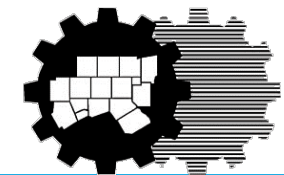


# HIGH OCCUPANCY VEHICLE TRANSPORTATION CONTROL MEASURES: APPLICATION OF MANAGED LANES AND SUBSTITUTION OF TRAFFIC SIGNAL PROGRESSION

REGIONAL TRANSPORTATION COUNCIL  
DECEMBER 12, 2019  
JENNY NARVAEZ, PROGRAM MANAGER



North Central Texas  
Council of Governments



Regional Transportation Council

# HOV TCM SUBSTITUTION

## OVERVIEW

Three Interim HOV lanes remain in the following State Implementation Plan (SIP) as TCMs:

*Dallas-Fort Worth 1-Hour Ozone Attainment Demonstration State Implementation Plan Revision - April 2000*

*Dallas-Fort Worth 1997 8-Hour Ozone Attainment Demonstration and Reasonable Further Progress State Implementation Plan Revision - May 2007*

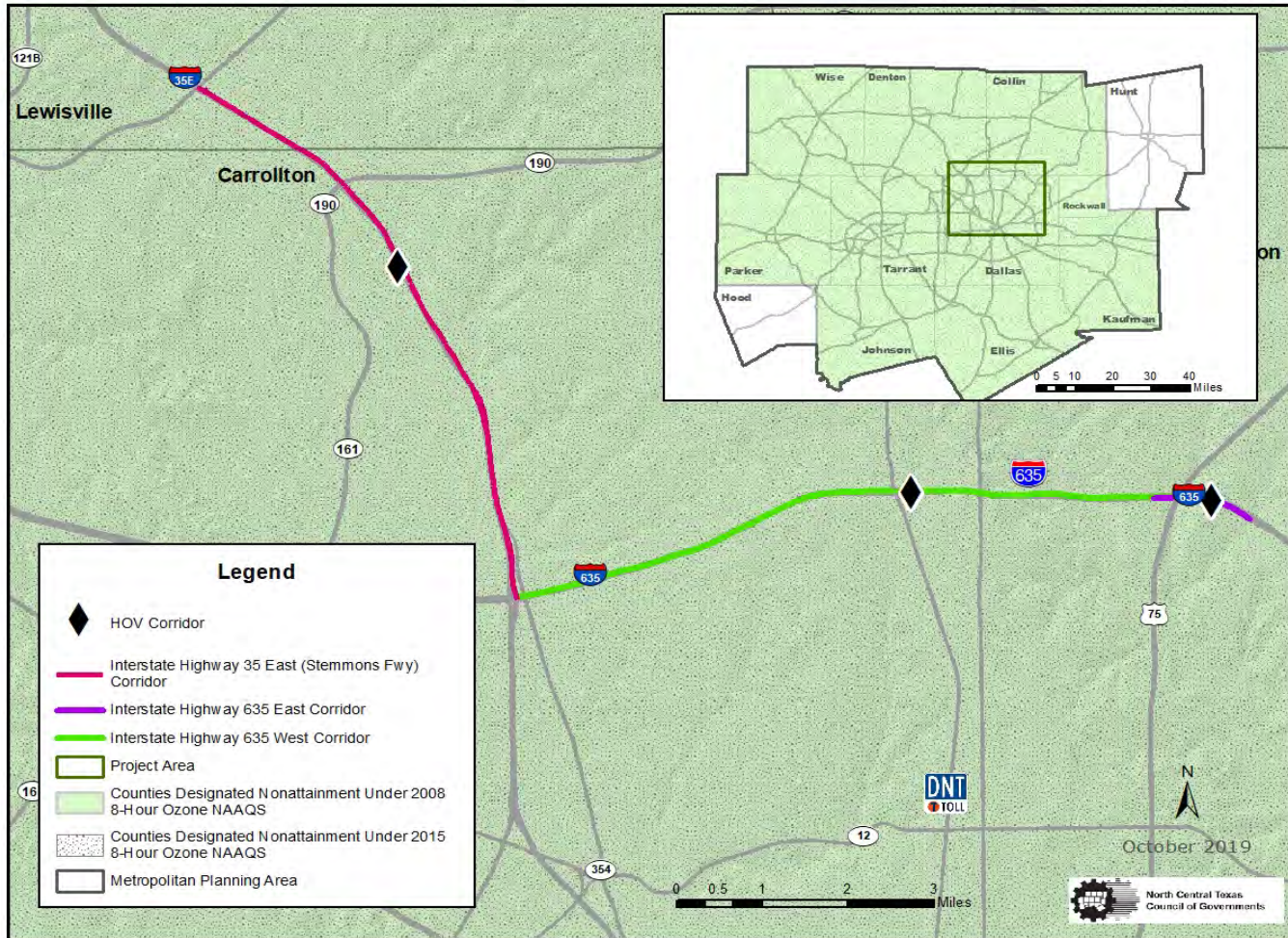
These Interim HOV lanes are being removed as a TCM in the SIP documentations due to being changed to Managed Lanes.

Removing them requires substituting alternate TCM projects that achieve equivalent emissions benefits.

# HOV TCM SUBSTITUTION

## HOV LANES TO BE SUBSTITUTED

### Location of HOV Lanes to be Substituted



**IH 35E corridor (Stemmons Fwy)  
between IH 635 and SH 121**

**IH 635 east corridor (LBJ Fwy)  
between Coit Rd and Greenville Ave**

**IH 635 west corridor (LBJ Fwy)  
between Luna Rd/IH 35E and US 75**

# HOV TCM SUBSTITUTION

## TRAFFIC SIGNALIZATION PROJECTS TO BE USED AS SUBSTITUTES

### 6 Corridors:

**Parker Rd (Midway Rd to Preston Rd)**

**9 signals**

**Park Blvd (Midway Rd to Coit Rd)**

**16 signals**

**Custer Rd (Legacy Dr to SH 121 NB)**

**8 signals**

**Coit Rd (Legacy Dr to SH 121 NB)**

**8 signals**

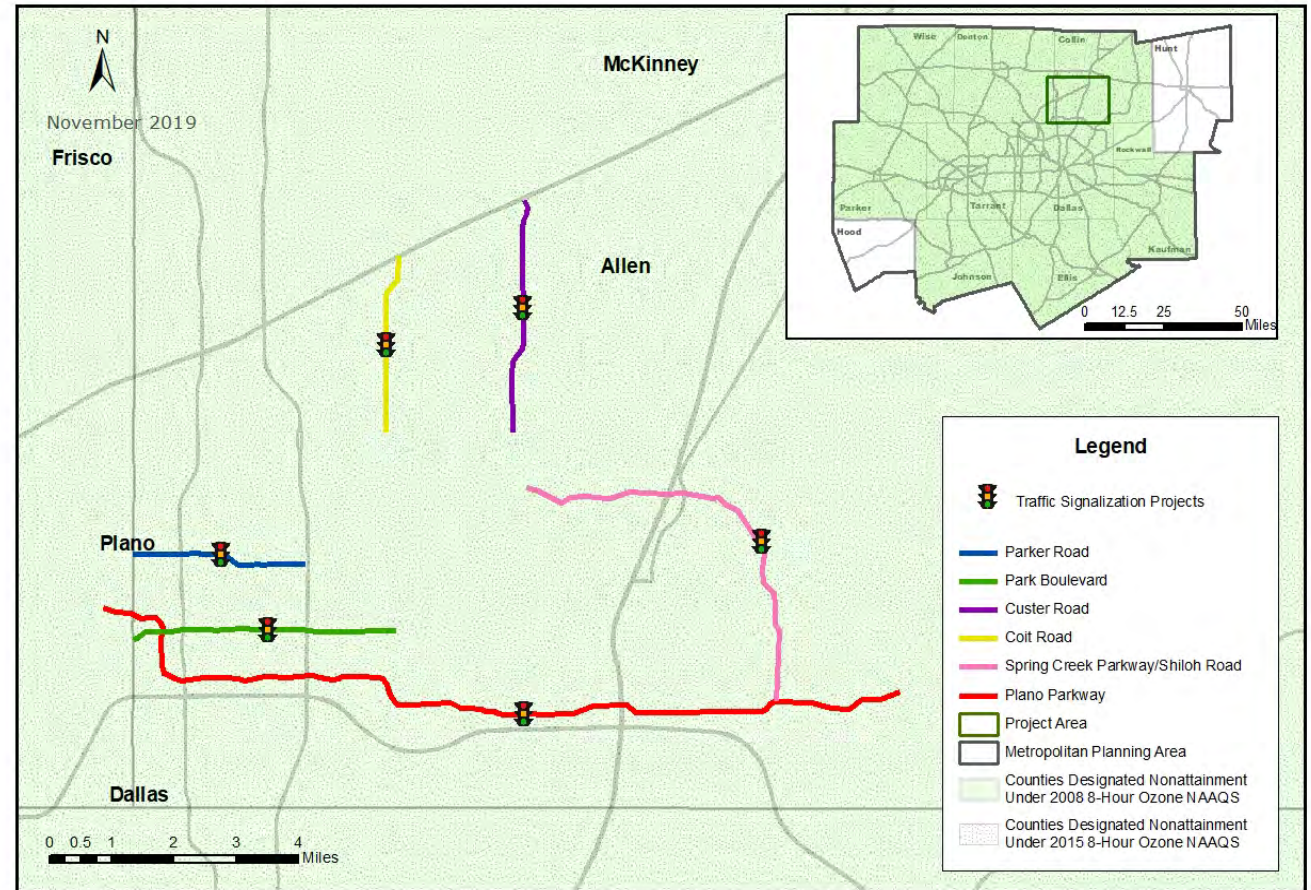
**Spring Creek Pkwy/Shiloh Rd (Custer Rd to Plano Pkwy)**

