

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
AGENDA ITEM REQUEST
for Adoption of State Implementation Plan Revision

AGENDA REQUESTED: February 27, 2025

DATE OF REQUEST: February 7, 2025

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

CAPTION: Docket No. 2023-0320-SIP. Consideration for adoption of the Bexar County Moderate Area Reasonable Further Progress (RFP) State Implementation Plan (SIP) Revision for the 2015 Eight-Hour Ozone National Ambient Air Quality Standard (NAAQS).

The SIP revision includes an analysis of RFP toward attainment of the 2015 eight-hour ozone NAAQS, RFP motor vehicle emissions budgets for 2023, and an RFP contingency plan. (Vanessa T. De Arman, Terry Salem; Project No. 2022-024-SIP-NR)

Richard C. Chism

Director

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Copy to CCC Secretary? NO YES

Texas Commission on Environmental Quality

Interoffice Memorandum

To: Commissioners **Date:** February 7, 2025

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

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

Docket No.: 2023-0320-SIP

Subject: Commission Approval for Adoption of the Bexar County Moderate 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 Moderate RFP SIP Revision
Non-Rule Project No. 2022-024-SIP-NR

Background and reason(s) for the SIP revision:

Bexar County was previously classified as marginal nonattainment for the 2015 eight-hour ozone NAAQS of 0.070 parts per million with a September 24, 2021, attainment date. Based on 2020 monitoring data, Bexar County did not attain the NAAQS in 2020 and did not qualify for a one-year attainment date extension in accordance with federal Clean Air Act (FCAA), §181(a)(5).¹ On October 7, 2022, the U.S. Environmental Protection Agency (EPA) published reclassifications for Bexar County to moderate, effective November 7, 2022 (87 *Federal Register* (FR) 60897). EPA set a January 1, 2023, deadline for states to submit attainment demonstration and RFP SIP revisions to address the 2015 eight-hour ozone 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 (DFW), and Houston-Galveston-Brazoria (HGB) 2015 eight-hour ozone NAAQS moderate nonattainment areas to serious. On October 18, 2023, EPA published a finding of failure to submit required SIP revisions for the 2015 eight-hour ozone NAAQS moderate nonattainment areas, effective November 17, 2023 (88 FR 71757), which started sanctions and federal implementation (FIP) clocks. Submittals and an EPA completeness determination are required by May 17, 2025, to prevent the implementation of the first sanction, increased emission offsets. If submittals are not received and a completeness determination is not made by November 17, 2025, federal highway funding sanctions will apply. If complete submittals are not approved by November 17, 2025, EPA will be obligated to promulgate a FIP.

On June 20, 2024, EPA published the final reclassification of the 2015 eight-hour ozone NAAQS nonattainment areas to serious, effective July 22, 2024 (89 FR 51829). The final reclassification action provided details on moderate classification SIP elements that EPA deems to still be due despite the voluntary reclassification to serious. The Bexar County nonattainment area is still subject to the moderate nonattainment area RFP requirements in FCAA, §182(b)(1) including a RFP demonstration with 15% volatile organic compounds (VOC)-only emissions reductions and contingency measures for failure to meet RFP. The commission is currently litigating the issue of whether the remaining ozone nonattainment moderate elements are still required to be submitted to EPA. Since the litigation is not concluded, the executive director is submitting the remaining moderate elements to the commission for consideration for adoption and submittal to the EPA to

¹ 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.

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fulfill those obligations if a court finds those elements must be submitted by the state to avoid the imposition of federal sanctions.

Scope of the SIP revision:

TCEQ is required to submit to EPA an RFP SIP revision consistent with FCAA requirements for moderate nonattainment areas.

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

The RFP SIP revision demonstrates that the Bexar County 2015 ozone NAAQS nonattainment area achieves emissions reductions in ozone precursors (nitrogen oxides (NO_x) and VOC), showing progress towards attaining the 2015 ozone NAAQS according to the following increments:

- a 15% emissions reduction in NO_x and VOC within the six-year period from January 1, 2018, through December 31, 2023; and
- a 3% emissions reduction in NO_x and VOC for the one-year period from January 1, 2024, through December 31, 2024, as an attainment year RFP contingency.

This RFP SIP revision also provides motor vehicle emissions budgets (MVEB) for the 2023 attainment year. This SIP revision demonstrates progress toward attainment of the 2015 ozone NAAQS using reductions of NO_x and VOC emissions for the Bexar County 2015 ozone NAAQS moderate nonattainment area for the 2023 attainment year as well as the 2024 contingency year.

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

This SIP revision is required to demonstrate that the Bexar County ozone NAAQS moderate nonattainment area achieved emissions reductions consistent with the requirements of FCAA, §182(b)(1) 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).

The RFP calculations documented in this SIP revision rely on an RFP base year of 2017 and a 2023 moderate attainment year, although that attainment year is no longer applicable to the area since it has been reclassified to serious. Instead, 2023 is a milestone year that must be demonstrated for both the moderate and serious classifications. This RFP SIP revision includes a 15% emissions reduction of ozone precursors for the six-year period from January 1, 2018, through December 31, 2023, for the nonattainment area. This SIP revision also incorporates an additional 3% emissions reduction for the one-year period from January 1, 2024, through December 31, 2024, as RFP contingency.

As previously mentioned, the commission is currently litigating the issue of whether the remaining ozone nonattainment moderate elements are still required to be submitted to EPA. Since the litigation is not concluded, the executive director is submitting the remaining moderate elements to the commission for consideration for adoption and submittal to the EPA to fulfill those obligations if a court finds those elements must be submitted by the state to avoid the imposition of federal sanctions.

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,

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§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 is required by FCAA, §110(a)(1) and is proposed and adopted under the commission's general authority under Texas Water Code, §5.102, General Powers and §5.105, General Policy. States are required 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 by 42 United States Code, §§7420 *et seq.*, and implementing rules in 40 Code of Federal Regulations Part 51.

Effect on the:

A.) Regulated community:

This SIP revision sets new NO_x and VOC MVEBs for the 2023 milestone 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 2015 eight-hour ozone nonattainment area may benefit from reduced ground-level ozone concentrations due to reduced emissions of ozone precursors documented in this RFP SIP revision.

C.) Agency programs:

No additional burden on agency programs is anticipated as a result of this SIP revision.

Stakeholder meetings:

TCEQ hosted a virtual Bexar County Stakeholders meeting on June 8, 2022, related to the 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 opened to the public, but the focus was on companies and industry in Bexar County with stationary sources of pollution. In addition, TCEQ hosted two virtual Technical Information Meetings (TIMs) on August 16, 2021, and August 22, 2022, to present technical and scientific information related to air quality modeling and analysis in the Bexar County nonattainment area. These TIMs included presentations on ozone planning, ozone design values, modeling platform updates, emissions inventory development, and updates from EPA. An additional outreach meeting was held on January 19, 2024, following the voluntary reclassification letter submitted by the governor on October 18, 2023. These meetings were open to the public, but the focus was on companies and industry in Bexar County with stationary sources of pollution.

Public Involvement Plan

Yes.

Alternative Language Requirements

Yes. Spanish.

