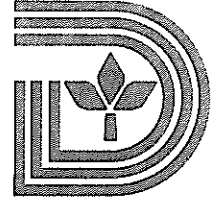


# Memorandum



CITY OF DALLAS

DATE May 8, 2009

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

SUBJECT Presentation on Ozone Season

On May 11, 2009 staff will brief the Committee on Ozone Season. Please find attached a copy of the presentation, and feel free to contact me if you need additional information.

A handwritten signature in black ink, appearing to read 'R. Miguez'.

Ramon F. Miguez  
Assistant City Manager

C: Mary K. Suhm, City Manager  
Deborah A. Watkins, City Secretary  
Thomas P. Perkins, City Attorney  
Craig Kinton, City Auditor  
Judge C. Victor Lander  
David K. Cook, Chief Financial Officer  
Ryan S. Evans, First Assistant City Manager  
A. C. Gonzalez, Assistant City Manager  
Jill A. Jordan, PE, Assistant City Manager  
Ramon F. Miguez, PE, Assistant City Manager  
Forest Turner, Interim Assistant City Manager  
Frank Libro, Public Information Office  
Helena Stevens-Thompson, Assistant to the City Manager  
Eric Griffin, Interim Director, Office of Environmental Quality

# City of Dallas Ozone Season Program

Presented to the  
Transportation and Environment Committee  
May 11, 2009



# Purpose of Briefing

- Announce beginning of 2009 Ozone Season in the City of Dallas
- Recap ozone reduction performance for 2008
- Discuss elements of 2009 Ozone Plan
- Discuss other local and state ozone initiatives

# What is (Ground-level) Ozone?

- Also known as smog, ozone forms when nitrogen oxides ( $\text{NO}_x$ ) and volatile organic compounds (VOCs) mix in the presence of sunlight.
- Primary source of  $\text{NO}_x$ : high-temperature combustion of fossil fuels
  - Cars, trucks, and marine vessels; construction equipment; power generation; industrial processes; and natural gas furnaces
- Sources of VOCs: chemicals that easily vaporize, and incomplete combustion
  - Gasoline stations; motor vehicles, airplanes, trains, boats; petroleum storage tanks; and oil refineries

# What is (Ground-level) Ozone?

- Ozone (O<sub>3</sub>) is regarded as a ground-level air pollutant by the US EPA and World Health Organization (WHO).
- Health effects can include shortness of breath; coughing or wheezing; headaches; nausea and throat and lung irritation.
- US EPA regulates ozone under health-based standards called National Ambient Air Quality Standards (NAAQS).
- The North Central Texas region is out of compliance with NAAQS, a condition known as non-attainment.

# 2009 Ozone Season

- May 1 through October 31 (184 days)
- 20 ozone monitors throughout the DFW region continuously sample ambient air
- Region is attempting to attain the 8-hour ozone standard
  - 84 parts per billion (ppb)
  - Attainment is reached when the 3-year average of the annual 4th highest daily maximum ozone concentration at each monitor is less than 85 ppb
  - Date to meet standard: June 2010

# 2008 Ozone Season

- 55 ozone watch/warning days and 9 exceedance days (85 ppb standard).
- Highest reading was 98 ppb at Eagle Mountain Lake.
- The 4th highest daily maximum was 85 ppb at Eagle Mountain Lake and Keller sites
- The 4th highest 3-year average (2006-08) was 91 ppb at Denton Airport
- At least 4 monitoring sites had 3-year averages above the 85 ppb standard

