

# **MAINTAINING OZONE ATTAINMENT: WHERE TO GO FROM HERE?**

## **GRANBURY CHAMBER LUNCHEON**

**August 17, 2012**

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**North Central Texas Council of Governments**

**Transportation Department**

# CRITERIA AND OTHER POLLUTANTS

## National Ambient Air Quality Standards (NAAQS)

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

## Possible Future Standards

Greenhouse Gas Emissions  
(i.e. Carbon Dioxide)

# FEDERAL CLEAN AIR ACT

Requires the Environmental Protection Agency (EPA) to review NAAQS every five years to ensure the standards protect human health and the environment.

**1990 – 1-Hour Ozone Standard Implemented**

**1991 – Collin, Dallas, Denton, and Tarrant Counties Designated Nonattainment**

**1997 – 8-Hour Ozone Standard (85 ppb) Promulgated**

**2004 – 8-Hour Ozone Standard (85 ppb) Implemented; Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall and Tarrant Counties Designated as Nonattainment**

**2008 – 8-Hour Ozone Standard Revised to 75 ppb**

**2012 – 8-Hour Ozone Standard Revision (75 ppb) Implemented  
Addition of Wise County to the 9-County Nonattainment  
Region**

# FEDERAL CLEAN AIR ACT

## Five Factors to Determine Nonattainment Designation

Factors	Hood County Findings <sup>1</sup>
<p><b>1. Air Quality Data</b> – based on the Design Value of the monitor</p>	<p>Design Value (2008 - 2010) = 75 ppb, attainment</p>
<p><b>2. Emissions and Emissions-Related Data</b></p> <p>a. Emissions Data – derived from the 2008 National Emissions Inventory data; and</p> <p>b. TCEQ's<sup>3</sup> emissions inventory of NO<sub>x</sub> and VOC emissions from the Barnett Shale oil and gas production and related activities</p> <p>    Combined NO<sub>x</sub> emissions     Combined VOC emissions</p> <p>c. Population Density (pop/sq. mile)     Degree of Urbanization (% population increase)</p> <p>d. Traffic and Commuting Patterns     2008 Vehicle Miles Traveled (VMT)     Percent Change in VMT (2002 - 2008)</p>	<p>5,515 tpy (12<sup>th</sup> highest level of NO<sub>x</sub>) 9,647 tpy (8<sup>th</sup> highest level of VOCs<sup>2</sup>)</p> <p>6,903 tpy (1<sup>st</sup> highest level of NO<sub>x</sub>) 2,113 tpy (4<sup>th</sup> highest level of VOCs)</p> <p>12,418 tpy (7<sup>th</sup> highest level of NO<sub>x</sub>) 11,660 tpy (8<sup>th</sup> highest level of VOCs)</p> <p>0.12 (9<sup>th</sup> densest) 9.2% (9<sup>th</sup> highest)</p> <p>443 million (14<sup>th</sup> highest) +46% (3<sup>rd</sup> highest)</p>

Source: [http://www.nctcog.org/trans/air/policy/EPALtrandTechnicalDoc\\_120911.pdf](http://www.nctcog.org/trans/air/policy/EPALtrandTechnicalDoc_120911.pdf)

<sup>1</sup> Rankings based on EPA review of 19 counties in North Central Texas for 2011 nonattainment designation.

