

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

AGENDA ITEM REQUEST

for Proposed State Implementation Plan Revision

AGENDA REQUESTED: July 9, 2025

DATE OF REQUEST: June 20, 2025

INDIVIDUAL TO CONTACT REGARDING CHANGES TO THIS REQUEST, IF NEEDED: Jamie Zech, Agenda Coordinator, (512) 239-3935

CAPTION: Docket No. 2025-0540-SIP. Consideration for publication of, and hearing on, proposed Bexar County Serious Area Reasonable Further Progress (RFP) State Implementation Plan (SIP) Revision for the 2015 Eight-Hour Ozone National Ambient Air Quality Standard (NAAQS).

To meet federal Clean Air Act requirements, the proposed SIP revision would include an analysis of RFP toward attainment of the 2015 eight-hour ozone NAAQS, demonstrating required ozone precursor emissions reductions from the 2017 baseline year, a contingency plan for failure to demonstrate progress for the 2023 milestone year and/or the 2026 attainment year, a vehicle miles traveled demonstration, and RFP motor vehicle emissions budgets for the 2023 milestone year and 2026 attainment year. (Emily Wagoner, Terry Salem; Non-Rule Project No. 2024-040-SIP-NR)

Richard C. Chism

Director

Donna Huff

Division Deputy Director

Jamie Zech

Agenda Coordinator

Copy to CCC Secretary? NO ☒ YES ☐

Texas Commission on Environmental Quality

Interoffice Memorandum

To: Commissioners **Date:** June 20, 2025

Thru: Laurie Gharis, Chief Clerk
Kelly Keel, Executive Director

From: Richard C. Chism, Director *RCC*
Office of Air

Docket No.: 2025-0540-SIP

Subject: Commission Approval for Proposed Bexar County Serious Area Reasonable Further Progress (RFP) State Implementation Plan (SIP) Revision for the 2015 Eight-Hour Ozone National Ambient Air Quality Standard (NAAQS)

Bexar County 2015 Ozone NAAQS Serious RFP SIP Revision
Non-Rule Project No. 2024-040-SIP-NR

Background and reason(s) for the SIP revision:

The Bexar County nonattainment area, consisting of Bexar County, was previously classified as moderate nonattainment for the 2015 eight-hour ozone NAAQS of 0.070 parts per million (ppm) with a September 24, 2024, attainment date and a 2023 attainment year. On October 12, 2023, Texas Governor Greg Abbott signed and submitted a letter to the U.S. Environmental Protection Agency (EPA) to voluntarily reclassify the Bexar County area, along with the Dallas-Fort Worth (DFW) and Houston-Galveston-Brazoria (HGB) 2015 eight-hour ozone NAAQS moderate nonattainment areas, to serious. On June 20, 2024, EPA published the final notice reclassifying the area from moderate to serious for the 2015 eight-hour ozone NAAQS, effective July 22, 2024 (89 *Federal Register* (FR) 51829).

Because the Bexar County area has been reclassified by EPA, it is now subject to the serious nonattainment area requirements in federal Clean Air Act (FCAA), §172(c) and §182(c), and the Texas Commission on Environmental Quality (TCEQ or commission) is required to submit serious area attainment demonstration (AD) and RFP SIP revisions to EPA by January 1, 2026. As indicated in EPA's *Implementation of the 2015 National Ambient Air Quality Standards for Ozone: Nonattainment Area Classifications Approach; Final Rule* published on March 9, 2018, the attainment deadline for the Bexar County serious classification is September 24, 2027, with a 2026 attainment year (83 FR 10376).

Scope of the SIP revision:

This proposed SIP revision addresses RFP consistent with FCAA requirements for areas classified as serious nonattainment for the 2015 eight-hour ozone NAAQS. This Bexar County RFP SIP revision is scheduled to be proposed in conjunction with both the Bexar County Serious Area AD SIP Revision for the 2015 Eight-Hour Ozone NAAQS (Non-Rule Project No. 2024-041-SIP-NR) and the proposed revisions to rules in 30 Texas Administrative Code (TAC) Chapter 115 (Rule Project No. 2025-006-115-AI).

A.) Summary of what the SIP revision would do:

This proposed RFP SIP revision demonstrates that the Bexar County 2015 eight-hour ozone nonattainment area will achieve emissions reductions in ozone precursors (nitrogen oxides (NO_x) and/or volatile organic compounds (VOC)), consistent with the serious ozone nonattainment area requirements of FCAA, §182(c), and EPA's *Implementation of the 2015 National Ambient Air Quality Standards for Ozone: State implementation Plan Requirements; Final Rule* (2015 eight-hour ozone standard SIP requirements rule, 83 FR 62998) according to the following increments:

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- a 15% VOC-only emissions reduction for the nine-year period from January 1, 2018, through December 31, 2026;
- a 9% emissions reduction in NO_x for the nine-year period from January 1, 2018, through December 31, 2026; and
- an RFP contingency plan in case of failure to demonstrate progress, including a revised contingency plan for the 2023 milestone (analysis) year along with a contingency plan for the 2026 attainment year, calculated as a 3% emissions reduction of the base year inventory for Bexar County.

In addition to demonstrating the required emissions reductions, the SIP revision also provides a vehicle miles traveled demonstration, revised motor vehicle emissions budgets (MVEB) for the 2023 milestone year, and provides new MVEBs for the 2026 attainment year. This RFP SIP revision would be proposed in conjunction with both the Bexar County 2015 Ozone NAAQS Serious AD SIP Revision and the proposed revisions to rules in 30 TAC Chapter 115 (Rule Project No. 2025-006-115-AI).

B.) Scope required by federal regulations or state statutes:

This proposed RFP SIP revision is required to demonstrate that the Bexar County serious nonattainment area will achieve emissions reductions consistent with the requirements of FCAA, §182(c)(2) and EPA's 2015 eight-hour ozone standard SIP requirements rule. The RFP calculations documented in this proposed SIP revision rely on an RFP base year of 2017, a 2023 milestone year, and a 2026 serious attainment year. This proposed SIP revision includes a 9% reduction in NO_x emissions to meet serious RFP requirements under FCAA, §182(c). This proposed SIP revision also incorporates an updated contingency plan for the 2023 milestone year that replaces the plan from the recently adopted Bexar County 2015 Ozone NAAQS Moderate RFP SIP Revision (Project No. 2022-024-SIP-NR) and a contingency plan for the 2026 attainment year.

Ozone nonattainment areas classified as moderate and above are also required by FCAA, §182(b)(1) to demonstrate a 15% VOC emissions reduction within six years after designation unless the requirement has already been met under a previous NAAQS, according to the 2015 eight-hour ozone SIP requirements rule. The moderate RFP SIP revision achieved the necessary 15% reasonable further progress with a combination of VOC and NO_x reductions. This SIP revision and the concurrently proposed revisions to rules in 30 TAC Chapter 115 (Rule Project No. 2025-006-115-AI) would fulfill the outstanding 15% VOC reduction requirement from the 2017 base year.

C.) Additional staff recommendations that are not required by federal rule or state statute:
None.

Statutory authority:

The authority to propose and adopt SIP revisions is derived from the following sections of Texas Health and Safety Code, Chapter 382, Texas Clean Air Act (TCAA), §382.002, which provides that the policy and purpose of the TCAA is to safeguard the state's air resources from pollution; TCAA, §382.011, which authorizes the commission to control the quality of the state's air; and TCAA, §382.012, which authorizes the commission to prepare and develop a general, comprehensive plan for the control of the state's air. This SIP revision would also be proposed under the commission's general authority under Texas Water Code, §5.102, General Powers and §5.105, General Policy. The SIP revision would also be proposed under 42 United States Code, §§7420 et seq., and implementing rules in 40 Code of Federal Regulations Part 51, which requires states to submit SIP revisions that specify the manner in which the NAAQS will be achieved and maintained within each air quality control region of the state.

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Effect on the:

A.) Regulated community:

To meet proposed control measures for additional emissions reductions in Bexar County to demonstrate RFP for the 2015 eight-hour ozone NAAQS, the regulated community would be obligated to comply with the new requirements in the concurrently proposed revisions to 30 TAC Chapter 115, if adopted, and would incur costs associated with those requirements.

The proposed Bexar County RFP SIP Revision would set new NO_x and VOC MVEBs for the 2026 attainment year. If found adequate or approved by EPA for conformity purposes, use of the MVEBs could affect transportation planning conducted by local governments in the Bexar County area.

B.) Public:

The general public in the Bexar County ozone nonattainment area may benefit from reduced emissions associated with an RFP demonstration.

C.) Agency programs:

Staff in the Office of Compliance and Enforcement may be required to conduct additional or expanded investigations as a result of any new or amended regulations in the concurrently proposed revisions to 30 TAC Chapter 115, if adopted.

Stakeholder meetings:

TCEQ hosted a virtual Bexar County Stakeholders Meeting on January 19, 2024, related to the development of this proposed SIP revision. If this proposed Bexar County 2015 Serious Ozone NAAQS RFP SIP Revision is approved by the commission for public comment and public hearing, then a formal comment period would be opened, and a public hearing would be offered.

Public Involvement Plan

Yes.

Alternative Language Requirements

Yes. Spanish.

Potential controversial concerns and legislative interest:

Bexar County was required to meet a 15% VOC emissions reduction for RFP between a 2017 base year and the 2023 moderate classification attainment year. To meet the 15% VOC requirement within the required timeframe, additional measures would have had to have been implemented by March 1, 2023, the beginning of ozone season in Bexar County, for potential reductions to be captured in the first six-year period. However, there were no measures that could have been implemented by March 1, 2023, to demonstrate the 15% reduction in VOC emissions from the 2017 base year to the 2023 attainment year. The moderate RFP SIP revision achieved the necessary 15% reasonable further progress with a combination of VOC and NO_x reductions. This proposed SIP revision includes measures to achieve the 15% reduction in VOC emissions required by FCAA, §182(b)(1) by December 31, 2026.

On December 3, 2024, EPA released its *Guidance on the Preparation of State Implementation Plan Provisions that Address the Nonattainment Area Contingency Measure Requirements for Ozone and Particulate Matter*.¹ The final guidance stated, “CMs must be conditional and prospective, not already implemented, per the statute and relevant court decisions.” EPA characterized its final guidance as “nonbinding.” Current and future proposed revisions to Texas’ SIP and related

¹ <https://www.epa.gov/air-quality-implementation-plans/final-contingency-measures-guidance>

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rulemakings that depend on surplus reductions from fleet turnover as contingency measures may be at risk of disapproval by EPA.

This proposed SIP revision uses TCEQ's historically approved approach and proposes to maintain reliance on surplus reductions from already implemented measures to fulfill the contingency measure requirements outlined in FCAA, §172(c)(9) and §182(c)(9), consistent with past practices.

Would this SIP revision affect any current policies or require development of new policies?
No.

What are the consequences if this SIP revision does not go forward? Are there alternatives to SIP revision?

The commission could choose not to comply with the requirements to develop and submit this proposed serious area RFP SIP revision to EPA by the January 1, 2026, deadline. Not submitting a timely or complete SIP revision would lead to EPA issuing a finding of failure to submit, which would start sanctions and federal implementation plan (FIP) clocks. EPA would be required to promulgate a FIP any time within two years after finding TCEQ failed to make the required submission. EPA could impose sanctions until the state submitted, and EPA determined complete, a replacement Bexar County 2015 ozone NAAQS serious RFP SIP revision for the area. These sanctions could include transportation funding restrictions, grant withholdings, and 2 to 1 emissions offsets requirement for new construction and major modifications of stationary sources in the Bexar County nonattainment area.

Key points in the proposal SIP revision schedule:

Anticipated proposal date: July 9, 2025

Anticipated public hearing date: August 19, 2025

Anticipated public comment period: July 11, 2025 - August 25, 2025

Anticipated adoption date: December 17, 2025

Agency contacts:

Emily Wagoner, SIP Project Manager, Air Quality Division, (512) 239-4994
Terry Salem, Staff Attorney, Environmental Law Division, (512) 239-0469
Jamie Zech, Agenda Coordinator, Air Quality Division, (512) 239-3935

cc: Chief Clerk, 2 copies
Executive Director's Office
Jessie Powell
Krista Kyle
Patrick Lopez
Office of General Counsel
Emily Wagoner
Terry Salem
Contessa Gay
Abigail Adkins
Jamie Zech

REVISIONS TO THE STATE OF TEXAS AIR QUALITY
IMPLEMENTATION PLAN FOR THE CONTROL OF OZONE AIR
POLLUTION

BEXAR COUNTY 2015 EIGHT-HOUR OZONE STANDARD
NONATTAINMENT AREA



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
P.O. BOX 13087
AUSTIN, TEXAS 78711-3087

**BEXAR COUNTY SERIOUS AREA REASONABLE FURTHER PROGRESS
STATE IMPLEMENTATION PLAN REVISION FOR THE 2015 EIGHT-
HOUR OZONE NATIONAL AMBIENT AIR QUALITY STANDARD**

PROJECT NUMBER 2024-040-SIP-NR

Proposal
July 9, 2025

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EXECUTIVE SUMMARY

The 1990 federal Clean Air Act (FCAA) Amendments, §182, requires ozone nonattainment areas designated with a classification of moderate or higher to submit plans showing reasonable further progress (RFP) toward attainment of the ozone National Ambient Air Quality Standard (NAAQS). On October 26, 2015, the U.S. Environmental Protection Agency (EPA) published a final rule revising the eight-hour ozone standard from 0.075 parts per million (ppm) to 0.070 ppm (80 *Federal Register* (FR) 65292). On July 25, 2018, EPA published its designation for the Bexar County area, consisting of Bexar County, as marginal nonattainment for the 2015 eight-hour ozone NAAQS, effective September 24, 2018 (83 FR 35136). Bexar County was reclassified from marginal to moderate nonattainment on October 7, 2022 (87 FR 60897).

As indicated in EPA's *Implementation of the 2015 National Ambient Air Quality Standards for Ozone: Nonattainment Area Classifications Approach; Final Rule* published on March 9, 2018, the attainment date for the Bexar County moderate classification was September 24, 2024, with a 2023 attainment year (83 FR 10376).¹ EPA set a January 1, 2023, deadline for states to submit SIP revisions to address the 2015 eight-hour ozone standard moderate nonattainment area requirements. On October 12, 2023, Texas Governor Greg Abbott signed and submitted a letter to EPA to voluntarily reclassify the Bexar County, Dallas-Fort Worth, and Houston-Galveston-Brazoria moderate 2015 eight-hour ozone NAAQS nonattainment areas to serious. On June 20, 2024, EPA published a final notice reclassifying the three areas from moderate to serious, effective July 22, 2024 (89 FR 51829).

Bexar County is now subject to the requirements in FCAA, §182(c) for serious ozone nonattainment areas. The Texas Commission on Environmental Quality (TCEQ) is required to submit serious classification attainment demonstration (AD) and RFP SIP revisions to EPA. The attainment date for Bexar County under the serious classification is September 24, 2027, with a 2026 attainment year. EPA set a January 1, 2026, deadline for states to submit SIP revisions to address the 2015 eight-hour ozone standard serious nonattainment area requirements (89 FR 51829).

This proposed Bexar County RFP SIP revision is not required to demonstrate attainment of the 2015 eight-hour ozone NAAQS but rather to demonstrate that the Bexar County 2015 ozone NAAQS nonattainment area will reduce ozone precursor emissions to show progress toward attainment of the standard. RFP requirements for serious ozone nonattainment areas, as specified in Section 182(c)(2) of the 1990 FCAA Amendments and in 40 Code of Federal Regulations §51.910, involve reducing ozone precursor emissions (nitrogen oxides (NO_x) and volatile organic compounds (VOC)) at annual increments between the base year and the attainment year. As specified in FCAA, §182(b)(1), moderate and higher classification ozone nonattainment areas are required to demonstrate a 15% VOC-only emissions reduction within six years after designation. If the 15% VOC emissions reduction requirement has already been met under a previous NAAQS, states may use a combination of NO_x and VOC emissions reductions to fulfill this requirement according to EPA's *Implementation of the 2015*

¹ The attainment year ozone season is the ozone season immediately preceding a nonattainment area's attainment deadline.

