



# ***Update on the National Ambient Air Quality Standards and the State Implementation Plan for Texas***

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# National Ambient Air Quality Standards and the State Implementation Plan in Texas

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- National Ambient Air Quality Standards
- Texas State Implementation Plan
- Status of Texas Air Quality
- Upcoming SIP Activity



# National Ambient Air Quality Standards



# National Ambient Air Quality Standards

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- Required by the Federal Clean Air Act (FCAA)
- The Environmental Protection Agency (EPA) sets these health-based standards for clean air, called National Ambient Air Quality Standards (NAAQS), for six criteria air pollutants:
  - Ground-Level Ozone ( $O_3$ )
  - Particulate Matter (PM)
  - Nitrogen Dioxide ( $NO_2$ )
  - Sulfur Dioxide ( $SO_2$ )
  - Carbon Monoxide (CO)
  - Lead (Pb)



# National Ambient Air Quality Standards

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- EPA is required to review these standards every five years. For more information on the review process go to the [EPA's NAAQS review Web page](http://epa.gov/ttn/naaqs/review.html).  
*(http://epa.gov/ttn/naaqs/review.html)*
- Requires that states with counties failing to meet the NAAQS (nonattainment) develop and submit to the EPA State Implementation Plan (SIP) revisions.



# Current NAAQS

Pollutant	Level	Averaging Time
Carbon Monoxide (CO)	9 ppm	8-Hour
Carbon Monoxide (CO)	35 ppm	1-Hour
Lead (Pb)	0.15 µg/m <sup>3</sup>	Rolling 3-Month Average
Lead (Pb)	1.5 µg/m <sup>3</sup>	Quarterly Average
Nitrogen Dioxide (NO <sub>2</sub> )	0.053 ppm	Annual (Arithmetic Mean)
Nitrogen Dioxide (NO <sub>2</sub> )	0.100 ppm	1-Hour
Particulate Matter (PM <sub>10</sub> )	150 µg/m <sup>3</sup>	24-Hour
Particulate Matter (PM <sub>2.5</sub> )	15.0 µg/m <sup>3</sup>	Annual (Arithmetic Mean)
Particulate Matter (PM <sub>2.5</sub> )	35 µg/m <sup>3</sup>	24-Hour
Ozone (O <sub>3</sub> )	0.075 ppm (2008)*	8-Hour
Ozone (O <sub>3</sub> )	0.08 ppm (1997)	8-Hour
Sulfur Dioxide (SO <sub>2</sub> )	75 ppb	1-Hour

Note: Secondary NAAQS are the same as the primary NAAQS for all pollutants EXCEPT SO<sub>2</sub>, which has a secondary NAAQS for 0.5 ppm over 3 hours. More information can be found at <http://epa.gov/air/criteria.html>

\* This standard is currently under review and designations have not been made on this standard.



# NAAQS Review Schedule

Criteria Pollutant	Proposed Rule	Final Rule
Lead* (Pb)	May 20, 2008	November 12, 2008
Nitrogen Dioxide (NO <sub>2</sub> )	July 15, 2009	February 9, 2010
Sulfur Dioxide (SO <sub>2</sub> )	December 8, 2009	June 22, 2010
Reconsidered 2008 Ozone (O <sub>3</sub> )	January 19, 2010	July 29, 2011
Carbon Monoxide (CO)	February 11, 2011	August 12, 2011
Nitrogen Oxides (NO <sub>x</sub> ) and Sulfur Oxides (SO <sub>x</sub> ) Secondary Standard	July 12, 2011	March 20, 2012
Particulate Matter (PM)	Summer 2011	--
Ozone	June 2012	March 2013

\*Dates are from previous lead revisions, the next revision schedule is yet to be determined.



# Design Values



# Calculating Eight-Hour Ozone Design Values

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- Find the fourth highest eight-hour daily peak at each monitor.
- Average those fourth highest values from the most recent three years, remember to do this for each monitor. This is the design value for each monitor.
- The design value for a county or Metropolitan Statistical Area (MSA) is the maximum design value from all of the monitors located within that county or MSA.
- A design value is valid if each year in the calculation has at least 75% valid data, or if a design value with incomplete data is above the NAAQS.



# Calculating Eight-Hour Ozone Design Values: An Example

1. Monitor A has three years of complete data.

	2008	2009	2010
Maximum Peak Eight-Hour Ozone	124	112	104
2 <sup>nd</sup> Highest Peak Eight-Hour Ozone	105	100	101
3 <sup>rd</sup> Highest Peak Eight Hour Ozone	98	92	96
4 <sup>th</sup> Highest Peak Eight-Hour Ozone	95	88	86

Note: All units in parts per billion (ppb)

2. Take the 4th highest peak-hour ozone from each year and find the average.

$$\frac{95 + 88 + 86}{3} = 89.667$$

3. Now truncate the average so there are no decimal places and you have the design value.

$$89.667 = 89$$

Note: Proposed revisions to the 2008 Ozone NAAQS calls for rounding in the last step rather than truncating



# Ozone Design Value Rounding Conventions

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- Note that the 1997 eight hour ozone standard is reported to two decimal places.
  - 0.084 ppm → 0.08 ppm → **ATTAINMENT**
  - 0.085 ppm → 0.09 ppm → **NONATTAINMENT**
  - Note that the standard is in parts per million (ppm), if using parts per billion (ppb), **84 ppb would be attainment** and **85 ppb would be nonattainment**.
- The 2008 ozone standard is reported to three decimal places so rounding is no longer necessary. Anything past three decimal places is still truncated.



# Ozone Design Value Rounding Conventions

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- Example – For the 2008 ozone standard of 0.075 ppm:
  - 0.075 ppm → ATTAINMENT
  - 0.076 ppm → NONATTAINMENT
  - If using ppb, 75 ppb would be attainment and 76 ppb would be nonattainment.



# Reconsideration of the 2008 Ozone NAAQS

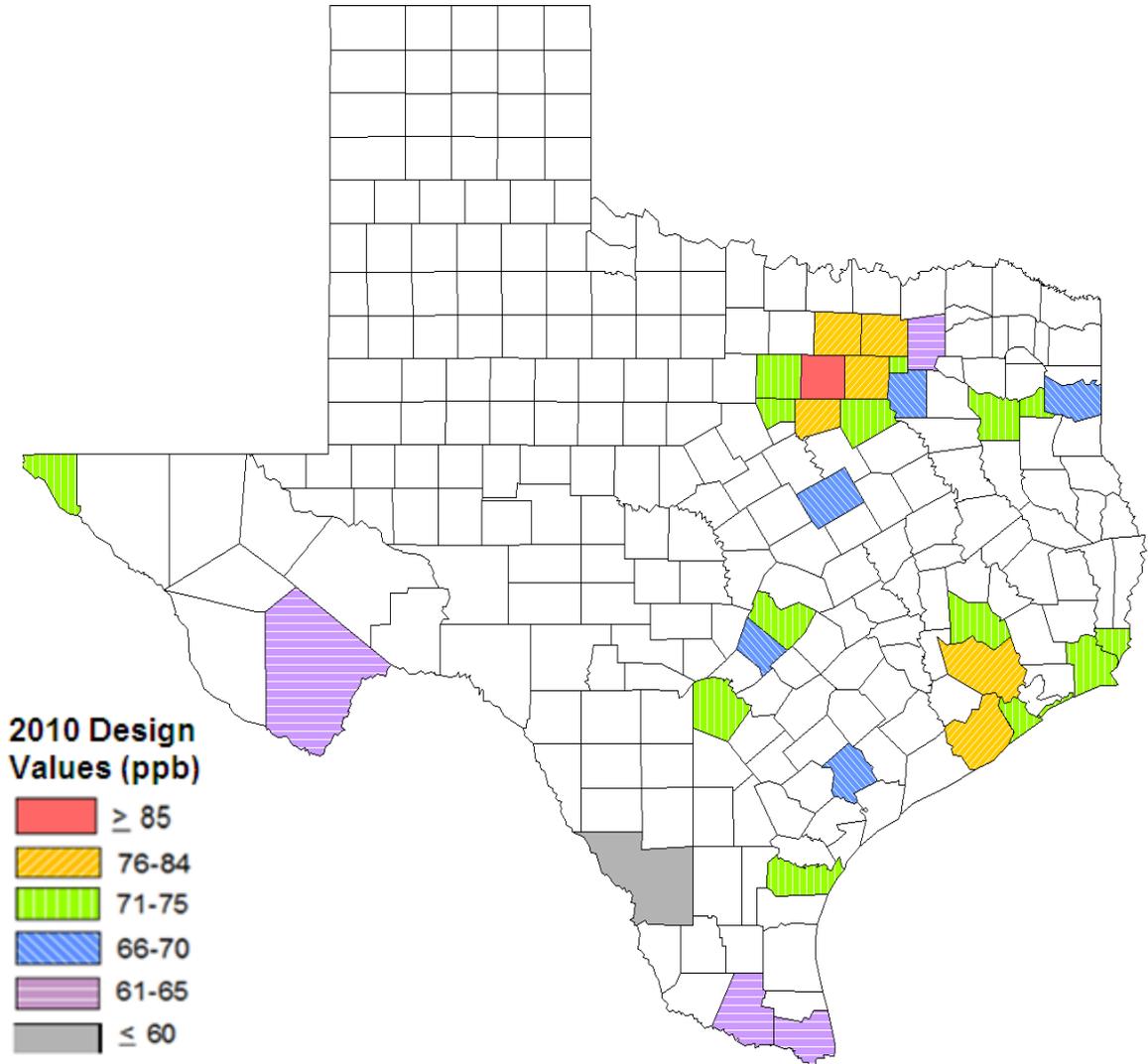
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- EPA proposed a reconsideration of the 2008 Primary Eight-Hour Ozone NAAQS
  - 2008 Eight-Hour Ozone NAAQS: 0.075 ppm
  - Reconsidered NAAQS: Range between 0.070 ppm and 0.060 ppm
  - EPA is proposing to drop truncation in the last step of design value calculations and use rounding instead .
- EPA is also reconsidering the 2008 secondary ozone NAAQS.
  - 2008 Secondary Eight-Hour Ozone NAAQS: 0.075 ppm (identical to the primary)
  - Reconsidered secondary NAAQS: A cumulative standard called W126 in the range of 7 to 15 ppm-hours

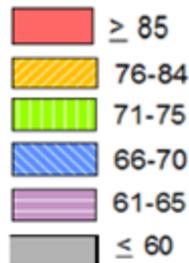


# 2010\* Ozone Design Values

Region	County	2010 8hr Ozone DV (ppb)*
DFW	Tarrant	86
HGB	Brazoria	84
HGB	Harris	83
DFW	Denton	80
DFW	Johnson	80
DFW	Dallas	78
DFW	Collin	77
SAN	Bexar	75
HGB	Galveston	75
DFW	Hood	75
DFW	Parker	75
BPA	Jefferson	74
ARR	Travis	74
DFW	Rockwall	74
NETX	Gregg	74
NETX	Smith	73
DFW	Ellis	72
ELP	El Paso	71
HGB	Montgomery	71
CC	Nueces	71
BPA	Orange	71
WACO	McLennan	70
NETX	Harrison	69
ARR	Hays	67
DFW	Kaufman	67
VIC	Victoria	66
LRGV	Cameron	65
BIG BEND	Brewster	65**
DFW	Hunt	64
MEM	Hidalgo	61
LAR	Webb	57



**2010 Design Values (ppb)**



\*2010 design values based on average of 2008 through 2010 data. Design values as of February 23, 2011 and are subject to change. \*\*Brewster County monitor is maintained by the US National Park Service, the design value is reported in EPA AQS.



