

Memorandum



CITY OF DALLAS

DATE April 25, 2008

TO Transportation and Environment Committee Members:
Linda Koop (Chair), Sheffie Kadane (Vice Chair), Jerry R. Allen, Carolyn R. Davis, Vonciel Jones Hill, Angela Hunt, Pauline Medrano, Ron Natinsky

SUBJECT City of Dallas Ozone Season Program

Attached are the briefing materials on the Ozone Season Program to be presented to the Transportation and Environment Committee on Monday, April 28, 2008.

If you have any questions, please let us know.

A handwritten signature in black ink, appearing to read 'David O. Brown'.

D David O. Brown
Interim Assistant City Manager

Attachment

c: The Honorable Mayor and Members of the City Council
Mary K. Suhm, City Manager
Deborah Watkins, City Secretary
Thomas Perkins, City Attorney
Craig D. Kinton, City Auditor
Judge Jay E. Robinson
Ryan S. Evans, First Assistant City Manager
Ramon F. Miguez, P.E., Assistant City Manager
Jill A. Jordan, P.E., Assistant City Manager
A.C. Gonzalez, Assistant City Manager
David K. Cook, Chief Financial Officer

Ozone Season Program

Presented to
Transportation & Environment Committee
April 28, 2008

Ozone Season

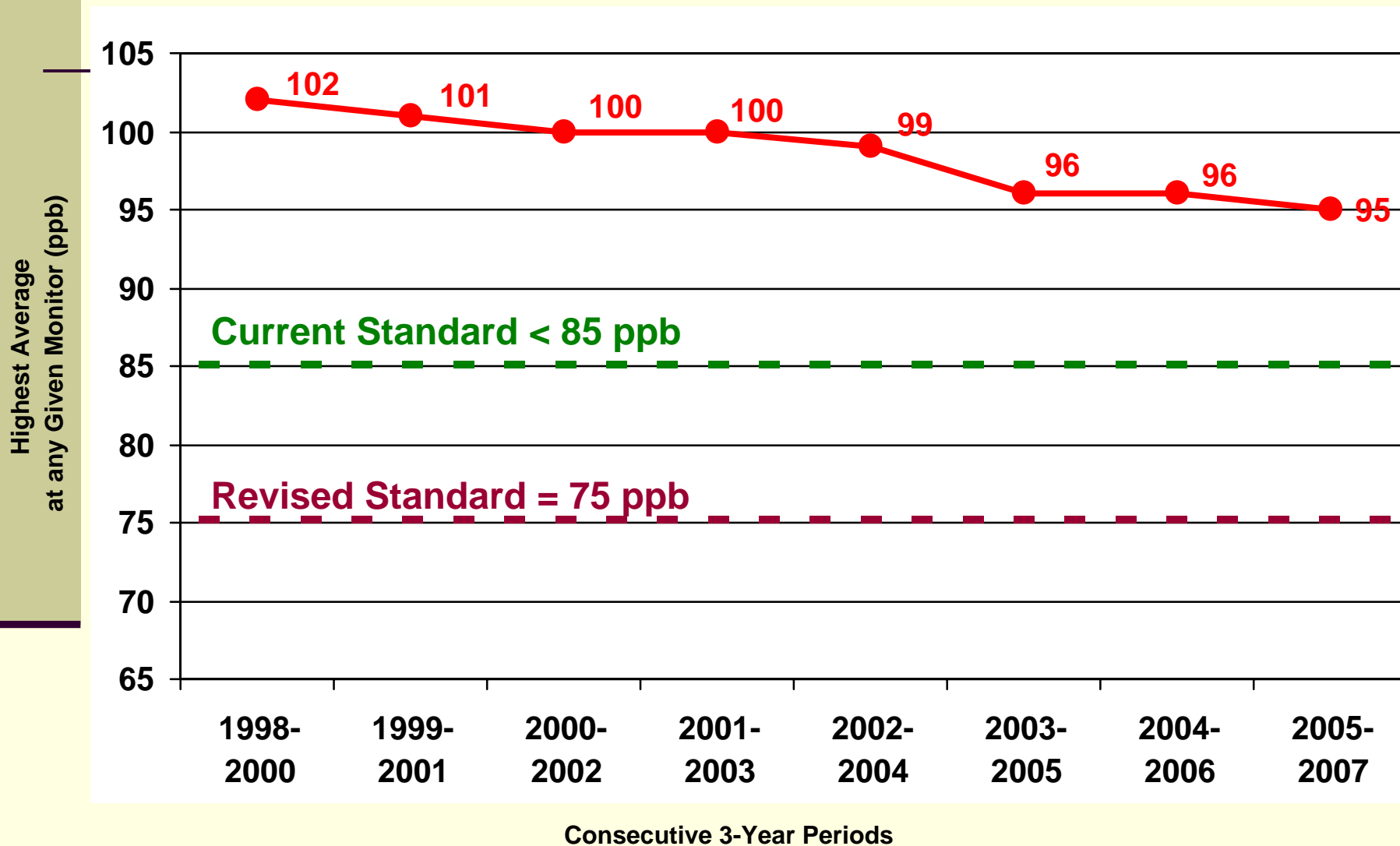
- 184 Days from May 1 through October 31
 - When Ozone, or Smog, a ground-level air pollutant, forms on hot, calm summer days from a chemical reaction of Nitrogen Oxides (NO_x) and Volatile Organic Compounds (VOC) has the highest chances of forming
- 20 ozone monitors continuously sample the ambient air
- 8-hour Ozone Standard
 - 1997 Standard 0.084 parts per million (ppm) or 84 parts per billion (ppb)
 - Current Status: Nonattainment
 - Attainment is reached when the 3-year average of the annual 4th highest daily maximum ozone concentration at each monitor is less than 0.085 ppm or 85 ppb

