CHAPTER 4: CONTROL STRATEGIES AND REQUIRED ELEMENTS

4.1 INTRODUCTION

The Dallas-Fort Worth (DFW) nonattainment area for the 2008 eight-hour ozone National Ambient Air Quality Standard (NAAQS), which consists of Collin, Dallas, Denton, Tarrant, Ellis, Johnson, Kaufman, Parker, Rockwall, and Wise Counties, includes a wide variety of major and minor industrial, commercial, and institutional entities. The Texas Commission on Environmental Quality (TCEQ) has implemented stringent and innovative regulations that address emissions of nitrogen oxides (NO_X) and volatile organic compounds (VOC) from these sources. This chapter describes existing ozone control measures for the DFW nonattainment area, as well as how Texas meets the following moderate ozone nonattainment area state implementation plan (SIP) requirements for the 2008 eight-hour ozone NAAQS: reasonably available control technology (RACT), reasonably available control measures (RACM), motor vehicle emissions budget (MVEB), and contingency measures.

4.2 EXISTING CONTROL MEASURES

Since the early 1990s, a broad range of control measures have been implemented for each emission source category for ozone planning in the DFW nonattainment area, formerly consisting of nine counties, Collin, Dallas, Denton, Tarrant, Ellis, Johnson, Kaufman, Parker, and Rockwall. Wise County was added to the nonattainment area for the 2008 eight-hour ozone NAAQS. Table 4-1: *Existing Ozone Control and Voluntary Measures Applicable to the DFW 10-County Nonattainment Area* lists the existing ozone control strategies that have been implemented for the one-hour and the 1997 and 2008 eight-hour ozone standards for all 10 counties comprising the DFW nonattainment area.

Table 4-1: Existing Ozone Control and Voluntary Measures Applicable to the DFW 10-County Nonattainment Area

Measure	Description	Start Date(s)
Industrial, Commercial, and Institutional (ICI) Major Source Rule 30 Texas Administrative Code (TAC) Chapter 117, Subchapter B, Division 4	Applies to all major sources (50 tons per year (tpy) of NO_X or more) with affected units in Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, and Tarrant Counties Applies to major sources (100 tpy of NO_X or more) with affected units in Wise County Affected source categories included in rule: boilers; process heaters; stationary gas turbines, and duct burners used in turbine exhaust ducts; lime kilns; heat treat and reheat metallurgical furnaces; stationary internal combustion engines; incinerators; glass, fiberglass, and mineral wool melting furnaces; fiberglass and mineral wool curing ovens; natural gas-fired ovens and heaters; brick and ceramic kilns; lead smelting reverberatory and blast furnaces; and natural gas-fired dryers used in organic solvent, printing ink, clay, brick, ceramic tile, calcining, and vitrifying processes	March 1, 2009 or March 1, 2010, depending on source category Note: these NO_X control requirements are in addition to the NO_X control strategies previously implemented for ICI major sources in Collin, Dallas, Denton, and Tarrant Counties in March 2002 for the one-hour ozone NAAQS January 1, 2017 for Wise County and for wood-fired boilers in all 10 counties of the DFW area