# What is W126?

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- Biologically based
- W126 uses sigmoidal weighting function to assign a weight to each hourly ozone concentration.
  - Focuses on higher ozone concentrations by giving them more weight, but still retains the lower and mid-level concentrations.
- W126 is a cumulative exposure index.
  - Designed to account for cumulative effects of repeated ozone exposures on sensitive vegetation during months with the highest ozone concentrations.



# Calculating the W126 Index

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- Take hourly ozone concentrations from 8:00 a.m. to 8:00 p.m. (12 hours).
- Weight each hour based on concentration, with higher concentrations receiving more weight:

$$O_3 * \left( \frac{1}{1 + 4403e^{-126*O_3}} \right)$$

- Sum the weight from each hour to get a daily W126 value.



# Calculating the W126 Index

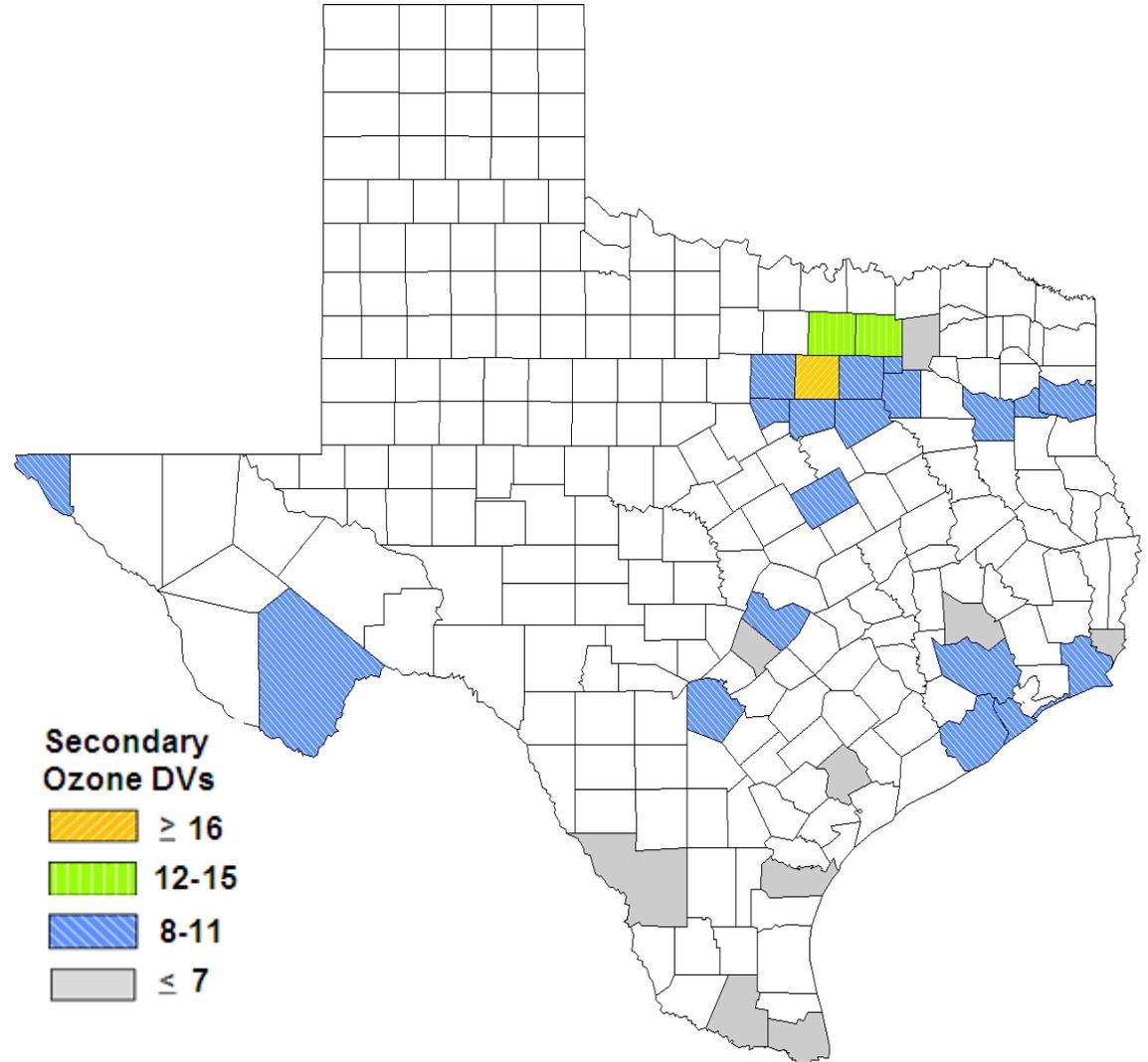
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- For each month in the ozone season, sum the daily W126 values to get a monthly value adjusted for data completeness.
- The three-year average of the consecutive three-month period with the highest W126 value is the secondary design value for the site.



# 2010\* Secondary Ozone W126 Design Values

Region	County	W126 DV (ppm-hrs)*
DFW	Tarrant	16
DFW	Denton	14
DFW	Colin	13
DFW	Dallas	11
ELP	El Paso	11
DFW	Parker	11
DFW	Johnson	10
DFW	Rockwall	10
HGB	Harris	10
HGB	Brazoria	10
SAN	Bexar	10
BIG BEND	Brewster	9**
BPA	Jefferson	9
NETX	Smith	9
NETX	Gregg	9
DFW	Kaufman	8
DFW	Hood	8
DFW	Ellis	8
WACO	McLennan	8
ARR	Travis	8
NETX	Harrison	8
HGB	Galveston	8
CC	Nueces	7
HGB	Montgomery	7
BPA	Orange	7
DFW	Hunt	6
ARR	Hays	5
VIC	Victoria	5
LRGV	Cameron	4
MEM	Hidalgo	3
LAR	Webb	2



\*2010 design values based on average of 2008 through 2010 data. Design values as of February 23, 2011 and are subject to change. \*\*Brewster County monitor is maintained by the US National Park Service, the design value is reported in EPA AQS.



# 2010 Sulfur Dioxide Design Value

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- In June 2010, the EPA revoked the 24-hour and Annual SO<sub>2</sub> NAAQS, replacing them both with a new one-hour SO<sub>2</sub> NAAQS of 75 ppb.
- Calculating Sulfur Dioxide Design Value
  - Three-year average of the 99<sup>th</sup> percentile one-hour SO<sub>2</sub> concentration
  - Requires at least 75% valid data; however, if incomplete data give a higher design value, that design value is used



# 2010\* Sulfur Dioxide Design Value

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- Sulfur Dioxide Design Values in Texas
  - Jefferson County 2010 design value: 77ppb
  - All other regulatory monitors in Texas meet the one-hour SO<sub>2</sub> NAAQS

\*2010 design values based on average of 2008 through 2010 data. Design values as of January 20, 2011 and are subject to change.



# 2010\* Particulate Matter (PM<sub>2.5</sub>) Design Values

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- Calculating PM<sub>2.5</sub> Design Values
  - Annual: Three-year average of the weighted annual mean PM<sub>2.5</sub>
    - The weighted annual mean is the mean of the 4 quarters
    - Requires at least 75% valid data per quarter
  - 24-Hour: Three-year average of the 98<sup>th</sup> percentile 24-hour PM<sub>2.5</sub> concentration
    - Requires at least 75% valid data per quarter
- PM<sub>2.5</sub> Design Values in Texas
  - Annual: All areas are below the annual PM<sub>2.5</sub> NAAQS of 15.0 micrograms per cubic meter (µg/m<sup>3</sup>)
  - 24-Hour: All areas are below the 24-hour PM<sub>2.5</sub> NAAQS of 35 µg/m<sup>3</sup>

\* 2010 data have not been certified and design values are subject to change.



# 2010\* Particulate Matter (PM<sub>10</sub>) Design Values

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- 24-Hour: An exceedance-based standard that cannot be exceeded more than once per year on average over a three-year period
- Because some PM<sub>10</sub> monitors do not sample every day, the number of expected exceedances is used.
- PM<sub>10</sub> Design Values in Texas
  - 24-Hour:
    - El Paso County 2010\* design value = 2.4 expected exceedances
    - All other counties in Texas meet the PM<sub>10</sub> 24-Hour NAAQS

\* 2010 data have not been certified and design values are subject to change. Concentrations flagged by the States, Tribes, and local agencies as exceptional events (e.g. high winds, wildfires, volcanic eruptions, construction) and concurred by the associated EPA Regional Office are not included in the calculation of these design values.



# 2010\* Nitrogen Dioxide Design Values

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- Calculating Nitrogen Dioxide Design Values
  - Annual: Annual average of the one-hour NO<sub>2</sub> concentrations
  - One-Hour: Three-year average of the 98<sup>th</sup> percentile one-hour NO<sub>2</sub> concentration
- Nitrogen Dioxide Design Values in Texas
  - Annual: All areas are below annual NO<sub>2</sub> NAAQS of 0.053 ppm
  - One-Hour: All areas are below one-hour NO<sub>2</sub> NAAQS of 0.100 ppm

\* 2010 data have not been certified and design values are subject to change.



# 2010\* Lead Design Values

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- Calculating Lead Design Values
  - 1978 lead NAAQS (Quarterly Average): Maximum quarterly average over a given year
  - 2008 lead NAAQS (Three-Month Average): Maximum rolling three-month average over a three-year period
- Lead Design Values in Texas
  - 1978 NAAQS: All areas are below Lead NAAQS of 1.5  $\mu\text{g}/\text{m}^3$ .
  - 2008 NAAQS:
    - Collin County 2010\* design value = 0.71  $\mu\text{g}/\text{m}^3$
    - All other areas are below the Lead NAAQS of 0.15  $\mu\text{g}/\text{m}^3$ .

\* 2010 data have not been certified and design values are subject to change.



# 2010\* Carbon Monoxide Design Values

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- Calculating Carbon Monoxide Design Values
  - One-Hour: Highest annual second maximum one-hour CO concentration
  - Eight-Hour: Highest annual second maximum non-overlapping eight-hour CO concentration
  - On January 28, 2011, the EPA proposed to retain the existing CO NAAQS.
- Carbon Monoxide Design Values in Texas
  - One-Hour: All areas are below the one-hour CO NAAQS of 35 ppm.
  - Eight-Hour: All areas are below the eight-hour CO NAAQS of 9 ppm.

