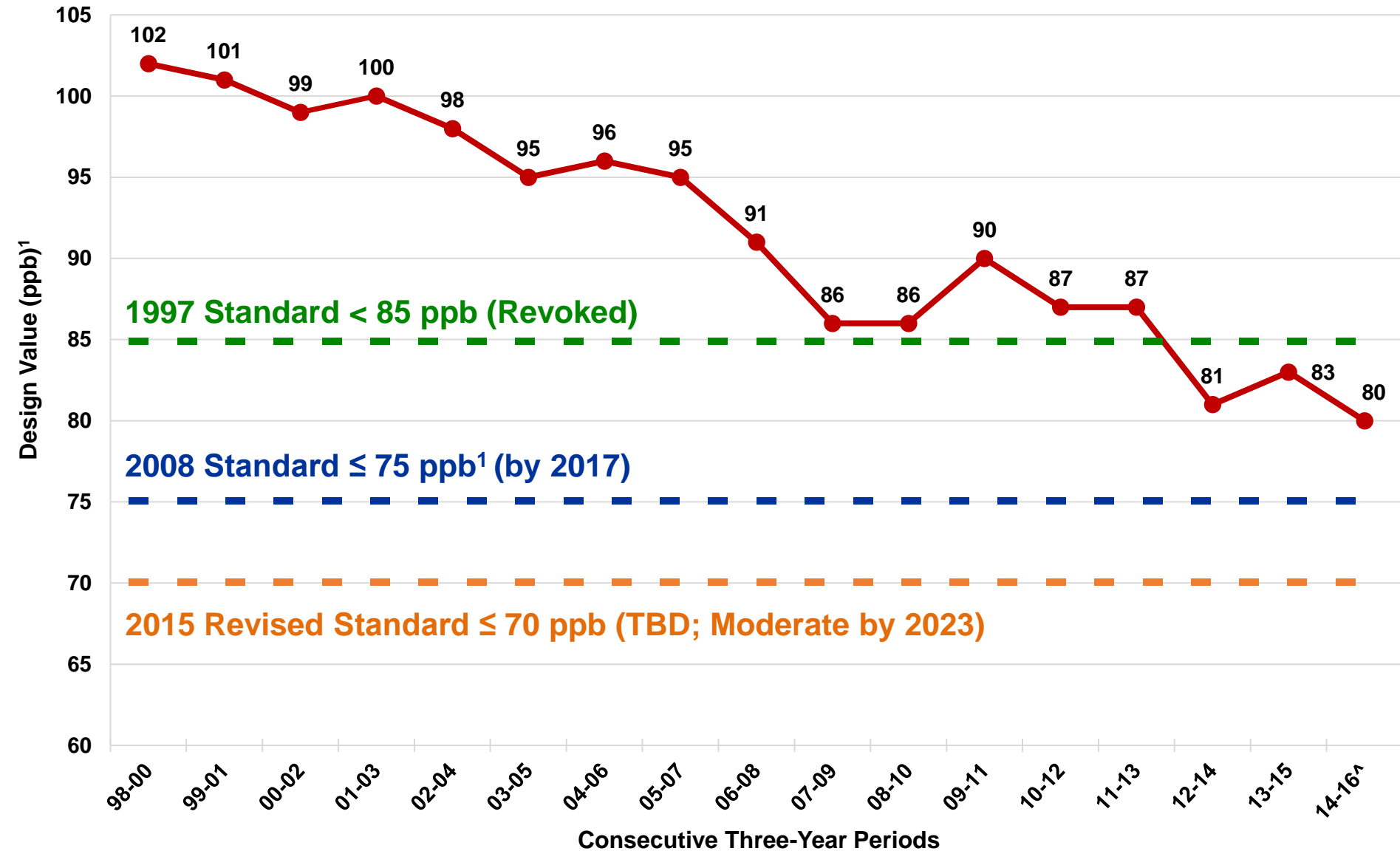


\*2016 data not certified by the TCEQ.  
Colors represent Air Quality Index breakpoints

According to the US EPA National Ambient Air Quality Standards, attainment is reached when, at each monitor, the three-year average of the annual fourth-highest daily maximum 8-hour average ozone concentration is less than or equal to 75 parts per billion (ppb)