**14 signals**

**Plano Parkway (Dublin Rd to Marsh Ln)**

**30 signals**

### Location of Traffic Signals



# HOV TCM SUBSTITUTION

## Transportation Control Measure Substitution

Transportation Control Measures (TCM) specified in an implementation plan may be replaced with Control Measures if the substitute measures achieve equivalent or greater emissions reductions than the TCMs to be replaced.

Pollutants	Emissions Impact of three HOV Projects	Emissions Impact of Corridor Signalization Projects	Difference
NO <sub>x</sub>	-0.108 tpd	+0.117 tpd	+0.009 tpd
VOC	-0.061 tpd	+0.075 tpd	+0.014 tpd

# HOV TCM SUBSTITUTION

## TIMELINE

STTC – HOV TCM Substitution – Information	October 25, 2019
RTC – HOV TCM Substitution – Information	November 14, 2019
STTC – HOV TCM Substitution – Action	December 6, 2019
<b>RTC – HOV TCM Substitution – Action</b>	<b>December 12, 2019</b>
<b>Interagency Consultation Concurrence Letters</b>	<b>February, 2020</b>
<b>Approved HOV TCM Substitution</b>	<b>May, 2020</b>

# HOV TCM SUBSTITUTION

## Request for Action

### **Approve Resolution (Reference Item 5.1)**

- **Approve the Transportation Control Measures substitution of three HOV projects and associated emissions benefits with traffic signalization projects and their associated emissions benefits:**
  - **IH 35E corridor (Stemmons Fwy) between IH 635 and SH 121**
  - **IH 635 east corridor (LBJ Fwy) between Coit Rd and Greenville Ave**
  - **IH 635 west corridor (LBJ Fwy) between Luna Rd/IH 35E and US 75**
- **The substitute TCM accounts for equivalent or greater emission reductions than the TCM to be replaced**
- **The resolution will be transmitted to the local, State, and federal partners**

# HOV TCM SUBSTITUTION

## CONTACTS

**Chris Klaus**  
**Senior Program Manager**  
**817-695-9286**  
[cklaus@nctcog.org](mailto:cklaus@nctcog.org)

**Jenny Narvaez**  
**Program Manager**  
**817-608-2342**  
[jnarvaez@nctcog.org](mailto:jnarvaez@nctcog.org)

**Vivek Thimmavajjhala**  
**Transportation System Modeler**  
**817-704-2504**  
[vthimmavajjhala@nctcog.org](mailto:vthimmavajjhala@nctcog.org)



# VIRGIN HYPERLOOP ONE CERTIFICATION CENTER STATUS REPORT

Deadline – December 13, 2019

6-Mile Section, Begin Construction in 2021

University Coalition with Some Starter Funding

4 Options

8 Corridors, Exploring a Business Response

State Support if Short-Listed

# VHO REQUEST FOR PROPOSAL

	<b>OPTION 1</b>	<b>OPTION 2</b>	<b>OPTION 3</b>	<b>OPTION 4</b>
<b>Focus</b>	Private Sector	Base Public Sector	Public Sector with Applications	Public Sector Hybrid Construction with Applications
<b>Corridors</b>	2	4	1	1

**MOVING AHEAD WITH  
DISCUSSION ITEMS:  
LOCAL OPTION, TRANSIT, MEGA  
DEVELOPMENTS, AND THE PATH  
FORWARD WITH TXDOT**

December 12, 2019  
Regional Transportation Council

Michael Morris, P.E.  
Director of Transportation

# MOVING AHEAD INTO 2020

State Interim Charges (Local Option)

Transit Partnership by RTC Chair

Mega Projects (IH 35 Austin without Our Funds)

Mega Developments (Midtown, Butler Housing, Collin Creek,  
and General Motors)

TxDOT (October 10, 2019)

# **SENATOR NICHOLS – JULY 22, 2016**

## **LETTER TO TXDOT**

“I encourage the Commission to use a fair share methodology using distribution formulas created over a decade ago.”

“Some communities have chosen to leverage local transportation dollars by developing toll projects, while other have chose to live with more congestion. It would be perceived as penalizing some and rewarding others if the distribution is not made on a systematic distribution that has been used and accepted in the past.”

# PARTNERSHIP

Since 2003

Formula “Fair Share” Allocation + TxDOT Tools = Leverage

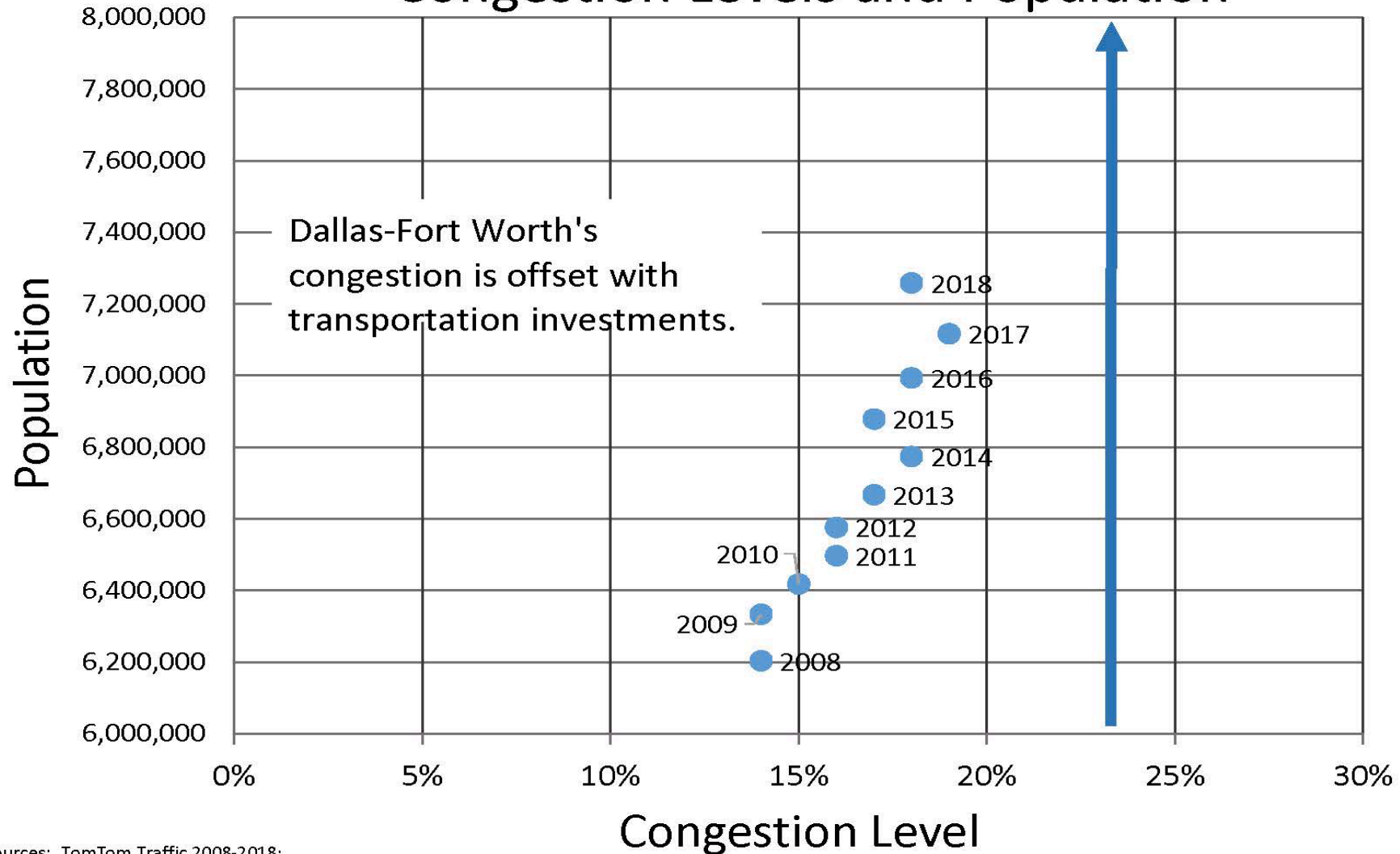
Today?