Measure	Description	Start Date(s)
ICI Minor Source Rule 30 TAC Chapter 117, Subchapter D, Division 2	Applies to all minor sources (less than 50 tpy of NO_X) with stationary internal combustion engines in Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, and Tarrant Counties	March 1, 2009 for rich-burn gas-fired engines, diesel-fired engines, and dual-fuel engines March 1, 2010 for lean-burn gas-fired engines
Stationary Diesel Engines 30 TAC Chapter 117, Subchapter B, Division 4 and Subchapter D, Division 2	Prohibition on operating stationary diesel and dual-fuel engines for testing and maintenance purposes between 6:00 a.m. and noon in Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, and Tarrant Counties	March 1, 2009
Major Utility Electric Generation Source Rule 30 TAC Chapter 117, Subchapter C, Division 4	NO_X control requirements for major source (50 tpy of NO_X or more) utility electric generating facilities in Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, and Tarrant Counties NO_X control requirements for major source (100 tpy of NO_X or more) utility electric generating facilities in Wise County Applies to utility boilers, auxiliary steam boilers, stationary gas turbines, and duct burners used in turbine exhaust ducts used in electric power generating systems Note: these NO_X control requirements are in addition to the NO_X control strategies implemented for utilities in Collin, Dallas, Denton, and Tarrant Counties in 2001 through 2005 for the one-hour ozone NAAQS	March 1, 2009 for Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, and Tarrant Counties January 1, 2017 for Wise County
Utility Electric Generation in East and Central Texas 30 TAC Chapter 117, Subchapter E, Division 1	NO_X control requirements on utility boilers and stationary gas turbines (including duct burners used in turbine exhaust ducts) at utility electric generation sites in East and Central Texas, including Parker County	May 1, 2003 through May 1, 2005
Cement Kiln Rule 30 TAC Chapter 117, Subchapter E, Division 2	NO_X control requirements for all Portland cement kilns located in Ellis County	March 1, 2009

Measure	Description	Start Date(s)
Nitric Acid Manufacturing Rule – General 30 TAC Chapter 117, Subchapter F, Division 3	NO_X emission standards for nitric acid manufacturing facilities (state-wide rule – no nitric acid facilities in DFW)	November 15, 1999
East Texas Combustion Sources Rule 30 TAC Chapter 117, Subchapter E, Division 4	NO_X control requirements for stationary rich-burn, gas-fired internal combustion engines (240 horsepower (hp) and greater) Measure implemented to reduce ozone in the DFW nonattainment area although controls not applicable in the DFW nonattainment area	March 1, 2010
Natural Gas-Fired Small Boilers, Process Heaters, and Water Heaters Rule 30 TAC Chapter 117, Subchapter E, Division 3	NO_X emission limits on small-scale residential and industrial boilers, process heaters, and water heaters equal to or less than 2.0 million British thermal units per hour in Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, and Tarrant Counties	May 11, 2000
VOC Control Measures 30 TAC Chapter 115	Control technology requirements for VOC sources for RACT and other SIP planning purposes including: storage, general vent gas, industrial wastewater, loading and unloading operations, general VOC leak detection and repair, solvent using processes, etc.	December 31, 2002 and earlier for Collin, Dallas, Denton, and Tarrant Counties June 15, 2007 or March 1, 2009 for Ellis, Johnson, Kaufman, Parker, and Rockwall Counties January 1, 2017 for Wise County
Degassing of Storage Tanks, Transport Vessels, and Marine Vessels Rule 30 TAC, Chapter 115, Subchapter F, Division 3	VOC control requirements for degassing during, or in preparation of, cleaning any storage tanks and transport vessels	May 21, 2011 for Collin, Dallas, Denton, and Tarrant Counties

Measure	Description	Start Date(s)
Storage Tanks Rule 30 TAC Chapter 115, Subchapter B, Division 1	Applies to major source storage tanks (50 tpy of VOC or more) in Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, and Tarrant Counties Applies to major source storage tanks (100 tpy of VOC or more) in Wise County Requires controls for slotted guidepoles and more stringent controls for other fittings on floating roof tanks, and control requirements or operational limitations on landing floating roof tanks Eliminates exemption for storage tanks for crude oil or natural gas condensate and regulates flash emissions from these tanks	March 1, 2013 January 1, 2017 for major source storage tanks in Wise County and for new inspection requirements to control flashed gases from storage tanks and corresponding recordkeeping requirements for fixed roof storage tanks in all 10 counties of the DFW area
Solvent-Using Processes Rules 30 TAC Chapter 115, Subchapter E	Implements control, testing, monitoring and recordkeeping requirements for eight emission source categories in the DFW nonattainment area for degreasing, surface coating, solvent cleaning, printing, and adhesive application processes. Certain rules were updated based on the control techniques guidelines issued by the United States Environmental Protection Agency (EPA) between 2006 and 2008 (see Dallas-Fort Worth Attainment Demonstration SIP Revision for the 1997 Eight-Hour Ozone Standard Nonattainment Area (2010-022-SIP-NR))	March 1, 2013 for Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, and Tarrant Counties January 1, 2017 for Wise County March 1, 2011 for major source offset lithographic printing lines and March 1, 2012 for minor source offset lithographic printing lines in Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, and Tarrant Counties

