

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

AGENDA REQUESTED: April 24, 2019

DATE OF REQUEST: April 5, 2019

INDIVIDUAL TO CONTACT REGARDING CHANGES TO THIS REQUEST, IF NEEDED: Joyce Spencer-Nelson, (512) 239-5017

CAPTION: Docket No. 2018-1670-SIP. Consideration for adoption of the El Paso Redesignation Request and Maintenance Plan State Implementation Plan (SIP) revision for the One-Hour Ozone National Ambient Air Quality Standards (NAAQS).

The SIP revision includes a request that the United States Environmental Protection Agency (EPA) redesignate the El Paso area (El Paso County) to attainment for the one-hour ozone NAAQS and provide a maintenance plan that will ensure the area remains in attainment of the NAAQS through 2032. The SIP revision includes a request that the EPA also consider this plan as a second 10-year maintenance plan for the one-hour ozone standard NAAQS. (Margaret Earnest, Nicolas Parke) (Project No. 2018-029-SIP-NR)

Tonya Baer

Donna F. Huff

Deputy Director

Division Director

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Agenda Coordinator

Copy to CCC Secretary? NO X YES

Texas Commission on Environmental Quality

Interoffice Memorandum

To: Commissioners **Date:** April 5, 2019

Thru: Bridget C. Bohac, Chief Clerk
Toby Baker, Executive Director

From: Tonya Baer, Deputy Director
Office of Air

Docket No.: 2018-1670-SIP

Subject: Commission Approval for Adoption of the El Paso Redesignation Request and Maintenance Plan State Implementation Plan (SIP) Revision for the One-Hour Ozone National Ambient Air Quality Standard

El Paso One-Hour Ozone Redesignation and Maintenance Plan SIP Revision
Non-Rule Project No. 2018-029-SIP-NR

Background and reason(s) for the SIP revision:

The El Paso area (El Paso County) is classified as serious nonattainment for the revoked one-hour ozone National Ambient Air Quality Standard (NAAQS) of 0.12 parts per million (ppm). The El Paso area has been attaining the one-hour ozone NAAQS since 1998. The El Paso area continues to have monitored design values showing attainment of the standard.

Historically, the United States Environmental Protection Agency (EPA) has not formally redesignated areas for a revoked NAAQS. The one-hour ozone NAAQS was revoked on June 15, 2005. Although the El Paso area was attaining the standard at the time of revocation, the area had not been formally redesignated to attainment and remained subject to continuing serious area anti-backsliding requirements. Effective June 15, 2004, the EPA designated the El Paso area attainment for the 1997 eight-hour ozone NAAQS of 0.08 ppm. Monitors in the El Paso area at that time showed attainment of both the one-hour and eight-hour ozone NAAQS. The EPA's Phase I Implementation Rule for the 1997 eight-hour ozone standard directed that areas designated nonattainment for the one-hour ozone standard but attainment for the eight-hour ozone standard submit a maintenance plan for the 1997 eight-hour ozone standard by June 15, 2007. On January 20, 2006, the Texas Commission on Environmental Quality (TCEQ) submitted a maintenance plan for the 1997 eight-hour ozone NAAQS to the EPA, consistent with Federal Clean Air Act (FCAA), §110(a)(1). Effective March 16, 2009, the EPA approved the El Paso 1997 eight-hour ozone maintenance plan SIP revision (74 *Federal Register* (FR) 2387). On October 20, 2010, the EPA published a final rule clarifying the EPA's approval of the 1997 eight-hour ozone maintenance plan regarding the lifting of one-hour ozone serious area anti-backsliding requirements for the El Paso area (75 FR 64675). The EPA determined that the approval of the FCAA, §110(a)(1) maintenance plan for the 1997 eight-hour ozone NAAQS removed the requirement for the continued application of one-hour ozone NAAQS anti-backsliding measures. Though the El Paso area was never formally redesignated to attainment for the revoked one-hour ozone NAAQS, the maintenance plan for the 1997 eight-hour ozone NAAQS effectively acted as a maintenance plan for the one-hour ozone NAAQS.

On February 16, 2018, the United States Court of Appeals for the District of Columbia Circuit issued an opinion in the case *South Coast Air Quality Management District v. EPA*, 882 F.3d 1138 (D.C. Cir. 2018). The case was a challenge to the EPA's final 2008 eight-

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hour ozone standard SIP requirements rule, which revoked the 1997 eight-hour ozone NAAQS as part of the implementation of the more stringent 2008 eight-hour ozone NAAQS. The court's decision vacated parts of the EPA's final 2008 eight-hour ozone standard SIP requirements rule, including the redesignation substitute, removal of anti-backsliding requirements for areas designated nonattainment under the 1997 eight-hour ozone NAAQS, waiving requirements for transportation conformity for maintenance areas under the 1997 eight-hour ozone NAAQS, and elimination of the requirement to submit a second 10-year maintenance plan. This ruling results in uncertainty for the El Paso area and for transportation projects for which conformity analyses may be needed.

The EPA filed a request for rehearing on the case on April 23, 2018, and the court issued an order on September 14, 2018, denying rehearing but granting a stay of its decision through February 16, 2019 (i.e., 12 months from the date of the original decision) with respect to transportation conformity requirements. In November 2018, the EPA released two documents¹ for areas directly affected by the court decision. The November 20, 2018, resource document provides states with areas affected by the ruling information on developing redesignation requests and maintenance plans. The November 29, 2018, guidance document addresses transportation conformity requirements for areas directly affected by the court decision. Neither document addresses areas that remain designated nonattainment for the revoked one-hour ozone NAAQS; however, the elements included in this redesignation request and maintenance plan are consistent with the EPA's November 20, 2018, resource document.

Scope of the SIP revision:

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

The SIP revision includes a request that the El Paso area be redesignated to attainment for the revoked one-hour ozone NAAQS. The SIP revision also includes a maintenance plan that would ensure the area remains in attainment of the standard through 2032. The maintenance plan uses a 2014 base year inventory and includes interim year inventories for 2020 and 2026, establishes motor vehicle emissions budgets for 2032, and includes a contingency plan.

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

FCAA, §107(d)(3)(E) states that the EPA can redesignate an area to attainment if the following conditions are met.

- The EPA has determined that the NAAQS has been attained.
- The applicable implementation plan has been fully approved by the EPA under FCAA, §110(k).
- The EPA has determined that the improvement in air quality is due to permanent and enforceable reductions in emissions.
- The EPA has fully approved a maintenance plan, including a contingency plan, for the area under FCAA, §175A.

¹ *Resource Document for 1997 Ozone NAAQS Areas: Supporting Information for States Developing Maintenance Plans*, released November 20, 2018, and *Transportation Conformity Guidance for the South Coast II Court Decision*, released November 29, 2018.

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- The state has met all applicable requirements for the area under FCAA, §110 and Part D.

FCAA, §175A(a) indicates that states that submit a request for redesignation for attaining the NAAQS are also required to submit a revision to the SIP providing for a maintenance plan for the area for at least 10 years after redesignation, including:

1. any additional measures necessary to ensure maintenance of the NAAQS;
2. contingency measures that will promptly correct any NAAQS violation that occurs after the redesignation; and
3. a requirement that the State will implement all control measures in the SIP relevant for the NAAQS; *see FCAA, §175A(a) and (d).*

FCAA, §175A(b) requires that eight years after an area is redesignated to attainment, the State submit an additional SIP revision including a maintenance plan for the 10 years after the expiration of the original maintenance plan. FCAA, §175A(c) indicates that areas remain in nonattainment, and the nonattainment SIP requirements remain in effect and enforceable until the redesignation and maintenance plan is approved.

C.) Additional staff recommendations that are not required by federal rule or state statute:

While the SIP revision includes a 10-year maintenance plan for the one-hour ozone standard as a requirement for redesignation under FCAA, §175A(a), staff recommends that the SIP revision include a request that the EPA also consider this plan as a second 10-year maintenance plan for the one-hour ozone standard under FCAA, §175A(b)

Statutory authority:

The authority to adopt the SIP revision is derived from FCAA, §110, which requires states to submit SIP revisions that contain enforceable measures to achieve the NAAQS; FCAA, §175A, regarding maintenance plans; and other general and specific authority in Texas Water Code, Chapters 5 and 7, and Texas Health and Safety Code, Chapter 382.

Effect on the:

A.) Regulated community:

EPA approval of the redesignation request and maintenance plan SIP revision would reduce regulatory uncertainty in the El Paso area.

B.) Public:

The public would benefit from continued maintenance of air quality in the El Paso area.

C.) Agency programs:

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

Stakeholder meetings:

The proposed SIP revision went through a public review and comment period including one public hearing.

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Public comment:

The commission offered a public hearing on the proposed SIP revision in El Paso on February 19, 2019. Notice of the public hearing was published in the *Texas Register* and the *Austin American-Statesman* and *El Paso Times* newspapers.

The public comment period opened on January 18, 2019 and closed on February 20, 2019. During the comment period, staff received comments from Baake Law LLC on behalf of Sierra Club and Familias Unidas del Chamizal, El Paso Equal Voice Network, El Paso Electric Company, Marathon Petroleum Corporation, and two individuals.

El Paso Electric Company and Marathon Petroleum Corporation expressed support for the proposed SIP revision. Sierra Club and Familias Unidas del Chamizal expressed opposition to the proposed SIP revision stating that it should be withdrawn because the contingency plan is inadequate, that additional control measures should be implemented, and that sources in the El Paso area are contributing to nonattainment in New Mexico. El Paso Equal Voice Network and two individuals expressed concern that high ozone was impacting community health and that the TCEQ should do more to reduce emissions in the El Paso area. A summary of the comments and the TCEQ's response is provided as part of the SIP revision in the Response to Comments.

Significant changes from proposal:

None.

Potential controversial concerns and legislative interest:

Historically, it has been the EPA's policy not to formally redesignate areas for a revoked NAAQS. The EPA has provided limited guidance regarding transportation conformity for the 1997 and 2008 eight-hour ozone NAAQS and has only provided a resource document to states regarding maintenance plan development for the 1997 eight-hour ozone NAAQS arising from the court's ruling.

Does 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 this SIP revision?

The TCEQ is not currently required to submit the recommended redesignation request SIP revision, and there are no associated deadlines that must be met to comply with state and federal law. The commission could choose to wait to adopt the redesignation request SIP revision.

Key points in the SIP revision proposal schedule:

Anticipated adoption date: April 24, 2019

Agency contacts:

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Joyce Spencer-Nelson, Agenda Coordinator, (512) 239-5017

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cc: Chief Clerk, 2 copies
Executive Director's Office
Jim Rizk
Martha Landwehr
Office of General Counsel
Margaret Earnest
Joyce Spencer-Nelson

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

EL PASO ONE-HOUR OZONE STANDARD NONATTAINMENT
AREA



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

**EL PASO REDESIGNATION REQUEST AND MAINTENANCE
PLAN STATE IMPLEMENTATION PLAN REVISION FOR THE
ONE-HOUR OZONE NATIONAL AMBIENT AIR QUALITY
STANDARD**

PROJECT NUMBER 2018-029-SIP-NR

Adoption
April 24, 2019

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EXECUTIVE SUMMARY

The El Paso area (El Paso County) is classified as a serious nonattainment area for the revoked one-hour ozone National Ambient Air Quality Standard (NAAQS) of 0.12 parts per million (ppm). The El Paso area has been attaining the one-hour ozone NAAQS since 1998. The El Paso area continues to have monitored design values showing attainment of the standard.

Historically, the United States Environmental Protection Agency (EPA) has not formally redesignated areas for a revoked NAAQS. The one-hour ozone NAAQS was revoked on June 15, 2005. Although the El Paso area was attaining the standard at the time of revocation, the area had not been formally redesignated to attainment and remained subject to continuing serious area anti-backsliding requirements. Effective June 15, 2004, the EPA designated the El Paso area attainment for the 1997 eight-hour ozone NAAQS of 0.08 ppm. Monitors in the El Paso area at that time showed attainment of both the one-hour and eight-hour ozone NAAQS. The EPA's Phase I Implementation Rule for the 1997 eight-hour ozone standard directed that areas designated nonattainment for the one-hour ozone standard but attainment for the eight-hour ozone standard submit a maintenance plan for the 1997 eight-hour ozone standard by June 15, 2007. On January 20, 2006, the Texas Commission on Environmental Quality submitted a maintenance plan for the 1997 eight-hour ozone NAAQS to the EPA consistent with Federal Clean Air Act (FCAA), §110(a)(1). Effective March 16, 2009, the EPA approved the El Paso 1997 eight-hour ozone maintenance plan SIP revision (74 *Federal Register* (FR) 2387). On October 20, 2010, the EPA published a final rule clarifying the EPA's approval of the 1997 eight-hour ozone maintenance plan regarding the lifting of one-hour ozone serious area anti-backsliding requirements for the El Paso area (75 FR 64675). The EPA determined that the approval of the FCAA, §110(a)(1) maintenance plan for the 1997 eight-hour ozone NAAQS removes the requirement for the continued application of one-hour ozone NAAQS anti-backsliding measures. Though the El Paso area was never formally redesignated to attainment for the revoked one-hour ozone NAAQS, the maintenance plan for the 1997 eight-hour ozone NAAQS effectively acted as a maintenance plan for the one-hour ozone NAAQS.

On February 16, 2018, the United States Court of Appeals for the District of Columbia Circuit issued an opinion in the case *South Coast Air Quality Management District v. EPA*, 882 F.3d 1138 (D.C. Cir. 2018). The case was a challenge to the EPA's final 2008 eight-hour ozone standard state implementation plan (SIP) requirements rule, which revoked the 1997 eight-hour ozone NAAQS as part of the implementation of the more stringent 2008 eight-hour ozone NAAQS. The court's decision vacated parts of the EPA's final 2008 eight-hour ozone standard SIP requirements rule including the removal of anti-backsliding requirements for areas designated nonattainment under the 1997 eight-hour ozone NAAQS, waiving requirements for transportation conformity for maintenance areas under the 1997 eight-hour ozone NAAQS, and elimination of the requirement to submit a second 10-year maintenance plan.

The EPA filed a request for rehearing on the case on April 23, 2018, and the court issued an order on September 14, 2018 denying rehearing but granting a stay of its decision through February 16, 2019 (i.e., 12 months from the date of the original decision) with respect to transportation conformity requirements. In November 2018,

the EPA released two documents¹ for areas directly affected by the court decision. The November 20, 2018 resource document provides states with areas affected by the ruling information on developing redesignation requests and maintenance plans. The November 29, 2018 guidance document addresses transportation conformity requirements for areas directly affected by the court decision, orphan nonattainment and maintenance areas for the 1997 eight-hour ozone NAAQS. Neither guidance document addresses areas that remain designated nonattainment for the revoked one-hour ozone NAAQS; however, the elements included in this redesignation request and maintenance plan are consistent with the EPA's November 20, 2018 resource document.

FCAA, §107(d)(3)(E) states that the EPA can redesignate an area to attainment if the following conditions are met.

- The EPA has determined that the NAAQS has been attained.
- The applicable implementation plan has been fully approved by the EPA under FCAA, §110(k).
- The EPA has determined that the improvement in air quality is due to permanent and enforceable reductions in emissions.
- The EPA has fully approved a maintenance plan, including a contingency plan, for the area under FCAA, §175A.
- The state has met all applicable requirements for the area under FCAA, §110 and Part D.

This SIP revision includes a request that the El Paso area be redesignated to attainment for the revoked one-hour ozone NAAQS. This SIP revision also includes a maintenance plan for the one-hour ozone NAAQS that would ensure the area remains in attainment of the standard through 2032. Because the El Paso area has and continues to maintain the standard, the SIP revision includes a request that the EPA also consider this plan as a second 10-year maintenance plan for the one-hour ozone NAAQS. The maintenance plan uses a 2014 base year inventory and includes interim year inventories for 2020 and 2026, establishes motor vehicle emissions budgets for 2032, and includes a contingency plan.

¹ *Resource Document for 1997 Ozone NAAQS Areas: Supporting Information for States Developing Maintenance Plans*, released November 20, 2018, and *Transportation Conformity Guidance for the South Coast II Court Decision*, released November 29, 2018.

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. The legislature amended the TCAA in 1969, 1971, 1973, 1979, 1985, 1987, 1989, 1991, 1993, 1995, 1997, 1999, 2001, 2003, 2005, 2007, 2009, 2011, 2013, 2015, and 2017. In 1989, the TCAA was codified as Chapter 382 of the Texas Health and Safety Code.

Originally, the TCAA stated that the Texas Air Control Board (TACB) is the state air pollution control agency and is 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 the 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 the TCEQ to September 1, 2011, unless continued in existence by the Texas Sunset Act. In 2011, the 82nd Texas Legislature continued the existence of the TCEQ until 2023. With the creation of the TNRCC, the authority over air quality is found in both the Texas Water Code and the TCAA. Specifically, the authority of the TNRCC is found in Chapters 5 and 7. Chapter 5, Subchapters A - F, H - J, and L, include the general provisions, organization, and general powers and duties of the TNRCC, and the responsibilities and authority of the executive director. Chapter 5 also authorizes the TNRCC to implement action when emergency conditions arise and to conduct hearings. Chapter 7 gives the TNRCC enforcement authority.

