

Memorandum



CITY OF DALLAS

DATE June 20, 2014

TO Honorable Members of the Quality of Life & Environment Committee:
Dwayne R. Caraway (Chair), Sandy Greyson (Vice Chair), Rick Callahan, Carolyn R. Davis, Lee M. Kleinman, Adam Medrano

SUBJECT **DFW Air Quality and State Implementation Plan Update**

On Monday, June 23, 2014, the Quality of Life & Environment Council Committee will be briefed on a DFW Air Quality and State Implementation Plan Update.

The following materials are attached for your review:

1. DFW Air Quality and State Implementation Plan Update Briefing

If you have any questions or require additional information, please do not hesitate to contact me.

A handwritten signature in blue ink, appearing to read 'Jill Jordan'.

Jill A. Jordan, P.E.
Assistant City Manager

c: The Honorable Mayor and Members of the City Council
A.C. Gonzalez, City Manager
Warren M.S. Ernst, City Attorney
Rosa A. Rios, City Secretary
Judge Daniel F. Solis, Administrative Judge
Craig D. Kinton, City Auditor
Ryan S. Evans, Interim First Assistant City Manager
Forest E. Turner, Assistant City Manager
Joey Zapata, Assistant City Manager
Charles M. Cato, Interim Assistant City Manager
Theresa O'Donnell, Interim Assistant City Manager
Jeanne Chipperfield, Chief Financial Officer
Shawn Williams, Interim Public Information Officer
Elsa Cantu, Assistant to the City Manager – Mayor and Council

DFW Air Quality and State Implementation Plan Update

Quality of Life and Environment Committee
June 23, 2014

Presented by the Office of Environmental Quality

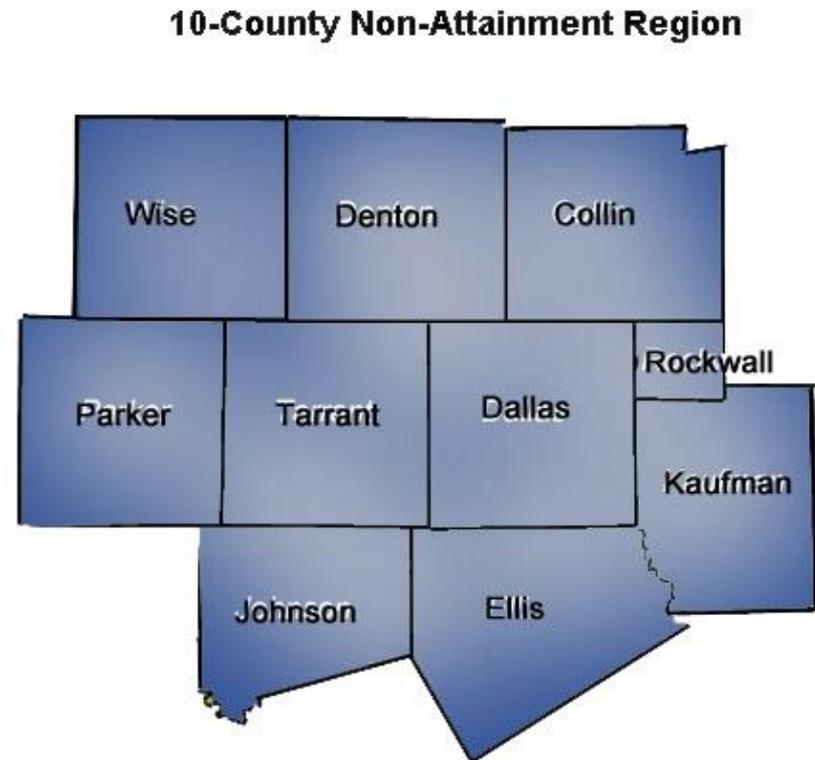


Air Quality Standards

- **Federal Clean Air Act:** Passed in 1970; Amended in 1990
- Requires the Environmental Protection Agency (EPA) to establish health-based standards called National Ambient Air Quality Standards (NAAQS)
- Six Criteria Pollutants
 - ❑ Ground Level Ozone/Smog (O₃)
 - ❑ Particulate Matter (PM)
 - ❑ Lead (Pb)
 - ❑ Nitrogen Dioxide (NO₂)
 - ❑ Sulfur Dioxide (SO₂)
 - ❑ Carbon Monoxide (CO)

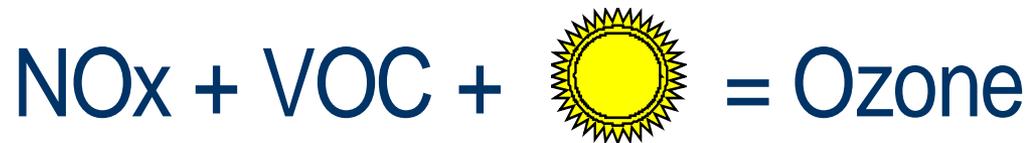
DFW Ozone Non-Attainment Area

- DFW region is currently a serious non-attainment area for the 1997 85 ppb ozone standard.
- Wise County was added in 2012, making a 10-county, moderate non-attainment region for the 2008 75ppb ozone standard.