Measure	Description	Start Date(s)
Refueling – Stage I Rule 30 TAC, Chapter 115, Subchapter C, Division 2	Captures gasoline vapors that are released when gasoline is delivered to a storage tank Vapors returned to tank truck as storage tank is filled with fuel, rather than released into ambient air	1990 for Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, and Tarrant Counties January 1, 2017 for Wise County A SIP revision related to Stage I regulations was approved by the EPA, effective June 29, 2015
Refueling – Stage II Rule 30 TAC, Chapter 115, Subchapter C, Division 4	Captures gasoline vapors when vehicle is fueled at pump Vapors returned through pump hose to petroleum storage tank, rather than released into ambient air	1992 (Collin, Dallas, Denton, and Tarrant Counties) A SIP revision authorizing the decommissioning of Stage II vapor control equipment was approved by the EPA on March 17, 2014. Facilities may continue operating Stage II until August 31, 2018.
Texas Low Reid Vapor Pressure (RVP) Gasoline 30 TAC Chapter 114, Subchapter H, Division 1	Requires all gasoline for both on-road and non-road use to have RVP of 7.8 pounds per square inch or less from May 1 through October 1 each year	April 2000 in Ellis, Johnson, Kaufman, Parker, Rockwall, and Wise Counties
Texas Low Emission Diesel (TxLED) 30 TAC Chapter 114, Subchapter H, Division 2	Requires all diesel fuel for both on-road and non-road use to have a lower aromatic content and a higher cetane number	Phased in from October 31, 2005 through January 31, 2006
Federal Area/Non-Road Measures	Series of emissions limits implemented by the EPA for area and non-road sources Examples: diesel and gasoline engine standards for locomotives and leaf-blowers	Phase in through 2018

Measure	Description	Start Date(s)
Texas Emissions Reduction Plan (TERP) 30 TAC Chapter 114, Subchapter K	Provides grant funds for on-road and non-road heavy-duty diesel engine replacement/retrofit. The first emissions reduction incentive grant projects funded under TERP were for fiscal years (FY) 2002-2003 (September 1, 2001, through August 31, 2003). To focus the emissions reduction benefits for the areas that needed them the most, applications were accepted only for projects in the Houston-Galveston-Brazoria (HGB) and DFW nonattainment areas for FY 2002-2003. An application period limited to DFW, HGB, and Beaumont-Port Arthur was done in 2006 and 2007. The allocation approach established by the commission for TERP included several grant programs for reducing emissions from mobile sources and encouraging the use of cleaner alternative fuels for transportation, including the Diesel Emissions Reduction Incentive Program providing grants to replace or upgrade heavy-duty on-road vehicles, non-road equipment, locomotives, marine vessels, and some stationary engines.	January 2002

Measure	Description	Start Date(s)
Vehicle Inspection and Maintenance (I/M) Rule 30 TAC Chapter 114, Subchapter C	Yearly treadmill-type testing for pre-1996 vehicles and computer checks for 1996 and newer vehicles	May 1, 2002 in Collin, Dallas, Denton, and Tarrant Counties May 1, 2003 in Ellis, Johnson, Kaufman, Parker, and Rockwall Counties The DFW area meets the Federal Clean Air Act (FCAA), §182(b)(4) requirements to implement an I/M program, and according to 40 Code of Federal Regulations (CFR) §51.350(b)(2), an I/M program is required to cover the entire urbanized area based on the 1990 census. The current I/M program in the DFW ozone nonattainment area sufficiently covers a population equal to the DFW urbanized area, thus expansion of the I/M program to include Wise County is not required.
California Gasoline Engines	California standards for non-road gasoline engines 25 hp and larger	May 1, 2004
Voluntary Mobile Emissions Reduction Program	Various pedestrian, bicycle, traffic, and mass transit voluntary measures administered by the North Central Texas Council of Governments (NCTCOG) (see Appendix H for more details)	2007
Voluntary Energy Efficiency/Renewable Energy (EE/RE)	EE/RE projects encouraged by the Texas Legislature are outlined in section 5.4.1.1	See section 5.4.1.1

