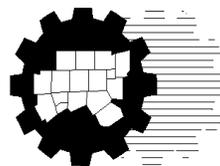


AIR QUALITY: OZONE, CLIMATE CHANGE, ENERGY

Metroplan and NCTCOG Peer Exchange

**Little Rock, AR
October 19-20, 2009**



Chris Klaus, Senior Program Manager
North Central Texas Council of Governments

AIR QUALITY: OZONE, CLIMATE CHANGE, ENERGY

Overview

Ozone:

- Latest News**
- State Implementation Plan**
- Transportation Conformity**
- Control Strategies**

Climate Change:

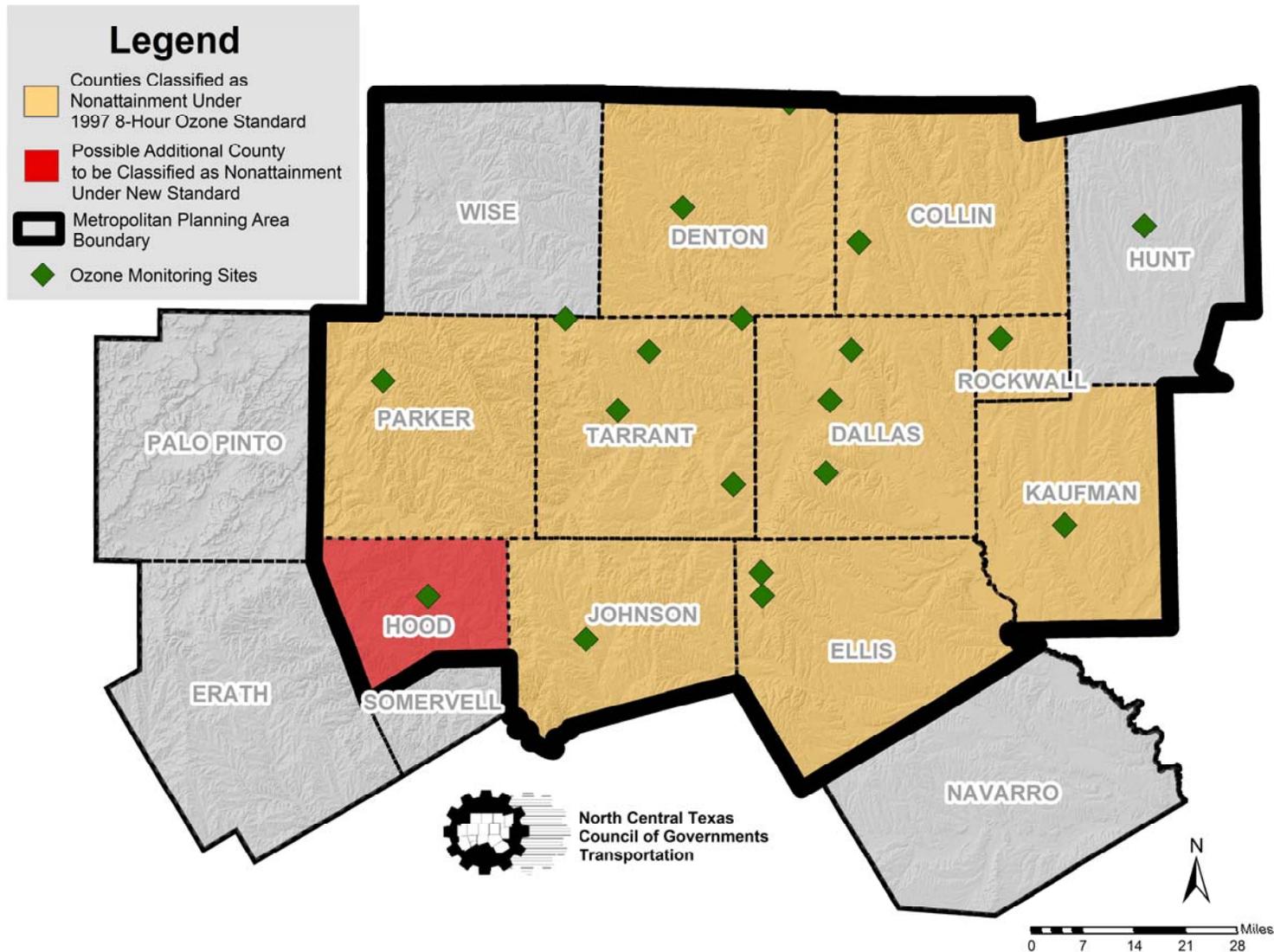
- House vs. Senate Legislation**
- Current Efforts**