The TCAA specifically authorizes the 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 authorizes the 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 the TCEQ to enter property and make inspections. They also may make recommendations to the commission concerning any action of the TCEQ

that affects their territorial jurisdiction, may bring enforcement actions, and may execute cooperative agreements with the 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.

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

Applicable Law

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

Statutes

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

| | |
|---|-------------------|
| TEXAS HEALTH & SAFETY CODE, Chapter 382 | September 1, 2017 |
| TEXAS WATER CODE | September 1, 2017 |

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, 5.2275, 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, 7.179-7.183

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 |
| Chapter 19: Electronic Reporting | March 15, 2007 |
| Chapter 35: Subchapters A-C, K: Emergency and Temporary Orders and Permits; Temporary Suspension or Amendment of Permit Conditions | July 20, 2006 |
| Chapter 39: Public Notice, §§39.402(a)(1) - (6), (8), and (10) - (12), 39.405(f)(3) and (g), (h)(1)(A) - (4), (6), (8) - (11), (i) and (j), 39.407, 39.409, 39.411(a), (e)(1) - (4)(A)(i) and (iii), (4)(B), (5)(A) and (B), and (6) - (10), (11)(A)(i) and (iii) and (iv), (11)(B) - (F), (13) and (15), and (f)(1) - (8), (g) and (h), 39.418(a), (b)(2)(A), (b)(3), and (c), 39.419(e), 39.420 (c)(1)(A) - (D)(i)(I) and (II), (D)(ii), (c)(2), (d) - (e), and (h), and 39.601 - 39.605 | May 31, 2018 |
| Chapter 55: Requests for Reconsideration and Contested Case Hearings; Public Comment, all of the chapter, except 55.125(a)(5) and (6) | May 31, 2018 |
| Chapter 101: General Air Quality Rules | October 12, 2017 |
| Chapter 106: Permits by Rule, Subchapter A | April 17, 2014 |
| Chapter 111: Control of Air Pollution from Visible Emissions and Particulate Matter | August 3, 2017 |
| Chapter 112: Control of Air Pollution from Sulfur Compounds | July 16, 1997 |
| Chapter 113: Standards of Performance for Hazardous Air Pollutants and for Designated Facilities and Pollutants | May 14, 2009 |
| Chapter 114: Control of Air Pollution from Motor Vehicles | April 26, 2018 |
| Chapter 115: Control of Air Pollution from Volatile Organic Compounds | January 5, 2017 |
| Chapter 116: Permits for New Construction or Modification | November 24, 2016 |
| Chapter 117: Control of Air Pollution from Nitrogen Compounds | June 25, 2015 |
| Chapter 118: Control of Air Pollution Episodes | March 5, 2000 |
| Chapter 122: §122.122: Potential to Emit | February 23, 2017 |

| | |
|--|-------------------|
| Chapter 122: §122.215: Minor Permit Revisions | June 3, 2001 |
| Chapter 122: §122.216: Applications for Minor Permit Revisions | June 3, 2001 |
| Chapter 122: §122.217: Procedures for Minor Permit Revisions | December 11, 2002 |
| Chapter 122: §122.218: Minor Permit Revision Procedures for Permit Revisions Involving the Use of Economic Incentives, Marketable Permits, and Emissions Trading | June 3, 2001 |

SECTION VI: CONTROL STRATEGY

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

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LIST OF ACRONYMS

| | |
|---------|---|
| AERR | Air Emissions Reporting Requirements |
| APU | auxiliary power units |
| AQS | Air Quality System |
| auto-GC | automated gas chromatograph |
| BART | Best Available Retrofit Technology |
| CAIR | Clean Air Interstate Rule |
| CAMS | Continuous Air Monitoring Station |
| CEMS | Continuous Emissions Monitoring System |
| CFR | Code of Federal Regulations |
| CMV | commercial marine vessel |
| CO | carbon monoxide |
| CSAPR | Cross-State Air Pollution Rule |
| CTG | Control Technique Guidelines |
| D.C. | District of Columbia |
| DERI | Diesel Emissions Reduction Incentive Program |
| DLC | Diagnostic Link Connector |
| DPS | Texas Department of Public Safety |
| EDMS | Emission and Dispersion Modeling System |
| EGU | Electric Generating Unit |
| EI | emissions inventory |
| EIA | United States Energy Information Administration |
| EPA | United States Environmental Protection Agency |
| EQI | emissions inventory questionnaire |
| ERG | Eastern Research Group |
| FAA | Federal Aviation Administration |
| FCAA | Federal Clean Air Act |
| FIP | federal implementation plan |
| FMVCP | Federal Motor Vehicle Control Program |
| FR | Federal Register |
| GHG | greenhouse gas |
| GSE | ground support equipment |
| HB | House Bill |
| HPMS | Highway Performance Monitoring System |

| | |
|-------------------|---|
| I/M | Inspection/Maintenance |
| ICI | industrial, commercial, and institutional |
| INC | incomplete |
| kWh | kilowatt-hours |
| LEED | Leadership in Energy and Environmental Design |
| MOVES | Motor Vehicle Emissions Simulator |
| MW | megawatt |
| NAAQS | National Ambient Air Quality Standard |
| NEI | National Emissions Inventory |
| NLEV | National Low Emission Vehicle |
| NO _x | nitrogen oxides |
| NSR | New Source Review |
| OBD | On-Board Diagnostics |
| PAMS | Photochemical Assessment Monitoring Stations |
| PEI | periodic emissions inventory |
| PM | particulate matter |
| PM _{2.5} | particulate matter smaller than 2.5 microns |
| ppb | parts per billion |
| ppbC | parts per billion by concentration |
| ppbV | parts per billion by volume |
| ppm | parts per million |
| PSD | Prevention of Significant Deterioration |
| psia | pounds per square inch absolute |
| PUCT | Public Utility Commission of Texas |
| RACT | reasonably available control technology |
| RFG | reformulated gasoline |
| RRC | Railroad Commission of Texas |
| RVP | Reid vapor pressure |
| SB | Senate Bill |
| SCORE | Schools and Cities Conserving Resources |
| SIP | state implementation plan |
| SO ₂ | sulfur dioxide |
| SOCMI | synthetic organic chemical manufacturing industry |
| 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 |
| TCFP | Texas Clean Fleet Program |
| TDM | travel demand model |
| TERP | Texas Emissions Reduction Plan |
| TexN | Texas NONROAD model |
| TNGVGP | Texas Natural Gas Vehicle Grant Program |
| TNRCC | Texas Natural Resource Conservation Commission (former name for TCEQ) |
| tpd | tons per day |
| tpy | tons per year |
| TSI | Two-Speed Idle |
| TTI | Texas Transportation Institute |
| TxDOT | Texas Department of Transportation |
| TxLED | Texas Low Emission Diesel |
| UAM | Urban Airshed Model |
| UTEP | University of Texas at El Paso |
| VMT | vehicle miles traveled |
| VOC | volatile organic compounds |

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CHAPTER 1: GENERAL

1.1 BACKGROUND

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

1.2 PURPOSE

The TCEQ is seeking redesignation of the El Paso area (El Paso County) to attainment for the one-hour ozone National Ambient Air Quality Standard (NAAQS) under §107(d)(3)(E) of the Federal Clean Air Act (FCAA), which states that the United States Environmental Protection Agency (EPA) can redesignate an area to attainment if all the following conditions are met.

- The EPA has determined that the NAAQS has been attained.
- The applicable implementation plan has been fully approved by the EPA under FCAA, §110(k).
- The EPA has determined that the improvement in air quality is due to permanent and enforceable reductions in emissions.
- The state has met all applicable requirements for the area under §110 and Part D of the FCAA.
- The EPA has fully approved a maintenance plan, including a contingency plan, for the area under FCAA, §175A.

The purpose of this state implementation plan (SIP) revision is to address all the above requirements, including submittal of a maintenance plan that will fulfill the requirements under FCAA, §107(d)(3)(E) and ensure that the El Paso area continues to attain the one-hour standard through the horizon year 2032. Additionally, the TCEQ requests that the EPA also consider this plan as a second 10-year maintenance plan for the one-hour ozone standard under FCAA, §175A(b).

1.3 ONE-HOUR OZONE NAAQS HISTORY

The EPA set the one-hour ozone standard at 0.12 parts per million (ppm) in the February 8, 1979 *Federal Register* (44 FR 8202). A design value of 0.124 ppm, or 124 parts per billion (ppb), would round down and meet the NAAQS while a design value of 0.125 ppm, or 125 ppb, would round up and exceed the NAAQS. Because of these rounding conventions, the one-hour ozone NAAQS of 0.12 ppm is commonly referenced as 124 ppb. Violation of the one-hour ozone NAAQS is based on the maximum number of expected exceedances over all the monitors in an area with a threshold of 1.0 expected exceedances per year averaged over a three-year period.

As a result of the FCAA amendments of 1990, the El Paso area was designated nonattainment for the one-hour ozone NAAQS. The El Paso area was classified as a serious nonattainment area with an attainment deadline of November 15, 1999.

In September 1994, the Texas Natural Resource Conservation Commission (TNRCC), a predecessor to the TCEQ, adopted an FCAA, §818 demonstration for the El Paso area. Section 818 of the 1990 FCAA amendments included a new FCAA, §179B, containing special provisions for nonattainment areas affected by emissions from outside the United States. Under FCAA, §179B, the EPA could approve a SIP revision for the El Paso area if the plan would achieve timely attainment of the NAAQS but for emissions from Mexico. Modeling showed that the El Paso area could attain the NAAQS with the planned 15% reduction in emissions from the United States' side of the border alone. On July 24, 1996, the TNRCC adopted the one-hour ozone SUPER SIP revision, which included changes to the 15% rate of progress demonstration for the El Paso nonattainment area as well as changes to the FCAA, §818 attainment demonstration.

On April 15, 2004, the EPA designated the El Paso area attainment for the 1997 eight-hour ozone standard of 0.08 ppm effective June 15, 2004. Monitors in the El Paso area at that time showed attainment of both the one-hour and eight-hour ozone standards.

The EPA's Phase I Implementation Rule for the 1997 eight-hour ozone standard directed that areas designated nonattainment for the one-hour ozone standard, but designated attainment for the 1997 eight-hour ozone standard, submit a maintenance plan for the 1997 eight-hour ozone standard by June 15, 2007. The maintenance plan had to demonstrate that the area was attaining the 1997 eight-hour and the one-hour ozone standards and would continue to attain the 1997 eight-hour ozone standard through 2014; maintenance could be demonstrated by projecting lower nitrogen oxides (NO_x) and volatile organic compounds (VOC) emissions in future years. The plan was required to include ambient air quality monitoring data and analysis, an attainment inventory, and a contingency plan. The TCEQ submitted this maintenance plan to the EPA on January 20, 2006. Effective March 16, 2009, the EPA approved the El Paso 1997 eight-hour ozone maintenance plan SIP revision (74 FR 2387). On October 20, 2010, the EPA published a final rule clarifying the EPA's approval of the 1997 eight-hour ozone maintenance plan regarding the lifting of one-hour ozone serious area anti-backsliding requirements for the El Paso area (75 FR 64675). The EPA determined that the approval of the FCAA, §110(a)(1) maintenance plan for the 1997 eight-hour ozone NAAQS removed the requirement for the continued application of one-hour ozone NAAQS anti-backsliding measures.

1.4 SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT V. EPA

On February 16, 2018, the United States Court of Appeals for the District of Columbia Circuit issued an opinion in the case *South Coast Air Quality Management District v. EPA*, 882 F.3d 1138 (D.C. Cir. 2018). The case was a challenge to the EPA's final 2008 eight-hour ozone standard SIP requirements rule, which revoked the 1997 eight-hour ozone NAAQS as part of the implementation of the more stringent 2008 eight-hour ozone NAAQS. The court's decision vacated parts of the EPA's final 2008 eight-hour ozone standard SIP requirements rule, including the redesignation substitute, removal of anti-backsliding requirements for areas designated nonattainment under the 1997 eight-hour ozone NAAQS, waiving requirements for transportation conformity for maintenance areas under the 1997 eight-hour ozone NAAQS, and elimination of the requirement to submit a second 10-year maintenance plan. The court's vacatur of removal of anti-backsliding requirements for areas designated nonattainment under the 1997 eight-hour ozone NAAQS may also apply to areas that were designated nonattainment under the one-hour ozone NAAQS.

The EPA filed a request for rehearing on the case on April 23, 2018, and the court issued an order on September 14, 2018 denying rehearing but granting a stay of its decision through February 16, 2019 (i.e., 12 months from the date of the original decision) with respect to transportation conformity requirements. In November 2018, the EPA released two documents² for areas directly affected by the court decision. The November 20, 2018 resource document provides states with areas affected by the ruling information on developing redesignation requests and maintenance plans. The November 29, 2018 guidance document addresses transportation conformity requirements for areas directly affected by the court decision. Neither guidance document addresses areas that remain designated nonattainment for the revoked one-hour ozone NAAQS; however, the elements included in this redesignation request and maintenance plan are consistent with the EPA's November 20, 2018 resource document.

1.5 PUBLIC HEARING AND COMMENT INFORMATION

The commission offered a public hearing for this SIP revision on February 19, 2019 at 2:00 p.m. in El Paso at the TCEQ Regional Office. Notice of the public hearing was published in the *Texas Register* as well as the *Austin American-Statesman* and *El Paso Times* newspapers.

The public comment period opened on January 18, 2019 and closed on February 20, 2019. Written comments were accepted via mail, fax, or through the eComments (<https://www6.tceq.texas.gov/rules/ecomments/>) system. During the comment period, staff received comments from Baake Law LLC on behalf of Sierra Club and Familias Unidas del Chamizal, El Paso Equal Voice Network, El Paso Electric Company, Marathon Petroleum Corporation, and two individuals. A summary of the comments and the TCEQ's response is provided as part of this SIP revision in the Response to Comments.

1.6 SOCIAL AND ECONOMIC CONSIDERATIONS

Because rulemaking is not a part of this SIP revision, there are no changes that would impact society or the economy.

1.7 FISCAL AND MANPOWER RESOURCES

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

² *Resource Document for 1997 Ozone NAAQS Areas: Supporting Information for States Developing Maintenance Plans*, released November 20, 2018, and *Transportation Conformity Guidance for the South Coast II Court Decision*, released November 29, 2018.

CHAPTER 2: REDESIGNATION REQUIREMENTS

2.1 INTRODUCTION

Section 107(d)(3)(E) of the Federal Clean Air Act (FCAA) states that an area can be redesignated to attainment if all the following conditions are met.

- The United States Environmental Protection Agency (EPA) has determined that the National Ambient Air Quality Standards (NAAQS) have been attained.
- The applicable implementation plan has been fully approved by the EPA under FCAA, §110(k).
- The EPA has determined that the improvement in air quality is due to permanent and enforceable reductions in emissions.
- The state has met all applicable requirements for the area under §110 and Part D of the FCAA.
- The EPA has fully approved a maintenance plan, including a contingency plan, for the area under FCAA, §175A.

This chapter describes how the El Paso area (El Paso County) meets the FCAA redesignation requirements for the one-hour ozone NAAQS.

2.2 ATTAINMENT OF THE ONE-HOUR OZONE NAAQS

The El Paso area has been attaining the one-hour ozone NAAQS since 1998. This section provides an analysis of air quality observational data in the El Paso area.

2.2.1 Ozone Data

While the ozone NAAQS is expressed in units of parts per million (ppm), the familiar convention of expressing concentrations in parts per billion (ppb) is also used in this section. Data for ozone and nitrogen oxides (NO_x) were retrieved from the EPA's Air Quality System (AQS) database, and volatile organic compounds (VOC) data were retrieved from the Texas Commission on Environmental Quality's (TCEQ) automated gas chromatograph (auto-GC) database. Analyses of ozone data from federal reference method monitors and federal equivalent method monitors, those used by the EPA to compare to the NAAQS, are included in this section.

2.2.2 One-Hour Ozone Trend Analysis

Trends in ozone are used to demonstrate the substantial progress the El Paso area has made in improving air quality. The trends in design values for the one-hour ozone NAAQS in the El Paso nonattainment area are seen clearly in Figure 2-1: *One-Hour Ozone Design Values for the El Paso Area*. The area monitored attainment of 124 ppb (or 0.12 ppm) in 1998 and has since remained in attainment of the standard. The one-hour ozone design value for 2017 was 103 ppb, and the preliminary design value for 2018 is 105 ppb. The design value for the one-hour ozone standard is the 4th highest value, provided that the monitor has three years of completed data. Data has to meet the validity checks of at least 18 valid hours of data to be declared as valid days, at least 75% of days with data to be valid months, at least two months of data for valid quarters, and at least three quarters of data to be declared as a valid year. If one year out of the three-year span does not meet the completeness requirements, then the

design value will be the third highest value of the three-year span. Similarly, if two years out of the three-year span do not meet the completeness requirements, the design value will be the second highest value for that three-year period. If none of the three years meet data completeness requirements, the design value for that three-year period is regarded as missing. Since 1990, the one-hour ozone design value in the El Paso area has shown large decreases over the past 29 years. The preliminary 2018 one-hour ozone design value of 105 ppb represents a 30% decrease from the 1990 design value of 150 ppb.

