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Margaret Hoffman, *Executive Director*

# TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

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October 16, 2003

Mayor Richard Greene
Regional Administrator
U.S. Environmental Protection Agency, Region 6
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202-2733

Dear Mayor Greene:

By letter dated July 15, 2003, Governor Rick Perry submitted recommendations for designation of areas in the State of Texas regarding the 8-hour ozone national ambient air quality standard (NAAQS). Staff from your office have asked that we provide information to support the recommendation. Attached is information that addresses the factors we think should be considered in EPA's decision concerning acceptance of the Governor's recommendation. We acknowledge that the recommendation may change because current monitoring data for some counties indicates those areas may be in attainment based on data from 2001-2003.

Historically the Texas Commission on Environmental Quality (TCEQ) has addressed its air quality issues based on the state's Air Quality Planning Regions. This approach recognizes the regional nature of air quality issues and allows the state to implement control strategies on an appropriate regional basis. The TCEQ has also worked closely with local officials in the areas potentially exceeding the 8-hour ozone NAAQS for several years, to form regional air quality planning areas. For the purposes of this response, the planning areas of current interest include nine counties in the Dallas/Fort Worth (DFW) Consolidated Metropolitan Statistical Area (CMSA) and four counties in the San Antonio Early Action Compact area.

Currently Texas is maintaining its course for bringing areas into attainment of the ozone standard through analysis of factors impacting ozone formation and adoption of strategies to mitigate the impact. In planning for the 8-hour ozone standard, Texas will continue to evaluate areas potentially exceeding the standard in terms of the airshed and apply controls to the appropriate sources in order to achieve attainment of this standard throughout the state. It is the TCEQ's long held position that it is not necessary to designate areas or counties as nonattainment to achieve the state's goals for air quality improvement. Our history clearly demonstrates that state and local officials have not waited for nonattainment designations to adopt and implement emission reduction measures.

Importantly, affected local officials have accepted this regional air quality planning area approach by agreeing to implement emission reduction programs to improve air quality in their areas before being mandated by the Clean Air Act. Throughout the state, and particularly in the Dallas/Fort Worth area, the TCEQ has planned and implemented control strategies beyond counties designated as nonattainment. For the last 10 years, development of the DFW SIP has been based upon an airshed that encompassed the four nonattainment counties and five additional counties designated attainment of the 1-hour ozone standard. Throughout this time, we utilized what we believe to be the proper planning area for DFW- not the C/MSA. Additionally, the four counties in the San Antonio area make up the area's planning region through the Early

Action Compact. As long as the counties adjacent to Bexar County continue to participate in the Early Action Compact and are willing to implement appropriate control strategies, these counties should not be designated as nonattainment.

In developing the DFW SIP, our analysis determined that commuting vehicles from the attainment counties adjacent to the four core nonattainment counties were a component of the mobile emissions, a dominant emission source in the area. As a result, the counties acknowledged their impact and the TCEQ adopted, at the request of local officials, an enhanced On-Board Diagnostic (OBD) and Acceleration Simulation Mode II (ASM-II) Vehicle Inspection and Maintenance (I/M) Program, which began in these adjacent counties on May 1, 2003. To the best of our knowledge, the DFW area is the only area in the country in which attainment counties have voluntarily agreed to implement an enhanced vehicle I/M program. Additional SIP analysis also indicated that emissions from point sources, specifically cement kilns and electric generation facilities, in the 95 counties of east and central Texas were affecting ozone formation in the state's nonattainment areas. Consequently, control strategies to target these emissions in attainment counties were adopted in 2000. As a result, emission reductions are required in 2003 and 2005 for cement kilns and electric generation facilities operating throughout the 95-county region. Specific to this analysis, cement kiln emission reductions will be achieved in Ellis and Bexar Counties and emission reductions from electric generation facilities in Hunt and Henderson Counties will occur in 2003 and 2005, respectively. Additionally, in 2005 requirements for low emission diesel fuel will be effective in the 95-county region. As the TCEQ has assessed the application of control strategies in counties designated attainment for the 1-hour standard, it has considered a number of factors including some criteria EPA has suggested as guidance for 8-hour designation recommendations. Similarly, EPA Region 6 staff has not recommended a nonattainment designation for counties adjacent to the default C/MSA in Texas because these counties have been included in the TCEQ's planning efforts and many of their sources have been included as part of Texas' regional control strategy. This is the rationale that EPA should use in its evaluation of the Governor's 8-hour ozone designation recommendation. Simply defaulting to the presumption of the C/MSA is not a reasonable assessment of a particular county's impact on an area's air quality and should only be used when specific local analysis (accompanied by implementation of control strategies) has not been developed.

For the purposes of designation, the TCEQ made its recommendations at the county level. However, for the purposes of demonstrating attainment of the applicable ozone standard, TCEQ analysis and planning uses Air Quality Planning Regions. In the process of designation consideration the TCEQ assessed a number of factors encompassing EPA's guidance criteria while providing a holistic approach to recommend attainment and nonattainment status. Of the factors evaluated the TCEQ's position is that the county's design value, emissions inventory prior to the implementation of emission controls, emissions inventory following the application of emission controls, population, and vehicle miles traveled are the most significant factors in Texas. The attached information summarizes these factors. The TCEQ recommended an attainment designation for any county monitoring attainment or with insufficient monitoring data. Furthermore, counties which make up a small portion of an area's total population and vehicle miles traveled and are not monitoring nonattainment were recommended for an attainment designation.

These regional air quality planning areas and factors were the basis for the Governor's designation recommendations. They are also the factors that should be determinative in EPA's decision concerning acceptance of the Governor's recommendations. Enclosed are the following attachments:

Attachment 1: Design Values Summary
Attachment 2: Adopted Control Strategy Summary
Attachment 3: Vehicle Miles Traveled Data
Attachment 4: Population Data
Attachment 5: Emissions Inventory Data

As shown in these attachments, the Dallas/Fort Worth and San Antonio counties the Governor recommended for attainment are not a significant component of the total emissions for their respective areas. Based upon our assessment of the applicable criteria, we maintain that these counties should be designated as attainment at this time.

Only data regarding the Dallas/Fort Worth and San Antonio area counties is included at this time because current monitoring data for the Austin and Northeast Texas areas indicates those areas may be in attainment when the 2003 data is complete. We anticipate that the Governor will be submitting a revision to remove these areas from the initial recommendation. Other designations were based on current 1-hour nonattainment areas.

We respectfully request that EPA review this information and use it as the basis for agreement with the Governor's 8-hour ozone NAAQS designation recommendation, including revisions after consideration of the 2003 monitoring data.