No TxDOT Tools = No Formula “Fair Share” Allocation  
= No Leveraging  
= “Penalizing”

Minute Order # 109370: Texas Metropolitan Mobility Plan (August 28, 2003)

Commissioner Ric Williamson: “The more you choose local sources of funds, whether that’s local taxes or local tolls, the more money will be invested in your community; you will not be penalized for being aggressive with local funding.”

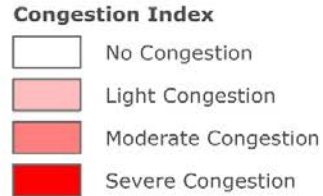
# Dallas-Fort Worth Congestion Levels and Population



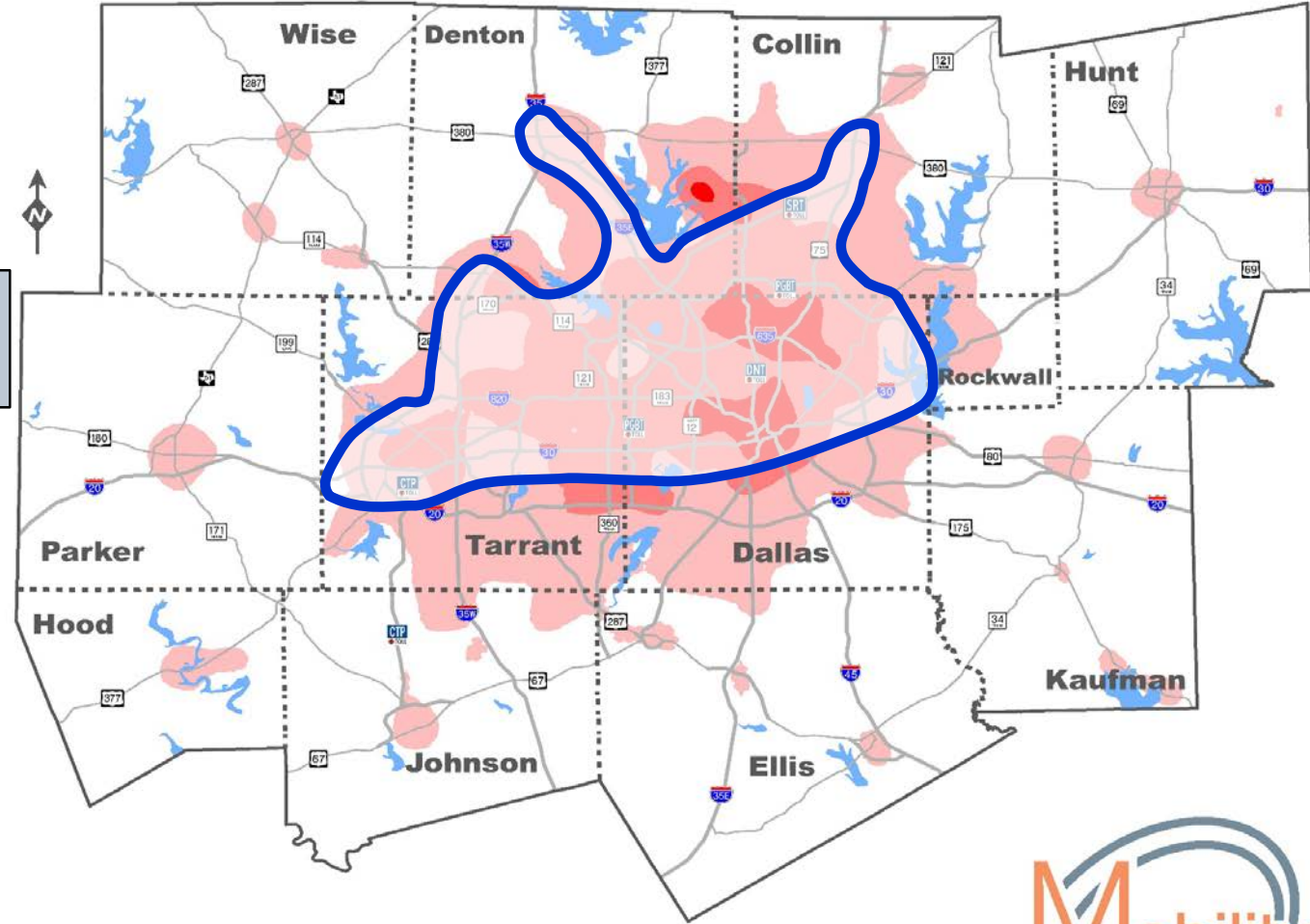
Sources: TomTom Traffic 2008-2018;  
North Central Texas Council of Governments

# Toll Managed Lane System Policy Boundary

## 2018 Levels of Congestion/Delay



**Within Boundary – Year 2018**  
13% Land Area  
79% Vehicle Hours of Congestion Delay



**Cost of Congestion/Delay: \$11.9 billion**  
Congestion Index is based on a percent increase in travel time.



# METROPOLITAN PLANNING ORGANIZATION (MPO) MILESTONE POLICY (ROUND 2)

Regional Transportation Council

December 12, 2019

# BACKGROUND

- ❖ The Regional Transportation Council (RTC) has been selecting projects since 1992.
- ❖ The first Metropolitan Planning Organization (MPO) Milestone Policy was adopted by the RTC in June 2015, and it reviewed projects selected from 1992 to 2005 that had not yet gone to construction.
- ❖ That initiative has been successful in getting 46 projects to construction thus far.
- ❖ Staff has been directed to initiate a second round of the Milestone Policy to review projects currently over 10 years old that have not been implemented.

# MILESTONE POLICY ROUND 2

- ❖ Affected projects:
  - ❖ Funded between 2006 and 2010 that have not let or obligated
  - ❖ Funded prior to 2006 that had let, but have had implementation issues (e.g., re-bid, utility delays)
  - ❖ Funded with RTC-selected sources
  - ❖ Locally funded and added to the Transportation Improvement Program (TIP) prior to 2010
  - ❖ Funded with Congressional Earmarks that are subject to rescission
- ❖ 41 projects will need to be reconfirmed or cancelled
- ❖ Projects have \$605,904,439 in total funding

# INTENDED OUTCOMES OF THE MILESTONE POLICY

- ❖ Provide a realistic assessment of project status for decision-making
- ❖ Balance project construction schedule capacity within the current financial constraints
- ❖ Increase the amount of available funds for priority, “ready-to-go” projects, rather than long delayed projects

# PROPOSED REAPPROVAL PROCESS

- ❖ Agencies with projects on the Milestone Policy Project List will be notified via letter (in addition to STTC & RTC agenda items)
- ❖ Agencies must reconfirm the projects as a priority by:
  - ❖ Providing a realistic and achievable schedule, which must receive NCTCOG & TxDOT concurrence
  - ❖ Providing documentation of policy board support
    - ❖ If projects are advancing imminently or have policy board approval within the last six months, new action is not needed (just submit latest approval documentation)
    - ❖ If policy support documentation is greater than six months old, new action is requested
- ❖ Documenting the availability of local matching funds

# LESSONS LEARNED – SUGGESTIONS FOR AGENCIES TO CONSIDER

- ❖ Review timeline with “20/20 vision,” not “Rose-Colored Glasses”
  - ❖ Include review of start and end dates for STIP approval, funding agreement execution, engineering, environmental clearance, right-of-way acquisition, utility relocations, bidding process, railroad or other interagency agreements
  - ❖ Include time for TXDOT review
  - ❖ Do not assume phases can run concurrently
  - ❖ Build in reasonable, but not excessive, contingency timing
- ❖ Coordinate with TxDOT & NCTCOG staff in advance to ensure timelines are realistic

# TIMELINE

- ❖ January 2020 – Notify implementing agencies
- ❖ May 1, 2020 – Formal responses due to NCTCOG staff
- ❖ Summer 2020 – Bring the Milestone Policy Project List to STTC/RTC for review and approval