Measure	Description	Start Date(s)
Federal On-Road Measures	Series of emissions limits implemented by the EPA for on-road vehicles Included in measures: Tier 1, Tier 2, and Tier 3 light-duty and medium-duty passenger vehicle standards, heavy-duty vehicle standards, low sulfur diesel standards, National Low Emission Vehicle standards, and reformulated gasoline	Phase in through 2010 Tier 3 phase in from 2017 through 2025
Transportation Control Measures	Various transportation-related, local measures implemented under the previous one-hour and 1997 eight-hour ozone NAAQS NCTCOG has implemented all transportation control measure (TCM) commitments and provides an accounting of TCMs as part of the transportation conformity process. TCMs are not required to be considered for a moderate nonattainment area.	May 2007 for TCM commitments under 1997 eight-hour ozone standard August 1986 for TCM commitments under one-hour ozone standard

4.3 UPDATES TO EXISTING CONTROL MEASURES (NO CHANGE)

4.3.1 Updates to NO_X Control Measures (No change)

4.3.2 Updates to VOC Control Measures (No change)

4.3.3 Minor Source Stationary Diesel Engine Exemption (No change)

4.3.4 Decommissioning of Stage II Vapor Recovery (No change)

4.3.5 Updates to Stage I Vapor Recovery (No change)

4.4 NEW CONTROL MEASURES (NO CHANGE)

4.4.1 Stationary Sources (No change)

4.4.1.1 NO_X RACT Control Measures for Wise County (No change)

4.5 RACT ANALYSIS

4.5.1 General Discussion

Nonattainment areas classified as moderate and above are required to meet the mandates of the FCAA under §172(c)(1) and §182(b)(2) and (f). According to the EPA's 2008 eight-hour ozone SIP requirements rule (80 *Federal Register* [FR] 12264), states containing areas classified as moderate nonattainment or higher must submit a SIP revision to fulfill the RACT requirements for all control techniques guidelines (CTG) emission source categories and all non-CTG major sources of NO_X and VOC. This SIP revision must also contain adopted RACT regulations, certifications where appropriate that existing provisions are RACT, and/or negative declarations that there are no sources in the nonattainment area covered by a specific CTG source category. The major source threshold for moderate nonattainment areas is a potential to emit 100 tpy or more of either NO_X or VOC. The 100 tpy major source threshold applies in the newly designated Wise County. A 50 tpy major source threshold is retained for the remaining nine counties, which are currently classified as a serious nonattainment area under the 1997 eight-hour ozone NAAQS.

RACT is defined as the lowest emissions limitation that a particular source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility (44 FR 53762, September 17, 1979). RACT requirements for moderate and higher classification nonattainment areas are included in the FCAA to assure that significant source categories at major sources of ozone precursor emissions are controlled to a reasonable extent, but not necessarily to best available control technology (BACT) levels expected of new sources or to maximum achievable control technology (MACT) levels required for major sources of hazardous air pollutants.

While RACT and RACM have similar consideration factors like technological and economic feasibility, there is a significant distinction between RACT and RACM. A control measure must advance attainment of the area towards meeting the NAAQS for that measure to be considered RACM. Advancing attainment of the area is not a factor of consideration when evaluating RACT because the benefit of implementing RACT is presumed under the FCAA.