If you have any questions, please contact Randy Wood at 512.239.1120.

Sincerely,

Robert J. Huston
Chairman

cc: Governor Rick Perry
Commissioner Ralph Marquez
Commissioner Kathleen Hartnett White

## Attachment 1: Design Value Summary

| DFW | 2000-2002 |
|---|---|
| Dallas | 91 |
| Tarrant | 99 |
| Collin | 93 |
| Denton | 99 |
| Johnson | 89 |
| Parker | 86 |
| Ellis | 86 |
| Rockwell | 83 |
| Kaufman | 70-incomplete data |
| Hood | 84-incomplete data |
| Henderson | no monitor |
| Hunt | no monitor |

| SAN | 2000-2002 |
|---|---|
| Bexar | 86 |
| Comal | no monitor |
| Guadalupe | 78-incomplete data |
| Wilson | no monitor |

Note: No monitor with incomplete data has experienced a 4th high reading in excess of 85ppb.

## Attachment 2: Adopted Control Strategy Summary
## Outside 1-Hour Nonattainment Areas

**Statewide**

- Cement Kiln NOx limits
  - -27% reduction Statewide (50% Ellis County only)
  - -Phased but many by 2004
- Gas-fired Water Heaters, Small Boilers, and Process Heaters
  - -Effective beginning 2002 on all new installations
- California Spark-Ignition Engines
  - -Effective statewide 2004 model year
- Clean Gasoline
  - -Sulfur portion repealed in favor of January 2004 low-sulfur federal gas rules
  - -Low RVP (7.8 psi, except El Paso) effective May- October
- Legislation
  - -SB5 - TERP
    - In nonattainment and near-nonattainment areas only (Texas Air Quality Planning Regions)
    - Exact NOx reductions depend on specific local uses of grants
      - -Goal of 18.90 tpd in HGA + 20 tpd for gap
      - -Goal of 16.3 in tpd DFW
  - -SB7 - Electric Utility Deregulation
    - By May 2003 permit & 50% NOx reduction from 1997 levels
    - Cap & Trade system statewide
  - -SB766 - VERP & MPP for Grand fathered Facilities
  - -HB2912 - Grandfathered Permitting Requirements
    - Permit or cease operation by 2003
    - 10 year BACT by 2007 (2008 if small business)

**Eastern Texas Region** (95 counties)

- Electric Generating Facilities NOx Emission Rules for boilers & gas turbines
  - -Estimated 50% NOx emissions rate reduction for boilers in current attainment counties
- Texas Low Emission Diesel
  - -April 1, 2005
  - -Average 5.7% NOx reduction (with no technology change)
- Stage 1 Vapor Recovery
  - -Required for all stations with > 125k gallons thruput per month
- Legislation
  - -HB2914 - Grandfathered Pipeline Facilities
    - 50% NOx reduction, may be up to 20% in west Texas

**Kaufman and Rockwall Counties**

- <u>Vehicle Inspection/Maintenance</u>
  - -By May 1, 2004 ASM/OBD will be fully implemented in all 9 counties in the planning region
  - -Dallas, Tarrant, Denton, and Collin Counties (Began May 1, 2002)
  - -Ellis, Johnson, Kaufman, Parker, and Rockwall Counties (Began May 1, 2003).
- **Speed Limit Reduction**

-5 mph reduction effective September 2001 in 9 counties

**San Antonio Area**

- Fleet strategies
  - -Accelerated use of low-emission fuels in private/public fleets
  - -Accelerated conversion of buses to cleaner fuels, e.g. LPG
  - -Increased use of alternative fuel vehicles in public fleets
  - -Promotion of emissions testing of fleet vehicles by one local industry
- Transportation control strategies
  - -Commuter alternative incentives
  - -Alternative work schedules
  - -Increased enforcement of smoking vehicle law
  - -Repair assistance
  - -Traffic flow improvements
- Other
  - -Changed school hours and school year
  - -Ozone season/air quality health alert programs
  - -Municipal/industrial/commercial/residential compliance with International Energy Conservation codes

Early Action Compact - 2002

- Designed to bring area into attainment of 8-hr standard through locally selected measures
- Likely mobile (on-road, then non-road) focused due to EI
  - -Discussing Vehicle I&M as a likely strategy

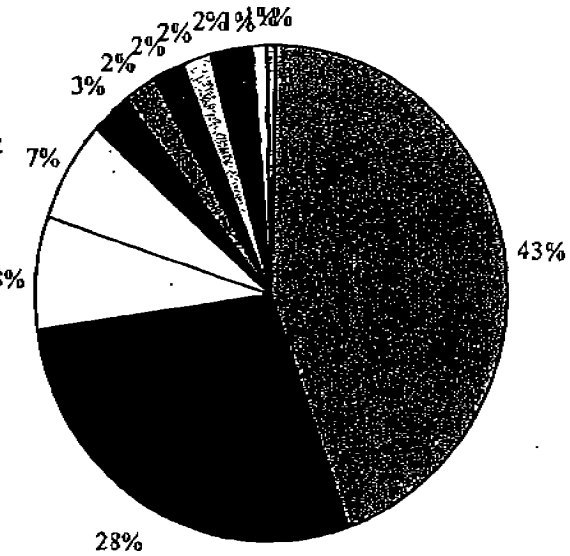
## Attachment 3: Vehicle Miles Traveled Data

### Dallas/Fort Worth Area VMT Estimates for 2000 by County

Summary

Governor's Recommended NonAttainment Counties (Dallas, Tarrant, Collin, Denton, Ellis, Johnson, Parker): 93%

Governor's Recommended Attainment Counties (Kaufman, Hunt, Henderson, Rockwall, Hood): 7%



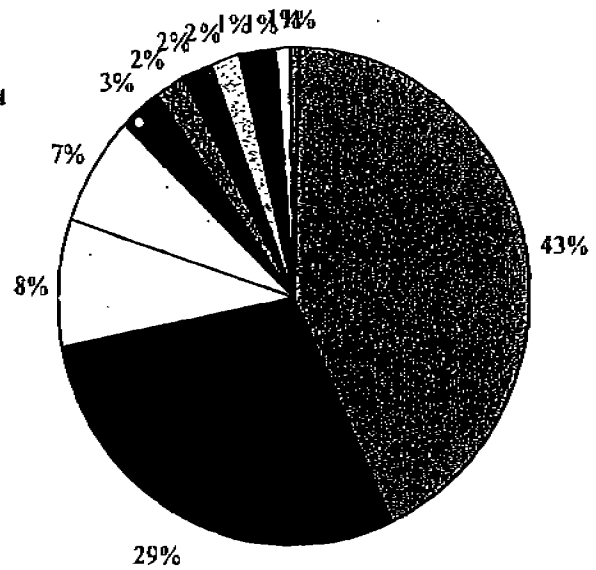

Dallas Tarrant Collin Denton Ellis Kaufman Johnson Parker Hunt Henderson Rockwall Hood