# FOLLOW UP: CITY OF DALLAS ROUND 1 PROJECT ACTION

- ❖ City established a revised schedule
- ❖ TxDOT and NCTCOG concurred with the updated schedule
- ❖ Proposed RTC action:
  - ❖ Grant an extension of the project's construction start timeline
  - ❖ If the City does not meet that schedule, staff proposes that the RTC remove funding from the project automatically (i.e., without further action needed).
  - ❖ Direct staff to continue monitoring the project for timely implementation
  - ❖ Extension is contingent upon development of tracking system within City of Dallas
- ❖ City developing a tracking system and better understanding of outstanding commitments
  - ❖ Tracking system must include regular updates to elected officials



# QUESTIONS?

Christie J. Gotti  
Senior Program Manager  
Ph: (817) 608-2338  
[cgotti@nctcog.org](mailto:cgotti@nctcog.org)

Brian Dell  
Senior Transportation Planner  
Ph: (817) 704-5694  
[bdell@nctcog.org](mailto:bdell@nctcog.org)

James Adkins  
Transportation Planner  
Ph: (682) 433-0482  
[jadkins@nctcog.org](mailto:jadkins@nctcog.org)

# High Occupancy Verification Technology

**RTC**

**December 2019**

**Natalie Bettger**



# Project Overview

## **Project Purpose:**

Regional Transportation Council instructed staff to replace manual enforcement (self-declaration through Drive On TEXpress app/website) with more advanced technology verification equipment

## **Work Completed:**

Pilot Test on DFW Connector Corridor

- 98.4% exact match in reported occupancy
- 1.6% indicates an “over count”

## **Proposed Phases:**

### **Phase 1 – Managed Lanes**

- HOV Discount
- Support for all managed lanes in DFW (LBJ, NTE, DFW Connector, IH 30, IH 35E and IH 635)

### **Phase 2 and Beyond – Other Corridors, Modes, & Events**

# Current HOV Enforcement

Register



Pre-Declare Every Trip



Occupancy Declaration Sent to Field



Officers Watch for Red Light



Violation: Legal Process



Toll Collected



NTTA Back Office System for Billing



# Proposed HOV Program

Register

↓

~~Pre - Declare Every Trip~~



The screenshot shows a web page with a header 'HOV Schedule' and a button 'Activate HOV Status Now'. Below is a section 'My Vehicle' for a 'Nissan Rouge 2011 - BVT407'. A calendar shows dates from Oct 30 to Nov 3, with 'HOV ON' status for Oct 31, Nov 1, and Nov 2.



~~Occupancy Declaration Sent to Field~~



~~Officers Watch for Red Light~~



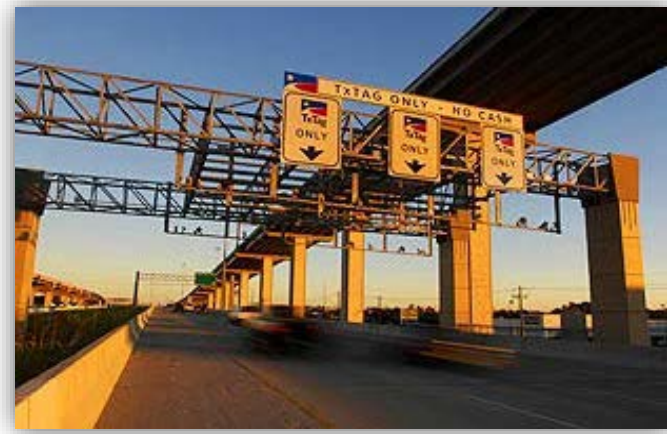
~~Violation: Legal Process~~



Toll Collected



**NTTA Back Office System for Billing**





### Get the GoCarma App

Each person in the car has the GoCarma app on their phone.



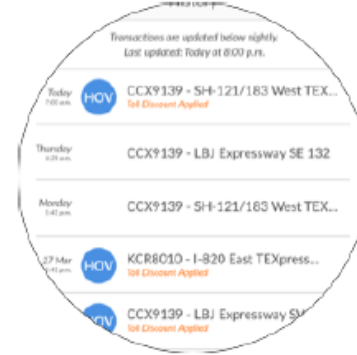
### Setup a GoCarma Pass

A small Bluetooth device that you keep in your car's glove box.



### Drive in a TEXpress Lane

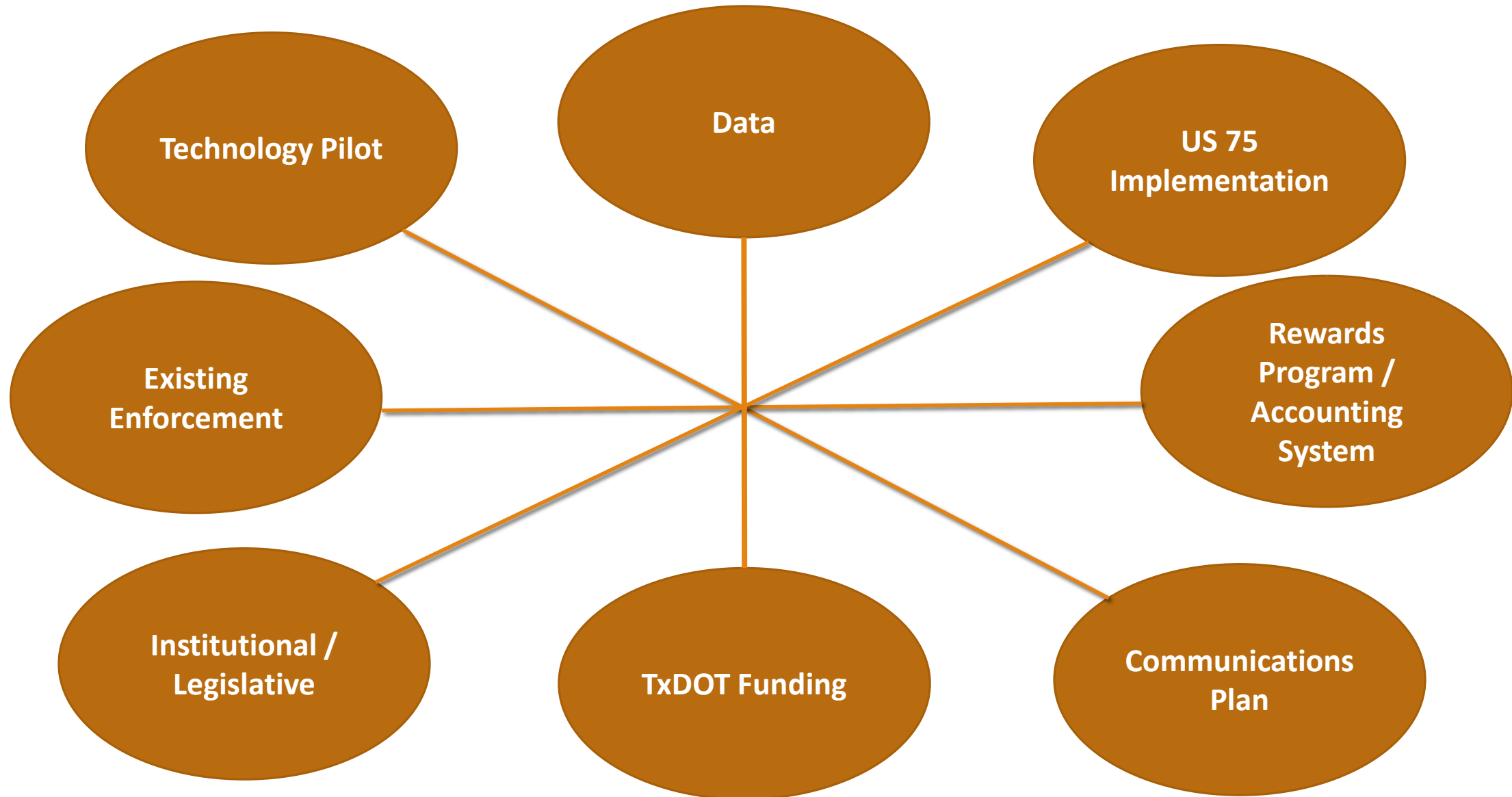
The app automatically verifies the number of people in the car.



### Earn HOV Discounts

Each HOV transaction will result in a discount being applied by NTTA.