National Ambient Air Quality Standards for Ozone: State Implementation Plan Requirements; Final Rule, published on December 6, 2018 (83 FR 62998).

Bexar County was required to meet a 15% VOC emissions reduction for RFP between a 2017 base year and the 2023 moderate classification attainment year. To meet the 15% VOC requirement within the required timeframe, additional measures would have had to be implemented by March 1, 2023, the beginning of ozone season in Bexar County, for potential reductions to be captured in the first six-year period. There were no measures that could have been implemented by March 1, 2023, to demonstrate the 15% reduction in VOC emissions from the 2017 base year to the 2023 attainment year. The moderate RFP SIP revision achieved the necessary 15% reasonable further progress with a combination of VOC and NO_x reductions.

This serious RFP demonstration incorporates measures from the concurrently proposed revisions to rules in 30 Texas Administrative Code Chapter 115 (Rule Project No. 2025-006-115-AI) to achieve the 15% reduction in VOC emissions required by FCAA, §182(b)(1) by December 31, 2026, along with a 9% reduction in NO_x emissions to meet serious RFP requirements. FCAA, §182(c)(2)(C) allows RFP demonstrations to use NO_x emissions reductions instead of VOC emissions reductions to meet serious and higher classification RFP requirements if NO_x emissions reductions produce decreases in ozone concentrations that are equivalent to those produced by VOC emissions reductions. As noted in the concurrently proposed Bexar County 2015 Ozone NAAQS Serious AD SIP revision (Non-Rule Project No. 2024-041-SIP-NR), NO_x emissions reductions are expected to be more effective than VOC emissions reductions at decreasing ozone concentrations in the Bexar County nonattainment area. Therefore, this proposed RFP SIP revision demonstrates the 9% emissions reduction required by FCAA, §182(c)(2)(B) using NO_x emissions reductions.

This proposed RFP SIP revision demonstrates that the Bexar County nonattainment area will achieve emissions reductions in NO_x and VOC, showing progress toward attaining the 2015 ozone NAAQS according to the following increments:

- A 15% VOC-only emissions reduction for the nine-year period from January 1, 2018, through December 31, 2026;
- a 9% emissions reduction in NO_x for the nine-year period from January 1, 2018, through December 31, 2026; and
- an RFP contingency plan in case of failure to demonstrate progress, including a revised contingency plan for the 2023 milestone (analysis) year that replaces the contingency plan in the recently adopted Bexar County 2015 Ozone NAAQS Moderate RFP SIP Revision (Project No. 2022-024-SIP-NR) along with a contingency plan for the 2026 attainment year, calculated as a 3% emissions reduction of the base year inventory for Bexar County.

The RFP methodology involves development of the base year, analysis year, attainment year, and contingency year emissions inventories and emissions reductions. The amount of emissions reductions is determined by FCAA requirements and is used to set target levels. Once calculated, the target levels and emissions inventories can be compared. If the forecasted controlled (post-control) emissions inventories are less than the target level, the area is meeting FCAA RFP requirements. The results of the

Bexar County RFP analysis-year comparisons are provided in Chapter 3: *Progress Toward Meeting Target Emissions Levels*.

The RFP contingency plan is provided in Section 4.3: *Contingency Measures*. Contingency measures are control requirements that would take effect and result in emissions reductions if an area fails to attain a NAAQS by the applicable attainment date or fails to demonstrate RFP. EPA has interpreted recent court decisions to have invalidated key aspects of EPA's historical approach to implementing the contingency measure requirement. EPA's December 3, 2024, *Guidance on the Preparation of State Implementation Plan Provisions that Address the Nonattainment Area Contingency Measure Requirements for Ozone and Particulate Matter*, indicates that contingency measures must be conditional and prospective (not previously implemented) based on the recent court rulings.² The guidance also establishes an entirely new scheme for determining the amount of emissions reductions necessary to address the contingency requirement. EPA characterized its final guidance as "nonbinding." This SIP revision relies on the historically approved approach of using surplus emissions reductions from previously implemented measures to fulfill the contingency measure requirements outlined in FCAA, §172(c)(9) and §182(c)(9), consistent with past practices.

In addition to demonstrating ozone precursor emissions reductions, this proposed Bexar County RFP SIP revision also provides a vehicle miles traveled demonstration, revised 2023 NO_x and VOC motor vehicle emissions budgets (MVEB), and new 2026 MVEBs for transportation conformity purposes, as detailed in Chapter 5: *Motor Vehicle Emissions Budget*.

² <https://www.epa.gov/air-quality-implementation-plans/final-contingency-measures-guidance>

SECTION V-A: LEGAL AUTHORITY

General

The Texas Commission on Environmental Quality (TCEQ) has the legal authority to implement, maintain, and enforce the National Ambient Air Quality Standards (NAAQS) and to control the quality of the state's air, including maintaining adequate visibility.

The first air pollution control act, known as the Clean Air Act of Texas, was passed by the Texas Legislature in 1965. In 1967, the Clean Air Act of Texas was superseded by a more comprehensive statute, the Texas Clean Air Act (TCAA), found in Article 4477-5, Vernon's Texas Civil Statutes. In 1989, the TCAA was codified as Chapter 382 of the Texas Health and Safety Code. The TCAA is frequently amended for various purposes during the biennial legislative sessions.

Originally, the TCAA stated that the Texas Air Control Board (TACB) was the state air pollution control agency and was the principal authority in the state on matters relating to the quality of air resources. In 1991, the legislature abolished the TACB effective September 1, 1993, and its powers, duties, responsibilities, and functions were transferred to the Texas Natural Resource Conservation Commission (TNRCC). In 2001, the 77th Texas Legislature continued the existence of the TNRCC until September 1, 2013, and changed the name of the TNRCC to TCEQ. In 2009, the 81st Texas Legislature, during a special session, amended section 5.014 of the Texas Water Code, changing the expiration date of TCEQ to September 1, 2011, unless continued in existence by the Texas Sunset Act. In 2011, the 82nd Texas Legislature continued the existence of TCEQ until 2023. In 2023, the 88th regular session of the Texas Legislature continued the existence of TCEQ until 2035.

With the creation of the TNRCC (and its successor the TCEQ), authority over air quality is found in both the Texas Water Code (TWC) and the TCAA. The general authority of TCEQ is found in TWC, Chapter 5 and enforcement authority is provided by TWC, Chapter 7. TWC, Chapter 5, Subchapters A - F, H - J, and L, include the general provisions, organization, and general powers and duties of TCEQ, and the responsibilities and authority of the executive director. TWC, Chapter 5 also authorizes TCEQ to implement action when emergency conditions arise and to conduct hearings. The TCAA specifically authorizes TCEQ to establish the level of quality to be maintained in the state's air and to control the quality of the state's air by preparing and developing a general, comprehensive plan. The TCAA, Subchapters A - D, also authorize TCEQ to collect information to enable the commission to develop an inventory of emissions; to conduct research and investigations; to enter property and examine records; to prescribe monitoring requirements; to institute enforcement proceedings; to enter into contracts and execute instruments; to formulate rules; to issue orders taking into consideration factors bearing upon health, welfare, social and economic factors, and practicability and reasonableness; to conduct hearings; to establish air quality control regions; to encourage cooperation with citizens' groups and other agencies and political subdivisions of the state as well as with industries and the federal government; and to establish and operate a system of permits for construction or modification of facilities.

Local government authority is found in Subchapter E of the TCAA. Local governments have the same power as TCEQ to enter property and make inspections. They also may

make recommendations to the commission concerning any action of TCEQ that affects their territorial jurisdiction, may bring enforcement actions, and may execute cooperative agreements with TCEQ or other local governments. In addition, a city or town may enact and enforce ordinances for the control and abatement of air pollution not inconsistent with the provisions of the TCAA and the rules or orders of the commission.

In addition, Subchapters G and H of the TCAA authorize TCEQ to establish vehicle inspection and maintenance programs in certain areas of the state, consistent with the requirements of the federal Clean Air Act; coordinate with federal, state, and local transportation planning agencies to develop and implement transportation programs and measures necessary to attain and maintain the NAAQS; establish gasoline volatility and low emission diesel standards; and fund and authorize participating counties to implement vehicle repair assistance, retrofit, and accelerated vehicle retirement programs.

Applicable Law

The following statutes and rules provide necessary authority to adopt and implement the state implementation plan (SIP). The rules listed below have previously been submitted as part of the SIP.

Statutes

All sections of each subchapter are included, unless otherwise noted.

TEXAS HEALTH & SAFETY CODE, Chapter 382

September 1, 2023

TEXAS WATER CODE

September 1, 2023

Chapter 5: Texas Natural Resource Conservation Commission

Subchapter A: General Provisions

Subchapter B: Organization of the Texas Natural Resource Conservation Commission

Subchapter C: Texas Natural Resource Conservation Commission

Subchapter D: General Powers and Duties of the Commission

Subchapter E: Administrative Provisions for Commission

Subchapter F: Executive Director (except §§5.225, 5.226, 5.227, 5.231, 5.232, and 5.236)

Subchapter H: Delegation of Hearings

Subchapter I: Judicial Review

Subchapter J: Consolidated Permit Processing

Subchapter L: Emergency and Temporary Orders (§§5.514, 5.5145, and 5.515 only)

Subchapter M: Environmental Permitting Procedures (§5.558 only)

Chapter 7: Enforcement

Subchapter A: General Provisions (§§7.001, 7.002, 7.0025, 7.004, and 7.005 only)

Subchapter B: Corrective Action and Injunctive Relief (§7.032 only)

Subchapter C: Administrative Penalties

Subchapter D: Civil Penalties (except §7.109)

Subchapter E: Criminal Offenses and Penalties: (§§7.177, 7.178-7.183 only)

Rules

All of the following rules are found in 30 Texas Administrative Code, as of the following latest effective dates:

Chapter 7: Memoranda of Understanding, §§7.110 and 7.119	December 13, 1996, and May 2, 2002, respectively
Chapter 19: Electronic Reporting	March 1, 2007
Subchapter A: General Provisions	
Subchapter B: Electronic Reporting Requirements	
Chapter 39: Public Notice	
Subchapter H: Applicability and General Provisions, §§39.402(a)(1) - (a)(6), (a)(8), and (a)(10) - (a)(12); §§39.405(f)(3) and (g), (h)(1)(A), (h)(2) - (h)(4), (h)(6), (h)(8) - (h)(11), (i) and (j), §39.407; §39.409; §§39.411(a), (e)(1) - (4)(A)(i) and (iii), (4)(B), (e)(5) introductory paragraph, (e)(5)(A), (e)(5)(B), (e)(6) - (e)(10), (e)(11)(A)(i), (e)(11)(A)(iii) - (vi), (11)(B) - (F), (e)(13), and (e)(15), (e)(16), and (f) introductory paragraph, (f)(1) - (8), (g) and (h); §39.418(a), (b)(2)(A), (b)(3), and (c); §39.419(e), §39.420(c)(1)(A) - (D)(i)(I) and (II), (c)(1)(D)(ii), (c)(2), (d) - (e), and (h), and Subchapter K: Public Notice of Air Quality Permit Applications, §§39.601 - 39.605	September 16, 2021
Chapter 55: Requests for Reconsideration and Contested Case Hearings; Public Comment, all of the chapter, except §55.125(a)(5) and (a)(6)	September 16, 2021
Chapter 101: General Air Quality Rules	May 14, 2020
Chapter 106: Permits by Rule, Subchapter A	April 17, 2014
Chapter 111: Control of Air Pollution from Visible Emissions and Particulate Matter	November 12, 2020
Chapter 112: Control of Air Pollution from Sulfur Compounds	October 27, 2022
Chapter 114: Control of Air Pollution from Motor Vehicles	December 21, 2023
Chapter 115: Control of Air Pollution from Volatile Organic Compounds	December 12, 2024
Chapter 116: Control of Air Pollution by Permits for New Construction or Modification	July 1, 2021
Chapter 117: Control of Air Pollution from Nitrogen Compounds	May 16, 2024
Chapter 118: Control of Air Pollution Episodes	March 5, 2000
Chapter 122: Federal Operating Permits Program §122.122: Potential to Emit	February 23, 2017

SECTION VI: CONTROL STRATEGY

- A. Introduction (No change)
- B. Ozone (Revised)
 - 1. Dallas-Fort Worth (No change)
 - 2. Houston-Galveston-Brazoria (No change)
 - 3. Beaumont-Port Arthur (No change)
 - 4. El Paso (No change)
 - 5. Regional Strategies (No change)
 - 6. Northeast Texas (No change)
 - 7. Austin Area (No change)
 - 8. San Antonio Area (Revised)
 - Chapter 1: General
 - Chapter 2: Emissions Inventories
 - Chapter 3: Progress Toward Meeting Target Emissions Levels
 - Chapter 4: Control Measures to Achieve Target Emissions Levels
 - Chapter 5: Motor Vehicle Emissions Budget
 - 9. Victoria Area (No change)
- C. Particulate Matter (No change)
- D. Carbon Monoxide (No change)
- E. Lead (No change)
- F. Oxides of Nitrogen (No change)
- G. Sulfur Dioxide (No change)
- H. Conformity with the National Ambient Air Quality Standards (No change)
- I. Site Specific (No change)
- J. Mobile Sources Strategies (No change)
- K. Clean Air Interstate Rule (No change)
- L. Transport (No change)
- M. Regional Haze (No change)

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AD	attainment demonstration
AEDT	Aviation Environmental Design Tool
AERR	Air Emissions Reporting Requirements
APU	auxiliary power unit
BY	base year
CARB	California Air Resources Board
CFR	Code of Federal Regulations
CO	carbon monoxide
DFW	Dallas-Fort Worth
ECO	enhanced conventional
EI	emissions inventory
EPA	U.S. Environmental Protection Agency
ERG	Eastern Research Group
FAA	Federal Aviation Administration
FCAA	federal Clean Air Act
FMVCP	Federal Motor Vehicle Control Program
FR	<i>Federal Register</i>
GSE	ground support equipment
HGB	Houston-Galveston-Brazoria
I/M	inspection and maintenance
ICI	industrial, commercial, and institutional
lb	pound
MOVES4	Motor Vehicle Emissions Simulator 4
MOVES5	Motor Vehicle Emissions Simulator 5
MVEB	motor vehicle emissions budget
NAAQS	National Ambient Air Quality Standard
NEI	National Emissions Inventory
NEMO	Nonpoint Emissions Methodology and Operator
NO _x	nitrogen oxides
ppb	parts per billion
ppm	parts per million
RFP	reasonable further progress

RRC	Railroad Commission of Texas
RRF	relative response factor
RVP	Reid vapor pressure
SCAQMD	South Coast Air Quality Management District
SI	spark ignition
SIP	state implementation plan
STARS	State of Texas Air Reporting System
TAC	Texas Administrative Code
TACB	Texas Air Control Board
TCAA	Texas Clean Air Act
TCEQ	Texas Commission on Environmental Quality (commission)
TDM	travel demand model
TexN2.5	Texas NONROAD utility version 2.5
TNRCC	Texas Natural Resource Conservation Commission
tpd	tons per day
tpy	tons per year
TTI	Texas Transportation Institute
TWC	Texas Water Code
TxLED	Texas Low Emission Diesel
VCP	Volatile Chemical Product
VMT	vehicle miles traveled
VOC	volatile organic compounds

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CHAPTER 1: GENERAL

1.1 REASONABLE FURTHER PROGRESS (RFP) BACKGROUND

Information on the Texas State Implementation Plan (SIP) and a list of SIP revisions and other air quality plans adopted by the commission can be found on the [Texas State Implementation Plan](http://www.tceq.texas.gov/airquality/sip) webpage (<http://www.tceq.texas.gov/airquality/sip>) on the [Texas Commission on Environmental Quality's](http://www.tceq.texas.gov) (TCEQ) website (<http://www.tceq.texas.gov>).

