North Central Texas Council of Governments

January 16, 2024

Ms. Denine Calvin, MC 206
State Implementation Plan Team – Air Quality Division
Texas Commission on Environmental Quality
PO Box 13087
Austin, TX 78711-3087

RE: Dallas-Fort Worth Severe Area Attainment Demonstration SIP Revision for the 2008 Eight-Hour Ozone NAAQS (2023-107-SIP-NR)

Dear Ms. Calvin:

Please accept the following comments regarding the Texas Commission on Environmental Quality's (TCEQ) revisions to the Texas State Implementation Plan (SIP) for the Dallas-Fort Worth (DFW) nonattainment area for the 2008 eight-hour ozone national ambient air quality standard (NAAQS) severe classification: ***Dallas-Fort Worth Severe Area Attainment Demonstration SIP Revision for the 2008 Eight-Hour Ozone NAAQS (2023-107-SIP-NR)***, proposed on November 29, 2023.

This effort results from the DFW serious nonattainment area for the 2008 NAAQS of 75 parts per billion (ppb), consisting of Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant, and Wise counties, not attaining the July 20, 2021 attainment date. Based on 2018, 2019, and 2020 monitoring data, the DFW area did not attain the 2008 eight-hour NAAQS in 2020 and did not qualify for a one-year attainment date extension in accordance with the Federal Clean Air Act (FCAA). On October 7, 2022, the United States Environmental Protection Agency (EPA) published a final notice reclassifying the DFW area to severe nonattainment for the 2008 eight-hour ozone NAAQS. This reclassification was effective on November 7, 2022.

In response to the EPA's reclassification, the area is now subject to the severe nonattainment area requirements in the FCAA that TCEQ is required to submit severe classification attainment demonstration (AD) and reasonable further progress (RFP) SIP revisions to the EPA. The attainment date for a severe classification is July 20, 2027 with a 2026 attainment year. The EPA set a May 7, 2024 deadline for states to submit AD and RFP SIP revisions to address the 2008 eight-hour ozone standard severe nonattainment area requirements. We commend TCEQ for devoting limited resources and turning around this SIP for the 2026 attainment year.

The attainment and maintenance of federal ambient air quality standards is vital for the region, as well as the state. We believe TCEQ should be proactive now to not only reach the 2008 standard, but also avoid potential Section 185 fees that will greatly impact our region.

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We appreciate the opportunity to comment on TCEQ's revisions to the DFW ADSIP, as well as the continued partnership between our agencies. NCTCOG thanks TCEQ staff for their time and resources spent attending public hearings to discuss SIP updates, and for their follow-up with comments and suggestions. NCTCOG staff is committed to continuing to implement projects and programs and collaborate with partner agencies to reduce emissions in the DFW region.

Should you have any questions, please contact Chris Klaus at cklaus@nctcog.org or (817) 695-9286.

Sincerely,

Mike Eastland
Executive Director
North Central Texas Council of Governments

VT:cmg

Technical Review of Photochemical Model Validation

Due to the results of TCEQ's photochemical model performance, NCTCOG requests a thorough, peer-reviewed photochemical model validation assessment to explain the model's NOx emissions underprediction, thus resulting in future year results inconsistent with observed monitoring readings. This state-led tool is critical for planning to ensure the implementation of the best strategies, quantify emissions reduction measures, and ultimately aid in reaching ozone attainment. It is understood that modeling is an estimate and does not produce absolute values; however, such large differences that ultimately result between a future modeled design value and the region's observed monitor values is not acceptable.

This observation was first realized in the "Proposed DFW Moderate AD SIP Revision for the 2015 Eight-Hour Ozone NAAQS", approved by the TCEQ Commission on May 31, 2023. Results suggested that the nonattainment area would have a future modeled 2023 design value of 73 ppb at Frisco; however, the monitored/observed design value at the end of the 2023 ozone season landed at 81 ppb at Pilot Point. This erroneous result in 2023, not only design value prediction but also location, is based on a 2019 model validation that is significantly under predicting NOx and most likely will result in inaccurate results in 2026.

Photochemical modeling for "Proposed DFW Severe Area Attainment Demonstration (AD) State Implementation Plan (SIP) Revision for the 2008 Eight-Hour Ozone NAAQS" indicates the DFW 10-county 2008 Ozone NAAQS Severe nonattainment area would have a 2026 design value forecast of 72 ppb, with Frisco as the driving monitor (Table ES-2, page ES-4). However, the design value at the end of 2023 ozone season is still 81 ppb at the Pilot Point monitor, leading to wonder how this will occur with no additional control strategies recommended, largely due to the fact that no additional control strategies are needed as the future modeled design value is under the 75 ppb standard, again, based on a 2019 model validation that is underestimating NOx.