Ground-Level Ozone Formation

Ozone forms when nitrogen oxides (NO_x) and volatile organic compounds (VOC) mix in the presence of strong ultraviolet (UV) rays from sunlight and heat.



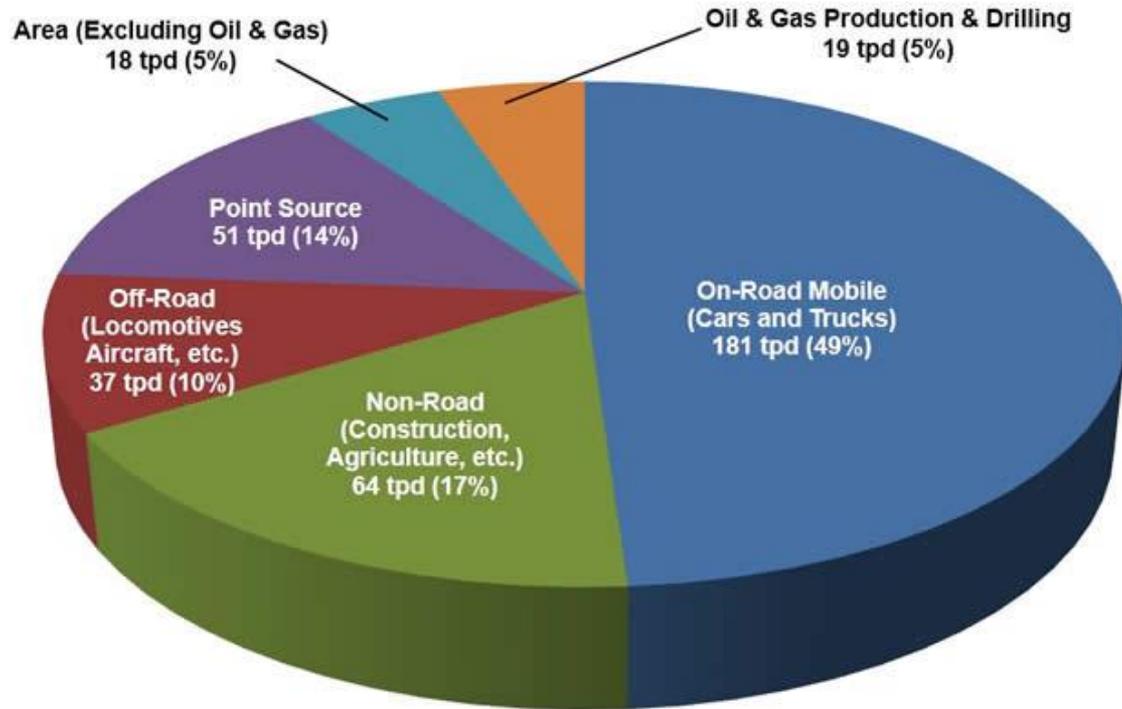
Primary Sources of NO_x

- High-temperature combustion of fossil fuels
 - ❑ Cars, trucks, and marine vessels
 - ❑ Construction equipment
 - ❑ Power generation
 - ❑ Industrial processes
 - ❑ Natural gas furnaces



Primary Sources of NO_x in North Texas Region

STATE OF AIR QUALITY IN NORTH TEXAS
Estimated 2012 Nitrogen Oxide (NO_x) Emissions Inventory
Source Category Estimates = 370 tons per day (tpd)