\* 2010 data have not been certified and design values are subject to change



# Texas State Implementation Plan



# When is a SIP revision needed?

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- EPA revises or adds a NAAQS.
- EPA revises or adds rules.
- An area attains the standard.
- An area does not attain the standard during the specified time frame.
- An area is reclassified.



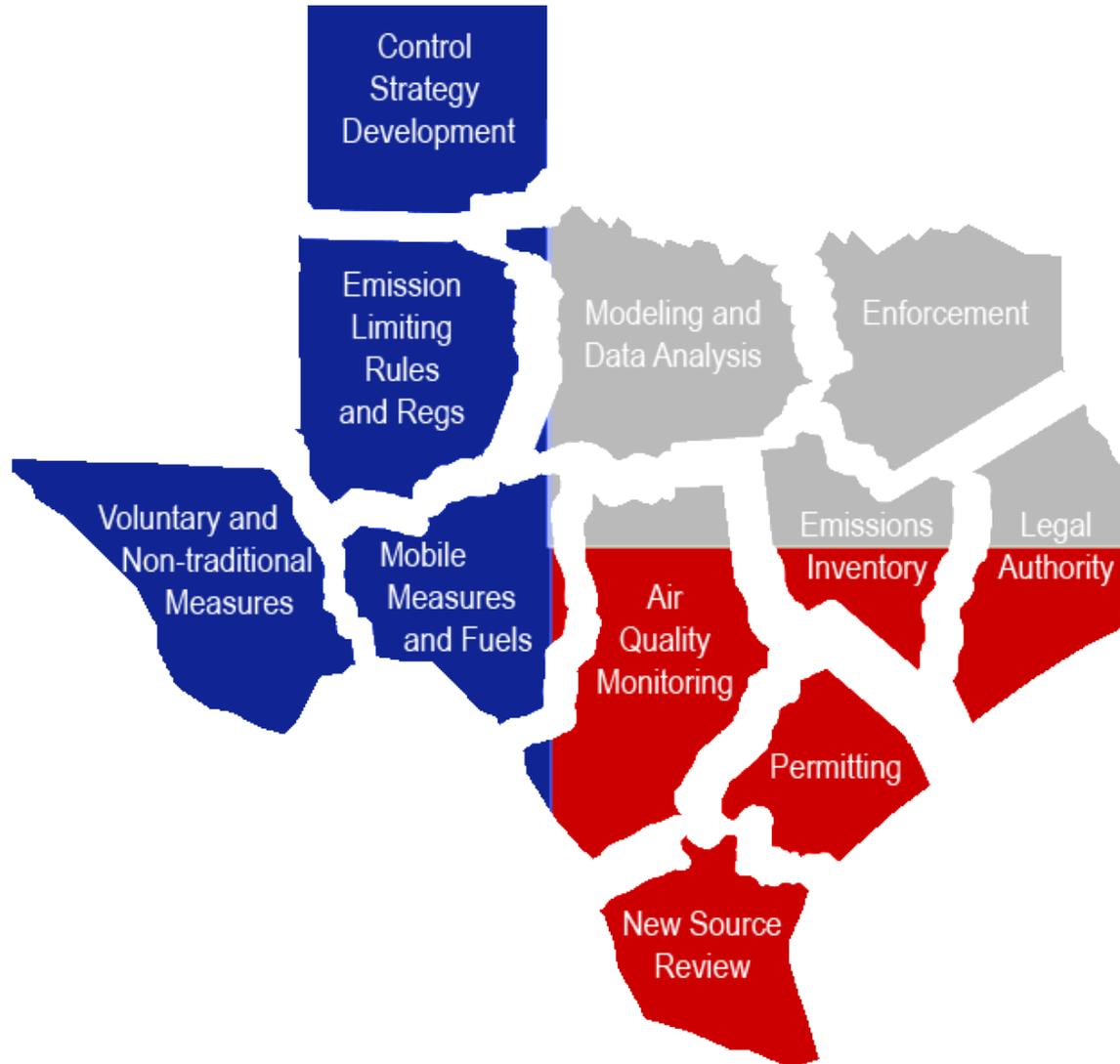
# Consequences of an Inadequate SIP

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- Federal Implementation Plan
- Federal highway funding cut-off
- Federal air permits are more difficult to obtain.
  - Sanctions may require more stringent New Source Review (NSR) offsets.



# Components of a SIP Revision





# Components of a SIP Revision

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- Monitoring Data
  - Used to determine whether an area meets the NAAQS
  - Used to analyze trends
- Emissions Inventory
  - Used to quantify sources of emissions
  - Used to evaluate potential control strategies
- Photochemical Modeling
  - Used to estimate the reductions needed to attain the NAAQS
  - Used to validate effectiveness of control strategies
- Control Measures
  - Implemented through rule revision, memorandums of agreement, ordinances, or voluntary actions



# Emissions Inventory Source Examples

- Point
  - Refineries, electric generating facilities
- Area
  - Temporary generators, paint shops, gas stations, etc.
- On-road mobile
  - Cars, trucks
- Non-road mobile
  - Construction equipment, trains, planes
- Biogenic
  - Based on estimates of vegetation type/quantity

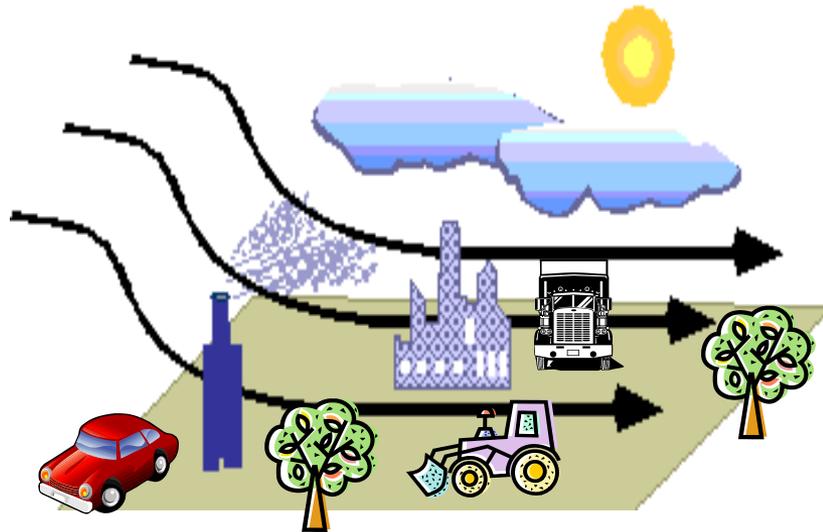


# Photochemical Modeling

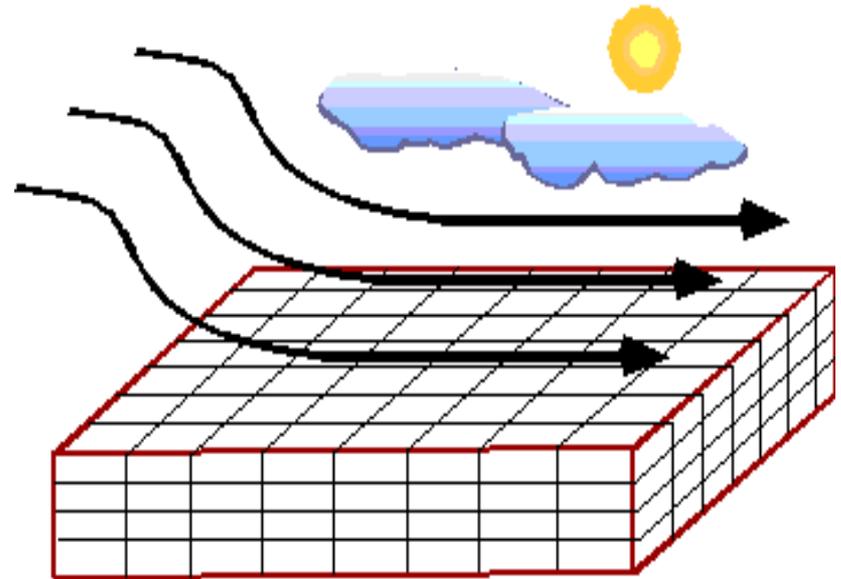
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- Computer simulation of how atmospheric chemistry and meteorological conditions interact with emissions
- Prediction tool to help determine future ambient air concentrations and the impact of potential ozone control strategies

# Photochemical Modeling



Real World Situation



Computer Grid Simulation



# Control Measures

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- Technical work helps determine what types of measures
- Development includes stakeholder process
- Commission adopts rules
- Local governments adopt ordinances



# SIP Revision Process

## Typically a 3-4 year process

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- 1
  - Pollution-exceeding episode is selected;
- 2
  - Base case and future emissions inventories are prepared;
- 3
  - Photochemical and grid modeling is performed to determine the amount of emissions reductions required;
- 4
  - Control measures are evaluated to determine how to accomplish the needed reductions;
- 5
  - Draft SIP revision and rules are prepared;
- 6
  - Commission approves the proposed SIP revision and rules package;



# SIP Revision Process

## Typically a 3-4 year process

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- 7
  - Formal public review and comment period with a public hearing;
- 8
  - Response to comments are prepared and options are reviewed based on comments;
- 9
  - Proposed control measures are re-quantified and re-modeled;
- 10
  - Final revisions are made to SIP and rulemaking packages;
- 11
  - Commission adopts final rules and SIP revision packages; and
- 12
  - The state submits the complete rule and SIP revision packages to the EPA



# Status of Texas Air Quality



# Status of Texas Air Quality

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- Ozone
- Lead
- Sulfur Dioxide
- Particulate Matter
- Transport Rule
  - To reduce  $O_3$  and  $PM_{2.5}$  emissions from electric generating units or EGUs
- Regional Haze – visibility issues, not health
  - Primarily PM and  $SO_2$  in Texas





# 1997 Eight-Hour Ozone Standard Nonattainment Areas

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- Standard is 0.08 ppm
  - To exceed the 1997 ozone standard, the design value must be greater than or equal to 85 ppb.
- Houston-Galveston-Brazoria (HGB)
  - Harris, Fort Bend, Montgomery, Chambers, Liberty, Waller, Galveston, and Brazoria Counties
- Dallas-Fort Worth (DFW)
  - Dallas, Tarrant, Collin, Denton, Kaufman, Parker, Johnson, Ellis, and Rockwall Counties



# HGB Area

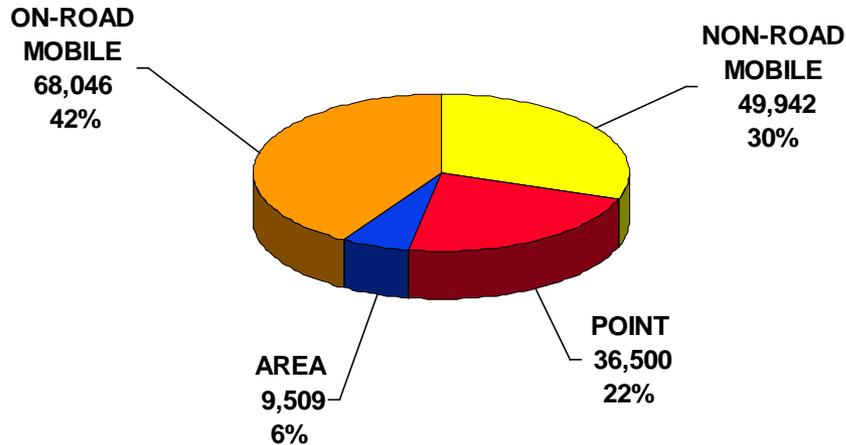
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- HGB is classified as a severe ozone nonattainment area.
- The TCEQ adopted the Attainment Demonstration and Reasonable Further Progress SIP revisions on March 10, 2010.
- The 2008 through 2010 design value is 84 ppb (the same as 2007 through 2009).