Energy:

- Regional Coordination**
- Electric Vehicle & Infrastructure Initiative**

AIR QUALITY: OZONE

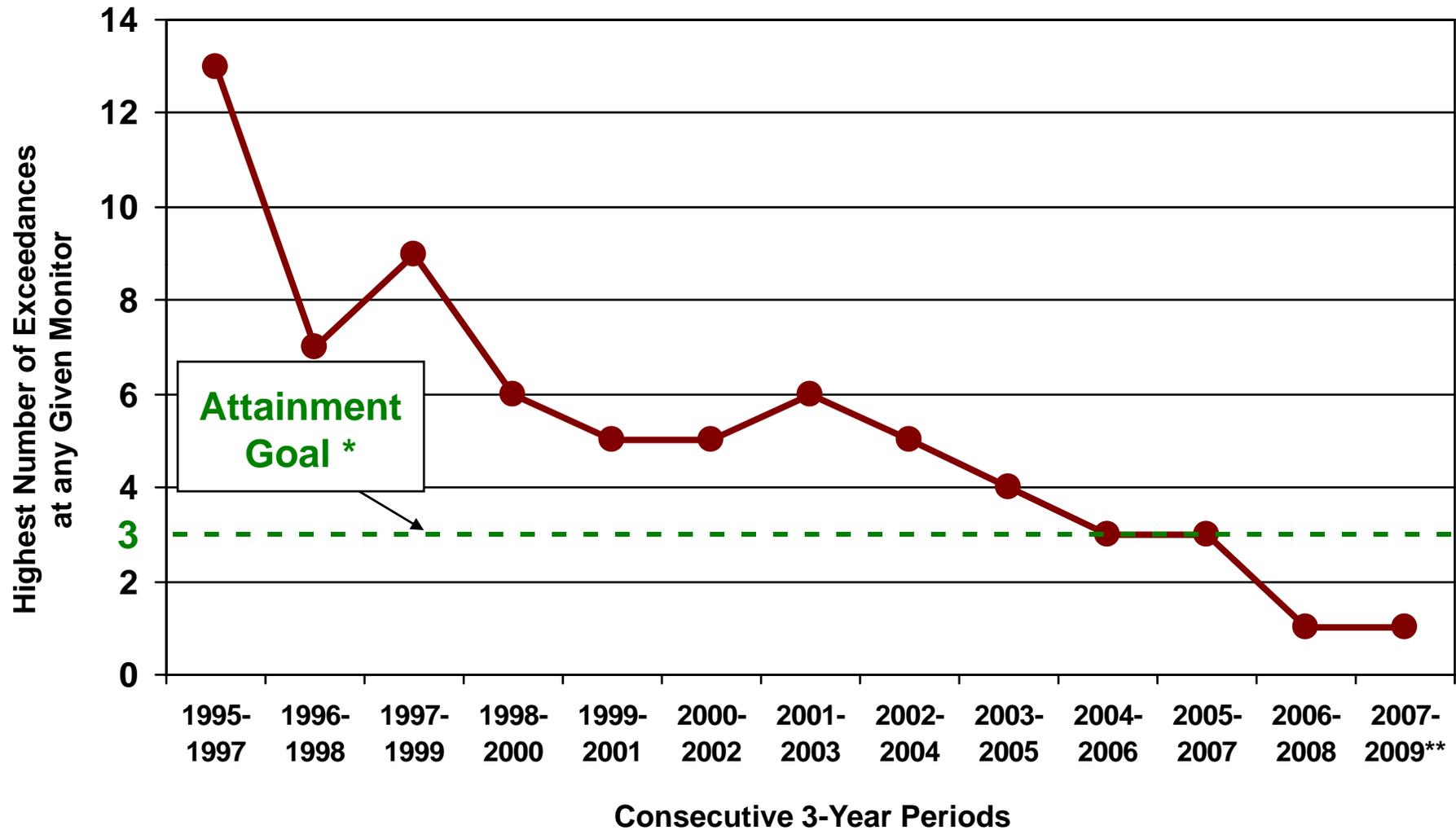
8-Hour Ozone Nonattainment Area*



* April 15, 2004 – EPA Designated Nine North Central Texas Counties Nonattainment for Ozone (8-Hour Ozone Standard)