Public comment:

The public comment period opened on June 2, 2023, and closed on July 17, 2023. The commission held a public hearing in San Antonio on July 13, 2023, at 7:00 p.m. Notice of the public hearing was published in the *San Antonio Express News* newspaper in English and Spanish on June 2, 2023. Notices in English and Spanish were also distributed to subscribers through GovDelivery and posted to TCEQ's website, and a notice was published in English in the *Texas Register* on June 16, 2023 (48 TexReg 3339). A plain language summary was provided in both English and Spanish. TCEQ staff were present and opened the hearing for public comment on this project as well as the concurrently proposed Bexar County 2015 Ozone NAAQS Moderate AD SIP Revision (Project No.

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2022-025-SIP-NR), Bexar County Vehicle Inspection and Maintenance (I/M) SIP Revision (Project No. 2022-027-SIP-NR), and the 30 Texas Administrative Code Chapter 114 Bexar County I/M Expansion, Low Reid Vapor Pressure Clean-Up, and Definitions Clean-Up Rulemaking (Project No. 2022-026-114-AI). Spanish language interpreters were available at the hearing, the comments were recorded, and a transcript was prepared.

During the comment period, comments were received from the Alamo Area Council of Governments (AACOG), EPA, and the Sierra Club. AACOG provided general support. Generally, the comments from EPA and the Sierra Club focused on the adverse health effects of ozone, environmental justice, and that combining NO_x and VOC to achieve the 15% emissions reduction was not permitted under the FCAA. The public comments received are summarized and addressed in this Bexar County RFP SIP revision.

Significant changes from proposal:

No significant changes have been made to the RFP elements included in this SIP revision.

Potential controversial concerns and legislative interest:

Due to the delayed EPA reclassification to moderate, TCEQ did not submit the required moderate classification SIP revisions for the 2015 ozone NAAQS by the January 1, 2023, deadline. EPA published a finding of failure to submit on October 18, 2023 (88 FR 71757). Effective November 17, 2023, this finding started 18-month and 24-month sanctions clocks and a 24-month federal FIP clock for the Bexar County 2015 ozone nonattainment area. The 18-month and 24-month sanctions clocks would stop only if EPA receives, and deems complete, a submittal with all remaining required elements. The 24-month FIP clock would stop only if EPA receives and approves a submittal with all remaining required elements. The remaining SIP elements are addressed in this SIP revision and the concurrent Bexar County 2015 Ozone NAAQS Moderate AD SIP Revision (Project No. 2022-025-SIP-NR).

TCEQ is still required to submit a moderate classification RFP SIP revision demonstrating 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 standard SIP requirements rule. Although Bexar County is newly designated as moderate nonattainment under the 2015 eight-hour ozone NAAQS, the required 15% emissions reduction in VOC is not included in this proposed RFP SIP revision. Existing VOC emissions reductions in Bexar County do not total 15% and will require additional analysis to determine the best means to address this requirement. No additional measures could be implemented in time to demonstrate the 15% reduction in VOC emissions from the 2017 base year to the 2023 attainment year. As noted in the Bexar County 2015 Ozone NAAQS Moderate AD SIP revision (Project No. 2022-025-SIP-NR), NO_x emissions reductions are expected to be more effective at reducing ozone concentrations in the Bexar County 2015 ozone NAAQS nonattainment area than VOC emissions reductions. Therefore, this proposed SIP revision uses both NO_x and VOC reductions to demonstrate progress towards attaining the 2015 eight-hour ozone NAAQS for the first six-year analysis period.

A 2021 court ruling on the 2015 eight-hour ozone standard SIP requirements rule vacated provisions in the rule allowing for the use of previously implemented measures as contingency measures (*Sierra Club v. EPA*, 21 F.4th 815, D.C. Cir. 2021). EPA published draft guidance on contingency measures in the *Federal Register* for public comment on March 23, 2023. Since EPA had not issued final guidance to states regarding contingency measures at the time it was developed, this SIP revision relies on the historically approved approach of using surplus mobile source emissions reductions to fulfill the contingency measure requirements. Although EPA's final action to reclassify the nonattainment areas from moderate to serious indicates that RFP contingency measures are still due for the moderate classification, EPA also notes this requirement

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could be mooted if the state submits, and EPA determines adequate, a formal demonstration to show that the moderate RFP targets have been met.

Will 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 revision?

The commission could choose to not comply with requirements to submit the moderate classification RFP SIP revision to EPA determined by EPA to still apply. However, the 18-month and 24-month sanctions clocks would stop only if EPA receives, and deems complete, a submittal with all remaining required elements. Sanctions include transportation funding restrictions, grant withholdings, and 2-to-1 emissions offsets requirements for new construction and major modifications of stationary sources in the Bexar County 2015 ozone NAAQS nonattainment area. EPA would impose such sanctions until the state submitted the remaining moderate classification SIP elements for the area and EPA determined the submittals complete. The 24-month FIP clock would stop only if EPA receives and approves a submittal with all remaining required elements. Submittals and a completeness determination are required by May 17, 2025, to prevent implementation of the first sanction, increased emission offsets. If submittals are not received and a completeness determination is not made by November 17, 2025, federal highway funding sanctions will apply. If complete submittals are not approved by November 17, 2025, EPA will be obligated to promulgate a FIP.

Key points in the adoption SIP revision schedule:
Anticipated agenda date: February 27, 2025

Agency contacts:

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

PROJECT NUMBER 2022-024-SIP-NR
SFR-122/2022-024-SIP-NR

Adoption
February 27, 2025

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EXECUTIVE SUMMARY

Federal Clean Air Act (FCAA), §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 Bexar County as marginal nonattainment for the 2015 eight-hour ozone NAAQS, effective September 24, 2018 (83 FR 35136).

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 marginal classification was September 24, 2021 with a 2020 attainment year (83 FR 10376).¹ Based on monitoring data from 2018, 2019, and 2020, Bexar County did not attain the 2015 eight-hour ozone NAAQS in 2020 and did not qualify for a one-year attainment date extension in accordance with FCAA, §181(a)(5).² On October 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). EPA set a January 1, 2023, deadline for states to submit attainment demonstration and RFP SIP revisions to address the 2015 eight-hour ozone 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 (DFW), and Houston-Galveston-Brazoria (HGB) 2015 eight-hour ozone NAAQS moderate nonattainment areas to serious. On October 18, 2023, EPA published a finding of failure to submit required SIP revisions for the 2015 eight-hour ozone NAAQS moderate nonattainment areas, effective November 17, 2023 (88 FR 71757), which started sanctions and federal implementation plan (FIP) clocks. Submittals and an EPA completeness determination are required by May 17, 2025, to prevent the implementation of the first sanction, increased emission offsets. If submittals are not received and a completeness determination is not made by November 17, 2025, federal highway funding sanctions will apply. If complete submittals are not approved by November 17, 2025, EPA will be obligated to promulgate a FIP. On June 20, 2024, EPA published the final reclassification of the 2015 eight-hour ozone NAAQS nonattainment areas to serious, effective July 22, 2024 (89 FR 51829). The final reclassification action provided details on moderate classification SIP elements that EPA deems to still be due despite the voluntary reclassification to serious.

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

² 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.

