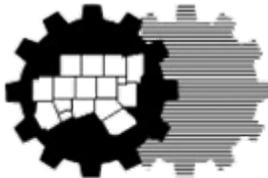


ECONOMIC IMPACTS ASSOCIATED WITH AIR QUALITY

Regions As The Building Blocks of The Global Economy

May 28, 2008



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North Central Texas Council of Governments**

ECONOMIC IMPACTS ASSOCIATED WITH AIR QUALITY

Outline

National Ambient Air Quality Standards

Health Effects

State Implementation Plan

Local Transportation Conformity

Legislative Initiatives

Resources

1990 CLEAN AIR ACT

National Ambient Air Quality Standards (NAAQS)

Six Criteria Pollutants

Carbon Monoxide (CO)

Lead (Pb)

Nitrogen Oxides (NO_x)

Ozone (O₃)

Particulate Matter (PM₁₀ & PM_{2.5})

Sulfur Dioxide (SO₂)



FEDERAL OZONE STANDARDS

Dallas-Fort Worth Nonattainment Area

Clean Air Act Amendments Of 1990

1-Hour Ozone Standard

Four North Central Texas Counties



8-Hour Ozone Standard
Nine North Central Texas Counties
2004 Designation As Moderate

8-Hour Ozone Standard
Attainment Date: June 15, 2010

FEDERAL OZONE STANDARDS

Major Stationary Sources Offset Ratios

<u>Classification</u>	<u>Offset (at least)</u>
Marginal	1.1:1
Moderate	1.15:1
Serious	1.2:1
Severe	1.3:1
Extreme	1.5:1

EPA REVISED OZONE STANDARD

Implementation Timeline

<u>Event</u>	<u>Tentative Dates</u>
EPA Proposes More Stringent 8-Hour Standard	Jun. 20, 2007
Four Public Hearings On Proposal:	
Los Angeles And Philadelphia	Aug. 30, 2007
Chicago And Houston	Sept. 5, 2007
EPA Issues Final Standards	Mar. 12, 2008
State Designation Recommendations To EPA (Based On 2006-2008 data)	Mar. 12, 2009
Final Designations By EPA	Mar. 12, 2010
Effective Date Of Designations	2010
State Implementation Plans Due To EPA	2013
Attainment Deadline (Depending On Severity)	2013-2030

EPA REVISED OZONE STANDARD

Health Benefits and Cost Estimates

The new standard (75 ppb) will prevent, in 2020:

380 Cases Of Chronic Bronchitis

890 Fatal Heart Attacks

1,000 Cases Of Acute Bronchitis

1,900 Hospital And Emergency Room Visits

6,100 Cases Of Aggravated Asthma

11,600 Cases Of Upper/Lower Respiratory Symptoms

243,000 Days Of Missed Work Or School

750,000 Days Of Restricted Activity

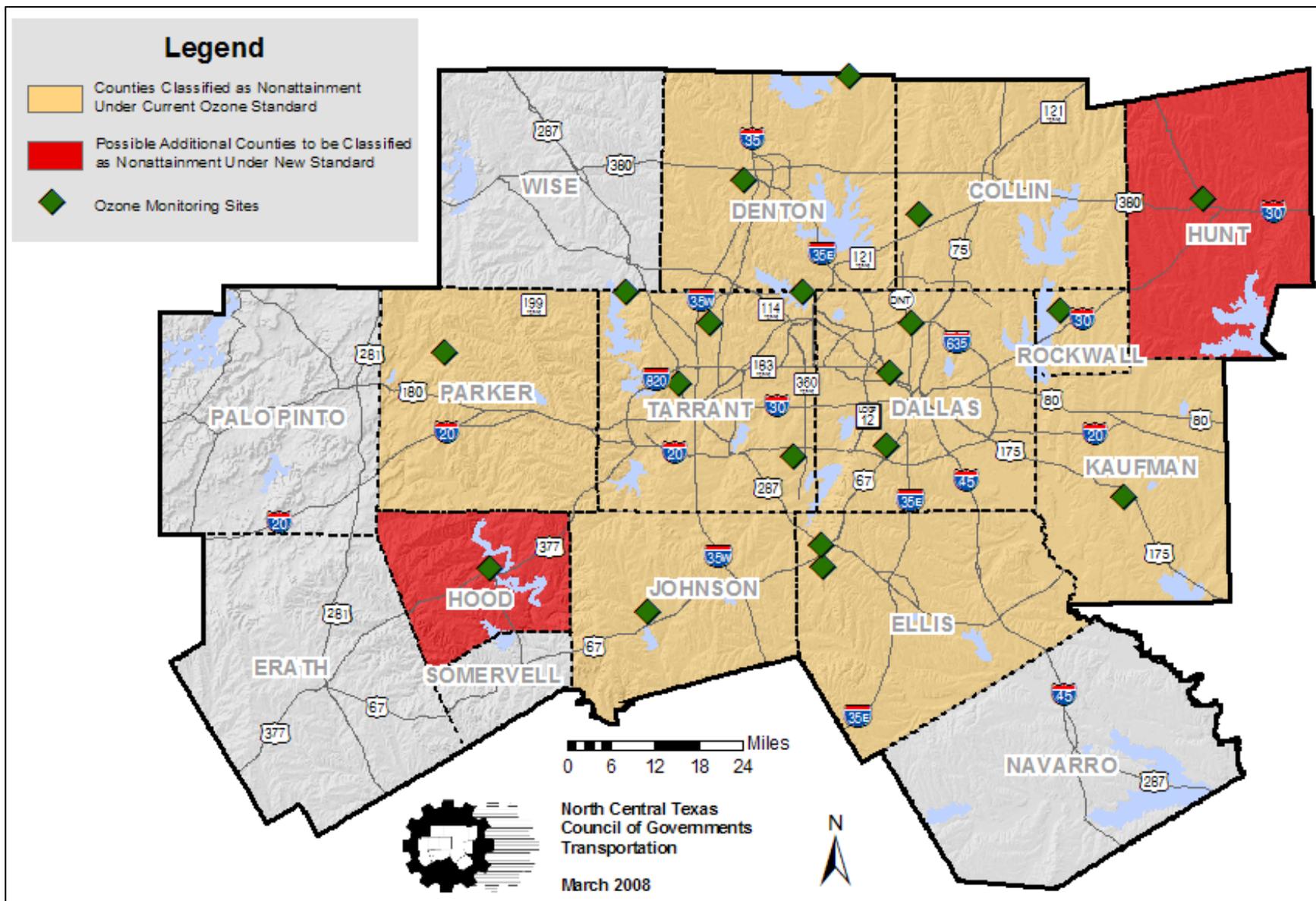
Benefits are likely greater than costs:

Estimated Health Benefits In 2020 Is \$2-\$19 billion

Estimated Cost Of Implementation Is \$7.6-\$8.5 billion

EPA REVISED OZONE STANDARD

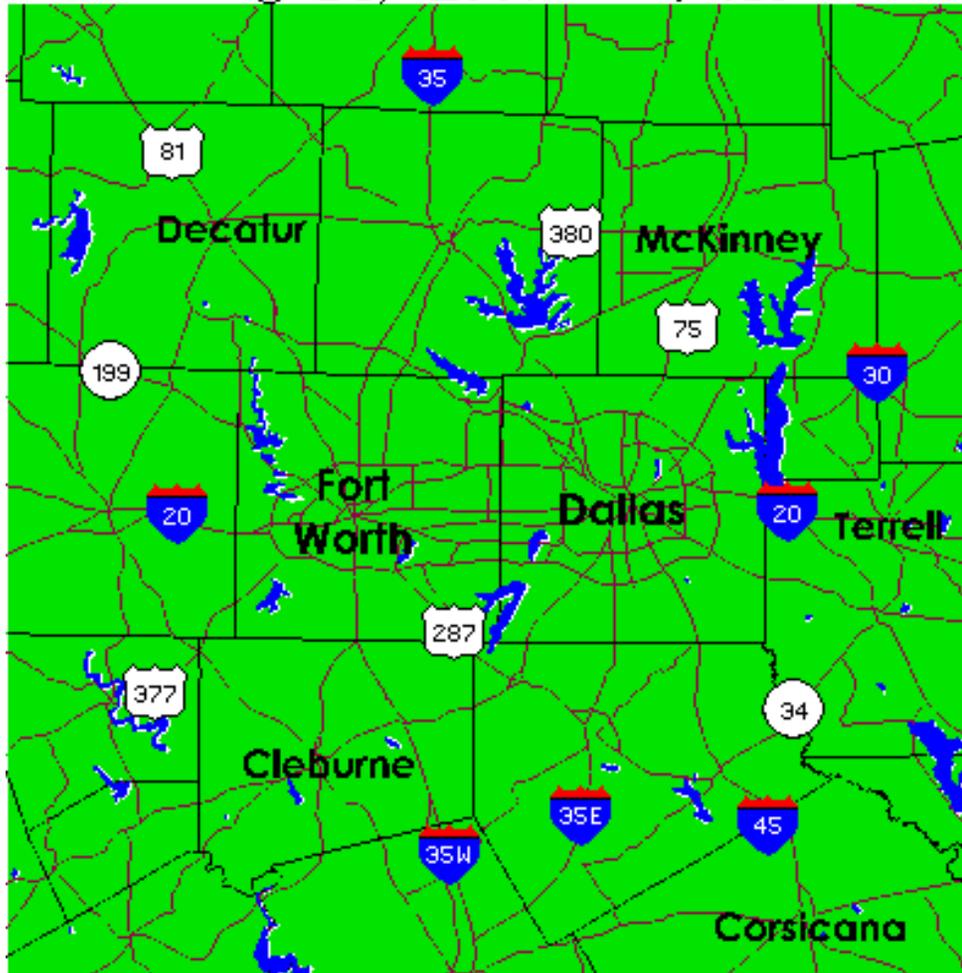
8-Hour Ozone Nonattainment Area



HIGHEST OZONE LEVEL IN 2007

Maximum Daily 8-Hour Average = 121 ppb

North-Central Texas