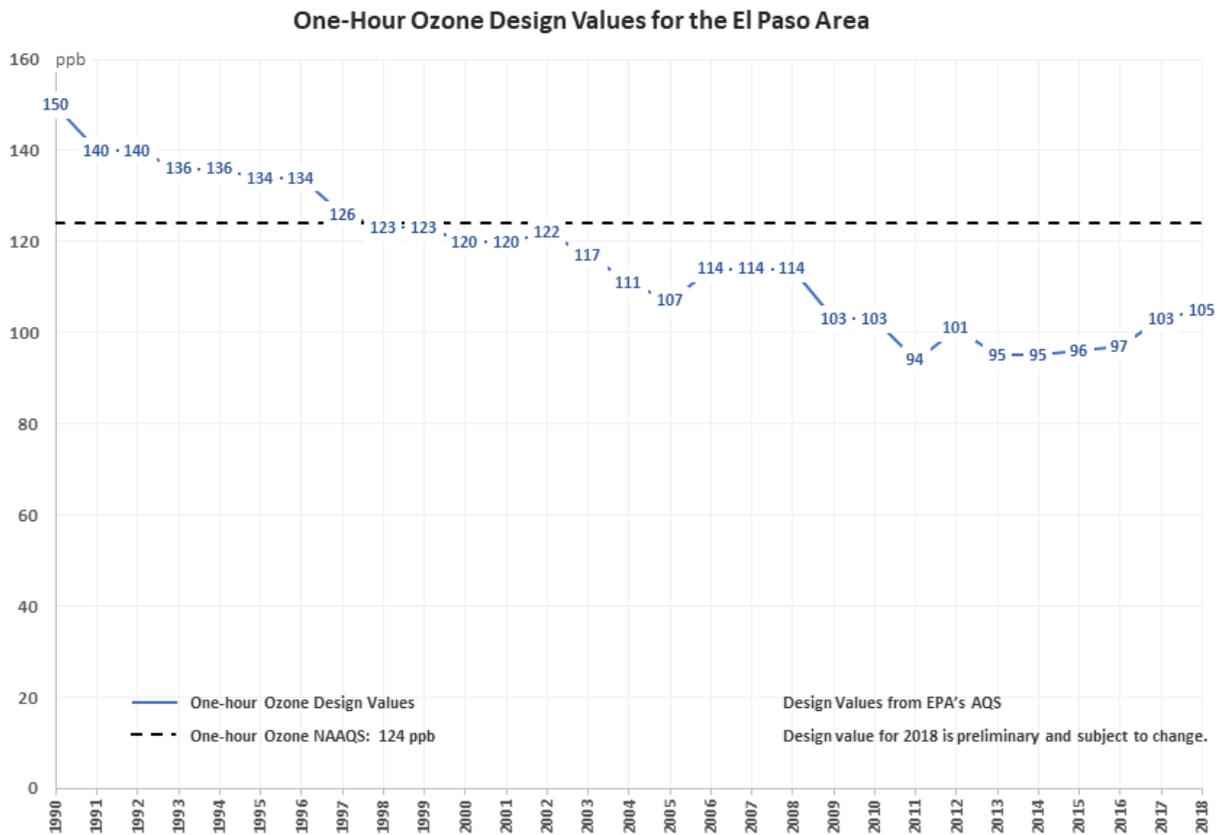


Figure 2-1: One-Hour Ozone Design Values for the El Paso Area

For the one-hour ozone NAAQS, the design value was used to determine the classification of a nonattainment area but was not used for designating an area as attainment or otherwise. Designation is based on the maximum number of expected exceedances over all the monitors in an area.³ To show that the El Paso area no longer violates the one-hour ozone NAAQS, the remainder of this section will be based on

³ The expected exceedances for a monitor is defined as the number of exceedances that occurred in the calendar year plus an increment that accounts for missing data, averaged across three consecutive years (for example, expected exceedances for 2018 is averaged across 2016, 2017, and 2018). The increment is calculated by finding the number of days without an associated ozone measurement that may not be assumed to be less than the standard, multiplied by the number of observed exceedances, then divided by the number of observations. This is done for each year and then averaged across three years to get the expected exceedances for that individual monitor.

expected exceedances calculated as per 40 Code of Federal Regulations (CFR) Part 50, Appendix H.

The expected number of exceedances of record in a metropolitan area is the maximum expected number of exceedances of all the area's regulatory monitors' individual expected number of exceedances. Because ozone concentrations vary spatially, it is also prudent to investigate trends at all regulatory monitors in an area. Table 2-1: *Number of Days per Year with One-Hour Ozone Expected Exceedances by Monitor* contains one-hour ozone expected number of exceedances at all regulatory monitors in the El Paso area from 2000 through 2017. In Table 2-1, "NA" indicates that the monitor was either not active and did not record ozone data or has been deactivated and no longer records ozone data. In that same table, "INC" indicates that the monitor was active that year although it did not have two previous complete years of data available to calculate the three-year average required for the expected exceedances calculation. More monitors than those listed in Table 2-1 operate in the El Paso area, but the expected number of exceedances at those additional monitors are not appropriate for compliance determinations because the monitors' data do not meet the EPA's quality assurance criteria and cannot be used for regulatory purposes. In 2017, all regulatory monitors in the El Paso area had expected exceedances less than the threshold of 1.0 per year.

Table 2-1: Number of Days per Year with One-Hour Ozone Expected Exceedances by Monitor

| Site Name | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
|--|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| El Paso UTEP C12/A125/X151 | 0.3 | 0.7 | 1.0 | 0.7 | 0.3 | 0.3 | 0.3 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Ascarate Park C37/A332/A172/X159 | INC | 0.0 | 0.0 | 0.0 | 0.0 | 0.7 | 0.7 | 0.7 | 0.3 | 0.3 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Chamizal C41/AH126 | 0.3 | 0.7 | 1.0 | 1.0 | 0.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Socorro C49/F312 | INC | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Skyline Park C72 | INC | INC | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Ivanhoe C414 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 | 0.4 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Number of Regulatory Monitors | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |

Figure 2-2: *One-Hour Ozone Expected Exceedance Statistics for All Monitors in the El Paso Area* displays the statistically summarized maximum, median, and minimum one-hour ozone expected number of exceedances averaged across three years computed across all monitors in the El Paso area. Figure 2-2 shows the range of expected number of exceedances averaged across three consecutive years observed at all regulatory monitors as well as how these distributions changed over time. Since 2000, all monitors in the El Paso area have been below the one-hour ozone NAAQS expected number of exceedances of 1.0 days per year. Although not captured on the range covered in Figure 2.2, the last year an El Paso monitor had an expected exceedance greater than 1.0 was 1997.

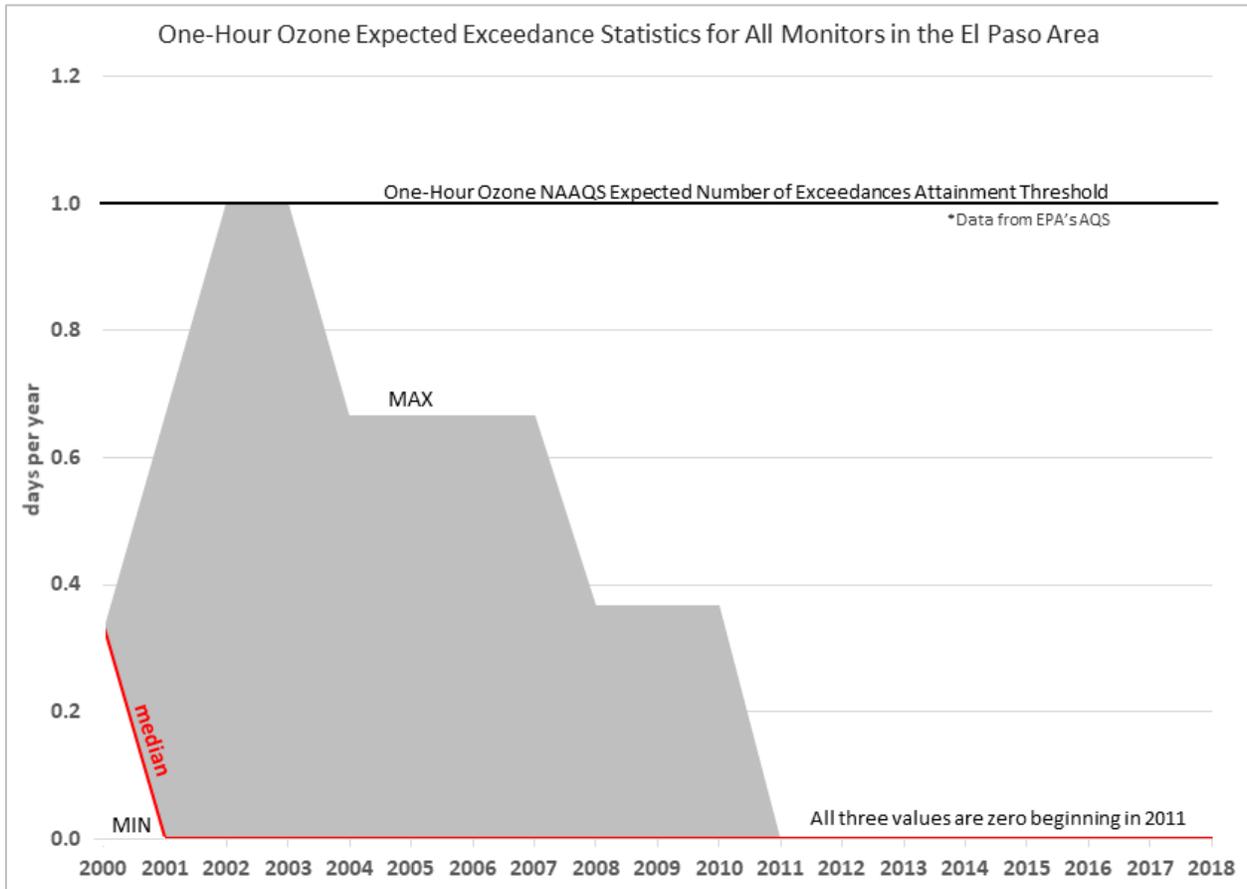


Figure 2-2: One-Hour Ozone Expected Exceedance Statistics for All Monitors in the El Paso Area

2.3 SIP APPROVABILITY UNDER SECTION 110(k) OF THE FCAA

The state implementation plan (SIP) revision for the El Paso area must be fully approved under FCAA, §110(k). This section of the FCAA contains the requirements for SIP completeness, deadlines, full, partial and conditional approval, and disapproval. Approval action on SIP elements and the redesignation request may occur

simultaneously.⁴ For the El Paso one-hour ozone nonattainment area to be redesignated, Texas must meet all applicable requirements of FCAA, §110 and Part D.

2.3.1 Section 110 General SIP Requirements

On October 2, 2007, the EPA requested that states certify that existing SIPs contain infrastructure provisions that address the requirements of the eight-hour ozone NAAQS under FCAA, §110(a)(1) and (2). The TCEQ submitted supporting documentation in an April 4, 2008 letter addressed to the EPA Region 6 Administrator, Richard E. Greene, to fulfill Texas' infrastructure SIP obligations for ozone. The EPA did not require states to make specific certifications regarding the one-hour ozone NAAQS.

The EPA published final approval of Texas' infrastructure submittal in the *Federal Register* (FR) on January 27, 2012 (76 FR 81371) for FCAA, §110(a)(2)(A), (B), (E), (F), (G), (H), (K), (L), (M), and portions of (C), (D)(ii), and (J). On January 6, 2014, the EPA published approval of Texas' public participation requirements for air quality permits (79 FR 551).⁵ On November 10, 2014, the EPA published partial approval of the October 2010 and April 2014 SIP submittals that revise Texas' Prevention of Significant Deterioration (PSD) program to provide for the regulation of greenhouse gas (GHG) emissions and clarify the applicability of best available control technology for all PSD permit applications (79 FR 66626).⁶ The EPA also approved revisions to the New Source Review (NSR) permitting program as consistent with federal requirements for PSD permitting of GHG emissions. Although the EPA originally disapproved portions of the Texas infrastructure SIP for the 1997 eight-hour ozone NAAQS for not containing provisions for the permitting of GHGs, on September 4, 2015 the EPA published a direct final rule in the *Federal Register* to correct the Code of Federal Regulations to reflect that Texas now has a SIP-approved GHG permitting program (80 FR 53467). The rule was effective November 3, 2015.

To address the transport requirements of FCAA, §110(a)(2)(D)(i) for the 1997 eight-hour ozone NAAQS, the commission adopted a SIP revision on April 16, 2008 concerning ozone and fine particulate matter. The EPA originally disapproved Texas' submittal addressing interstate transport requirements of FCAA, §110(a)(2)(D)(i), prongs 1 and 2 and included Texas in the ozone season NO_x trading program under the Cross-State Air Pollution Rule (CSAPR) in 2011 (76 FR 48208). On October 26, 2016, the EPA published the final CSAPR Update Rule for the 2008 eight-hour ozone standard (81 FR 74504). The EPA's modeling showed that emissions from within Texas no longer significantly contribute to downwind nonattainment or interference with maintenance for the 1997 eight-hour ozone NAAQS even without implementation of the original CSAPR NO_x ozone season emissions budget. Accordingly, sources in Texas are no longer subject to the emissions budget calculated to address the 1997 eight-hour ozone NAAQS. However, this rule finalized a new ozone season NO_x emissions budget for Texas to address interstate transport with respect to the 2008 eight-hour ozone NAAQS. This new budget became effective for the 2017 ozone season. To

⁴ Memorandum from John Calcagni, Director of Air Quality Management Division, September 4, 1992, *Procedures for Processing Requests to Redesignate Areas to Attainment*. EPA Office of Air Quality Planning and Standards.

⁵ Approval and Promulgation of Implementation Plans; Texas; Prevention of Significant Deterioration; Greenhouse Gas Tailoring Rule Revisions, 79 FR 66626 (November 10, 2014).

⁶ Approval and Promulgation of Implementation Plans; Texas; Public Participation for Air Quality Permit Applications, 79 FR 551 (January 6, 2014).

address the interstate visibility transport requirement of FCAA, §110(a)(2)(D)(i)(II), prong 4, the EPA determined that the Best Available Retrofit Technology (BART) alternatives to address sulfur dioxide (SO₂) and NO_x BART at Texas' electric generating units (EGU) meet the interstate visibility transport requirements for the 1997 eight-hour ozone NAAQS (82 FR 48324). On December 6, 2018, the EPA published final approval of the Texas infrastructure SIP submittal for FCAA, §110(a)(2)(D)(i)(I) (83 FR 62719) for the 1997 eight-hour ozone NAAQS, concluding that emissions from Texas will not significantly contribute to nonattainment or interfere with maintenance of this standard in any other state. The effective date of the rule is February 4, 2019.

Texas has met all applicable requirements of FCAA, §110.

2.3.2 Part D Requirements

2.3.2.1 One-Hour Ozone Nonattainment Area Requirements

Although the one-hour ozone standard was revoked on June 15, 2005, under the EPA's anti-backsliding rules, areas designated nonattainment for the one-hour standard at the time of the eight-hour designations remained subject to certain control measures that applied due to the one-hour classification as outlined in 40 CFR §51.905(a)(1). At the time of revocation, the El Paso area was classified as serious for the one-hour ozone standard. All one-hour ozone nonattainment area requirements have been met for the El Paso area as listed in Table 2-2: *Status of SIP-Required Elements for the El Paso One-Hour Ozone Nonattainment Area*. All acronyms used in Table 2-2 are defined in the *List of Acronyms* located after the *Table of Contents* in this document.

