

## **Appendix H: Local Initiatives Submitted by the North Central Texas Council of Governments**

The NCTCOG submitted an assortment of locally implemented strategies in the DFW area including pilot programs, new programs, or programs with pending methodologies. These programs are expected to be implemented in the nine-county nonattainment area by March 2012. Due to the continued progress of these measures, additional air quality benefits will be gained and will further reduce precursors to ground level ozone formation. The following is a summary of each strategy:

- **Bicycle/Pedestrian Projects**

Projects that create and/or enhance bicycle/pedestrian pathways throughout the region serve to link individuals to alternative methods of transportation other than driving a single occupancy vehicle. By doing so, the automobile emissions that would otherwise be released from the automobile are removed completely. In the North Central Texas region, the Veloweb has been designed for use primarily by fast-moving bicyclists. The Veloweb is also designed to encourage concurrent pedestrian transportation use. Accounting existing and future projects, the NCTCOG has identified 146 miles of Veloweb projects in the nine-county nonattainment area.

- **Grade Separation Projects**

Idling time that would otherwise be created by intersection blockage is eliminated by separating a road or railroad track from a crossroad. With this elimination of idling, grade separations increase the efficiency of traffic flow; thereby, improving travel time and minimizing delay. Thus, vehicle emissions and fuel consumption are reduced. Accounting existing and future projects, NCTCOG has identified 91 locations in the nine-county nonattainment area. Since these projects are included in the DFW regional travel model, benefits from these projects are already accounted for in the on-road mobile source emission inventories.

- **High Occupancy Vehicle (HOV) Projects**

HOV projects promote carpooling; thereby, removing single occupancy vehicles and associated emissions released from the vehicle tailpipe. The increase in flow of HOV lanes offers incentive for drivers to carpool. Accounting existing and future projects, NCTCOG has identified 120 lane miles of HOV projects in the nine-county nonattainment area. Since these projects are included in the DFW regional travel model, benefits from these projects are already accounted for in the on-road mobile source emission inventories.

- **Intersection Improvement Projects**

Improvements to intersections including left and/or right hand turn lanes decrease the amount of time automobiles are left idling at intersections. This decrease in idling reduces fuel consumption and vehicle emissions. Accounting existing and future projects, NCTCOG has identified 896 locations in the nine-county nonattainment area.

- **Park and Ride Projects**

Park and ride facilities promote carpooling and vanpooling. With each occupied parking space at these locations, it can be assumed that the otherwise additional "running" emissions from each parked vehicle are eliminated. Park and ride lots that also serve as transit stations

are not accounted for in this category as it is assumed the majority of these park and ride lots contain transit riders, which are then captured in Rail Transit Projects. NCTCOG has identified 23,291 parking spaces contained in Park and Ride projects that are complete and open to the public. Park and ride facilities that are part of existing transit stations are included in the DFW regional travel model, so benefits from these projects are already accounted for in the on-road mobile source emission inventories.

- Rail Transit Projects

Rail projects involve implementation of new or expanded transit services or facilities. The improvements may be accomplished for all transit modes such as buses, rail, and paratransit. The three main components of improved transit are: system/service expansion projects, system/service operational improvements, and inducements. By improving regional transit systems, an increase in opportunity is created for new passengers as well as an increase in air quality benefits. Accounting for existing and future projects, NCTCOG has identified 140 miles of rail projects in the nine-county nonattainment area. Since these projects are included in the DFW regional travel model, benefits from these projects are already accounted in the on-road mobile source emission inventories.

- Vanpool Projects

Vanpool projects include a group of six to 15 commuters who travel to and from the same area, have similar work hours, share the costs of operating the van, and usually meet at a Park and Ride lot at a centralized location. These projects remove extra vehicles that would otherwise be commuting by consolidating travelers into one automobile. These projects reduce air pollution, reduce traffic congestion, and help conserve fuel. Accounting existing and future projects, NCTCOG has identified 348 vanpools in the nine-county nonattainment area.