1.1.1 2015 Eight-Hour Ozone National Ambient Air Quality Standard (NAAQS) History

On October 1, 2015, the U.S. Environmental Protection Agency (EPA) revised the primary and secondary eight-hour ozone standards to 0.070 parts per million. The 2015 eight-hour ozone NAAQS became effective on December 28, 2015 (80 *Federal Register* (FR) 65291). On July 25, 2018, EPA designated Bexar County as marginal nonattainment for the 2015 eight-hour ozone NAAQS, effective September 24, 2018 (83 FR 35136).

EPA published the *Implementation of the 2015 National Ambient Air Quality Standards for Ozone: State Implementation Plan Requirements; Final Rule* (2015 eight-hour ozone standard SIP requirements rule) on December 6, 2018 (83 FR 62998).

1.1.1.1 Marginal Classification for the 2015 Eight-Hour Ozone NAAQS

Under its marginal classification, Bexar County was required to attain the 2015 eight-hour ozone standard by the end of 2020 to meet a September 24, 2021, attainment date.³ On June 10, 2020, the commission adopted the 2015 Eight-Hour Ozone NAAQS Emissions Inventory (EI) SIP Revision for the Houston-Galveston-Brazoria (HGB), Dallas-Fort Worth (DFW), and Bexar County Nonattainment Areas (Non-Rule Project No. 2019-111-SIP-NR). The SIP revision satisfied federal Clean Air Act (FCAA), §172(c)(3) and §182(a)(1) EI reporting requirements for areas designated nonattainment for the 2015 eight-hour ozone NAAQS. The SIP revision also included certification statements to confirm that the emissions statement and nonattainment new source review requirements have been met for the HGB, DFW, and Bexar County 2015 ozone NAAQS nonattainment areas. On June 29, 2021, EPA published final approval of the EI for the Bexar County 2015 ozone NAAQS nonattainment area (86 FR 34139). On September 9, 2021, EPA published final approval of the nonattainment new source review and emissions statement portions of the SIP revision (86 FR 50456).

1.1.1.2 Reclassification to Moderate for the 2015 Eight-Hour Ozone NAAQS

Based on monitoring data from 2018, 2019, and 2020, Bexar County did not attain the 2015 eight-hour ozone NAAQS in the 2020 attainment year and did not qualify for a one-year attainment date extension in accordance with FCAA, §181(a)(5).⁴ On October

³ The attainment year ozone season is the ozone season immediately preceding a nonattainment area's attainment deadline.

⁴ An area that fails to attain the 2015 eight-hour ozone NAAQS by its attainment date would be eligible for the first one-year extension if, for the attainment year, the area's fourth highest daily maximum eight-hour average is at or below the level of the standard (70 parts per billion (ppb)). Bexar County's fourth-highest daily maximum eight-hour average for 2020 was 72 ppb. Bexar County's design value for 2020 was 73 ppb.

7, 2022, EPA published a final notice reclassifying the Bexar County 2015 ozone NAAQS nonattainment area from marginal to moderate, effective November 7, 2022 (87 FR 60897). The attainment date for the Bexar County moderate classification was September 24, 2024, with a 2023 attainment year. EPA set a January 1, 2023, deadline for states to submit attainment demonstration and RFP SIP revisions to address the 2015 eight-hour ozone standard moderate nonattainment area requirements.

1.1.1.3 Reclassification to Serious for the 2015 Eight-Hour Ozone NAAQS

On October 12, 2023, Texas Governor Greg Abbott signed and submitted a letter to EPA to reclassify the Bexar County, DFW, and HGB moderate 2015 eight-hour ozone NAAQS nonattainment areas to serious. On June 20, 2024, EPA published a final notice reclassifying the three areas from moderate to serious, effective July 22, 2024 (89 FR 51829).

Since the Bexar County nonattainment area has been reclassified by EPA, it is subject to the serious nonattainment area requirements in FCAA, §182(c), and TCEQ is required to submit serious area RFP SIP revisions to EPA. As indicated in EPA's *Implementation of the 2015 National Ambient Air Quality Standards for Ozone: Nonattainment Area Classifications Approach; Final Rule*, published on March 9, 2018 (83 FR 10376), the Bexar County attainment date for a serious classification is September 24, 2027, with a 2026 attainment year. EPA set a January 1, 2026, deadline for states to submit SIP revisions to address the 2015 eight-hour ozone standard serious nonattainment area requirements (89 FR 51829).

1.2 RFP REQUIREMENTS

FCAA, §110 requires states to submit SIP revisions that contain enforceable measures to achieve the NAAQS. FCAA, §182(b) also requires states with ozone nonattainment areas classified as moderate or above to submit plans showing reasonable further progress toward attainment, along with additional RFP requirements in FCAA, §182(c) for ozone nonattainment areas classified as serious or above. This proposed Bexar County RFP SIP revision is not required to demonstrate attainment of the 2015 eight-hour ozone NAAQS but rather to demonstrate that ozone precursor emissions (nitrogen oxides (NO_x) and volatile organic compounds (VOC)) will be reduced by specified amounts at annual increments between the 2017 base year and the 2026 attainment year to show ongoing progress toward attainment.

The RFP requirements for ozone nonattainment areas, as specified in FCAA, §182 and in 40 Code of Federal Regulations §51.1310, involve reducing ozone precursor emissions at annual increments between the base year and the attainment year. In this case, because the area has been reclassified to serious, the moderate attainment year has become a milestone (analysis) target year and is still required to be demonstrated. Serious ozone nonattainment areas are required to demonstrate a 15% VOC emissions reduction within six years after designation. If the 15% VOC emissions reduction requirement has already been met under a previous NAAQS, states may use a combination of NO_x and VOC emissions reductions to fulfill this requirement according to EPA's *Implementation of the 2015 National Ambient Air Quality Standards for Ozone: State Implementation Plan Requirements; Final Rule*, published on December 6, 2018 (83 FR 62998). Bexar County was required to meet a 15% VOC emissions reduction for RFP between a 2017 base year and the 2023 moderate classification

attainment year. To meet the 15% VOC requirement within the required timeframe, additional measures would have had to have been implemented by March 1, 2023, the beginning of ozone season in Bexar County, for potential reductions to be captured in the first six-year period. There were no measures that could have been implemented by March 1, 2023, to demonstrate the 15% reduction in VOC emissions from the 2017 base year to the 2023 analysis year; therefore, the moderate RFP SIP revision achieved the necessary 15% reasonable further progress with a combination of VOC and NO_x reductions. The RFP demonstration for this proposed SIP revision includes measures to achieve the 15% reduction in VOC by incorporating measures from the concurrently proposed revisions to rules in 30 Texas Administrative Code (TAC) Chapter 115 (Rule Project No. 2025-006-115-AI).

Specifically, this proposed Bexar County RFP SIP revision demonstrates that the Bexar County 2015 ozone NAAQS nonattainment area will achieve emissions reductions in NO_x and VOC according to the following increments:

- a 15% VOC-only emissions reduction for the nine-year period from January 1, 2018, through December 31, 2026;
- a 9% emissions reduction in NO_x for the nine-year period from January 1, 2018, through December 31, 2026; and
- an RFP contingency plan in case of failure to demonstrate progress, including an updated contingency plan for the 2023 milestone (analysis) year along with a contingency plan for the 2026 attainment year, calculated as a 3% emissions reduction of the base year inventory.

The RFP calculations documented in this proposed SIP revision rely on an RFP base year of 2017, a 2023 analysis year, and a 2026 attainment year. This proposed SIP revision demonstrates RFP as progress toward attainment of the 2015 ozone NAAQS for Bexar County for the 2026 attainment year and includes an updated contingency plan for the 2023 milestone (analysis) year along with a contingency plan for the 2026 attainment year. Specifically, this RFP SIP revision includes a revised contingency plan for 2024 that replaces the plan from the recently adopted Bexar County 2015 Ozone NAAQS Moderate RFP SIP Revision (Project No. 2022-024-SIP-NR) and proposes a contingency plan for 2027 consisting of a 3% emissions reduction.

The RFP contingency plan is provided in Section 4.3: *Contingency Measures*. Contingency measures are control requirements that would take effect and result in emissions reductions if an area fails to attain a NAAQS by the applicable attainment date or fails to demonstrate RFP. EPA has interpreted recent court decisions to have invalidated key aspects of EPA's historical approach to implementing the contingency measure requirement. EPA's December 3, 2024, *Guidance on the Preparation of State Implementation Plan Provisions that Address the Nonattainment Area Contingency Measure Requirements for Ozone and Particulate Matter* indicates that contingency measures must be conditional and prospective (not previously implemented) based on the recent court rulings.⁵ The guidance also establishes an entirely new scheme for determining the amount of emissions reductions necessary to address the contingency requirement. This SIP revision relies on the historically approved approach of using

⁵ <https://www.epa.gov/air-quality-implementation-plans/final-contingency-measures-guidance>

surplus emissions reductions from previously implemented measures to fulfill the contingency measure requirements and to determine the amount of emissions reductions necessary to address the contingency requirement outlined in FCAA, §172(c)(9) and §182(c)(9), consistent with past practices. EPA characterized its final guidance as “nonbinding.”

A summary of Bexar County’s progress toward meeting RFP requirements can be found in Appendix 1: *Bexar County Reasonable Further Progress Demonstration (RFP) Spreadsheet*.

In addition to demonstrating the required emissions reductions, the proposed SIP revision also provides revised MVEBs for the 2023 analysis year and establishes the MVEBs for the 2026 attainment year. Specifically, this RFP SIP revision includes revised 2023 MVEBs that replace the 2023 MVEBs in the recently adopted Bexar County 2015 Ozone NAAQS Moderate RFP SIP Revision (Project No. 2022-024-SIP-NR).

1.3 STAKEHOLDER PARTICIPATION AND PUBLIC MEETINGS

1.3.1 Bexar County Virtual Technical Information Meeting (TIM)

The Bexar County Air Quality TIMs are provided to present technical and scientific information related to air quality modeling and analysis in the Bexar County nonattainment area. TCEQ hosted two virtual TIMs on August 16, 2021, and August 22, 2022. These TIMs included presentations on ozone planning, ozone design values, modeling platform updates, emissions inventory development, and updates from EPA. The 15% VOC-only emissions reduction requirement for RFP was also discussed. More information is available on the [San Antonio Air Quality TIM](https://www.tceq.texas.gov/airquality/airmod/meetings/aqtim-sa.html) webpage (<https://www.tceq.texas.gov/airquality/airmod/meetings/aqtim-sa.html>).

1.3.2 Bexar County Stakeholders Meeting

TCEQ hosted a virtual Bexar County Stakeholders Meeting on January 19, 2024, related to the development of this proposed SIP revision. The purpose of the meeting was to discuss what emission reduction strategies (primarily VOC) are being or could be implemented by different source sectors. The meeting was open to the public but focused on companies and industry in Bexar County with stationary sources of pollution.

1.4 PUBLIC HEARING AND COMMENT INFORMATION

The commission is scheduled to hold a public hearing for this proposed SIP revision at the following time and location:

Table 1-1: Public Hearing Information

City	Date	Time	Location
San Antonio	August 19, 2025	7:00 p.m.	Alamo Area Council of Governments Conference Room

The public comment period will open on July 11, 2025, and close on August 25, 2025. Written comments will be accepted via mail, fax, or through the [TCEQ Public Comment system](https://tceq.commentinput.com) (<https://tceq.commentinput.com>). All comments should reference the “Bexar County 2015 Ozone NAAQS Serious RFP SIP Revision” and should reference Project

Number 2024-040-SIP-NR. Comments submitted via hard copy may be mailed to Emily Wagoner, MC 206, State Implementation Plan Team, Air Quality Division, Texas Commission on Environmental Quality, P.O. Box 13087, Austin, Texas 78711-3087 or faxed to (512) 239-4808. Comments submitted electronically must be submitted through the TCEQ Public Comments system. File size restrictions may apply to comments being submitted via the TCEQ Public Comments system. Comments must be received by 11:59 pm CDT on August 25, 2025.

An electronic version of this proposed SIP revision and associated appendices can be found at TCEQ's [San Antonio: Latest Ozone Planning Activities](https://www.tceq.texas.gov/airquality/sip/san/san-latest-ozone) webpage (<https://www.tceq.texas.gov/airquality/sip/san/san-latest-ozone>). An electronic version of the public hearing notice will be available on the [Texas SIP Revisions](https://www.tceq.texas.gov/airquality/sip/sipplans.html) webpage (<https://www.tceq.texas.gov/airquality/sip/sipplans.html>).

1.5 SOCIAL AND ECONOMIC CONSIDERATIONS

Control measures for new and updated VOC rules (Rule Project No. 2025-006-115-AI) were developed concurrently with this proposed SIP revision to achieve VOC reductions for Bexar County. The regulated community would be obligated to comply with the new requirements and would incur costs associated with meeting those requirements. The general public in the Bexar County ozone nonattainment area may benefit from reduced emissions associated with the new control measures. Control measures may have direct or indirect costs to the public, which are addressed in the associated rule project. For a detailed explanation of the social and economic issues involved with the concurrently proposed 30 TAC Chapter 115 rule revision, refer to the preamble that precedes the rule package (Rule Project No. 2025-006-115-AI).

1.6 FISCAL AND MANPOWER RESOURCES

The state has determined that its fiscal and manpower resources are adequate and will not be adversely affected through the implementation of this plan.

CHAPTER 2: EMISSIONS INVENTORIES

2.1 INTRODUCTION

The federal Clean Air Act (FCAA) requires that reasonable further progress (RFP) emissions inventories be prepared for ozone nonattainment areas (April 16, 1992; 57 *Federal Register* (FR) 13498). Ground-level (tropospheric) ozone is produced when ozone precursor emissions, volatile organic compounds (VOC) and nitrogen oxides (NO_x), undergo photochemical reactions in the presence of sunlight.

The Texas Commission on Environmental Quality (TCEQ) maintains an inventory of current information for anthropogenic sources of NO_x and VOC emissions that identifies the types of emissions sources present in an area, the amount of each pollutant emitted, and the types of processes and emissions control devices at each source or source category. The total anthropogenic inventory of NO_x and VOC emissions for an area is derived from estimates developed for three general categories of emissions sources: point, area, and mobile (both non-road and on-road). The emissions inventory (EI) also provides data for a variety of air quality planning tasks, including establishing baseline emissions levels, calculating reduction targets, developing control strategies to achieve emissions reductions, developing emissions inputs for air quality models, and tracking actual emissions reductions against established emissions growth and control budgets.

This proposed Bexar County Serious Area RFP State Implementation Plan (SIP) revision for the 2015 eight-hour ozone National Ambient Air Quality Standard (NAAQS) demonstrates progress toward attainment of the 2015 eight-hour ozone NAAQS. Specifically, this proposed SIP revision demonstrates a 15% VOC-only emissions reduction for calendar years 2018 through 2026 and an additional 9% NO_x emissions reduction for calendar years 2018 through 2026.

To complete the RFP calculations, a set of inventories and control measure reduction estimates is required. In accordance with U.S. Environmental Protection Agency's (EPA) *Implementation of the 2015 National Ambient Air Quality Standards for Ozone: State Implementation Plan Requirements; Final Rule* (2015 eight-hour ozone standard SIP requirements rule) published in the *Federal Register* on December 6, 2018 (83 FR 62998), this proposed SIP revision includes documentation of EIs for the 2017 base year, the 2023 analysis year, the 2026 attainment year, and the RFP contingency requirement. Those EIs provide the basis for demonstrating how RFP emissions reductions will be met.

To develop an RFP SIP revision for the 2015 eight-hour ozone NAAQS, states must: (1) determine the base year emissions for ozone precursors; (2) calculate RFP target emissions reductions levels based on the RFP percent reduction requirements; (3) determine the attainment year inventories according to RFP requirements; and (4) account for creditable emissions reductions in the attainment year EI in accordance with applicable requirements. When the RFP controlled emissions reductions meet or exceed the calculated target emissions reductions, then RFP is demonstrated.

This proposed SIP revision includes:

- a 2017 base year EI;

The base year EI is the starting point for calculating the target levels of emissions. A base year of 2017 was selected in accordance with the 2015 eight-hour ozone standard SIP requirements rule.