Table 2-2: Status of SIP-Required Elements for the El Paso One-Hour Ozone Nonattainment Area

| SIP Requirement | Latest EPA Action | Date of Latest Action (Effective Date) | Federal Register (FR) Citation |
|---|-------------------|--|--------------------------------|
| Clean Fuels for Fleets 182(c)(4) ⁷ | Approval | 04/09/2001 | 66 FR 9203 |
| Contingency Measures VOC and NO _x | Approval | 12/10/1998 | 63 FR 62943 |
| Emission Inventory | Approval | 12/08/1994 | 59 FR 55589 |
| Emission Statement | Approval | 10/25/1994 | 59 FR 44036 |
| Enhanced Monitoring (PAMS) | Approval | 12/05/1994 | 59 FR 50502 |
| I/M Enhanced | Approval | 09/21/1994 | 59 FR 43046 |
| Nonattainment NSR rules | Approval | 11/27/1995 | 60 FR 49781 |
| Ozone Attainment Plan UAM | Approval | 08/09/2004 | 69 FR 32450 |
| RACT Fix-ups | Approval | 10/26/1992 | 57 FR 44124 |
| RACT Non-CTG VOC for Major Sources | Approval | 05/08/1995 | 60 FR 12438 |
| RACT NO _x for Major Sources | Approval | 11/21/1994 | 59 FR 60709 |
| RACT VOC CTG Aerospace | Approval | 12/30/1996 | 61 FR 55894 |
| RACT VOC CTG Clean-up Solvents | Approval | 12/30/1996 | 61 FR 55894 |

⁷ The state's approved substitute Clean Fuel Fleets program, satisfying FCAA, §184(c)(4) requirements, was repealed in a rule and SIP revision adopted April 26, 2006 and approved by the EPA effective April 21, 2014 (79 FR 5288).

| SIP Requirement | Latest EPA Action | Date of Latest Action (Effective Date) | Federal Register (FR) Citation |
|--|-------------------|--|--------------------------------|
| RACT VOC CTG Industrial Wastewater ⁸ | Approval | 12/20/2000 | 65 FR 79745 |
| RACT VOC CTG Offset Lithography | Approval | 12/30/1996 | 61 FR 55894 |
| RACT VOC CTG Plastic Parts (Business Machine) | Approval | 12/30/1996 | 61 FR 55894 |
| RACT VOC CTG Plastic Parts (Other) | Approval | 12/30/1996 | 61 FR 55894 |
| RACT VOC CTG Shipbuilding/repair | Approval | 12/30/1996 | 61 FR 55894 |
| RACT VOC CTG SOCOMI Batch | Approval | 08/06/2007 | 72 FR 31457 |
| RACT VOC CTG SOCOMI Distillation and Reactor Processes | Approval | 03/29/1999 | 64 FR 3841 |
| RACT VOC CTG VOL Storage | Approval | 03/29/1999 | 64 FR 3841 |
| RACT VOC CTG Wood Furniture ⁹ | Approval | 05/14/1999 | 64 FR 12759 |
| Stage II or Equivalent ¹⁰ | Approval | 05/16/1994 | 59 FR 17940 |
| VOC 15% Plan | Approval | 06/23/1997 | 62 FR 27964 |
| VOC-NO _x Post96 Rate of Progress | Approval | 08/09/2004 | 69 FR 32450 |

Source: EPA's [Status of SIP Requirements for Texas Designated Areas](https://www3.epa.gov/airquality/urbanair/sipstatus/reports/tx_elembypoll.html#ozone-1hr__1979__291) webpage (https://www3.epa.gov/airquality/urbanair/sipstatus/reports/tx_elembypoll.html#ozone-1hr__1979__291)

2.4 PERMANENT AND ENFORCEABLE EMISSIONS REDUCTIONS

2.4.1 Control Strategies

The El Paso nonattainment area for the one-hour ozone NAAQS, which consists of El Paso County, includes a wide variety of major and minor industrial, commercial, and institutional entities. The TCEQ has implemented stringent and innovative regulations that address emissions of NO_x and VOC from these sources. This section describes existing ozone control measures for the El Paso area.

2.4.2 List of Existing Control Measures

Since the early 1990s, a broad range of control measures have been implemented for each emission source category for ozone planning in the El Paso area. Table 2-3: *Existing Ozone Control Measures Applicable to the El Paso Nonattainment Area* lists the existing ozone control strategies that have been implemented for the one-hour ozone NAAQS in the El Paso area.

⁸ The EPA fully approved industrial wastewater RACT effective December 20, 2000 (65 FR 79745).

⁹ The EPA approved wood furniture surface coating rules effective May 14, 1999 (64 FR 12759).

¹⁰ A SIP revision authorizing the decommissioning of Stage II vapor control equipment was approved by the EPA on March 17, 2014 (79 FR 14611). All decommissioning procedures were complete by August 31, 2018.

Table 2-3: Existing Ozone Control Measures Applicable to the El Paso Nonattainment Area

| Measure | Description | Start Date(s) |
|---|--|---|
| Vehicle Inspection/ Maintenance (I/M) 30 Texas Administrative Code (TAC) Chapter 114, Subchapter C | Yearly two-speed idle testing for pre-1996 vehicles and computer checks for 1996 and newer vehicles | January 1, 2007 in El Paso |
| Oxygenated Gasoline Program 30 TAC 114 Subchapter D | Requires gasoline in El Paso County to contain at least 2.7% oxygen by weight minimum from October 1 to March 31 each year | October 1, 1992 |
| El Paso low Reid vapor pressure (RVP) Program 30 TAC 115 Subchapter C, Div. 5 | Program limits gasoline RVP to 7.0 psi maximum in El Paso County from May 1 to September 16 each year | May 1, 1996 |
| California Gasoline Engines | California standards for non-road gasoline engines 25 horsepower and larger | May 1, 2004 |
| Federal On-Road Measures | Series of emissions limits implemented by the EPA for on-road vehicles | Federal On-Road Measures |
| Federal Area/Non- Road Measures | Series of emissions limits implemented by the EPA for area and non-road sources | Federal Area/Non-Road Measures |
| Refueling - Stage I 30 TAC, Chapter 115, Subchapter C, Division 2 | Captures gasoline vapors that are released when gasoline is delivered to a storage tank Vapors returned to tank truck as storage tank is filled with fuel, rather than released into ambient air | 1985 A SIP revision related to Stage I regulations was approved by the EPA, effective June 29, 2015. |
| VOC Control Measures - Storage Tanks 30 TAC Chapter 115, Subchapter B, Division 1 | Controls on fixed and floating roof tanks storing VOC liquids based on the size of the tank and pressure of liquid being stored Rule was updated to include monitoring requirements for certain vapor control systems | March 1, 2013 and earlier |
| VOC Control Measures - Vent Gas Control 30 TAC Chapter 115, Subchapter B, Division 2 | Control of VOC emissions from process vents on a wide variety of industrial sources | March 21, 1999 and earlier |

| Measure | Description | Start Date(s) |
|---|--|-------------------------------|
| VOC Control Measures - Industrial Wastewater 30 TAC Chapter 115, Subchapter B, Division 4 | Control of VOC emissions from industrial wastewater sources | December 31, 2002 and earlier |
| VOC Control Measures - Municipal Solid Waste Landfills 30 TAC Chapter 115, Subchapter B, Division 5 | Controls for operating any municipal solid waste landfill that exceeds 150 megagrams of calculated non-methane gas concentration | December 31, 2003 and earlier |
| VOC Control Measures - Loading and Unloading of VOCs 30 TAC Chapter 115, Subchapter C, Division 1 | Controls for VOC transfer operations and transport vessels during the loading and unloading of VOC and the disposal of transported vapors | June 25, 2015 and earlier |
| VOC Control Measures - Transport Vessels 30 TAC Chapter 115, Subchapter C, Division 3 | Requirements for inspecting and maintaining records certifying that tank truck tanks carrying gasoline or non-gasoline VOC are vapor tight | February 31, 1993 and earlier |
| VOC Control Measures - Petroleum Refining, Natural Gas Processing, and Petrochemical Processes 30 TAC Chapter 115, Subchapter D, Divisions 1 and 3 | Controls to reduce emissions from steam ejectors and mechanical pumps in petroleum refineries Requirements for VOC component leak detection and repair (LDAR) at a petroleum refinery, natural gas processing operation, or a petrochemical process Rule was updated to explain new requirements for repairs and inspections | June 24, 2010 and earlier |
| VOC Control Measures - Solvent-Using Processes 30 TAC Chapter 115, Subchapter E, Divisions 1-4 | Control of VOC emissions from solvent-using processes: degreasing, surface coating, flexographic and rotogravure printing, and offset lithographic printing | May 18, 2002 and earlier |

| Measure | Description | Start Date(s) |
|--|---|-------------------------------|
| VOC Control Measures - VOC Miscellaneous Industrial Sources 30 TAC Chapter 115, Subchapter F, Divisions 1 and 2 | VOC limits on cutback asphalt and pharmaceutical manufacturing | February 11, 2011 and earlier |
| NO _x Control Measures - Water Heaters, Small Boilers, and Process Heaters 30 TAC Chapter 117, Subchapter E, Division 3 | NO _x emission limits imposed on small-scale water heaters, small boilers, and process heaters less than or equal to 2.0 million British thermal units per hour | June 14, 2007 |
| NO _x Control Measures - Nitric Acid Manufacturing 30 TAC Chapter 117, Subchapter F, Division 3 | NO _x emission limits for nitric acid manufacturing facilities | January 26, 1972 |

2.5 ADDITIONAL MEASURES

This section outlines additional measures that are expected to further reduce ozone levels in the El Paso area.

2.5.1 SmartWay Transport Partnership and the Blue Skyways Collaborative

Among its various efforts to improve air quality in Texas, the TCEQ continues to promote two voluntary programs in cooperation with the EPA: SmartWay Transport Partnership and Blue Skyways Collaborative.

The SmartWay Transport Partnership is a market-driven partnership aimed at helping businesses move goods in the cleanest, most efficient way possible. This is a voluntary EPA program primarily for the freight transport industry that promotes strategies and technologies to help improve fleet efficiency while also reducing air emissions.

There are over 3,700 SmartWay partners in the United States (U.S.), including most of the nation's largest truck carriers, all the Class 1 rail companies, and many of the top Fortune 500 companies. Since its founding in 2004, SmartWay has reduced oil consumption by 215.4 million barrels.¹¹ Between 2009 and 2016, the SmartWay Truck Carrier Partners prevented the release of 1,700,000 tons of NO_x and 70,000 tons of particulate matter into the atmosphere.¹² Approximately 192 Texas companies are SmartWay partners, 25 of which are in the El Paso area.¹³ The SmartWay Transport

¹¹ <https://www.epa.gov/smartway/smartway-program-successes>

¹² <https://www.epa.gov/smartway/smartway-trends-indicators-and-partner-statistics-tips>

¹³ <https://www.epa.gov/smartway/smartway-partner-list>

Partnership will continue to benefit the El Paso area by reducing emissions as more companies and affiliates join and additional idle reduction, trailer aerodynamic kits, low-rolling resistance tire, and retrofit technologies are incorporated into SmartWay-verified technologies.

The Blue Skyways Collaborative was created to encourage voluntary air emission reductions by planning or implementing projects that use innovations in diesel engines, alternative fuels, and renewable energy technologies applicable to on-road and non-road sources. The Blue Skyways Collaborative partnerships include international, federal, state, and local governments, non-profit organizations, environmental groups, and private industries.

2.5.2 Consent Decrees with Refineries

The EPA's National Petroleum Refinery Initiative¹⁴ has resulted in multi-issue settlement agreements with the nation's major petroleum refineries. As of November 2018, 112 refineries representing more than 95% of total domestic refining capacity are under settlement. The EPA consent decrees limit emissions from fluidized catalytic cracking units, sulfur recovery units, heaters and boilers, and flares. The EPA estimates that full implementation of the current settlements will result in more than 95,000 tpy of NO_x emission reductions. The EPA also anticipates VOC emission reductions will result from consent decree requirements that reduce hydrocarbon flaring including:

- installing continuous emissions monitoring systems (CEMS) or predictive emissions monitoring systems;
- operating a flare gas recovery system to control continuous or routine flaring;
- limiting flaring to only process upset gases, fuel gas released as a result of relief valve leakage, or gas released due to a malfunction; and
- eliminating the routes of generated fuel gases and monitoring the flare with CEMS or a flow meter.

Since there is a refinery subject to these consent decrees located in the El Paso area, the commission expects the El Paso area will benefit from the NO_x and VOC emission reductions required by these settlements.

2.5.3 Clean Air Interstate Rule (CAIR) and Cross-State Air Pollution Rule (CSAPR)

In March 2005, the EPA issued CAIR to address EGU emissions that transport from one state to another. The rule incorporated the use of three cap and trade programs to reduce SO₂ and NO_x: the ozone season NO_x trading program; the annual NO_x trading program; and the annual SO₂ trading program.

Texas was not included in the ozone season NO_x program but was included for the annual NO_x and SO₂ programs. As such, Texas was required to make necessary reductions in annual SO₂ and NO_x emissions from new and existing EGUs to demonstrate that emissions from Texas do not contribute to nonattainment or interfere with maintenance of the 1997 particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers (PM_{2.5}) NAAQS in another state. CAIR consisted of two phases for implementing necessary NO_x and SO₂

¹⁴ <https://www.epa.gov/enforcement/petroleum-refinery-national-case-results>

reductions. Phase I addressed required reductions from 2009 through 2014. Phase II was intended to address reductions in 2015 and thereafter.

In July 2006, the commission adopted a SIP revision to address how the state would meet emissions allowance allocation budgets for NO_x and SO₂ established by the EPA to meet the federal obligations under CAIR. The commission adopted a second CAIR-related SIP revision in February 2010. This revision incorporated various federal rule revisions that the EPA had promulgated since the TCEQ's initial submittal. It also incorporated revisions to 30 TAC Chapter 101 resulting from legislation during the 80th Texas Legislature, 2007.

A December 2008 court decision found flaws in CAIR but kept CAIR requirements in place temporarily while directing the EPA to issue a replacement rule. In July 2011, the EPA finalized CSAPR to meet FCAA requirements and respond to the court's order to issue a replacement program. Texas was included in CSAPR for ozone season NO_x, annual NO_x, and annual SO₂ due to the EPA's determination that Texas significantly contributes to nonattainment or interferes with maintenance of the 1997 eight-hour ozone NAAQS and the 1997 PM_{2.5} NAAQS in other states. As a result of numerous EGU emission reduction strategies already in place in Texas, the annual and ozone season NO_x reduction requirements from CSAPR were relatively small but still significant. CSAPR required an approximate 7% reduction in annual NO_x emissions and less than 5% reduction in ozone season NO_x emissions.

On August 21, 2012, the U.S. Court of Appeals for the District of Columbia (D.C.) Circuit vacated CSAPR. Under the D.C. Circuit Court's ruling, CAIR remained in place until the EPA developed a valid replacement.

The EPA and various environmental groups petitioned the Supreme Court of the United States to review the D.C. Circuit Court's decision on CSAPR. On April 29, 2014, a decision by the Supreme Court reversed the D.C. Circuit and remanded the case. On October 23, 2014, the D.C. Circuit lifted the CSAPR stay and on November 21, 2014, the EPA issued rulemaking, which shifted the effective dates of the CSAPR requirements to account for the time that had passed after the rule was stayed in 2011. Phase 1 of CSAPR took effect January 1, 2015 and Phase 2 began January 1, 2017. On July 28, 2015, the D.C. Circuit Court ruled that the 2014 annual SO₂ budgets and the 2014 ozone season NO_x budgets for Texas were invalid because they required over control of Texas emissions, and remanded these budgets back to the EPA without vacatur.

On June 27, 2016, the EPA issued a memorandum outlining the agency's approach for responding to the D.C. Circuit's July 2015 remand of the Phase 2 SO₂ emissions budgets, providing a choice of two paths for states with remanded budgets. Under the first path, states could voluntarily continue to participate in CSAPR at the state's current Phase 2 SO₂ and annual NO_x budget levels through a SIP revision. Under the second path, if a state did not choose to participate in CSAPR, the EPA would initiate rulemaking by fall of 2016 to remove the state's sources from CSAPR's SO₂ and annual NO_x programs and address any remaining interstate transport or regional haze obligations on a state-by-state basis. On November 10, 2016, the EPA published a proposed rule to remove Texas sources from the CSAPR SO₂ and annual NO_x trading programs. The EPA also proposed to determine that, following withdrawal of the federal implementation plan (FIP) requirements, sources in Texas would not contribute

significantly to nonattainment or interfere with maintenance of the 1997 PM_{2.5} NAAQS in any other state and that the EPA would have no obligation to issue new FIP requirements for Texas sources to address transport for the 1997 PM_{2.5} NAAQS (81 FR 78954). The rule was finalized, effective immediately, on September 29, 2017 (82 FR 45481).

On September 7, 2016, the EPA signed the final CSAPR Update Rule for the 2008 eight-hour ozone standard. The EPA's modeling showed that emissions from within Texas no longer significantly contribute to downwind nonattainment or interference with maintenance for the 1997 eight-hour ozone NAAQS even without implementation of the original CSAPR ozone season NO_x emissions budget. Accordingly, sources in Texas are no longer subject to the emissions budget calculated to address the 1997 eight-hour ozone NAAQS. However, this rule finalized a new ozone season NO_x emissions budget for Texas to address interstate transport with respect to the 2008 eight-hour ozone NAAQS. This new budget became effective for the 2017 ozone season, the same period in which the Phase 2 budget that was invalidated by the court was scheduled to become effective.

CSAPR budgets for Texas may be subject to change in the future based on any additional rulemaking to address remanded budgets or changes resulting from further appeals.

2.5.4 Texas Emissions Reduction Plan (TERP)

The TERP program was created in 2001 by the 77th Texas Legislature to provide grants to offset the incremental costs associated with reducing NO_x emissions from high-emitting heavy-duty internal combustion engines on heavy-duty vehicles, non-road equipment, marine vessels, locomotives, and some stationary equipment.

The primary emissions reduction incentives are awarded under the Diesel Emissions Reduction Incentive Program (DERI). DERI incentives are awarded to projects to replace, repower, or retrofit eligible vehicles and equipment to achieve NO_x emission reductions in Texas ozone nonattainment areas and other counties identified as affected counties under the TERP program where ground-level ozone is a concern.

From 2001 through August 2018, \$1,102,232,075 in DERI grants were awarded for projects projected to help reduce an estimated 179,879 tons of NO_x in the period over which emissions reductions are reported for each project under the program. This includes \$3,570,748 going to activities in the El Paso area with an estimated 736 tons of NO_x reduced in the period over which emissions reductions are reported for each project under the program.

Three other incentive programs under the TERP program will result in the reduction in NO_x emissions in the El Paso area.