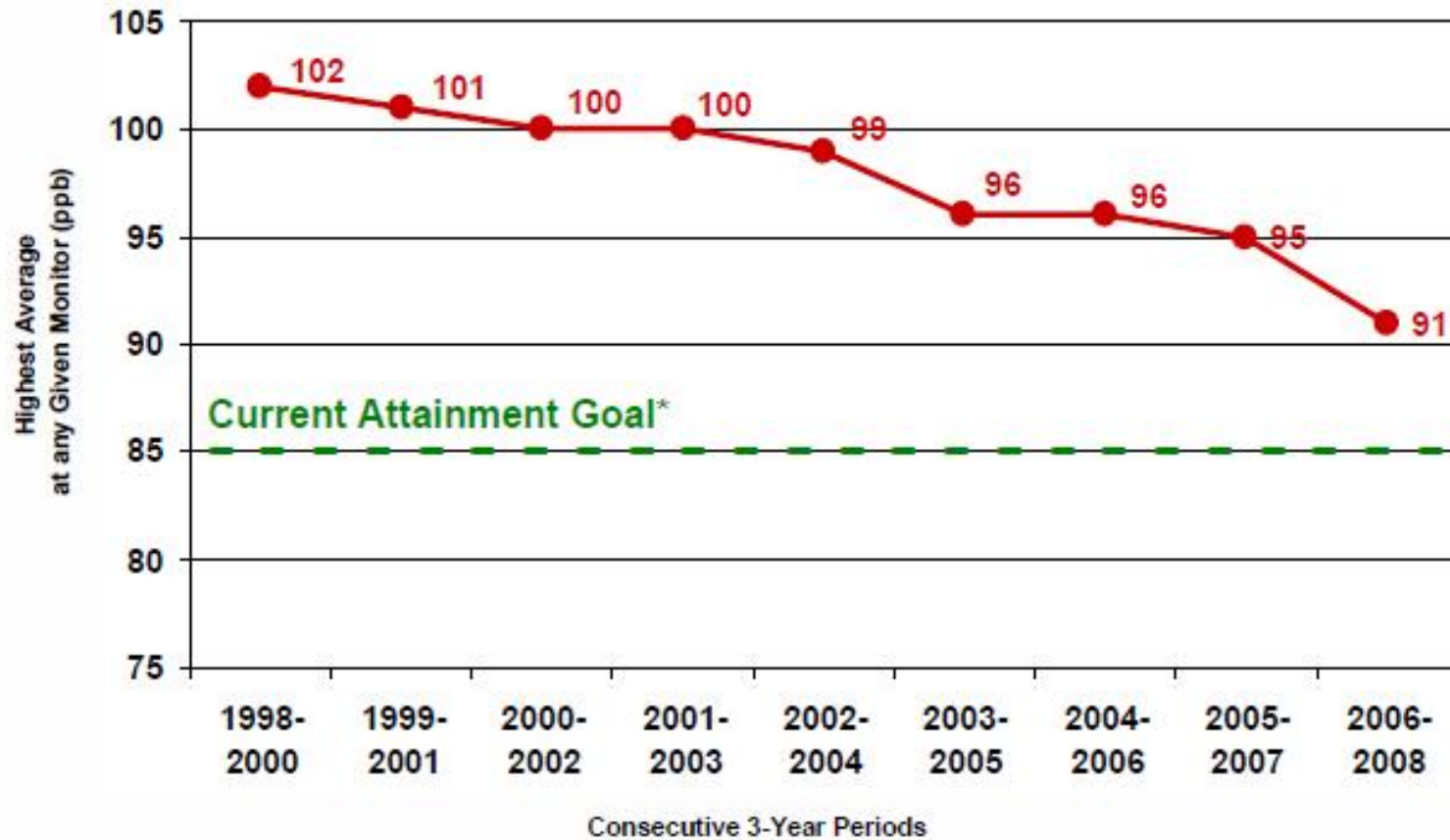
# 2008 Ozone Season

Air Quality Index	2008 Good Ozone Days	2008 High Ozone Days	2007 Good Ozone Days	2007 High Ozone Days
GOOD (green)	122 (66.3%)		103 (56%)	
MODERATE (yellow)	52 (28.3%)		71 (38.6%)	
UNHEALTHY FOR SENSITIVE GROUPS (orange)		10 (5.4%)		8 (4.3%)
UNHEALTHY (red)				2 (1.1%)
VERY UNHEALTHY (purple)				0
TOTAL (184 days)	174 (94.6%)	10 (5.4%)	174 (94.6%)	10 (5.4%)



# 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).

# City Ozone Plan

- Promotes activities to reduce emissions of NO<sub>x</sub> and VOCs
- Applies to all City Departments and employees 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 GreenRide to plan a carpool/vanpool

# City Ozone Plan

- Activity guidelines are included for both Seasonal and predicted high Ozone Days (cont.):
  - 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 of city vehicles
    - 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

## **2009 Employees Trip Reduction Plan:**

- Continue Ozone Plan activities of previous years, beginning May 1
- Continue with GreenRide web-based Software System to report activities and calculate trips and vehicle emissions savings (began 2008)
- Advertise changes on GreenRide to encourage more carpooling and overall use of GreenRide for commute reporting