2007 Ozone Season

- The 4th highest daily maximum was 89 ppb at Denton Airport and Grapevine sites
 - (2006: 100 ppb at Denton Airport)
- The 4th highest 3 year average (2005-07) was 95 ppb at Eagle Mountain Lake site in Tarrant County
 - (2004-2006: 96 ppb at Eagle Mountain Lake)
- At least 11 monitoring sites had 3 year averages above the 85 ppb standard
 - (2006: at least 12 sites above standard)

8-HOUR OZONE HISTORICAL TRENDS*

DFW Nonattainment Area



2007 Ozone Season

Compared with 2006

Air Quality Index	2007 Good Ozone Days	2007 High Ozone Days	2007 High Ozone Forecast Days	2006 Good Ozone Days	2006 High Ozone Days	2006 High Ozone Forecast Days
GOOD (green)	103 (56%)			84 (45.7%)		
MODERATE (yellow)	71 (38.6%)			69 (37.5%)		
UNHEALTHY FOR SENSITIVE GROUPS (orange)		8 (4.3%)	18 (100%)		29 (15.8%)	34 (89.5%)
UNHEALTHY (red)		2 (1.1%)	0		2 (1.0%)	4 (10.5%)
VERY UNHEALTHY (purple)		0	0		0	0
TOTAL (184 days)	174 (94.6%)	10 (5.4%)	18	153 (83.2%)	31 (16.8%)	38

2007 Ozone Season

- 174 good ozone days
- 10 high ozone days exceeded standard
 - 18 High Ozone Days were forecast
 - August had most bad days and highest ozone

	Exceeded Standard	Day & Highest Ozone
May	0	
June	0	
July	2	July 25; 99 ppb
August	5	August 14; 121 ppb
September	2	September 21; 93 ppb
October	1	October 4; 86 ppb
TOTAL	10	

City Ozone Plan

- Promotes activities to reduce emissions of Nitrogen Oxides (NOx) and Volatile Organic Compounds (VOC)
- Affects all City Departments during six-month Ozone Season
- Activity guidelines are included for both Seasonal and predicted high Ozone Days:
 - Hours of Work/Operations
 - Temporarily change hours of operations
 - Compressed work schedules
 - Employee commuting
 - Schedule meetings after 10:00 AM
 - Cancel non-essential vehicle trips or postpone to afternoon
 - Telework
 - Use public transportation
 - Use a plan for carpools and public transportation traveling to and from workplace
 - Carpool to meetings
 - Encourage use of carpools and public transportation during lunch
 - Use of City vehicles and equipment
 - Defer gas/diesel vehicles use until after 10:00 AM
 - Refuel vehicles in late afternoon
 - Restrict maintenance/repair operations that require running vehicles or equipment before 10:00 AM
 - Prohibit idling city vehicles just to use air conditioner
 - Restrict use of small engines for City and contract crews before 10:00 AM
 - Restrict use of certain paints before 10:00 AM
 - Roadway Construction
 - Not allow or cause roadway construction lane closures before 10:00 AM