<sup>2</sup> VOCs = Volatile Organic Compounds

<sup>3</sup> TCEQ = Texas Commission on Environmental Quality

<sup>4</sup> tpy = tons per year

# FEDERAL CLEAN AIR ACT

## Five Factors to Determine Nonattainment Designation

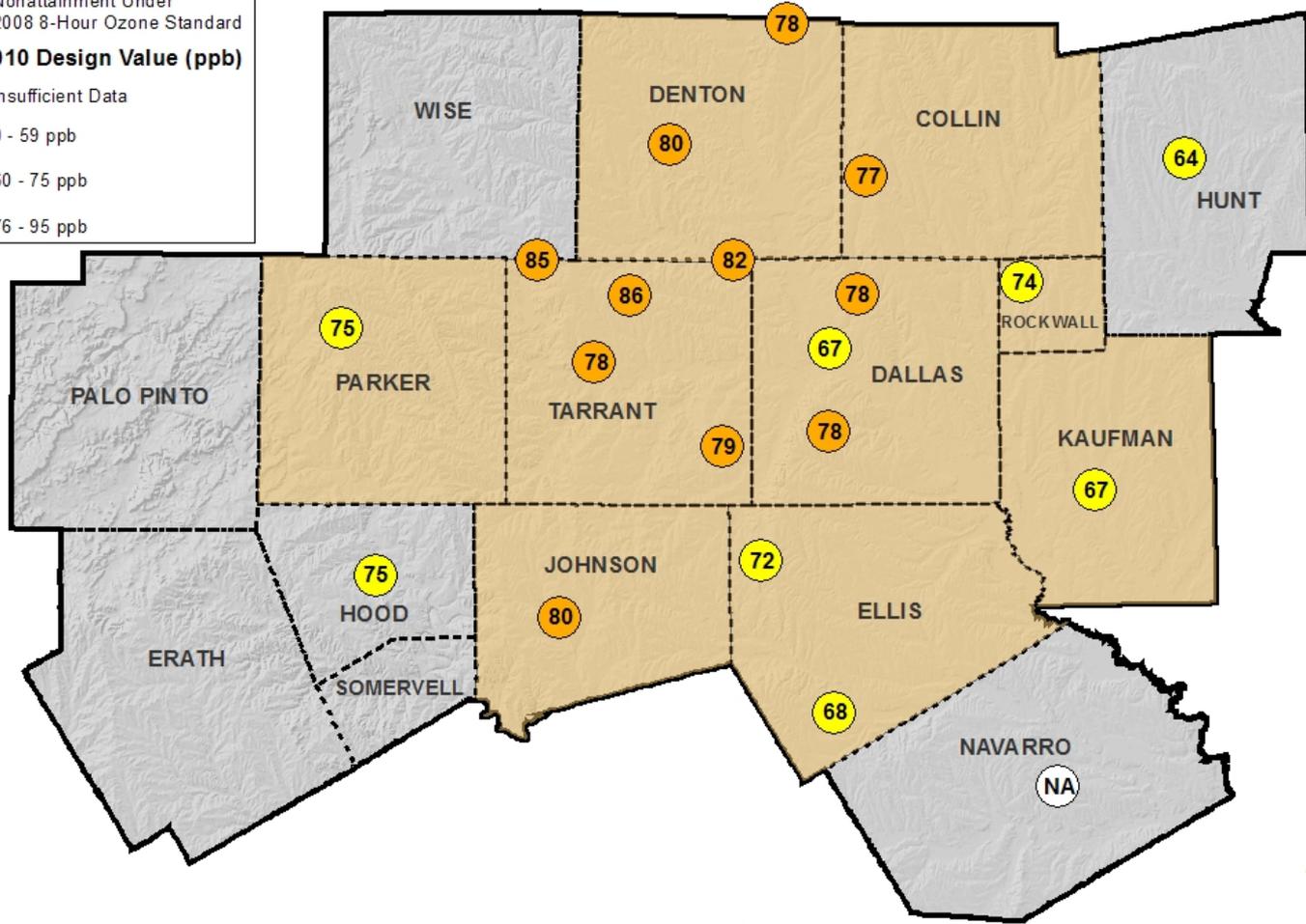
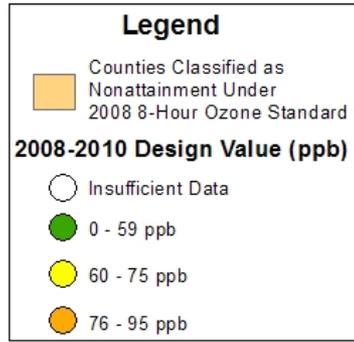
Factors	Hood County Findings <sup>1</sup>
<b>3. Meteorology (Weather/Transport Patterns)</b> – based on NOAA's HYSPLIT <sup>2</sup> model (back trajectories of wind patterns)	Significant number of back trajectories from Hood County to Parker County
<b>4. Geography/Topography</b>	No significant findings by EPA
<b>5. Jurisdictional Boundaries</b>	Use of existing county boundaries is not problematic

<sup>1</sup> Rankings based 12 counties in DFW EPA reviewed for nonattainment designations in 2011.

<sup>2</sup> NOAA HYSPLIT = National Oceanic and Atmospheric Administration's Hybrid Single Particle Lagrangian Integrated Trajectory Model