After reviewing the 'Photochemical Modeling Performance Evaluation' (Section 3.5, pages 3-16 to 3-19) in the proposed SIP and the '2019 Modeling Platform Updates' presentation at the DFW Air Quality Technical Information Meeting on August 24, 2022, we understand the model performance metrics meet EPA modeling guidance. Even though TCEQ's photochemical performance is within EPA's modeling guidance, it is significantly off from real-world observances, and we believe further evaluation is needed. TCEQ is applauded for a <15 percent normalized mean bias for all the monitors except the Cleburne Airport monitor; however, it still does not achieve desirable results. We recommend establishing more stringent Texas-level or region-specific criteria rather than relying on generous EPA/national guidance parameters.

The results contain a systematic underprediction of the values in the photochemical model. We request a further assessment of the established modeling platform with any necessary updates/revisions to be done for future work.

Below is a matrix showing the anthropogenic emissions for analysis years from multiple ADSIP emissions inventories for the DFW 2008 ozone NAAQS 10-county nonattainment area. Despite the decrease in various sources of local emissions from 2006 to 2026, the ozone design value continues to be in an upward trend and is at 81 ppb (end of 2023 ozone season). Due to such a decrease in current Design Value (DV) and the 72 ppb predictions, we request TCEQ provide

information (data analyses and assumptions) used to determine the 3 ppb per year reduction that will need to occur between now and 2026.

We understand that the background ozone generally accounts for approximately two-thirds to three-quarters of the total ozone concentration, and the remaining one-fourth to one-third is locally attributable. Since we are limited on how much more local contributions can be reduced, we encourage TCEQ to investigate this further and work with the EPA to modernize/update parameters governing ozone transport and implement rules that would not subject regional airshed to reduce emissions they are not responsible for producing. Additionally, we request an expansion of existing measures applicability to beyond the 10-county nonattainment area to assist in reducing background ozone coming from outside the region but within Texas.

DFW 10-County Nonattainment Area Nitrogen Oxides (NOx) (tons/day)						
Sources	**Analysis Years**				**% Change from 2006 to 2023**	**% Change from 2023 to 2026**
	2006	**2017**	**2023**	**2026**		
On-Road Mobile	284.27	130.77	72.30	60.20	-75%	-17%
Non-Road Mobile	98.06	45.54	34.38	32.03	-65%	-7%
Off-Road Mobile	32.92	25.24	23.59	24.59	-28%	4%
Point (All sources)	57.55	54.80	42.34	42.00	-26%	-1%
Oil & Gas (Production & Drill Rigs)	80.07	13.87	3.61	1.86	-95%	-48%
Area	29.02	26.55	31.33	32.17	8%	3%
Total	**581.89**	**296.77**	**207.55**	**192.85**	**-64%**	**-7%**
DFW 10-County Nonattainment Area Volatile Organic Compounds (VOC) (tons/day)						
Sources	**Analysis Years**				**% Change from 2006 to 2023**	**% Change from 2023 to 2026**
	2006	**2017**	**2023**	**2026**		
On-Road Mobile	116.50	64.91	38.74	33.27	-67%	-14%
Non-Road Mobile	64.69	34.01	42.68	44.12	-34%	3%
Off-Road Mobile	5.74	3.66	4.60	4.86	-20%	6%
Point (All sources)	50.44	47.38	23.53	23.56	-53%	0%
Oil & Gas (Production & Drill Rigs)	44.88	32.18	24.72	11.80	-45%	-52%
Area	290.46	236.70	265.77	275.73	-9%	4%
Total	**572.71**	**418.84**	**400.04**	**393.34**	**-30%**	**-2%**

Enhance Public Engagement Efforts

NCTCOG requests that TCEQ enhance public engagement for the SIP and partner with NCTCOG and local governments in our region to distribute information on public hearings. We believe there is a need for TCEQ to be more specific in public engagement discussion to identify the number of meetings held, as well as include the attendance across all hearings, as opposed to stating that multiple meetings were held.

Additionally, NCTCOG requests TCEQ organize more engagement and information meetings for the DFW region allowing clear understanding of the technical outcomes, not only closer to the SIP proposal timeframe, but for results to not be a surprise to those outside TCEQ.