The Drayage Truck Incentive Program was established in 2013 to provide grants for the replacement of drayage trucks operating in and from seaports and rail yards located in nonattainment areas. The name of this program was recently changed to the Seaport and Rail Yard Areas Emissions Reduction Program, and replacement or repower of cargo handling equipment was added to the eligible projects list. Through August 2018, the program awarded \$6,209,424, with an estimated 362 tons of NO_x

reduced in the period over which emissions reductions are reported for each project under the program. In the El Paso area, the funding totaled \$107,745, with projects estimated to reduce up to 5.5 tons of NO_x in the period over which emissions reductions are reported for each project under the program.

The Texas Natural Gas Vehicle Grant Program (TNGVGP) was established in 2011 to provide grants for the replacement of medium-duty and heavy-duty diesel vehicles with vehicles powered by natural gas. This program may include grants for individual vehicles or multiple vehicles. From 2011 through August 2018, \$42,396,348 in TNGVGP grants were awarded for projects to help reduce an estimated 1,495 tons of NO_x in the period over which emissions reductions are reported for each project under the program. In the El Paso area, \$795,945 in TNGVGP grants were awarded to projects with an estimated 41.4 tons of NO_x reduced in the period over which emissions reductions are reported for each project under the program.

Through fiscal year 2017, TNGVGP required that the majority of the grant-funded vehicles' operation occur in the Texas nonattainment areas, other counties designated as affected counties under the TERP, and the counties in and between the triangular area between Houston, San Antonio, and Dallas-Fort Worth. Legislative changes in 2017 expanded the eligible areas into a new Clean Transportation Zone, to include the counties in and between an area bounded by Dallas-Fort Worth, Houston, Corpus Christi, Laredo, and San Antonio.

2.5.5 Clean School Bus Program

House Bill 3469 (HB 3469), 79th Texas Legislature, 2005, Regular Session, established the Clean School Bus Program, which provides monetary incentives for school districts in the state for reducing emissions of diesel exhaust from school buses through retrofit of older school buses with diesel oxidation catalysts, diesel particulate filters, and closed crankcase filters. As a result of legislative changes in 2017, this program also includes replacement of older school buses with newer, lower-emitting models. Through August 2018, the TCEQ Clean School Bus Program had reimbursed approximately \$37.5 million in grants for over 7,500 retrofit and replacement activities across the state. This amount included \$4.7 million in federal funds. Of the total amount, approximately \$199,062 was used for 25 school bus retrofit projects in the El Paso area.

2.5.6 Local Initiatives

Local strategies in the El Paso area are being implemented by the El Paso Metropolitan Planning Organization (<http://www.elpasompo.org/>), the Joint Advisory Committee (<https://www.cccjac.org/>), and the City of El Paso (<https://www.elpasotexas.gov/environmental-services/air-quality>). Due to the continued progress of these measures, additional air quality benefits are expected to be gained that will further reduce precursors to ground level ozone formation. More information on local measures is available on the websites provided.

2.6 CONTROL STRATEGIES SUMMARY

The permanent and enforceable VOC and NO_x control measures contained in Section 2.4.2: *List of Existing Control Measures* have resulted in air quality improvement in the El Paso area. These enforceable measures will remain in place to ensure continued

maintenance of the one-hour ozone NAAQS in the El Paso area. In addition, Section 2.5: *Additional Measures* lists control measures that may not meet all the EPA's standard tests of SIP creditability (permanent, enforceable, surplus, and quantifiable) but are crucial to the success of the air quality plan in the El Paso area. Implementation of these control measures will contribute to the continued maintenance of the one-hour ozone NAAQS. The TCEQ continues to seek innovative air quality improvement measures and technologies to implement in the El Paso area.

2.7 PERIODIC EMISSIONS INVENTORY

To track progress of the El Paso area toward continued attainment of the one-hour ozone NAAQS, the TCEQ will continue to develop and submit periodic emissions inventories (PEI) to the EPA every three years as required by the Federal Air Emissions Reporting Requirements (AERR) rule. The 2011 inventory was the first PEI submitted under the AERR.

As required by the AERR, the PEIs are reported to the EPA's National Emissions Inventory (NEI) as a comprehensive and detailed estimate of air emissions, including ozone precursors (NO_x and VOC). As directed by the AERR, the Texas PEI includes annual emissions for the entire state. In addition, it contains summer weekday emissions for ozone nonattainment areas and other specified areas in Texas, including the El Paso area. Per the EPA's *Implementation of the 2008 National Ambient Air Quality Standards for Ozone: State Implementation Plan Requirements; Final Rule* (2008 eight-hour ozone standard SIP requirements rule), published in the March 6, 2015 *Federal Register* (80 FR 12264), states can rely on AERR PEI submittals to satisfy ongoing SIP EI submission requirements every three years.

2.8 TREND ANALYSIS FOR OZONE PRECURSORS

Decreases in NO_x and VOC, precursors to ozone formation, demonstrate the effectiveness of control measures in reducing NO_x and VOC emissions, generally support declining ozone values, and indicate that ozone reductions are due to NO_x and VOC emission reductions in the El Paso area; however, ozone may not always exhibit trends identical to its precursors due to other variables such as meteorological conditions. This section evaluates trends in concentrations of NO_x and VOC. Only data that met data completeness checks are used in this section. To meet the completeness check, each day must contain at least 18 valid hours of data, each month must contain at least 75% of days with data, each quarter must have at least two months of data, and each year must contain at least three quarters of data.

NO_x emissions are a variable mixture of nitric oxide and nitrogen dioxide and are critical precursors to ozone formation. As NO_x emissions decrease, ambient concentrations of these compounds should also decrease. NO_x emissions are primarily created by fossil fuel combustion, lightning, biomass burning, and microbial action in soil.

Annual maxima, annual 90th percentile, and annual average daily peak one-hour NO_x values observed in the El Paso area are plotted in Figure 2-6: *Annual Maxima, 90th Percentile and Average of Daily Peak NO_x Values (ppb) in the El Paso Area, 2000 through 2017*. The figure uses a logarithmic scale so that all three statistics are visible, and a linear regression line was added to each statistic. The linear regression line of the

yearly maximum shows a negative slope of 6.78 ppb per year with an r^2 of 0.35, and the regression line of the yearly 90th percentile shows a negative slope of 4.12 ppb per year with an r^2 of 0.73. The linear regression line of the yearly average shows a negative slope of 2.25 ppb per year with an r^2 of 0.81. All three measures have decreased over the 2000 through 2017 period, falling 22.3% (maximum), 36.5% (90th percentile), and 45.1% (mean). Strong downward trends in ambient NO_x concentrations depicted in the emission-trend data are evidence of the effectiveness of emission controls implemented in the El Paso area and would be expected to support declining ozone values, as observed in the El Paso area.

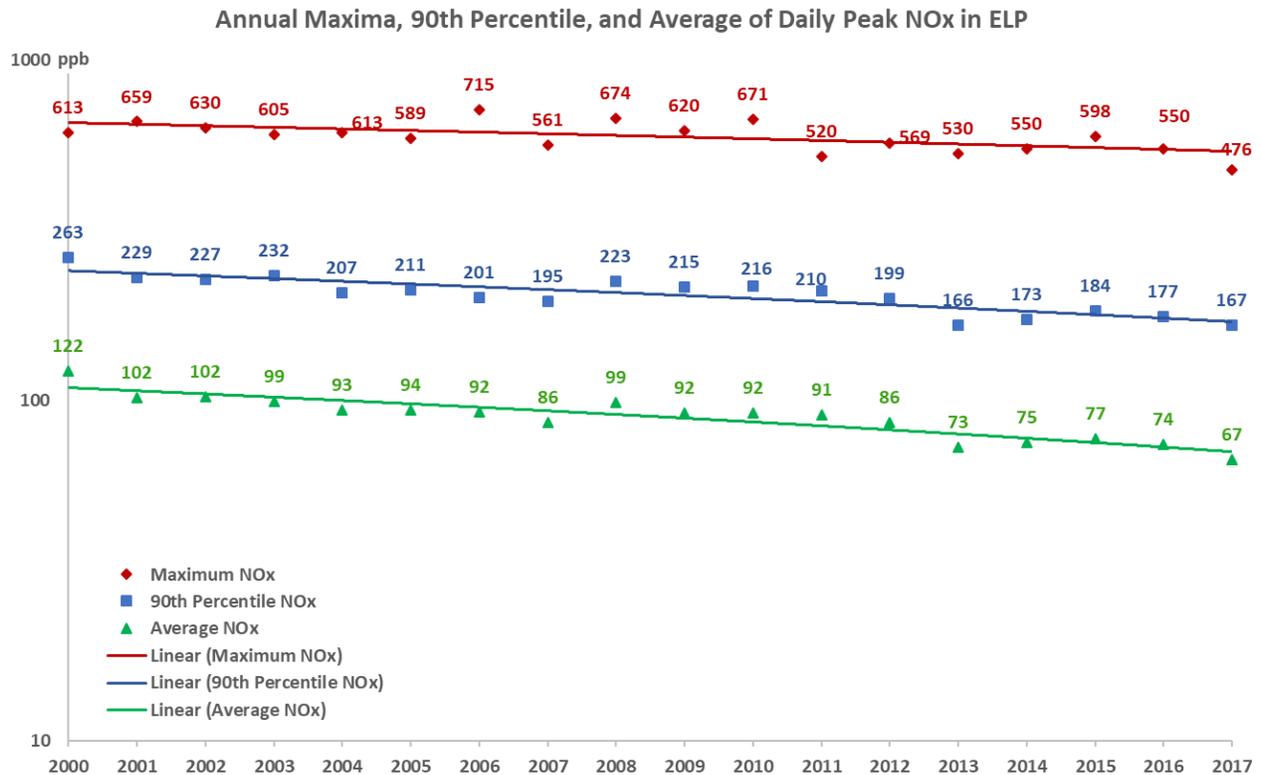


Figure 2-3: Annual Maxima, 90th Percentile and Average of Daily Peak NO_x Values (ppb) in the El Paso Area, 2000 through 2017

The other major class of ozone precursors is VOC. Since the mid-1990s, the TCEQ has collected 40-minute time-integrated measurements in the El Paso area, on an hourly basis, of over 40 VOC compounds using auto-GC instruments. This section will focus on two prevalent VOC compounds that are associated with rapid and efficient ozone formation, ethylene, and propylene. Yearly geometric means were computed from valid ambient hourly measurements. A geometric mean was calculated by taking the natural logarithm of each measurement, averaging these logs, and then calculating the antilog of this mean log value. The geometric mean is a preferable statistic to median or arithmetic (ordinary) mean for evaluating the central tendency of data when the data are skewed, that is, when the data are not symmetrically, or normally, distributed, but instead clustered around extreme high or low values. It is more robust than an ordinary average, meaning its value is not greatly influenced by one or a few very high or very low values. Many distributions of pollutant measurements, especially VOC, in

the El Paso area are skewed, thus the geometric mean was evaluated to provide an assessment of VOC emissions in the El Paso area.

The annual geometric mean of ethylene concentrations in parts per billion by volume (ppbV) is shown in Figure 2-4: *Yearly Geometric Mean Ethylene Concentrations (ppbV) at El Paso Monitors, 2000 through 2017*. Values from 2000, 2008, and 2010, from the El Paso Chamizal auto-GC monitor are not included in this graph because data did not meet completeness checks referenced in this section. However, based on data available for those years, the geometric means were consistent with the overall trend in the graph at 1.85 ppbV in 2000, 0.92 ppbV in 2008, and 0.82 ppbV in 2010. Only one year (2012) had data that met completeness checks for the El Paso Delta auto-GC monitor. While trends are variable from year-to-year, the geometric mean ethylene concentration at the auto-GC monitor with more than one year of data meeting completeness checks has decreased since 2001 and remained relatively flat from 2013 through 2017.

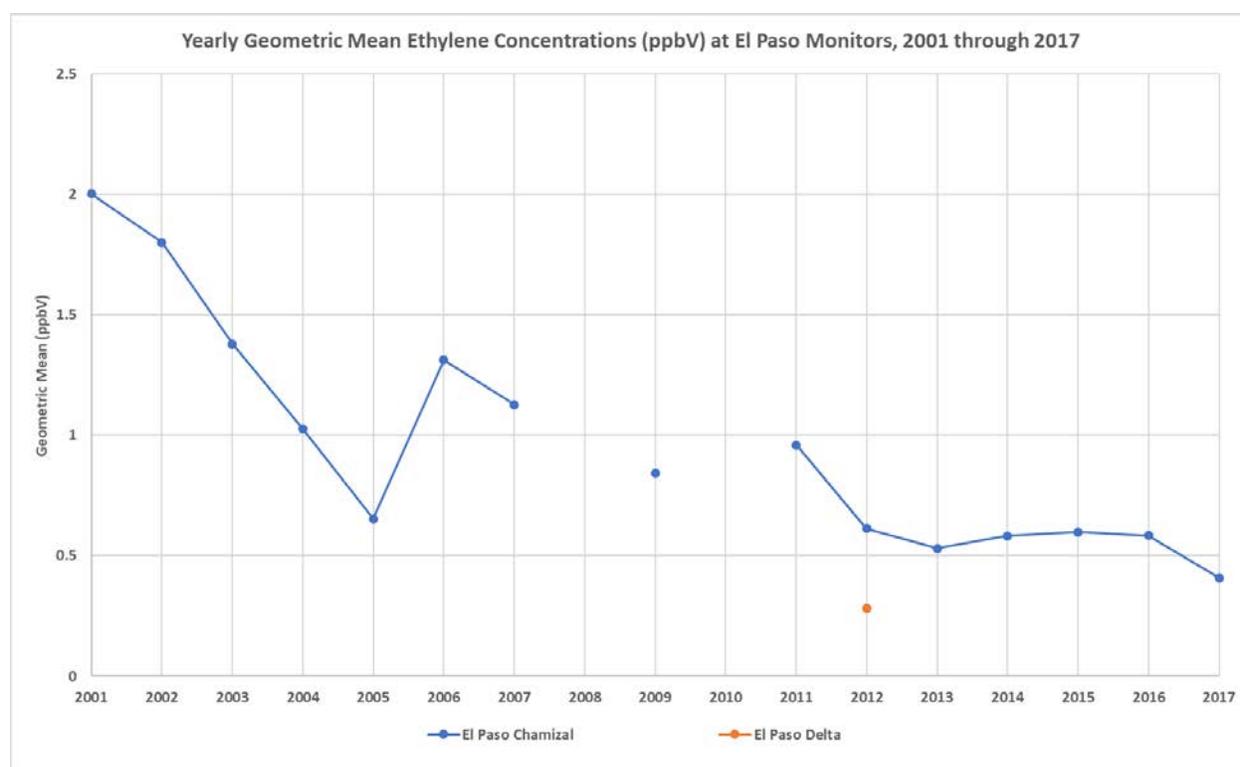


Figure 2-4: Yearly Geometric Mean Ethylene Concentrations (ppbV) at El Paso Monitors, 2001 through 2017

Figure 2-5: *Yearly Geometric Mean Propylene Concentrations (ppbV) at El Paso Monitors, 2001 through 2017* shows the annual geometric mean for propylene. Similar to ethylene measurements, only the Chamizal monitor has data meeting completeness checks, established in this section, for multiple years from 2001 through 2017. Values from 2000, 2008, and 2010, from the El Paso Chamizal monitor are not included in this graph because data did not meet completeness checks. However, based on data available for those years, the geometric means were consistent with the overall trend in the graph at 0.75 ppbV in 2000, 0.36 ppbV in 2008, and 0.29 ppbV in 2010. Only one year (2012) had data that met completeness checks for the El Paso Delta auto-GC

monitor. Note that the y-axis is not the same as in Figure 2-4. The geometric means for propylene are lower than the geometric means for ethylene for all the years, with the geometric mean propylene concentration in the El Paso area in 2017 below 0.3 ppbV. Geometric mean propylene concentrations have decreased since the first available value in 2001. From 2009 through 2017, the trend has been relatively flat except for a spike in value in 2014. Though decreasing at different rates, these long-term decreases in ambient concentrations of ethylene and propylene suggest overall industrial and automobile emissions of these compounds have decreased considerably since 2001.