# City Ozone Plan

## 2008 Employees Trip Reduction Results:

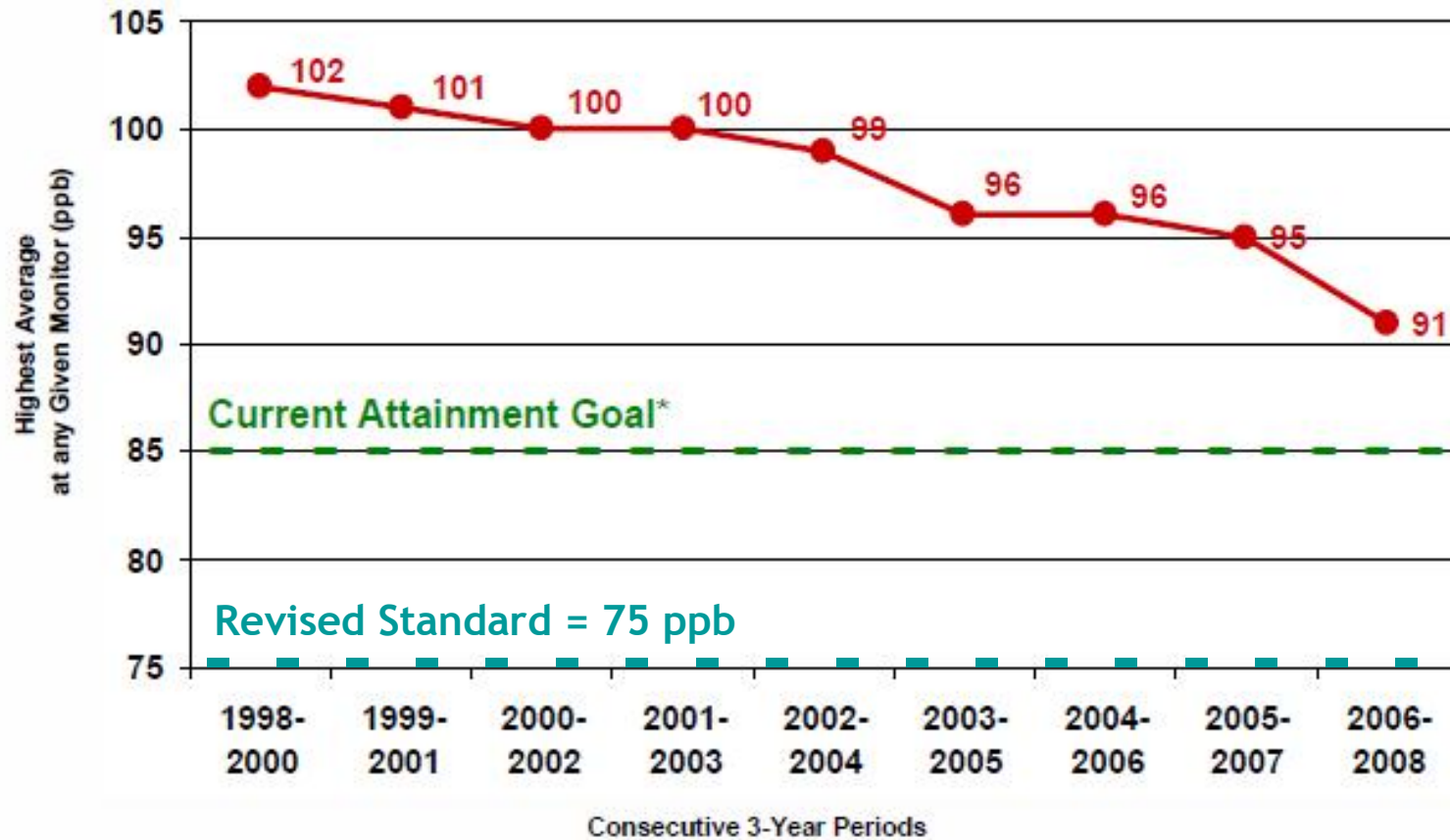
- Non-single occupant vehicles commuting to and from the workplace reduced 11,640,769 miles
- Commuting emissions reduced
  - 9.4 tons NO<sub>x</sub>
  - 16.7 tons VOC
  - 124 tons Carbon Monoxide (CO)
  - 4993.2 tons Greenhouse Gases (CO<sub>2</sub>)
- 6% emissions reduction from carpooling
- 8% emissions reduction from riding DART
- 12% emissions reduction from compressed work schedules