The last DFW Air Quality Technical Information Meeting was held on August 24, 2022, mostly specific to the DFW Moderate AD SIP Revision for the 2015 Eight-Hour Ozone NAAQS. No further meetings were held to discuss technical information on the DFW Severe Area AD State SIP Revision for the 2008 Eight-Hour Ozone NAAQS. The discussions should cover concluding results and summaries of the anthropogenic modeling emissions, ozone design values of base case, future design values, and scenario-based planning runs (such as zero-out runs on various emissions source categories, time-of-day analysis, etc.) and present these sensitivities at the technical information meetings.

Sensitivity Analyses to Determine Strategy Effectiveness

TCEQ is strongly encouraged to establish necessary resources and reinstate photochemical model sensitivity analyses. These efforts provide informative information to all those involved in the SIP process, including elected officials, and the ability to make educated decisions on how best to address future emission reductions. The analyses should cover scenario-based planning runs, such as zero-out runs on various emissions source categories, time-of-day analysis, weekend assessments, and other programs that generate unnecessary emissions, as mentioned throughout these comments. At a minimum, final results should be shared with the public and made available on the TCEQ's website and provide findings at technical information meetings.

Implement Additional Control Measures and Expand Applicability of Existing Measures Beyond the 10-County Area

Given the fact that our region continuously fails to attain the ozone standard despite SIP revisions that model attainment makes clear that a more aggressive approach should be taken. While more stringent emissions requirements may be unpopular, unwillingness to do something more aggressive now could be the catalyst to trigger Section 185 fees. It is more agreeable to go ahead and do something a bit more aggressive now that may avoid Section 185 fees in the future by proactively pursuing additional benefits.

To further decrease emissions, NCTCOG recommends expanding and updating existing control measures. As previously stated, measures currently only applicable in the DFW region should be expanded to key counties upwind. TCEQ should review the latest reasonable standards for those with specific targets and update to the latest/greatest. For example, the standards for non-road gasoline engines 25 horsepower and larger (30 TAC Chapter 114, Subchapter I, Division 3) were based on California standards as applicable on November 18, 1999. California revised these standards in 2007 and 2008, which should trigger an update to the Texas Administrative Code.

With the design value forecast for the 2026 analysis year at 72 ppb (even though under 75 ppb but still 2 ppb more than the EPA's 2015 Ozone NAAQS) and with the EPA disapproving the existing contingency measures, a discussion on comprehensive control strategies and air quality programs will benefit the region. NCTCOG staff is evaluating existing emissions reductions strategies and hosting sessions for local governments and the public to solicit ideas for multi-pollutant emissions reductions strategies in the coming months. Any relevant information gathered from these meetings will be shared with TCEQ.

Evaluate Trade-Offs Between Costs to Implement Reasonably Available Control Technology

It appears that TCEQ is proposing only applying Reasonably Available Control Technology (RACT) to 25 tons per year sources versus 50 tons per year sources, which is beneficial. However, NCTCOG requests an explanation of the expected emissions reductions impact this may bring. Additionally, has the potential future cost of Section 185 fees been factored into the assessment that "additional RACT is not economically feasible"? Has TCEQ evaluated how many years' worth of fees would be needed to fund RACT implementation if an amount equal to those fees were expended now on strategy implementation?

Release of Texas Emissions Reduction Plan Revenue in Fund Balance to Targeted Programs Specific to Severe Nonattainment Areas

NCTCOG requests TCEQ taking a stronger role in advocating and requesting dedicated monies through Legislative Appropriations that are available for targeted air quality reductions. The Texas Emissions Reduction Plan (TERP) has over $2 billion in dedicated revenue (fund 5071). Assuming half of this is appropriated to the DFW area and based on the cost per ton estimates in the TCEQ December 2022 Biennial Report ($8,787 per ton), a potential reduction of around 45 tons per day of NOx and approximately 1.5 ppb of ozone is possible. The latter estimate would be a great sensitivity applied to the photochemical model (see earlier comment) to answer how much ppb is achievable by reducing an additional 45 tpd of locally generated emissions.

Advocate for Local Initiative Programs Funding to Counties in TCEQ Legislative Appropriations Request

NCTCOG encourages TCEQ to include Local Initiatives Project (LIP) funds into their Legislative Appropriations Request ahead of the 89th Texas Legislative session occurring in 2025. There still exists approximately $176 million in Clean Air Account 151 which, if reappropriated back to nonattainment regions, would fund local emissions enforcement task forces to combat fraudulent vehicle emissions inspections, reduce, high emitting vehicles, and other air quality/transportation initiatives. Research is also needed to see what effect this fraud is having on air quality, and what other initiatives can be done to enhance the Inspection and Maintenance Program. Being proactive is a key to success moving forward.