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1-Hour Ozone Historical Trends

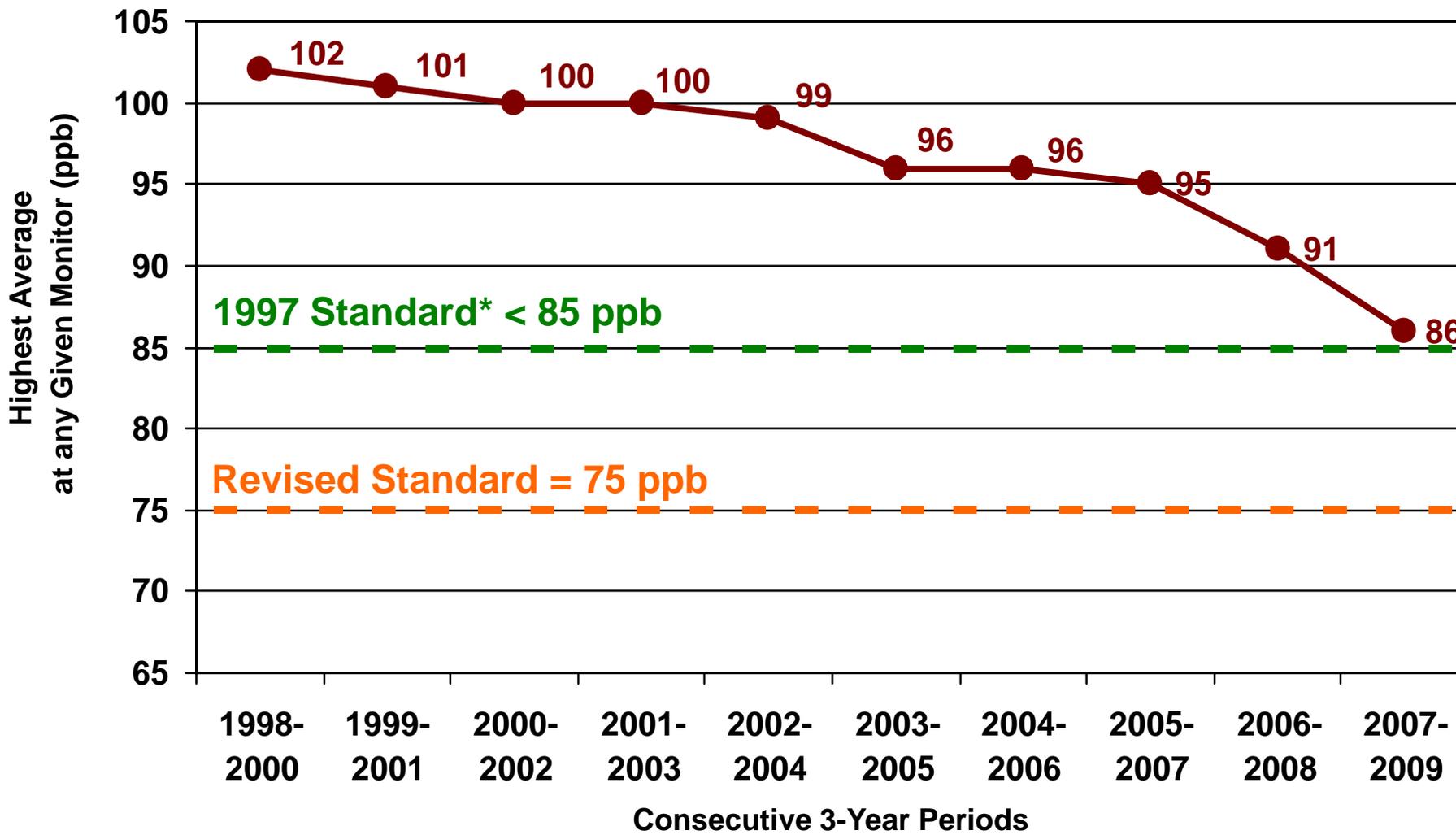


* Attainment Goal - According to the US EPA National Ambient Air Quality Standards, attainment is reached when there are no more than 3 exceedances per monitor within a consecutive 3-year period. An exceedance occurs when the ozone concentration \geq 125 parts per billion averaged over a one hour period.