# Continue Monitoring through Implementation Process



# Ramp Up to Implementation

Cooperative effort between:

- TxDOT/Transcore
- NTTA
- LBJE/NTE Mobility Partners

Back-office integration testing

Public education and outreach plan developed

Coordinated switchover schedule

Violation process

Customer service scenarios and business rules



# Schedule

December 4, 2019	December 4, 2019 – LBJ/NTE will begin communications with current TEXpress Users and Partner Website Updates with GoCarma; 2 <sup>nd</sup> Pre-Launch Meeting with Partners
December 6, 2019	STTC Update Item
<b>December 12, 2019</b>	<b>RTC Update Item</b>
December 2019	Public Meeting
January 6, 2020	GoCarma App Release
January 9, 2020	RTC Reminder – Director’s Report
January 10, 2020	3 <sup>rd</sup> and Final Pre-Launch Meeting with Partners
January 13, 2020	NCTCOG Press Release
January 24, 2020	STTC Fast Fact
January 24, 2020	Go Live (focus on existing TEXpress users)
February 13, 2020	RTC Update Item
February 28, 2020	STTC Update Item
April 2020	Paid Outreach and Education (new recruitment)

# Contacts

**Natalie Bettger**

Senior Program Manager

[nbettger@nctcog.org](mailto:nbettger@nctcog.org)

817-695-9280

**Dan Lamers**

Senior Program Manager

[dlamers@nctcog.org](mailto:dlamers@nctcog.org)

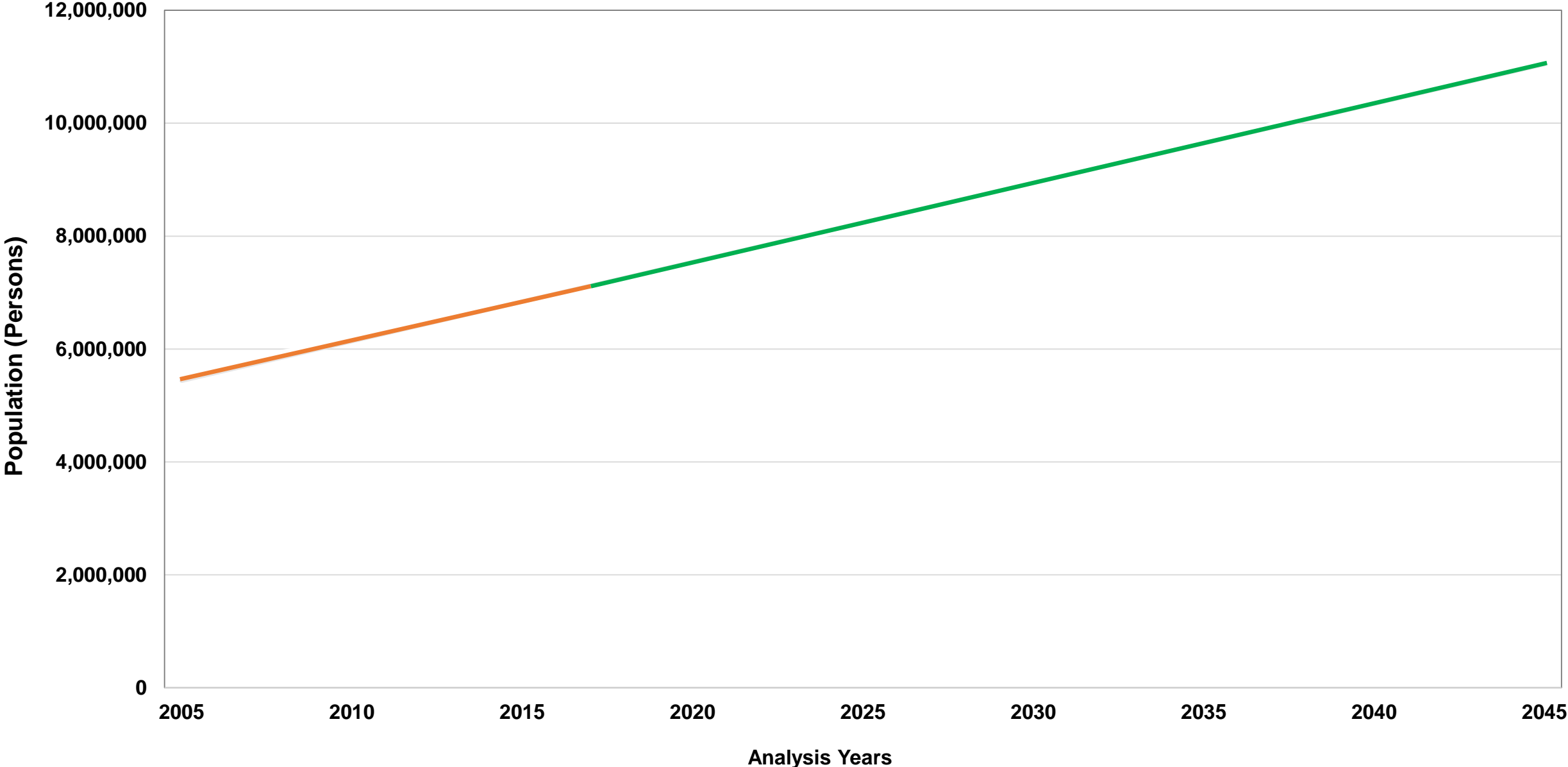
817-695-9263

# End of 2019 Ozone Season

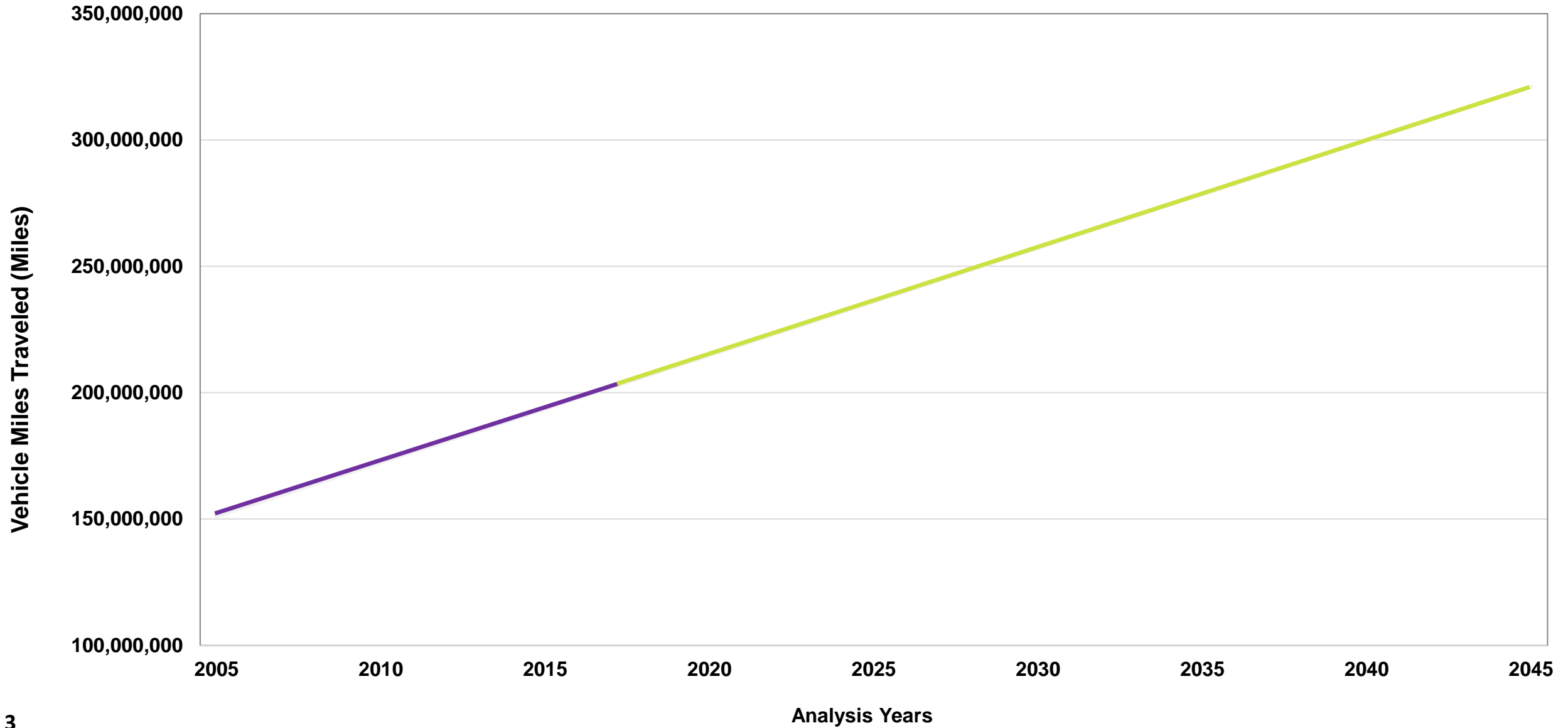
Regional Transportation Council Meeting - December 12, 2019