Aug 14, 2007 7 AM



Air Quality

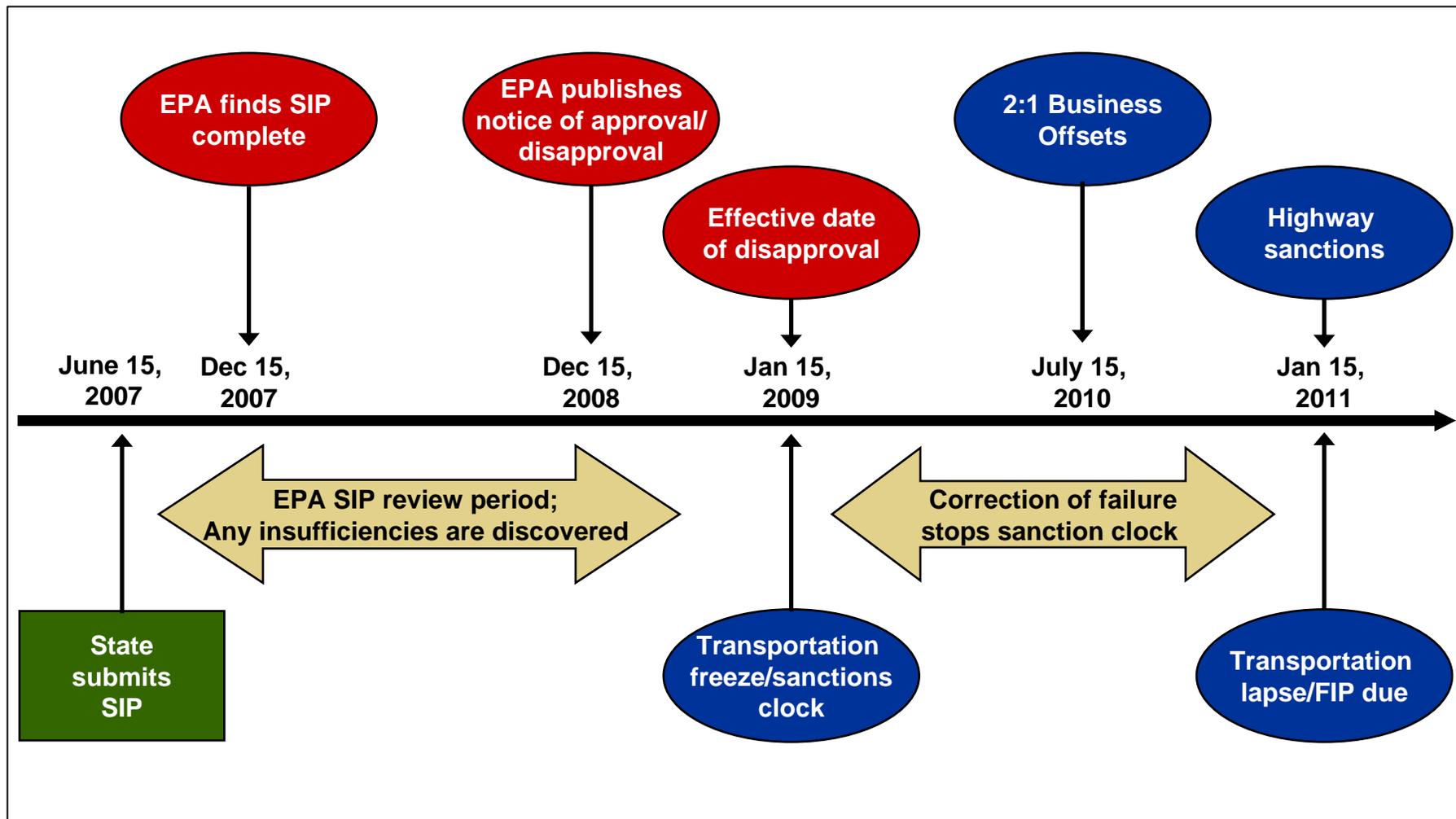


Scale: Yellow = 80-99 ppb, Orange = 100-124 ppb, Red = 125-149 ppb (Forecasted 8-hour average ozone concentration based on a 1-hour average).

Source: NCTCOG/TCEQ - www.tceq.state.tx.us/cgi-bin/compliance/monops/ozone_animation.pl