Bexar County is still subject to the RFP requirements in FCAA, §182(b)(1) for moderate ozone nonattainment areas. In order to avoid the sanctions that would result from EPA's October 18, 2023, finding of failure to submit action, the Texas Commission on Environmental Quality (TCEQ) is required to submit moderate RFP state implementation plan (SIP) revisions. Under the final serious reclassification action, Bexar County must still submit an RFP demonstration that includes 15% VOC-only emissions reductions and contingency measures for failure to meet RFP requirements. The commission has filed a legal challenge in the Fifth Circuit Court of Appeals challenging EPA's position that these remaining ozone nonattainment moderate elements are still required to be submitted after EPA granted the commission's request that the areas be reclassified to serious. Since the litigation is not concluded, the commission is adopting and submitting the moderate elements to EPA to fulfill the obligations only if a court deems those elements must be submitted by the state to avoid the imposition of federal sanctions.

This 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 towards attainment of the standard. RFP requirements for ozone nonattainment areas, as specified in Section 182(b)(1) of the 1990 FCAA Amendments and in 40 Code of Federal Regulations §51.1310, 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. In this case, because the area has been reclassified to serious, the moderate attainment year will ultimately become a milestone target year in a future serious RFP SIP revision but is still required to be demonstrated in this SIP revision. Moderate ozone nonattainment areas are required 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 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). Although Bexar County was newly designated as moderate nonattainment under the 2015 eight-hour ozone NAAQS, the required 15% emissions reduction in VOC is not included in this RFP SIP revision. Existing VOC emissions reductions in Bexar County do not total 15% and will require additional analysis to determine the best means to address this requirement. To meet the 15% VOC requirement, additional measures would have had to be implemented by March 1, 2023, (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; therefore, the RFP demonstration for this SIP revision uses both NO_x and VOC emissions reductions. Although the RFP demonstration uses both NO_x and VOC emissions reductions, an analysis of ozone levels, as provided in the concurrent Bexar County 2015 Ozone NAAQS Attainment Demonstration SIP revision (Project No. 2022-025-SIP-NR), indicates ozone formation appears to be predominantly NO_x-limited at the monitors with the highest ozone concentrations. As a result, NO_x emissions reductions are expected to be more effective than VOC emissions reductions at reducing ozone concentrations in the nonattainment area. Therefore, this RFP SIP revision demonstrates progress towards attaining the 2015 eight-hour ozone NAAQS using a combination of NO_x and VOC emissions reductions. EPA's final serious reclassification action notes that EPA is working on the

challenge of meeting the 15% VOC requirement with several states to identify approaches that would be allowable under the FCAA.

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

- a 15% emissions reduction in NO_x and VOC within the six-year period from January 1, 2018, through December 31, 2023; and
- an RFP contingency plan in case of failure to demonstrate progress for 2023, calculated as a 3% emissions reduction for potential use during the one-year period between January 1, 2024, through December 31, 2024.

The RFP methodology involves development of the base year, attainment year, and contingency year emissions inventories and emissions reductions for each analysis year. The amount of emissions reductions is determined through the RFP methodology. Once calculated, the target levels and emissions inventories can be compared to determine if the forecasted controlled (post-control) emissions inventories are less than the target level, thus 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*.

In addition to demonstrating ozone precursor emissions reductions, this Bexar County RFP SIP revision also sets 2023 NO_x and VOC motor vehicle emissions budgets for transportation conformity purposes, as detailed in Chapter 5: *Motor Vehicle Emissions Budgets*.

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. At the time the proposed SIP revision was being developed, EPA had historically accepted the use of surplus emissions reductions from previously implemented control measures to fulfill the contingency measure requirements. However, EPA's new draft guidance on contingency measures, published in the *Federal Register* for public comment on March 23, 2023 (88 FR 17571), indicates that contingency measures must be conditional and prospective (not previously implemented) based on the recent court rulings. The draft guidance also establishes an entirely new scheme for determining the amount of emissions reductions necessary to address the contingency requirement.

Since EPA had not issued final guidance to states regarding contingency measures at the time this SIP revision was developed, this SIP revision relies on the historically approved approach of using surplus emissions reductions from previously implemented measures to fulfill the contingency measure requirements.

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 TCEQ), the 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 with the most recent effective date, 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 15, 2007
Subchapter A: General Provisions	
Subchapter B: Electronic Reporting Requirements	
Chapter 39: Public Notice	
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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
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LIST OF ACRONYMS

AD	attainment demonstration
AERR	Air Emissions Reporting Requirements
AEDT	Aviation Environmental Design Tool
APU	auxiliary power unit
BEX	Bexar County
BY	Base Year
DV	design value
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
I/M	inspection and maintenance
ICI	industrial, commercial, and institutional
MOVES3	Motor Vehicle Emissions Simulator 3
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
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
TERP	Texas Emissions Reduction Plan
TexN2.2	Texas NONROAD utility version 2.2
TNRCC	Texas Natural Resource Conservation Commission
TTI	Texas Transportation Institute
TWC	Texas Water Code
TxLED	Texas Low Emission Diesel
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](https://www.tceq.texas.gov/airquality/sip) webpage (<https://www.tceq.texas.gov/airquality/sip>) on the [Texas Commission on Environmental Quality's](https://www.tceq.texas.gov) (TCEQ) website (<https://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). Under the marginal classification, Bexar County was required to attain the 2015 eight-hour ozone NAAQS by September 24, 2021, with a 2020 attainment year.³

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. 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

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

one-year attainment date extension in accordance with FCAA, §181(a)(5).⁴ On October 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 required 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 voluntarily reclassify the Bexar County, Dallas-Fort Worth, and Houston-Galveston-Brazoria 2015 eight-hour ozone NAAQS nonattainment areas from moderate to serious. On June 20, 2024, EPA published reclassification of the Bexar ozone nonattainment area from moderate to serious classification for the 2015 ozone NAAQS, effective July 22, 2024 (89 FR 51829). The attainment date for the Bexar County serious classification is September 24, 2027, with a 2026 attainment year. EPA set a January 1, 2026, deadline for states to submit attainment demonstration and RFP required SIP revisions to address the 2015 eight-hour ozone standard serious nonattainment area requirements. The final reclassification action states that TCEQ is still required to submit moderate classification RFP SIP elements to EPA, including the 15% VOC-only emissions reductions and contingency measures for failure to meet RFP.

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. This 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 between a 2017 base year and the 2023 attainment year to show progress towards 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. Moderate ozone nonattainment areas are required 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 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). Although Bexar County is newly designated as moderate nonattainment under the 2015 eight-hour ozone NAAQS, the required 15% emissions reduction in VOC is not included in

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.

this RFP SIP revision. Existing VOC emissions reductions in Bexar County do not total 15% and will require additional analysis to determine the best means to address this requirement. To meet the 15% VOC requirement, additional measures would have had to be implemented by March 1, 2023, (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; therefore, this RFP demonstration for this SIP revision uses both NO_x and VOC emissions reductions. Although the RFP demonstration uses both NO_x and VOC, an analysis of ozone levels, as provided in Section 5.2.4: *VOC and NO_x Limitation* of the concurrent Bexar County 2015 Ozone NAAQS Attainment Demonstration SIP revision (Project No. 2022-025-SIP-NR), indicates ozone formation appears to be predominantly NO_x-limited at the monitors with the highest ozone concentrations. As a result, NO_x emissions reductions are expected to be more effective than VOC reductions at reducing ozone concentrations in the nonattainment area.

This Bexar County RFP SIP revision demonstrates that the Bexar County 2015 ozone NAAQS nonattainment area achieved emissions reductions in NO_x and VOC according to the following increments:

- a 15% emissions reduction in NO_x and VOC within the six-year period from January 1, 2018, through December 31, 2023; and
- an RFP contingency plan in case of failure to demonstrate progress for 2023, calculated as a 3% emissions reduction for potential use during the one-year period between January 1, 2024, through December 31, 2024.