In 2008, the EPA approved the DFW NO_X rules in 30 TAC Chapter 117 (73 FR 73562). In 2009, the EPA approved the DFW VOC rules in 30 TAC Chapter 115 and NO_X rules for cement kilns in 30 TAC Chapter 117 as meeting the FCAA RACT requirements (74 FR 1903 and 74 FR 1927). In 2014, the EPA approved the 30 TAC Chapter 115 rules for VOC storage tanks as meeting the FCAA RACT requirements (79 FR 53299). State regulations in Chapter 115 that implement the controls recommended in CTG or alternative control techniques (ACT) documents or that implement equivalent or superior emission control strategies were determined to fulfill RACT requirements for any CTG or ACT documents issued prior to 2006 for the nine-county DFW 1997 eight-hour ozone nonattainment area.

The EPA issued 11 CTG documents between 2006 and 2008 with recommendations for VOC controls on a variety of consumer and commercial products. The RACT analysis included in the DFW Attainment Demonstration SIP revision for the 1997 Eight-Hour Ozone Standard adopted on March 10, 2010 addressed the following three CTG documents:

- Flat Wood Paneling Coatings, Group II issued in 2006;
- Offset Lithographic and Letterpress Printing, Group II issued in 2006; and
- Fiberglass Boat Manufacturing Materials, Group IV issued in 2008.

The RACT analysis included in the DFW Attainment Demonstration SIP Revision for the 1997 Eight-Hour Ozone Standard adopted on December 7, 2011 addressed the remaining eight CTG documents:

- Flexible Packaging Printing Materials, Group II issued in 2006;
- Industrial Cleaning Solvents, Group II issued in 2006;
- Large Appliance Coatings, Group III issued in 2007;
- Metal Furniture Coatings, Group III issued in 2007;
- Paper, Film, and Foil Coatings, Group III issued in 2007;
- Miscellaneous Industrial Adhesives, Group IV issued in 2008;
- Miscellaneous Metal and Plastic Parts Coatings, Group IV issued in 2008; and
- Auto and Light-Duty Truck Assembly Coatings, Group IV issued in 2008.

In 2014, the EPA approved the 30 TAC Chapter 115 rules for offset lithographic printing as meeting the FCAA RACT requirements (79 FR 45105). In 2015, the EPA approved the DFW VOC rules in 30 TAC Chapter 115 addressing the remaining CTGs issued between 2006 and 2008, in

addition to approving the DFW RACT analysis as meeting the FCAA RACT requirements for all affected VOC and NO_X sources under the 1997 eight-hour ozone NAAQS (80 FR 16291).

TCEQ rules that are consistent with or more stringent than controls implemented in other nonattainment areas were also determined to fulfill RACT requirements. Federally approved state rules and rule approval dates can be found in 40 CFR §52.2270(c), EPA Approved Regulations in the Texas SIP. Emission sources subject to the more stringent BACT or MACT requirements were determined to also fulfill RACT requirements.

The TCEQ fulfilled FCAA RACT requirements for the 2008 eight-hour ozone NAAQS as part of the 2018 DFW Attainment Demonstration (AD) SIP revision for the 2008 eight-hour ozone NAAQS submitted to the EPA on July 10, 2015. However, as part of this 2017 DFW AD SIP revision, the TCEQ reviewed the 2013 point source emissions inventory to verify that all CTG or ACT emission source categories and non-CTG or non-ACT major emission sources in the DFW nonattainment area were subject to requirements that meet or exceed the applicable RACT requirements, or that further emission controls on the sources were either not economically feasible or not technologically feasible. The TCEQ concluded that RACT is in place for all emission sources in the DFW area and that no additional rulemaking is necessary as part of this 2017 DFW AD SIP Revision.

4.5.2 NO_X RACT Determination (No change)

4.5.3 VOC RACT Determination (No change)

4.6 RACM ANALYSIS

4.6.1 General Discussion

FCAA, §172(c)(1) requires states to provide for implementation of all RACM as expeditiously as practicable and to include RACM analyses in the SIP. In the general preamble for implementation of the FCAA Amendments published in the April 16, 1992 issue of the *Federal Register* (57 FR 13498), the EPA explains that it interprets FCAA, §172(c)(1) as a requirement that states incorporate into their SIP all RACM that would advance a region's attainment date; however, states are obligated to adopt only those measures that are reasonably available for implementation in light of local circumstances.