# Dallas/Fort Worth Area VMT Projections for 2010 by County

Summary

Governor's Recommended NonAttainment Counties (Dallas, Tarrant, Collin, Denton, Ellis, Johnson, Parker): 94%

Governor's Recommended Attainment Counties (Kaufman, Hunt, Henderson, Rockwall, Hood): 6%



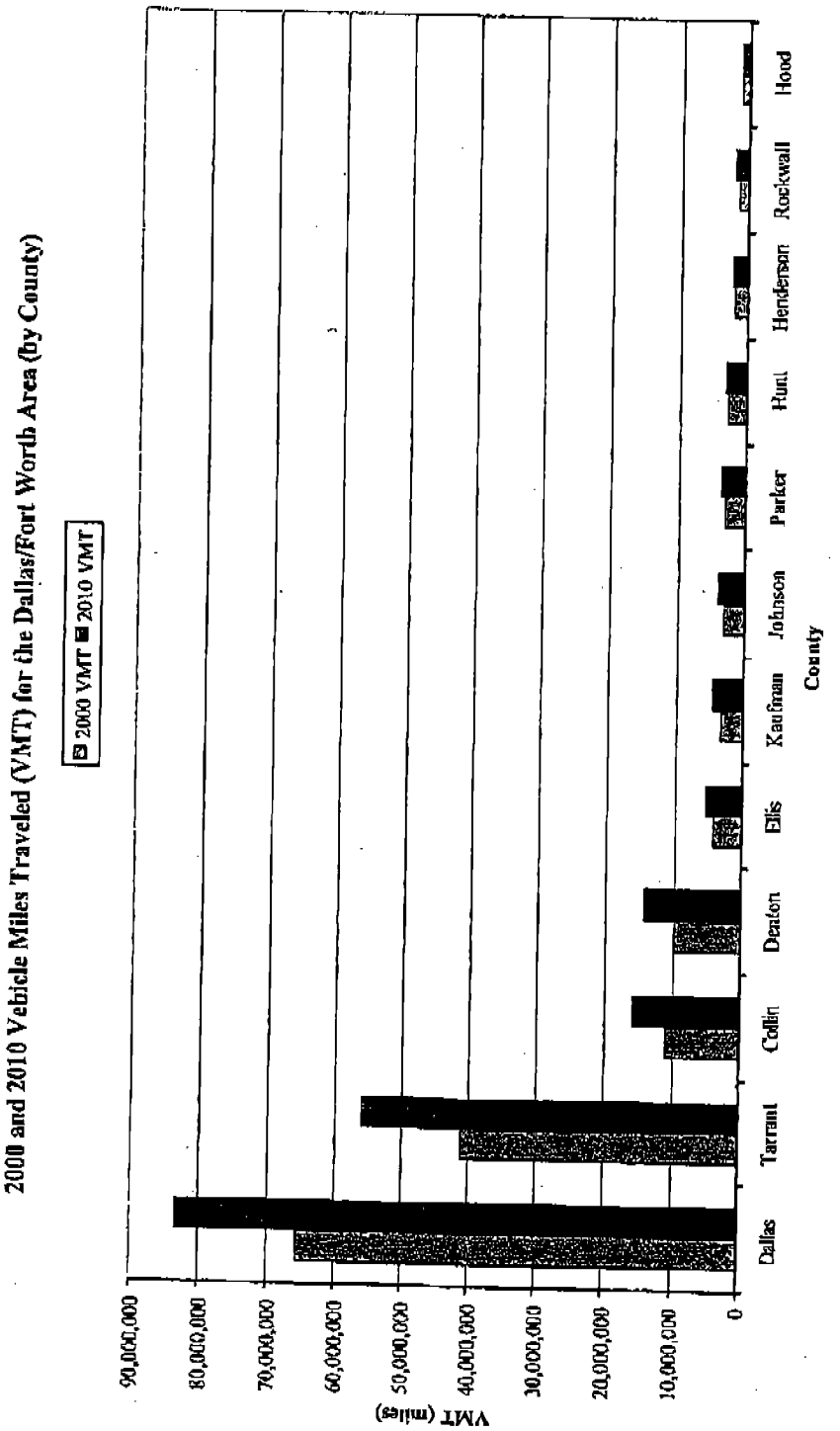

Dallas Tarrant Collin Denton Ellis Kaufman Johnson Parker Hunt Henderson Rockwall Hood