STATE IMPLEMENTATION PLAN

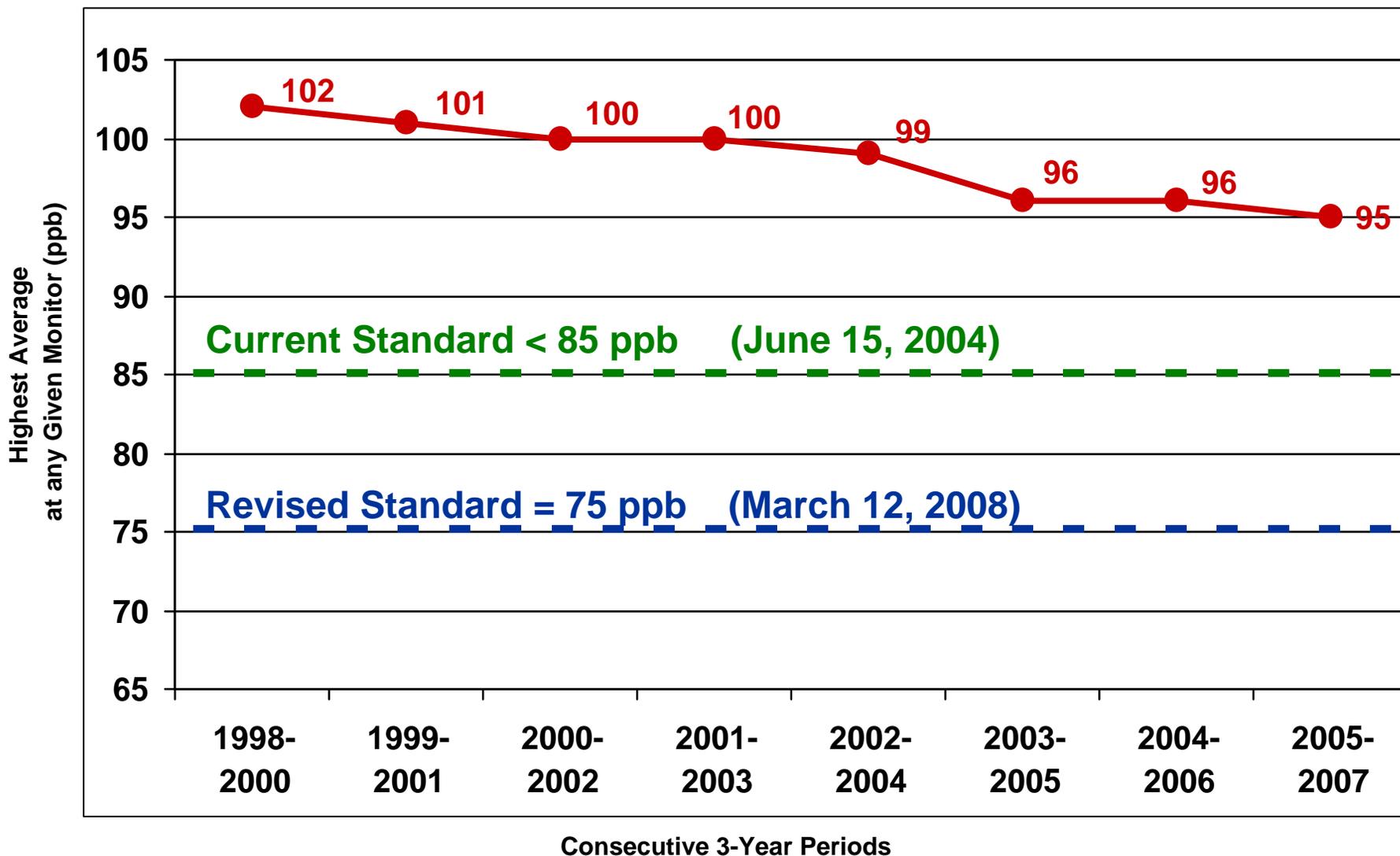
Dallas-Fort Worth Timeline



For sanction provisions, see CAA Section 179

8-HOUR OZONE HISTORICAL TRENDS*

DFW Nonattainment Area

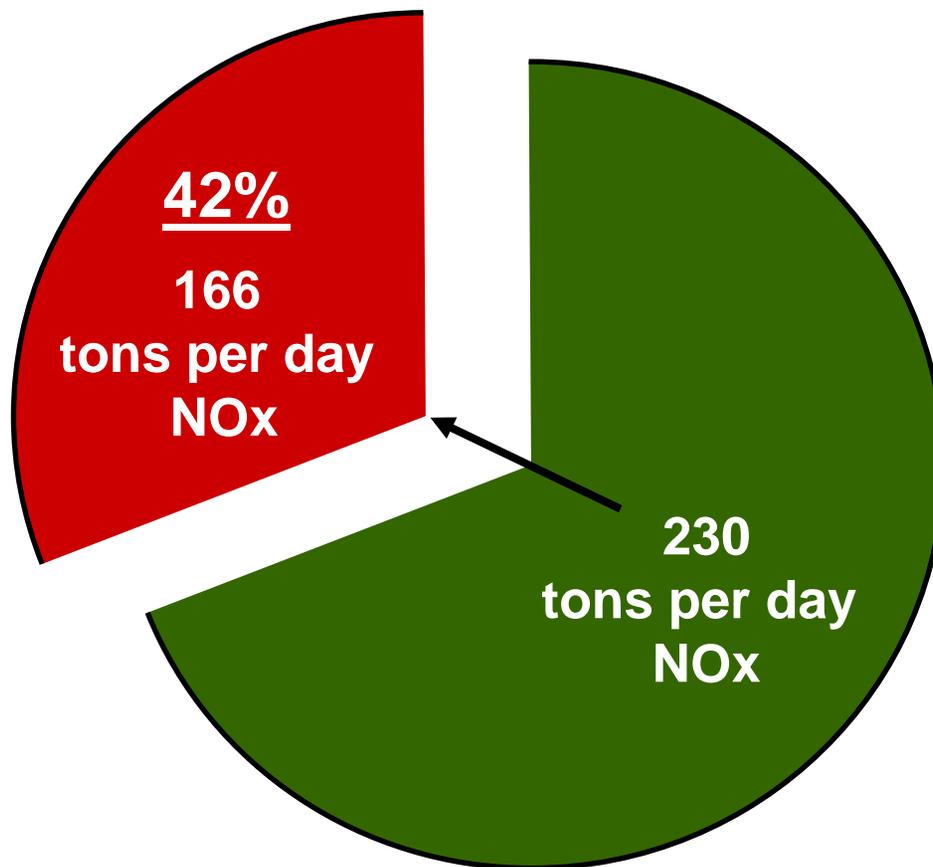


* Current Attainment Goal - According to the US EPA National Ambient Air Quality Standards, attainment is reached when, at each monitor, the three-year average of the annual fourth-highest daily maximum 8-hour average ozone concentration is less than 85 parts per billion (ppb).