The RFP calculations documented in this SIP revision rely on an RFP base year of 2017 and a 2023 attainment year. In accordance with the 2015 eight-hour ozone standard SIP requirements rule, the 15% reduction requirement covers the period from January 1, 2018, through December 31, 2023. This SIP revision incorporates an additional 3% emissions reduction to cover the one-year contingency period from January 1, 2024, through December 31, 2024.

In addition to demonstrating progress toward attainment of the 2015 ozone NAAQS, this SIP revision also provides motor vehicle emissions budgets for the 2023 attainment year.

This SIP revision demonstrates RFP as progress toward attainment of the 2015 ozone NAAQS for Bexar County for the 2023 attainment year as well as the 2024 contingency year.

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. At the time the proposed SIP revision was being developed, EPA had historically accepted the use of surplus emissions reductions from previously implemented control measures to fulfill the contingency measure requirements. However, EPA's new draft guidance on contingency measures, published in the *Federal Register* for public comment on March 23, 2023 (88 FR 17571), indicates that

contingency measures must be conditional and prospective (not previously implemented) based on the recent court rulings. The draft guidance also establishes an entirely new scheme for determining the amount of emissions reductions necessary to address the contingency requirement.

Since EPA had not issued final guidance to states regarding contingency measures at the time this SIP revision was developed, this SIP revision relies on the historically approved approach of using surplus emissions reductions to fulfill the contingency measure requirements. EPA's final action to reclassify the nonattainment areas from moderate to serious indicates that RFP contingency measures are still due for the moderate classification.

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

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. 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 June 8, 2022, related to the 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 opened to the public, but the focus was on companies and industry in Bexar County with stationary sources of pollution. An additional outreach meeting was held on January 19, 2024, following the voluntary reclassification letter submitted by the governor on October 18, 2023. These meetings were open to the public, but the focus was on companies and industry in Bexar County with stationary sources of pollution.

1.4 PUBLIC HEARING AND COMMENT INFORMATION

The public comment period opened on June 2, 2023, and closed on July 17, 2023. Notice for the public hearing was published in the *San Antonio Express News* newspaper in both English and Spanish on June 2, 2023, and in the *Texas Register* on June 16, 2023 (48 TexReg 3339). Notices in English and Spanish were also distributed to subscribers through GovDelivery and posted to TCEQ's website, and notices were published in English in the *Texas Register* on June 16, 2023 (48 TexReg 3339 and 3340). A plain language summary was provided in both English and Spanish on TCEQ's website. The commission held a public hearing in San Antonio on July 13, 2023, and Spanish language interpreters were available. Formal testimony was recorded and transcribed for the record.

Written comments were accepted via mail, fax, or through [TCEQ's Public Comment system](https://tceq.commentinput.com/) (https://tceq.commentinput.com/). During the comment period, comments were received from EPA and the Sierra Club. The public comments received are summarized and addressed in the Response to Comments for this SIP revision.

1.5 SOCIAL AND ECONOMIC CONSIDERATIONS

No new control strategies have been incorporated into this Bexar County RFP SIP revision. Therefore, there are no additional social or economic costs associated with this revision.

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 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 Bexar County Moderate Area RFP State Implementation Plan (SIP) Revision for the 2015 Eight-Hour Ozone National Ambient Air Quality Standard (NAAQS) demonstrates progress towards attainment of the 2015 eight-hour ozone NAAQS. Specifically, this SIP revision demonstrates a 15% emissions reduction from calendar years 2018 through 2023 for Bexar County by combining NO_x and VOC emissions reductions.

To complete the RFP calculations, a set of inventories and control measures reduction estimates is required. In accordance with 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) published in the *FR* on December 6, 2018 (83 FR 62998), this SIP revision includes documentation of EIs for the 2017 base year, for the 2023 attainment year, and for the attainment year RFP contingency requirement (2024). 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 precursor emissions; (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 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 uncontrolled EI;

The RFP analysis requires an uncontrolled EI with growth between the base year and the attainment year. 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 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 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 RFP contingency control reductions.

The RFP analysis requires the calculation of the emissions reductions for control strategies in 2024, the year following the attainment year. These control reductions must be implemented if an RFP requirement is not met. A discussion of the RFP contingency control strategies for this SIP revision is provided in Chapter 4.

The RFP calculations for this 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 TCEQ's 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 December 7, 2022. 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 2023 Analysis Year Inventory

Updated attainment year inventories were developed according to the general requirements described in Section 2.2.1: *Emissions Inventory Development*. TCEQ designated the 2019 EI as the starting point for EI projections. NO_x and VOC emissions were projected to the 2023 attainment year using the maximum of the 2019 through 2021 emission rates. This approach follows EPA's guidance, which assumes stable emissions trends when projecting future emissions.⁵ 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 at TCEQ's [Air Success](https://www.tceq.texas.gov/airquality/airsuccess/airsucsessemissions) webpage (https://www.tceq.texas.gov/airquality/airsuccess/airsucsessemissions).

The 2019 through 2021 point source EI data were extracted from STARS on December 7, 2022. 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 2019, 2020, or 2021 EI. The data reflect revisions to the 2019 through 2021 EIs that were reviewed, approved, and entered into STARS on or before the extract date.

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)*; and

⁵ https://www.epa.gov/sites/default/files/2017-07/documents/ei_guidance_may_2017_final_rev.pdf

- Table 2-3: *Bexar County 2015 Ozone NAAQS Nonattainment Area RFP Summary of the 2023 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.

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 emission inventories; and projecting 2014 EIs by applying growth factors derived from Eastern Research Group (ERG) study data, the [Economy and Consumer Credit Analytics](https://www.economy.com/) website (<https://www.economy.com/>), and the U.S. 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 development and 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 improved upon 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. Quality assurance of area source emissions involves ensuring that the activity data used for each category is current and valid. Data such as current population figures, fuel usage, and material usage were updated, and EPA's guidance on emissions factors was used. Other routine efforts such as checking calculations for errors and conducting reasonableness and completeness checks were implemented.

2.3.3 Updated Analysis Year Inventories

Updated attainment year inventories were developed according to the general requirements described in Section 2.3.1: *Emissions Inventory Development*. TCEQ designated the 2020 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 2020 area source EI was developed in accordance with the requirements of the Air Emissions Reporting Requirements (AERR) rule. The 2020 EI was developed using EPA-generated emissions inventories, TCEQ-contracted projects to develop emission inventories, and TCEQ staff projects to develop emission inventories. A significant improvement made for the 2020 EI was the use of updated emission 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 (Draft Solvents NEMO)*.

The area source oil and gas inventory production categories have been updated using 2020 production data from the Railroad Commission of Texas (RRC).

The updated 2023 attainment year EIs for the area source categories were 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 EPA's standard and accepted methodology for developing future year EIs.

The 2023 area source EI was developed by applying the selected emissions projection factor to the 2020 emissions for each area source category. For sources where the 2020 activity data were significantly different than previous years due to the coronavirus pandemic or other affects, the 2023 area source EI was developed by applying the selected emissions projection factor to the 2017 emissions instead. Rules controlling emissions from industrial coatings, portable fuel containers, and gasoline station underground tank filling (Stage I) were applied in the base year inventory. Federal New Source Performance Standards Subpart OOOO emissions reductions were applied to the 2020 projection base year inventory but not the 2017 base year inventory due to applicable compliance deadlines.