## County-to-County Worker Flows for North Central Texas: 2000 Census Data
### Absolute Numbers

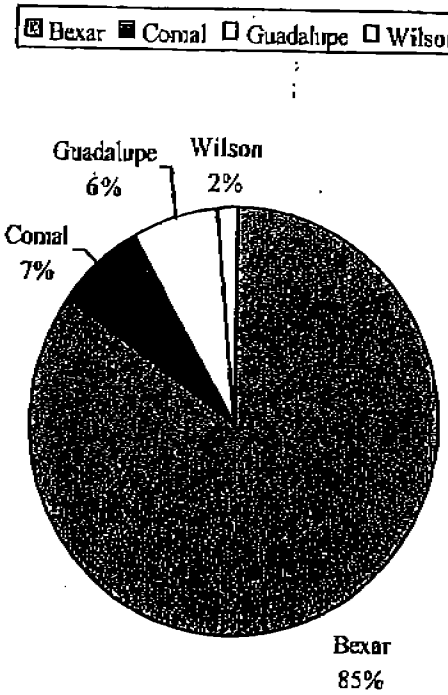
County of Work

| County of Residence | Collin | Dallas | Denton | Ellis | Erath | Hood | Hunt | Johnson | Kaufman | Navarro | Palo Pinto | Parker | Rockwall | Somervell | Tarrant | Wise | Other in TX | Not in TX | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Collin | 129,271 | 119,210 | 5,194 | 116 | 2 | 8 | 524 | 53 | 239 | 8 | 6 | 169 | 790 | 0 | 3,482 | 0 | 2,809 | 2,720 | 263,601 |
| Dallas | 47,976 | 905,380 | 13,256 | 3,369 | 17 | 191 | 1,192 | 575 | 2,833 | 170 | 22 | 443 | 9,474 | 5 | 46,430 | 114 | 7,469 | 5,909 | 1,036,779 |
| Denton | 14,896 | 95,367 | 103,598 | 200 | 3 | 42 | 123 | 79 | 98 | 14 | 0 | 170 | 76 | 0 | 15,809 | 343 | 2,748 | 2,106 | 235,572 |
| Ellis | 583 | 21,385 | 137 | 25,453 | 0 | 6 | 16 | 460 | 105 | 391 | 7 | 10 | 31 | 0 | 2,763 | 0 | 803 | 230 | 52,380 |
| Erath | 17 | 192 | 5 | 4 | 12,201 | 422 | 0 | 124 | 3 | 11 | 147 | 192 | 0 | 183 | 365 | 13 | 935 | 129 | 14,763 |
| Hood | 23 | 776 | 77 | 46 | 215 | 9,769 | 0 | 317 | 4 | 9 | 63 | 412 | 0 | 1,064 | 4,577 | 0 | 288 | 209 | 17,868 |
| Hunt | 1,896 | 6,596 | 129 | 35 | 0 | 9 | 21,070 | 6 | 779 | 17 | 0 | 11 | 1,618 | 0 | 226 | 0 | 1,314 | 307 | 34,013 |
| Johnson | 194 | 4,271 | 318 | 1,305 | 20 | 237 | 22 | 24,749 | 31 | 52 | 16 | 308 | 16 | 228 | 25,363 | 27 | 848 | 394 | 58,393 |
| Kaufman | 586 | 15,467 | 173 | 182 | 0 | 0 | 93 | 11 | 13,981 | 56 | 0 | 10 | 352 | 0 | 569 | 0 | 1,026 | 199 | 32,704 |
| Navarro | 56 | 1,352 | 0 | 1,503 | 0 | 0 | 0 | 15 | 59 | 13,764 | 0 | 0 | 3 | 8 | 315 | 4 | 942 | 98 | 18,119 |
| Palo Pinto | 8 | 209 | 15 | 2 | 133 | 74 | 0 | 16 | 0 | 0 | 7,618 | 1,697 | 0 | 16 | 1,061 | 85 | 510 | 97 | 11,741 |
| Parker | 112 | 1,556 | 325 | 57 | 32 | 374 | 4 | 163 | 0 | 25 | 688 | 18,674 | 0 | 19 | 19,989 | 331 | 441 | 231 | 41,031 |
| Rockwall | 1,382 | 10,789 | 124 | 25 | 0 | 9 | 588 | 38 | 412 | 0 | 0 | 0 | 7,195 | 0 | 277 | 0 | 358 | 89 | 21,217 |
| Somervell | 2 | 99 | 29 | 29 | 39 | 219 | 0 | 210 | 0 | 0 | 0 | 16 | 0 | 2,088 | 248 | 0 | 82 | 37 | 3,098 |
| Tarrant | 3,728 | 136,092 | 9,290 | 1,679 | 41 | 635 | 214 | 3,959 | 211 | 128 | 181 | 2,500 | 125 | 149 | 534,154 | 495 | 4,687 | 4,767 | 703,035 |
| Wise | 95 | 1,401 | 2,032 | 32 | 2 | 4 | 0 | 35 | 7 | 6 | 16 | 579 | 0 | 0 | 6,137 | 11,232 | 439 | 105 | 22,121 |
| Other in TX | 7,239 | 24,831 | 5,332 | 1,445 | 1,463 | 160 | 4,121 | 1,633 | 4,713 | 1,392 | 564 | 483 | 459 | 305 | 7,505 | 1,252 | | | |
| Not in TX | 1,387 | 12,377 | 1,037 | 354 | 10 | 17 | 97 | 82 | 657 | 55 | 19 | 97 | 97 | 11 | 3,641 | 27 | | | |
| Total | 208,432 | 1,357,260 | 141,073 | 35,656 | 14,178 | 12,118 | 28,064 | 32,520 | 24,132 | 16,098 | 9,360 | 23,961 | 14,236 | 4,074 | 672,811 | 13,923 | | | |

Source: http://dfwinfo.com/trans/publications/data/commute_matrix1.pdf


2000 and 2010 Vehicle Miles Traveled (VMT) for the Dallas/Fort Worth Area (by County)
2000 VMT
2010 VMT
VMT (miles)
90,000,000
80,000,000
70,000,000
60,000,000
50,000,000
40,000,000
30,000,000
20,000,000
10,000,000
0
Dallas
Tarrant
Collin
Denton
Ellis
Kaufman
Johnson
Parker
Hunt
Henderson
Rockwall
Hood
County