- a 2023 and 2026 uncontrolled EI;

The RFP analysis requires an uncontrolled EI with growth between the base year and the attainment year. The uncontrolled EI may include controls that existed prior to the base year; in this case the EI is referred to as an “existing controlled” EI. The uncontrolled EI serves as the basis for determining the amount of emissions reductions required to meet the RFP target for the attainment year.

- quantification of control measure reductions for the 2023 analysis year and 2026 attainment year;

The RFP analysis requires the calculations of emissions reductions for control strategies, which are then subtracted from the uncontrolled or existing controlled emissions to determine the controlled RFP EI. The RFP emissions reductions are individually quantified for each control strategy that pertains to particular source categories. A discussion of RFP control strategies is provided in Chapter 4: *Control Measures to Achieve Target Levels*.

- a 2023 and 2026 controlled EI; and

The controlled EI represents the projected (forecasted) EI with all controls implemented. The controlled projected RFP EI is the result of subtracting the emissions reductions for controls that are used to demonstrate RFP from the uncontrolled or existing controlled projected EI.

- 2024 and 2027 RFP contingency control reductions.

The RFP analysis requires the calculation of the emissions reductions for control strategies in the year following the attainment year. These control reductions must be implemented if an RFP requirement is not met. The RFP contingency control strategies for this proposed SIP revision are provided in Chapter 4.

The RFP calculations for this proposed Bexar County RFP SIP revision are documented in Chapter 3: *Progress Toward Meeting Target Emissions Levels*. Details of the Bexar County ozone NAAQS nonattainment area’s progress toward meeting RFP requirements can be found in Appendix 1: *Bexar County Reasonable Further Progress (RFP) Demonstration Spreadsheet*.

2.2 POINT SOURCES

2.2.1 Emissions Inventory Development

Stationary point source emissions data are collected annually from sites that meet the reporting requirements of 30 Texas Administrative Code (TAC) §101.10. This rule,

referred to as the TCEQ EI reporting rule, establishes point source EI reporting thresholds in ozone nonattainment areas that are currently at or less than major source thresholds in the Bexar County 2015 ozone NAAQS nonattainment area. Therefore, some minor sources in the Bexar County 2015 ozone NAAQS nonattainment area report to the point source EI.

To collect the data, TCEQ sends notices to all sites identified as potentially meeting the reporting requirements. Companies are required to report emissions data and to provide sample calculations used to determine the emissions. Information characterizing the process equipment, the emissions control devices, and the emission points is also required. As required by FCAA, §182(a)(3)(B) and 30 TAC §101.10(d)(1), company representatives certify that reported emissions are true, accurate, and fully represent emissions that occurred during the calendar year to the best of the representative's knowledge.

All data submitted are reviewed for quality-assurance purposes and then stored in the State of Texas Air Reporting System (STARS) database. EI guidance documents and historical point source emissions of criteria pollutants are available on TCEQ's [Point Source Emissions Inventory](https://www.tceq.texas.gov/airquality/point-source-ei/psei.html) webpage (<https://www.tceq.texas.gov/airquality/point-source-ei/psei.html>). Additional information is available upon request from TCEQ's Air Quality Division.

2.2.2 Updated 2017 Base Year Inventory

The 2017 point source EI data were extracted from STARS on November 15, 2024. The extracted data include reported annual and ozone season daily emissions of NO_x and VOC for each site in the Bexar County 2015 ozone NAAQS nonattainment area that submitted a 2017 EI. The data reflect revisions to the 2017 EI that were reviewed, approved, and entered into STARS on or before the extract date.

2.2.3 Updated Analysis and Attainment Year Inventories

Updated 2023 analysis year and 2026 attainment year inventories were developed according to the general requirements described in Section 2.2.1: *Emissions Inventory Development*. TCEQ designated the 2023 EI as the starting point for EI projections. NO_x and VOC emissions were projected to the 2023 analysis year and 2026 attainment year using the maximum of the 2021 through 2023 emission rates for the uncontrolled inventory. This approach follows EPA's guidance, which assumes stable emissions trends when projecting future emissions.⁶ Point source NO_x emissions trends have been declining, and point source VOC emissions trends have been flat in the Bexar County 2015 ozone NAAQS nonattainment area over the last 10 years. Emissions trend data are available on the TCEQ [Air Success](https://www.tceq.texas.gov/airquality/airsuccess/airsuccessemissions) webpage (<https://www.tceq.texas.gov/airquality/airsuccess/airsuccessemissions>).

Emissions reductions that could be quantified from control strategies with compliance deadlines after 2017 were then applied to the uncontrolled inventory to determine the controlled inventory. No point source VOC emissions reductions associated with Chapter 115 rules were quantified for this SIP revision. NO_x emissions reductions were quantified from Chapter 117 rules adopted April 24, 2024, for cement kilns and

⁶ https://www.epa.gov/sites/default/files/2017-07/documents/ei_guidance_may_2017_final_rev.pdf

applied to the 2026 attainment year inventory since compliance was required by January 1, 2025 (Rule Project No. 2023-117-117-AI).

The 2021 through 2023 point source EI data were extracted from STARS on November 15, 2024. The extracted data include reported annual and ozone season daily emissions of NO_x and VOC for each site in the Bexar County 2015 ozone NAAQS nonattainment area that submitted a 2021, 2022, or 2023 EI. The data reflect revisions to the 2021 through 2023 EIs that were reviewed, approved, and entered into STARS on or before the extract date. As 2023 is an analysis year and the maximum of the 2021-2023 span, 2023 data were used for 2023 and projected to 2026.

Summaries of the point source RFP inventories are presented in:

- Table 2-2: *Bexar County 2015 Ozone NAAQS Nonattainment Area RFP Summary of the 2017 Base Year Average Summer Weekday NO_x and VOC Emissions (tons per day)*;
- Table 2-3: *Bexar County 2015 Ozone NAAQS Nonattainment Area RFP Summary of the 2023 Analysis Year Average Summer Weekday NO_x and VOC Emissions (tons per day)*; and
- Table 2-4: *Bexar County 2015 Ozone NAAQS Nonattainment Area RFP Summary of the 2026 Attainment Year Average Summer Weekday NO_x and VOC Emissions (tons per day)*.

2.3 AREA SOURCES

2.3.1 Emissions Inventory Development

Stationary emissions sources that do not meet the reporting requirements of 30 TAC §101.10 for point sources are classified as area sources. Area sources are small-scale stationary industrial, commercial, and residential sources that use materials or perform processes that generate emissions. Examples of area sources that emit VOC include oil and gas production sources, printing operations, industrial coatings, degreasing solvents, house paints, gasoline service station underground tank filling, and vehicle refueling operations. Examples of typical fuel combustion area sources that emit NO_x include oil and gas production sources, stationary source fossil fuel combustion at residences and businesses, outdoor refuse burning, and structure fires.

Area source emissions are calculated as county-wide totals rather than as individual sources. Area source emissions are typically calculated by applying an EPA- or TCEQ-developed emissions factor (emissions per unit of activity) by the appropriate activity or activity surrogate responsible for generating emissions. Population is one of the more commonly used activity surrogates for area source calculations. Other activity data commonly used include the amount of gasoline sold in an area, employment by industry type, and crude oil and natural gas production.

Quality assurance of area source emissions involves ensuring that the activity data used for each category are current and valid. Data such as current population figures, fuel usage, and material usage were updated, and EPA guidance on emissions factors was used. Other routine efforts such as checking calculations for errors and conducting reasonableness and completeness checks were implemented.

2.3.2 Updated 2017 Base Year Inventory

The 2017 area source EIs were developed using EPA-generated EIs; TCEQ-contracted projects to develop emission inventories; TCEQ staff projects to develop emissions inventories; and projecting previous EIs by applying growth factors derived from Eastern Research Group (ERG) study data, the [Economy and Consumer Credit Analytics](http://www.economy.com/default.asp) website (<http://www.economy.com/default.asp>), and the United States Energy Information Administration's *Annual Energy Outlook* publication. The documentation for development of the ERG study projection factors can be found in Appendix 2: *Growth Factors for Area and Point Sources*.

EPA developed EIs for states to use for many area source categories as part of the National Emissions Inventory (NEI). The states access these individual inventories through EPA's [2017 NEI Data](https://www.epa.gov/air-emissions-inventories/2017-national-emissions-inventory-nei-data) webpage (<https://www.epa.gov/air-emissions-inventories/2017-national-emissions-inventory-nei-data>). These source categories include but are not limited to industrial coatings; degreasing; residential, commercial/institutional, and industrial fuel use; commercial cooking; aviation fuel use; and consumer products. For some source categories, TCEQ developed state-specific emissions estimates by acquiring current state-specific activity data and applying appropriate emissions factors. These source categories include, but are not limited to, gasoline storage tanks, structure fires, dry cleaners, and automobile fires.

TCEQ committed significant resources to improve the oil and gas area source inventory categories for the 2017 base year EIs. The improvements included the refinement of a state-specific oil and gas area source emissions calculator. This oil and gas area source emissions calculator uses county-level production and local equipment activity data with local emissions requirements to estimate emissions from individual production categories, including compressor engines, condensate and oil storage tanks, loading operations, heaters, and dehydrators. The documentation for development of the oil and gas emissions calculator can be found in Appendix 3: *Characterization of Oil and Gas Production Equipment and Develop a Methodology to Estimate Statewide Emissions*.

Another significant improvement made for the 2017 base year EI was the development of a Texas-specific industrial, commercial, and institutional (ICI) combustion emissions calculator. This calculator improved the default calculations and parameters provided by EPA for these fuel combustion sources. The documentation for development of the ICI combustion emissions calculator is provided in Appendix 4: *Industrial, Commercial, and Institutional (ICI) Fuel Use Study*.

For those area source categories affected by TCEQ rules, rule effectiveness factors are applied to the baseline emissions to estimate controlled emissions. These factors address the efficiency of the controls and the percentage of the category's population affected by the rule.

2.3.3 Updated Analysis and Attainment Year Inventories

Updated 2023 analysis year and 2026 attainment year inventories were developed according to the general requirements described in Section 2.3.1: *Emissions Inventory Development*. TCEQ designated the 2023 EI as the starting point for EI projections of area source categories for the attainment year because it is the most recently available periodic inventory year.

The 2023 area source EI was developed in accordance with the requirements of the Air Emissions Reporting Requirements (AERR) rule. The 2023 EI was developed using EPA-generated emissions inventories, TCEQ-contracted projects to develop emissions inventories, and TCEQ staff projects to develop emission inventories. A significant improvement made for the 2020 EI and carried forward for the 2023 EI was the use of updated emissions factors for Volatile Chemical Product (VCP) categories developed by EPA. The documentation for development of the improved VCP emissions is provided in Appendix 5: *2020 EPA Volatile Chemical Product (VCP) Nonpoint Emissions Methodology and Operator (NEMO) Instructions*.

The area source oil and gas inventory production categories were updated using 2023 production data from the Railroad Commission of Texas (RRC).

The 2026 attainment year EI for the area source categories was developed using projection factors derived from Appendix 2. The study in this appendix contains individual projection factors for each source category and for each forecasting year. This projection method is the EPA standard and accepted methodology for developing future year EIs.

The 2026 area source EIs were developed by applying the selected emissions projection factor to the 2023 emissions for each area source category. Rules controlling emissions from industrial coatings, portable fuel containers, and gasoline station underground tank filling (Stage I) were applied in the 2017 base year inventory. Federal New Source Performance Standards Subpart OOOO emissions reductions were applied to the 2023 projection base year inventory but not the 2017 base year inventory based on applicable compliance deadlines.

A summary of the area source RFP inventories is presented in Table 2-2, Table 2-3, and Table 2-4.

2.4 NON-ROAD MOBILE SOURCES

Non-road vehicles (non-road sources) do not normally operate on roads or highways and are often referred to as off-road or off-highway vehicles. Non-road emissions sources include agricultural equipment, commercial and industrial equipment, construction and mining equipment, lawn and garden equipment, aircraft and airport equipment, locomotives, and drilling rigs.

For this proposed Bexar County RFP SIP revision, emissions inventories for non-road sources were developed for the following subcategories: NONROAD model categories, airports, locomotives, and drilling rigs used in upstream oil and gas exploration activities. The airport subcategory includes estimates for emissions from the aircraft, auxiliary power units (APU), and ground support equipment (GSE) subcategories relevant for airports added together and presented as a total. The sections below describe the emissions estimates methodologies used for the non-road mobile source subcategories.

2.4.1 NONROAD Model Categories Emissions Estimation Methodology

The Motor Vehicle Emission Simulator 4 (MOVES4) model was EPA's latest mobile source emissions model for estimating non-road source category emissions at the time of inventory development for this SIP revision. The Motor Vehicle Emission Simulator 5

(MOVES5) model was not used in this SIP revision since TCEQ had already invested significant resources to develop a non-road mobile source EI using MOVES4. As EPA stated in its notice of availability published in the *Federal Register* on December 11, 2024, “[...] in cases where state and local agencies have already completed significant work on a SIP with a version of MOVES4 (e.g., attainment modeling has already been completed with MOVES4), they may continue to rely on this earlier version” (89 FR 99862, 99864).

TCEQ used the most recent Texas-specific utility for the non-road mobile component of the MOVES4 model, called Texas NONROAD utility version 2.5 (TexN2.5), to calculate emissions from all non-road mobile source equipment and recreational vehicles with the exception of airports, locomotives, and drilling rigs used in upstream oil and gas exploration activities. Because emissions for airports and locomotives are not included in either the MOVES4 model or the TexN2.5 utility, the emissions for these categories are estimated using other EPA-approved methods and guidance. Although emissions for drilling rigs are included in the MOVES4 model and TexN2.5 utility, alternate emissions estimates were developed for that source category to develop more accurate county-level inventories, as described in Section 2.4.2: *Drilling Rig Diesel Engines Emissions Estimation Methodology*. The equipment populations for drilling rigs were set to zero in the TexN2.5 utility to avoid double counting emissions from these sources.

TexN2.5 estimates Texas non-road emissions more accurately than the national default values in EPA’s MOVES4 model by incorporating updated input data based on TCEQ emissions inventory improvement projects. Specifically, TCEQ has conducted equipment survey studies that focused on various equipment categories operating in different areas of Texas, including diesel construction equipment, liquid propane gas-powered forklifts, and agricultural equipment.

The TexN2.5 utility was updated to be compatible with the MOVES4 model. In addition, enhancements were added to the utility to streamline the way the utility handles alternative equipment scrappage curves and generates county databases for submittal for the AERR and NEI, resulting in version TexN2.5. The NONROAD model category emissions included in this proposed SIP revision were developed from a TCEQ-commissioned study using the TexN2.5 utility. More information regarding the development of these emissions is provided in the ERG report in Appendix 6: *Development of Texas Nonroad Model 2023 Air Emissions Reporting Requirements and Reasonable Further Progress Emissions*.

2.4.2 Drilling Rig Diesel Engines Emissions Estimation Methodology

Although emissions for drilling rig diesel engines used in upstream oil and gas exploration activities are included in the TexN2.5 utility, alternate emissions estimates were developed for this source category to develop more accurate county-level inventories. The equipment populations for drilling rigs were set to zero in the TexN2.5 utility to avoid duplicating emissions.

Due to significant growth in the oil and gas exploration and production industry, a 2015 TCEQ-commissioned survey of oil and gas exploration and production companies

was used to develop updated drilling rig emissions characterization profiles.⁷ The uncontrolled and controlled drilling rig emissions characterization profiles from this study were combined with county-level drilling activity data obtained from the RRC to develop the drilling rigs EI. The documentation of procedures used in developing the drilling rigs EI can be found in Appendix 7: *2014 Statewide Drilling Rig Emissions Inventory with Updated Trends Inventories*.

2.4.3 Locomotive Emissions Estimation Methodology

The locomotive EI was developed from a TCEQ-commissioned study using EPA-accepted EI development methods.⁸ The locomotive EI includes line haul and rail yard emissions activity data from all Class I and Class III (currently, there are no Class II operators in Texas) locomotive activity and emissions by rail segment. Documentation of methods and procedures used to develop the locomotive EI can be found in Appendix 8: *2023 Texas Statewide Locomotive and Rail Yard AERR Emissions Inventory and 2011 through 2050 Trend Inventories*.