# Revised Ozone Standard

- EPA has strengthened the 1997 8-hour standard to 75 ppb (WHO recommends 51 ppb) which goes into effect in June 2010
- If applied to 2008 ozone season, 17 of 20 monitors in DFW would have exceeded the standard
- Hood & Hunt will likely be added to DFW nonattainment counties

# Revised Ozone Standard

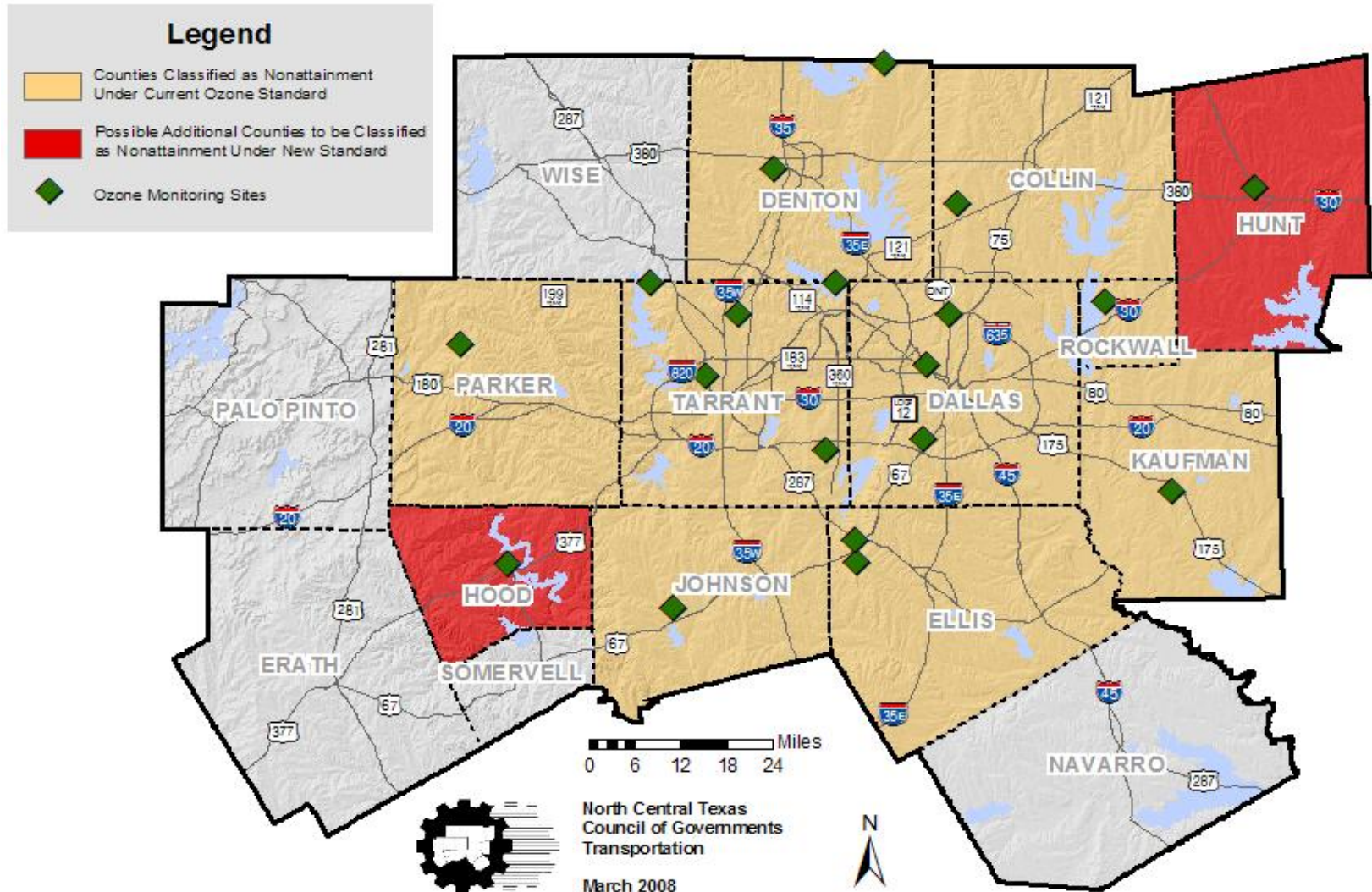
## DFW Nonattainment Area



\* 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).