## San AntonioArea VMT Estimates for 2000 by County

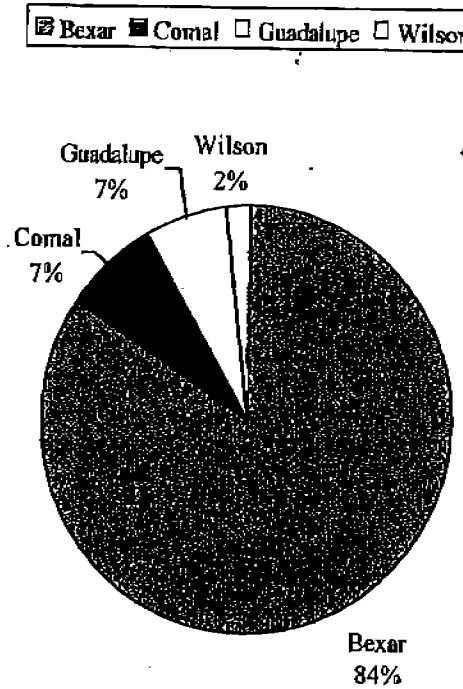



Summary

Governor's Recommended NonAttainment County (Bexar): 85%

Governor's Recommended Attainment Counties (Comal, Guadalupe, Wilson): 15%

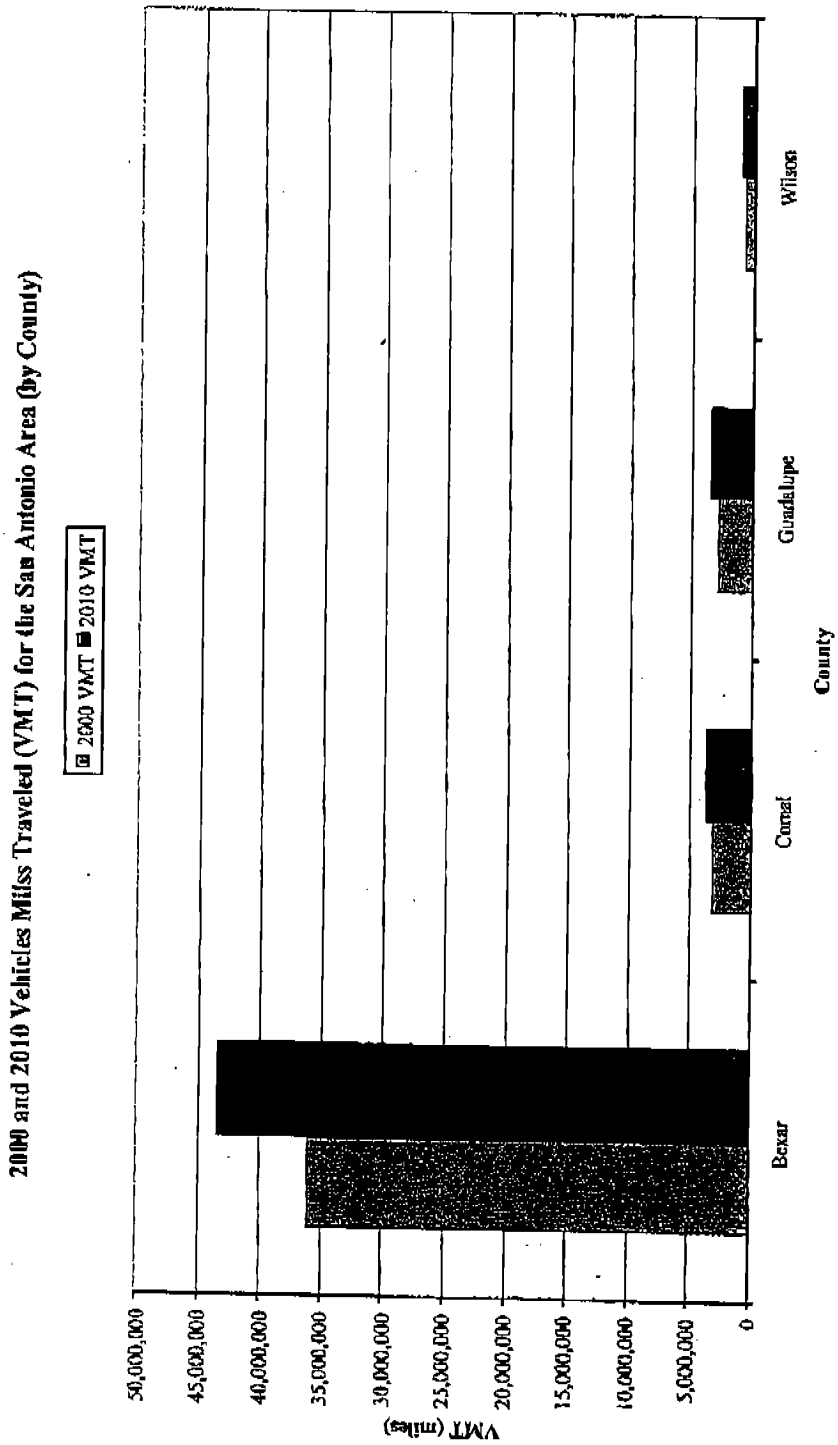
## San AntonioArea VMT Projections for 2010 by County




Summary

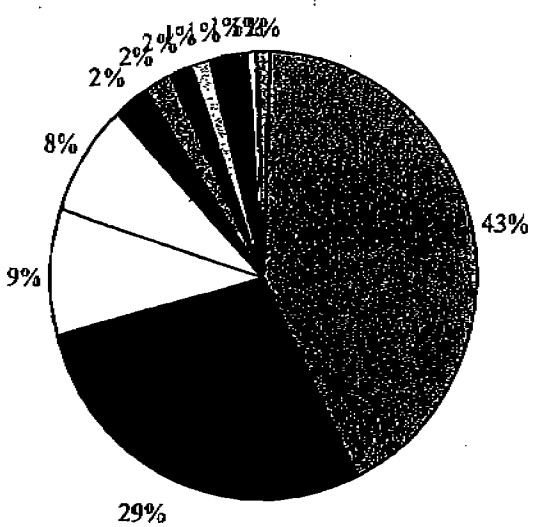
Governor's Recommended NonAttainment County (Bexar): 84%

Governor's Recommended Attainment Counties (Comal, Guadalupe, Wilson): 16%


2000 and 2010 Vehicles Miles Traveled (VMT) for the San Antonio Area (by County)
2000 VMT
2010 VMT
VMT (miles)
50,000,000
45,000,000
40,000,000
35,000,000
30,000,000
25,000,000
20,000,000
15,000,000
10,000,000
5,000,000
0
Bexar
Comal
Guadalupe
Wilson
County

## Attachment 4: Population Data

### 2000 Dallas/Fort Worth Area Population



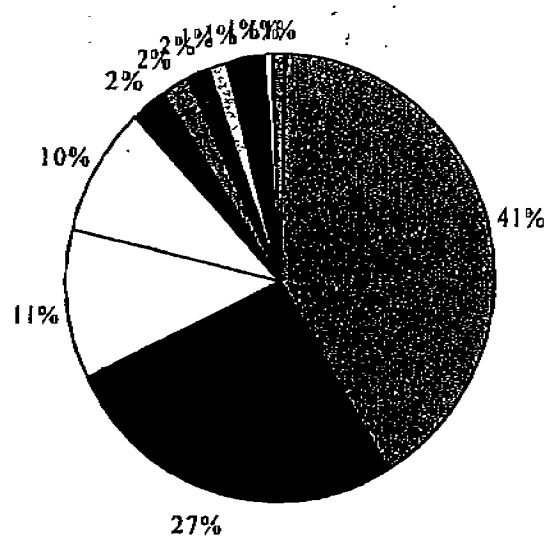

Summary

Governor's Recommended NonAttainment Counties (Dallas, Tarrant, Collin, Denton, Johnson, Ellis, Parker): 95%

Governor's Recommended Attainment Counties (Hunt, Henderson, Kaufman, Rockwall, Hood): 5%

| | | | | | |
|---|---|---|---|---|---|
| Dallas County | Tarrant County | Collin County | Denton County | Johnson County | Ellis County |
| Parker County | Hunt County | Henderson County | Kaufman County | Rockwall County | Hood County |