DFW NONATTAINMENT AREA

2009 Nitrogen Oxide (NOx) Reduction Required

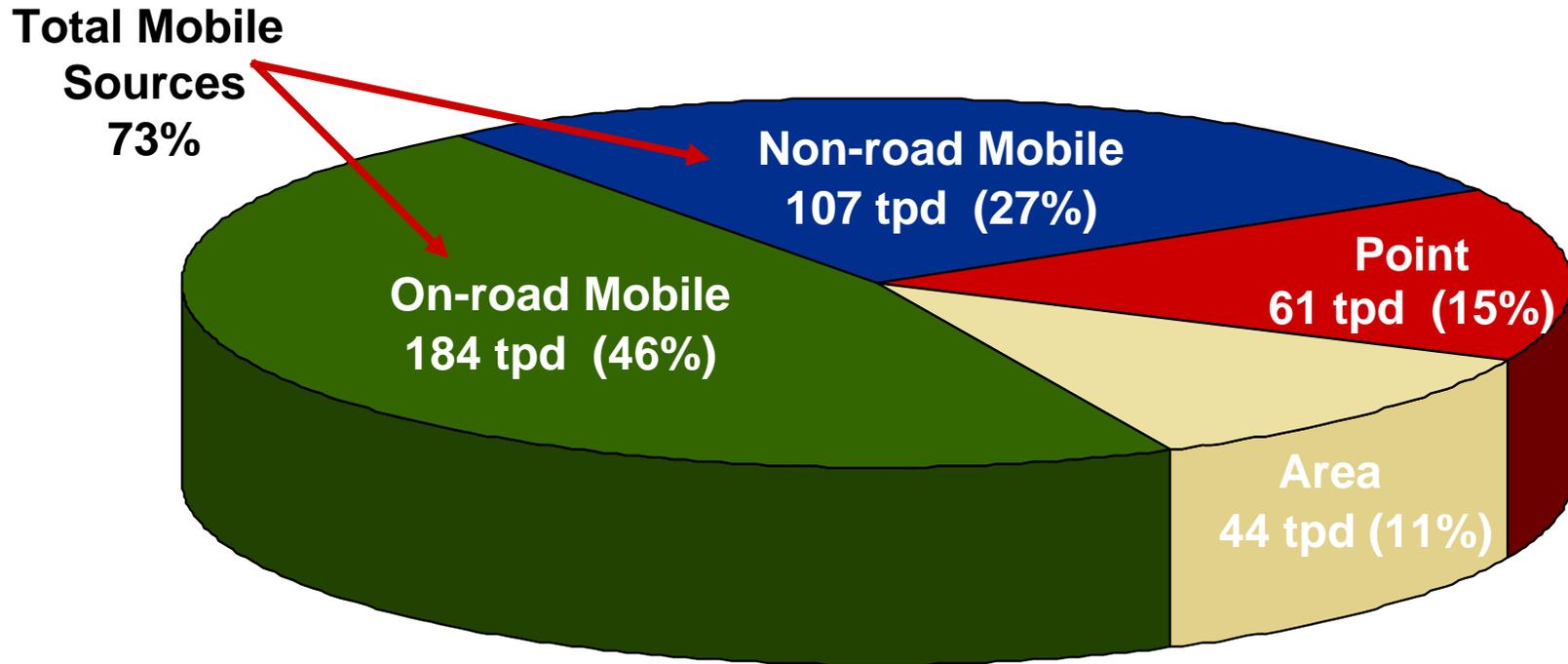
Total Anthropogenic NOx = 396 Tons Per Day