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

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 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 discussed below.

2.4.1 NONROAD Model Categories Emissions Estimation Methodology

The Motor Vehicle Emission Simulator 3 (MOVES3) model is EPA's latest mobile source emissions model for estimating non-road source category emissions. TCEQ uses the most recent Texas-specific utility for the non-road mobile component of the MOVES3 model, called Texas NONROAD utility version 2.2 (TexN2.2), 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 MOVES3 model or the TexN2.2 utility, the emissions for these categories are estimated using other EPA-approved methods and guidance as described in the sections below. Although emissions for drilling rigs are included in the MOVES3 model and TexN2.2 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 TexN2.2 utility to avoid double counting emissions from these sources.

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

resulting survey data contributed to the updating of inputs to the TexN2 utility to estimate non-road emissions more accurately for the State of Texas instead of using the national default values in EPA's MOVES3 model.

The TexN2 utility was updated to be compatible with the MOVES3 model. In addition, enhancements were added to the utility to streamline the way TexN2 handles alternative equipment scrappage curves and generates county databases for submittal for the AERR and NEI, resulting in version TexN2.2. The NONROAD model category emissions included in this SIP revision were developed from a TCEQ-commissioned study using the TexN2.2 utility. More information regarding the development of these emissions is provided in the ERG report in Appendix 6: *Development of the Nonroad Model RFP Emissions Inventories for the HGB Six-County, DFW Nine-County, and Bexar County Ozone Nonattainment Areas*.

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 TexN2.2 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 TexN2.2 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.⁶ The uncontrolled and controlled drilling rig emissions characterization profiles from this study were combined with county-level drilling activity data obtained from 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.⁷ 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: *2020 Texas Statewide Locomotive and Rail Yard Emissions Inventory and 2011 through 2050 Trend Inventories*.

⁶ 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

⁷ <https://www.tceq.texas.gov/downloads/air-quality/research/reports/emissions-inventory/5822111027-20211015-tti-texas-locomotive-railyard-2020-aerr-trend-ei.pdf>

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.⁸ AEDT is the most recent FAA model for estimating airport emissions.

The airport emissions categories used for this SIP revision included 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: *2020 Texas Statewide 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 2020 periodic EI to provide consistency between emissions estimation approaches used for this 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 TexN2.2 with updated county-specific input data, including 2017 meteorological input data, as detailed in Appendix 6.

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 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 a 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 a TCEQ-commissioned study detailed in Appendix 9.

2.4.6 Updated Uncontrolled Attainment Year Inventories

The NONROAD model category uncontrolled emissions for each analysis year (2017 base year and 2023 attainment year) were calculated by removing all federal and state control measures from the TexN2.2 utility runs as detailed in Appendix 6.

⁸ <https://www.tceq.texas.gov/downloads/air-quality/research/reports/emissions-inventory/5822111196-20211015-tti-texas-airport-2020-aerr-trend-ei.pdf>

The uncontrolled 2017 EI for drilling rigs was developed using 2017 drilling activity data and the uncontrolled factors from the ERG report found in Appendix 7. A 2023 EI for drilling rigs was developed using 2020 drilling activity data (the most recently available activity data) and the uncontrolled factors from the ERG report found in Appendix 7. Because future drilling activity is difficult to predict, the 2020 drilling activity data were held constant to the 2023 attainment year, since 2020 data were the most current available.

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

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

2.4.7 Updated Controlled Analysis Year Inventories

The NONROAD model category controlled emissions for each analysis year (2017 base year, 2023 attainment year, and 2024 contingency year) were calculated by accounting for all federal and state control measures in the TexN2.2 utility runs as detailed in Appendix 6.

Controlled 2023 emissions for diesel drilling rigs were based on 2020 drilling activity data (the most recently available activity data) combined with the 2023 year-specific controlled emission factors from the ERG report found in Appendix 7.

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

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

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

2.5 ON-ROAD MOBILE SOURCES

The 2017, 2023, and 2024 on-road mobile source EIs for this SIP revision were developed under contract by the Texas A&M Transportation Institute (TTI) for the Bexar County 2015 ozone NAAQS nonattainment area. The data, methods, activity inputs, emissions factors, and results are documented in the TTI report provided in Appendix 10: *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, MOVES3 was used to estimate the summer weekday emission rates in units of grams per mile for NO_x and VOC. 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 (emission factors) and the number of units of activity must be determined.

Emission factors for this Bexar County RFP SIP revision were developed using EPA's mobile emissions factor model, MOVES3. The MOVES3 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 emission factors calculated by the MOVES3 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, emission factors calculated by the MOVES3 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 organizations. 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 MOVES3 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 and Table 2-3.

For complete documentation of the development of the on-road mobile source emissions inventories for this 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 VMT¹ (miles per day)

RFP Analysis Year	VMT
2017 Base Year	48,023,548
2023 Attainment Year	56,682,813

Note 1: For this 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 emission factors calculated using the MOVES3 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 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 MOVES3 model inputs, refer to Appendix 10.

2.5.3 On-Road Mobile Updated Uncontrolled Attainment Year Inventories

The uncontrolled on-road mobile EIs for the RFP attainment year were developed using emission factors that reflect only control strategies implemented prior to 1990. Those controls include pre-1990 FMVCP and the 1992 RVP control. MOVES3 was used to develop the emissions inventories for this 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. A summary of the 2023 EIs is presented in Table 2-3. For complete documentation of the development of the EIs and details on MOVES3 model inputs, refer to Appendix 10.

2.5.4 On-Road Mobile Updated Controlled Attainment Year Inventories

The controlled on-road mobile EIs for the attainment year were developed using emission 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 attainment year. The effects of the post-1990 control strategies between 2017 and the attainment year 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 ultra-low sulfur diesel, and TxLED, where applicable. 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). The on-road control strategies are documented in Appendix 10.

The activity levels used to calculate the attainment year emissions inventories reflect the 2023 roadway network, with 2023 VMT and speeds. A summary of the 2023 EIs is presented in Table 2-3. For complete documentation of the development of the EIs and details on MOVES3 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 attainment year, the uncontrolled and controlled NO_x and VOC emissions for each RFP source category and analysis year are summarized in Table 2-3.

Between 1990 and 2017, substantial emissions reductions have 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. No additional stationary source controls are quantified for this Bexar County RFP SIP revision; therefore, the 2017 controlled stationary source EI is equivalent to the 2017 existing controlled stationary source EI.

Similarly, the 2023 attainment year inventory reflects: 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 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	27.21	11.62	51.49	11.92
On-Road Mobile Sources	33.94 ¹	33.94	17.35 ¹	17.35
Area Sources	6.83	6.83	77.45	77.45
Point Sources	29.88	29.88	3.56	3.56
Total of All Sources	97.86	82.27	149.85	110.28

Note 1: 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 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	31.80	10.27	58.33	12.56
On-Road Mobile Sources	356.10 ¹	20.63	225.67 ¹	12.38
Area Sources	7.09	7.09	73.86	73.86
Point Sources	28.29	28.29	4.20	4.20
Total of All Sources	423.28	66.28	362.06	103.00

Note 1: The Bexar County uncontrolled on-road EI values for 2023 reflect pre-1990 controls, no post-1990 controls included.