## 2010 Dallas/Fort Worth Area Population

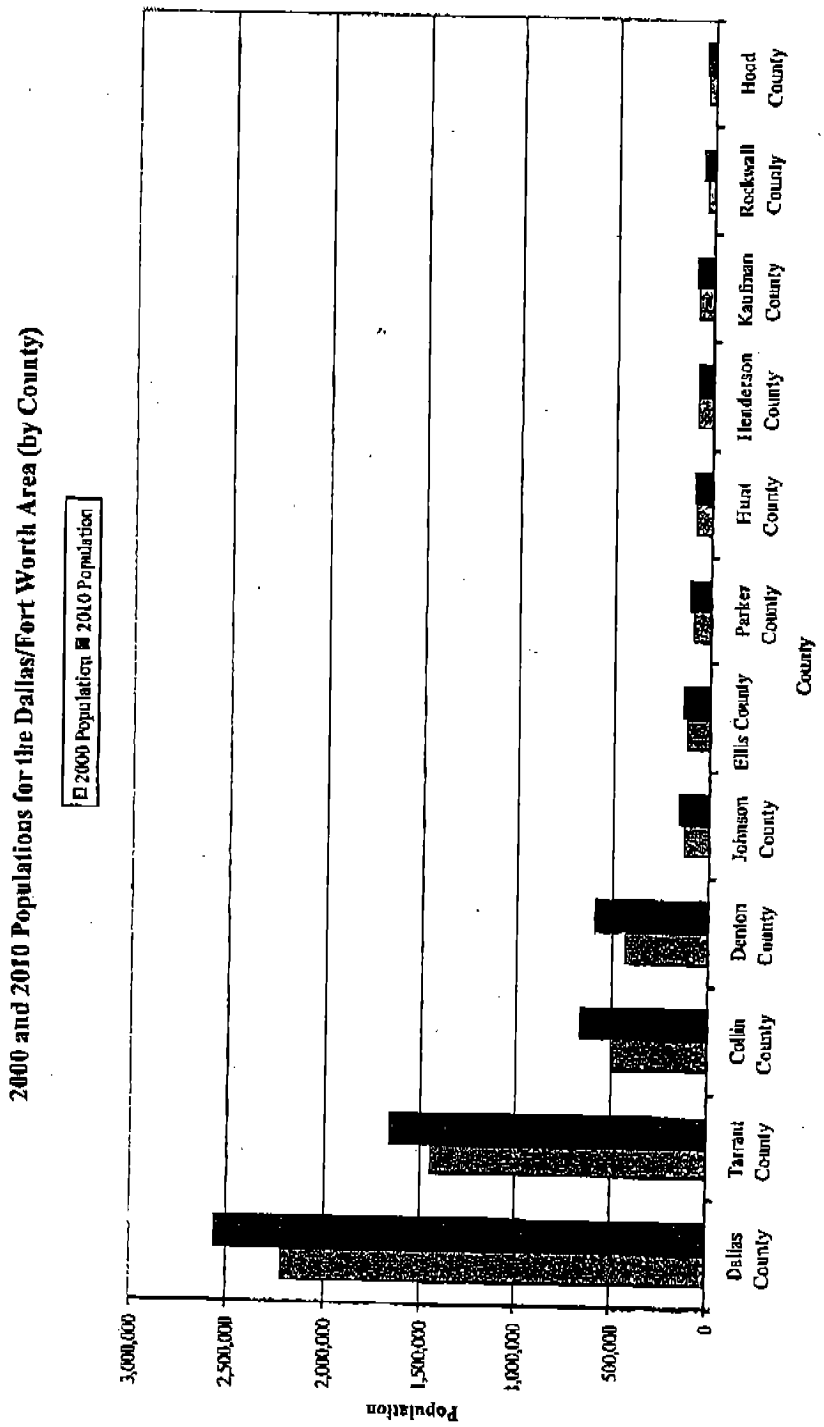



Summary

Governor's Recommended NonAttainment Counties (Dallas, Tarrant, Collin, Denton, Johnson, Ellis, Parker): 95%

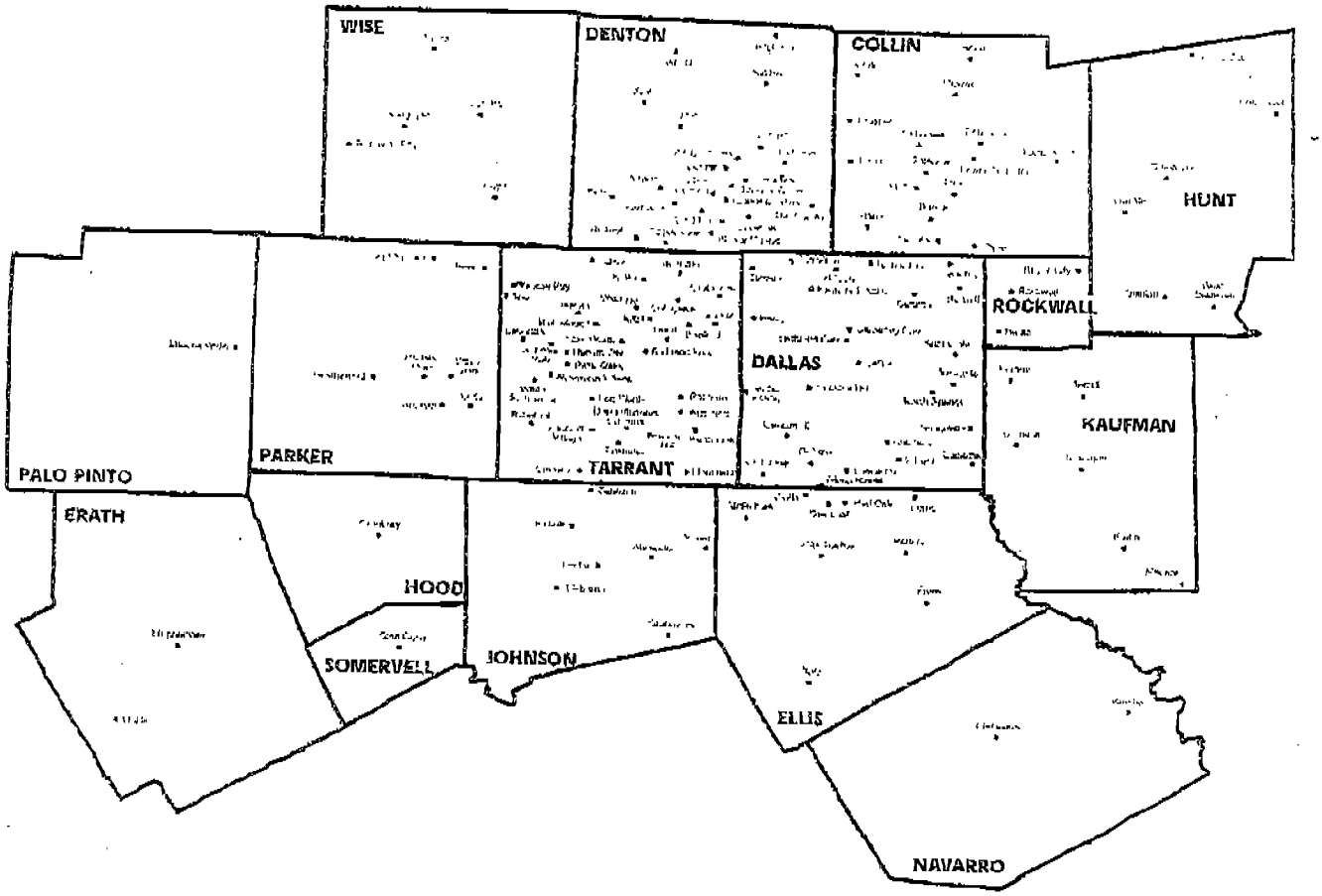
Governor's Recommended Attainment Counties (Hunt, Henderson, Kaufman, Rockwall, Hood): 5%

| | | | | | |
|---|---|---|---|---|---|
| Dallas County | Tarrant County | Collin County | Denton County | Johnson County | Ellis County |
| Parker County | Hunt County | Henderson County | Kaufman County | Rockwall County | Hood County |