DFW NONATTAINMENT AREA

2009 Nitrogen Oxide (NO_x) Emission Inventory

Emission Source Category Estimates



Total NO_x = 396 Tons Per Day (tpd)

DFW NONATTAINMENT AREA

8-Hour Ozone State Implementation Plan

State Rules

NOx Benefit

DFW Major Source Rule	-----
- Industrial, Commercial & Institutional Resources	8.88 tpd
- Electric Generating Utility Sources	0.40 tpd
- Cement Kilns	9.69 tpd
DFW Minor Source Rules	2.90 tpd
East Texas Combustion Source Rule	22.40 tpd
Subtotal	44.27 tpd

DFW NONATTAINMENT AREA

8-Hour Ozone State Implementation Plan

Transportation Control Measures

NOx Benefit

Bicycle/Pedestrian Projects	0.01 tpd
Grade Separation Projects	0.18 tpd
HOV/Managed Lane Projects	0.79 tpd
Intersection Improvement Projects	0.15 tpd
Park And Ride Improvement Projects	0.04 tpd
Rail Transit Projects	0.28 tpd
Vanpool Projects	0.08 tpd
Subtotal	1.53 tpd

DFW NONATTAINMENT AREA

8-Hour Ozone State Implementation Plan

<u>Voluntary Mobile Emission Reductions</u>	<u>NOx Benefit</u>
Clean Vehicle	0.24 tpd
Employee Trip Reduction	0.43 tpd
Locally Enforced Idling Restriction	0.62 tpd
Diesel Freight Idling Reduction	0.33 tpd
SmartWay Transport Demonstration Project	0.002 tpd
Policy For Construction Equipment	0.06 tpd
Aviation Efficiencies	0.95 tpd
Subtotal	2.63 tpd

DFW NONATTAINMENT AREA

8-Hour Ozone State Implementation Plan

Other State and Local Programs

NOx Benefit

Energy Efficiency	2.12 tpd
Texas Emissions Reduction Plan*	-----
Vehicle Repair And Replacement	-----
Clean School Bus Program	-----
Stationary Diesel/Dual Fuel Engines	-----
Locomotive And Marine Compression Engines	-----
Coatings/Consumer Products VOC Reductions	-----
Subtotal	2.12 tpd

*Only control measure that produces significant short-term results

DFW NONATTAINMENT AREA

8-Hour Ozone Concentrations

2007 Regional Design Value	96 ppb
2009 Attainment Goal	85 ppb
2009 Modeled Design Value	88.7 ppb
Weight Of Evidence Requirement	<u>87.9 ppb</u>
Difference	0.8 ppb

(1 ppb ozone ~ 20 tons NOx)

DFW NONATTAINMENT AREA

Transportation Conformity Analysis

Conducted On Local Level

Evaluates Latest Transportation System Updates

Compares Against State Air Quality Plan

Ensures System Is Consistent With Air Quality Goals

If Successful, Transportation System Can Proceed

If Fail, More Transportation System Modifications

Impacts \$400 Million In Transportation Projects

DFW NONATTAINMENT AREA

Transportation System Implementation Delays

Higher Costs Of Construction

Unnecessary Levels Of Traffic Congestion

Higher Frequency Of Traffic Conflicts/Incidents

Increased Frustration

Lost Worker Productivity

Higher Sick, Out Of Office Occurrences

Time Is Money

81st TEXAS LEGISLATURE

Air Quality Categories

Texas Emissions Reduction Plan (TERP)

Locally Enforced Idling Restriction

Vehicle Engine Standards Consistent With California

Differential Speed Limits

**Low-Income Vehicle Repair Assistance, Retrofit,
And Accelerated Vehicle Retirement Program (LIRAP)**

Inspection and Maintenance (I&M) Program

Others Being Developed by Special Interest Groups

ECONOMIC IMPACTS ASSOCIATED WITH AIR QUALITY

Resources

North Texas Clean Air Coalition (Business)

North Central Texas Council Of Governments

Texas Commission Of Environmental Quality

Environmental Protection Agency

Air North Texas

Try Parking It

Drive Clean Across Texas

American Lung Association

ECONOMIC IMPACTS ASSOCIATED WITH AIR QUALITY

Questions?