- Truck Lane Restriction Program

A pilot study to improve the operational efficiency and highway safety was conducted that restricted trucks with three or more axles from using the left lane on controlled access, on-state system facilities with three or more lanes. Truck lane restrictions were implemented on segments of Interstate 20 (I-20) and 30 (I-30) in the DFW area from August 2005 through January 2006. Results showed that truck lane restrictions effectively controlled trucks from using the left lane and slightly reduced truck speeds. Consequently, NO<sub>x</sub> and VOC emissions produced by trucks also decreased. Greater emissions benefits are expected as truck lane restrictions are implemented throughout the region.

Truck lane restrictions have remained in place along the pilot study corridors and have resulted in quantifiable emissions reductions. Additionally, implementation of restrictions on I-45, I-820, and additional mileage along I-20 and I-30 was completed by August 2010. NCTCOG staff has worked to evaluate the feasibility of and develop recommendations for future expansion within the region. Currently, there are 245 miles of truck lane restrictions within the region; additional restrictions will be implemented along corridors in the near future.

- Traffic Signal Improvements

The DFW Metropolitan Area is involved in the planning, programming, and implementation of traffic signal improvement programs and projects. Arterial congestion accounts for 35% of the total congestion in the region, in turn adding emissions due to inefficient traffic patterns and unnecessary idling. Traffic signal improvements such as signal retiming and signal coordination can enhance traffic flow and help decrease vehicular emissions. Emphasis of the traffic signal improvement program in the North Central Texas region is placed upon

major arterial corridors, where synchronizing a succession of traffic signals to operate as a continuous system has a great impact on a large volume of traffic. These improvements result in a more consistent travel speed and reduced delay, which reduces vehicular emissions due to frequent starts, stops, and unnecessary idling. Inventorying existing and future projects, NCTCOG has identified 1,226 locations with traffic signal improvements in the nine-county nonattainment area.

- **Intelligent Transportation System**

The Intelligent Transportation System (ITS) improves traffic speeds and reduces idling time through advanced traffic control systems and more efficient incident and corridor management. ITS also combines the strengths of regional transportation planning models and traffic simulation models with overall transportation management strategies. Examples of ITS projects include transportation management centers, dynamic message signs, vehicle detectors, integration of systems and closed circuit television cameras. Transportation system capacity has increased as high as 30% by implementing these types of transportation management strategies, thereby enhancing the overall efficiency of the entire transportation system. In addition, benefits include fuel savings and air pollution reduction, safer streets and highways, and reductions in maintenance costs. Together with transit agencies, local governments, the Texas Department of Transportation, etc., the DFW Metropolitan area is currently involved in the planning, programming, and implementation of ITS programs and projects. Using the National ITS Architecture as a model, the region has and continues to define a Regional ITS Architecture to guide future deployment and to build consensus for multi-agency systems integration. NCTCOG has identified 62% (Collin, Dallas, Denton, Ellis, Hood, Hunt, Johnson, Kaufman, Parker, Rockwall, Tarrant, and Wise) and 88% (Collin, Dallas, Denton, and Tarrant Counties) of ITS coverage within the region on freeways, interstate and tollways.

- **Clean Fleet Vehicle Policy**

NCTCOG developed a model policy that includes guidance and best practices for vehicle acquisitions, maintenance, and operations, and provides for an annual reporting element to monitor compliance. Among the best practices included are a restriction on extended idling and guidance regarding the best time of day to refuel. The policy, which was made available for adoption by local government fleets throughout the region, helps ensure that public-sector fleets are as low-emitting as possible. As of December 2010, 100 entities had adopted the Clean Fleet Vehicle Policy. NCTCOG continues to promote adoption across the region and includes the policy as either an eligibility criterion or evaluation measure in various funding programs related to vehicles and equipment.

- **Clean Vehicle/Equipment Program**

NCTCOG continues to offer programs that provide financial assistance for projects that reduce emissions from on-road vehicles and non-road equipment through purchase, replacement, repower, or conversion activities. Programs and projects are widely varied, including both public and private fleets, different target fleet sectors (such as school buses, regulated fleets such as taxicabs, freight vehicles, etc.) and a range of vehicle/equipment types, including light- and heavy-duty vehicles, non-road construction equipment, and a variety of alternative fuels. In addition, financial assistance for infrastructure needed to support new alternative fuel or advanced technology vehicles has been provided. NCTCOG will continue to seek opportunities to provide financial assistance for projects which achieve NO<sub>x</sub> emissions reductions. The following list outlines specific programs/projects funded to date and anticipated results by March 2012.