# 8-HOUR OZONE DESIGN VALUES

## 2010 Ozone Nonattainment Status



August 2012

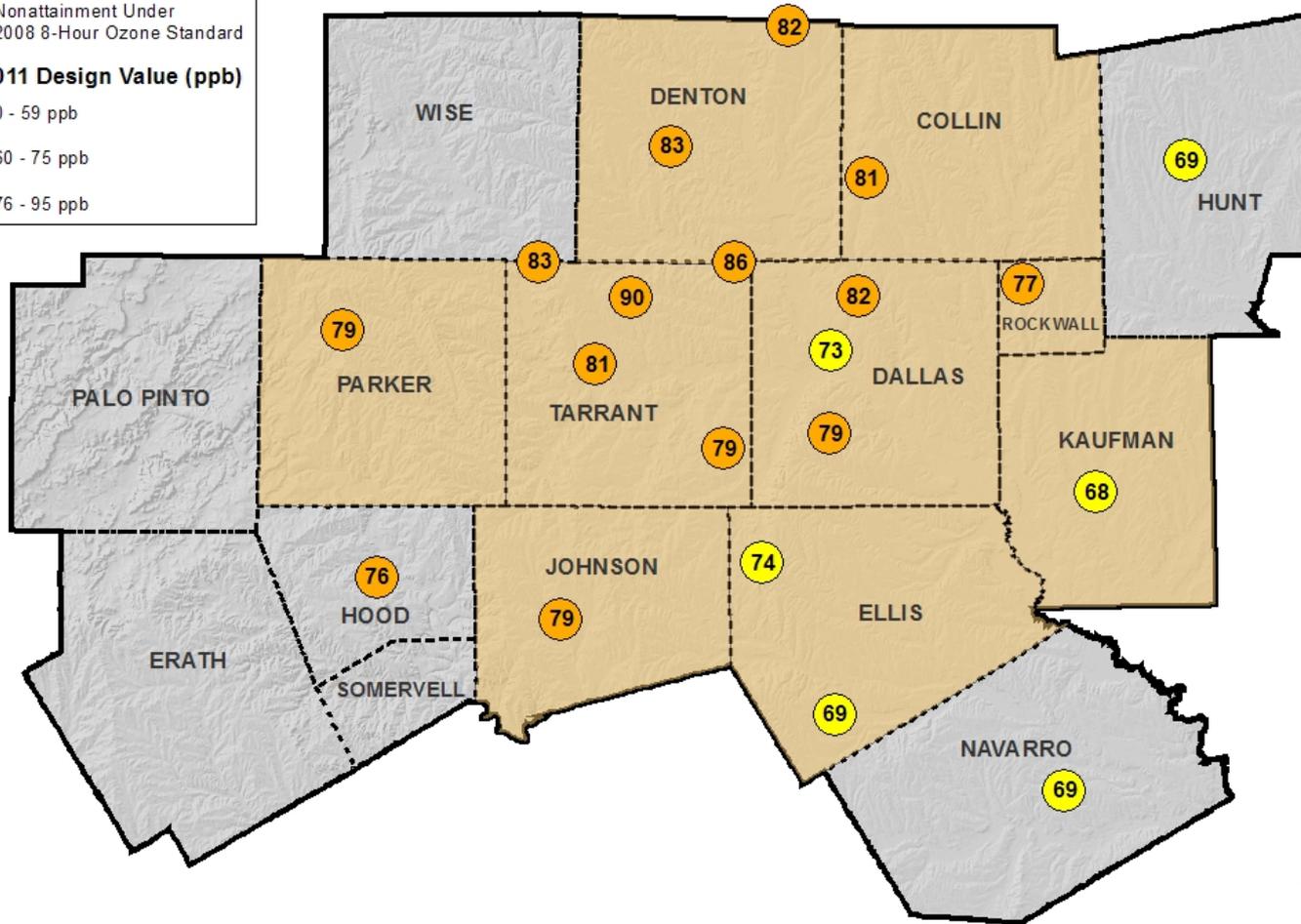
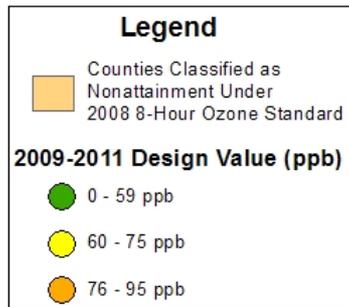
Colors represent Air Quality Index Breakpoints Under 2008 Standard

According to the U.S. 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).