2000 and 2010 Populations for the Dallas/Fort Worth Area (by County)
2000 Population
2010 Population
3,000,000
2,500,000
2,000,000
1,500,000
1,000,000
500,000
0
Population
Dallas County
Tarrant County
Collin County
Denton County
Johnson County
Ellis County
Parker County
Hunt County
Henderson County
Kaufman County
Rockwall County
Hood County
County

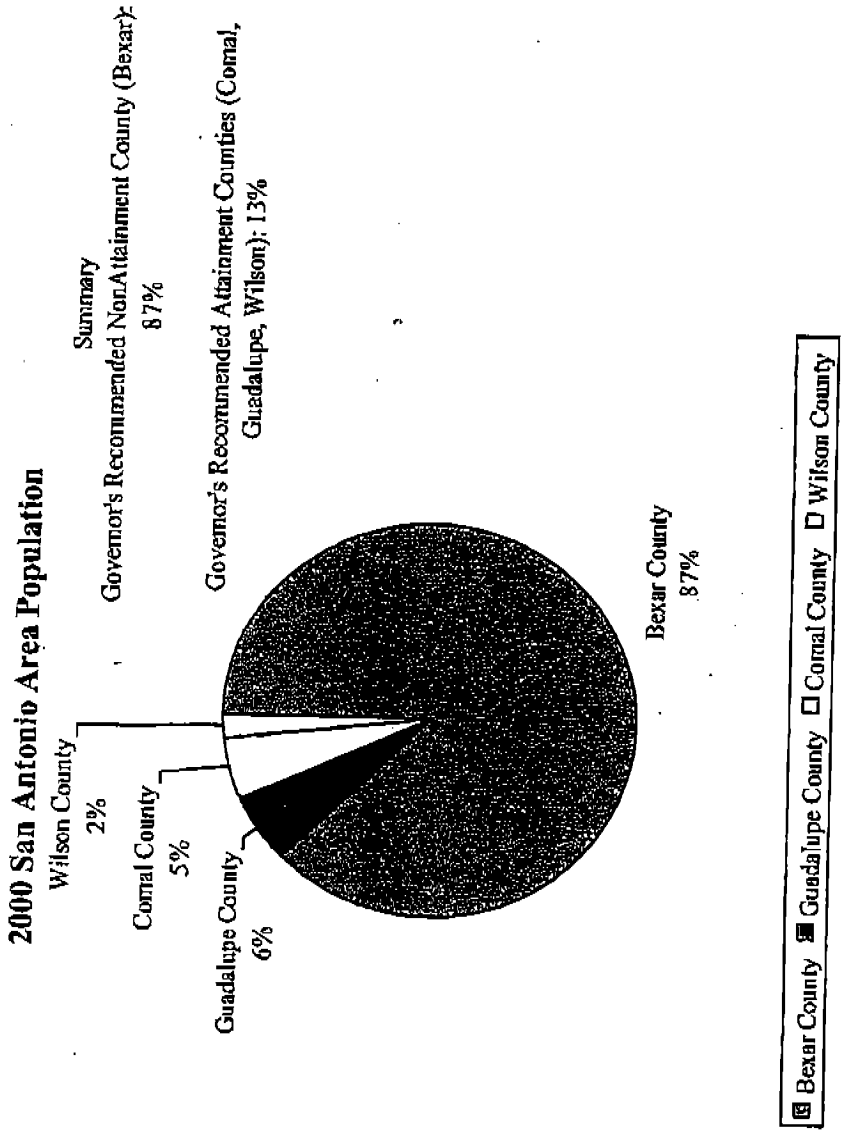
# Map of the North Central Texas Region

(All Cities over 1,000)

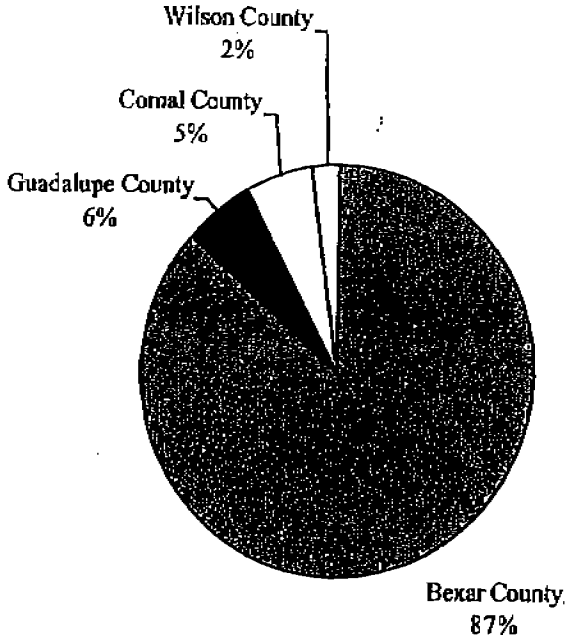



North Central Texas Council of Governments
P.O. Box 5888
Arlington, TX 76005-5888

Source: http://www.dfwinfo.com/ris/population/2003popestimates.pdf


2000 San Antonio Area Population
Wilson County
2%
Comal County
5%
Guadalupe County
6%
Summary
Governor's Recommended NonAttainment County (Bexar): 87%
Governor's Recommended Attainment Counties (Comal, Guadalupe, Wilson): 13%
Bexar County
87%
Bexar County
Guadalupe County
Comal County
Wilson County