The prevalence of emissions related fraud has steadily increased since the dissolution of Regional Emissions Task Forces as a result of losing funding. Much was covered in the news regarding the fraudulent temporary paper license plates, which enabled registration of a vehicle without the need to have a proper emissions or safety inspection. According to the news reports, millions of these vehicles were able to circumvent emissions inspections utilizing this method. These paper plates were used in the commission of serious crimes, including murder and human trafficking, while generating tens of millions of dollars in illegal profits and depriving the state and local governments from registration fees and toll revenues.

Additionally, improper, and fraudulent vehicle inspection has been occurring with more frequency in the past few years, again partly enabled by a lack of allocated enforcement resources needed to combat this issue head-on. According to the news reports, millions of vehicles in the past few years have been able to obtain a passing emissions test without even having been present at an inspection station. This is known as "clean scanning" a vehicle,

using a vehicle that would pass an inspection as a surrogate for one that would not. The use of "simulators" mimics a vehicle connected to an inspection machine as also being utilized to a much greater extent than in years past. These inspections have been allowed to occur within the TCEQ maintained database, with little to no enforcement actions being taken until very recently with Texas Department of Public Safety (TxDPS) assistance. TCEQ's recent actions are commended for coordinating with TxDPS on enforcement as a result of evidence covered in the news.

Proactive Action to Reduce Vehicle Inspection Fraud
More proactive actions can include using the TCEQ-maintained database to obtain "clean scanning" trends and share to TxDPS so they can take enforcement action as soon as possible. Another remedy is to simply program the analyzer to shut down an inspection test from proceeding when a VIN mismatch is identified. Again, the ill-gotten revenue from these fraudulent inspections have enabled criminals to profit at the expense of the general public and state.

Enhance the State's Vehicle Inspection and Maintenance Program
NCTCOG encourages Texas to implement a "clean screen" program by which drivers pass through a predetermined roadside monitor location and have the entire emissions inspection taken care of through the mail if emissions are at an acceptable level. With the recent passing of legislation to eliminate the noncommercial vehicle safety inspection requirement, there is an opportunity to enhance the Inspection and Maintenance Program to provide a greater convenience to the vehicle owners by streamlining the vehicle emissions inspection process. In addition, this can result in reducing historical levels of observed inspection station vehicle fraud.

Research on Diesel Engine Tampering; Extent and Impacts
NCTCOG requests TCEQ to conduct research on the magnitude and emission impacts associated with diesel engine emission component tampering. In addition to gasoline vehicle fraud, diesel vehicle emissions component tampering such as removing selective catalytic reduction systems (manual tampering) or disabling emissions components through tuning (electronic tampering) presents another challenge currently. According to the EPA, a tampered diesel truck has an increase of over 300 times the NOx emissions of a compliant diesel truck. Since there are no diesel emissions inspections performed in Texas, the extent of the diesel tampering requires more study and research opportunities.

Once emission impacts are identified, NCTCOG requests TCEQ to conduct a photochemical model sensitivity analysis, using real-world studies on both vehicle inspection fraud and diesel vehicle tampering. This can indicate possible reasons for the disconnect between air quality photochemical modeling results as compared to observed monitor readings.

Attainment Demonstration On-road Motor Vehicle Emission Budgets
Part of the EPA's approval process of this SIP will be to consider the adequacy of Motor Vehicle Emissions Budgets (MVEB) based on on-road emissions inventories contained in the SIP narrative. Once declared adequate by the EPA, updated MVEBs are required for use in all subsequent transportation conformities. Due to local responsibility and regional importance of transportation conformity to the implementation of long-range transportation plans, staff has reviewed the proposed SIP and observes marginally different on-road NOx and VOC emissions in the SIP versus on-road NOx and VOC emissions provided by NCTCOG under contract Proposal for Grant Activities/PCR No. 582-21-11549-004. Differences are summarized in the

following table. NCTCOG is requesting an explanation by TCEQ regarding these slight differences.