2.4.4 Airport Emissions Estimation Methodology

The airport EI was developed from a TCEQ-commissioned study using the Federal Aviation Administration's (FAA) Aviation Environmental Design Tool (AEDT) model.⁹ AEDT is the most recent FAA model for estimating airport emissions.

The airport emissions categories used for this proposed SIP revision include aircraft (commercial air carriers, air taxis, general aviation, and military), APU, and GSE operations. Documentation of methodology and procedures used to develop the Bexar County 2015 ozone NAAQS nonattainment area airport emissions inventories can be found in Appendix 9: *2023 Texas Statewide AERR Airport Emissions Inventory and 2011 through 2050 Trend Inventories*.

2.4.5 Updated 2017 Base Year Inventory

For certain non-road mobile source categories detailed below, the updated 2017 base year EI was developed from the 2023 periodic EI to provide consistency between emissions estimation approaches used for this proposed SIP revision. Exceptions and specific details about non-road source category inventory development are included in the relevant section below.

2.4.5.1 Updated 2017 Base Year NONROAD Model Category Inventory

The 2017 base year EI used for all non-road mobile model-specific source categories was developed using TexN2.5 with updated county-specific input data, including 2017 meteorological input data, as detailed in Appendix 6.

⁷ https://wayback.archive-it.org/414/20210527185246/https://www.tceq.texas.gov/assets/public/implementation/air/am/contracts/reports/ei/5821552832FY1505-20150731-erg-drilling_rig_2014_inventory.pdf

⁸ <https://www.tceq.texas.gov/downloads/air-quality/research/reports/emissions-inventory/5822110369019-20241031-2023-texas-statewide-locomotive-and-rail-yard-emissions-inventory-and-2011-through-2050-trend-inventories.pdf>

⁹ <https://www.tceq.texas.gov/downloads/air-quality/research/reports/emissions-inventory/582211036918-20241004-2023-texas-statewide-airport-emissions-inventory-and-2011-through-2050-trend-inventories.pdf>

2.4.5.2 Updated 2017 Base Year Drilling Rig Diesel Engines Inventory

The 2017 base year EI for drilling rig diesel engines used in upstream oil and gas exploration activities was developed using the results of a 2015 statewide EI improvement study combined with 2017 drilling activity data from the RRC. The documentation of procedures used in developing the 2017 drilling rigs EI can be found in Appendix 7.

2.4.5.3 Updated 2017 Base Year Locomotive Inventory

The 2017 base year locomotive emissions were taken from the 2017 trend EI developed as part of the TCEQ-commissioned study detailed in Appendix 8.

2.4.5.4 Updated 2017 Base Year Airport Inventory

The 2017 base year airport emissions were taken from the 2017 trend EI developed as part of the TCEQ-commissioned study detailed in Appendix 9.

2.4.6 Updated Uncontrolled Analysis and Attainment Year Inventories

The NONROAD model category uncontrolled emissions for each analysis year (2017 base year, 2023 analysis year, and 2026 attainment year) were calculated by removing all federal and state control measures from the TexN2.5 utility runs, as detailed in Appendix 6.

The uncontrolled 2017 EI for drilling rigs was developed using 2017 drilling activity data and the uncontrolled factors from the ERG report provided in Appendix 7. The 2023 and 2026 EIs for drilling rigs were developed using 2023 drilling activity data (the most recently available activity data) and the uncontrolled factors from the ERG report provided in Appendix 7. Because future drilling activity is difficult to predict, the 2023 drilling activity data were held constant for the 2026 attainment year. Data for 2023 were the most recently available.

TCEQ calculated updated, uncontrolled 2023 and 2026 emissions from locomotives based on the information detailed in Appendix 8.

TCEQ calculated updated, uncontrolled 2023 and 2026 emissions from airports based on the information detailed in Appendix 9.

2.4.7 Updated Controlled Analysis and Attainment Year Inventories

The NONROAD model category controlled emissions for each analysis year (2017 base year, 2023 analysis year, and 2026 attainment year) were calculated by accounting for all federal and state control measures in the TexN2.5 utility runs, as detailed in Appendix 6.

Controlled 2023 and 2026 emissions for diesel drilling rigs were based on 2023 drilling activity data (the most recently available activity data) combined with the 2023 or 2026 year-specific controlled emissions factors from the ERG report provided in Appendix 7.

TCEQ calculated updated controlled 2023 and 2026 emissions from locomotives based on the information detailed in Appendix 8.

TCEQ calculated updated controlled 2023 and 2026 emissions from airports based on the information detailed in Appendix 9.

A summary of the non-road mobile source RFP inventories is presented in Table 2-2, Table 2-3, and Table 2-4.

2.5 ON-ROAD MOBILE SOURCES

The 2017, 2023, and 2026 on-road mobile source EIs for this proposed SIP revision were developed by the Texas A&M Transportation Institute (TTI) under contract. The data, methods, activity inputs, emissions factors, and results are documented in the TTI report provided in Appendix 10: *Dallas-Fort Worth (DFW), Houston-Galveston-Brazoria (HGB), and Bexar County 2015-Eight-Hour Ozone Nonattainment Area Reasonable Further Progress (RFP) On-Road Mobile Emissions Inventories*. As required by the 2015 eight-hour ozone standard SIP requirements rule, the on-road inventories are based on vehicle miles traveled (VMT) estimates and emission rates for an average summer work weekday.

The latest major revision of EPA's mobile source emission model at the time of inventory development, MOVES4, was used to estimate the summer weekday emissions rates for NO_x and VOC in units of grams per mile. The MOVES5 model was not used in this SIP revision since TCEQ had already invested significant resources to develop an on-road mobile source EI using MOVES4. As EPA stated in its notice of availability published in the *Federal Register* on December 11, 2024, "[...] in cases where state and local agencies have already completed significant work on a SIP with a version of MOVES4 (e.g., attainment modeling has already been completed with MOVES4), they may continue to rely on this earlier version" (89 FR 99862, 99864). The roadway link-level VMT estimates were obtained from travel demand modeling for the Bexar County 2015 ozone NAAQS nonattainment area for each analysis year.

2.5.1 On-Road Emissions Inventory Development

On-road mobile emissions sources consist of automobiles, trucks, motorcycles, and other motor vehicles traveling on public roadways. On-road mobile source ozone precursor emissions are usually categorized as combustion-related emissions or evaporative hydrocarbon emissions. Combustion-related emissions are estimated for vehicle engine exhaust. Evaporative hydrocarbon emissions are estimated for the fuel tank and other evaporative leak sources from the vehicle. To calculate emissions, both the rate of emissions per unit of activity (emissions factors) and the number of units of activity must be determined.

Emissions factors for this proposed Bexar County RFP SIP revision were developed using EPA's mobile emissions factor model, MOVES4. The MOVES4 model may be run using national default information or the default information may be modified to simulate data specific to an area, such as the control programs, driving behavior, meteorological conditions, and vehicle characteristics. Because modifications to the national default values influence the emissions factors calculated by the MOVES4 model, to the extent that local values are available, parameters that are used reflect local conditions. The localized inputs used for the on-road mobile EI development include vehicle speeds for each roadway link, vehicle populations, vehicle hours idling, temperature, humidity, vehicle age distributions for each vehicle type, percentage of

miles traveled for each vehicle type, fuel control programs, and gasoline Reid vapor pressure (RVP) controls.

To estimate on-road mobile source emissions, emissions factors calculated by the MOVES4 model must be multiplied by the level of vehicle activity. On-road mobile source emissions factors are expressed in units of grams per mile, grams per vehicle (evaporative), and grams per hour (extended idle); therefore, the activity data required to complete the inventory calculation are VMT in units of miles per day, vehicle populations, truck hoteling activity, and source hours idling. The level of vehicle travel activity is developed using travel demand models (TDM) run by the Texas Department of Transportation or by the local metropolitan planning organization. The TDMs are validated against a large number of ground counts, i.e., traffic passing over counters placed in various locations throughout a county or area. For SIP EIs, VMT estimates are calibrated against outputs from the federal Highway Performance Monitoring System, a model built from a different set of traffic counters. Vehicle populations by source type are derived from the Texas Department of Motor Vehicles' registration database and, as needed, national estimates for vehicle source type population.

In addition to the number of miles traveled on each roadway link, the speed on each roadway type or segment is also needed to complete an on-road EI. Roadway speeds, required inputs for the MOVES4 model, are calculated by using the activity volumes from the TDM and a post-processor speed model.

A summary of the on-road mobile source VMT used to develop the various NO_x and VOC emissions estimates for the area are presented in Table 2-1: *Bexar County 2015 Ozone NAAQS Nonattainment Area RFP Ozone Season Weekday On-Road Mobile Source VMT (miles per day)*.

The controlled and uncontrolled on-road mobile source emissions inventories are presented in Appendix 1 and summarized in Table 2-2, Table 2-3, and Table 2-4.

For complete documentation of the development of the on-road mobile source emissions inventories for this proposed RFP demonstration, refer to Appendix 10. The complete set of input and output files are available upon request from TCEQ's Air Quality Division.

Table 2-1: Bexar County 2015 Ozone NAAQS Nonattainment Area RFP Ozone Season Weekday On-Road Mobile Source VMT (miles per day)

RFP Analysis Year	VMT
2017 Base Year	47,288,348
2023 Analysis Year	53,914,308
2026 Attainment Year	55,843,828

Note: For this proposed Bexar County RFP SIP revision, the same VMT is used for the uncontrolled and controlled scenarios.

2.5.2 On-Road Mobile Updated 2017 Base Year Inventory

The 2017 base year EI for on-road mobile sources was updated using emissions factors calculated using the MOVES4 model. Additional updates were made to incorporate the latest activity estimates from the Bexar County 2015 ozone NAAQS nonattainment area TDM 2017 networks. Only control strategies implemented prior to 2017 were included

in the input to the EI development for the 2017 on-road mobile source base year emissions inventories. Those controls include the pre-1990 Federal Motor Vehicle Control Program (FMVCP), the 1990 to 2017 FMVCP, the East Texas Regional Low RVP Gasoline program, federal ultra-low sulfur diesel, and on-road Texas Low Emission Diesel (TxLED), where applicable. The activity levels used to calculate the EI reflect the 2017 roadway networks with 2017 VMT and speeds. A summary of the 2017 EIs is presented in Table 2-2. For complete documentation of the development of the EIs and details on MOVES4 model inputs, refer to Appendix 10.

2.5.3 On-Road Mobile Updated Uncontrolled Analysis and Attainment Year Inventories

The uncontrolled on-road mobile EIs for the 2023 analysis year and 2026 attainment year were developed using emissions factors that reflect existing control strategies, including pre-1990 and post-1990 FMVCP and the 1992 RVP control. MOVES4 was used to develop the emissions inventories for this proposed SIP revision. The activity levels were updated to include the latest output from the Bexar County 2015 ozone NAAQS nonattainment area TDM. The activity levels used to calculate the EI reflect the attainment roadway network, with attainment year VMT and speeds. Summaries of the 2023 and 2026 EIs are presented in Table 2-3 and Table 2-4. For complete documentation of the development of the EIs and details on MOVES4 model inputs, refer to Appendix 10.

2.5.4 On-Road Mobile Updated Controlled Analysis and Attainment Year Inventories

The controlled on-road mobile EIs for the 2023 analysis year and 2026 attainment year were developed using emissions factors that include the effects of pre-1990 control strategies, the effects of all control strategies between 1990 and 2017, and the effects of all control strategies from 1990 through the 2023 analysis and 2026 attainment years. The effects of the post-1990 control strategies between 2017 and the 2023 analysis and 2026 attainment years are creditable reductions used to demonstrate compliance with RFP requirements. The pre- and post-1990 controls include pre-1990 FMVCP, post-1990 FMVCP, the East Texas Regional Low RVP Gasoline Program, federal low sulfur gasoline, federal ultra-low sulfur diesel, and TxLED for applicable years. All control strategies used to demonstrate RFP for Bexar County are documented in Table 4-1: *Summary of Bexar County 2015 Ozone NAAQS Nonattainment Area RFP NO_x and VOC Cumulative Emissions Reductions from Control Strategies for 2017 through 2023 (tons per day)* and Table 4-2: *Summary of Bexar County 2015 Ozone NAAQS Nonattainment Area RFP NO_x and VOC Cumulative Emissions Reductions from Control Strategies for 2017 through 2026 (tons per day)*. The on-road control strategies are documented in Appendix 10.

The activity levels used to calculate the attainment year emissions inventories reflect the 2023 or 2026 roadway network, with 2023 or 2026 VMT and speeds. Summaries of the 2023 and 2026 EIs are presented in Table 2-3 and Table 2-4. For complete documentation of the development of the EIs and details on MOVES4 model inputs, refer to Appendix 10.

Quantification of specific control reductions is documented in Chapter 4 with details presented in Appendix 1. Motor vehicle emissions budget calculations for the attainment year are documented in Chapter 5: *Motor Vehicle Emissions Budgets*.

2.6 EMISSIONS SUMMARY

Uncontrolled and controlled 2017 base year NO_x and VOC emissions for each RFP source category are summarized in Table 2-2.

For the 2023 analysis year, the uncontrolled and controlled NO_x and VOC emissions for each RFP source category and analysis year are summarized in Table 2-3.

For the 2026 attainment year, the uncontrolled and controlled NO_x and VOC emissions for each RFP source category and attainment year are summarized in Table 2-4.

Between 1990 and 2017, substantial emissions reductions occurred in all EI source categories (stationary sources as well as mobile sources) due to regulations implemented at the federal, state, and local levels and innovative programs implemented by TCEQ. As noted in Section 2.1, the 2017 EI for stationary sources includes all controls and associated reductions implemented by the end of the 2017 base year. Therefore, the 2017 controlled stationary source EI is equivalent to the 2017 existing controlled stationary source EI.

Similarly, the 2023 analysis year and 2026 attainment year inventories reflect: 1) all controls and associated reductions implemented by the end of the projection base EI year and 2) growth from the projection base EI. Where there is no difference between the uncontrolled and controlled emissions for the base year or the analysis or attainment year, there were no controls quantified for the projected source inventories.

Table 2-2: Bexar County 2015 Ozone NAAQS Nonattainment Area RFP Summary of the 2017 Base Year Average Summer Weekday NO_x and VOC Emissions (tons per day)

Emissions Inventory Source	Uncontrolled NO _x	Controlled NO _x	Uncontrolled VOC	Controlled VOC
Non-Road Mobile Sources	28.32	12.90	56.48	12.84
On-Road Mobile Sources	38.47	38.47	17.80	17.80
Area Sources	6.83	6.83	81.62	81.62
Point Sources	29.88	29.88	3.56	3.56
Total of All Sources	103.50	88.08	159.46	115.82

Note: The Bexar County uncontrolled on-road EI values for 2017 reflect controls in place up to 2017; no post-2017 controls included.

Table 2-3: Bexar County 2015 Ozone NAAQS Nonattainment Area RFP Summary of the 2023 Analysis Year Average Summer Weekday NO_x and VOC Emissions (tons per day)

Emissions Inventory Source	Uncontrolled NO _x	Controlled NO _x	Uncontrolled VOC	Controlled VOC
Non-Road Mobile Sources	32.77	11.55	62.22	13.15
On-Road Mobile Sources	31.20	26.21	15.36	13.20
Area Sources	8.02	8.02	85.18	82.95
Point Sources	30.60	30.60	4.13	4.13
Total of All Sources	102.59	76.38	166.89	113.43

Note: The Bexar County uncontrolled on-road EI values for 2023 reflect pre-1990 controls and post-1990 FMVCP.