- American Recovery and Reinvestment Act (ARRA) On-Road Heavy-Duty Diesel Replacement and Repower Project (\$2,130,089)

This project has funded the implementation of 101 heavy-duty diesel vehicle replacements.

- Clean Construction Equipment Upgrade Project (\$1,226,884)

Construction equipment projects are the focus of two programs: the Heavy-Duty Vehicle and Equipment Grant Program (HDVEGP) and North Central Texas Clean Construction Equipment 2011 Call for Projects. Under HDVEGP, 10 construction equipment replacement activities were awarded, with five implemented to date. The second program is an upcoming funding opportunity that will be administered in early 2011 to award the balance of available funds to construction equipment replacement/repower/retrofit/upgrade projects. It is anticipated that approximately nine to 15 activities will be implemented through this program.

- Clean Fleets North Texas: Recovery Act Project (\$2.5 million)

To date, approximately \$1.5 million has been awarded for 13 light-duty and 15 heavy-duty vehicle purchases/leases, 11 light-duty and 45 heavy-duty vehicle conversions, and six alternative fuel infrastructure sites. Additional projects are anticipated to be approved for funding in early 2011 to fully award funds.

- Clean School Bus Program and Call for Projects (\$492,162)

To date, over \$1.6 million has been awarded through call for projects through the North Central Texas Clean School Bus Program to replace and repower 45 older, high emitting school buses with cleaner technology. Eligible entities include schools, school districts, and school bus operators that travel within the 16-county NCTCOG service area. Additional funding will be awarded in FY 2011/12 to implement similar type projects, including on-board idle reduction. Further calls for projects will be administered as more funding becomes available.

- Regulated Fleet Program

Research in the DFW region shows that regulated fleets such as taxicabs, limousines, shuttle buses, and hotel/courtesy vans, have on average high vehicle miles traveled per year. These vehicles, particularly taxicabs, are often used vehicles that stay in a fleet for several years. For these reasons, the Regulated Fleet Program will continue to encourage regulated fleets such as taxicabs, limousines, shuttle buses, and/or hotel/courtesy vans, to purchase new or cleaner vehicles. To date, approximately \$1.3 million has been awarded to fund 285 clean taxicabs and limousines. A primary focus of the program will be on taxi companies and support for the coordination of the Regional-Vehicle-For-Hire Program. The education and outreach component will continue for public and private interests, and will likely encourage taxicabs and other regulated fleet vehicle types through education, outreach, and/or financial incentives about the benefits of new, lower emission vehicles, and advanced technologies.

- Heavy-Duty Vehicle and Equipment Grant Program (\$750,000)

Funds were awarded for both on-board idle reduction and construction equipment replacement projects, which are documented under the Clean Construction Equipment Upgrade Project and Diesel Idling Reduction Program, respectively. A variety of projects were funded under this program, but many were funded with TERP dollars and; therefore, may be being claimed for SIP credit by the TCEQ. The descriptions provided in this document are limited to projects funded with non-TERP dollars.

- North Central Texas Alternative Fuel and Advanced Technology Investments Project (\$12,915,989)

Funds were awarded to 19 partner entities for implementation of 25 neighborhood electric vehicles, 146 light-duty and 96 heavy-duty hybrid-electric vehicles, seven light-duty and 91 heavy-duty compressed natural gas vehicles, nine heavy-duty electric vehicles, and 11 refueling/recharging infrastructure sites.

- Electric Vehicles North Texas (EVNT)

The Electric Vehicles North Texas (EVNT) program was created to coordinate a partnership and develop a plan to enhance the implementation of recharging infrastructure and purchase of vehicles. Stakeholders include utility companies, regional governments, school districts, transit authorities, local businesses, plug-in vehicle (PEV) manufacturers, recharging infrastructure producers, and other stakeholders.

EVNT will continue to promote the development of the public recharging infrastructure network throughout the region and enhance public understanding of this new technology. It is anticipated the public infrastructure network will be put in place and vehicles will be available for purchase during 2011. Work will be done to assist public and private entities in funding the purchase of PEVs and recharging infrastructure as available as well as education and other support required for the success of this technology.