Source: NCTCOG Transportation Dept

# 8-HOUR OZONE DESIGN VALUES

## 2011 Ozone Nonattainment Status



August 2012

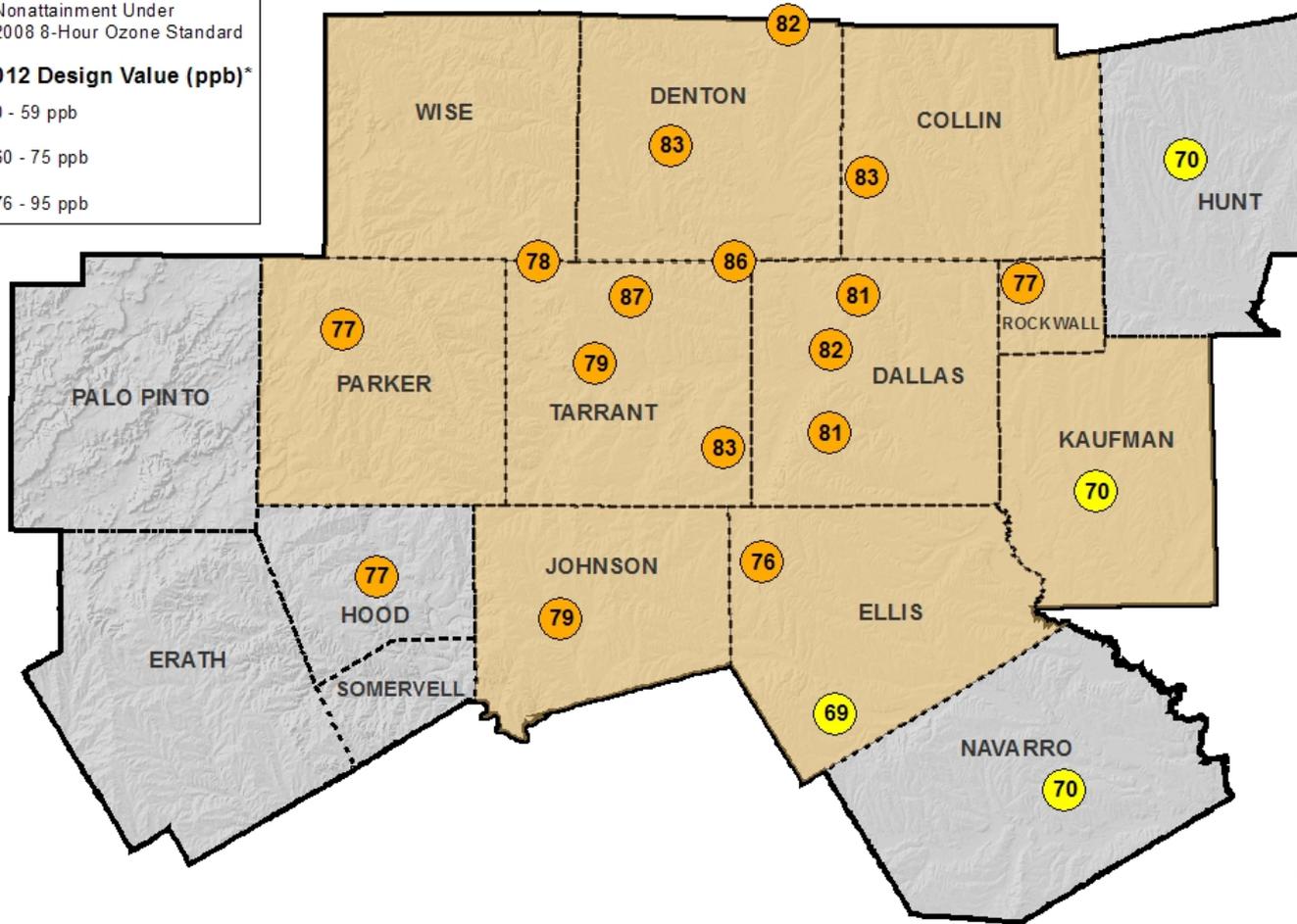
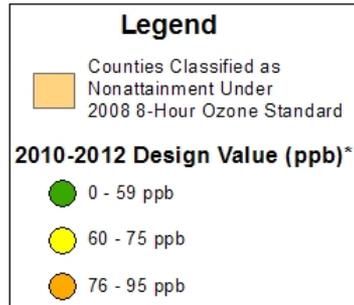
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Source: NCTCOG Transportation Dept

