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The Bluest Skies in Texas

Air is primarily oxygen, nitrogen, and small amounts of other gases. Air pollution develops when human activity and natural sources affect this gaseous mix. Three main sources pollute these gases:

- **Sources that don't move:** these include factories, refineries, and power plants. These are called **point sources** because they can be traced to a single point or location.
- **Sources that do move:** these include cars, construction equipment, lawn mowers, all terrain vehicles, and boats. These are called **mobile or nonpoint sources** because the cannot be traced to a single point or location.
- **Sources that grow naturally:** these include trees and grass and flowers. They are called **biogenic sources**.

A Smoldering Problem

- Air quality has long been an issue of much debate and continued controversy.
  - The global impact resulting from the combustion of fossil fuels for energy is still hotly contested.
  - The local impact, however, is far from invisible and growing more pressing every year.
- Without agreement on the overall problem, it is difficult to create an encompassing solution.

Texas History

- Beginning as far back as **1952**, the State of Texas has been studying air quality.
- **1956:** Texas' first air quality initiative is established when the State Department of Health begins air sampling in the state.
- **1963:** The U.S. Congress enacts the Federal Clean Air Act.
- **1965:** The Texas Clean Air Act establishes the Texas Air Control Board, in the Department of Health, to monitor and regulate air pollution in the state.
- **1966:** The first Texas Air Control Board members are appointed.
- **1967:** The Texas Air Control Board adopts first air regulations.
- **1969:** Texas takes over most federal air monitoring; Executive Order creates the Federal Environmental Protection Agency (EPA).
- **1970:** The Federal Clean Air Act is amended requiring states to develop State Implementation Plans (SIP).
- **1971:** EPA adopts National Ambient Air Quality Standards; the Texas Air Control Board establishes air permits program.
- **1972:** The Texas Air Control Board submits the first State Implementation Plan to the EPA. It also deploys the first continuous air monitoring station.

Texas History

- **1973:** The Legislature removes the Texas Air Control Board from the Department of Health, making it an independent state agency.
- **1974:** Texas et al vs. the U.S. Environmental Protection Agency challenges EPA's plan for controlling ozone in Texas; The Texas Air Control Board completes deployment of first continuous monitoring network.
- **1975:** Texas Air Control Board proposes Texas' Five-Point Plan amendment to the Federal Clean Air Act.
- **1977:** Federal Clean Air Act amended.
- **1978:** The EPA establishes National Ambient Air Quality Standards for lead.
- **1979:** The Texas Air Control Board submits revisions of the State Implementation Plan to the EPA.
- **1980:** The Texas Air Control Board submits plan to address lead pollution to the EPA.
- **1982:** The Texas Air Control Board submits Harris County ozone plan to the EPA. It also reorganizes monitoring network and relocates continuous air monitoring stations.
- **1985:** The Texas Air Control Board mobile sampling laboratory is first deployed.

Texas History

- **1991:** Federal Clean Air Act Amendments of 1990 are implemented and expansion of Texas Air Control Board staff begins in support of the act; the Legislature, in special session, creates the Texas Natural Resource Conservation Commission to be effective Sept.1, 1993. Preparation begins for the consolidation of the Texas Water Commission and the Texas Air Control Board into the TNRCC.
- **1993:** The Texas Natural Resource Conservation Commission begins operation, bringing together for the first time regulatory programs for air, water, and waste.
- **2001:** Texas Emissions Reduction Plan (TERP) established by the Legislature to be administered by the TNRCC, the Comptroller, the Public Utility Commission of Texas, and the Texas Council on Environmental Technology.
- **2003:** Texas Emissions Reduction Plan (TERP) is fully funded by the Legislature.

Texas History

- **2007:** The Legislature expands the Low Income Vehicle Repair Assistance, Retrofit, and Accelerated Vehicle Retirement Program (LIRAP) by increasing the number of eligible individuals and grant amounts for the purchase of a new vehicle; the Texas Emissions Reduction Plan (TERP) is increased in scope allowing the TCEQ to designate certain highways and roadways to count towards the eligibility requirement for grant funded vehicles; the TCEQ adopts the Texas BART (Best Available Retrofit Technology) Rule that requires emission controls for certain industrial facilities emitting air pollutants that contribute to regional haze.