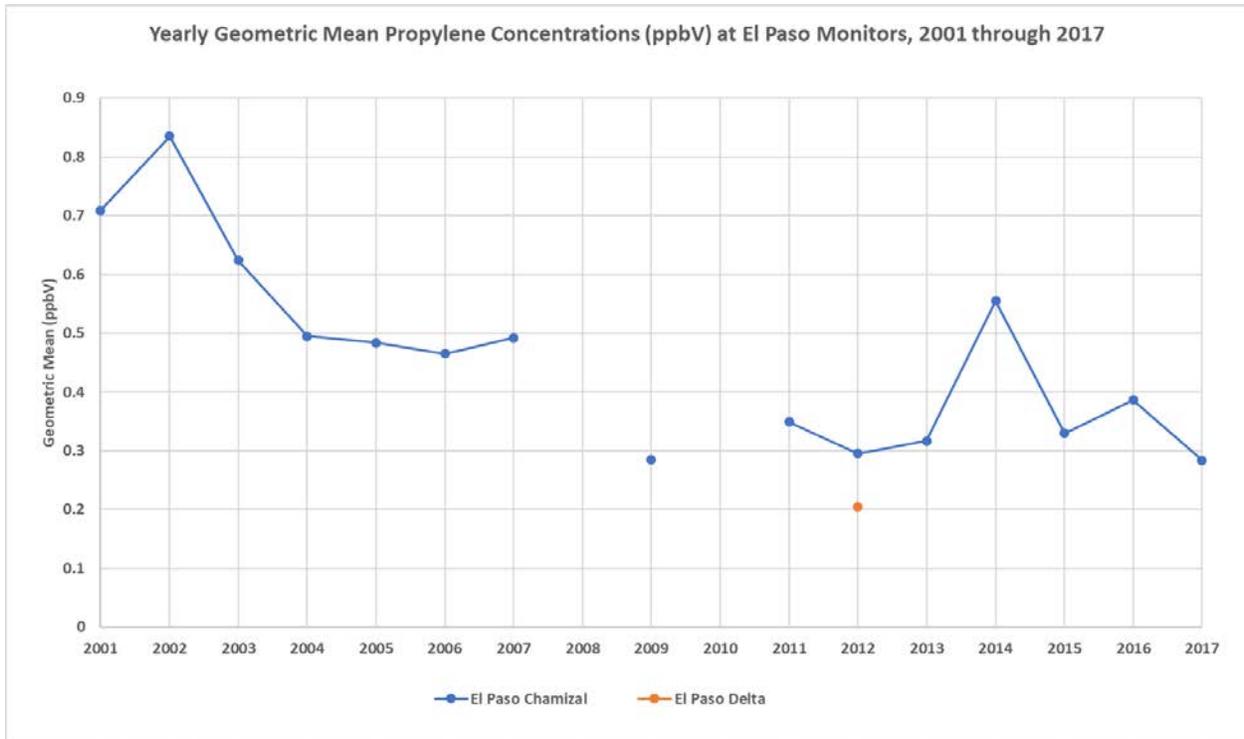


Figure 2-5: Yearly Geometric Mean Propylene Concentrations (ppbV) at El Paso Monitors, 2001 through 2017

2.9 SECTION 175A REQUIREMENTS FOR MAINTENANCE PLANS

The remainder of this SIP revision fulfills the maintenance requirements in Section 175A of the FCAA and contains the following elements:

- attainment inventory;
- maintenance demonstration;
- verification of continued attainment;
- monitoring network;
- motor vehicle emissions budget; and
- contingency plan.

CHAPTER 3: MAINTENANCE DEMONSTRATION

3.1 GENERAL

This El Paso Redesignation Request and Maintenance Plan State Implementation Plan (SIP) revision demonstrates that the El Paso area (El Paso County) will remain in attainment of the one-hour ozone National Ambient Air Quality Standard (NAAQS) for the 10-year period following the date that the El Paso area is redesignated to attainment by the United States Environmental Protection Agency (EPA). Since redesignation is contingent upon the EPA's approval of this plan, the Texas Commission on Environmental Quality (TCEQ) has set a horizon year of 2032. Setting the horizon year at 2032 allows adequate time for EPA review and approval of the plan and redesignation of the El Paso area to attainment. The maintenance demonstration is satisfied if the state demonstrates that future volatile organic compounds (VOC) and nitrogen oxides (NO_x) emission levels are not expected to result in exceedances of the one-hour ozone NAAQS.

The year 2014 was chosen as the base year for the analyses presented in this chapter because it is a year in which the El Paso area is attaining the one-hour ozone NAAQS and due to periodic emissions inventory (PEI) data availability. At the time of this El Paso redesignation request and maintenance plan SIP revision adoption, the calendar year 2014 PEI was the most recent periodic inventory available. The calendar year 2014 PEI for the El Paso area was developed in accordance with the EPA's Air Emissions Reporting Requirements (AERR) (40 Code of Federal Regulations Part 51, Subpart A).

Additionally, the 13 years prior to and including the 2014 base year (2002 through 2014) were analyzed to develop historical trend data. During this time, the El Paso-area emissions inventory (EI) showed a significant decrease in ozone precursor emissions, which contributed to the attainment of the one-hour ozone NAAQS. These reductions were accomplished through a variety of federal, state, and local regulations and programs as detailed in Section 3.2: *Historical Emissions Inventory Trends*.

3.2 HISTORICAL EMISSIONS INVENTORY TRENDS

For the historical period 2002 through 2014, overall anthropogenic ozone precursor emissions in the El Paso area declined substantially due to regulations implemented at the federal, state, and local levels and innovative programs implemented by the TCEQ. As demonstrated in Figure 3-1: *El Paso Area Historical NO_x Emissions Trends* and Figure 3-2: *El Paso Area Historical VOC Emissions Trends*, anthropogenic VOC emissions have decreased 14%, and anthropogenic NO_x emissions have decreased 44%. Both 30 Texas Administrative Code (TAC) Chapter 115: *Control of Air Pollution from Volatile Organic Compounds* and 30 TAC Chapter 117: *Control of Air Pollution from Nitrogen Compounds* regulations have contributed to overall ozone precursor emissions reductions at major and/or minor (point and area) industrial, commercial, and institutional sources in the El Paso area. Additionally, innovative emissions reduction programs such as the Texas Emissions Reduction Plan have also contributed to emissions reductions from mobile sources, the primary source of NO_x emissions in the El Paso area.

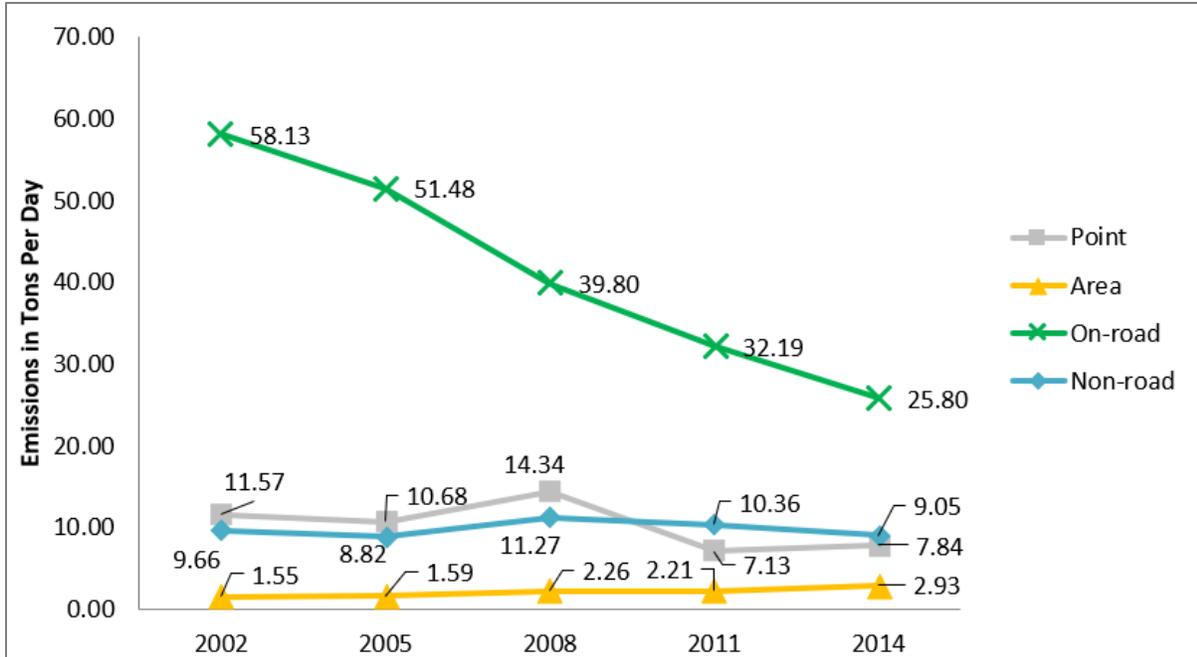


Figure 3-1: El Paso Area Historical NO_x Emissions Trends

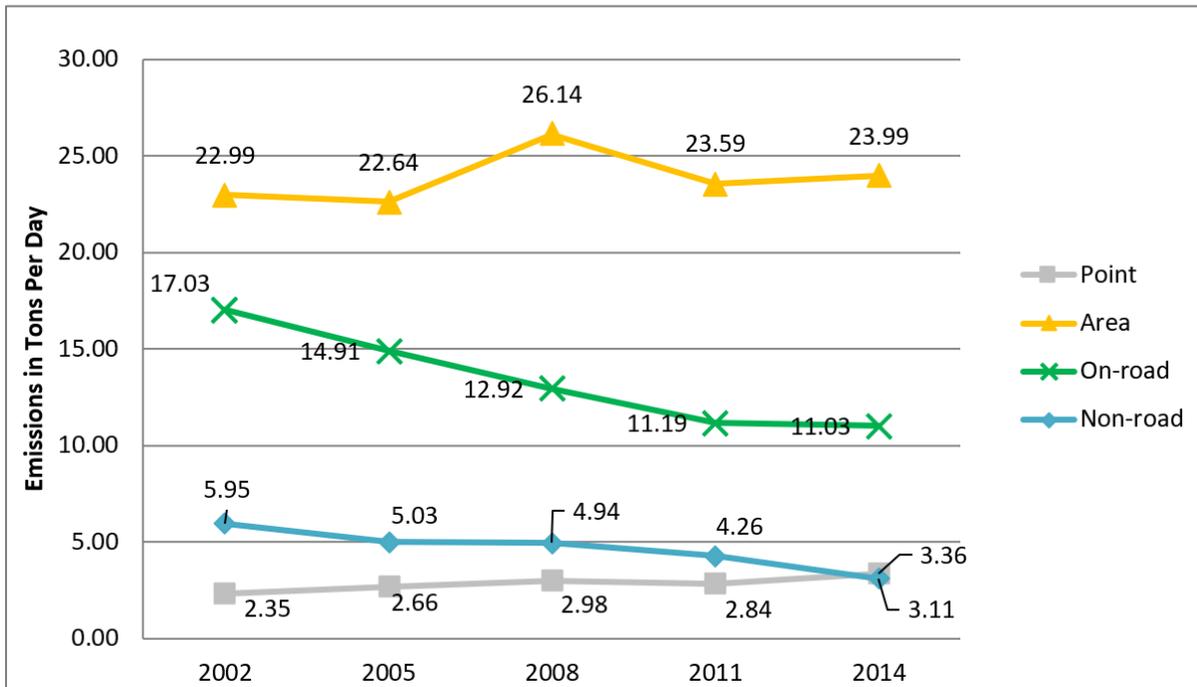


Figure 3-2: El Paso Area Historical VOC Emissions Trends

3.3 ATTAINMENT INVENTORY BASE YEAR

The 1990 Federal Clean Air Act Amendments require that EIs be prepared for ozone nonattainment areas. Because ozone is photochemically produced in the atmosphere when VOC mixes with NO_x in the presence of sunlight, the TCEQ must compile information on the sources of these precursor pollutant emissions. The EI must

identify the source types present in an area, the amount of each pollutant emitted, and the types of processes and control devices employed at stationary sources or other source categories. The EI provides data for a variety of air quality planning tasks, including establishing baseline emission levels, calculating reduction targets, control strategy development for achieving the required emission reductions, emission inputs into air quality simulation models, and tracking actual emission reductions against the established emissions growth and control budgets.

The 2014 base year EI for the El Paso area is based on the VOC and NO_x emissions that occur on a typical summer weekday. Consistent with the September 4, 1992 EPA memorandum entitled *Procedures for Processing Requests to Redesignate Areas to Attainment*, the attainment EI base year may be any one of the three years used to determine the design value for the attainment year. For this El Paso redesignation and maintenance SIP revision, the attainment EI base year is 2014. The total VOC and NO_x EI for the El Paso area is summarized from the estimates developed for four general categories of anthropogenic emissions sources, which are each explained in Section 3.4.1: *Area Sources*, Section 3.4.2: *On-Road Mobile Sources*, Section 3.4.3: *Non-Road Mobile Sources*, and Section 3.4.4: *Stationary Point Sources*. Summaries of the 2014 VOC and NO_x emissions by source type are provided in Section 3.4.5: *Emissions Summary*.

3.4 FUTURE EMISSIONS AND VERIFICATION OF CONTINUED ATTAINMENT

This SIP revision demonstrates continued attainment using the method outlined in the EPA's redesignation guidance.¹⁵ Future emissions for the El Paso area were projected from the base year EI (2014) to a future year (horizon year) of 2032. Projecting emissions to 2032 aligns with the EPA's requirement of maintenance plans to demonstrate attainment for a 10-year period following the date of redesignation. The requirement for demonstration of continued attainment is satisfied when the state demonstrates that future VOC and NO_x emissions levels are not expected to result in exceedances of the one-hour ozone NAAQS. To track progress of the El Paso area toward continued attainment of the one-hour ozone NAAQS, the TCEQ will continue to develop and submit PEIs to the EPA every three years as required by the AERR rule.

Future emissions were projected to the horizon year 2032 using six-year intervals to align interim years with AERR PEI years as appropriate. A summary of the base year inventory and the future year inventories for ozone precursor emissions is presented in Section 3.4.5.

3.4.1 Area Sources

Stationary emissions sources that do not meet the reporting requirements 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 typical VOC emissions sources 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 sources that emit NO_x

¹⁵ Memorandum from John Calcagni, Director of Air Quality Management Division, September 4, 1992, *Procedures for Processing Requests to Redesignate Areas to Attainment*. USEPA Office of Air Quality Planning and Standards.

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 multiplying an established 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.

3.4.1.1 Updated 2014 Base Year Inventories

The updated 2014 base year EI was developed from the 2014 AERR PEI. The 2014 PEI was created using a combination of methods and data according to AERR requirements: EPA-generated EIs; TCEQ-contracted projects; TCEQ staff projects; and categories grown from the 2011 EI using factors derived from data compiled by Eastern Research Group (ERG), the [Moody's Analytics Economy.com](http://www.economy.com) website (<http://www.economy.com/default.asp>), and the United States Energy Information Administration's (EIA) annual energy outlook publication. The documentation for the development of the ERG growth factors can be found in Appendix A: *Growth Factors for Area and Point Sources*.

The EPA develops EIs for states to use for many source categories. The states access these individual EIs through the [EPA's National Emissions Inventory \(NEI\)](ftp://ftp.epa.gov/EmisInventory/2014/doc/) website (<ftp://ftp.epa.gov/EmisInventory/2014/doc/>). For some source categories, the TCEQ developed state-specific emissions estimates by acquiring state-specific activity data and applying appropriate emissions factors. These source categories include but are not limited to: storage tanks, structural fires, dry cleaners, and automobile fires.

In particular, the TCEQ focused on refining the industrial, commercial, and institutional (ICI) combustion area source categories. The improvements included the development and refinement of a state-specific ICI combustion area source emissions calculator. This ICI combustion area source emissions calculator improves upon the EPA ICI Combustion Tool by using Texas-specific calculations and allocation factors. The documentation for the development of the ICI combustion emissions calculator can be found in Appendix B: *Industrial, Commercial, and Institutional Fuel Use Study*.

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

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

3.4.1.2 Updated Interim Years Inventories

The updated interim years (2020 and 2026) and horizon year (2032) EIs for the area source categories were developed using projection factors from Appendix A. The ERG-derived factors contain individual growth factors for each category and for each forecasting year. This projection method is the EPA standard and accepted method for developing future year EIs.

3.4.1.3 Area Source Emissions Inventories

The area source NO_x and VOC 2014, 2020, 2026, and 2032 emissions totals for the El Paso area are summarized in Table 3-1: *El Paso Area NO_x and VOC Emissions for Area Sources (tons per day)*.

Table 3-1: El Paso Area NO_x and VOC Emissions for Area Sources (tons per day)

| Pollutant | 2014 | 2020 | 2026 | 2032 |
|-----------------|-------|-------|-------|-------|
| NO _x | 2.93 | 3.00 | 3.11 | 3.18 |
| VOC | 23.99 | 27.11 | 29.22 | 31.54 |

3.4.2 On-Road Mobile Sources

On-road mobile emission sources consist of automobiles, trucks, motorcycles, and other motor vehicles traveling on public roadways. On-road mobile source emissions are usually categorized as either 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 on the vehicle. To calculate emissions, both the rate of emissions per unit of activity (emissions factors) and the number of units of activity must be determined. The emissions factors for on-road mobile sources are determined using models developed and approved by the EPA. The models allow for input of local conditions and vehicle characteristics. The activity information corresponding to the emissions factors is obtained using local travel demand models (TDM), the output from the highway performance monitoring system, and speed models.

In March 2010, the EPA released the Motor Vehicle Emissions Simulator (MOVES) model as the official emissions factor model for developing on-road mobile source category EIs. Although MOVES represented a new approach to assessing on-road emissions, the sources are the same, and the opportunity to use local inputs for meteorological conditions, control programs, and fleet characteristics remains. When using MOVES in emission-rates mode, emission rates are produced for subsets of the on-road fleet, and the emission rates are multiplied by the activity level of each vehicle type or source-use type to calculate emissions.