# 8-HOUR OZONE DESIGN VALUES

## 2012 Ozone Nonattainment Status\*



August 2012

Colors represent Air Quality Index Breakpoints Under 2008 Standard

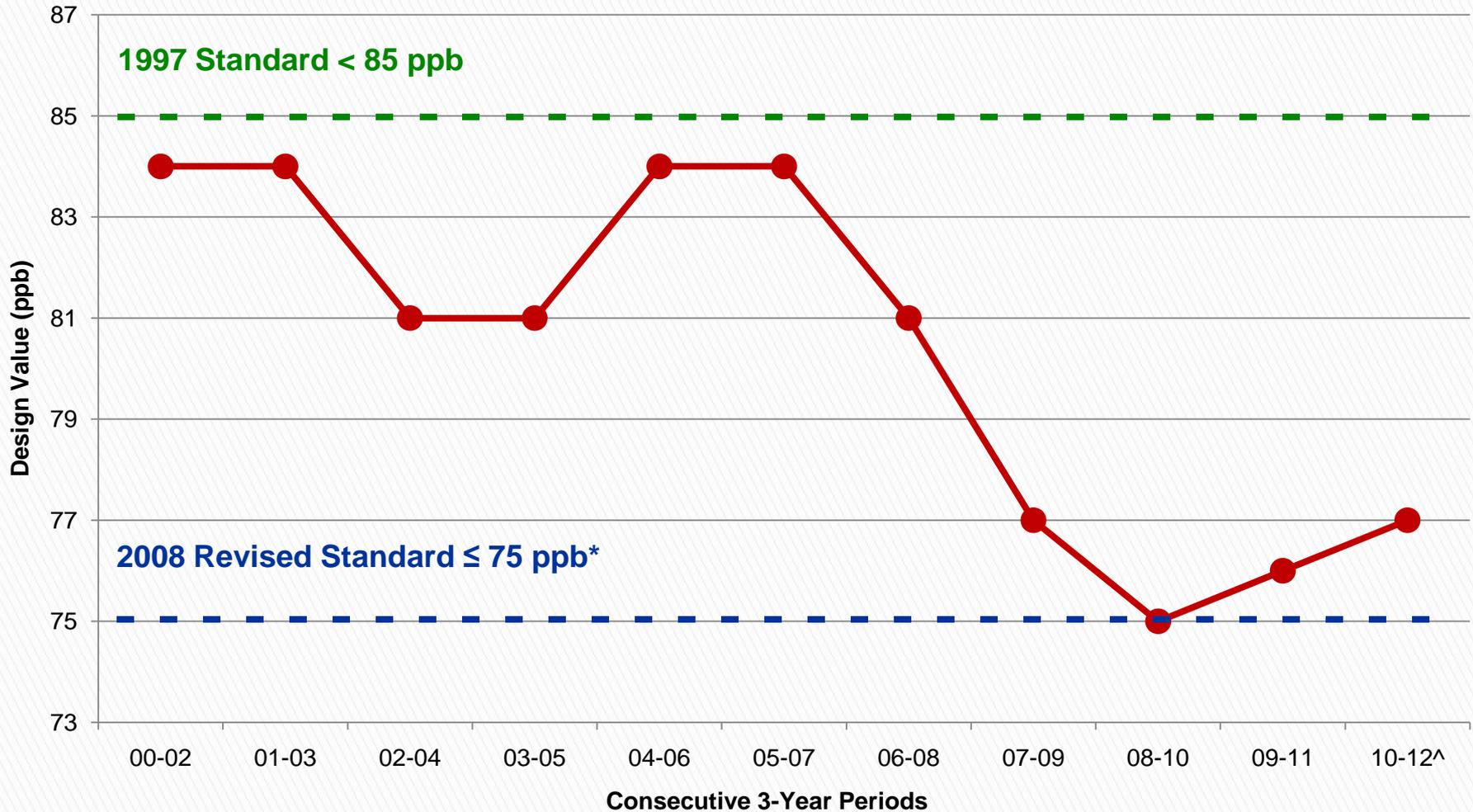
\*Not a full year of data. Current as of 08/15/2012.

According to the U.S. 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).

Source: NCTCOG Transportation Dept

# HOOD COUNTY (GRANBURY MONITOR)

## Historical 8-Hour Ozone Design Values (ppb)



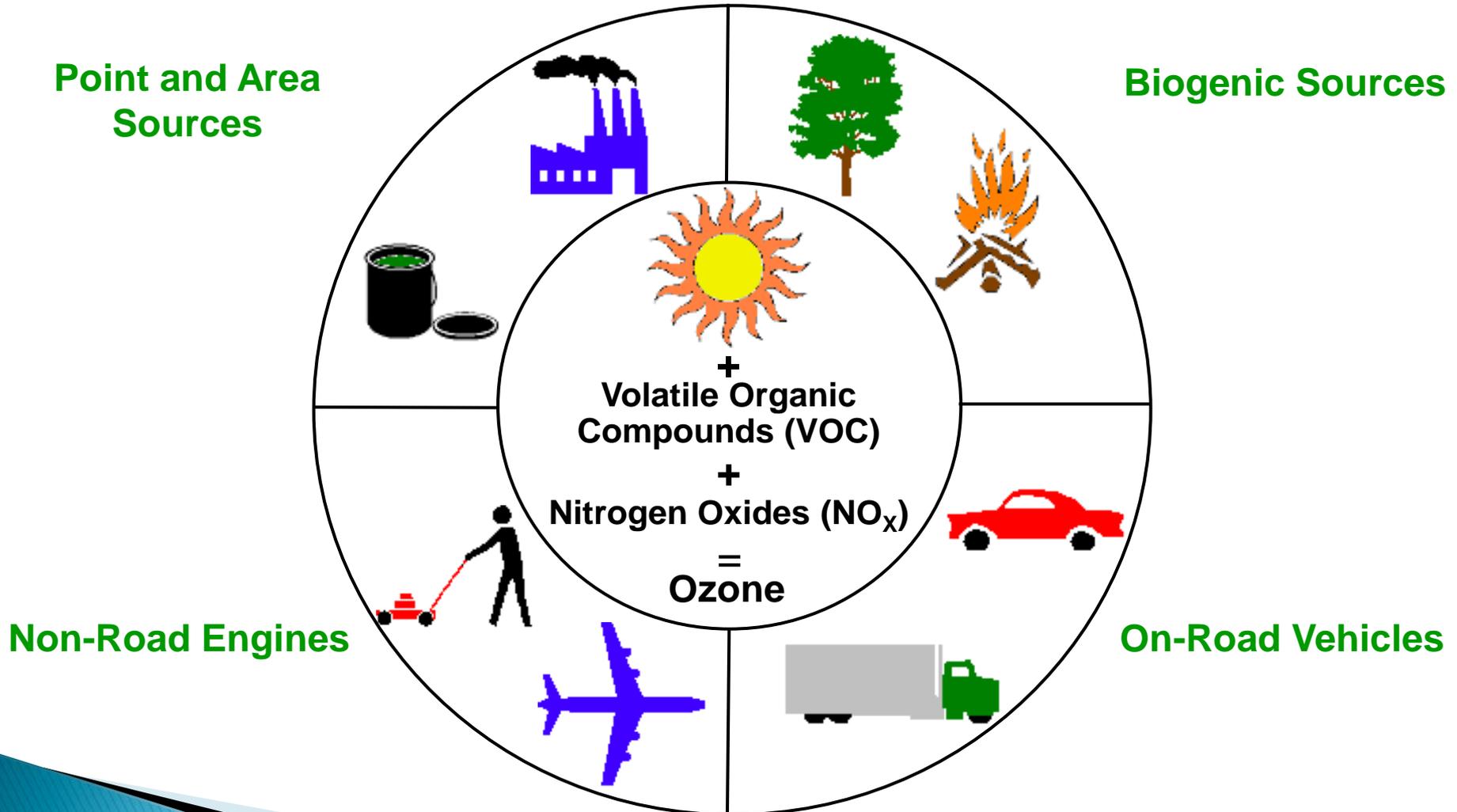
\*Attainment Goal - According to the US EPA National Ambient Air Quality Standards, attainment is reached when, at each monitor, the three-year average of the annual fourth-highest daily maximum 8-hour average ozone concentration is equal to or less than 75 parts per billion (ppb).