** Not a full year of data. Current as of August 2009

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8-Hour Ozone Historical Trends



* 2010 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 less than 85 parts per billion (ppb).

Year 2009 not a full year of data. Current as of August 2009

Source: NCTCOG TR Dept

AIR QUALITY: OZONE

Ozone (O3) Reconsideration

Announced September 16, 2009

Reconsidering 2008 Ozone NAAQS (75 ppb)

Propose Any Needed Revisions by December 2009

Final Decision by August 2010

Final Designations by August 2011

State Implementation Plans (SIP) Due August 2013

EPA Will Propose To “Stay” The 2008 Standards

Clean Air Scientific Advisory Committee: 60 ppb – 70 ppb

AIR QUALITY: OZONE
Ozone (O3) Reconsideration
2007-2009 Design Value Impacts

Current Areas < 84 ppb

Dallas-Fort Worth, TX

Current Areas < 75 ppb

Crittenden County, AR

If NAAQS < 70 ppb

Austin, TX

San Antonio, TX

Longview, TX

Tyler, TX

El Paso, TX

Waco, TX

Little Rock, AR

Ouachita National Forest, AR

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State Implementation Plan

Stay Involved With State Environmental Agency

Scheduling, Photochemical Modeling, Policies, etc.

Develop On-Road Mobile Emission Inventories

Results Carry Over To Transportation Conformity

Evaluate Potential Control Strategies

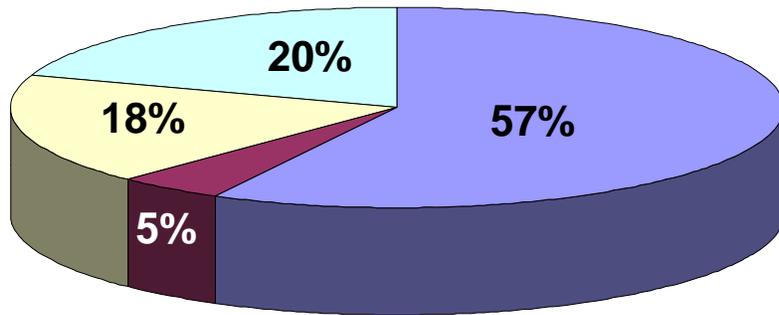
If Offering Control Strategies - **Be Conservative**

Don't Be Bullied (What's Fair Share?)

AIR QUALITY: OZONE

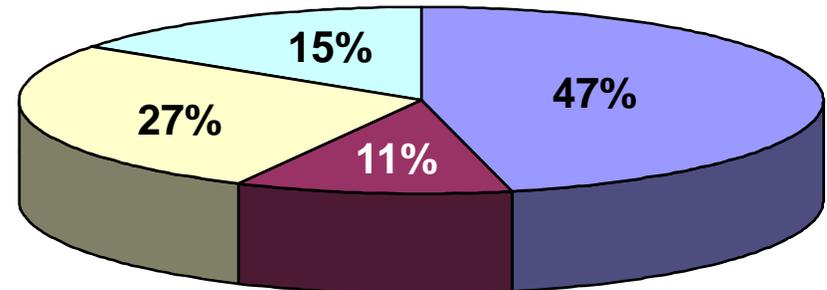
DFW Past, Present, Future NOx Projections