The on-road mobile source category EIs for this SIP revision were developed using the latest version of the MOVES model that is available, MOVES2014a¹⁶. The TCEQ, working with the Texas A&M Transportation Institute (TTI), recently completed MOVES2014a-based 2014, 2020, 2026, and 2032 on-road EIs for the El Paso area. The local planning

¹⁶ Specifically, the version of MOVES2014a update used in this analysis is the EPA's November 2016 version. For on-road emissions inventory development, this is technically the most recent on-road release. The more recent December 2017 MOVES2014a update does not change the on-road model, but only updates non-road post-processors.

assumptions, fleet characteristics, and vehicle miles traveled (VMT) estimates were updated to incorporate the latest available information at the time the EIs were developed.

To estimate on-road mobile source emissions, emissions rates calculated by the MOVES model are multiplied by the level of vehicle activity. On-road mobile source emissions factors are expressed in units of grams per mile, grams per vehicles (evaporative), and grams per hour (extended idle mode); therefore, the activity data required to complete the emissions calculations are VMT in units of miles per day, vehicle populations, truck hoteling activity, and idling hours. The level of vehicle travel activity is developed using a TDM run by the Texas Department of Transportation or by the local metropolitan planning organization. The TDMs are validated against a large number of ground counts, i.e., traffic passing over counters placed in various locations throughout a county or area. For SIP and reporting EIs, VMT estimates are calibrated against outputs from the federal highway performance monitoring system (HPMS), a model built from a different set of traffic counters. Vehicle populations by source type are derived from the Texas Department of Motor Vehicle 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 used to complete an on-road EI. Roadway speeds, required inputs for the MOVES model, are calculated by using the activity volumes from the TDM and a post-processor speed model.

3.4.2.1 On-Road Mobile Source Emissions Inventories

The 2014, 2020, 2026, and 2032 on-road mobile source EIs were developed using the latest available data, current emissions factors and models, and the most current planning assumptions. The EIs include El Paso County and were recently developed under contract by the TTI.

Consistent with on-road EI development procedures for the AERR PEI, reasonable further progress demonstrations, and maintenance plans, the on-road EIs for each of these calendar years are based on VMT estimates and emissions rates for an average summer weekday. MOVES2014a, which is the latest available version of the EPA's MOVES model, was used to estimate the summer weekday emission rates in units of grams per mile for NO_x and VOC.

Two methods are used to establish VMT: the HPMS federal system; and a TDM local system. For historical years, the HPMS data constitutes the official measurement of highway performance, including VMT. The TDM represents the best method for distributing VMT to the roadway links within the local travel network and for predicting future year VMT. To provide consistency between the estimates for the two systems, the TDM-forecasted VMT estimates are adjusted using a VMT ratio based on an historical year for which the TDM was validated and the HPMS data has been made available. The 2014 VMT is based upon historical HPMS VMT data. The HPMS data was not available for any of the future years; therefore, the VMT for these years was forecast using the El Paso TDM and adjusted using the 2012 HPMS-to-TDM VMT ratio. A summary of the on-road mobile source VMT used as one of the inputs to the MOVES2014a post-processing utilities to estimate the NO_x and VOC emissions is presented in Table 3-2: *El Paso Area VMT (miles per average summer weekday)*.

Table 3-2: El Paso Area VMT (miles per average summer day)

| Year | Vehicle Miles Traveled |
|------|------------------------|
| 2014 | 15,369,706 |
| 2020 | 18,593,117 |
| 2026 | 20,037,734 |
| 2032 | 21,452,418 |

The El Paso area on-road mobile source 2014, 2020, 2026, and 2032 emissions for NO_x and VOC are summarized in Table 3-3: *El Paso Area Average Summer Weekday NO_x and VOC Emissions for On-Road Mobile Sources (tons per day)*. For complete documentation of the development of the on-road mobile source EIs for this SIP revision including the inventory development methods, MOVES inputs, and the results, refer to Appendix C: *El Paso Redesignation and Maintenance On-Road Mobile Emissions Inventories*. The complete set of input and output files are available from the TCEQ Air Quality Division upon request.

Table 3-3: El Paso Area Summer Weekday NO_x and VOC Emissions for On-Road Mobile Sources (tons per day)

| Pollutant | 2014 | 2020 | 2026 | 2032 |
|-----------------|-------|-------|-------|------|
| NO _x | 25.80 | 16.58 | 10.38 | 7.46 |
| VOC | 11.03 | 8.16 | 5.91 | 4.13 |

3.4.2.2 On-Road Mobile Source Control Strategies

The on-road mobile EIs for each analysis year were developed using MOVES2014a emissions factors that reflect all control strategies used to demonstrate maintenance of the one-hour ozone NAAQS. The controls that were modeled include: pre-1990 Federal Motor Vehicle Control Program (FMVCP), fleet turnover to Tier 1 of the FMVCP, fleet turnover to Tier 2 of the FMVCP, the 2007 heavy-duty diesel FMVCP, fleet turnover to Tier 3 of the FMVCP, the lower sulfur gasoline associated with Tier 3 FMVCP, National Low Emission Vehicle (NLEV) program, the El Paso Low Reid Vapor Pressure (RVP) Program, the El Paso vehicle inspection and maintenance (I/M) program, and the Texas Motorist Choice I/M program. A summary of the El Paso on-road mobile source control strategies used for this SIP revision is presented in Table 3-4: *El Paso Area On-Road Mobile Control Strategies Summary*.

Table 3-4: El Paso Area On-Road Mobile Control Strategies Summary

| Control Program Description | Year Control Program Started | Control Scenario Notes |
|--|------------------------------|--|
| Pre-1990 FMVCP | Pre-1990 | Included for 2014, 2020, 2026, and 2032 |
| El Paso I/M Program | 1987 | Superseded by Texas Motorist Choice Program |
| 1992 Federal Controls on Gasoline Volatility | 1992 | Maximum RVP of 7.8 pounds per square inch Superseded by El Paso Low RVP Program |
| Tier 1 FMVCP | 1994 | Included for 2014, 2020, 2026, and 2032 |
| El Paso Low RVP Program | 1996 | Maximum RVP of 7.0 pounds per square inch El Paso County Included for 2014, 2020, 2026, and 2032 |

| Control Program Description | Year Control Program Started | Control Scenario Notes |
|--|------------------------------|--|
| Texas Motorist Choice I/M Program | 1997 | El Paso County Included for 2014, 2020, 2026, and 2032 |
| NLEV Program | 2001 | Included for 2014, 2020, 2026, and 2032 |
| Tier 2 FMVCP | 2004 | Phased in from 2004 to 2009 Included for 2014, 2020, 2026, and 2032 |
| Federal Low-Sulfur Highway Diesel | 2006 | 15 parts per million (ppm) maximum sulfur content Included for 2014, 2020, 2026, and 2032 |
| 2007 Heavy-Duty FMVCP | 2007 | Phased in from 2007 to 2010 Included for 2014, 2020, 2026, and 2032 |
| Tier 3 FMVCP | 2017 | Will be phased in from 2017 to 2025 |
| Lower sulfur gasoline associated with Tier 3 FMVCP | 2017 | 10 ppm maximum for sulfur |

3.4.2.3 On-Road Mobile Source Control Strategy Reductions

Due to the on-road mobile source control programs in place for each analysis year in conjunction with fleet turnover, the on-road NO_x and VOC emissions are steadily decreasing from the base year of 2014 to each interim year and the 2032 horizon year despite projected VMT growth for years 2020, 2026, and 2032. A summary of the tons per day (tpd) change from the 2014 base year to each interim year and the horizon year are summarized in Table 3-5: *Estimated Reductions from 2014 Baseline Due to FMVCP, I/M, and Low RVP (tons per day)*. A summary of the percent change in NO_x and VOC from the 2014 base year to each interim year and the horizon year are summarized in Table 3-6: *Estimated Percent Reductions from 2014 Baseline Due to FMVCP, I/M, and Low RVP*.

Table 3-5: Estimated Reductions from 2014 Baseline Due to FMVCP, I/M, and Low RVP (tons per day)

| Inventory Year | NO _x (tons per day) | VOC (tons per day) |
|----------------|--------------------------------|--------------------|
| 2014 | 0 | 0 |
| 2020 | -9.22 | -2.87 |
| 2026 | -15.42 | -5.12 |
| 2032 | -18.34 | -6.90 |

Table 3-6: Estimated Percent Reductions from 2014 Baseline Due to FMVCP, I/M, and Low RVP

| Inventory Year | NO _x Percent Reductions | VOC Percent Reductions |
|----------------|------------------------------------|------------------------|
| 2014 | 0 | 0 |
| 2020 | -35.74 | -26.02 |
| 2026 | -59.77 | -46.42 |
| 2032 | -71.09 | -62.56 |

3.4.3 Non-Road Mobile Sources

Non-road mobile sources do not typically operate on roads or highways and are often referred to as off-road or off-highway vehicles. Non-road emissions sources include but are not limited to: agricultural equipment, construction and mining equipment, lawn and garden equipment, aircraft and airport equipment, locomotives, commercial marine vessels (CMV), and drilling rigs. EI development for non-road mobile sources is customized for each specific non-road subcategory; these subcategories include: NONROAD model categories, airports, CMVs, drilling rigs, and locomotives. CMV and oil and gas drilling rig activities do not apply to the El Paso area; therefore, El Paso County will have no emissions from CMV and oil and gas drilling rig activities. The following sections describe the emissions calculation methods used for the non-road mobile source subcategories.

3.4.3.1 Updated 2014 Base Year Inventories

A Texas-specific version of the EPA's latest NONROAD 2008a model, called the Texas NONROAD (TexN) model, (version 1.7.1), was used to calculate the 2014 EI for all non-road mobile source equipment and recreational vehicles (referred to as "NONROAD model categories"), except for airports and locomotives. Because emissions from airports and locomotives are not included in either the NONROAD model or the TexN model, the emissions for these categories are estimated using other EPA-approved methods and guidance as described in the sections below.

Several equipment survey studies have been conducted 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 are used as inputs to the TexN model to more accurately estimate non-road emissions for the State of Texas instead of using the national default values in the EPA's NONROAD 2008a model.

The 2014 airport EI was developed from a TCEQ-commissioned study using two different approaches. When aircraft-specific data were available, the Federal Aviation Administration's (FAA) Emission and Dispersion Modeling System (EDMS) model was used. If detailed data were not available, then a more general approach employing EPA-developed procedures was used to estimate emissions by aircraft type (i.e., air taxis, general aviation, and military aircraft). The airport emissions categories used for this SIP revision included aircraft (commercial air carriers, air taxis, general aviation, and military), auxiliary power units (APU), and ground support equipment (GSE) operations. Documentation of methodology and procedures used to develop the El Paso area 2014 airport emissions inventory can be found in Appendix D: *Aircraft Emissions Inventory for Texas Statewide 2014 AERR Inventory and 2008 through 2040 Trend Analysis Years*.

The 2014 locomotive EI was developed from a TCEQ-commissioned study using standard EPA EI development methods. The 2014 locomotive EI includes line haul and yard emissions activity data from all Class I, II, and III locomotive activity and emissions by rail segment. Documentation of methods and procedures used to develop the locomotive EI can be found in Appendix E: *2014 Texas Statewide Locomotive Emissions Inventory and 2008 through 2040 Trend Inventories*.

3.4.3.2 Updated Interim Years Emissions Inventories

The updated interim year EIs for the NONROAD model categories were developed using the latest version of the TexN model (version 1.7.1), which incorporates all the latest available data updates. Average summer weekday emissions were developed for VOC and NO_x for the analysis years 2020, 2026, and 2032. The TexN model contains unique population files for all 254 Texas counties that have been developed for every analysis year (1970 to 2050) within the TexN model, using county and source category classification-specific growth factors. Due to fluctuations in engine activity and their associated surrogates, the TexN population files are periodically updated using the most recent growth factors such as those available on the [Moody's Analytics Economy.com](https://www.economy.com) website (<https://www.economy.com>) to support more accurate forecasting and back-casting of emissions.

The updated interim year EIs for airport emissions categories were developed by applying growth factors from the FAA's Terminal Area Forecast (TAF) dataset to the activity data used to generate the 2014 EI. Documentation on the development of growth factors can be found in Appendix D.

The updated interim year trend EIs for locomotive sources were developed from 2014 data by applying activity adjustment factors to each source classification code, and by adjusting emissions factors as detailed in Appendix E. The emissions factor adjustments were obtained from the EPA's [Emission Factors for Locomotives Technical Highlights](https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100500B.pdf) (<https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100500B.pdf>). The activity adjustment factors used were based on the EIA's [Transportation Sector Key Indicators and Delivered Energy Consumption data](http://www.eia.gov/forecasts/aeo/tables_ref.cfm) (reference Table A7 at: http://www.eia.gov/forecasts/aeo/tables_ref.cfm).

3.4.3.3 Non-Road Mobile Source Emissions Inventories

The 2014 through 2032 interim year non-road category source NO_x and VOC emissions totals for the El Paso area are presented in Table 3-7: *El Paso Area NO_x Emissions for Non-Road EI Categories (tons per day)* and Table 3-8: *El Paso Area VOC Emissions for Non-Road EI Categories (tons per day)*.

Table 3-7: El Paso Area NO_x Emissions for Non-Road EI Categories (tons per day)

| Category | 2014 | 2020 | 2026 | 2032 |
|---------------------------|------|------|------|------|
| Airport | 0.59 | 0.65 | 0.70 | 0.75 |
| Commercial Marine Vessels | 0.00 | 0.00 | 0.00 | 0.00 |
| Drilling Rigs | 0.00 | 0.00 | 0.00 | 0.00 |
| Locomotive | 2.63 | 2.13 | 1.63 | 1.14 |
| NONROAD Model Categories | 5.83 | 4.19 | 3.36 | 3.12 |
| Non-road Total | 9.05 | 6.97 | 5.69 | 5.01 |

Table 3-8: El Paso Area VOC Emissions for Non-Road EI Categories (tons per day)

| Category | 2014 | 2020 | 2026 | 2032 |
|---------------------------|------|------|------|------|
| Airport | 0.15 | 0.16 | 0.18 | 0.19 |
| Commercial Marine Vessels | 0.00 | 0.00 | 0.00 | 0.00 |
| Drilling Rigs | 0.00 | 0.00 | 0.00 | 0.00 |
| Locomotive | 0.15 | 0.10 | 0.08 | 0.05 |
| NONROAD Model Categories | 2.81 | 2.54 | 2.62 | 2.75 |
| Non-road Total | 3.11 | 2.80 | 2.88 | 2.99 |

3.4.4 Stationary Point Sources

3.4.4.1 Emissions Inventory Development

Stationary point source emissions data are collected annually from sites that meet the reporting requirements of 30 TAC §101.10. This rule, referred to as the TCEQ EI reporting rule, establishes point source EI reporting thresholds in ozone nonattainment areas that are currently at or less than major source thresholds.

To collect the data, the 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 abatement units, and the emission points is also required.

All data submitted in the emissions inventory questionnaire (EIQ) are reviewed for quality-assurance purposes and then stored in the State of Texas Air Reporting System (STARS) database. EIQ guidance documents and historical point source emissions of criteria pollutants are available on the 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 the TCEQ's Air Quality Division.

3.4.4.2 Updated 2014 Base Year Emissions Inventory

The TCEQ extracted the 2014 point source EI data from STARS on October 15, 2018. The extracted data includes reported annual and ozone season daily emissions of NO_x and VOC for each site in the El Paso area that submitted a 2014 EIQ and reflects revisions made on or before the extract date.

3.4.4.3 Updated Interim Years Emissions Inventories

The TCEQ designated the 2016 EI as the baseline or starting point for emissions projections for each of the interim years because it was the most recent point source EI data available. Using the most recent point source EI data captures the most recent economic conditions and any recent applicable controls, which can improve the accuracy of emissions projections. The TCEQ extracted the 2016 point source EI data from STARS on October 15, 2018. The extracted data includes reported annual and ozone season daily emissions of NO_x and VOC for each site in the El Paso area that submitted a 2016 EIQ and reflects revisions made on or before the extract date.

For both NO_x and VOC emissions, the TCEQ followed the EPA’s guidance, assuming stable emissions trends when projecting future emissions. While continued economic growth is anticipated for the El Paso area, the EPA has noted that emissions trends for ozone precursors and particulate matter generally have remained stable or declined even during economic growth; therefore, the EPA makes similar assumptions when projecting emissions for many source categories.¹⁷

Specifically, when developing the interim and horizon (future) year EIs for NO_x and VOC, the TCEQ projected future emissions from point sources by comparing the 2014 through 2016 emissions and holding the highest values constant for all future interim and horizon years. The 2015 NO_x and VOC emissions represent the highest emissions among the 2014 through 2016 time span.

A summary of the 2014, 2020, 2026, and 2032 point source EIs is presented in Table 3-9: *El Paso Area NO_x and VOC Emissions for Point Sources (tons per day)*.