# END OF OZONE SEASON

## Eight-Hour Ozone Historical Trends

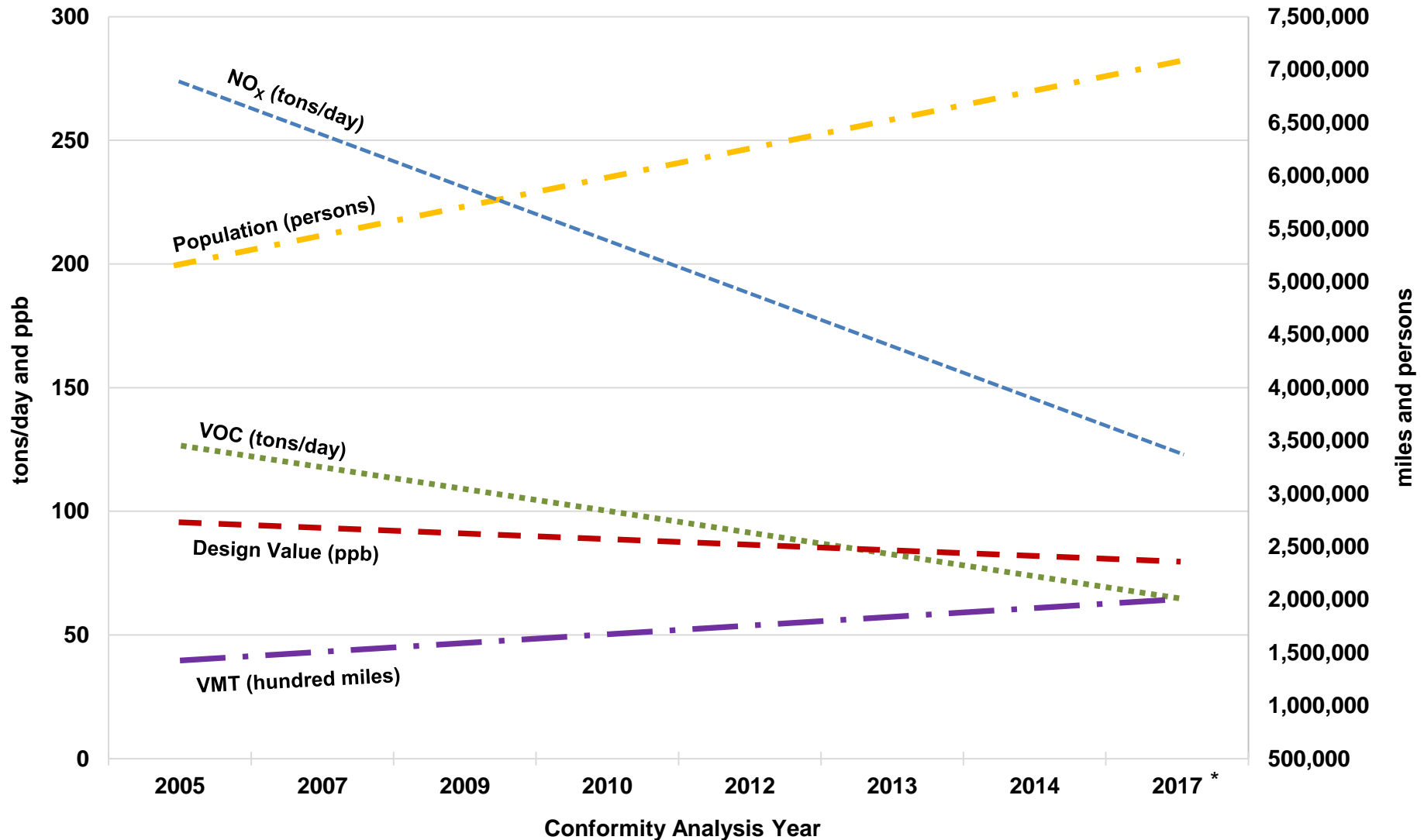


<sup>1</sup>Attainment Goal - According to the US EPA National Ambient Air Quality Standards, attainment is reached when, at each monitor, the *Design Value* (three-year average of the annual fourth-highest daily maximum eight-hour average ozone concentration) is less than or equal to 70 parts per billion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

<sup>^</sup>2016 data not certified by the TCEQ.