Table 2-4: Bexar County 2015 Ozone NAAQS Nonattainment Area RFP Summary of the 2026 Attainment Year Average Summer Weekday NO_x and VOC Emissions (tons per day)

Emissions Inventory Source	Uncontrolled NO_x	Controlled NO_x	Uncontrolled VOC	Controlled VOC
Non-Road Mobile Sources	33.40	11.01	65.98	13.79
On-Road Mobile Sources	25.24	21.31	12.66	10.85
Area Sources	7.91	7.91	85.50	69.61
Point Sources	30.60	29.95	4.13	4.13
Total of All Sources	97.15	70.18	168.27	98.38

Note: The Bexar County uncontrolled on-road EI values for 2026 reflect pre-1990 controls and post-1990 FMVCP.

CHAPTER 3: PROGRESS TOWARD MEETING TARGET EMISSIONS LEVELS

3.1 INTRODUCTION

3.1.1 General RFP Requirements

This chapter describes how the Bexar County 2015 ozone National Ambient Air Quality Standard (NAAQS) nonattainment area serious classification reasonable further progress (RFP) demonstrations are calculated, documents the RFP calculations, and provides a summary of the RFP demonstration. Under the serious classification, the attainment date for the Bexar County ozone NAAQS nonattainment area is September 24, 2027, with an attainment year of 2026 (89 *Federal Register* (FR) 51829).

For this proposed Bexar County RFP state implementation plan (SIP) revision, a base year of 2017 was used to harmonize the RFP base year with the triennial reporting requirement of the Air Emissions Reporting Requirements (AERR) rule. The required emissions reductions for RFP, as detailed in Sections 3.1.2: *Fifteen Percent Emissions Reduction Requirement*, 3.1.3: *Additional Emissions Reduction Requirements*, and 3.1.4: *Contingency Plan*, are calculated as a percentage of the base year (2017) emissions inventory (EI).

The proposed SIP revision demonstrates the following emissions reductions:

- a 15% volatile organic compounds (VOC)-only emissions reduction for the nine-year period from January 1, 2018, through December 31, 2026;
- a 9% nitrogen oxides (NO_x) emissions reduction for the nine-year period from January 1, 2018, through December 31, 2026; and
- an RFP contingency plan, including a revised contingency plan for the 2023 milestone (analysis) year along with a contingency plan for the 2026 attainment year, calculated as a 3% emissions reduction of the base year inventory for Bexar County.

3.1.2 Fifteen Percent Emissions Reduction Requirement

The U.S. Environmental Protection Agency's (EPA) *Implementation of the 2015 National Ambient Air Quality Standards for Ozone: State Implementation Plan Requirements; Final Rule* (2015 eight-hour ozone standard SIP requirements rule) requires states with moderate nonattainment areas to submit an RFP plan with a 15% emissions reduction from the RFP base year to the RFP attainment year. In accordance with the 2015 eight-hour ozone standard SIP requirements rule, if a state chooses 2017 as a base year for a moderate nonattainment area, the 15% reduction requirement covers the period from January 1, 2018, through December 31, 2023.

The first 15% RFP reduction achieved by an area under its initial ozone nonattainment designation must be from VOC emissions. Bexar County was required to meet a 15% VOC emissions reduction for RFP between a 2017 base year and the 2023 moderate classification attainment year. To meet the 15% VOC emissions reduction requirement within the required timeframe, additional measures would have to have been implemented by March 1, 2023, the beginning of ozone season in Bexar County, for potential reductions to be captured in the first six-year period. There were no measures that could have been implemented by March 1, 2023, to demonstrate the 15% reduction in VOC emissions from the 2017 base year to the 2023 analysis year;

therefore, the moderate RFP SIP revision achieved the necessary 15% reasonable further progress with a combination of VOC and NO_x reductions. The RFP demonstration for this proposed serious SIP revision, by incorporating measures from the concurrently proposed revisions to rules in 30 Texas Administrative Code Chapter 115 (Rule Project No. 2025-006-115-AI), achieves the 15% VOC emissions reduction by December 31, 2026.

3.1.3 Additional Emissions Reduction Requirements

To demonstrate RFP for the Bexar County 2015 ozone NAAQS serious nonattainment area, an additional 9% emissions reduction is required by December 31, 2026. This proposed RFP SIP revision uses NO_x emissions reductions to achieve the 9% emissions reduction requirements.

Federal Clean Air Act (FCAA), §182(c)(2)(C) allows RFP demonstrations to use NO_x emissions reductions instead of VOC emissions reductions after the initial 6-year period as long as NO_x emissions reductions produce equivalent reductions in ozone concentrations. As noted in Section 5.2.4: *VOC and NO_x Limitation* of the concurrently proposed Bexar County 2015 Ozone NAAQS Serious Attainment Demonstration (AD) SIP revision (Project No. 2024-041-SIP-NR), while photochemical modeling shows benefit from both NO_x and VOC emissions reductions, ozone decreases in larger amounts when reductions in NO_x emissions occur. Appendix B: *Conceptual Model for the Bexar County Nonattainment Area for the 2015 Eight-Hour Ozone National Ambient Air Quality Standard* of the Bexar County 2015 Ozone NAAQS Serious AD SIP revision contains more detail about the NO_x-limited nature of ozone formation within Bexar County. As a result, NO_x emissions reductions are expected to be more effective than VOC reductions at decreasing ozone concentrations in the nonattainment area. Therefore, this proposed RFP SIP revision demonstrates the 9% emissions reduction required by FCAA, §182(c)(2)(B) using NO_x emissions reductions.

3.1.4 Contingency Plan

This proposed SIP revision also contains a contingency plan required by FCAA, §172(c)(9).

Details about the contingency plan for this SIP revision are provided in Section 4.3, *Contingency Measures*. A summary of the RFP contingency plan is provided in Table 4-4: *Bexar County 2015 Ozone NAAQS Nonattainment Area 2024 RFP Contingency Plan (tons per day unless otherwise noted)* and Table 4-5: *Bexar County 2015 Ozone NAAQS Nonattainment Area 2027 RFP Contingency Plan (tons per day unless otherwise noted)*.

3.1.5 RFP Demonstration Method

Required serious nonattainment area RFP demonstration elements for the Bexar County 2015 ozone NAAQS nonattainment area include:

- 2017 base year emissions;
- 2023 and 2026 target emissions levels;
- 2023 and 2026 projected emissions, with growth; and
- individually quantified emissions reductions from control measures for 2023 and 2026.

Progress toward the 2023 analysis year and the 2026 attainment year emissions reductions requirements is demonstrated using EPA methods to calculate the RFP targets and complete the RFP analyses. First, the emissions inventories and control measure reductions are developed for each analysis year. Second, the target level of emissions is calculated for each analysis year. Third, the RFP control measure reductions for each analysis year are subtracted from the uncontrolled or existing controlled EI for the corresponding analysis year. The difference includes growth from the base year to the selected analysis year. When the combined uncontrolled and existing controlled projected inventory for each analysis year minus the RFP controls is less than or equal to the target level of emissions for NO_x and/or VOC, the RFP requirement has been met.

A summary of the RFP demonstration for Bexar County is provided in Table 3-1: *Summary of the 2023 Bexar County 2015 Ozone NAAQS Nonattainment Area RFP Demonstration (tons per day)* and Table 3-2: *Summary of the 2026 Bexar County 2015 Ozone NAAQS Nonattainment Area RFP Demonstration (tons per day)*. Details on how RFP is calculated for the Bexar County 2015 ozone NAAQS nonattainment area can be found in Appendix 1: *Bexar County Reasonable Further Progress (RFP) Demonstration Spreadsheet*.

3.2 RFP DEMONSTRATION

EPA's final 2015 eight-hour ozone standard SIP requirements rule requires the RFP demonstration to show that the controlled emissions for each RFP analysis year are equal to or less than the required emissions target values due to ozone precursor (NO_x and/or VOC) emissions reductions. Creditable RFP emissions reductions are subtracted from the uncontrolled and/or existing controlled forecasted emissions for each RFP analysis year. The RFP requirement is met for each analysis year if the resulting controlled forecasted emissions are less than the target level of emissions.

The RFP demonstration for this proposed serious SIP revision includes measures to achieve the 15% reduction in VOC emissions required by FCAA, §182(b)(1) by December 31, 2026.

Since NO_x emissions reductions are anticipated to be more effective at reducing ozone concentrations in the Bexar County 2015 ozone NAAQS nonattainment area than VOC emissions reductions (see Section 3.1.3), this proposed SIP revision uses NO_x emissions reductions to demonstrate RFP by December 31, 2026, along with demonstrating the 15% VOC-only requirement, as required by FCAA. Details of the RFP demonstration are documented in Appendix 1.

Summaries of the 2023 and 2026 RFP demonstration for the Bexar County 2015 ozone NAAQS nonattainment area are provided in Tables 3-1 and 3-2. Slight (0.01 ton per day) differences in 2023 and 2026 emissions between Tables 3-1, 3-2, and tables in Chapter 2: *Emissions Inventories* may occur due to rounding.

Table 3-1: Summary of the 2023 Bexar County 2015 Ozone NAAQS Nonattainment Area RFP Demonstration (tons per day)

Line	Description	NO _x	VOC
Line 1	Uncontrolled or existing controlled Bexar County 2023 emissions forecast with growth	102.59	166.89
Line 2	Creditable Bexar County RFP control reductions between 2017 and 2023	26.20	53.46
Line 3	Controlled Bexar County 2023, RFP emissions forecast (Line 1 minus Line 2)	76.39	113.43
Line 4	Amount of substituted NO _x reductions	0.00	0.00
Line 5	Controlled Bexar County 2023, accounting for NO _x substitution (Line 3 plus Line 4)	76.39	113.43
Line 6	Bexar County 2023 RFP target level of emissions (2017 controlled RFP base year EI minus 15% VOC emissions reduction)	88.08	98.45
Line 7	Excess (+) / Shortfall (-) (Line 6 minus Line 5)	11.69	-14.98
Line 8	Is controlled RFP EI less than target level of emissions?	Yes	No

Table 3-2: Summary of the 2026 Bexar County 2015 Ozone NAAQS Nonattainment Area RFP Demonstration (tons per day)

Line	Description	NO _x	VOC
Line 1	Uncontrolled or existing controlled Bexar County 2026 emissions forecast with growth	97.15	168.27
Line 2	Creditable Bexar County RFP control reductions between 2017 and 2023	26.20	53.46
Line 3	Creditable Bexar County RFP control reductions between 2023 and 2026	0.76	16.42
Line 4	Controlled Bexar County 2026, RFP emissions forecast (Line 1 minus Line 2 minus Line 3)	70.19	98.39
Line 5	Amount of substituted NO _x reductions	0.00	0.00
Line 6	Controlled Bexar County 2026, accounting for NO _x substitution (Line 4 plus Line 5)	70.19	98.39
Line 7	Bexar County 2026 RFP target level of emissions (2017 controlled RFP base year EI minus 15% VOC and 9% NO _x emissions reductions)	80.15	98.45
Line 8	Excess (+) / Shortfall (-) (Line 7 minus Line 6)	9.96	0.06
Line 9	Is controlled RFP EI less than target level of emissions?	Yes	Yes

CHAPTER 4: CONTROL MEASURES TO ACHIEVE TARGET LEVELS

4.1 OVERVIEW OF CONTROL MEASURES

The emissions reductions from control strategies for the 2026 attainment year to achieve the required emissions reductions in nitrogen oxides (NO_x) and volatile organic compounds (VOC) to demonstrate reasonable further progress (RFP) are detailed in Appendix 1: *Bexar County Reasonable Further Progress (RFP) Demonstration Spreadsheet*. A summary of the reductions for this proposed Bexar County 2015 Eight-Hour Ozone National Ambient Air Quality Standard (NAAQS) Serious RFP State Implementation Plan (SIP) Revision is provided in Tables 4-1: *Summary of Bexar County 2015 Ozone NAAQS Nonattainment Area RFP NO_x and VOC Cumulative Emissions Reductions from Control Strategies for 2017 through 2023 (tons per day)* and 4-2: *Summary of Bexar County 2015 Ozone NAAQS Nonattainment Area RFP NO_x and VOC Cumulative Emissions Reductions from Control Strategies for 2017 through 2026 (tons per day)*.

The projected emissions reductions reflect the identified federal and state emissions controls. All state control measures are codified in regulations for the State of Texas. Texas Low Emissions Diesel (TxLED) NO_x emissions reductions are calculated in accordance with the U.S. Environmental Protection Agency's (EPA) February 2023 guidance document, *Guidance on Quantifying NO_x Benefits for Cetane Improvement Programs for Use in SIPs and Transportation Conformity*, EPA-420-B-23-006.

Table 4-1: Summary of Bexar County 2015 Ozone NAAQS Nonattainment Area RFP NO_x and VOC Cumulative Emissions Reductions from Control Strategies for 2017 through 2023 (tons per day)

Control Strategy Description	Source Category	NO _x Reduction	VOC Reduction
Chapter 117 NO _x controls ¹	Point	0.00	0.00
Chapter 115 VOC controls ¹	Point	0.00	0.00
Portable fuel containers ¹	Area	0.00	0.00
Chapter 117 NO _x area source engine controls ¹	Area	0.00	0.00
Oil and gas Chapter 115 VOC controls	Area	0.00	2.23
Other Chapter 115 VOC controls ¹	Area	0.00	0.00
Federal Motor Vehicle Control Program (FMVCP) ²	On-Road	0.00	0.00
Regional Low RVP conventional gasoline/federal low sulfur gasoline/federal ultra-low sulfur diesel	On-Road	4.96	2.16
Inspection and maintenance (I/M)	On-Road	0.00	0.00
On-road TxLED	On-Road	0.03	0.00
Tier I and II locomotive NO _x standards	Non-Road	0.02	0.00
Non-road TxLED	Non-Road	0.00	0.00
Non-road reformulated gasoline	Non-Road	0.00	0.00
Small non-road spark ignition (SI) (Phase III)	Non-Road	1.35	6.25
Diesel recreational marine	Non-Road	0.00	0.00

Control Strategy Description	Source Category	NO _x Reduction	VOC Reduction
Tier 4 non-road diesel engines	Non-Road	13.91	3.28
Large non-road SI and gasoline recreational marine	Non-Road	5.61	2.61
Small non-road SI engines (Phase II)	Non-Road	1.48	18.70
Tiers 2 and 3 non-road diesel engines	Non-Road	0.63	0.13
Heavy duty non-road engines	Non-Road	0.20	0.18
Small non-road SI engines (Phase I) ³	Non-Road	-2.06	17.90
Drilling rigs: federal engine standards	Non-Road	0.00	0.00
Drilling rigs: TxLED	Non-Road	0.00	0.00
Airport reductions	Non-Road	0.07	0.02
Sum of reductions from projected uncontrolled or existing controlled emissions		26.20	53.46

Note 1: The 2017 base year emissions inventory (EI) includes the effect of controls for rules with compliance deadlines before 2017 in Bexar County. No additional emissions reductions from 2017 through 2023 are claimed for these 30 Texas Administrative Code (TAC) Chapter 117 NO_x rules. No reductions were claimed for RFP purposes for point sources from 30 TAC Chapter 115 VOC rules with compliance deadlines after 2017.

Note 2: On-road emissions inventories developed using MOVES4 include FMVCP emissions reductions; however, MOVES4 does not include an option for quantifying FMVCP reductions separately from the overall emissions inventory. For continuity with previous state implementation plan (SIP) revisions, FMVCP is still included as a control strategy, but the reductions are set to zero.

Note 3: The small SI Phase 1 rule is shown to provide a substantial reduction in VOC emissions. A slight increase in NO_x emissions is due to the engine modifications required to meet the VOC and Carbon Monoxide (CO) standards of the Small SI Phase 1.