The TCEQ used a two-step process to develop the list of potential control strategies evaluated during the RACM analysis for the 2018 DFW AD SIP for the 2008 eight-hour ozone NAAQS submitted to the EPA on July 10, 2015. The same list was used for this 2017 DFW AD SIP revision. First, the TCEQ compiled a list of potential control strategy concepts based on an initial evaluation of the existing control strategies in the DFW nonattainment area and existing sources of VOC and NO_X in the DFW nonattainment area. The EPA allows states the option to consider control measures outside the ozone nonattainment area that can be shown to advance attainment; however, consideration of these sources is not a requirement of the FCAA. A draft list of potential control strategy concepts was developed from this initial evaluation. The TCEQ also invited stakeholders to suggest any additional strategies that might help advance attainment of the DFW nonattainment area. The final list of potential control strategy concepts for RACM analysis includes the strategies on the initial draft list and the strategies suggested by stakeholders during the informal stakeholder comment process.

Each control measure identified through the control strategy development process was evaluated to determine if the measure would meet established criteria to be considered reasonably available. The TCEQ used the general criteria specified by the EPA in the proposed

approval of the New Jersey RACM analysis published in the January 16, 2009 issue of the *Federal Register* (74 FR 2945):

> *RACM is defined by the EPA as any potential control measure for application to point, area, on-road and non-road emission source categories that meets the following criteria:*
>
> - *The control measure is technologically feasible;*
> - *The control measure is economically feasible;*
> - *The control measure does not cause "substantial widespread and long-term adverse impacts;"*
> - *The control measure is not "absurd, unenforceable, or impracticable;"*
> - *The control measure can advance the attainment date by at least one year.*

The EPA did not provide guidance in the *Federal Register* notice on how to interpret the criteria "advance the attainment date by at least one year." Considering the July 20, 2018 attainment date for this 2017 DFW AD SIP revision, the TCEQ evaluated this aspect of RACM based on advancing the deadline for implementing control measures by one year, to July 20, 2017. As a result of the December 23, 2014 court decision that vacated the previous December 31, 2018 attainment date, the commission reevaluated RACM as part of this 2017 DFW AD SIP revision based on the new attainment date of July 20, 2018, since the new attainment year is now 2017.

In order for a control measure to "advance attainment," it would need to be implemented prior to the beginning of ozone season in the attainment year, so suggested control measures that could not be implemented by March 1, 2017 could not be considered RACM because the measures would not advance attainment. To "advance the attainment date by at least one year" to July 20, 2017, suggested control measures would have to be fully implemented by March 1, 2016. In order to provide a reasonable amount of time to fully implement a control measure, the following must be considered: availability and acquisition of materials; the permitting process; installation time; and the time and resources necessary for implementation of testing and monitoring to demonstrate compliance.

The TCEQ also considered whether the control measure was similar or identical to control measures already in place in the DFW nonattainment area. If the suggested control measure would not provide substantive and quantifiable benefit over the existing control measure, then the suggested control measure was not considered RACM because reasonable controls were already in place. Tables G-1: *DFW Area Stationary Source RACM Analysis* and G-2: *DFW Area On-Road and Non-Road Mobile Source RACM Analysis* of Appendix G: *RACM Analysis* presents the final list of potential control measures as well as the RACM determination for each measure.

4.6.2 Results of the RACM Analysis

Based on the RACM analysis, the TCEQ determined that no potential control measures met the criteria to be considered RACM. All potential control measures evaluated for stationary sources were determined to not be RACM due to technological or economic feasibility, enforceability, adverse impacts, or ability of the measure to advance attainment of the NAAQS. In general, the inability to advance attainment is the primary determining factor in the RACM analyses. As discussed in Chapter 3: *Photochemical Modeling* and Chapter 5: *Weight of Evidence* of this 2017 DFW AD SIP revision, the current modeling results in conjunction with the weight of evidence analysis indicate that the DFW area will demonstrate attainment. Modeling results based on the April 2007 EPA modeling guidance project the future ozone design value to be 77 parts per billion (ppb). Use of the newer EPA draft guidance projects this 2018 future ozone