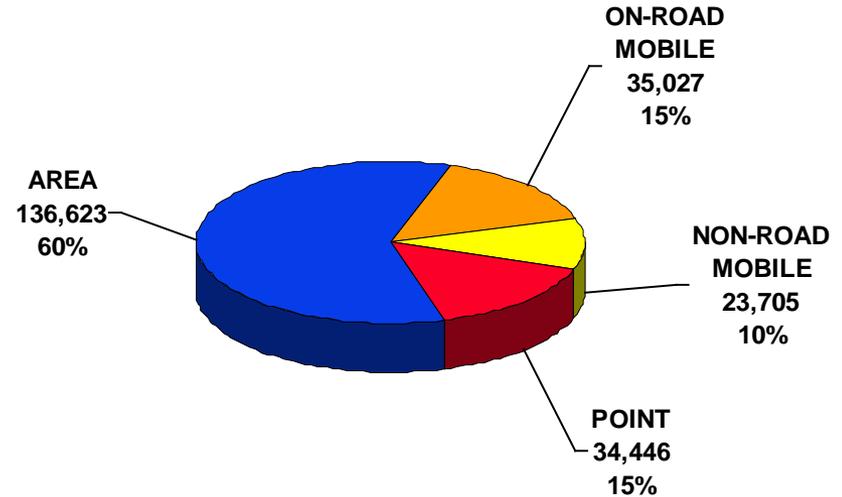
# HGB Area Emissions 2008 Emissions Inventory

2008 HOUSTON - GALVESTON - BRAZORIA  
NO<sub>x</sub> EMISSIONS INVENTORY  
TONS PER YEAR



*Total NO<sub>x</sub>: 163,997 tpy*

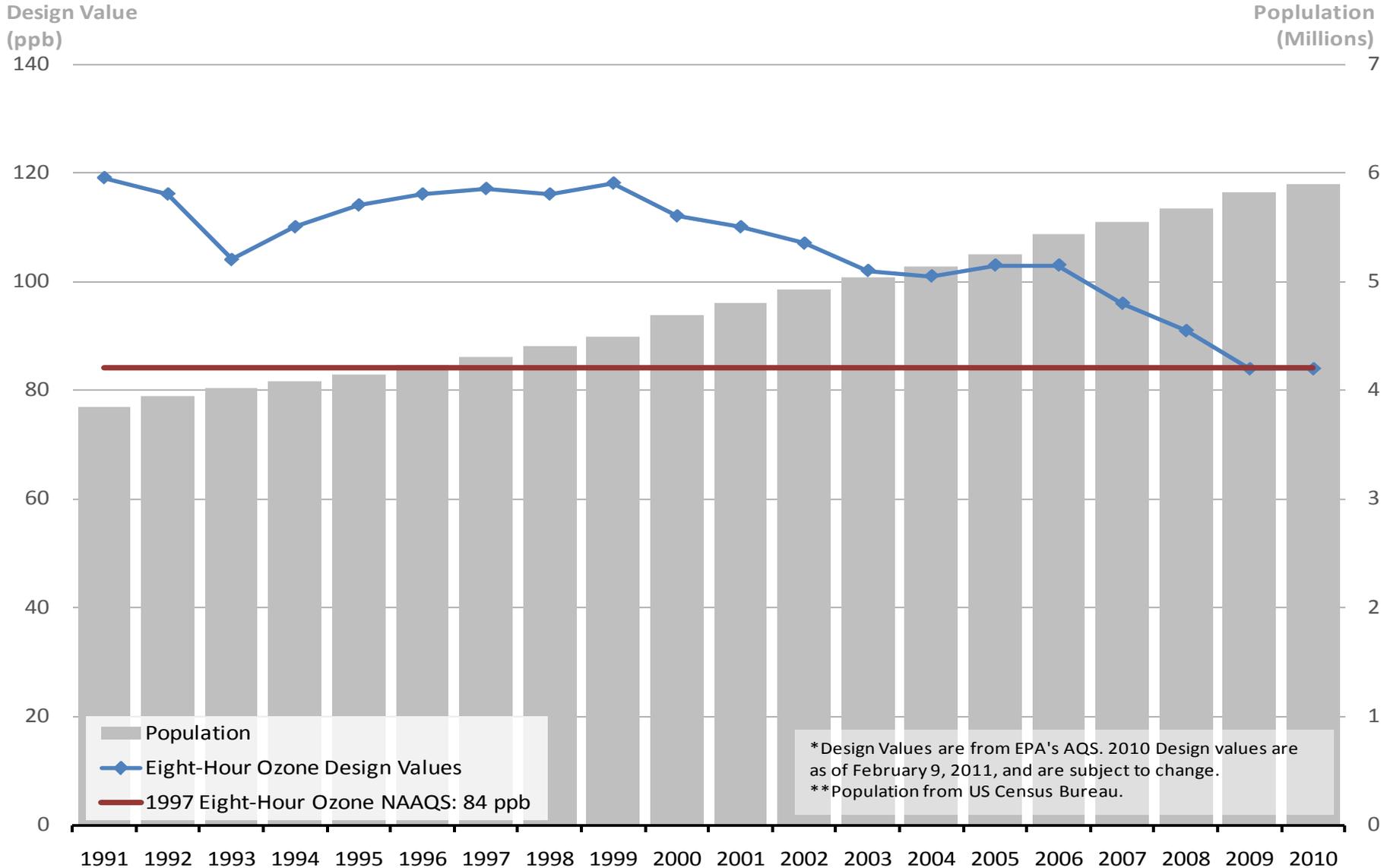
2008 HOUSTON - GALVESTON - BRAZORIA  
VOC EMISSIONS INVENTORY  
TONS PER YEAR



*Total VOC: 229,801 tpy*



# HGB Eight-Hour Ozone Trends





# DFW Area

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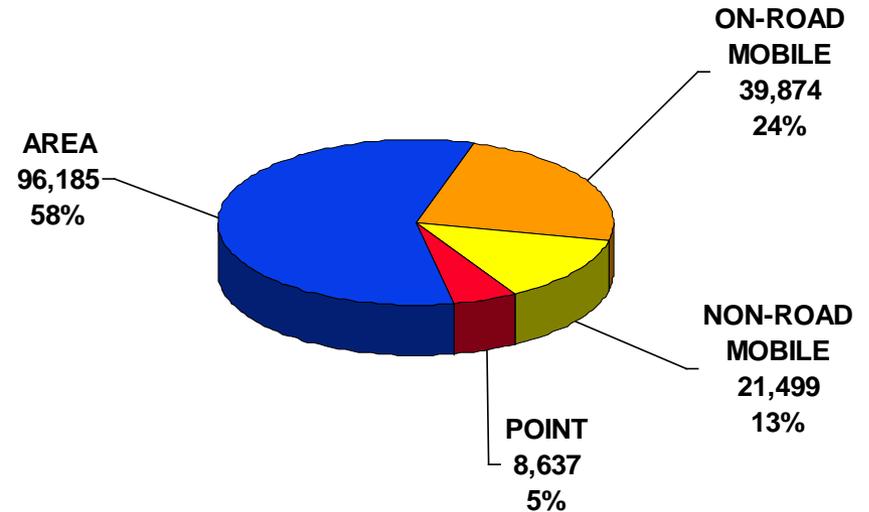
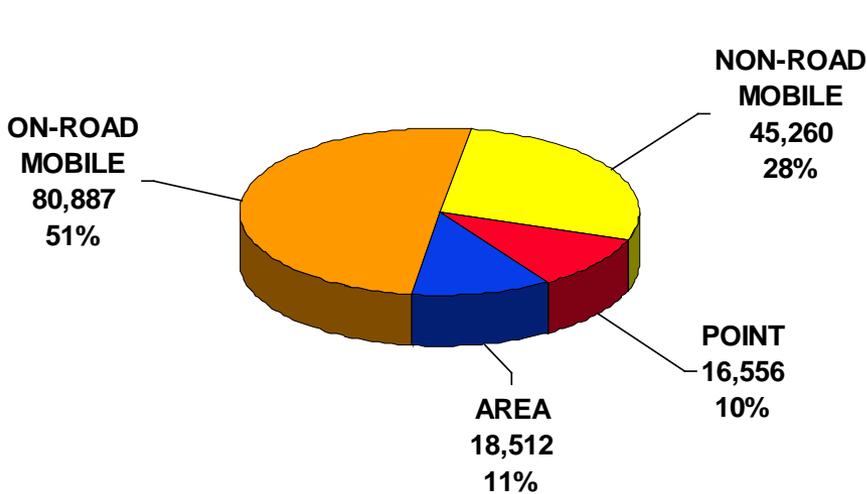
- DFW was reclassified to serious nonattainment effective January 19, 2011.
- Attainment Demonstration and Reasonable Further Progress SIP revisions are scheduled to be proposed in June and submitted to EPA in January 2012.
- The preliminary 2008 through 2010 design value is 86 ppb (the same as 2007 through 2009).