- Fifty-five years since the State of Texas first began evaluating air quality and where are we?

- Do we wait for more regulation from Federal or State levels? Do we take action on our own?

No choking matter

How serious is the situation?

Many areas in Texas are facing the challenge of improving their air quality. Some places are coming under **increased regulation** because of their increased air pollution. These areas are called **nonattainment areas**. Areas which are close to facing increased regulation are called **near-nonattainment areas**.

The economic consequences to a nonattainment region are widespread. The punishments severe. The tolls on our health immeasurable.

The fall will kill you

- Waiting for science: the candle on its side
- Politics and bedfellows
- Following the money
- Green-washing
- Walking the walk

The City Steps Up

- Cities are in touch every day with residents on a variety of issues from Code compliance to land development
- Promote economic prosperity, healthy communities and environmental improvements
- Provide sense and pride of community
- Empower residents at the local level to participate in events that affect them and their families
- Provide essential services
- **Competition to be the “greenest mayor” or “greenest city”**

ISO 14001:2004 EMS

- First City in the U.S. to implement and certify to ISO 14001:2004 specifications across major Departments
  - EMS is the business system of “Plan, Do, Check, Act” applied to the environment
- Important components of the EMS that drive environmental improvements
  - Review environmental impacts from all City activities
  - Set environmental objectives and targets
  - Monitor progress
  - Environmental training
  - Environmental auditing
  - Report results

It isn’t over yet…

Why stop here?

What more can we do?

How else shall we lead?

Energy

- 40% of the City's power comes from renewable energy (333,659,840 kWh)
  - Number 2 on EPA's Top 10 Local Government List and Number 10 on the National Top 25 List
  - Renewable energy comes from wind power
- Consistently meets a 5% energy efficiency goal primarily through performance contracting as part of EMS

City Fleet

- 41% of the City's fleet is now alternative-fueled or hybrid
- According to Sustainlane, City of Dallas has the largest alternative fueled fleet in Texas
- Early user of Texas Low Emission Diesel (TxLED) and biodiesel
- Developed and currently operates two public access compressed natural gas (CNG) vehicle fueling facilities
- Hydraulic Hybrids purchase for Sanitation Fleet

Waste to Energy

McCommas landfill will be the first in Texas to use biotechnology to produce methane gas

Turn the landfill into a giant compost pile that could produce enough natural gas to serve the needs of some 16,000 homes.

Between Sept '07 and Aug '08 –

1.7026 B Cubic Feet of gas yielding 928.6 M CF of CH_4

The Intergovernmental Panel on Climate Change's new interpretations reveal methane emissions may account for a third of the climate warming from well-mixed greenhouse gases between the 1750s and today.

While this could mean McCommas will be the last landfill Dallas ever needs, it's also environmentally good sense to do everything we can to address our impact on the atmosphere.

Green Buildings

- Green Building Program passed in 2003 by City Council
  - All City facilities over 10,000 square feet LEED Silver or better
- Expanded in 2008 through Ordinance
  - Applies to all structures built in Dallas
  - Phase I – quantifiable efficiency measures
  - Phase II – LEED or GBNT certifiable