Chris Klaus, Senior Program Manager

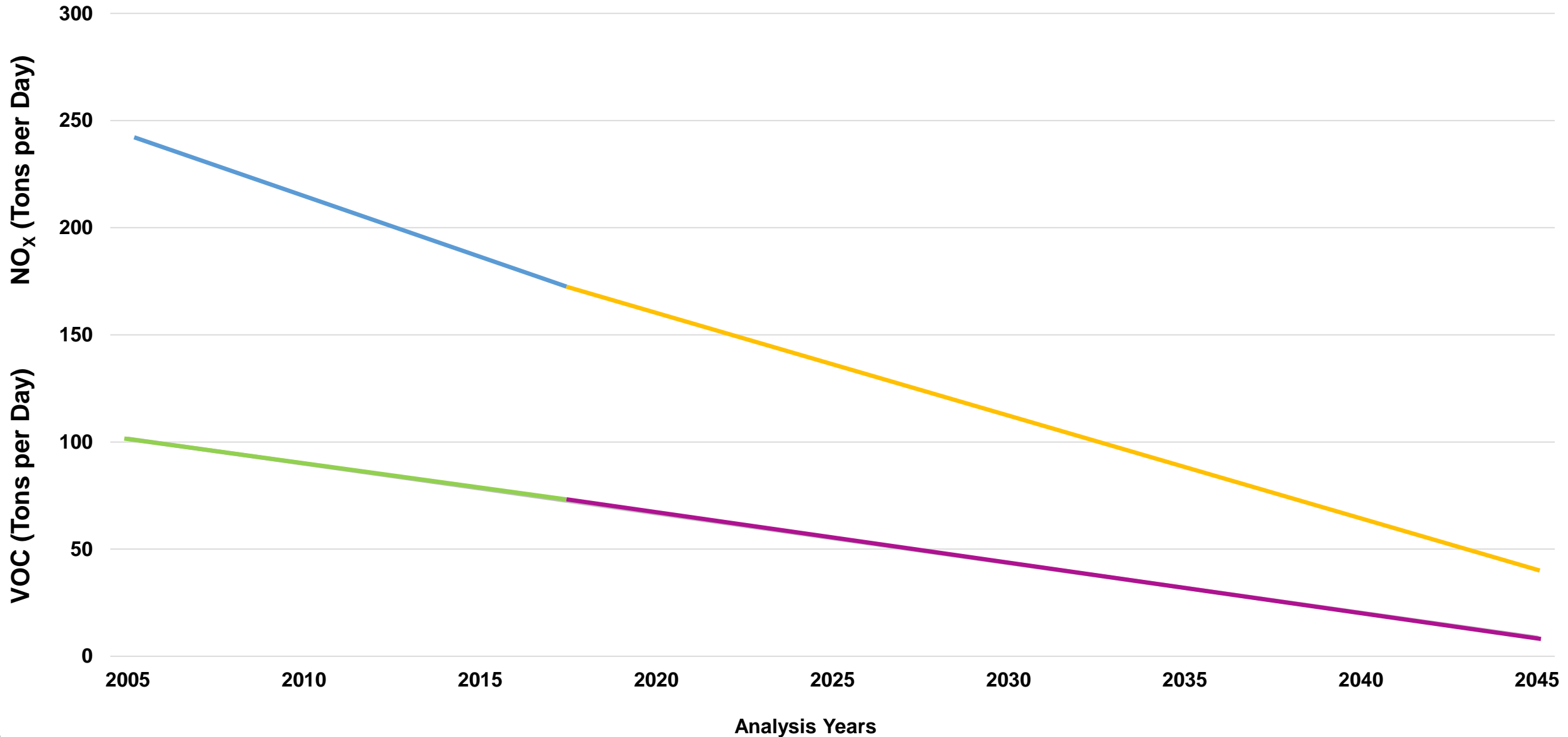
# Population Data Trend



# VMT Data Trend

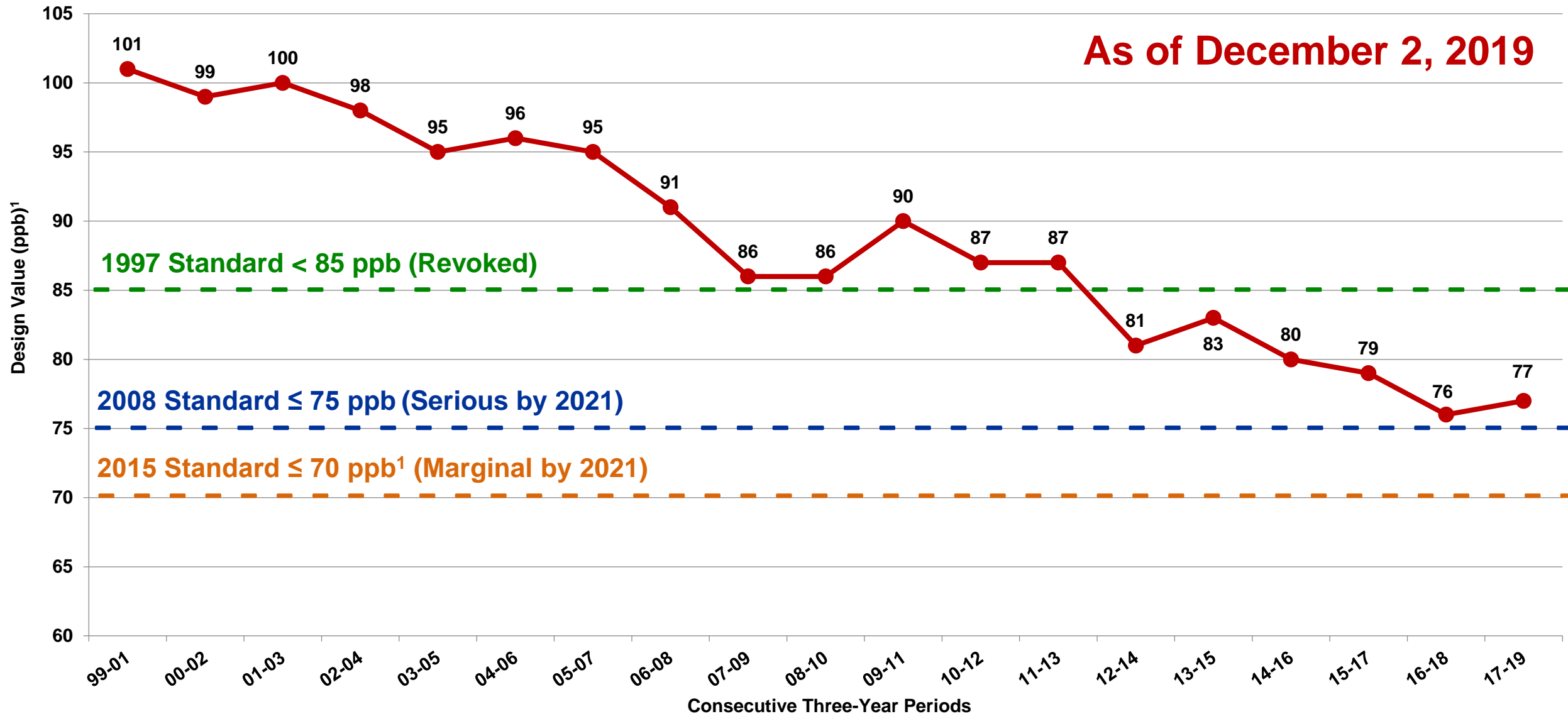


# On-road Mobile Emissions Trends



# Ozone Design Value Trend

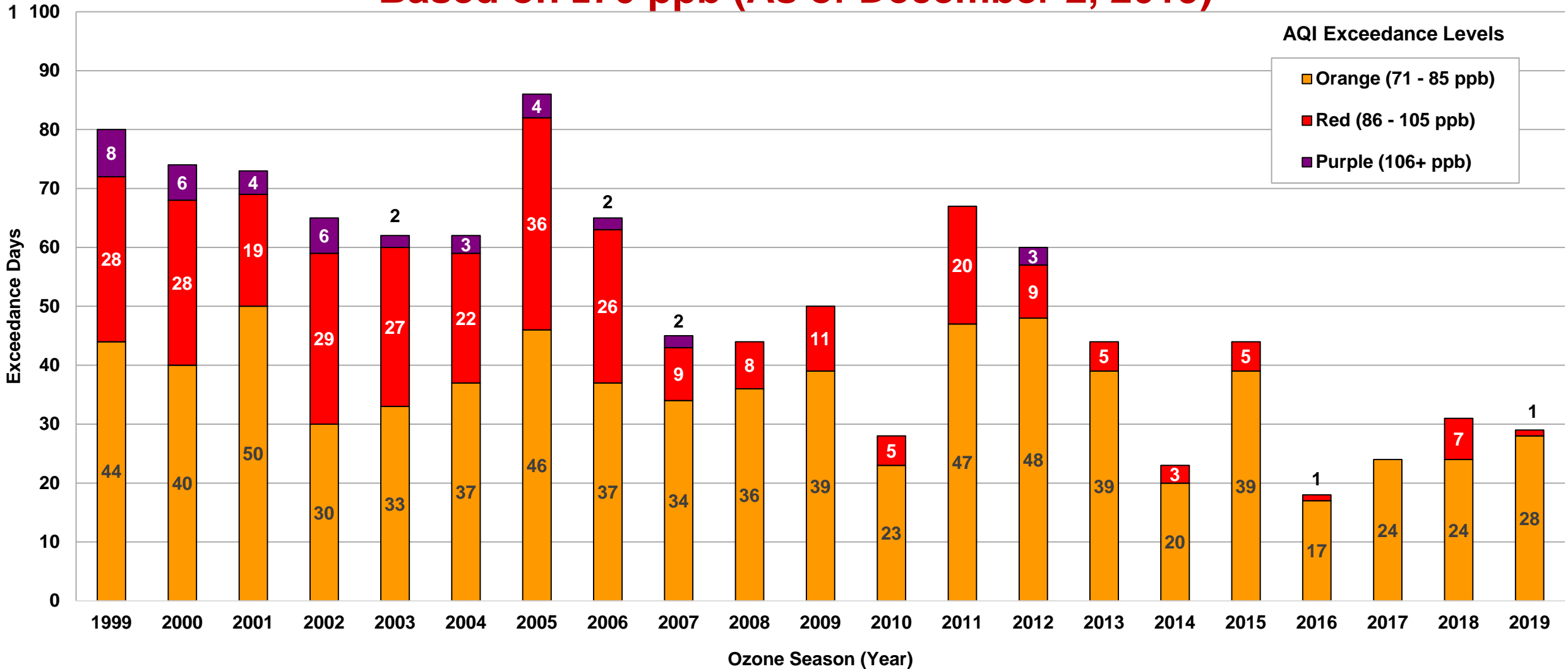
As of December 2, 2019



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

# Historical Ozone Exceedance Days

Based on  $\leq 70$  ppb (As of December 2, 2019)



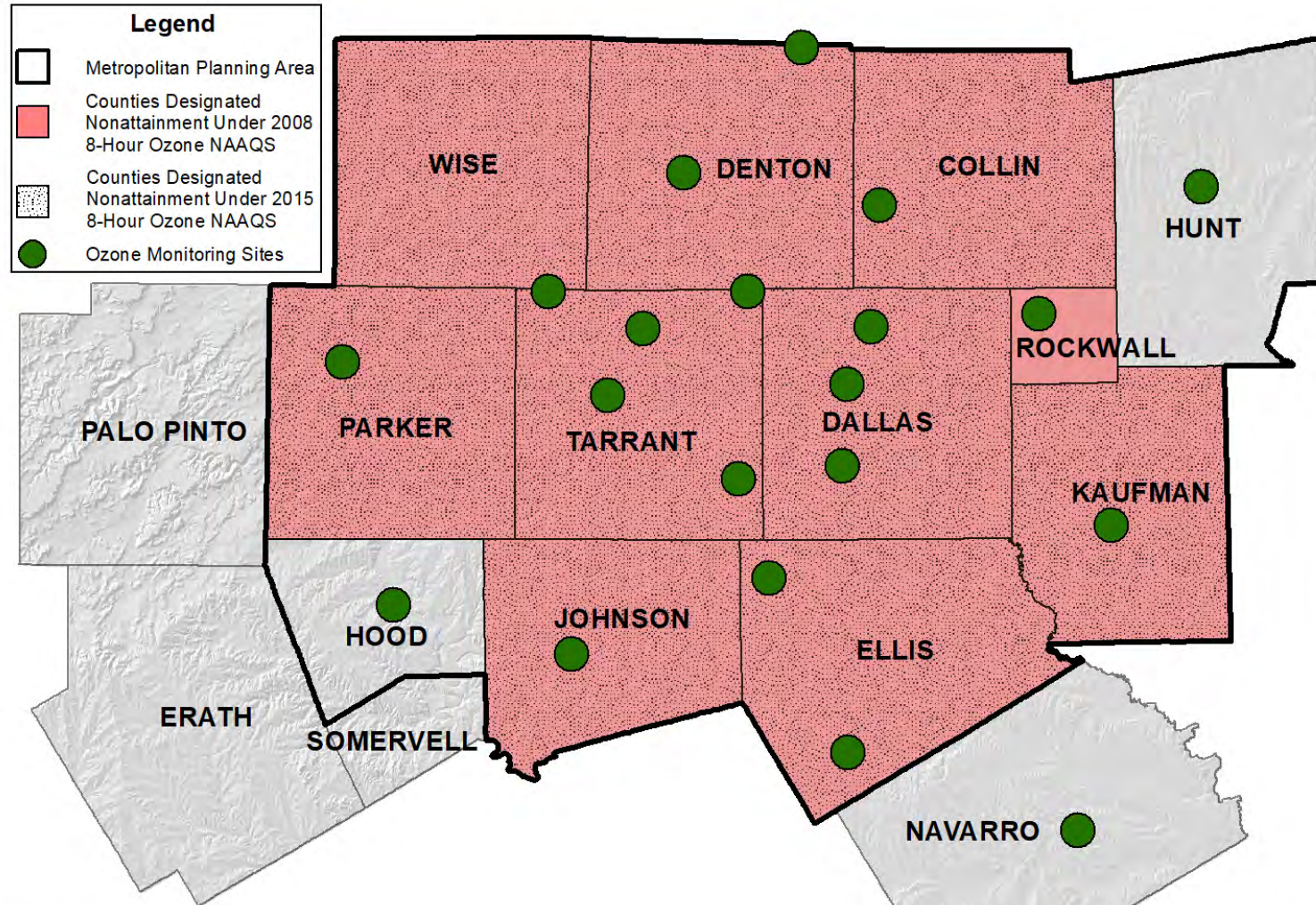
Exceedance Level indicates daily maximum eight-hour average ozone concentration. Exceedance Levels are based on Air Quality Index (AQI) thresholds established by the EPA for the revised ozone standard of 70 ppb.

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



# Monitor Locations

## 2008 and 2015 Ozone NAAQS



# Monitor Data

## Four Highest Monitors

Monitor	4 <sup>th</sup> Highest Value for Season			2019 Ozone Season Design Value
	2017	2018	2019	
Cleburne	75	81	73	76
Dallas North	77	81	73	77 ←
Frisco	72	81	76	76
Grapevine Fairway	73	82	71	75