Source	NOx (tpd)	VOC (tpd)
TCEQ: Executive Summary, Table ES-1, page ES-3	60.12	33.31
TCEQ: Section 4.7, Table 4-2, page 4-12	60.12	33.31
NCTCOG: Chapter 6: Summary of Vehicle Miles of Travel, Speed, and Emissions, Page 40 and 43	60.19	33.27

These on-road emissions inventories are developed using inputs from NCTCOG's Travel Demand Model and other local inputs, resulting in inventories based on regional specific parameters. The development of these on-road emissions inventories by NCTCOG minimizes transportation conformity risk for the 10-county Dallas-Fort Worth area, with transportation investments totaling $148 billion. We appreciate the relationship with TCEQ working together to develop emissions inventories and various projects and programs implemented in the North Central Texas region.

Appendix E (Local Initiatives Submitted by the North Central Texas Council of Governments)
NCTCOG continues to develop local area strategies to help improve air quality. These projects and programs are expected to be fully implemented within the 10-county 2008 ozone NAAQS nonattainment area by the end of 2026. The continued progress of these strategies will allow for additional air quality benefits to be gained with further reduction in ozone precursor emissions. We appreciate the opportunity to provide these local initiatives (Appendix E) and continued collaboration between our agencies to mitigate health and environmental impacts of pollution in the DFW region.

Update Weight of Evidence (WOE)
After the review of Chapter 5: Weight of Evidence, TCEQ appears to be using inaccurate or inappropriate assumptions. For example, Figure 5-8: DFW 2008 Ozone NAAQS Nonattainment Area Point Source NOx Emissions by Site illustrates a decreasing trend in Point Source NOx emissions, but the data in the graph do not support this premise. The bar graph illustrates a variable or flat trend at best, not a clear decrease.

TCEQ indicates that prevailing winds bring emissions from the southeast into the region, impacting ozone formation. NCTCOG recommends an expansion to Figure 5-9: Map of Stationary NOx Emissions in the DFW 2008 Ozone NAAQS Nonattainment Area to include major NOx sources in counties south and east to show a complete picture of facilities impacting our region.

After review of 5.3.1: Additional Measures, NCTCOG recommends that TCEQ remove discussion of the Blue Skyways Collaborative from Section 5.3.1.1. This particular EPA initiative has not been active in EPA Region 6 in nearly 10 years and is no longer resulting in meaningful impacts.

Additionally. NCTCOG recommends several additional programs could be added to the Weight of Evidence discussion:

- Several TERP programs not currently listed may achieve additional reductions, including the Light-Duty Motor Vehicle Purchase or Lease Incentive Program and Alternative Fueling Facility Program (which achieve benefits indirectly by facilitating broader use of cleaner alternative fuel vehicles).
- The Bipartisan Infrastructure Law (BIL) and Inflation Reduction Act (IRA) implemented key programs, including the new EPA Clean School Bus Program, which are not highlighted.
- Implementation of the National Electric Vehicle Infrastructure (NEVI) Formula Program through the Texas EV Charging Plan may result in additional tailpipe emissions reductions in the urban core.

TCEQ should seek to voluntarily, but proactively implement the VOC contingency measures detailed in Chapter 4: Control Strategies and Required Elements, voluntary measures listed in Table 4-1: Existing Ozone Control and Voluntary Measures Applicable to the DFW 10-County Nonattainment Area, and contingency measures listed in Table 4-3: 10-County DFW 2008 Ozone NAAQS Nonattainment Area VOC Contingency Measures Reductions (tons per day) that could provide for a discussion as inclusion as WOE measures.

Modernized Industry Permit Process

Requesting TCEQ to modify the statewide permit approval process so that each permit under consideration for approval by the Commission be evaluated through the appropriate SIP photochemical model on their proposed permitted air quality impacts and how permit levels would impact nonattainment areas. Since photochemical modeling suggests emissions transport from outside the nonattainment area is significant, statewide means EVERY proposed permit be analyzed for their air quality impacts, not just those sought within a nonattainment area. Similar to transportation conformity and MVEBs, TCEQ is encouraged to identify a certain allotment of industry/point source emissions allowable as a whole, not individually. This is in order to reach future attainment per what the photochemical suggests the air shed can accommodate from this emission source. Predicting number of future permits, be it new or modified, is uncertain and for every one not predicted accurately would be absent from the photochemical modeling used in a SIP. The continued impact from the existing process would continue to grow over time as the attainment year approaches. Mechanically, a modernized statewide permit process would have an established point source total of emissions that is acceptable per the TCEQ photochemical model. Thereafter, each new or revised permit for consideration would either add or subtract from the point source total. Future permits would not be allowed for approval if the emissions are over the allowable collective point source total.