1999



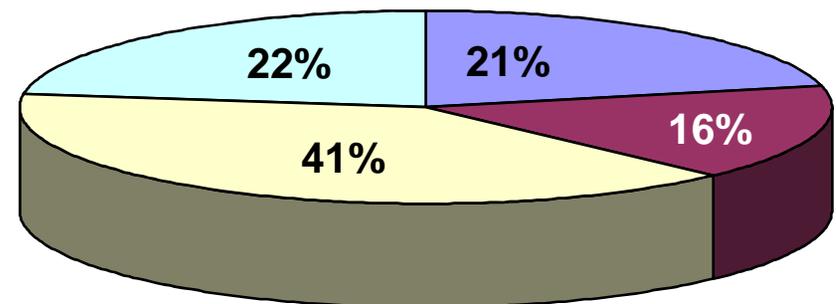
Source: TCEQ; DFW SIP, pg. B-5

2009

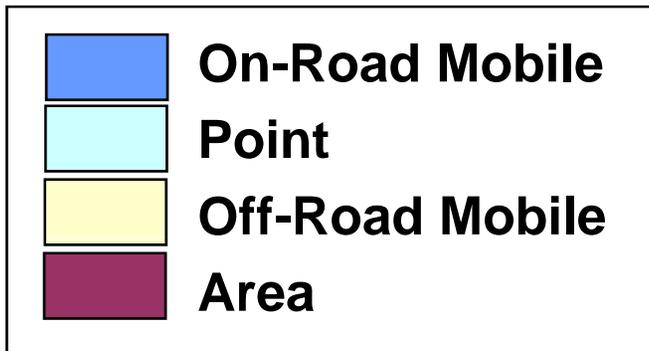


Source: TCEQ; DFW SIP, pg. B-7

2019



Source: NCTCOG Forecast



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Transportation Conformity

When?

MTP or TIP Amendment or Update

At Least Every 4 Years

18 Months Following SIP MVEB Adequacy

Who?

FHWA, FTA, EPA-Region 6, TxDOT, TCEQ, MPO

How?

Pre-Analysis Consensus/Data Collection

Technical Analysis

Public Involvement

State/Federal Review

AIR QUALITY: OZONE

Transportation Conformity

Pre-Analysis Consensus/Data Collection

Detailed Project Info From Local Partners

Multiple Roadway Analysis Years

Review Transportation Project Commitments

Developing MOBILE/MOVES Input Files

Consultation Agreement of Planning Assumptions

Challenges:

All Participants Taking Process Seriously

Process Starts Almost One Year In Advance

Recommendations Continually Changing

Coordination & Communication of All Participants

Project Submittal Deadlines Often Missed

AIR QUALITY: OZONE

Transportation Conformity

Technical Analysis

Run Regional Travel Demand Model

Run Air Quality Model

Summarize Results

Produce Documentation

TCM Substitution (if necessary)

Challenges:

Step Most Likely To Be Shortened

(i.e., data collection runs long, analysis begins late, public meetings scheduled months in advance)

Little Time To Make Significant Changes, If Needed

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Transportation Conformity

Public Involvement

Multiple Sets of Public Meetings

Orientation

Draft Results

Final Results

Challenges:

Ensuring Documentation is Complete

Adverse Comments

Communication With All Counties

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Control Strategy Emphasis Areas

High-Emitting Vehicles

Engine Cold Starts

Hard Accelerations

Excessive Idling

Diesel Engines

High Vehicle Speeds

Low Vehicle Speeds

Vehicle Miles Traveled

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Programs Minimizing Transportation Impacts



Don't Choke, Call #SMOKE



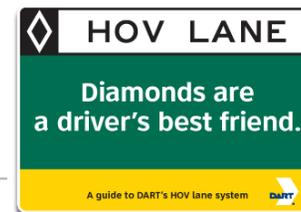
northcentral.texas.clean.school.bus.program



BLUE SKYWAYS COLLABORATIVE



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AIR QUALITY: CLIMATE CHANGE

Legislation, Regulations and Recent Developments

American Clean Energy and Security Act of 2009 – H.R. 2454

Waxman-Markey Bill Passed House On June 26, 2009

3% GHG Reductions From 2005 Levels In 2012

17% GHG Reductions From 2005 Levels In 2020

42% GHG Reductions From 2005 Levels In 2030

83% GHG Reductions From 2005 Levels In 2050

Clean Energy Jobs and American Power Act – S. 1733

Kerry-Boxer Bill Introduced September 30, 2009

3% GHG Reductions From 2005 Levels In 2012

20% GHG Reductions From 2005 Levels In 2020

42% GHG Reductions From 2005 Levels In 2030

83% GHG Reductions From 2005 Levels In 2050

AIR QUALITY: CLIMATE CHANGE

Legislation, Regulations and Recent Developments

Climate Scientists Interested In An 80% Reduction In GHG Emissions Below A 1990 Baseline by 2050