City Ozone Plan

2007 Employees Trip Reduction Results

- Single occupant vehicle commuting to and from the workplace reduced 13,232,724 miles
- Commuting emissions reduced
 - 15.6 tons NOx
 - 7.4 tons VOC
 - 166.7 tons Carbon Monoxide (CO)
 - 6840.1 tons Greenhouse Gases (CO₂)
- Average of 1545 employees worked compressed schedules each month (16.7% of reduction)
- Average of 390 employees carpooled one or more days each month (8.2% of reduction)
- Average of 418 employees used DART one or more days each month (11.5% of reduction)
- Average of 111 employees Biked, Walked and Teleworked one or more days each month (1.4%)

City Ozone Plan

2007 Employees Trip Reduction Results

- Overall, the City averaged 20.7% reduction in commuting miles and emissions from these activities and not working on days when they were normally scheduled

- In addition:

- Average of 342 meetings were scheduled after 10:00 AM each month due to Ozone Season
- Average of 446 employees carpooled to those meetings each month
- Average of 721 gas/diesel vehicles were deferred for use until after 10:00 AM one or more days each month
- Average of 2,432 employees didn't drive during lunch one or more days each month (97.7% of additional activities)
- Average of 117 employees worked flexible hours one or more days each month to avoid commuting during RUSH hours

City Ozone Plan

2007 Employees Trip Reduction Results

by Department

Department	2007	2007	2007	2006	2005	2004
	Miles	Emissions (tons)	%*	%*	%*	%*
Aviation	220,684	117.2	29.4	32.6	33.5	16.2
Business Dev	38,819	20.6	16.4	19.5	14.1	-
City Attorney	63,574	33.8	8.6	-	-	-
City Auditor	46,053	24.5	25.3	26.7	34.2	-
CMO	33,841	18.0	11.6	-	-	-
City Secretary	11,017	5.9	10.1	-	22.5	-
Civil Service	18,582	9.9	17.8	-	25.1	-
Code	378,684	201.2	22.4	12.3	4.3	3.6
CIS	196,994	104.7	26.3	19.7	21.2	-
Convention	132,544	70.4	25.7	20.0	25.2	-
Courts	167,544	89.0	18.2	18.2	27.6	10.4
Cultural Affairs	90,327	48.0	28.4	27.1	18.0	32.3
Dallas Fire	1,718,667	913.0	17.9	25.0	17.1	10.0
Dev Services	208,925	111.0	15.5	15.4	15.3	3.1
Economic Dev	94,227	50.1	44.7	16.3	-	-
ERF	11,590	6.2	12.1	-	-	-
EHS	381,974	202.9	18.9	17.1	23.0	17.3

City Ozone Plan

2007 Employees Trip Reduction Results

by Department

Department	2007	2007	2007	2006	2005	2004
	Miles	Emissions (tons)	%*	%*	%*	%*
EBS	484,449	257.4	24.4	16.7	14.3	12.2
Financial Ser	139,251	74.0	17.8	-	-	17.1
Housing	202,429	107.5	59.5	25.3	25.8	20.6
HR	71,340	37.9	17.0	30.6	24.5	-
Judiciary	31,307	16.6	20.1	-	-	-
Library	891,920	473.8	36.4	29.2	35.9	29.2
OEM	3,325	1.8	9.5	6.7	18.5	-
OEQ	31,469	16.7	34.5	18.6	14.0	-
Parks	886,627	471.0	19.1	18.0	22.4	12.5
Police	2,524,455	1341.1	13.6	-	9.1	3.6
Public Works	580,921	308.6	27.1	22.5	23.2	13.3
Sanitation	732,552	389.2	29.9	22.1	17.5	8.3
Streets	531,957	282.6	19.0	18.0	-	22.3
Water	2,259,923	1200.6	32.2	21.3	18.4	10.7