^Not a full year of data. Current as of 08/12/2012

Source: [http://www.tceq.state.tx.us/cgi-bin/compliance/monops/8hr\\_attainment.pl](http://www.tceq.state.tx.us/cgi-bin/compliance/monops/8hr_attainment.pl)

# HOW IS OZONE FORMED?

## Emission Source Categories

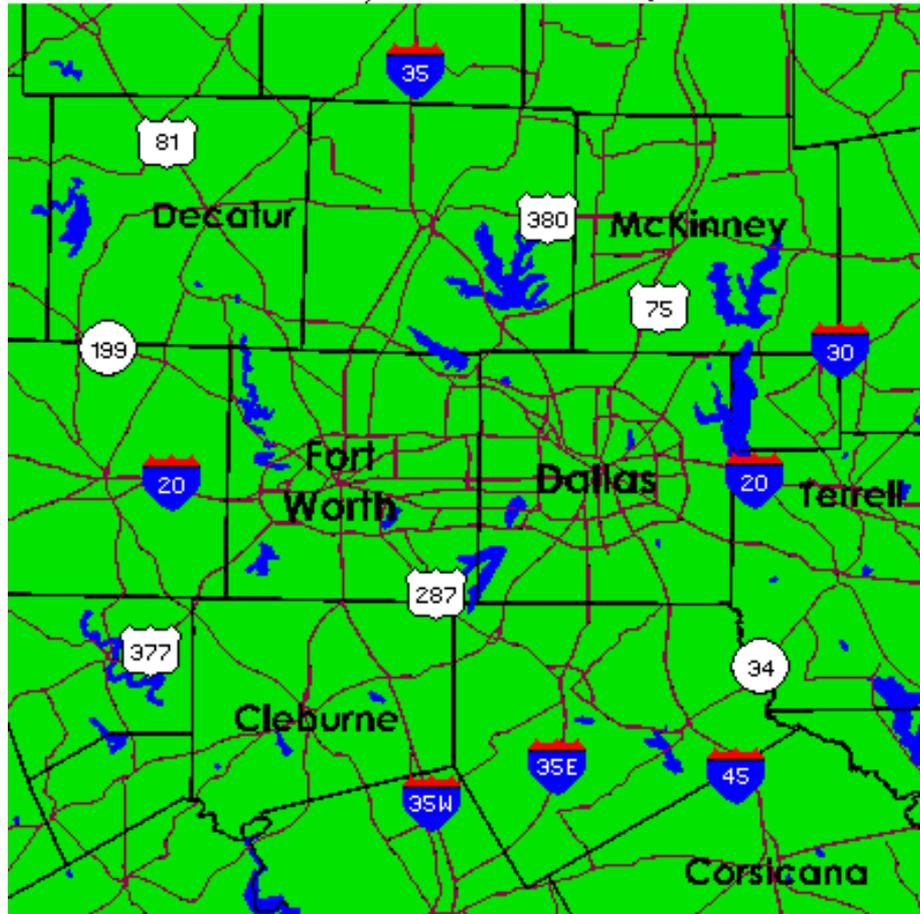


Optimum conditions for the formation of ozone include high temperatures and low winds. As a result, ozone season spans from March 31 through October 31.