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 moderate reasonable further progress (RFP) demonstrations are calculated, documents the RFP calculations, and provides a summary of the RFP demonstration. The attainment date for the Bexar County ozone NAAQS nonattainment area is September 24, 2024, with an attainment year of 2023 (87 *Federal Register* (FR) 60897).

For this Bexar County RFP 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* and 3.1.3: *Contingency Requirement*, are calculated as a percentage of the base year (2017) emissions inventory (EI) and must occur no later than the required timeframe.

The RFP requirements for this SIP revision are to demonstrate:

- a 15% emissions reduction for the six-year period from January 1, 2018, through December 31, 2023, for Bexar County; and
- a 3% emissions reduction for the one-year period between January 1, 2024, through December 31, 2024, as attainment year RFP contingency 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 area designated nonattainment, 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 should be from volatile organic compounds (VOC) emissions. In subsequent RFP demonstrations, if an area has demonstrated that nitrogen oxides (NO_x) is effective at reducing ozone, the 15% reduction requirement can be fulfilled with a combination of NO_x and VOC emissions. Although Bexar County is newly designated as moderate nonattainment under the 2015 eight-hour ozone NAAQS, the required 15% emissions reduction in VOC is not included in this RFP SIP revision. Existing VOC emissions reductions in Bexar County do not total 15% and will require additional analysis to determine the best means to address this requirement. To meet the 15% VOC requirement, additional measures would have had to be implemented by March 1, 2023 (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; therefore, the RFP demonstration

for this SIP revision uses 8.4% NO_x emissions reductions and 6.6% VOC emissions reductions to achieve the total 15% reduction. The 6.6% VOC emissions reduction includes all available creditable VOC emissions reductions at the time of SIP development.

As noted in Section 5.2.4: *VOC and NO_x Limitation* of the concurrent Bexar County 2015 Ozone NAAQS Moderate Attainment Demonstration (AD) SIP revision (Project No. 2022-025-SIP-NR), while photochemical modeling shows benefit from both NO_x and VOC reductions, ozone decreases in larger amounts with the reductions in NO_x. Section 5.2.4 of the concurrent Bexar County 2015 Ozone NAAQS Moderate 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 reducing ozone concentrations in the nonattainment area. Therefore, this RFP SIP revision demonstrates progress towards attaining the 2015 eight-hour ozone NAAQS using a combination of NO_x and VOC emissions reductions.

3.1.3 Contingency Plan

This SIP revision also contains a contingency plan for 2024 as required by FCAA, §172(c)(9).

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. At the time the SIP revision was being developed, EPA had historically accepted the use of surplus emissions reductions from previously implemented control measures to fulfill the contingency measure requirements. However, EPA's new draft guidance on contingency measures, published in the *Federal Register* for public comment on March 23, 2023 (88 FR 17571), indicates that contingency measures must be conditional and prospective (not previously implemented) based on the recent court rulings. The draft guidance also establishes an entirely new scheme for determining the amount of emissions reductions necessary to address the contingency requirement.

Since EPA had not issued final guidance to states regarding contingency measures at the time this SIP revision was developed, this SIP revision relies on the historically approved approach of using surplus emissions reductions to fulfill the contingency measure requirements. EPA's final action to reclassify the nonattainment areas from moderate to serious indicates that RFP contingency measures are still due for the moderate classification.

A summary of the RFP contingency plan is provided in Table 4-2: *Bexar County 2015 Ozone NAAQS Nonattainment Area RFP Contingency Plan for the 2023 Attainment Year (tons per day unless otherwise noted)*.

3.1.4 RFP Demonstration Method

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

- the 2017 base year emissions;

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

Progress toward the 2023 attainment year emissions reductions requirements is demonstrated using EPA’s methodologies to calculate the elements of the RFP demonstration and complete the RFP analyses. First, the emissions inventories and control 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 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)*. 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 Demonstration Spreadsheet*.

3.2 RFP DEMONSTRATION

EPA’s final 2015 eight-hour ozone standard SIP requirements rule requires the RFP control strategy plan to show ozone precursor (NO_x and VOC) emissions reductions that will reduce controlled RFP analysis year emissions to values equal to or less than the emissions target values. As stated in Section 3.1.2, 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, this SIP revision uses both NO_x and VOC reductions to demonstrate RFP for the first six-year analysis period. Creditable RFP control reductions are subtracted from the uncontrolled or existing controlled forecast EI for each RFP analysis year. The RFP requirement is met for each analysis year if the resulting controlled RFP EI forecast is less than the target level of emissions. Details of the RFP demonstration are documented in Appendix 1. A summary of the 2023 RFP demonstration for the Bexar County 2015 ozone NAAQS nonattainment area is provided in Table 3-1.

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	423.28	362.06
Line 2	Creditable Bexar County RFP control reductions between 2017 and 2023	357.01	259.06
Line 3	Controlled Bexar County 2023, RFP emissions forecast (Line 1 minus Line 2)	66.27	103.00
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)	66.27	103.00

Line	Description	NO_x	VOC
Line 6	Bexar County 2023 RFP target level of emissions	75.36	103.00
Line 7	Excess (+) / Shortfall (-) (Line 6 minus Line 5)	9.09	0.00
Line 8	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 2023 attainment year to achieve the emissions reductions in nitrogen oxides (NO_x) and volatile organic compounds (VOC) to demonstrate reasonable further progress (RFP) for this Bexar County 2015 Eight-Hour Ozone National Ambient Air Quality Standard (NAAQS) Moderate RFP State Implementation Plan (SIP) Revision are detailed in Appendix 1: *Bexar County Reasonable Further Progress Demonstration Spreadsheet* details. A summary of the reductions is provided in Table 4-1: *Summary of Bexar County 2015 Ozone NAAQS Nonattainment Area NO_x and VOC Cumulative Emissions Reductions from Control Strategies for 2017 through 2023 (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.

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	NO _x Reduction	VOC Reduction
Chapter 117 NO _x controls ¹	0.00	0.00
Chapter 115 storage tank rules ¹	0.00	0.00
Coating/printing rules	0.00	0.00
Portable fuel containers	0.00	0.00
Federal Motor Vehicle Control Program (FMVCP)	329.09	210.78
Regional Low RVP conventional gasoline/Tier 3 Sulfur Gasoline/Ultra Low Sulfur Diesel	5.67	2.51
On-road Texas Low Emission Diesel (TxLED)	0.71	0.00
Tier I and II locomotive NO _x standards	0.11	0.00
Small non-road spark ignition (SI) engines (Phase I) ²	-2.07	16.90
Heavy duty non-road engines	0.20	0.18
Tiers 2 and 3 non-road diesel engines	0.63	0.13
Small non-road SI engines (Phase II)	1.50	16.94
Large non-road SI and recreational marine	5.61	2.61
Non-road TxLED	0.23	0.00
Non-road Reformulated Gasoline	0.00	0.00
Tier 4 non-road diesel engines	13.91	3.28
Diesel recreational marine	0.00	0.00
Small SI (Phase III)	1.42	5.73
Drilling rigs: federal engine standards and TxLED	0.00	0.00
Sum of reductions from projected uncontrolled or existing controlled emissions	357.01	259.06

Note 1: These rules had compliance deadlines before 2017 in Bexar County. The 2017 base year emissions inventory (EI) includes the effect of the control. No additional emissions reductions beyond 2017 are claimed.