# DFW Area Emissions 2008 Emissions Inventory

2008 DALLAS - FORT WORTH  
NO<sub>x</sub> EMISSIONS INVENTORY  
TONS PER YEAR

2008 DALLAS - FORT WORTH  
VOC EMISSIONS INVENTORY  
TONS PER YEAR



*Total NO<sub>x</sub>: 161,215 tpy*

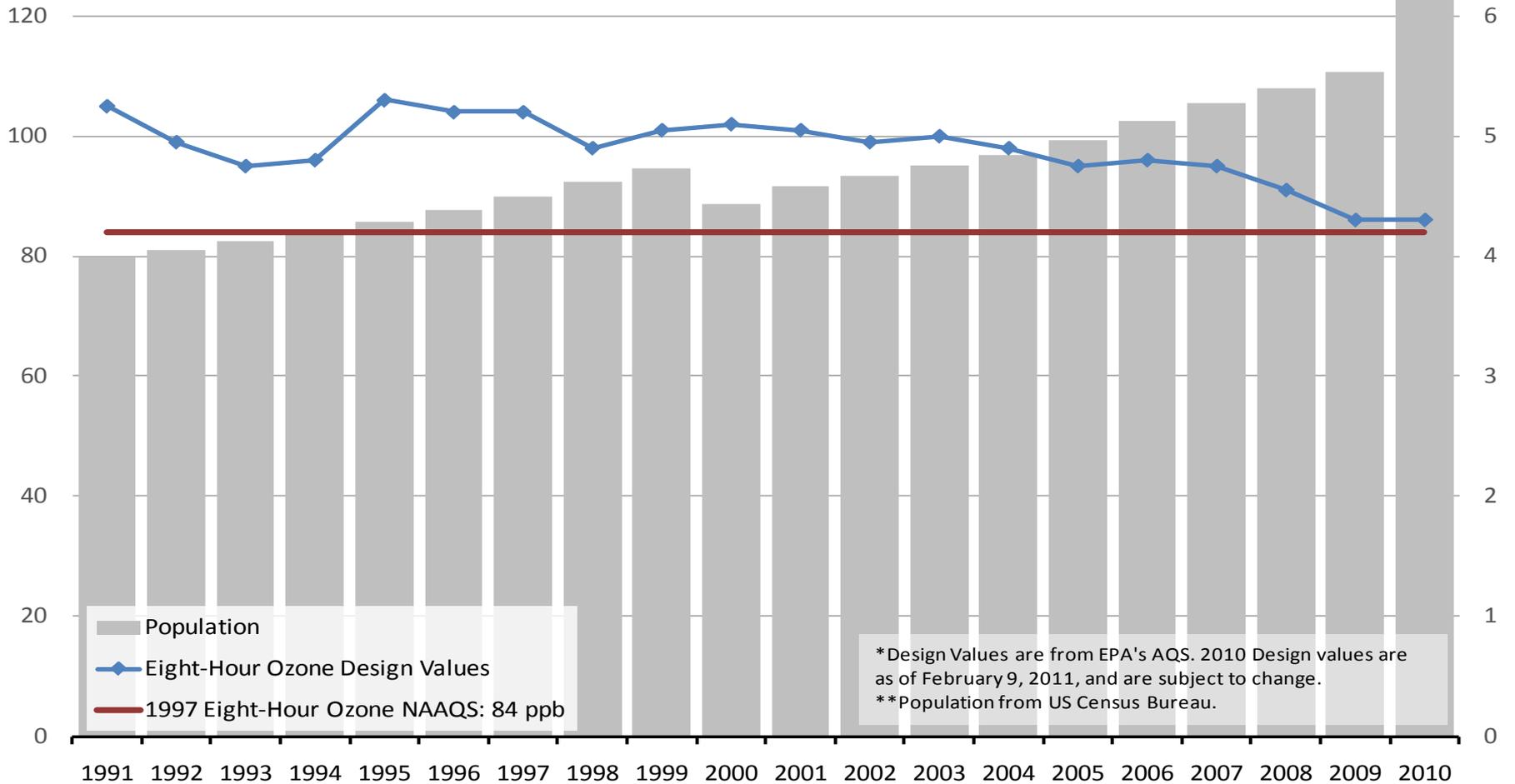
*Total VOC: 166,194 tpy*



# DFW Eight-Hour Ozone Trends

Design Value  
(ppb)  
140

Population  
(Millions)  
7





# Beaumont-Port Arthur (BPA) Area

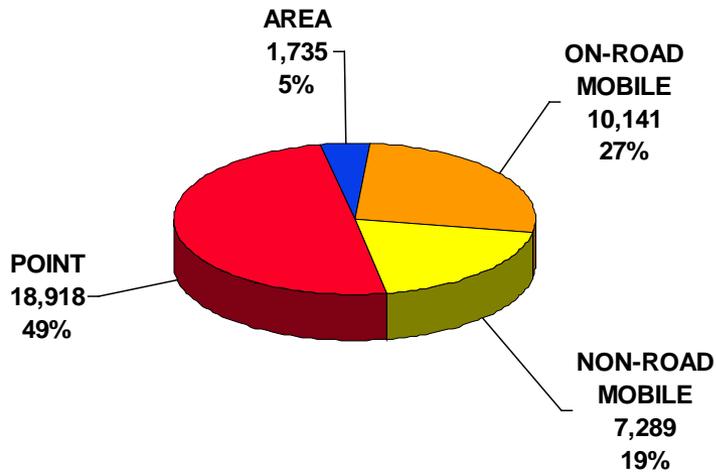
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- BPA is designated attainment for the 1997 ozone standard.
  - Hardin, Jefferson, and Orange Counties
- The EPA approved the BPA redesignation request and maintenance plan effective November 19, 2010.
- The preliminary 2008 through 2010 design value is 74 ppb (down 3 ppb from 2007 through 2009).



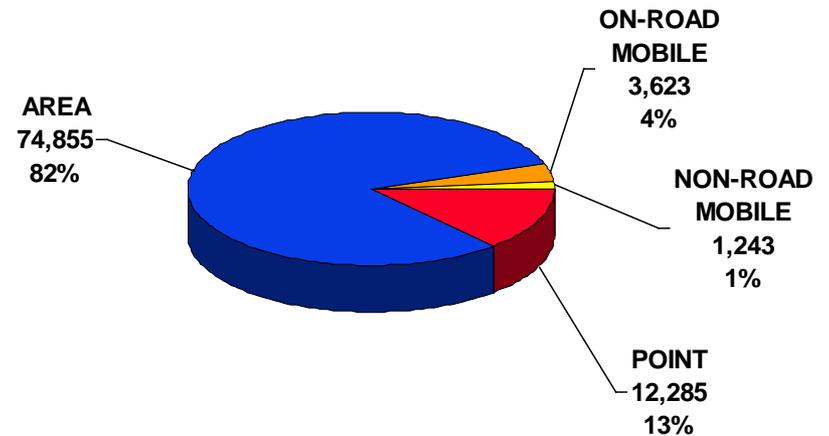
# BPA Area Emissions 2008 Emissions Inventory

2008 BEAUMONT- PORT ARTHUR  
NO<sub>x</sub> EMISSIONS INVENTORY  
TONS PER YEAR



*Total NO<sub>x</sub>: 38,083 tpy*

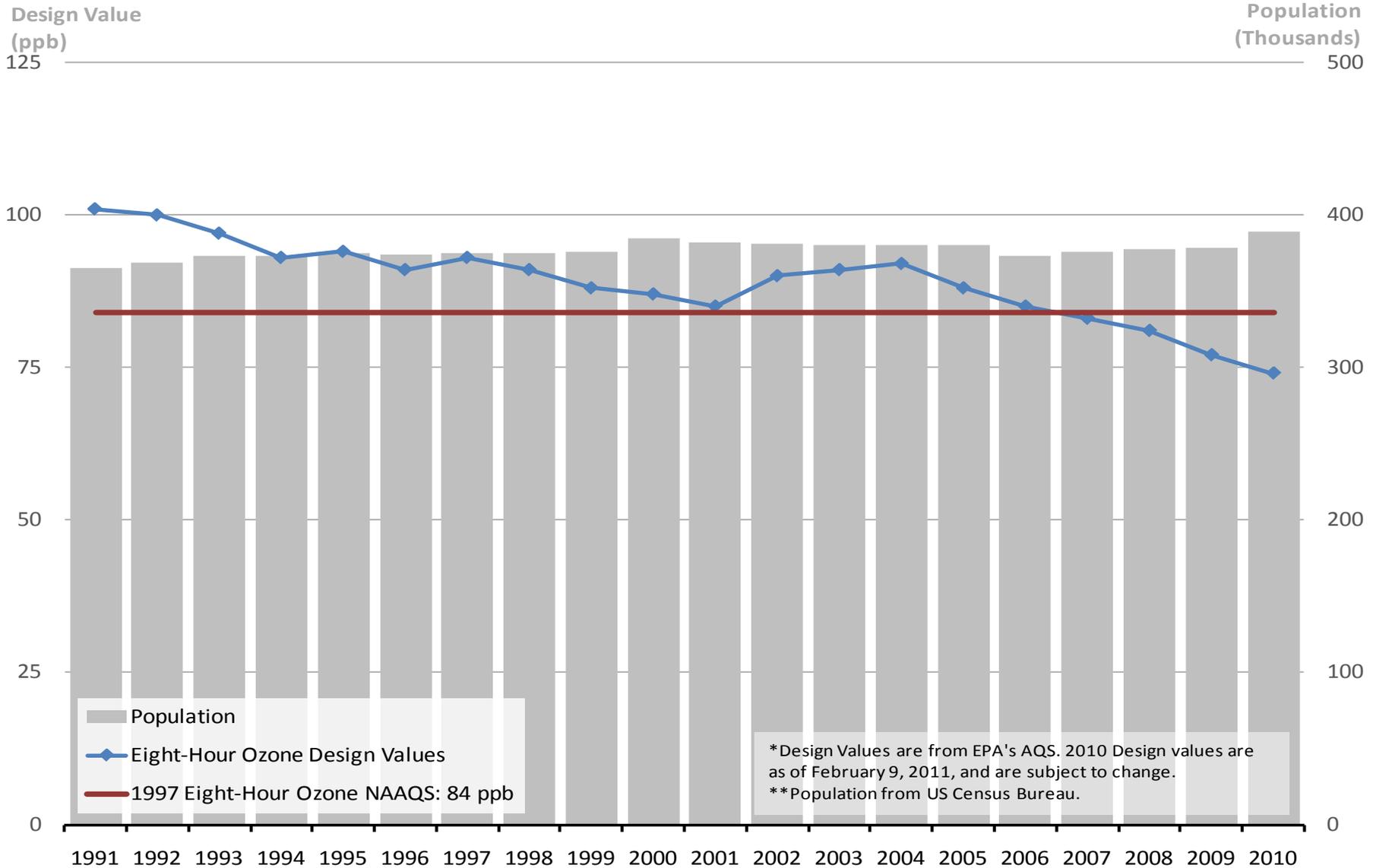
2008 BEAUMONT - PORT ARTHUR  
VOC EMISSIONS INVENTORY  
TONS PER YEAR



*Total VOC: 92,006 tpy*



# BPA Eight-Hour Ozone Trends





# San Antonio Area

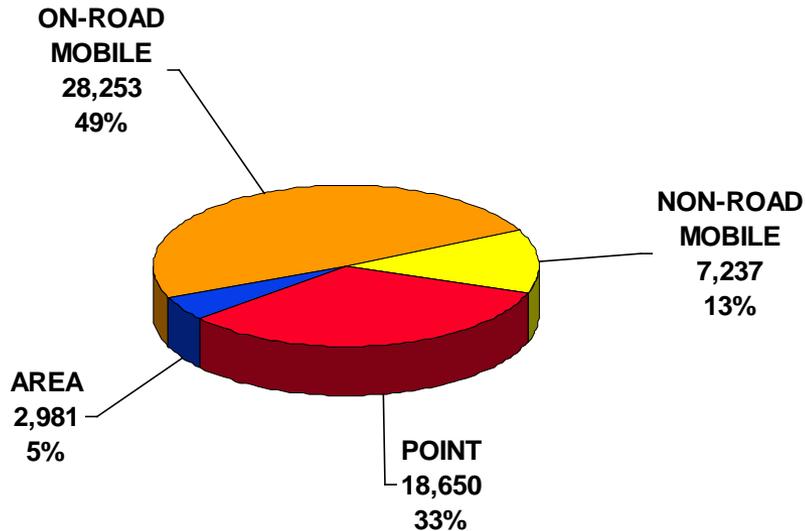
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- The San Antonio area is designated attainment for the 1997 ozone standard.
  - Bexar, Comal, and Guadalupe Counties
- The preliminary 2008 through 2010 design value is 75 ppb (up 1 ppb from 2007 through 2009).