Table 4-2: Summary of Bexar County 2015 Ozone NAAQS Nonattainment Area RFP NO_x and VOC Cumulative Emissions Reductions from Control Strategies for 2017 through 2026 (tons per day)

Control Strategy Description	Source Category	NO _x Reduction	VOC Reduction
Chapter 117 NO _x controls	Point	0.65	0.00
Chapter 115 VOC controls ¹	Point	0.00	0.00
Portable fuel containers ¹	Area	0.00	0.00
Chapter 117 NO _x area source engine controls ¹	Area	0.00	0.00
Oil and gas Chapter 115 VOC controls	Area	0.00	1.79
Other Chapter 115 VOC controls	Area	0.00	14.10
FMVCP ²	On-Road	0.00	0.00
Regional Low RVP conventional gasoline/federal low sulfur gasoline/federal ultra-low sulfur diesel	On-Road	3.92	1.81
I/M	On-Road	0.00	0.00
On-road TxLED	On-Road	0.01	0.00
Tier I and II locomotive NO _x standards	Non-Road	0.08	0.00
Non-road TxLED	Non-Road	0.00	0.00
Non-road reformulated gasoline	Non-Road	0.00	0.00
Small SI (Phase III)	Non-Road	1.43	6.67
Diesel recreational marine	Non-Road	0.00	0.00
Tier 4 non-road diesel engines	Non-Road	14.52	3.41

Control Strategy Description	Source Category	NO _x Reduction	VOC Reduction
Large non-road SI and gasoline recreational marine	Non-Road	6.28	2.87
Small non-road SI engines (Phase II)	Non-Road	1.56	19.93
Tiers 2 and 3 non-road diesel engines	Non-Road	0.48	0.10
Heavy duty non-road engines	Non-Road	0.12	0.16
Small non-road SI engines (Phase I) ³	Non-Road	-2.18	19.02
Drilling rigs: federal engine standards	Non-Road	0.00	0.00
Drilling rigs: TxLED	Non-Road	0.00	0.00
Airport reductions	Non-Road	0.09	0.02
Sum of reductions from projected uncontrolled or existing controlled emissions		26.96	69.88

Note 1: The 2017 base year emissions inventory (EI) includes the effect of controls for rules with compliance deadlines before 2017 in Bexar County. No reductions were claimed for point sources for RFP purposes from 30 TAC Chapter 115 VOC rules with compliance deadlines after 2017.

Note 2: On-road emissions inventories developed using MOVES4 include FMVCP emissions reductions; however, MOVES4 does not include an option for quantifying FMVCP reductions separately from the overall emissions inventory. For continuity with previous state implementation plan (SIP) revisions, FMVCP is still included as a control strategy, but the reductions are set to zero.

Note 3: The small SI Phase 1 rule is shown to provide a substantial reduction in VOC emissions. A slight increase in NO_x emissions is due to the engine modifications required to meet the VOC and CO standards of the Small SI Phase 1.

4.1.1 New Measures

Proposed new and updated 30 Texas Administrative Code (TAC) Chapter 115 VOC rules contained in Rule Project No. 2025-006-115-AI were developed concurrently with this proposed SIP revision and, if adopted, are expected to achieve 12.13 tons per day (tpd) in VOC reductions in Bexar County, significantly contributing to the 15.83 tpd target for a 15% VOC reduction necessary to demonstrate RFP. The proposed rule changes encompass several sections of Chapter 115. First, amendments are proposed to existing rules for degreasing processes within Subchapter E, Division 1 and are anticipated to result in 0.49 tpd of VOC emission reductions in the Bexar County area. Second, proposed revisions for fabric coating provisions outlined in Subchapter E, Division 2 are expected to result in 1.06 tpd of VOC emission reductions in the Bexar County area. Third, proposed revisions to coating of metal parts and products, architectural coatings, and industrial maintenance coatings provisions in Subchapter E, Division 5 are expected to result in 8.46 tpd of VOC emission reductions; along with revisions to industrial cleaning solvent provisions in Subchapter E, Division 6, which would result in 1.48 tpd of VOC emission reductions. Finally, proposed new rules in Subchapter C, Division 6, for gasoline dispensing nozzles and low permeation hoses from motor vehicle fuel dispensing facilities would result in an estimated 0.64 tpd in VOC emission reductions in the Bexar County area. The proposed compliance date for all these changes, March 1, 2026, is the start of the ozone season in Bexar County for the serious classification attainment year.

The remaining VOC reductions needed to complete the 15.83 tpd target for a 15% VOC reduction for RFP come from a recently adopted Chapter 115 rulemaking (Rule Project No. 2023-116-115-AI, effective May 16, 2024), expected to achieve 3.75 tpd in VOC reductions. These previously adopted reasonably available control technology (RACT) rules for the 2015 ozone NAAQS moderate nonattainment classification were

implemented in Bexar County for source categories addressing VOC emissions from tanks storing VOCs, water separation, oil and gas, VOC loading/unloading, transport vessel leaks, equipment leak fugitives, surface coating, flexographic/rotogravure printing, offset lithographic printing, industrial cleaning solvents, and industrial adhesives. A summary of the VOC reductions can be found in Table 4-3: *Summary of Bexar County 2015 Ozone NAAQS Nonattainment RFP VOC Emissions Reductions from New Measures for 2017 through 2026 (tons per day)*.

The reduction in point source NO_x emissions comes from a single regulated entity impacted by new cement kiln rules in the recently adopted 30 TAC Chapter 117 NO_x rulemaking (Rule Project No. 2023-117-117-AI, effective May 16, 2024). That recently adopted rulemaking implemented RACT in Bexar County for 2015 ozone NAAQS moderate nonattainment. Cement kiln control measures are expected to achieve 0.65 tpd in NO_x reductions through a decreased post-RACT NO_x emission rate of 2.8 pounds (lb) NO_x/ton clinker compared to a pre-RACT emission rate of 4.7 lb NO_x/ton clinker for applicable Alamo Cement Company cement kilns.

4.1.1.1 Calculation Methodologies

Degreasing

There is currently no VOC content limit applicable in Bexar County. Current high VOC degreasing solvent is assumed to be 800 grams/liter (g/l) VOC content, consistent with mineral spirits. Some degreasing is also assumed to occur with solvents currently meeting the 25 g/l proposed VOC content limit. The fraction of use between these high and low-VOC content degreasing solvents was calculated, along with the total volume of degreasing solvent used to match the projected 2026 area source VOC emissions inventory for Bexar County. Emission reductions were calculated by applying the 25 g/l VOC content limit to the calculated high VOC degreasing solvent use in Bexar County.

Fabric Coating

The estimated VOC emissions were determined by calculating the fabric coating usage required to match the projected area source VOC emissions for 2026. This calculation assumed an average fabric coating VOC content of 493 g/l, based on available industry data. The proposed VOC limit of 265 g/l was then applied to the calculated 2026 usage to determine VOC emissions from fabric coatings meeting the proposed VOC limit. To determine emissions reductions, these VOC emissions were compared with the calculated VOC emissions when the same amount of coating is used but with the assumed VOC content.

Coating of Metal Parts

The VOC emission reductions from coating of metal parts and products were estimated by analyzing the South Coast Air Quality Management District (SCAQMD) metal parts and products coatings emissions inventory and Rule 1107 limits to estimate total coating usage and determine an assumed distribution of coating usages based on percentage of emissions in each coating category. To reflect actual usage patterns, the same percent distribution observed by SCAQMD was applied to account for the proportion of air-dry and baked coating emissions, respectively. (South Coast Air Quality Management District, board meeting date: August 14, 1998, Agenda no. 33, file 980833I.DOC within agenda item attachments: <http://www3.aqmd.gov/hb/attachments/1998/980833.zip>) The number of gallons of

metal parts and products coating used in Bexar County was calculated using the fractional split between coating categories determined from SCAQMD's projected 2026 emissions inventory metal parts and products coatings and the existing limits in Chapter 115 to match the projected Bexar County 2026 area source VOC emissions inventory. (Emissions inventory for South Coast Air Quality Management District, 2026 projection, EIC category 230-230, <https://ww2.arb.ca.gov/applications/cepam2019v1-04-standard-emission-tool>) Then, emission reductions were estimated by comparing the differences in VOC emissions under the current limits in Chapter 115 versus VOC emissions expected from the proposed VOC content limits, using the calculated Bexar County coating usage for each coating type.

Architectural Coatings

Architectural coating VOC emissions from TCEQ's projected 2026 Bexar County source emissions inventory was used as the baseline. SCAQMD Rule 1113 architectural coating sales and population data were employed to estimate coating use in gallons per person per year. VOC content limits from SCAQMD Rule 1113 for architectural coatings were used to calculate pounds of VOC emissions per gallon of architectural coating under the proposed rule. Bexar County's projected 2026 population, the calculated gallons of architectural coating per person, and the average VOC content were multiplied to calculate the 2026 Bexar County emissions under the proposed regulations. VOC emission reductions were calculated by subtracting 2026 proposed rule architectural coating VOC emissions from projected 2026 area source architectural coating VOC emissions.

Industrial Maintenance Coatings

Emission reductions from proposed VOC content limits for industrial maintenance coatings were calculated by first determining the number of gallons of coating required under the current EPA 40 Code of Federal Regulations (CFR) 59, Subpart D National Volatile Organic Compound Standards for Architectural Coatings VOC content limit of 450 g/l to emit the projected 2026 area source VOC emission estimate for Bexar County. Next, the emissions resulting from the calculated amount of coating used, but at the proposed 250 g/l limit were calculated. The difference between the calculated emissions and the projected area source emissions is the emission reduction.

Industrial Cleaning Solvents

Similar to the coating of metal parts calculation, the use fractions for the various categories of industrial cleaning solvents specified in SCAQMD Rule 1171 were calculated to match SCAQMD's industrial cleaning solvents emissions inventory. The same fractional use for each cleaning solvent category was used to determine the projected cleaning solvent use in Bexar County necessary to match the projected 2026 area source emissions inventory for cleaning solvents using the current RACT VOC content limits. Emission reductions are calculated by assuming the same Bexar County solvent use but at the proposed VOC content limits.

Enhanced Conventional Gasoline Nozzles

Staff calculated potential enhanced conventional (ECO) nozzle VOC emission reductions from Bexar County gasoline dispensing source leaks, drips, and spills in TCEQ's projected 2026 area source emissions inventory. Bexar County gasoline

dispensing facility VOC emissions from gasoline transfer leaks, drips, and spills in the 2026 area source emissions inventory are based on an emission factor of 0.64 pounds VOC per 1,000 gallons of gasoline transferred. ECO nozzles are certified to emit a maximum of 0.05 pounds of VOC per 1,000 gallons of gasoline transferred, although prior testing indicates that they are achieving significantly lower levels. To be conservative, TCEQ assumed that ECO nozzle retrofits would only reduce gasoline spillage emissions from 0.64 pounds of VOC per 1,000 gallons of gasoline transferred to 0.05 pounds of VOC per 1,000 gallons of gasoline transferred. Staff multiplied the projected 2026 area source emissions inventory for Bexar County gasoline spillage VOC emissions in tpy under current commission rules by the ECO nozzle factor of 0.05 pounds per 1,000 gallons and divided by standard nozzle factor of 0.64 pounds per 1,000 gallons to derive projected 2026 Bexar County gasoline spillage under the newly proposed regulations. TCEQ's 2026 area source EI Bexar County gasoline spillage VOC emissions under the proposed rules were subtracted from the calculated 2026 Bexar County gasoline spillage VOC emissions under the current rules to derive total ECO nozzles control VOC emission reductions.

Low Permeation Gasoline Hoses

TCEQ used California Air Resources Board (CARB) public and low permeation hose vendor data to estimate Bexar County gasoline spillage VOC emission reductions sources that would result if the proposed rules requiring gasoline dispensing facilities to install low permeation hoses on gasoline pumps were adopted. Staff consulted low permeation hose vendors, CARB, and public databases to estimate the number of Bexar County gasoline dispensing facility hose connections that would need to be retrofitted if the proposed rules were promulgated. Low permeation hose vendors estimated that each gasoline dispensing pump low permeation hose retrofit would reduce gasoline emissions by 10.8 pounds of VOC per year based on their experience. Staff multiplied the number of Bexar County gasoline dispensing hoses by the 10.8 pounds of VOC per year emission factor and by the 1 ton per 2,000 pounds conversion factor to calculate Bexar County emission reductions in tons per year.

Table 4-3: Summary of Bexar County 2015 Ozone NAAQS Nonattainment RFP VOC Emissions Reductions from New Measures for 2017 through 2026 (tons per day)

Control Strategy Description	VOC Reduction
Degreasing	0.49
Fabric Coating	1.06
Coating of Metal Parts	2.39
Architectural Coatings	5.16
Industrial Maintenance Coatings	0.92
Industrial Cleaning Solvents	1.48
Enhanced Conventional Gasoline Nozzles	0.54
Low Permeation Gasoline Hoses	0.10
Moderate RACT Chapter 115 VOC controls (Rule Project No. 2023-116-115-AI)	3.75
Sum of RFP reductions	15.88

4.2 VEHICLE MILES TRAVELED (VMT) DEMONSTRATION

FCAA, §182(c)(5) requires a VMT demonstration for areas designated as serious ozone nonattainment. The state must demonstrate that current VMT and related on-road mobile source emissions do not exceed levels required to attain the ozone NAAQS; otherwise, the state must implement transportation control measures (TCM). EPA has issued guidance on what information must be included in a SIP revision to demonstrate that VMT offsets are not required. The VMT demonstration for the Bexar County 2015 serious ozone NAAQS nonattainment area required for this SIP revision is provided in Section 4.2.1: *VMT Demonstration*.

4.2.1 VMT Demonstration

TCMs are required to offset growth in VMT that results in an increase in vehicle emissions for nonattainment areas classified as serious under the ozone NAAQS. There is growth in VMT for the Bexar County ozone nonattainment area for the years between the RFP base year of 2017 and the attainment year, 2026, as illustrated in Figure 4-1: *2017 and 2026 Bexar County RFP VMT Trends (miles per day)*. However, the growth in VMT is more than offset by control measures that reduce the per mile emission rates, resulting in a decrease in both VOC and NO_x emissions for the same time period, as shown in Figure 4-2: *Bexar County 2017 and 2026 RFP NO_x and VOC Emissions (tons per day)*. The increase in VMT and decrease in vehicle emissions for the RFP time period are summarized in Table 4-4: *Bexar County RFP On-Road Mobile Controlled NO_x Emissions, VOC Emissions, and Vehicle Miles Traveled*. A list of the Bexar County on-road mobile source control measures used to demonstrate RFP in this SIP revision are provided in Table 4-2. Since vehicle emissions are decreasing with the current list of controls, no additional controls from TCMs are required.