# HOOD COUNTY OZONE CONCENTRATIONS

**Maximum Daily 8-Hour Average Was 88 ppb\***

North-Central Texas  
Jul 13, 2012 7 AM



\*Current as of August 12, 2012

Source: TCEQ, [www.tceq.state.tx.us/cgi-bin/compliance/monops/ozone\\_animation.pl](http://www.tceq.state.tx.us/cgi-bin/compliance/monops/ozone_animation.pl)

# CURRENT HOOD COUNTY EFFORTS

## Hood County Clean Air Coalition

**WHO: Businesses, Schools, Local Government, and Citizens**

**WHAT: Promote clean air in Hood County**

**WHY: Recognize the dangers that high ozone levels pose to community**

**HOW: Work with local, state, and national stakeholders to identify strategies and solutions**



# CURRENT HOOD COUNTY EFFORTS

## EPA Ozone Advance

### Eligibility:

Designated as “Attainment”

### Requirements:

Submit sign-up letter to EPA;

Involve stakeholders – Hood County Clean Air Coalition;

Coordinate and implement action plan including control strategy development: *Hood Should! Strategy to Protect the Environment in Hood County, TX:*

Seek voluntary action by all gas operators in the county to reduce emissions

Limit emissions to current levels from oil and gas operations

Modify oil and gas zoning regulation to protect environmental values

Convert city/county diesel fleets to natural gas

Adopt Resolutions and Ordinances to protect air quality

Enter into a partnership with TCEQ

Complete a “Path forward letter” (no later than 1 year after sign-up); and

Complete annual informal status updates.

*Emissions inventory refinement and modeling, not required, but encouraged.*

### 5 Year Commitment

Source: <http://www.epa.gov/airquality/advance/flex.html> and <http://www.granburyedc.com/cleanair.php>

# **EPA NONATTAINMENT REQUIREMENTS**

## **Minimal Requirements for Newly Designated Areas**

**Emissions Inventory & Emissions Statements**

**New Source Review/Emission Offsets**

**Basic Vehicle Inspection and Maintenance Program**

**Reasonably Available Control Technology and Measures**

**Reasonable Further Progress Emissions Reductions**

**Attainment Demonstration**

**Contingency Measures**

# REGIONAL AIR QUALITY EFFORTS

## Compliance and Enforcement Programs

### Regional Emissions Enforcement Program

Reduce Number of Fictitious/Counterfeit Inspection Certificates

Identify Stations and Inspectors Performing Improper Inspections

Conduct Covert Operations

Prosecute Those Responsible

Train Local Law Enforcement Officers

Truck Lane Restrictions

Anti-Idling Restrictions

Smoking Vehicle Statute

NCTCOG Emissions Database



### Regional Smoking Vehicle Program

Encourage “Grassroots” Citizen Identification of Emission Problems

Offer Various Reporting Methods

Online at [www.smokingvehicle.net](http://www.smokingvehicle.net)

#SMOKE (#76653) from Wireless Phone

817-704-2522 From a Landline Phone



Don't Choke, Call #SMOKE

# REGIONAL AIR QUALITY EFFORTS

## Compliance and Enforcement Programs

### Heavy-Duty Vehicle Idling Restrictions

#### Regional Implementation

RTC Endorsement of Policy

Local Jurisdiction Adoption of Ordinance/Court Order

Local Jurisdiction Entrance into North Texas Memorandum of Agreement

Local Jurisdiction Development of Enforcement Plan

#### Current Adoption Status

23 Municipalities, 4 Counties to Date

#### Regional Education and Outreach

Anti-Idling Signs

Driver Education Brochures

Idling Complaint Hotline

**(1-877-NTX-IDLE)**

Anti-idling Website

**[www.EngineOffNorthTexas.org](http://www.EngineOffNorthTexas.org)**



# REGIONAL AIR QUALITY EFFORTS

## Clean School Bus Program

### Funding Sources

Federal Congestion Mitigation and Air Quality Improvement Program Funds  
EPA/Blue Skyways Collaborative Grants  
TCEQ Supplemental Environmental Project Funds  
DFW Adopt-a-School Bus Foundation

### Grant Opportunities

5 Calls for Projects  
\$2.6+ Million Awarded to 16 Entities  
75 Replacement and Repower Projects Completed  
75 tons of NO<sub>x</sub> and 5 Tons of PM Reduced