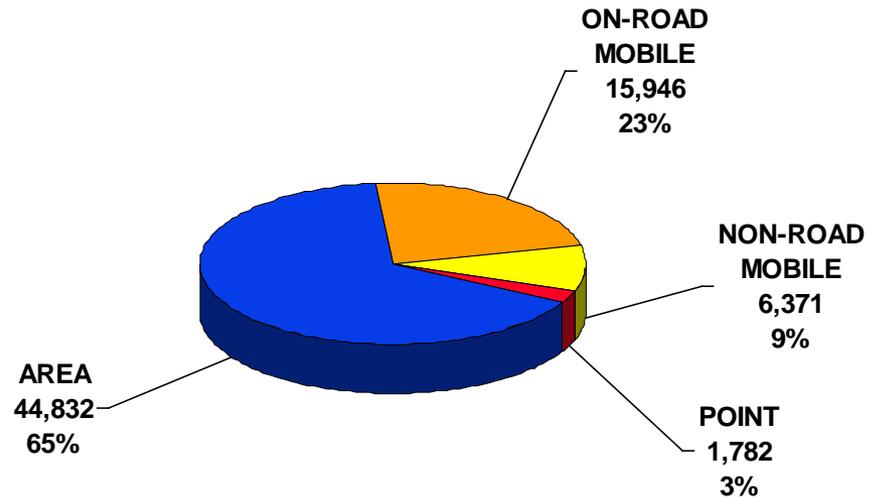
# San Antonio Area Emissions 2008 Emissions Inventory

### 2008 SAN ANTONIO AREA NO<sub>x</sub> EMISSIONS INVENTORY TONS PER YEAR



*Total NO<sub>x</sub>: 57,121 tpy*

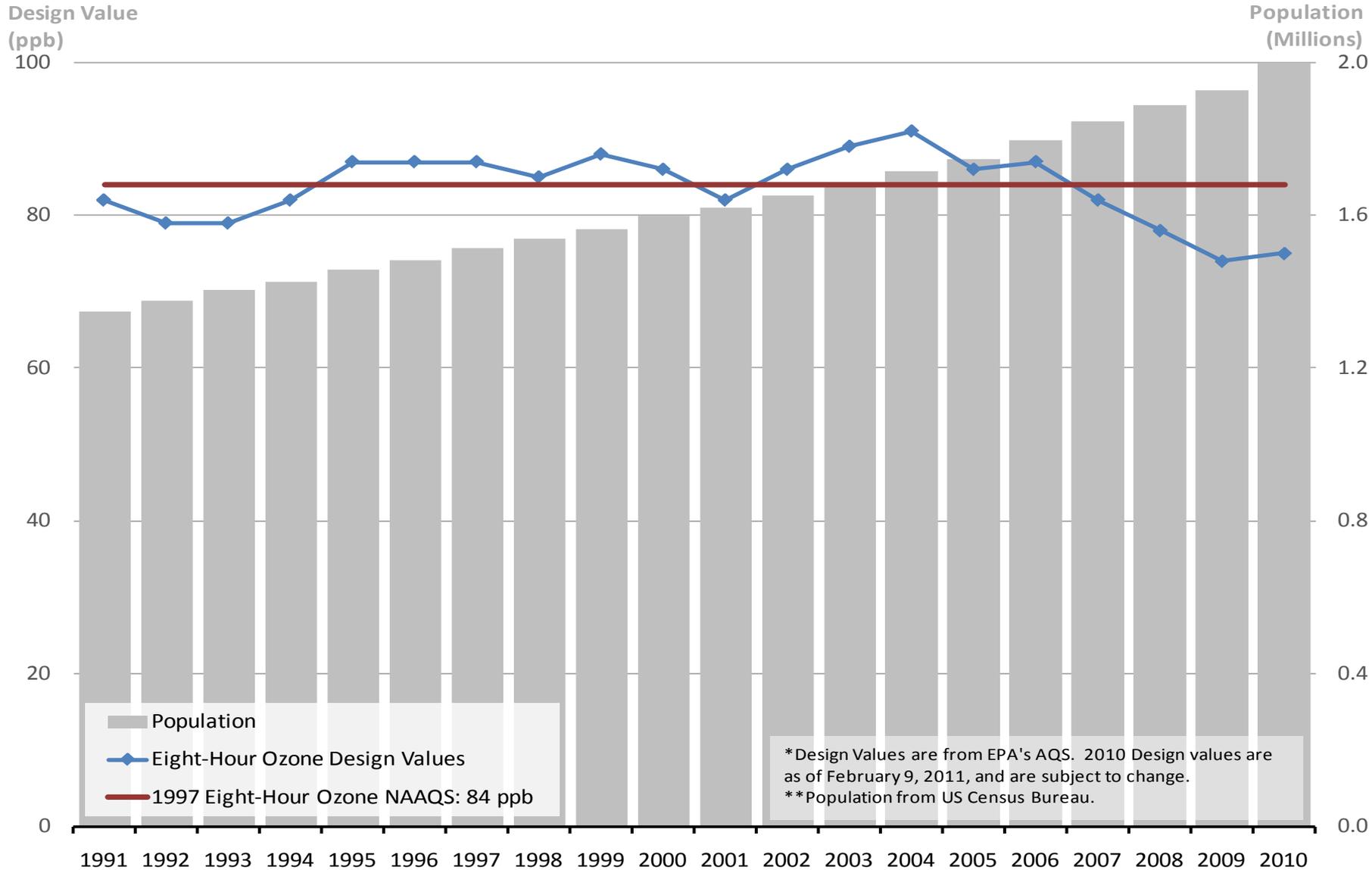
### 2008 SAN ANTONIO AREA VOC EMISSIONS INVENTORY TONS PER YEAR



*Total VOC: 68,931 tpy*



# San Antonio Eight-Hour Ozone Trends





# Austin Area

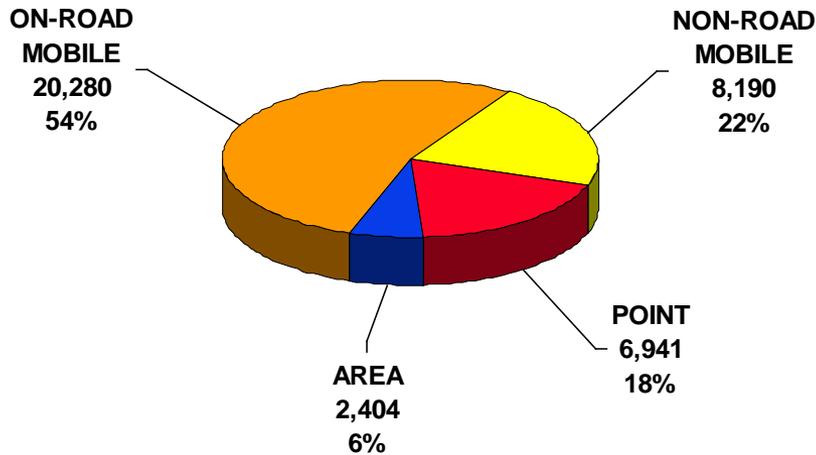
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- The Austin area is designated attainment for the 1997 ozone standard.
  - Bastrop, Caldwell, Hays, Travis, and Williamson Counties
- The Austin-Round Rock 1997 Eight-Hour Ozone Flex plan was approved by the EPA in September 2008.
- The preliminary 2008 through 2010 design value is 74 ppb (down 1 ppb from 2007 through 2009).



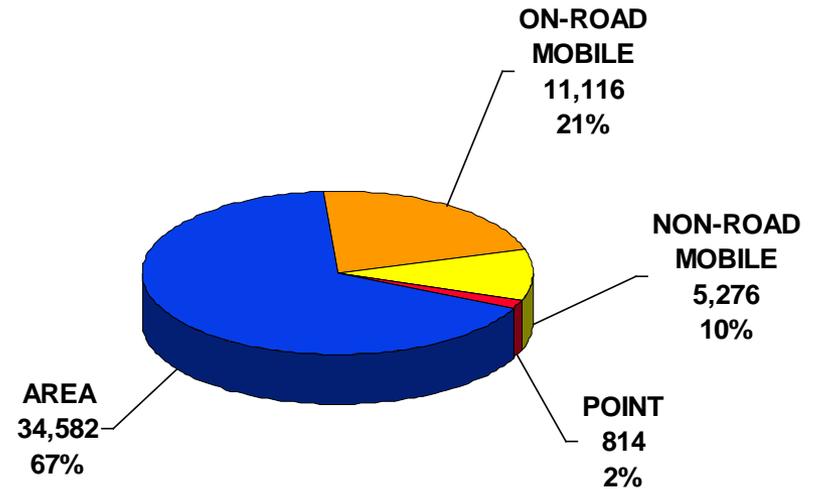
# Austin Area Emissions 2008 Emissions Inventory