**Design Value = 3-Year Average of Fourth Highest Value**

# Attainment Deadlines

**2008 NAAQS Attainment Date ( $\leq 75$  ppb): No later than **July 20, 2021****

***Serious Classification***

**2015 NAAQS Attainment Date ( $\leq 70$  ppb): No later than **August 3, 2021****

***Marginal Classification***

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

# Reclassification Scenarios

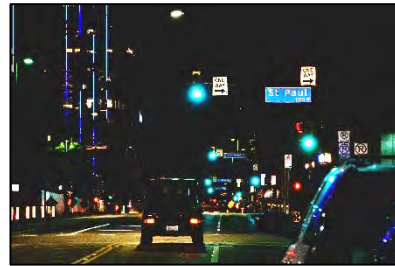
## 2008 NAAQS Attainment Date ( $\leq 75$ ppb) (Serious Classification)

Monitor	4 <sup>th</sup> Highest Value for Season			2020 Ozone Season Design Value
	2018	2019	2020	
Cleburne	81	73	<b>74</b>	76
Dallas North	81	73	<b>74</b>	76
Frisco	81	76	<b>71</b>	76
Grapevine Fairway	82	71	<b>75</b>	76

## 2015 NAAQS Attainment Date ( $\leq 70$ ppb) (Marginal Classification)

Monitor	4 <sup>th</sup> Highest Value for Season			2020 Ozone Season Design Value
	2018	2019	2020	
Cleburne	81	73	<b>59</b>	71
Dallas North	81	73	<b>59</b>	71
Frisco	81	76	<b>56</b>	71
Grapevine Fairway	82	71	<b>60</b>	71