### Outreach and Education

Best Practices  
Clean Fleet Vehicle Policy  
Resources for Fleet Managers  
*The Clean Buzz* Electronic Newsletter  
Student and Parent Educational Materials



# REGIONAL AIR QUALITY EFFORTS

## Clean Construction Specification

### Clean Construction Demonstration Project

**Voluntary Incorporation of Clean Construction Specification**

**Local Government Participation to Collect Data**

**Financial Implications and Emissions Impacts**

### Potential Future Policy

**Publicly Owned and Contracted Equipment**

**Specification for Engines and Equipment Operation**

**Incorporation into Contracting Procedures**

### Goals

**Encourage Use of Cleaner Equipment**

**Encourage Use of Existing Incentives**

### Statewide Coordination

**Goal to Ensure Consistency of Standard**



# REGIONAL AIR QUALITY EFFORTS

## Diesel Idling Reduction Program/ Regional Idling Reduction Program

### Program Goals

Reduce NO<sub>x</sub> Emissions from Extended Vehicle/Equipment Idling  
Incentivize Investment in Idle Reduction Technologies

### Funding Sources

Federal CMAQ And EPA Funds  
TCEQ Texas Emissions Reduction Plan Funds

### Grant Opportunities

3 Calls for Projects Completed  
~\$1.7 Million  
2 Infrastructure Sites  
29 On-Vehicle Idle Reduction Activities  
519.36 Tons NO<sub>x</sub> and 4.0 Tons PM Reduced  
~2.9 Million Gallons Diesel Conserved  
Currently Accepting Applications

### Geographic Focus

Dallas-Fort Worth Ozone Nonattainment Area  
Blue Skyways Collaborative Corridor



# REGIONAL AIR QUALITY EFFORTS

## Electric Vehicles North Texas

### Program Goals

- Address Private and Public Fleet Needs
- Streamline Home Recharging Infrastructure Installation
- Install Public Recharging Infrastructure Locations
- Provide Education and Training

### Stakeholder Group

- Local Governments
- Regional Transportation Authorities
- Utility Companies
- Universities
- Private and Non-Profit Entities



### Partnerships

- Center for Commercialization of Electric Technologies
- Coordination with Regional Efforts in Houston, Austin, San Antonio
- Electric Vehicles Transportation and Electricity Convergence (EV-TEC) Center
  - Joint Effort of National Science Foundation, Texas A&M University, University of Texas at Austin
- Project Get Ready, Rocky Mountain Institute

# REGIONAL AIR QUALITY EFFORTS

## Clean Fleet Vehicle Policy

**Seeks to Minimize Emissions Among Public Sector Fleet Vehicles  
Addresses Acquisitions, Operations/Maintenance, and Reporting  
Included Adoption in Evaluation of Funding Requests  
103 Adopting Entities to Date**

[www.nctcog.org/FleetPolicy](http://www.nctcog.org/FleetPolicy)

## Texas Emissions Reduction Plan (TERP) Partnership

**Promote and Support Grant Programs Offered by TCEQ  
Pursue Opportunities to Administer Third-Party Grant Programs  
\$22.8 Million Received for FY06-11  
Targeted Fleet Focus**

[www.nctcog.org/TERP](http://www.nctcog.org/TERP)



# REGIONAL AIR QUALITY EFFORTS

## Air North Texas Campaign



**Air Quality Public Relations Task Force Formed to Encourage Public Participation and Support Key Elements in the State Implementation Plan and Other Air Quality Improvement Strategies**

**Partnering Entities Include, But Are Not Limited to Local, City, Government, and Non-Profit Organizations**

**Efforts Targeted to the General Public Include, But are Not Limited to:**

- **Regional Air Quality Branding Campaign Implementation**
- **Regional Partner Coordination**
- **Public Education Collateral Development and Creation**
- **Graphic, Educational, and Information Services Support to Local Governments**



# REGIONAL AIR QUALITY EFFORTS

## Air North Texas – Be Air Aware

**Become an Air North Texas Partner:**

**[www.airnorthtexas.org](http://www.airnorthtexas.org)**

**Participate in the Air North Texas *Be Air Aware* campaign by reviewing the list of clean air strategies and make your commitment to clean air.**



# **OIL AND NATURAL GAS INDUSTRY**

## **EPA Final Rules**

**Published April 17, 2012**

**Includes Regulations Pertaining To:**

**Natural Gas Well Sites**

**Natural Gas Gathering and Boosting Stations**

**Gas Processing Plants**

**Natural Gas Transmission Compressor Stations**

**The Oil Industry**

**Rules Fully Implemented by 2015**

# **NONATTAINMENT RISKS**

## **Economy**

**Limited Business Expansion**

**Relocation of New Business**

## **Public Costs**

**Automobile Emissions Test**

**Summer Blend Fuels**

## **Local Government**

**Decreased Tax Base**

**New Policies**

# CONTACT INFORMATION

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