Insert cliché here

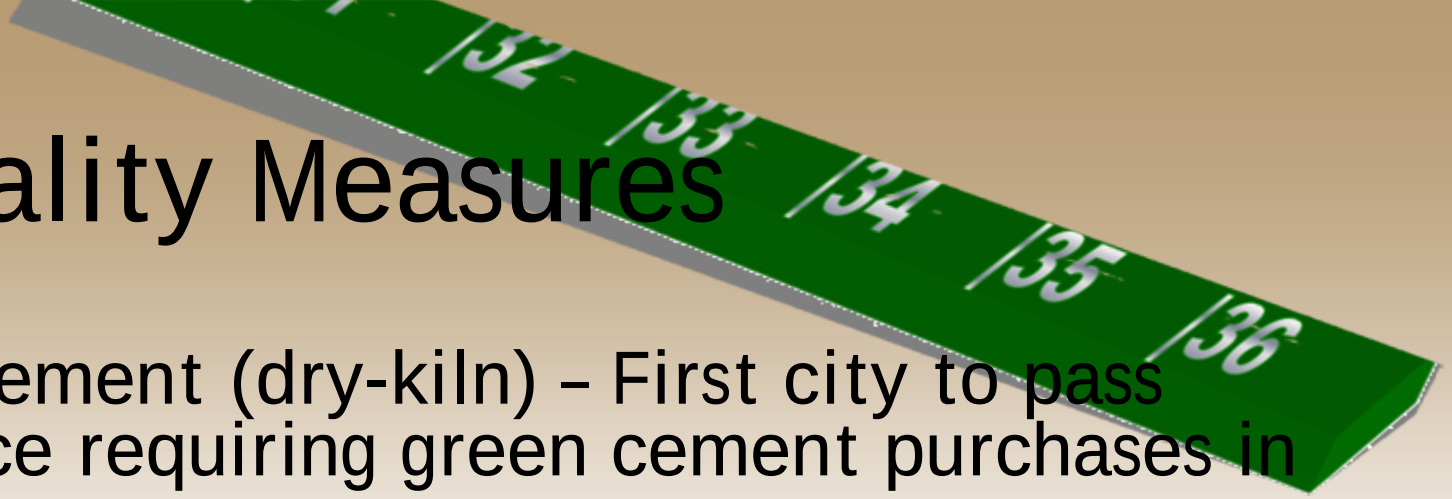
- Low hanging fruit
- Green
- Best in Show
- Think outside the box

What really gets the job done?

Where to begin?

- Environmental Management System
- GHG Survey
- Sustainability Plan

Air Quality Measures



- Green Cement (dry-kiln) – First city to pass ordinance requiring green cement purchases in contracts
- Mayor Laura Miller, along with Mayor White, founded the Texas Clean Air Cities Coalition
  - First time cities have formally collaborated over environmental issues
- Only City with dedicated staff member dedicated to Texas Emission Reduction Program (TERP) and Low Income Repair and Replacement Program (LIRAP) applications
- Anti-idling Ordinance

Water Conservation and Reuse

- Total savings of 83 billion gallons since 2001

- Extensive public education, audits/inspections, retrofits and replacements, and water restrictions
  - Toilet rebate program "New Throne for Your Home"
    - 7,100 toilets replaced
    - 32 million gallons saved annually

- During 2005, the Cedar Crest golf course was watered with wastewater effluent totaling 54.1 million gallons
  - 90% of water use is from recycled water

Community Gardens

- 12,000 square foot organic garden on City property at Lake Highlands
- 26 families with plots and requests for 20 more
  - Donate excess fresh produce to local food bank
  - Calls at Christmas asking for plots as presents
- A model of water conservation practices throughout the City by implementing drip irrigation and rain water harvesting.

Green Spaces

Woodall Rodgers Deck Plaza is anticipated to be a vibrant destination that will tie together Downtown and Uptown, draw a large number of visitors to the area, and add a significant new landmark in downtown Dallas

- A 5.2-acre public park and plaza that spans Woodall Rodgers Freeway between St. Paul Avenue and Pearl Street
- Transportation system under the park that will includes life safety systems