California:

Reduce to 1990 levels by 2020

“80in50”: 80% reduction in emission relative to 1990 level by 2050

AIR QUALITY: CLIMATE CHANGE

Legislation, Regulations and Recent Developments

H.R. 2454: Not later than **1** year after promulgation of final regulations

S. 1733: Not later than **2** years after promulgation of final regulations

MPO's shall **develop** surface transportation-related GHG emissions **reduction targets, as well as strategies** to meet such targets, as part of the transportation planning process

MPO's shall, within the plan, **demonstrate progress** in stabilizing and reducing transportation-related GHG emissions

Lists GHG emission reduction requirements and strategies

AIR QUALITY: CLIMATE CHANGE

Current Efforts

Starting Carbon Footprint Evaluation/Partnerships

Conducting Emission Inventories – Regional and Local

Quantifying GHG Emissions For All Control Strategies (Information)

Integrating GHG Emissions/Strategies Into The Next Long Range Plan

Proceeding Without State Support

Participating In NCHRP 20-24(64): Implications of Performance Standards, Conformity-Style Approaches, and Other Mechanisms for Assessing Greenhouse Gas (GHG) Reduction Strategies and Integrating GHG Objectives into Transportation Decision Making

AIR QUALITY: ENERGY

Regional Energy Efficiency & Emissions Reduction Initiatives Roundtable

Quarterly Forum to **Share Knowledge** on Energy Efficiency and Air Quality Emissions Reduction Measures

Opportunity to **Explore New Ideas** and to Discuss Implementation of Various Strategies Including Successes, Challenges, and Lessons Learned

Typical Attendees: Cities, Counties, Airports, Independent School Districts, Universities, State Agencies, Federal Agencies, and Private Companies

<http://www.nctcog.org/trans/committees/reri/index.asp>

AIR QUALITY: ENERGY

City of Denton “Green” Fire Station No. 7

Gold LEED Certification

- First Building in Denton
- First Fire Station in Texas

**30-35% Less Energy Use than
Traditional Buildings**

**\$3.4 Million-Worth of Recycled
Construction Materials**

12 Geothermal Heat Pumps

High-Efficiency Lighting

**Operable Windows in Bunk
Rooms**



Photo: www.texasarchitect.org

AIR QUALITY: ENERGY

DFWIA Energy Efficiency Measures

LEED and EnergyStar for
Equipment, HVAC, Plumbing
Fixtures, Materials

Energy Efficient Data Centers and IT
Systems

Terminal Lighting and Traffic Signal
Retrofits

Dynamic, Efficient Parking Signs

Continuous Commissioning
Projects

Testing and Deployment of New
Technologies

Incorporation of Renewable Fuels



Energy consumption
avoided since 1975 is
estimated at over 25
trillion BTU (~5 million
barrels of oil)

AIR QUALITY: ENERGY

Electrification Initiative

Goals

**Launch Market for Electric Vehicles
Infrastructure Development and Installation**

Regional Coalition

**Electric Utility Companies
Regional Governments
Local Businesses
EV Industry Leaders**



Statewide Coordination

Corridor Recharging Infrastructure

Kick-Off Workshop

**October 29, 2009, from 8:30 am to 5 pm
NCTCOG Offices, Arlington, TX**

**Contact Jenny Danieau at 817-608-2342 or jdanieau@nctcog.org
<http://www.nctcog.org/trans/clean/vehicles/news/EVNT/rsvp.asp>**

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Shared Material

State Implementation Plan

Control Strategy Review Document

Transportation Conformity

TCM Substitution Process

Pre-Analysis Consensus Template

Texas Documentation Structure

Partner Review Timeline/Process

Latest NCTCOG Final Document (August 2009)

Control Strategies

Methodology Handbook

Quantification Template

Outreach/Educational Material

AIR QUALITY: OZONE, CLIMATE CHANGE, ENERGY

For More Information

Please Visit

www.nctcog.org/trans/air