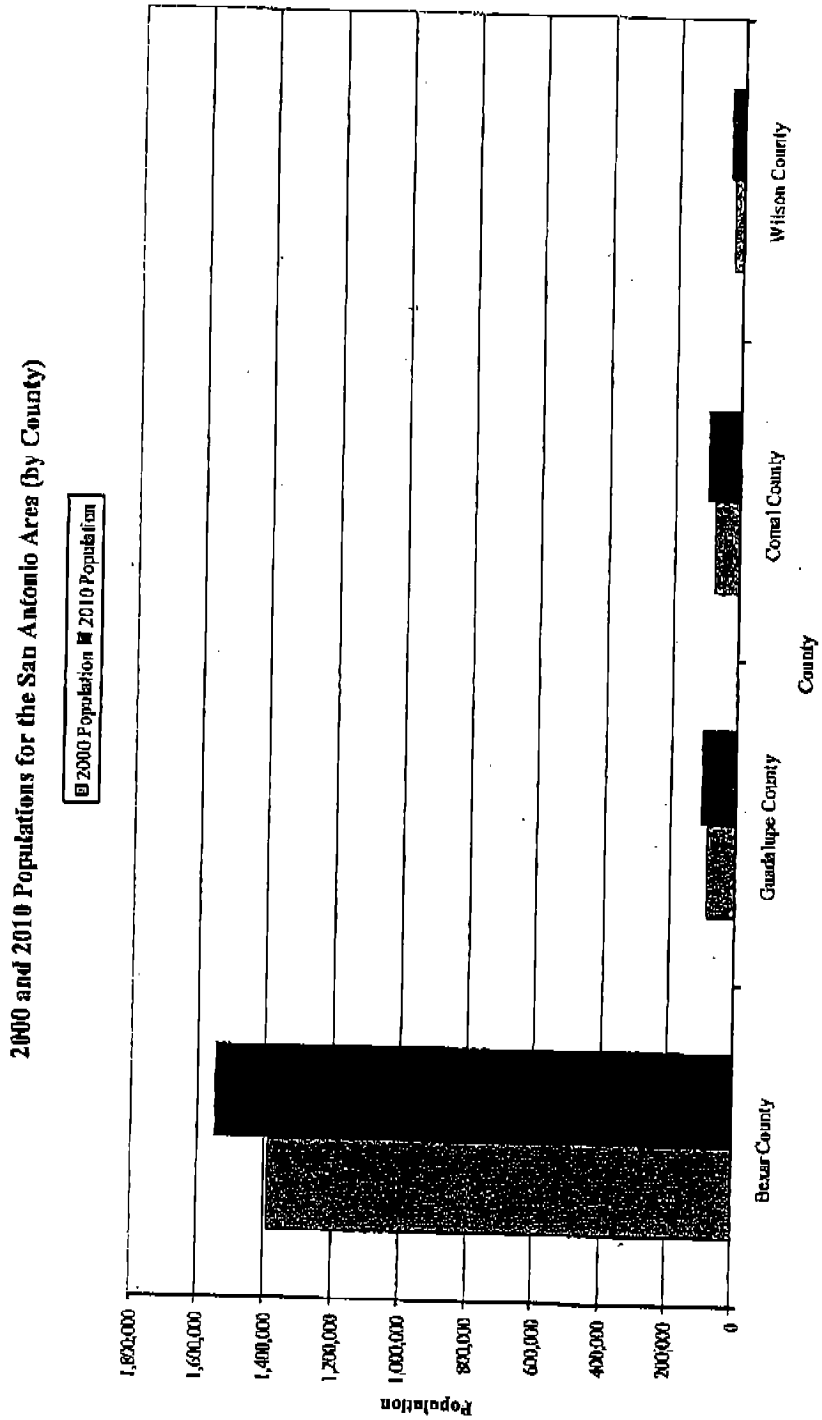
## 2010 San Antonio Area Population




Summary
Governor's Recommended
NonAttainment County (Bexar):
87%

Governor's Recommended
Attainment Counties (Comal,
Guadalupe, Wilson): 13%

Bexar County | Guadalupe County | Comal County | Wilson County


2000 and 2010 Populations for the San Antonio Area (by County)
2000 Population
2010 Population
Population
1,800,000
1,600,000
1,400,000
1,200,000
1,000,000
800,000
600,000
400,000
200,000
0
Bexar County
Guadalupe County
Comal County
Wilson County
County

## Attachment 5: Emissions Inventory Data

(based on 1999 Emissions Inventory data average ozone season weekday)

**Dallas/Fort Worth**

| County | NOx-TPD (%) | VOC-TPD (%) | Emissions Growth-NOx-TPD 2010 (% Total) | Emissions Growth-VOC-TPD 2010 (% Total) |
|---|---|---|---|---|
| Dallas | 258 (38.0) | 198 (36.1) | 194 (32.6) | 155 (36.6) |
| Tarrant | 168 (24.7) | 128 (23.4) | 142 (23.8) | 113 (26.8) |
| Ellis | 52 (7.6) | 33 (6.0) | 58 (9.7) | 21 (5.0) |
| Collin | 51 (7.5) | 31 (5.7) | 44 (7.4) | 28 (6.7) |
| Denton | 43 (6.3) | 30 (5.5) | 31 (5.2) | 32 (7.6) |
| Hood | 28 (4.1) | 26 (4.7) | 32 (5.4) | 4 (1.0) |
| Johnson | 18 (2.6) | 20 (3.6) | 19 (3.2) | 12 (2.8) |
| Parker | 15 (2.2) | 18 (3.3) | 24 (4.0) | 10 (2.4) |
| Henderson | 14 (2.1) | 24 (4.4) | 20 (3.4) | 12 (2.8) |
| Kaufman | 14 (2.1) | 20 (3.6) | 22 (3.7) | 17 (4.0) |
| Hunt | 13 (1.9) | 8 (1.5) | 7 (1.1) | 13 (3.1) |
| Rockwall | 6 (0.9) | 12 (2.2) | 3 (0.5) | 4 (1.0) |
| **Totals** | **680 (100)** | **548 (100)** | **596 (100.0)** | **421 (100.0)** |

**San Antonio MSA**

| County | NOx-TPD (%) | VOC-TPD (%) | Emissions Growth-NOx-TPD 2007 (% Total) | Emissions Growth-VOC-TPD 2007 (% Total) |
|---|---|---|---|---|
| Bexar | 243 (83.8) | 189 (82.9) | 163 (80.7) | 148 (80.9) |
| Comal | 25 (8.6) | 12 (5.3) | 15 (7.4) | 11 (6.0) |
| Guadalupe | 19 (6.6) | 22 (9.6) | 21 (10.4) | 19 (10.4) |
| Wilson | 3 (1.0) | 5 (2.2) | 3 (1.5) | 5 (2.7) |
| **MSA Totals** | **290 (100)** | **228 (100)** | **202 (100.0)** | **183 (100.0)** |