# Sample of Air Quality Initiatives



# For More Information

**Chris Klaus**  
**Senior Program Manager**  
**817-695-9286**  
[cklaus@nctcog.org](mailto:cklaus@nctcog.org)

**Jenny Narvaez**  
**Program Manager**  
**(817) 608-2342**  
[jnarvaez@nctcog.org](mailto:jnarvaez@nctcog.org)

**Trey Pope**  
**Air Quality Planner**  
**(817) 695-9297**  
[tpope@nctcog.org](mailto:tpope@nctcog.org)

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

# Unmanned Aircraft Systems (UAS) Safety and Integration Initiative Update

*Regional Transportation Council  
December 12, 2019*

Presenter: Ernest Huffman



# Key Issues with UAS Integration in a Metro Area

Safety

Industry  
Collaboration

Public  
Engagement  
and Perception

Education and  
Training

Workforce  
Development

Regulations

Technology



# UAS Safety and Integration Initiative



**North Central  
Texas UAS Task  
Force**



**Safety**



**Integration**



**Education**

- Know Before You Fly Workshops
- Airport/Military Facility Risks



**Legislation**

- Regional Ordinance
- Statewide Legislation
- National Legislation
- Notice for Proposed Rule Making
- Permitting



**Training**

- Training Standards
- PSURT/Enforcement
- Promote UAS Training



**Testing**

- Metropolitan Testing Corridors
- Package Delivery
- Air Taxi
- Regional UAM Charter



**Public Awareness**

- UAS Applications
- UAS Careers
- Public Outreach Strategy
- Bring Your Drone to the Park Day

## PRE-EXISTING COMMITTEES

Regional Coordination  
Committee

Regional Transportation Committee  
Surface Transportation Technical Committee  
Air Transportation Advisory Committee

PSURT Committee and Team  
Workforce Development

Lone Star UAS Center of Excellence  
UAS Werx  
Cumulus Technologies  
Hillwood Group

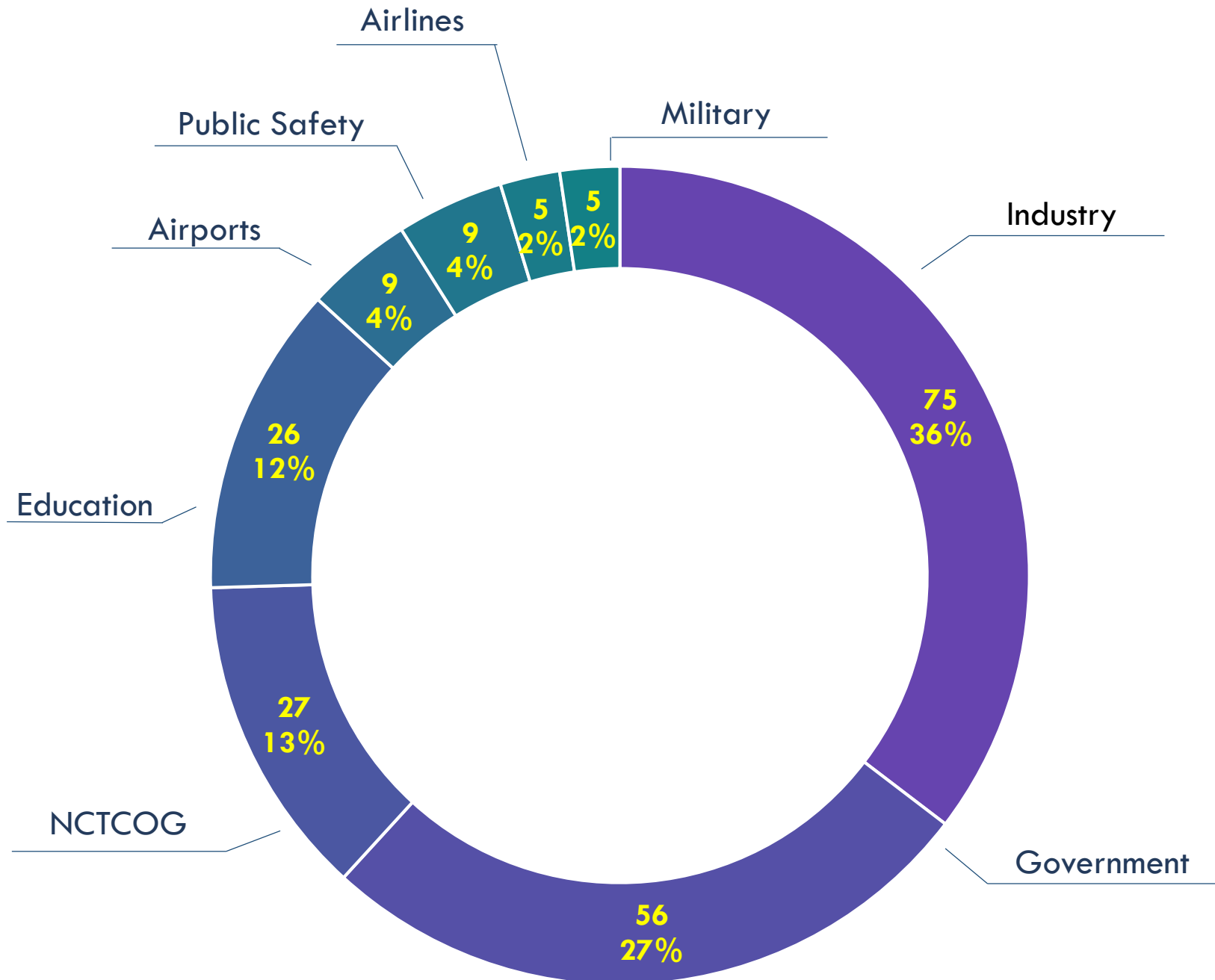
AUVSI Lone Star Chapter  
Regional Freight Committee

# Task Force Objectives

- Promote UAS safety and standardization
- Mitigate reckless UAS operations
- Promote the integration of UAS into the DFW regional airspace
- Collaborate with regional partners for a coordinated comprehensive approach

## 212 Members, 100+ Organizations

- Airports
- Cities, Counties, TxDOT and FAA
- Military
- Public Safety
- UAS Industry Representatives (training, manufacturers, etc.)
- Universities
- NCTCOG Staff (Transportation, 911, and Emergency Preparedness)



# Notable Accomplishments

- 100+ organizations collaborating
- Know Before You Fly “Your Drone” Workshops
- Public Safety UAS Response Team (PSURT)
- Mineral Wells, TX establishment of the 8<sup>th</sup> UAS testing site
- First registered UAS Apprenticeship Program
- Partnering with Lonestar UAS Center of Excellence to attract NASA Grand Design Challenge



# The Working Groups



Education and Public  
Awareness



Legislative



Training



Integration

# Education and Public Awareness



## Prioritized Initiatives

**Know Before You Fly Your Drone Workshops**

**Public Outreach Strategy**

**Outreach Events**

**Bring Your Drone to the Park Day**



## Prioritized initiatives

Provide Comments for Pending UAS  
Legislation

Provide Comments on Notice for Rule  
Changes from Government

Hold General Informational Sessions for  
Legislature/Policy Makers

Strategic Legislative Plan

**Regional UAS Charter**



## Prioritized Initiatives

Educate Superintendents and CTE Directors

Externships/Internships

Survey Regional Stakeholders for Employee Demand

University Research and Training

Federal Research Partnerships

**UAS Workforce Pipeline Development**





## Prioritized Initiatives

**Urban Air Mobility Integration**

**UAS Weather Detection and CASA Avoidance**

**Regional UAS Charter**

**Designate Viable Test Sites**

**Work with Airports on UAM Infrastructure Needs**

# Why should you be involved?

- Technology Pilot Opportunities
- Be a Part of the Solution
  - Safer skies
  - Participate in workshops
- Economic Development
  - Let the world know that the DFW region is supportive of the UAS industry
- Grant Opportunities
  - NCTCOG Incident Management 2020 Equipment Purchase
  - Letters of Support



# Next Meeting

January 28, 2020, 10am – 12pm

Hosted by Hillwood

Exact Location - TBD



# Contacts

## **Dan Kessler**

Assistant Director of Transportation  
North Central Texas Council of  
Governments

[DKessler@nctcog.org](mailto:DKessler@nctcog.org)

(817)695-9248

## **Ernest Huffman**

Principal Transportation Planner  
North Central Texas Council of  
Governments

[ehuffman@nctcog.org](mailto:ehuffman@nctcog.org)

(817)704-5612

Task Force Website - <https://www.northtexasuas.com/>