- Locally Enforced Idling Restrictions

To date, 26 entities (four counties and 22 municipalities) have adopted locally enforced idling restrictions and signed a memorandum of agreement (MOA) with the TCEQ to enforce this rule at the local level. Over 50% of the region (by population) is covered under this rule. NCTCOG will continue to promote adoption, education, and enforcement of idling restrictions throughout the region in an effort to reduce emissions from heavy-duty vehicles.

- Diesel Idling Reduction Program

Through the Diesel Idling Reduction Program, NCTCOG works to provide opportunities for investment in technological solutions to address idling. Funds have been awarded for both on-board and on-site idle reduction activities. To date, approximately \$2.4 million in EPA and Congestion Mitigation and Air Quality funds have been programmed to this initiative. NCTCOG has awarded grant funds for five truck stop electrification sites with 195 electrified connections, two hybrid trucks that will reduce idling through use of battery power during power take-off operation, and 137 APUs. NCTCOG continues to subaward funds under this program and is soliciting applications through a Diesel Idling Reduction Program 2011 Call for Projects. NCTCOG will continue to seek avenues to provide financial assistance and will also work to identify other mechanisms through which to address idling.

- Clean Construction Demonstration Project

NCTCOG has drafted a model Clean Construction Specification which can be used to establish emissions-based requirements for equipment in use on certain projects. The specification requires certain operational practices, such as limits on idling, and also stipulates that equipment meet Tier 2 or equivalent emissions standards, which phased in for engines manufactured from 2001 through 2006. NCTCOG estimates that approximately 60% of all construction equipment currently in use in the Dallas-Fort Worth nonattainment area is either pre-Tier or certified only to Tier 1 emissions standards. The Clean Construction Demonstration Project is designed to gather information regarding potential financial, air quality, and administrative impacts of the Clean Construction Specification on a project-level basis in order to determine cost effectiveness and the magnitude of additional burden on local governments. Information gathered in this project will be used to determine

whether these types of emissions-based contract requirements could be an effective air quality control strategy across the region.

- **Blue Skyways Collaborative**

The Blue Skyways Collaborative was developed by the EPA and the Central States Air Resources Agencies (CenSARA) to significantly reduce air pollution in the central United States corridor. The collaborative emphasizes partnerships between non-profit environmental groups, private industries, and international, federal, state and local governments to meet air quality goals. Collaborative participants pledge active and meaningful participation in the planning or implementation of projects that use innovations in diesel engines, alternative fuels, and renewable energy technologies. Working together allows members to leverage funding, share technology, and professional expertise. NCTCOG was designated a Blue Skyways Community in fall 2006 and is dedicated to promoting the mission of the collaborative. NCTCOG actively participates in collaborative meetings, subcommittee meetings, and funding opportunities offered by Blue Skyways.

- **SmartWay<sup>SM</sup> Transport Partnership**

The EPA SmartWay<sup>SM</sup> Transport Partnership (SmartWay), established in 2004, is a voluntary, public-private partnership with the ground freight industry designed to reduce emissions, reduce fuel consumption, and increase energy efficiency among the freight transportation sector. NCTCOG joined the SmartWay Transport Partnership as an Affiliate in 2006. In this role, NCTCOG has committed to outreach and education efforts related to the program in the Dallas-Fort Worth area. In addition, NCTCOG will pursue opportunities to implement projects that increase use of verified SmartWay technologies, including idle reduction and fuel saving activities. In 2009, NCTCOG received approximately \$1.5 million in EPA National Clean Diesel Funding Assistance Program grant funds under the American Recovery and Reinvestment Act for a SmartWay Technology Upgrade Project. NCTCOG has subgranted these funds to seven private sector companies to purchase and install SmartWay technologies on Class 8 heavy-duty diesel vehicles, including auxiliary power units for 73 trucks, low rolling resistance tires for 86 tractors and 65 trailers, trailer side skirts for 82 trailers, trailer gap reducers for 40 trailers, and cetane enhancers for at least 100 trucks. NCTCOG will continue to pursue implementation of projects which address the goals of the SmartWay Transport Partnership, including a plan to fund the development of a Freight Efficiency Outreach Center in the North Central Texas area.