**2008 AUSTIN AREA  
NO<sub>x</sub> EMISSIONS INVENTORY**  
TONS PER YEAR



*Total NO<sub>x</sub>: 37,815 tpy*

**2008 AUSTIN AREA  
VOC EMISSIONS INVENTORY**  
TONS PER YEAR



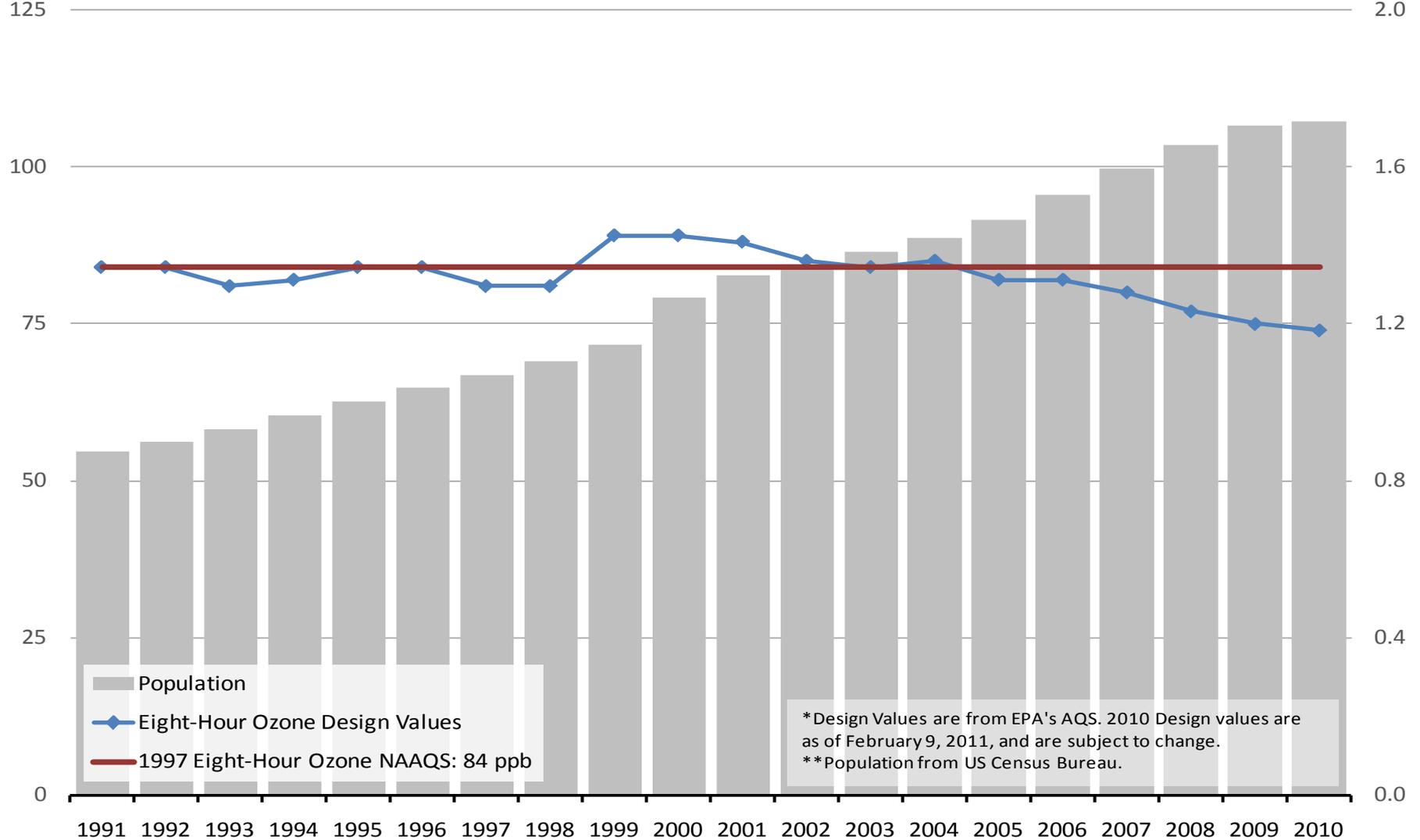
*Total VOC: 51,788 tpy*



# Austin Eight-Hour Ozone Trends

Design Value  
(ppb)  
125

Population  
(Millions)  
2.0



1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010



# Northeast Texas

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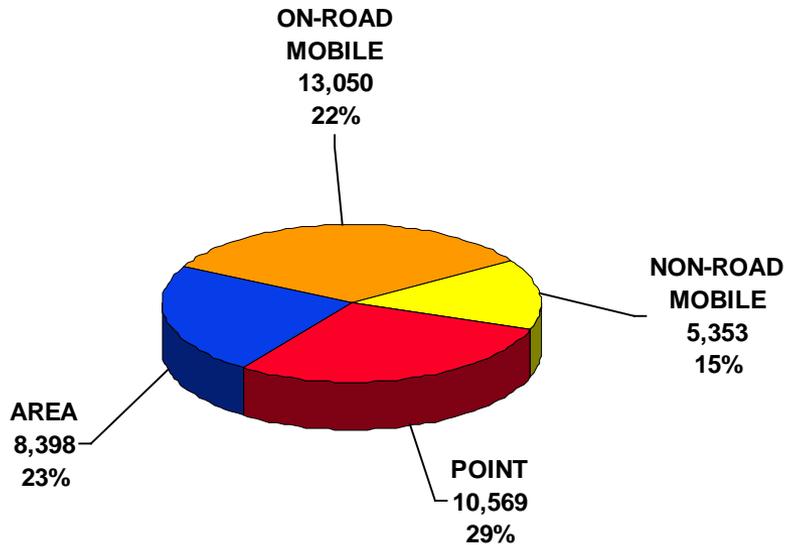
- The Northeast Texas area is designated attainment for the 1997 ozone standard.
  - Harrison, Rusk, Smith, and Upshur Counties
- The preliminary 2008 through 2010 design value is 74 ppb (down 1 ppb from 2007 through 2009).



# Northeast Texas Area Emissions 2008 Emissions Inventory

## 2008 TYLER - LONGVIEW - MARSHALL AREA NO<sub>x</sub> EMISSIONS INVENTORY

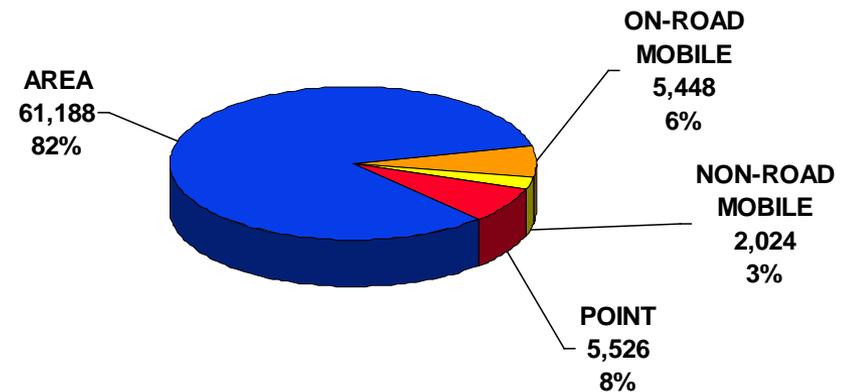
TONS PER YEAR



*Total NO<sub>x</sub>: 37,370 tpy*

## 2008 TYLER - LONGVIEW - MARSHALL AREA VOC EMISSIONS INVENTORY

TONS PER YEAR



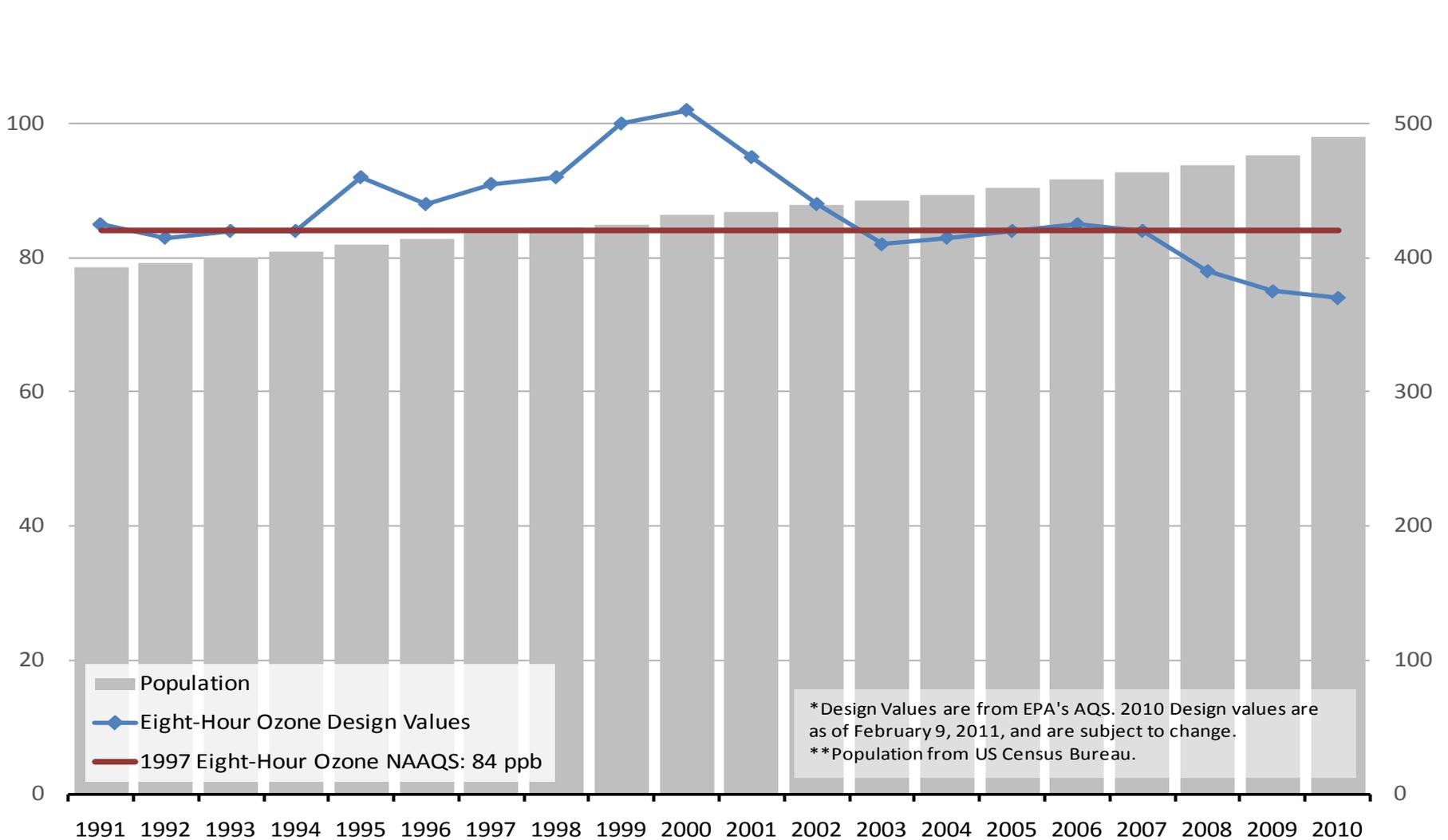
*Total VOC: 74,186 tpy*



# Northeast Texas Eight-Hour Ozone Trends

Design Value  
(ppb)  
120

Population  
(Thousands)  
600



\*Design Values are from EPA's AQS. 2010 Design values are as of February 9, 2011, and are subject to change.  
 \*\*Population from US Census Bureau.