* % reduction within the department

City Ozone Plan

2008 Employees Trip Reduction Plan

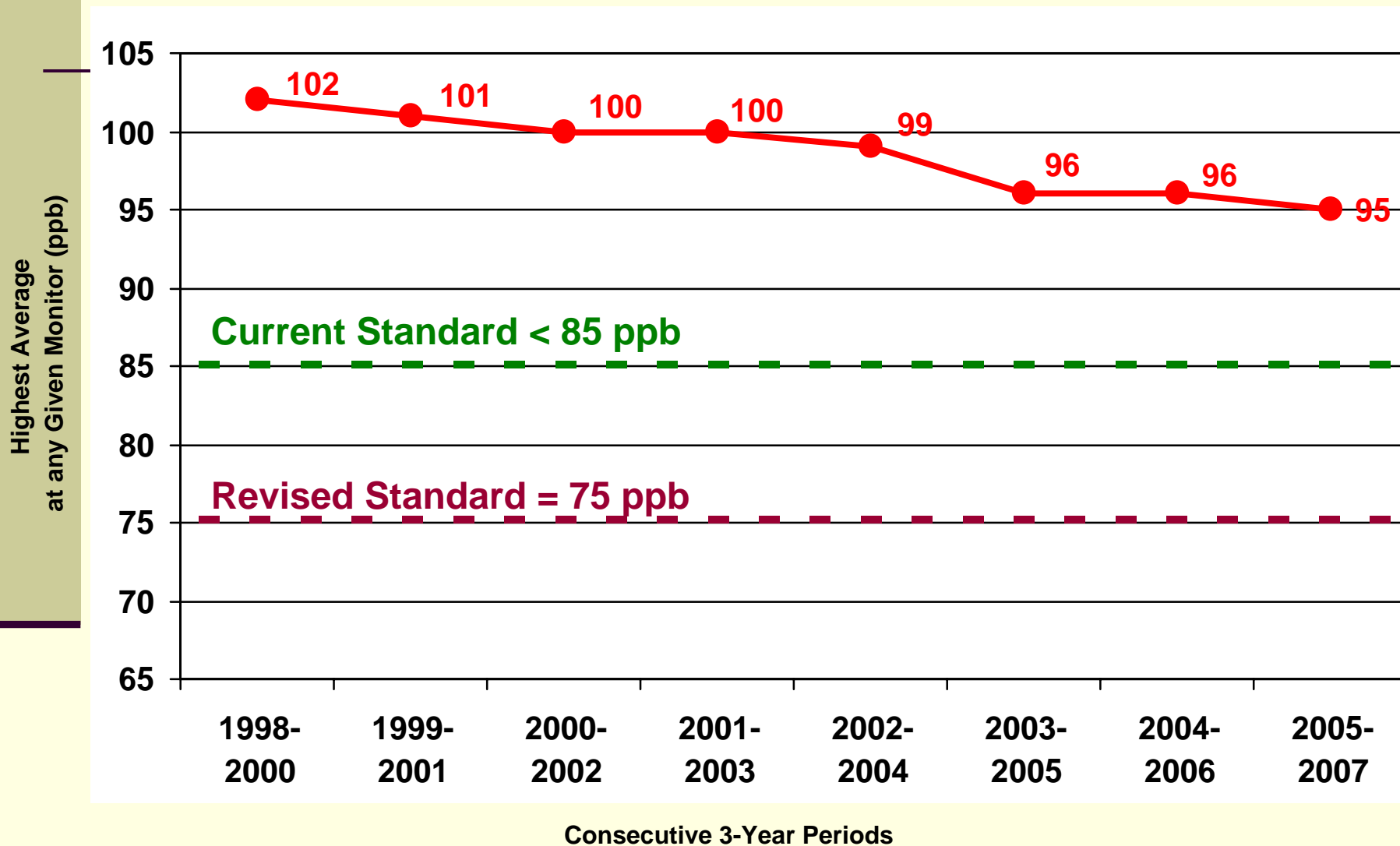
- Continue Ozone Plan activities of previous years, beginning May 1
- Implement 'GreenRide' web-based Software System to report activities and calculate reduced trips and vehicle emissions

Revised National Ozone Standard

- EPA proposed to strengthen the 1997 8-hour standard on June 20, 2007
- Evidence indicated adverse effects occurs at levels below existing standard, particularly in those with respiratory illnesses (primary-health)
- Evidence shows damage to vegetation, trees and crops; increased susceptibility to disease and reduced crop yields at lower levels of ozone (secondary)
- Proposed revised primary and secondary standards:
 - Primary: range 70-75 ppb; consider range 60 ppb to existing 84 ppb
 - Secondary: (1) 3 month daily cumulative range 7 to 21 ppm-hours, or (2) same as primary standard
- EPA issued final standard on March 12, 2008
 - Primary: 75 ppb
 - Secondary: 75 ppb