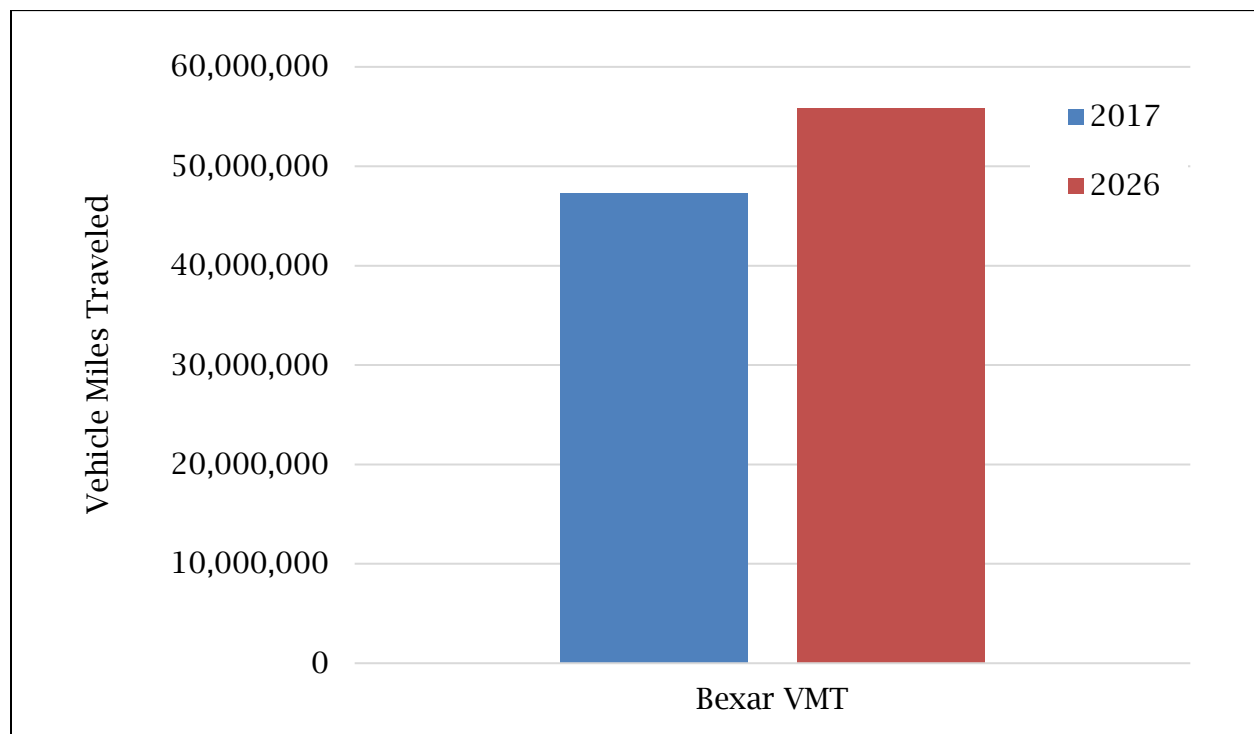


Figure 4-1: 2017 and 2026 Bexar County RFP VMT Trends (miles per day)

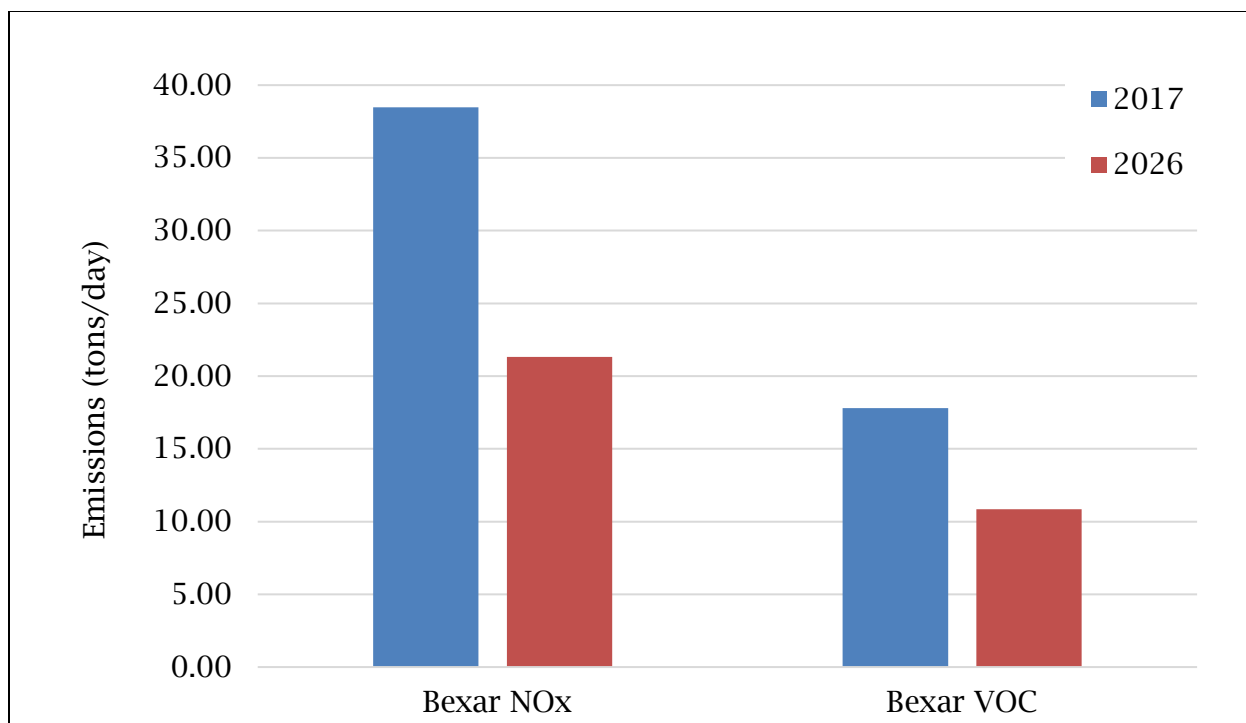


Figure 4-2: Bexar County 2017 and 2026 RFP NO_x and VOC Emissions (tons per day)

Table 4-4: Bexar County RFP On-Road Mobile Controlled NO_x Emissions, VOC Emissions, and Vehicle Miles Traveled

RFP Analysis Year	NO _x (tons per day)	VOC (tons per day)	VTM (miles per day)
2017 Base Year	38.47	17.80	47,288,348
2026 Attainment Year	21.31	10.85	55,843,828

4.3 CONTINGENCY MEASURES

Contingency measures are control requirements that would take effect and result in emissions reductions if an area fails to attain a NAAQS by the applicable attainment date or fails to demonstrate RFP. EPA’s December 3, 2024, *Guidance on the Preparation of State Implementation Plan Provisions that Address the Nonattainment Area Contingency Measure Requirements for Ozone and Particulate Matter* states that contingency measures must be conditional and prospective (not previously implemented) based on recent court rulings.¹⁰ The guidance also establishes an entirely new scheme for determining the amount of emissions reductions necessary to address the contingency requirement. This SIP revision relies on the historically approved approach of using surplus reductions from previously implemented measures to fulfill the contingency measure requirements and to determine the amount of emissions reductions necessary to address the contingency requirement outlined in FCAA, §172(c)(9) and §182(c)(9), consistent with past practices. EPA characterized its final guidance as “nonbinding.”

¹⁰ <https://www.epa.gov/air-quality-implementation-plans/final-contingency-measures-guidance>

Under the historical approach, EPA's 2015 eight-hour ozone standard SIP requirements rule states that contingency measures "should provide 1 year's worth of emissions reductions, or approximately 3 percent of the baseline emissions inventory" (83 FR 62998). The contingency emissions reductions should be realized in the year following the year in which the failure is identified.

This proposed RFP SIP revision includes a contingency plan for the one-year period after the 2023 RFP analysis year (2024) and the one-year period after the 2026 attainment year (2027). Specifically, this RFP SIP revision includes a revised contingency plan for 2024 that replaces the plan from the recently adopted Bexar County 2015 Ozone NAAQS Moderate RFP SIP Revision (Project No. 2022-024-SIP-NR) and proposes a contingency plan for 2027 consisting of a 3% emissions reduction. In the event an RFP requirement is not met, the contingency control measures will provide the required emissions reductions. The 3% emissions reduction is calculated from the RFP base year EI and may be met using VOC and NO_x emissions reductions.

Surplus mobile source emissions reductions are proposed to be used to fulfill the contingency measure requirements. For on-road mobile sources, standard methods were used to calculate emissions reductions from fuel controls and the I/M program being implemented in Bexar County in November 2026. Since the ability to assess post-1990 FMVCP controls is unavailable in MOVES4, a ratio method using MOVES2014b results was used to estimate post-1990 FMVCP emissions reductions from 2026 to 2027. Specifically, MOVES2014b runs were performed with and without post-1990 FMVCP controls for calendar years 2023, 2024, 2026, and 2027. The ratio of controlled emissions results between the two models (MOVES4/MOVES2014b) was determined from these runs and applied to the calendar year emissions to estimate the FMVCP emissions reductions. These on-road mobile emissions reductions are detailed in Appendix 1. Controlled (post-control) emissions reductions not previously used in the 2026 RFP demonstration were not needed to satisfy contingency requirements, so the excess emissions reductions from the 2026 RFP demonstration are not included in the contingency analysis.

The proposed 3% attainment year RFP contingency plan is based on:

- a revised 3% reduction in NO_x emissions achieved for the one-year period from January 1, 2024, through December 31, 2024, that replaces the reductions from the recently adopted Bexar County 2015 Ozone NAAQS Moderate RFP SIP Revision (Project No. 2022-024-SIP-NR); and
- a 0.4% reduction in NO_x emissions and a 2.6% reduction in VOC emissions to be achieved for the one-year period from January 1, 2027, through December 31, 2027.

A summary of the 2024 and 2027 RFP contingency analysis for the Bexar County 2015 ozone NAAQS nonattainment area is provided in Table 4-5: *Bexar County 2015 Ozone NAAQS Nonattainment Area Revised 2024 RFP Contingency Plan (tons per day unless otherwise noted)* and Table 4-6: *Bexar County 2015 Ozone NAAQS Nonattainment Area 2027 RFP Contingency Plan (tons per day unless otherwise noted)*.

Table 4-5: Bexar County 2015 Ozone NAAQS Nonattainment Area Revised 2024 RFP Contingency Plan (tons per day unless otherwise noted)

Line	Contingency Plan Description	NO _x	VOC
Line 1	Bexar County 2017 Base Year (BY) EI	88.08	115.82
Line 2	Percent for contingency calculation (total of 3%)	3.00	0.00
Line 3	Bexar County 2023 to 2024 required contingency reductions (BY EI x (contingency percent): Line 1 multiplied by Line 2, then divided by 100 and rounded up)	2.64	0.00
	Control Reductions to meet Contingency Requirements	NO _x	VOC
Line 4	2023 to 2024 emissions reductions due to FMVCP, East Texas Regional Low RVP, 2017 federal low sulfur gasoline standard, federal ultra-low sulfur diesel, and on-road TxLED	6.21	-0.81
Line 5	2023 to 2024 emissions reductions due to federal non-road mobile new vehicle certification standards and non-road TxLED	0.26	1.04
Line 6	Other contingency measures	0.00	0.00
Line 7	Total 2023 to 2024 Bexar County RFP demonstration contingency reductions (sum of Lines 4, 5, and 6)	6.47	0.23
Line 8	Contingency Excess (+) or Shortfall (-) (Line 7 minus Line 3)	3.83	0.23

Table 4-6: Bexar County 2015 Ozone NAAQS Nonattainment Area 2027 RFP Contingency Plan (tons per day unless otherwise noted)

Line	Contingency Plan Description	NO _x	VOC
Line 1	Bexar County 2017 BY EI	88.08	115.82
Line 2	Percent for contingency calculation (total of 3%)	0.40	2.60
Line 3	Bexar County 2026 to 2027 required contingency reductions (BY EI x (contingency percent): Line 1 multiplied by Line 2, then divided by 100 and rounded up)	0.35	3.01
	Control Reductions to meet Contingency Requirements	NO _x	VOC
Line 4	2026 to 2027 emissions reductions due to FMVCP, East Texas Regional Low RVP, 2017 federal low sulfur gasoline standard, federal ultra-low sulfur diesel, and on-road TxLED.	3.98	3.60
Line 5	2026 to 2027 emissions reductions due to federal non-road mobile new vehicle certification standards and non-road TxLED	0.35	1.08
Line 6	Other contingency measures	0.00	0.00
Line 7	Total 2026 to 2027 Bexar County RFP demonstration contingency reductions (sum of Lines 4, 5, and 6)	4.33	4.68
Line 8	Contingency Excess (+) or Shortfall (-) (Line 7 minus Line 3)	3.98	1.67

CHAPTER 5: MOTOR VEHICLE EMISSIONS BUDGETS

5.1 INTRODUCTION

This proposed Bexar County Serious Area Reasonable Further Progress (RFP) State Implementation Plan (SIP) Revision for the 2015 Eight-Hour Ozone National Ambient Air Quality Standard (NAAQS) establishes motor vehicle emissions budgets (MVEB), setting the allowable on-road mobile emissions an area can produce while continuing to demonstrate RFP. The Bexar County 2015 ozone NAAQS nonattainment area RFP MVEBs are calculated by subtracting the on-road mobile source control strategies emissions reductions necessary to demonstrate RFP from the uncontrolled, projected on-road mobile source emissions inventories. Local transportation planning organizations use applicable MVEBs to demonstrate that projected emissions from transportation plans, programs, and projects are equal to or less than the MVEBs, as required by the federal transportation conformity rule (40 Code of Federal Regulations Part 93, Subpart A).

The Texas Commission on Environmental Quality (TCEQ) developed updated on-road mobile source emissions inventories and control strategy reduction estimates using the latest planning assumptions and the U.S. Environmental Protection Agency's (EPA) Motor Vehicle Emissions Simulator, Version 4 (MOVES4) emissions factor model. MOVES4 was the latest version of the model available at the time of inventory development. The Motor Vehicle Emissions Simulator 5 (MOVES5) model was not used in this SIP revision since TCEQ had already invested significant resources to develop a non-road mobile source EI using MOVES4. As EPA stated in its notice of availability published in the *Federal Register* on December 11, 2024, "[...] in cases where state and local agencies have already completed significant work on a SIP with a version of MOVES4 (e.g., attainment modeling has already been completed with MOVES4), they may continue to rely on this earlier version" (89 FR 99862, 99864).

Updated emissions inventory (EI) development included development of a 2017 base year EI, uncontrolled and controlled emissions inventories, and control strategies reduction estimates for 2023, 2024, 2026, and 2027. TCEQ contracted Texas A&M Transportation Institute to develop the RFP emissions inventories and control strategies reductions for the Bexar County 2015 ozone NAAQS nonattainment area. Detailed documentation of the on-road mobile EI development is provided in the contractor report, Appendix 10: *Dallas-Fort Worth (DFW), Houston-Galveston-Brazoria (HGB), and Bexar County 2015-Eight-Hour Ozone Nonattainment Area Reasonable Further Progress (RFP) On-Road Mobile Emissions Inventories*.

5.2 MOTOR VEHICLE EMISSIONS BUDGETS FOR RFP ANALYSIS YEAR

The MVEBs in this proposed Bexar County RFP SIP revision are established from the on-road mobile source EIs for RFP analysis years and the on-road mobile source reductions strategies used to demonstrate RFP. A transportation conformity safety margin is allowed when there is an excess of emissions reductions beyond those required to demonstrate RFP. Details for MVEB calculations are documented in Appendix 1: *Bexar County Reasonable Further Progress (RFP) Demonstration Spreadsheet* (Tab 08 2023 RFP MVEB and Tab 09 2026 RFP MVEB). Summaries of the MVEB calculations for 2023 and 2026 are presented in Table 5-1: *Updated 2023 RFP*

MVEBs for the Bexar County 2015 Ozone NAAQS Nonattainment Area (tons per day)
and Table 5-2: *2026 RFP MVEBs for the Bexar County 2015 Ozone NAAQS*
Nonattainment Area (tons per day).

This RFP SIP revision includes revised 2023 MVEBs that replace the 2023 MVEBs in the recently adopted Bexar County 2015 Ozone NAAQS Moderate RFP SIP Revision (Project No. 2022-024-SIP-NR). The revised 2023 MVEBs were calculated using a newer version of the MOVES model, MOVES4. As a result of using the newer version of MOVES, the NO_x and VOC MVEBs changed. No safety margins are proposed for the 2023 MVEBs.

The RFP control strategies for this SIP revision will produce more than the required amount of nitrogen oxides (NO_x) emissions reductions for the 2026 attainment year for the Bexar County 2015 ozone NAAQS nonattainment area. Therefore, a percentage of the excess emissions reductions for the 2026 attainment year is used to provide an MVEB safety margin for the area. The safety margin is less than the total excess emissions reductions remaining after demonstrating RFP for the Bexar County 2015 ozone NAAQS nonattainment area. Therefore, even if this safety margin is used, the area still demonstrates RFP for 2026.

Table 5-1: Revised 2023 RFP MVEB for the Bexar County 2015 Ozone NAAQS Nonattainment Area (tons per day)

Control Strategy Description	Nitrogen Oxides (NO _x)	Volatile Organic Compounds (VOC)
2023 On-road mobile controlled inventory	26.21	13.20
Transportation conformity safety margin	0.00	0.00
2023 Bexar County MVEB	26.21	13.20

Table 5-2: 2026 RFP MVEB for the Bexar County 2015 Ozone NAAQS Nonattainment Area (tons per day)

Control Strategy Description	Nitrogen Oxides (NO _x)	Volatile Organic Compounds (VOC)
2026 On-road mobile controlled inventory	21.31	10.85
Transportation conformity safety margin	2.09	0.00
2026 Bexar County MVEB	23.40	10.85

Appendices Available Upon Request

Emily Wagoner
emily.wagoner@tceq.texas.gov
512.239.4994