# El Paso Area

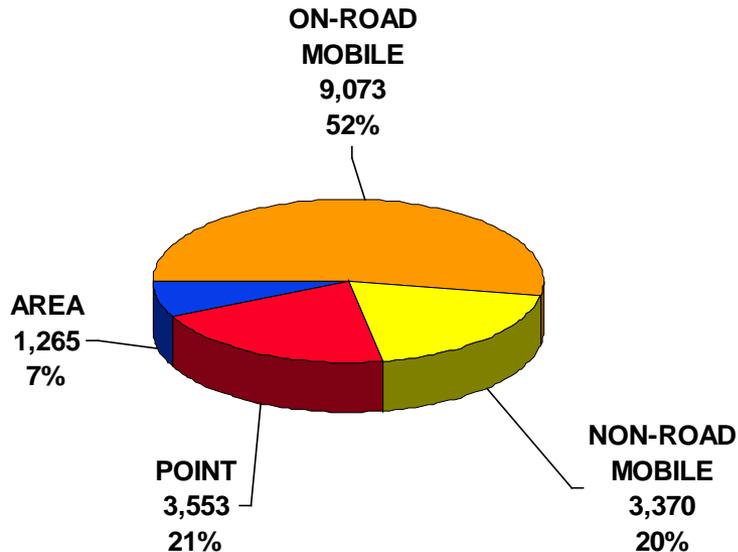
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- In 2004, the EPA designated the area to attainment for the 1997 ozone standard.
- In January 2009, the EPA approved the 1997 Eight-Hour Ozone Maintenance SIP revision with a direct-final notice.
- The preliminary 2008 through 2010 ozone design value is 71 ppb (down 4 ppb from 2007 through 2009).



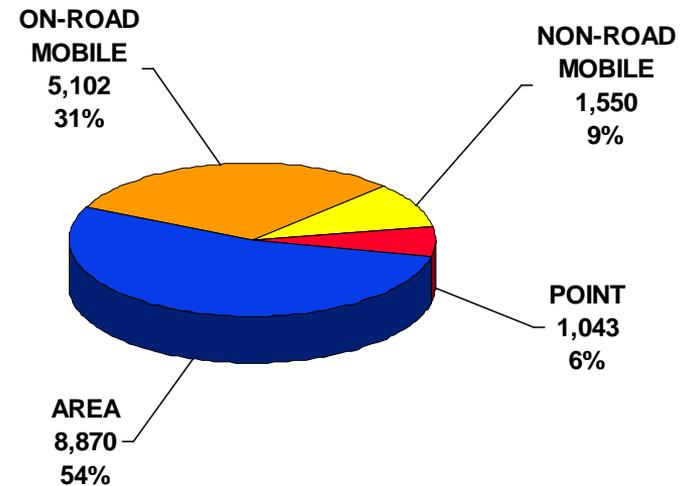
# El Paso Area Emissions 2008 Emissions Inventory

**2008 EL PASO  
NO<sub>x</sub> EMISSIONS INVENTORY**  
TONS PER YEAR



*Total NO<sub>x</sub>: 17,261 tpy*

**2008 EL PASO  
VOC EMISSIONS INVENTORY**  
TONS PER YEAR



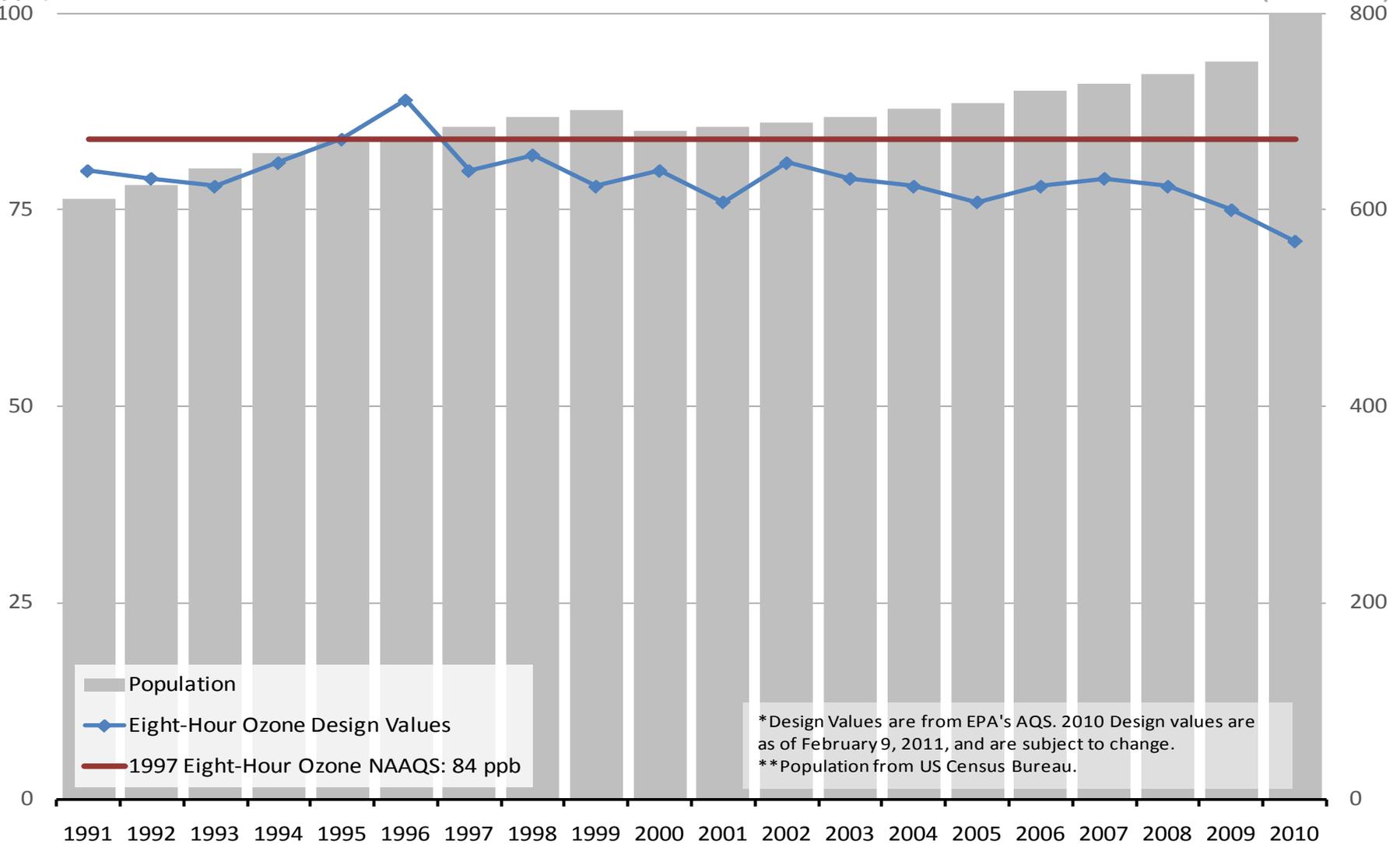
*Total VOC: 16,565 tpy*



# El Paso Eight-Hour Ozone Trends

Design Value  
(ppb)  
100

Population  
(Thousands)  
800



Population  
 Eight-Hour Ozone Design Values  
 1997 Eight-Hour Ozone NAAQS: 84 ppb

\*Design Values are from EPA's AQS. 2010 Design values are as of February 9, 2011, and are subject to change.  
 \*\*Population from US Census Bureau.



# Additional Attainment Areas

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- Corpus Christi (CC)
  - The preliminary 2008 through 2010 ozone design value is 71 ppb.
  - The Corpus Christi 1997 Eight-Hour Ozone Flex plan was approved by the EPA in June 2007.
  
- Victoria (VIC)
  - The preliminary 2008 through 2010 ozone design value is 66 ppb.
  - The 1997 Eight-Hour Ozone Maintenance SIP revision was submitted to the EPA March 2007.
    - A contingency plan SIP revision was adopted in July 2010.



# Additional Attainment Areas

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- Lower Rio Grande Valley  
(Brownsville-Harlingen-San Benito)
  - The preliminary 2008 through 2010 ozone design value is 65 ppb.



## Lead (Pb)

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- Effective December 31, 2010, the EPA designated a portion of Collin County nonattainment for the 2008 lead NAAQS.
- An attainment demonstration SIP revision is scheduled to be proposed to the commission on June 22, 2011.
- A SIP revision to address FCAA requirements for interstate transport of lead pollution is scheduled to be adopted by the commission in August 2011.



# Sulfur Dioxide (SO<sub>2</sub>)

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- On April 20, 2011, the commission approved a recommendation to the governor that Jefferson County be designated nonattainment for the 2010 SO<sub>2</sub> NAAQS.
- The EPA is scheduled to finalize designations for the standard in June 2012.
- Section 110(a)(1) maintenance plan SIP revisions are due to the EPA in June 2013.
  - For all counties designated attainment or unclassifiable
- Attainment demonstration SIP revisions are due to the EPA in February 2014.



# Particulate Matter

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- In October 2009, the governor received a letter from the EPA requesting a 2006 annual  $PM_{2.5}$  standard designation recommendation for Harris County based on 2006 through 2008 data from one monitor (Clinton Drive).
- On February 4, 2010, the governor submitted a letter to the EPA recommending that Harris County remain designated attainment based on 2007 through 2009 monitoring data.



# Particulate Matter

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- On April 29, 2010, the EPA regional administrator signed a letter stating his concurrence with the governor's recommendation that Harris county remain attainment for PM<sub>2.5</sub>.



# Clean Air Transport Rule (CATR)

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- The CATR was proposed July 6, 2010, and is anticipated to be finalized in spring 2011.
- The rule is intended to replace the Clean Air Interstate Rule (CAIR) and reduce interstate transport of ozone PM<sub>2.5</sub> pollution.
  - Currently addresses only the 1997 and 2006 PM<sub>2.5</sub> standards and 1997 ozone standard
  - Also addresses CAIR flaws identified by the D.C. Circuit Court in its 2008 remand



# CATR Timeline

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- **December 2008** – D.C. Circuit court remands CAIR back to EPA.
- **July 6, 2010** – EPA proposes the CATR.
- **Spring 2011** – EPA intends to finalize the CATR.
- **November 2011** – EPA requires SIP revisions for states seeking to assume control over CATR allocations in 2014.
- **January 2012** – CATR controls begin.
- **January 2014** – Start of first control period that states might direct allocation methodologies.



# Regional Haze

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- EPA's 1999 Regional Haze Rule requires states to improve visibility in 156 national parks and wilderness areas. In Texas, this includes Big Bend National Park and Guadalupe Mountains National Park.
- The TCEQ's Regional Haze SIP Revision was submitted to the EPA in March 2009.
- The next Regional Haze SIP Revision is due to the EPA in 2013.



# Contact Information

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  - <http://www.tceq.texas.gov/implementation/air/sip/sipcontact.html>



**Questions?**