Note 2: 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.

4.2 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 the U.S. Environmental Protection Agency's (EPA) historical approach to implementing the contingency measure requirement. At the time the SIP revision was being developed, EPA had historically accepted the use of surplus emissions reductions from previously implemented control measures to fulfill the contingency measure requirements. However, EPA's new draft guidance on contingency measures, published in the *Federal Register* for public comment on March 23, 2023 (88 FR 17571), indicates that contingency measures must be conditional and prospective (not previously implemented) based on the recent court rulings. The draft guidance also establishes an entirely new scheme for determining the amount of emissions reductions necessary to address the contingency requirement.

Since EPA had not issued final guidance to states regarding contingency measures at the time this SIP revision was developed, this SIP revision relies on the historically approved approach of using surplus emissions reductions to fulfill the contingency measure requirements. EPA's final action to reclassify the nonattainment areas from moderate to serious indicates that RFP contingency measures are still due for the moderate classification.

The RFP requirements include a 3% contingency plan for the one-year period after each RFP analysis year and the one-year period after the attainment year. In the event the required reductions in ozone precursor emissions are not met, individual contingency control measures will be triggered for each area sufficient to provide the required emissions reduction. For this SIP revision, the only RFP analysis year is the attainment year. The 3% contingency requirement is based on the RFP base year EI and may be met using VOC and NO_x reductions. This section contains an attainment year RFP contingency plan based on the 2023 attainment year.

The 3% attainment year RFP contingency analysis is based on a 1.5% reduction in NO_x and a 1.5% reduction in VOC to be achieved for the one-year period from January 1, 2024, through December 31, 2024. EI analyses were performed for fuel control programs and for the fleet turnover effects for the federal emissions certification programs for on-road and non-road vehicles. The emissions reductions for the 2024 contingency year were estimated for those programs. Controlled (post-control) emissions reductions not previously used in the 2023 RFP demonstration were used to satisfy contingency requirements, so the excess emissions reductions from the 2023 RFP demonstration are included in the contingency analysis.

This SIP revision does not provide for NO_x and VOC motor vehicle emissions budget (MVEB) safety margins; the emissions reductions that would have been reserved from the contingency demonstration to account for the MVEB safety margins have been set to zero.

A summary of the 2023 attainment year RFP contingency analysis for the Bexar County 2015 ozone NAAQS nonattainment area is provided in Table 4-2: *Bexar County 2015 Ozone NAAQS Nonattainment RFP Contingency Plan for the 2023 Attainment Year (tons per day unless otherwise noted)*.

Table 4-2: Bexar County 2015 Ozone NAAQS Nonattainment Area RFP Contingency Plan for the 2023 Attainment Year (tons per day unless otherwise noted)

Line	Contingency Plan Description	NO_x	VOC
Line 1	Bexar County 2017 Base Year (BY) EI	82.27	110.28
Line 2	Percent for contingency calculation (total of 3%)	1.50	1.50
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))	1.23	1.65
	Control Reductions to meet Contingency Requirements	NO_x	VOC
Line 4	Excess reductions from 2023 RFP demonstration (from Table 3-1: <i>Summary of the 2023 Bexar County 2015 Moderate Ozone Nonattainment Area RFP Demonstration</i>) (tons per day)	9.09	0.00
Line 5	Subtract 2023 RFP demonstration motor vehicle emissions budget (MVEB) safety margin from excess reductions from 2023 RFP demonstration	0.00	0.00
Line 6	2023 to 2024 emissions reductions due to federal Motor Vehicle Control Program (FMVCP), East Texas Regional Low RVP, 2017 Low Sulfur Gasoline Standard, ultra-low sulfur diesel, and on-road TxLED.	10.41	6.96
Line 7	2023 to 2024 emissions reductions due to federal non-road mobile new vehicle certification standards and non-road TxLED	0.25	0.83
Line 8	Total 2023 to 2024 Bexar County RFP demonstration contingency reductions (sum of Lines 4, 5, 6, and 7)	19.75	7.79
Line 9	Contingency Excess (+) or Shortfall (-) (Line 8 minus Line 3)	18.52	6.14

CHAPTER 5: MOTOR VEHICLE EMISSIONS BUDGETS

5.1 INTRODUCTION

This Bexar County Moderate 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 Motor Vehicle Emissions Simulator, Version 3 (MOVES3) emissions factor model. Updated emissions inventory (EI) development included development of a 2017 base year EI, uncontrolled emissions inventories for 2023 and 2024, controlled emissions inventories for 2023 and 2024, and control strategies reduction estimates for 2023 and 2024. 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: *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 YEARS

The MVEBs in this 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. The Bexar County 2015 ozone NAAQS nonattainment area did not have sufficient excess emissions reductions to provide 2023 MVEB safety margins. Details for MVEB calculations are documented in Appendix 1: *Bexar County Reasonable Further Progress Demonstration Spreadsheet, Tab 06 Calc 2023 RFP MVEB*. A summary of the MVEB calculations for 2023 are presented in: Table 5-1: *2023 RFP MVEBs for the Bexar County 2015 Ozone NAAQS Nonattainment Area (tons per day)*. The 2023 Bexar County MVEB safety margins are set to zero.

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

Control Strategy Description	NO _x	VOC
2023 On-road mobile controlled inventory	20.63	12.38
Transportation conformity safety margin	0.00	0.00
2023 Bexar County MVEB	20.63	12.38

Appendices Available Upon Request

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**RESPONSE TO COMMENTS RECEIVED CONCERNING THE
BEXAR COUNTY MODERATE CLASSIFICATION
REASONABLE FURTHER PROGRESS (RFP) STATE
IMPLEMENTATION PLAN (SIP) REVISION FOR THE 2015
EIGHT-HOUR OZONE NATIONAL AMBIENT AIR QUALITY
STANDARD (NAAQS)**

The Texas Commission on Environmental Quality (commission or TCEQ) offered a public hearing in San Antonio on July 13, 2023, at 7:00 p.m. During the comment period, which closed on July 17, 2023, the commission received comments from Alamo Area Council of Governments (AACOG), Sierra Club, and the U.S. Environmental Protection Agency (EPA).

In this response to comments, unless otherwise specified, the commission uses “Bexar County area” to refer to the Bexar County 2015 eight-hour ozone NAAQS nonattainment area.

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GENERAL COMMENTS

AACOG expressed support for the multiple meetings between TCEQ staff and Bexar County elected officials. AACOG generally supported the proposed SIP revision.

EPA requested TCEQ carefully review applicable authorities for opportunities to incorporate environmental justice (EJ) considerations and ensure they have been adequately and appropriately incorporated in this State Implementation Plan (SIP), as well as incorporating EJ considerations in developing contingency measures. In addition, EPA suggested that TCEQ consider the number of pollution sources, major and minor, in a geographic area as part of evaluating community risk during SIP development.

Sierra Club stated coal-fired electricity generating units have led to high ozone levels in EJ communities. Further, Sierra Club stated that communities of color and economically marginalized communities carry a disproportionate burden of ozone exposure.