design value to be 76 ppb. These 2018 design values and the weight of evidence analysis included in Chapter 5 of this 2017 DFW AD SIP revision demonstrate attainment of the 2008 eight-hour ozone NAAQS. Based on a July 20, 2018 attainment deadline, a control measure would have to be in place by March 1, 2017 (prior to the beginning of ozone season in the attainment year) to be considered RACM. Furthermore, a control measure would have to be in place by March 1, 2016 in order for the measure to advance the attainment date by one year; to July 20, 2017; and it is not possible for the TCEQ to reasonably implement any control measures that would provide for earlier attainment of the NAAQS. Specifically, there is not adequate time to adopt additional rule requirements and have these rules go into effect or for sources to acquire, install, permit, and/or begin operation prior to this date. Negative RACM determinations for potential control measures that were based on technological or economic feasibility, enforceability, or adverse impacts remain relevant, regardless of attainment year.

4.7 MVEB

The MVEB refers to the maximum allowable emissions from on-road mobile sources for each applicable criteria pollutant or precursor as defined in the SIP. The budget must be used in transportation conformity analyses. Areas must demonstrate that the estimated emissions from transportation plans, programs, and projects do not exceed the MVEB. The attainment budget represents the summer weekday on-road mobile source emissions that have been modeled for the AD, and includes all of the on-road control measures reflected in Chapter 4: *Control Strategies and Required Elements* of the demonstration. The on-road emission inventory establishing this MVEB was developed with the 2014 version of the Motor Vehicle Emission Simulator (MOVES2014) model, and is shown in Table 4-2: *2017 Attainment Demonstration MVEB for the 10-County DFW Area*. For additional detail, refer to Chapter 3 of Appendix B*: Emissions Modeling for the DFW Attainment Demonstration SIP Revision for the 2008 Eight-Hour Ozone Standard.*

Table 4-2: 2017 Attainment Demonstration MVEB for the 10-County DFW Area

10-County DFW Area On-Road Emissions Inventory Description	NO_X tons per day (tpd)	VOC (tpd)
2017 On-Road MVEB Based on MOVES2014	130.77	64.91

4.8 MONITORING NETWORK

The TCEQ operates a variety of monitors in support of assessing ambient air quality throughout the state of Texas. These monitors meet the requirements for several federally required networks including the State or Local Air Monitoring Stations network (SLAMS), Photochemical Assessment Monitoring Stations network, Chemical Speciation Network, National Air Toxics Trends Stations network, and National Core Multipollutant Monitoring Stations network.

The Texas annual monitoring network plan provides information on ambient air monitors established to meet federal ambient monitoring requirements including comparison to the NAAQS. Under 40 CFR §58.10, all states are required to submit an annual monitoring network plan to the EPA by July 1 of each year. The annual monitoring network plan is made available for public inspection for at least 30 days prior to submission to the EPA. The plan and any comments received during the 30 day inspection period are forwarded to the EPA for final review and approval. The TCEQ's 2015 plan presented the current Texas network, as well as proposed changes to the network from July 1, 2015, through December 31, 2016. The plan was posted for public comment from May 15, 2015, through June 14, 2015, and was submitted to the EPA on July 1, 2015.

The current DFW area monitoring network in 2015 includes 20 regulatory ozone monitors. There are 17 ozone monitors located in Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, and Tarrant Counties and an additional three ozone monitors in Navarro, Hood, and Hunt Counties. The TCEQ ensures compliance with monitoring siting criteria and data quality requirements for these and all other federally required monitors in accordance with 40 CFR Part 58. The TCEQ utilizes this data to support determinations regarding air quality in the DFW nonattainment area.

4.9 CONTINGENCY PLAN (NO CHANGE)

4.10 REFERENCES

EPA, 1993. NO_X Substitution Guidance (https://www3.epa.gov/ttn/oarpg/t1/memoranda/noxsubst.pdf)

EPA, 2005. Clean-Fuel Vehicle Standards, no. CCD-05-1