# END OF OZONE SEASON

## Historical Design Value and Transportation Trends



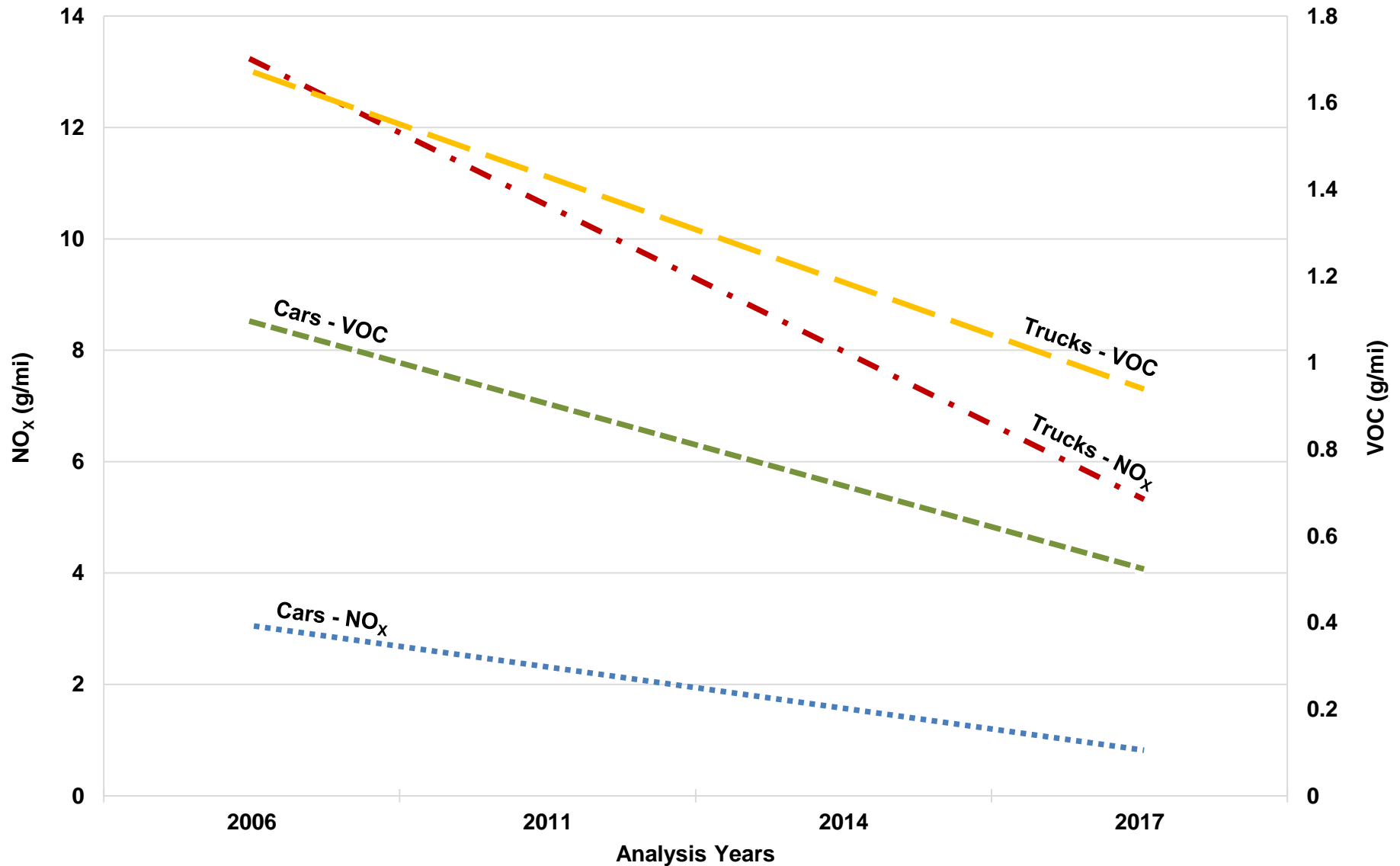
Design Value (DV) - three-year average of the annual fourth-highest daily maximum eight-hour average ozone concentration is less than or equal to 70 parts per billion (ppb).

\*2017 DV based on 2016 data. Not certified by the TCEQ.

Source: NCTCOG TR Dept

# END OF OZONE SEASON

## Historical Emission Factors – Cars and Trucks





# AIR QUALITY INITIATIVES



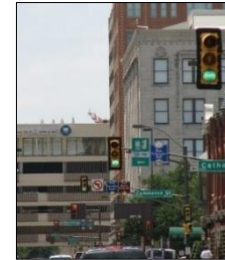
Rideshare. Record. Reward.



James Arthur Ray



northcentral.texas.clean.school.bus.program



# OZONE SEASON

## Future Considerations

### Impacts of Meteorological Data

Precipitation ✓

Temperature ✓

Humidity

Wind Speed and Direction

### Background Levels

### Daily and Site Specific Comparisons

### Potential to Develop Dynamic, Targeted Control Strategies

# 2015 OZONE NAAQS

## EPA Proposed Timeline

Action	Planned Dates
TCEQ Submitted Nonattainment Designation Recommendations to EPA	October 2016
<b>EPA Published Proposed 2015 Ozone NAAQS Implementation Rule (60 Day Comment Period Closes January 17, 2017)</b>	November 17, 2016
<b>Final Designations, Classifications, and Nonattainment Area SIP Rules/Guidance</b>	October 2017
<b>Update to Transportation Conformity Guidance</b>	November 2017
<b>Nonattainment Area Attainment Dates (Marginal – Extreme)</b>	2020-2037

# REFERENCES

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**Air Quality Policy and Regulations: [www.nctcog.org/trans/air/policy/](http://www.nctcog.org/trans/air/policy/)**  
**NCTCOG Ozone Updates: [www.nctcog.org/ozone](http://www.nctcog.org/ozone)**