- **Pay-As-You-Drive (PAYD) Insurance Pilot Program**

PAYD Insurance is a mileage-based vehicle insurance program. This program permits drivers to pay automobile premiums on a variable scale, dependent upon how much they drive each vehicle. Since the cost of coverage is directly tied to use of the vehicles, PAYD insurance is a strong incentive to drive less and; thereby, pollute less. This strategy compliments current Regional Transportation Council (RTC) efforts not only to reduce vehicle miles traveled but also to promote the concept of sustainable development throughout the region. NCTCOG will continue to promote mileage-based insurance to insurance carriers throughout the region in an effort to increase the availability of PAYD to Texas drivers.

- **Sustainable Development**

The promotion of livable communities that support sustainability and economic vitality has become the objective of the North Central Texas region because of the interconnections between land use, transportation, economy, environmental quality, and livability. Sustainable

development is utilized as a tool to help meet the coordination between land use, transportation, and improvement of air quality. Numerous studies have shown a reduction in vehicle miles traveled (VMT) due to higher density, mixed use, infill, or Transit-Oriented Development (TOD) connected by alternative modes of transportation and pedestrian improvements due to the reduction in need for automobile usage to access various uses. Therefore, transportation strategies and projects must be responsive to regional trends in economic expansion, population growth, development, quality of life, public health, and the environment in order to provide mobility and prevent the continued decline of the region's air quality status. A variety of strategies and policies have been adopted by the RTC to ensure the development of transportation plans, programs, and projects which promote air quality improvements through sustainable development. These strategies are designed to (1) respond to local initiatives for Town Centers, Mixed Use Growth Centers, Transit Oriented Developments, Infill/Brownfield Developments and Pedestrian Oriented Projects; (2) complement rail investments with coordinated investments in park and ride, bicycle and pedestrian facilities, and (3) reduce the growth in vehicle miles traveled per person. The shift toward alternative modes of transportation and lower VMT will lead to reduced transportation-related emissions and improved public health and quality of life.

NCTCOG's Sustainable Development Funding Program was created by the RTC to encourage public/private partnerships that positively address existing transportation system capacity, rail access, air quality concerns, and/or mixed land uses. By allocating transportation funds to land use projects promoting alternative transportation modes or reduced automobile use, NCTCOG and its regional partners are working to address escalating air quality, congestion and quality of life issues. Three Calls for Projects were conducted in 2001, 2005-2006, and 2009 through 2010 and over \$120 million to 95 projects were funded to Sustainable Infrastructure, Landbanking, and Planning projects. The TOD Implementation Group funded under the 2005 through 2006 Sustainable Development Call for Projects is continuing to offer NCTCOG planning assistance to 52 projects that focus on transit-oriented development. NCTCOG's Center of Development Excellence was funded by the RTC to bring city, county, school district, and private-sector representatives together to address "Principles of Development Excellence". This program includes various planning activities and outreach efforts such as best practice research, annual awards recognizing development excellence, and support to local comprehensive planning, infrastructure, and urban/rural planning issues. NCTCOG, in partnership with various regional transit authorities, manages an Environmental Protection Agency Brownfields Program Revolving Loan Fund (RLF) grant to provide loans on favorable terms or sub-grants to carry out cleanup activities at brownfield sites. Through a Call for Projects in 2009 through 2010 to local governments to provide for no-interest loans or sub-grants for site remediation; four sites were approved to receive \$1.5 million of federal funding. Through Alternative Futures Program NCTCOG staff provided technical assistance to create alternative growth scenarios through the Vision North Texas initiative to model sustainable alternative future growth patterns for the region.

- **High Emitting Vehicles**

The High-Emitting Vehicle Program (HEVP) conducts regional programs in an effort to reduce emissions from on-road mobile sources. These initiatives focus on public awareness and enforcement of emissions standards. Studies indicate approximately 10 percent of the polluting vehicles are responsible for over 50% of the nitrogen oxide (NO<sub>x</sub>) emissions in the North Texas nonattainment area. Identifying vehicle emission problems that may develop in the period between annual emissions inspections helps get the highest polluting vehicles repaired or replaced sooner.

