North Central Texas Council of Governments (NCTCOG) is:

1 of 24 COGs Across Texas

364 Employees; 9 Departments

Transcend Jurisdictional Boundaries to Promote Sound Development

Facilitate Cooperation
  Transportation Planning
  Air Quality
  Environmental Management
  Demographic Research
  Emergency Preparedness
  Workforce Development
NORTH TEXAS AIR QUALITY 101

OU Meteorology Field Trip
October 20, 2017

Shannon Stevenson
Program Manager
North Central Texas Council of Governments (NCTCOG) is:

Council of Governments
• Regional Coordination

Transportation: Metropolitan Planning Organization
• Transportation Planning
• Air Quality

Dallas-Fort Worth Clean Cities (DFWCC) Coalition
• Petroleum Reduction
• Alternative Fuels
TRANSPORTATION: WHO WE ARE

NCTCOG Service Area
DFWCC Service Area
Metropolitan Planning Area (RTC Service Area)
Ozone Nonattainment Area
AIR QUALITY: WHO WE ARE

Air Quality Planning and Operations

By the Numbers

• 33 Dedicated Staff
• Over $30 Million Annual Operating Budget
• Over $159 Million Awarded in Competitive Grants
• Over 20 Programs/Projects/Initiatives

Purpose

• Develop & Implement Strategies to Reduce Emissions
• Support the State’s Clean Air Plan
• Elements Include:
  • Successful Transportation Conformity
  • Emissions Inventories
  • Technology Improvements
  • Demonstration Programs
  • Partnerships & Collaborations
  • Regional Policies & Best Practices
  • Enforcement Measures
Clean Air Act (CAA) Last Amended in 1990

Requires Environmental Protection Agency (EPA) to Set National Ambient Air Quality Standards (NAAQS) for 6 Criteria Pollutants:

- Carbon Monoxide (CO)
- Lead (Pb)
- Nitrogen Oxides (NO\textsubscript{x})
- Ozone (O\textsubscript{3})
- Particulate Matter (PM)
- Sulfur Dioxide (SO\textsubscript{2})

EPA Must Complete a Review of NAAQS Every 5 Years
Optimum conditions for the formation of ozone include high temperatures and low winds. Sections are not to scale and are for illustrative purposes only.
New Source Review (NSR) Permit Program
Nonattainment NSR Permits – Required for New Major Sources or Major Sources Making a Major Modification

Economic Development: Indirect Impacts
Installation of Pollution Control Equipment, Limit Production, or Otherwise Find Reductions in Emissions by “Offsetting” in Order to Expand; and

Companies are Less Likely to Locate to a Nonattainment Area; and

Cost to Operate is Increased Because of Requirement to Install Pollution Controls or Enforce Stringent Operational Limits

State Implementation Plan Required
State Air Quality Plan for Meeting the NAAQS Prepared by a State or Local Air Quality Agency and Submitted to EPA for Approval
Transportation Conformity

Air Quality Programs to Reduce On-Road Mobile Emissions Contributing to Ozone Formation

Congestion Mitigation and Air Quality Improvement (CMAQ) Program

On-Road Mobile Inventories for Reasonable Further Progress and Attainment Demonstration State Implementation Plans (SIP)

Vehicle Inspection and Maintenance Program
Oxides of Nitrogen (NO\textsubscript{X})

- Total NO\textsubscript{X} = 296.73 tons per day (tpd)

Source: TCEQ, 2017 Dallas-Fort Worth 8-hour Ozone Attainment Demonstration State Implementation Plan
According to the US EPA National Ambient Air Quality Standards, attainment is reached when, at each monitor, the Design Value (three-year average of the annual fourth-highest daily maximum eight-hour average ozone concentration) is equal to or less than 70 parts per billion (ppb).

1. **1997 Standard < 85 ppb (Revoked)**
2. **2008 Standard ≤ 75 ppb\(^1\) (by 2017)**
3. **2015 Standard ≤ 70 ppb (TBD; Marginal by 2022)**

\(^1\)Attainment Goal - According to the US EPA National Ambient Air Quality Standards, attainment is reached when, at each monitor, the Design Value (three-year average of the annual fourth-highest daily maximum eight-hour average ozone concentration) is equal to or less than 70 parts per billion (ppb).

\(^\ast\)Not a full year of data.
**DESIGN VALUE AND DEMOGRAPHIC DATA**

- **Population (Persons)**
- **NOx (tons per day)**
- **VOC tons per day**
- **Design Value (ppb)**
- **Vehicle Miles Traveled (hundreds)**

*2017 design value data current as of 07/12/2017*
SEVEN AIR QUALITY EMPHASIS AREAS

Mobile Sources

- Vehicle Miles Traveled (VMT)
- Energy and Fuel Use
- Cold Starts
- Hard Accelerations
- High Emitting Vehicles and Equipment
- Low Speeds
- Idling
- High Emission Vehicles and Equipment
SAMPLE OF AIR QUALITY INITIATIVES
NCTCOG CLEAN VEHICLE FUNDING EFFORTS

DOLLARS AWARDED FROM 2006-2016; TOTAL = $159,429,148
Technology Improvements
- AirCheckTexas Drive a Clean Machine
- Electric Vehicles North Texas
- Texas Emissions Reduction Plan
- Clean Technologies Revolving Loan

Demonstration Programs
- Pay-As-You-Drive Automobile Insurance Pilot
- Streamlined Heavy-Duty Emissions Determination (SHED) Phase I & Phase II
- Oversize/Overweight Vehicles Emissions Impact
- Idle-Free School Zones
Policies & Processes

Clean Construction Specification
Clean Fleet Policy
Engine Off North Texas
Go Solar Texas
Preferential Parking for Alternative Fuel Vehicles

Outreach/Public Engagement/Enforcement

Air North Texas
Car Care Clinics
Regional Emissions Enforcement Program
Regional Smoking Vehicle Program
EPA SmartWay Affiliate/Saving Money and Reducing Truck Emissions Program
SELECT EXISTING AIR QUALITY INITIATIVES

Transportation System Management
- Intersection Improvements
- High Occupancy Vehicle/Managed Lanes
- Intelligent Transportation Systems
- Freeway/Arterial Bottleneck Removals
- Traffic Signal Improvements
- Truck Lane Restrictions

Travel Demand Management
- Active Transportation Programs
- Park and Ride Projects
- Rail Transit
- Try Parking It
- Vanpool Programs
WHAT’S NEXT??

Modernize Legacy Fleet
  • 53% of Diesel Fleet >14,000 GVWR is Model Years 1992-2009

Volkswagen Settlement

Nonprofit Vehicle Donation Partnership

Alternative Fuel Vehicle Deployment Program

Update Building Codes to Support Electrification and Solar Deployment

Improve/Enhance Effectiveness of Existing Initiatives
  • Expand adoption and increase enforcement of anti-idling policies
  • Standardize clean construction specification language
  • Increase electrification
  • Expand/Improve freight relations
WHAT’S NEXT??

Legislative Efforts

Closely Monitor State and Federal Legislation to Identify Activity Related to Transportation and Air Quality to Actively Pursue, Support and Monitor

Past Examples

Pursue Additional Transportation Revenue
Pursue Full Funding of the AirCheckTexas Program
Support Ban of Hand-Held Communication Devices in Work Zones
Monitor Local Authority to Implement Red-Light Cameras