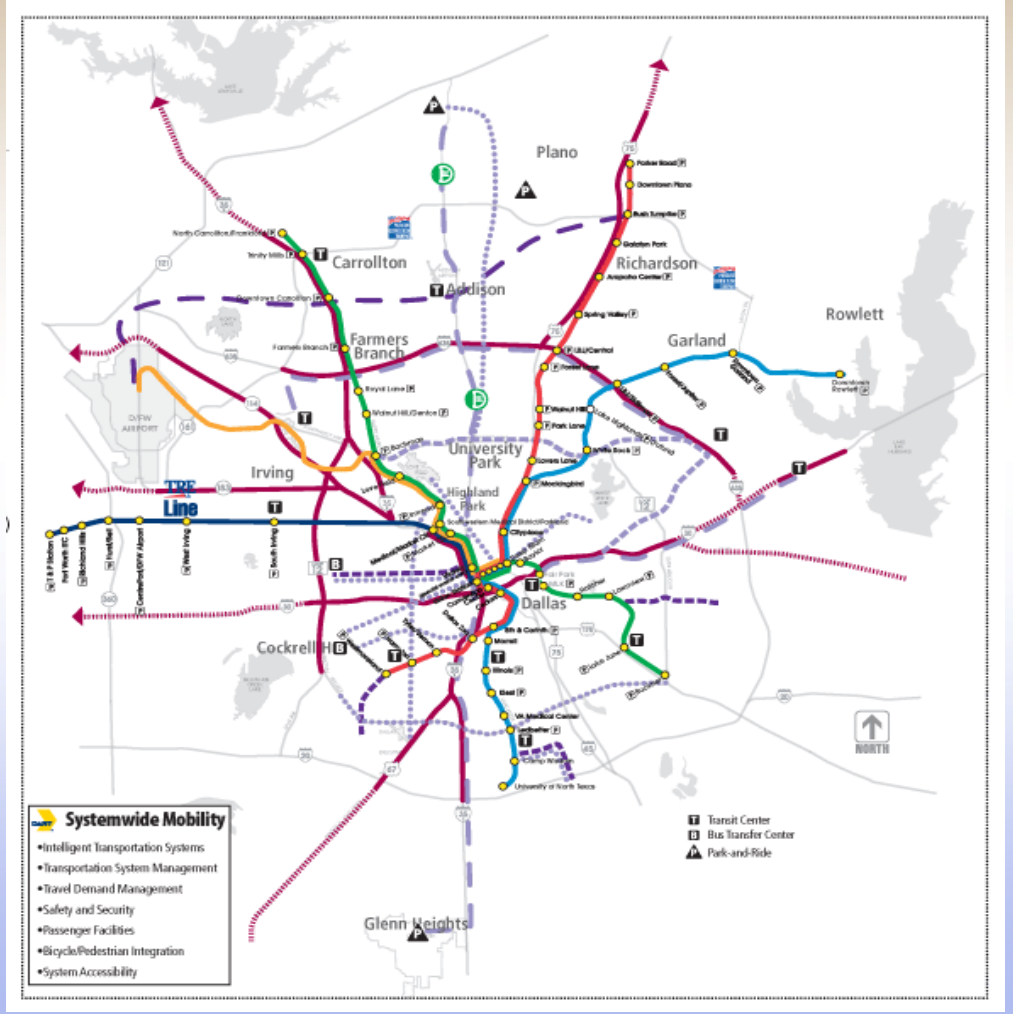
Green Spaces

Main Street Garden

- Terraced central city urban green space
  - Toddler place space
  - Dog runs
  - Climbing blocks and concrete bands
  - Sheltered seating
  - Stage
  - Water features
  - LED lighting
  - Café space

Moving People

- Traffic jammed
- Massive transit
- Green Ride
- Ozone Awareness
- Smoking Vehicles



Sustainable Skylines: Dallas

- First City in U.S. EPA's Sustainable Skylines Initiative
- The 3 Year Pilot Program – DSSI
- Projects chosen aimed to improve air quality through reduced emissions
  - Urban Heat Island/Stormwater Mitigation
  - Green Taxis
  - Green Buildings Project
  - Greenhouse Gas Strategy
  - Renewable Energy/Energy Efficiency Outreach
  - Site Assistance Visits Plus (SAV+) Program
  - Off-Road Equipment Replacements and Retrofits

How soon is now?

- Initiatives seen in other Cities already in place in Dallas
- Sustainability Plan tied to City-wide EMS
  - Success in the future intrinsic to efforts of today
  - Monitoring and measurement of progress
- Driven by a Vision, not just incentives (or consequence)
  - Recognize the need to provide for the future and working to continue that work despite “costs”
- GreenDallas.net
  - Portal for Citizen and City to work together to realize the Vision of a Sustainable Dallas
- Office of Environmental Quality
  - Internal, Interdepartmental, Integral

City of Dallas