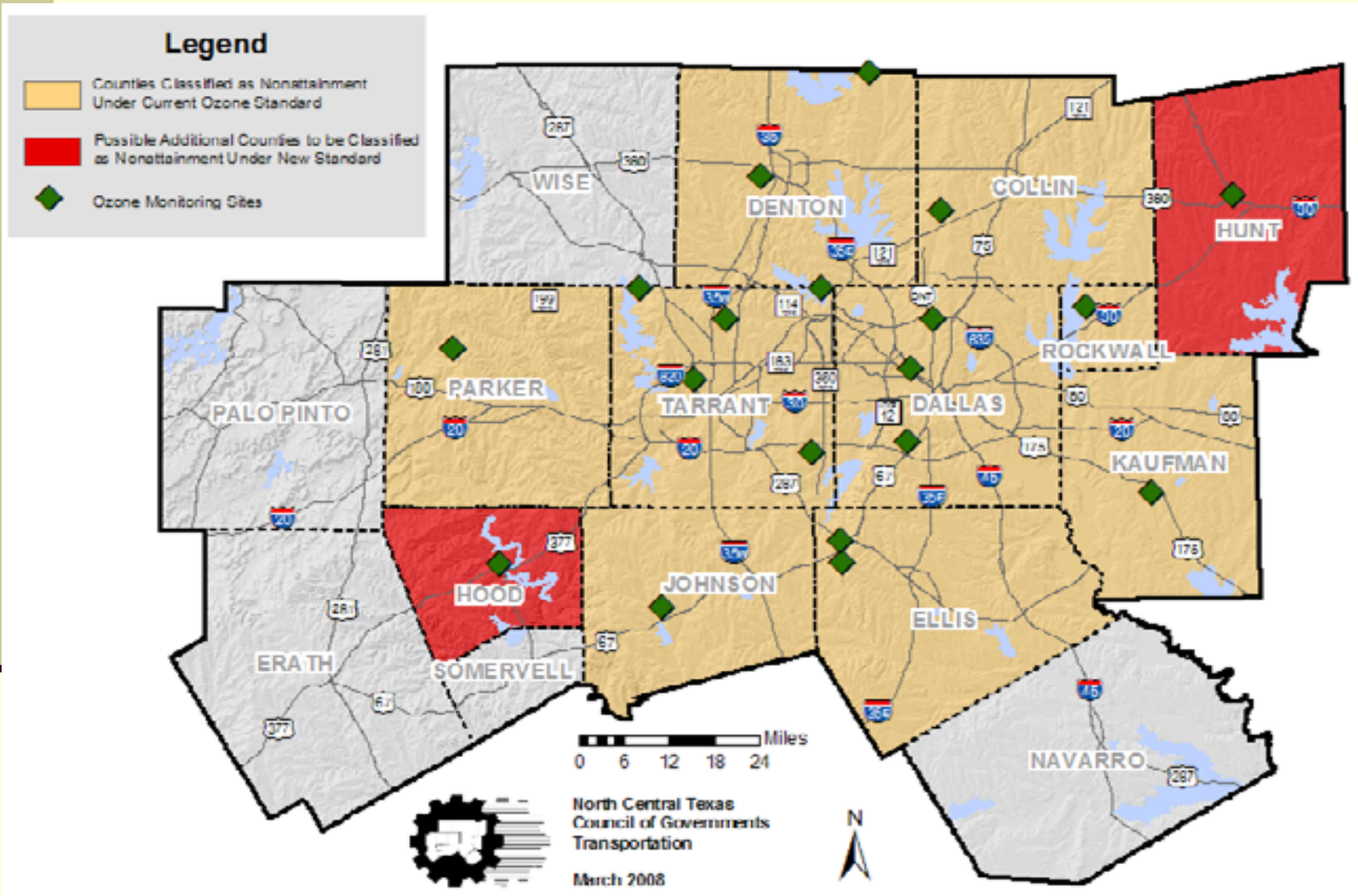
8-HOUR OZONE HISTORICAL TRENDS*

DFW Nonattainment Area



EPA REVISED OZONE STANDARD

Potential 8-Hour Ozone Nonattainment Area



Revised National Ozone Standard

- Local Impact:
 - Under 1997 Standard, during 2007 ozone season, 4 of 20 monitors in DFW Area exceeded standard of 84 ppb
 - Under 2008 Standard, using ozone concentrations during 2007 ozone season, 15 of 20 monitors exceed standard of 75 ppb
 - Hood & Hunt possible additional nonattainment counties

Revised National Ozone Standard

- Implementation Timeline:
 - Signature, final rule: March 12, 2008
 - Effective date: March 12, 2008
 - State designations by: March 2009
 - Final designations by: March 2010
 - SIPs due by: 2013
 - Attainment dates: 2013-2030

EPA intends to propose a monitoring rule to address monitoring requirements necessary to implement the new standards in June 2008 and issue a final rule by March 2009.