# Revised Ozone Standard

## Potential 8-Hour Ozone Nonattainment Area





# Revised Ozone Standard

## Implementation Timeline:

- Signature, final rule: ✓ March 12, 2008
- Effective date: ✓ May 27, 2008
- State designations by: ✓ March 2009
- Final designations by: March 2010
- SIPs due by: 2013
- Attainment dates: 2013-2030

# Other City of Dallas Initiatives

- **Anti-Idling Ordinance**
  - Passed May 23, 2007
  - Prohibits vehicle with a gross weight of 14,000 lbs and over from idling for more than 5 minutes
  - Enforceable April-October of each year
- **Green Cement Purchasing Policy**
  - Passed May 23, 2007
  - Specifies the purchase of dry kiln cement as the base bid in City of Dallas bid packages, with an alternative bid for the purchase of cement from a unspecified source and preferential purchasing for bids from a cement kiln with emission rates of 1.7 pounds of NO<sub>x</sub> per ton of clinker or less

# Other City of Dallas Initiatives

- Texas Emissions Reduction Plan (TERP)
  - Outreach coordinator assists citizens with grant applications to reduce emissions from heavy duty vehicles
  - Outreach coordinator also assists City of Dallas departments with grant applications to replace or upgrade fleet vehicles and equipment
- AirCheckTexas (also known as LIRAP)
  - Outreach Coordinator promotes program to City employees and to citizens through chambers of commerce, outreach events

# State Legislative Initiatives

- HB 2355 and 2174: strengthens municipal ability to specify the type of cement for purchase.
- HB 3424: states that a cement kiln that is located in an area designated as a non-attainment area for a national ambient air quality standard may not emit more than 1.7 pounds of nitrogen oxides for each ton of clinker produced by the kiln.
- SB 760: allows the Texas Commission on Environmental Quality (TCEQ) to test selective catalytic reduction (SCR) technology at a dry cement kiln facility.

# State Legislative Initiatives

- HB 1920: anti-idling rule amendments
  - Restricts vehicles 6,000 lbs and over from idling for more than 5 minutes
  - Proposes to enforce the rule year round
- HB 4346/SB 184: preparation of a list of strategies for reducing GHGs in the state of Texas
- HB 16: omnibus air quality bill regarding emissions, energy efficiency, funding, among others

# Appendix: 2008 Trip Reduction Results by Department

Department	2008	2008	2007	2006	2005
	Miles	Emissions (tons)	%*	%*	%*
Aviation	150602	69.65	29.4	32.6	33.5
Business Dev	167696	77.55	16.4	19.5	14.1
City Attorney	82393	38.1	8.6	-	-
City Auditor	47915	22.16	25.3	26.7	34.2
CMO	21944	10.15	11.6	-	-
City Secretary	12271	5.7	10.1	-	22.5
Civil Service	26386	12.2	17.8	-	25.1
Code	188135	87	22.4	12.3	4.3
CIS	136836	63.3	26.3	19.7	21.2
Convention	131659	60.8	25.7	20.0	25.2
Courts	164456	76.1	18.2	18.2	27.6
Cultural Affairs	39894	18.45	28.4	27.1	18.0
Dallas Fire	1632726	755.08	17.9	25.0	17.1
Dev Services	257165	118.93	15.5	15.4	15.3
Economic Dev	22114	10.23	44.7	16.3	-
ERF	15508	7.17	12.1	-	-
EHS	319770	147.88	18.9	17.1	23.0

# Appendix: 2008 Trip Reduction Results by Department

Department	2008	2008	2007	2006	2005
	Miles	Emissions (tons)	%*	%*	%*
EBS	499782	231.13	24.4	16.7	14.3
Housing	69812	32.3	59.5	25.3	25.8
HR	44543	20.6	17.0	30.6	24.5
Library	385697	178.4	36.4	29.2	35.9
OEM	2344	1.08	9.5	6.7	18.5
OEQ	35171	16.3	34.5	18.6	14.0
Parks	956790	442.5	19.1	18.0	22.4
Police	2546349	1177.6	13.6	-	9.1
Public Works	502847	232.55	27.1	22.5	23.2
Sanitation	491634	227.4	29.9	22.1	17.5
Streets	682225	315.5	19.0	18.0	-
Water	1960409	906.6	32.2	21.3	18.4