- **Regional Emissions Enforcement Program (REEP)**

REEP, formerly known as the Dallas Emissions Enforcement Program, was developed to help identify and remove high-emitting vehicles from roadways with counterfeit, expired, fictitious, fraudulent, improper, and stolen State inspection and registration certificates. REEP takes a four pronged approach including: conducting covert operations on State vehicle emissions inspection stations to identify and prosecute inspectors performing improper inspections, finding and prosecuting dealers and manufacturers of fictitious or counterfeit inspection certificates, investigating and pursuing civil litigation against car dealers selling improperly inspected vehicles, and on-road emissions enforcement of vehicles traveling in our region.

- **Regional Smoking Vehicle Program (RSVP)**

The North Central Texas RSVP is designed to encourage North Texans to voluntarily maintain and repair their vehicles and to promote public awareness regarding the harmful emissions and air pollution caused by smoking vehicles. By utilizing the existing AirCheck Texas Repair and Replacement Assistance Program infrastructure, the incorporation of the RSVP will encourage greater participation by providing local solutions to vehicle owners.

- **Air Quality Public Education and Communication**

As policies, projects, and programs are implemented to fulfill obligations required under the variety of air quality mandates such as FCAA, NAAQS, SIP, etc. communication efforts are strategically created and implemented to educate and inform the region on current air quality levels, associated impacts, funding opportunities, and new programs and/or policies. NCTCOG continues to promote air quality awareness throughout the North Texas region through campaigns such as Air North Texas. This campaign strives to create a unified message and brand related to air quality with regional partners; and to help guide direction, an Air Quality Public Relations Task Force was created in 2007. Also, the campaign strives to teach the general public about the health impacts of emissions and to encourage the use of voluntary measures that help reduce emissions such as but not limited to vehicle maintenance, combining errands, ridesharing, reducing idling, and by promoting existing NCTCOG emission reduction programs, like [tryparkingit.com](http://tryparkingit.com), AirCheckTexas DACM, and the RSVP. Monthly e-mails, Clean Air Mails, which include sustainable clean air tips as well as air quality watches and warnings, are sent to those participating in the campaign. Also, the campaign provides a website with information on air quality programs and facts as well as resources, educational and advertising resources to partners, outreach at several community and environmental events around North Texas, radio and TV public service announcements, online and print paid advertising, resources for children, and an awareness day on July 7 entitled Clean Air Action Day where North Texas residents are asked to at least adopt one new practice that can improve air quality such as tacking transit or bringing their lunch to work. The goal is for residents to see how easy these lifestyle changes can be and incorporate them into their daily lives or, at the very least, during ozone season. Education to the business community on how to reduce their impact on air quality through their practices and operations continues to be provided by entities such as the North Texas Clean Air Coalition.

Additionally, the Air Quality Public Education and Communication program also promotes the use of clean vehicle technologies and fuels as well as idle reduction and fuel economy practices via the DFW Clean Cities Technical Coalition. DFW Clean Cities provides a locally based, private and public partnership coalition that works to advance the economic, environmental and energy security goals of the United States by supporting local decisions to adopt practices that contribute to the reduction of petroleum consumption in the transportation sector. DFW Clean Cities provides education and technical guidance through

quarterly meetings, workshops/events, development of educational pieces and awareness campaigns, outreach at community, environmental and fleet geared events, monthly electronic e-mails, and the DFW [Clean Cities](#) Web site at <http://www.nctcog.org/trans/clean/cities>.

- **Environmental Speed Limits**

Environmental Speed Limits (ESL) have been in effect since 2001 as a means to further reduce on-road mobile emissions that contributes to the formation of ozone. ESL's on roadways that had a current maximum speed limit of 70 mph were reduced to 65 mph, while speed limits on roadways that had a current maximum speed limit of 65 mph were reduced to 60 mph. This measure applies to applicable roadways in the Counties of Collin, Dallas, Denton, Ellis , Johnson, Kaufman, Parker, Rockwall, and Tarrant. For more information regarding ESLs, please see the Speed Limit Reduction Measure website maintained by the NCTCOG. This site provides a geographical map and separate listing of affected roadways: <http://www.nctcog.org/trans/air/sip/previous/esl/index.asp>.