Source: Texas Commission on Environmental Quality

Primary Sources of VOC

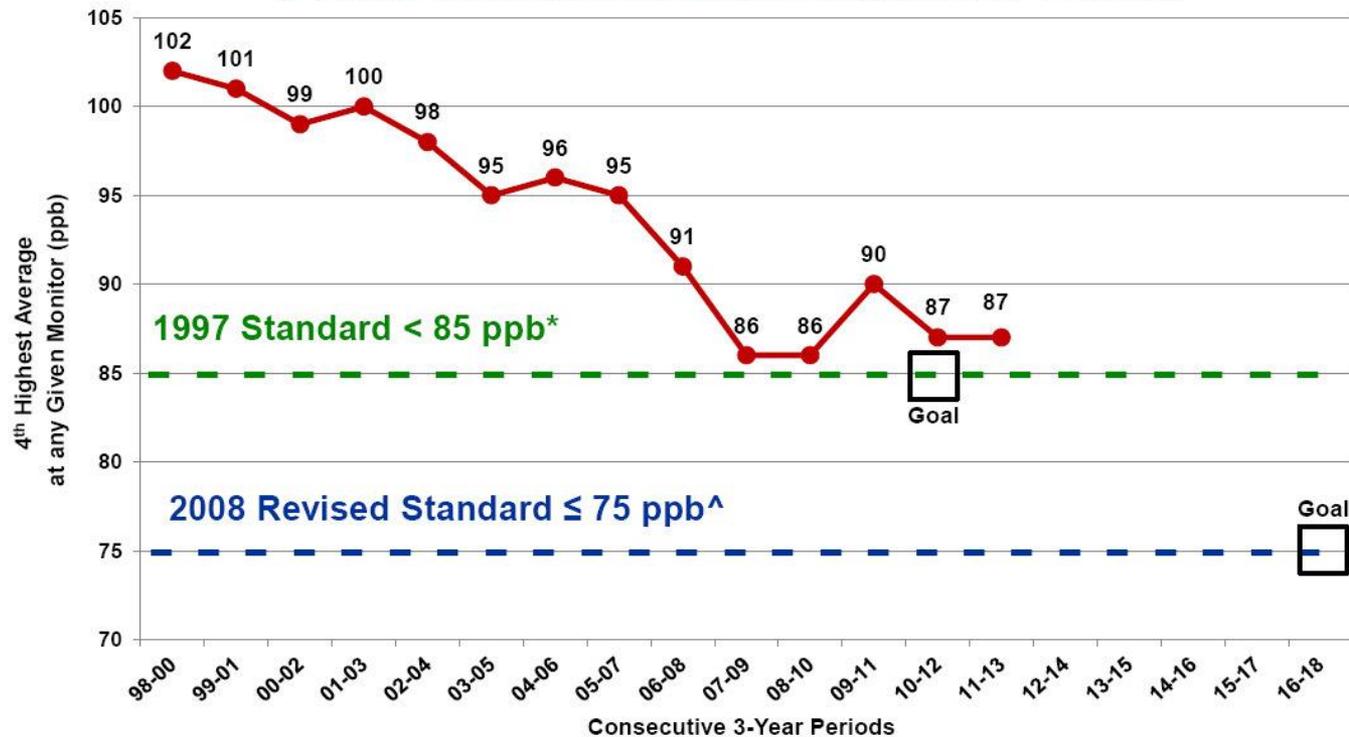
- Chemicals that easily vaporize and incomplete combustion of fuels
 - Gasoline stations
 - Motor vehicles, airplanes, trains, boats
 - Petroleum storage tanks
 - Oil refineries



DFW Historical Ozone Trends

2013 OZONE SEASON RECAP

8-Hour Ozone Standard Historical Trends



*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).

^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 equal to or less than 75 parts per billion (ppb).

Note: The 2013 data has not been verified by the TCEQ. This is the most current data, but it is not official until certified by TCEQ technical staff.

Source: NCTCOG TR Dept

State Implementation Plan (SIP)

- Applies to areas not meeting federal National Ambient Air Quality Standards (ozone for DFW)
- Prepared by TCEQ, approved by EPA
- SIP is designed to reduce pollution to meet health-based standards
- Sets control strategies for reducing emissions
- Establishes a technical and regulatory process for achieving and demonstrating attainment

Most Effective SIP Control Strategies

- Federal on-road and non-road NO_x and VOC reduction measures
 - Reformulated gasoline, Texas Low Emission Diesel
 - Federal Low Emissions Vehicles program
- Adopt new State regulations requiring emission limits and control of NO_x from combustion sources (industrial, commercial, institutional)
- Encourage Local Initiatives
 - Voluntary Mobile Emissions Reduction Program
 - Clean vehicle programs, locally-enforced idling restrictions, aviation efficiencies
 - Transportation Control Measures
 - Bicycle/pedestrian projects, HOV/managed lanes projects, mass transit projects

SIP Timeline

- With the adoption of the 2008 75 ppb Ozone standard, a new SIP must be submitted by TCEQ and approved by EPA
 - TCEQ anticipated public comment period: December 2014 – January 2015
 - TCEQ anticipated adoption: May/June 2015
- 2008 75 ppb Ozone standard attainment deadline: December 18, 2018

Current City Air Quality Control Strategies

- Reduce Vehicle Emissions
 - Anti-idling Policy
 - City Clean Fleet Vehicle Policy
 - Alternative Fuel Fleet
- Adopt new regulations and policies
 - Anti-idling Ordinance
 - Taxi Ordinance
 - City Ozone Action Plan
 - Cement Resolution
 - Green Building Resolution and Ordinance
 - Tree Ordinance

Current City Air Quality Control Strategies (cont'd)

- Reduce Electrical Consumption
 - Water Conservation Plan
 - Co-generation
 - Building Retrofits
 - Methane Gas Capture
 - Energy Performance Contracting
- Purchase Renewable Energy

Possible Future City Initiatives

- Stricter adherence to anti-idling policy for City vehicles
- More education on air quality and training to reduce air pollution
- More emphasis on employee trip reduction programs
- Continue energy benchmarking and reduction/retrofit programs for City and commercial buildings to reduce pollution from power plants
- Increase tree planting to reduce Urban Heat Island effects and reduce air pollution

Possible Future City Initiatives (cont'd)

- Enhance City programs to encourage biking and use of mass transit
- Provide incentives for City employees to bike or use mass transit
- Consider office supply delivery management
- Investigate use of new technologies and pilot demonstration projects to reduce air pollution
- Implement comprehensive greenhouse gas and ozone reduction plan

Next Steps

- Continue to monitor TCEQ and NCTCOG announcements and meetings regarding SIP status
- Review draft SIP during the expected public comment period of December 2014 through January 2015
- Brief Council on SIP status in early 2015

Questions