EPA encouraged TCEQ to use both EJScreen and specific area information in developing its SIP to consider potential issues related to civil rights of the communities potentially impacted. EPA commented that using EJScreen would indicate (1) whether a SIP revision has the potential to contribute to significant public health or environmental impacts, (2) whether the community may be particularly vulnerable to impacts from the SIP revision, and (3) whether the community is already disproportionately impacted by public health and/or environmental burdens on the basis of demographic factors. Sierra Club stated that ozone exposure does not affect

all Texans equally and noted that EPA's EJScreen tool shows areas of concern, pointing out specific index values for San Antonio.

The purpose of this Bexar County RFP SIP revision is to demonstrate whether the Bexar County nonattainment area will or will not achieve emissions reductions in ozone precursors consistent with the moderate ozone nonattainment area requirements of federal Clean Air Act (FCAA), §182(b)(1)(A) and EPA's *Implementation of the 2015 National Ambient Air Quality Standards for Ozone: State Implementation Plan Requirements; Final Rule*. TCEQ followed all relevant federal and state statutes, regulations, and guidance in the development of this SIP revision and evaluated all relevant information, including emission sources, in reaching its decision regarding the appropriate control strategies for the Bexar County area.

The SIP is not the appropriate mechanism to address EJ issues. No federal or state statute, regulation, or guidance provides a process for evaluating or considering the socioeconomic or racial status of communities within an ozone nonattainment area. In a recent proposed approval of a TCEQ submittal for El Paso County, which did not include an EJ evaluation, EPA stated that the FCAA "and applicable implementing regulations neither prohibit nor require such an evaluation." (88 *Federal Register* (FR) 14103). Further, TCEQ's jurisdiction is limited by statute; for example, it may not consider location, land use, or zoning when permitting facilities. TCEQ continues to be committed to protecting Texas' environment and the health of its citizens regardless of location.

While EPA may encourage states to utilize EJScreen in SIP actions, it is not necessary, because the NAAQS are protective of all populations. If the NAAQS are not sufficient to protect public health, it is incumbent upon EPA to revise the NAAQS.

This SIP revision was developed in compliance with the policies and guidance delineated in [TCEQ's Language Access Plan](#) (LAP) and [TCEQ's Public Participation Plan](#) (PPP).^{1,2} The LAP helps ensure individuals with limited English proficiency may meaningfully access TCEQ programs, activities, and services in a timely and effective manner; and the PPP identifies the methods by which TCEQ interacts with the public, provides guidance and best practices for ensuring meaningful public participation in TCEQ activities, and highlights opportunities for enhancing public involvement in TCEQ activities and programs.

In accordance with the PPP, EJScreen was used to conduct a preliminary analysis of the population in the Bexar County area, which was then used to plan public engagement efforts for this SIP revision. Specifically, TCEQ translated the Plain Language Summaries, GovDelivery notices, Public Hearing notices, and SIP Hot Topics notices into Spanish for all projects. Newspaper publications were also in Spanish. Additionally, two Spanish translators were available at all hearings, and

¹ <https://www.tceq.texas.gov/downloads/agency/decisions/participation/language-access-plan-gi-608.pdf>

² <https://www.tceq.texas.gov/downloads/agency/decisions/participation/public-participation-plan-gi-607.pdf>

the notices included a statement that Spanish translation would be available at each hearing.

No changes were made in response to these comments.

CONTROL STRATEGIES

EPA disagreed with the use of the already implemented measures to satisfy the contingency measure requirements and cited a recent court decision (*Sierra Club, et al. v. EPA*, 985 F.3d 1055 (D.C. Cir. 2021) that invalidated the use of already implemented control measures and required prospective measures (i.e., undertaken in the future) to meet FCAA contingency measure statutory requirements. EPA commented that the proposed contingency measures, if adopted, may not be approvable and expressed support for TCEQ's efforts to develop approvable measures that incorporate EJ considerations.

TCEQ relied on the historical and previously approved EPA method to address contingency requirements. Although EPA's final action to reclassify the nonattainment areas to serious indicates that RFP contingency measures are still due for the moderate classification, EPA also notes this requirement could be mooted if the state submits, and EPA determines adequate, a formal demonstration to show that the moderate RFP targets have been met.

No changes were made in response to this comment.

EPA and Sierra Club commented that the proposed Bexar County RFP SIP revision demonstrated RFP using an invalid combination of both nitrogen oxides (NO_x) and volatile organic compounds (VOC) to achieve the 15% emissions reduction between the base year and the attainment year. Since Bexar County was newly designated as moderate nonattainment under the 2015 eight-hour ozone NAAQS and did not have an approved 15% VOC rate of progress (ROP) under a previous NAAQS, then FCAA §182(b)(1) requires a 15% VOC emissions reduction within six years after designation. EPA also commented that TCEQ's reasoning that NO_x is expected to be more effective than VOC reductions at reducing ozone concentrations in the nonattainment area was not a valid FCAA option for relying on a mix of NO_x and VOC reductions to provide the 15% ROP.

The commission acknowledges that the Bexar County RFP SIP revision was not able to include the required 15% VOC emissions reduction, as discussed in the proposal. The commission also acknowledges that the FCAA does not provide an option to use both NO_x and VOC emissions reductions to demonstrate the 15% ROP for newly designated ozone nonattainment areas such as Bexar County. Existing VOC emissions reductions in Bexar County did not achieve a 15% reduction, and additional analysis is necessary to determine the best means to address this requirement. To meet the 15% VOC requirement for this SIP revision, additional measures would have had to be implemented by March 1, 2023, the beginning of the moderate attainment year ozone season in Bexar County. The final moderate reclassification of Bexar County was published on October 7, 2022. There were no measures that could have been designed and evaluated with input from

stakeholders, proposed through the rulemaking process, published for public comment, adopted by the commission, and implemented by March 1, 2023, in order to demonstrate the 15% reduction in VOC emissions from the 2017 base year to the 2023 attainment year. Therefore, the RFP demonstration for this SIP revision uses both NO_x and VOC emissions reductions to show progress toward attainment.

No changes were made in response to these comments.

EPA inquired about TCEQ's schedule for the additional analysis to address the 15% VOC ROP requirement for the Bexar County RFP SIP revision. Sierra Club stated that the 15% VOC ROP requirement remains after an area is reclassified to serious nonattainment.

The commission is aware that the 15% VOC ROP requirement will need to be addressed in the future and continues to engage with local officials, Bexar County area stakeholders, and EPA on options to meet this requirement.

No changes were made in response to these comments.

EPA commented that TCEQ should continue to investigate options to meet the 15% VOC ROP requirement. EPA also commented that FCAA, §182(b)(1)(A)(ii) provides an option if the 15% VOC ROP emissions reduction cannot be met. To be considered for approval without meeting the 15% VOC ROP requirement, the SIP would need to demonstrate that extreme classification requirements for new source review are implemented, require RACT for all existing major sources, and demonstrate that all measures that can be feasibly implemented, in light of technological achievability, are implemented.

Sierra Club suggested that oil and gas production sources should be considered to assist with meeting the 15% VOC reduction for the Bexar County RFP SIP revision, pointing out that they are already covered under EPA's 2016 Control Techniques Guidelines (CTGs) and offering that methane emissions from those sources will need to be controlled under FCAA, §111(d). Sierra Club also commented that EPA's 2016 CTG does not reflect the most cost-effective RACT controls and that EPA's proposed methane standards are more current.

TCEQ staff and contractors continue to evaluate potential measures that can be implemented to meet the 15% VOC ROP in the Bexar County area.

No changes were made in response to these comments.