Table 3-9: El Paso Area NO_x and VOC Emissions for Point Sources (tons per day)

| Pollutant | 2014 | 2020 | 2026 | 2032 |
|-----------------|------|------|------|------|
| NO _x | 7.84 | 9.86 | 9.86 | 9.86 |
| VOC | 3.36 | 4.64 | 4.64 | 4.64 |

3.4.5 Emissions Summary

The 2014 base year and the 2020, 2026, and 2032 future year EI summaries by source categories for the El Paso area are shown in Table 3-10: *El Paso Area NO_x Emissions by Source Category (tons per day)* and Table 3-11: *El Paso Area VOC Emissions by Source Category (tons per day)*. These tables illustrate that in the horizon year of 2032, point sources contribute the most NO_x emissions and area sources contribute the most VOC emissions. Contributions from biogenic emissions are not included in the summary because this analysis is limited to anthropogenic sources.

Table 3-10: El Paso Area NO_x Emissions by Source Category (tons per day)

| Category | 2014 | 2020 | 2026 | 2032 |
|-------------------------|-------|-------|-------|-------|
| Point Sources | 7.84 | 9.86 | 9.86 | 9.86 |
| Area Sources | 2.93 | 3.00 | 3.11 | 3.18 |
| On-Road Mobile Sources | 25.80 | 16.58 | 10.38 | 7.46 |
| Non-Road Mobile Sources | 9.05 | 6.97 | 5.69 | 5.01 |
| Total | 45.62 | 36.41 | 29.04 | 25.51 |

¹⁷ United States Environmental Protection Agency. “Emissions Inventory Guidance for Implementation of Ozone and Particulate Matter National Ambient Air Quality Standards (NAAQS) and Regional Haze Regulations.” Accessed June 18, 2018. https://www.epa.gov/sites/production/files/2017-07/documents/ei_guidance_may_2017_final_rev.pdf.

Table 3-11: El Paso Area VOC Emissions by Source Category (tons per day)

| Category | 2014 | 2020 | 2026 | 2032 |
|-------------------------|-------|-------|-------|-------|
| Point Sources | 3.36 | 4.64 | 4.64 | 4.64 |
| Area Sources | 23.99 | 27.11 | 29.22 | 31.54 |
| On-Road Mobile Sources | 11.03 | 8.16 | 5.91 | 4.13 |
| Non-Road Mobile Sources | 3.11 | 2.80 | 2.88 | 2.99 |
| Total | 41.49 | 42.71 | 42.65 | 43.30 |

3.5 MAINTENANCE DEMONSTRATION CONCLUSION

Trend analysis using the 2014 base year and the 2032 future year emissions shows an overall decrease in combined NO_x and VOC emissions of 18.30 tpd for the El Paso area. This net change includes a projected 1.81 tpd increase in VOC emissions and a 20.11 tpd decrease in NO_x emissions.

The projected 20.11 tpd decrease of NO_x emissions is expected to contribute to continued maintenance of the one-hour ozone NAAQS despite the small projected 1.81 tpd increase in VOC emissions.

A maintenance demonstration using NO_x substitution guidance calculation procedures¹⁸ showing the 2032 horizon year emissions are below the emissions in the maintenance base year for the El Paso area is provided in Table 3-12: *Maintenance Demonstration for the El Paso One-Hour Ozone Nonattainment Area (tons per day)*. This demonstration also provides for a transportation conformity safety margin for the 2032 motor vehicle emissions budget (MVEB) as described in Chapter 5: *Motor Vehicle Emissions Budget*. Based on future expected trends and previous photochemical analysis, the El Paso area is projected to show continued attainment of the one-hour ozone NAAQS through 2032.

Table 3-12: Maintenance Demonstration for the El Paso One-Hour Ozone Nonattainment Area (tons per day)

| Description | NO _x | VOC |
|---|-----------------|-------|
| A) El Paso Redesignation and Maintenance 2014 Base Year Emissions Inventory | 45.62 | 41.49 |
| B) El Paso Redesignation and Maintenance 2032 Horizon Year EI | 25.51 | 43.30 |
| C) Change in EI from Base Year to Horizon Year (B minus A) | -20.11 | 1.81 |
| D) Is Horizon Year Equal to or Less Than the Base Year? | Yes | No |
| E) Percent NO _x Substitution | 10% | -10% |
| F) Convert Percent Substitution to Tons (A times E) | 4.56 | -4.15 |
| G) Adjusted 2032 El Paso Redesignation and Maintenance Horizon Year EI (B plus F) | 30.07 | 39.15 |
| H) Change in EI from Base Year to Adjusted Horizon Year (G minus A) | -15.55 | -2.34 |

¹⁸ United States Environmental Protection Agency, Office of Air Quality Planning and Standards. "NO_x Substitution Guidance." December 1993. https://www3.epa.gov/ttn/naaqs/aqmguide/collection/cp2_old/19931201_oaqps_nox_substitution_guidance.pdf.

| Description | NO _x | VOC |
|---|-----------------|-------|
| I) 2032 MVEB Safety Margin (see Table 5-1) | 2.24 | 1.24 |
| J) Change in EI Adjusted for MVEB Safety Margin (H plus I) | -13.31 | -1.10 |
| K) Is Change in EI Adjusted for MVEB Safety Margin Equal to or Less Than Zero? ($J \leq 0$) | Yes | Yes |

CHAPTER 4: MONITORING NETWORK

4.1 MONITORING NETWORK AND REPORTING REQUIREMENTS

The ambient air quality monitoring network provides data to verify continued attainment of the one-hour ozone National Ambient Air Quality Standard.

The El Paso area monitoring network in 2018 consists of six regulatory ambient air ozone monitors located in El Paso County. The City of El Paso operates two monitors: Ivanhoe (C0414) and Skyline Park (C0072). The Texas Commission on Environmental Quality (TCEQ) operates the remaining four ozone monitors: Ascarate Park Southeast or SE (C0037), El Paso Chamizal (C0041), El Paso University of Texas at El Paso or UTEP (C0012), and Socorro Hueco (C0049).

The monitors are managed in accordance with 40 Code of Federal Regulations (CFR) Part 58 to verify the attainment status of the area. The TCEQ commits to maintaining an air monitoring network to meet regulatory requirements in the El Paso area and continue to work with the United States Environmental Protection Agency through the air monitoring network review process, as required by 40 CFR Part 58, to determine: the adequacy of the ozone monitoring network, additional monitoring needs, and recommended monitor decommissions. Air monitoring data from these monitors will continue to be quality assured, reported, and certified according to 40 CFR Part 58, until the end of the maintenance period in 2032.

CHAPTER 5: MOTOR VEHICLE EMISSIONS BUDGET

5.1 INTRODUCTION

This El Paso redesignation request and maintenance plan state implementation plan (SIP) revision for the one-hour ozone nonattainment area establishes motor vehicle emissions budgets (MVEB) for the maintenance plan horizon year, 2032. The MVEBs set the allowable on-road mobile emissions an area can produce while continuing to demonstrate attainment, reasonable further progress, or maintenance. For this SIP revision, 2032 MVEBs are set for the ozone precursors, nitrogen oxides (NO_x) and volatile organic compounds (VOC). The transportation planning organization for the El Paso area, the El Paso Metropolitan Planning Organization, is required to demonstrate that projected NO_x and VOC emissions from its transportation plans, programs, and projects are consistent with the applicable MVEBs in the Texas SIP, as required by the federal transportation conformity rule.

5.2 OVERVIEW OF METHODOLOGIES AND ASSUMPTIONS

The Texas Commission on Environmental Quality (TCEQ), working with the Texas A&M Transportation Institute (TTI), recently completed development of on-road mobile source emission inventories (EI) for 2014, 2020, 2026, and 2032 for this SIP revision. The EIs were developed using the latest version of the United States Environmental Protection Agency's (EPA) Motor Vehicle Emission Simulator (MOVES) model, MOVES2014a. The planning assumptions, fleet characteristics, and vehicle miles traveled estimates were updated to incorporate the latest available information at the time the EIs were developed. Detailed documentation of the on-road mobile EI development is provided in the TTI report in Appendix C: *El Paso Redesignation And Maintenance On-Road Mobile Emissions Inventories*.

5.3 MOTOR VEHICLE EMISSIONS BUDGETS FOR 2032 HORIZON YEAR

The 2032 maintenance MVEBs for this SIP revision are based on the on-road mobile source NO_x and VOC EIs for the 2032 horizon year, and a transportation conformity safety margin. A transportation conformity safety margin is allowed for the 2032 MVEBs if overall emissions projected for the 2032 horizon year are less than the 2014 base year emissions. Table 3-12: *Maintenance Demonstration for the El Paso One-Hour Ozone Nonattainment Area (tons per day)* shows that overall 2032 horizon year ozone precursor emissions, VOC and NO_x, are projected to be below those calculated for the 2014 base year. Based on 40 Code of Federal Regulations §93.101, the state may allocate some or all the difference as a transportation conformity safety margin to be added to the applicable budget for transportation conformity purposes.

The 2032 NO_x and VOC maintenance plan MVEBs for the one-hour ozone standard are summarized in Table 5-1: *2032 Horizon Year MVEB for the El Paso One-County Area (tons per day)*. Some of the emission reductions demonstrated between the 2032 horizon year and the 2014 base year are used to provide MVEB safety margins of 2.24 tpd for NO_x, and 1.24 tpd for VOC. The safety margins represent 30% of the total horizon year on-road mobile source emissions inventory. A 30% MVEB safety margin provides enough flexibility to accommodate the expected updates to the travel model as well as other typical variations in vehicle miles traveled forecasting. These safety margins are less than the emission reductions used for the maintenance demonstration (see Table 3.12) and including them in the MVEBs will not prevent the El

Paso area from demonstrating continued maintenance of the one-hour ozone standard through the 2032 horizon year.

Table 5-1: 2032 Horizon Year MVEB for the El Paso One-County Area (tons per day)

| Description | NO _x Emissions (tons per day) | VOC Emissions (tons per day) |
|--|---|---------------------------------|
| 2032 Summer Weekday On-road Emissions | 7.46 | 4.13 |
| Transportation Conformity Safety Margin ¹ | 2.24 | 1.24 |
| 2032 MVEB with Safety Margin | 9.7 | 5.37 |

¹Transportation conformity safety margin values are equal to 30% of the 2032 summer weekday on-road emissions. These transportation conformity safety margins will not prevent the El Paso area from demonstrating continued maintenance (see Table 3-12).

CHAPTER 6: CONTINGENCY PLAN

6.1 BACKGROUND

The Federal Clean Air Act (FCAA) requires that maintenance plans include contingency provisions to promptly correct any violation of the National Ambient Air Quality Standard (NAAQS) [see Section 175A(d) of the FCAA]. The contingency plan ensures that the contingency measures are adopted expeditiously if they are triggered.

6.2 CONTINGENCY MEASURES AND TRIGGER LEVEL

Since the implementation of potential contingency measures would not be expected to take place until well in the future, the identification of specific detailed measures is not practical. The most appropriate contingency measures may be significantly different from the measures mentioned below due to technological, societal, economic, and political factors that are impossible to predict.

If air quality monitoring data indicate that the area has violated the one-hour ozone NAAQS¹⁹, the Texas Commission on Environmental Quality (TCEQ) will implement specific contingency measures. Those to be considered include but are not limited to the following control measures:

- Vent Gas Control in 30 Texas Administrative Code (TAC) Chapter 115, Subchapter B, Division 2
 - Limit volatile organic compounds (VOC) emissions from each bakery with a bakery oven vent gas stream with greater than or equal to 25 tons per year (tpy) VOC emissions. El Paso County is currently included in the rules as a contingency measure if the area fails to demonstrate compliance with the one-hour ozone NAAQS.
- Degassing of Storage Tanks, Transport Vessels and Marine Vessels in 30 TAC Chapter 115, Subchapter F, Division 3
 - Control VOC emissions from degassing of storage tanks and transportation vessels. El Paso County is currently included in the rules as a contingency measure if the area fails to demonstrate compliance with the one-hour ozone NAAQS.
- Petroleum Dry Cleaning Systems in 30 TAC Chapter 115, Subchapter F, Division 4
 - Limit VOC emissions from dryers, filtration systems, and fugitive emissions from petroleum dry cleaning facilities. El Paso County is currently included in the rules as a contingency measure if the area fails to demonstrate compliance with the one-hour ozone NAAQS.
- Fugitive Emission Control in 30 TAC Chapter 115, Subchapter D, Division 3
 - Implement enhanced leak detection and repair program measures such as expanding the scope of the current rule applicability, adding gas imaging

¹⁹ The one-hour ozone NAAQS is violated when the maximum three-year average expected exceedances from all the monitors in an area is greater than 1.0. A one-hour exceedance occurs when a monitor measures a daily-maximum one-hour ozone concentration greater than or equal to 125 parts per billion (ppb).

technology requirements, increasing the monitoring frequency, or lowering the leak detection threshold.

- Industrial Cleaning Solvents in 30 TAC Chapter 115, Subchapter E, Division 6
 - Limit the VOC content of cleaning solutions and establish new operating procedures for using cleaning solvents in a wide variety of industrial source types.

Texas has the authority to promulgate rules according to Texas Health and Safety Code, §382.017 and Texas Water Code §5.103. State administrative procedures require that proposed rules are adopted no more than six months after notice of the adoption is published in the *Texas Register* (see Texas Government Code, §2001.027). These measures or other strategies that would reduce the ozone precursor levels to the extent necessary to comply with the one-hour ozone NAAQS will be adopted (subject to commission approval and opportunity for public comment), submitted, and implemented no longer than 18 months following a monitored and certified violation of the NAAQS.

**RESPONSE TO COMMENTS RECEIVED CONCERNING THE
EL PASO REDESIGNATION REQUEST AND MAINTENANCE
PLAN STATE IMPLEMENTATION PLAN (SIP) REVISION
FOR THE ONE-HOUR OZONE NATIONAL AMBIENT AIR
QUALITY STANDARD (NAAQS)**

The Texas Commission on Environmental Quality (commission or TCEQ) conducted a public hearing in El Paso on February 19, 2019, at 2:00 p.m. During the comment period, which closed on February 20, 2019, the commission received comments from Baake Law LLC on behalf of Sierra Club and Familias Unidas del Chamizal, El Paso Equal Voice Network, El Paso Electric Company, Marathon Petroleum Corporation, and two individuals.

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GENERAL COMMENTS

Marathon Petroleum Corporation and El Paso Electric Company commented that they both support redesignation of the El Paso area to attainment for the one-hour ozone standard and the associated SIP revision. The commenters agreed that the proposed SIP revision follows United States Environmental Protection Agency (EPA) guidance on redesignation requests and maintenance plans. Marathon Petroleum Corporation commended the TCEQ for pursuing this SIP revision to address the uncertainties resulting from the South Coast opinion from the United States Court of Appeals for the District of Columbia (D.C.) Circuit.

The TCEQ appreciates the support for this SIP revision.

Sierra Club and Familias Unidas del Chamizal, El Paso Equal Voice Network, and one individual commented that, given the El Paso area's unique situation as a border community, achieving and maintaining clean air requires collaboration with Mexico and the TCEQ should work with Texas' Congressional delegation to develop amendments to the North American Free Trade Agreement that would help improve air quality in border communities.

The TCEQ takes its commitment to protect the environment and public health very seriously. The commission prepares and implements air quality plans in accordance with both state and federal law. The requested action is outside the scope of this SIP revision. This SIP revision demonstrates that the El Paso area is attaining the revoked one-hour ozone NAAQS and will continue to attain the NAAQS through 2032 without any additional control requirements. The TCEQ has met all the Federal Clean Air Act (FCAA) requirements for redesignation for the one-hour

ozone standard, including a contingency plan in case the El Paso area fails to continue to maintain the one-hour ozone NAAQS.

El Paso Equal Voice Network and two individuals commented that more attention should be given to reducing vehicle emissions in environmental justice communities, such as the Chamizal neighborhood.

The TCEQ is committed to protecting the health of the citizens of Texas and its environment. The TCEQ has made a strong commitment to address environmental equity. The Office of the Chief Clerk works to help individuals and neighborhood groups participate in the regulatory process to ensure that agency programs that may affect human health or the environment operate without discrimination and to make sure that citizens' concerns are considered thoroughly and are handled in a way that is fair to all. The Office of the Chief Clerk may be reached at 512-239-3300 for further information. More information on Environmental Equity may be found on the TCEQ website: <https://www.tceq.texas.gov/agency/hearings/envequ.html>.

This SIP revision provides the data and establishes the basis for the EPA to redesignate the El Paso area to attainment for the revoked one-hour ozone NAAQS, which has been replaced with more stringent standards. While the TCEQ is prohibited from establishing engine standards for vehicles, through the Texas Emissions Reduction Plan (TERP) program, the TCEQ works to incentivize faster fleet turnover, which can assist with reductions in emissions of ozone precursors. In addition, the TCEQ adopted an inspection and maintenance (I/M) SIP revision on May 29, 1996 that implemented a vehicle I/M program in the El Paso one-hour ozone nonattainment area. On January 1, 2007, El Paso County transitioned to a low-enhanced program using on-board diagnostics (OBD) inspections for 1996 and newer model-year vehicles and two-speed idle (TSI) inspections on pre-1996 model-year vehicles to increase emission reductions.

Sierra Club and Familias Unidas del Chamizal urge the TCEQ to withdraw the proposed SIP revision.

The commission does not agree that this SIP revision should be withdrawn for reasons fully discussed in this Response to Comments.

HEALTH EFFECTS AND ENVIRONMENTAL IMPACTS

Sierra Club and Familias Unidas del Chamizal, El Paso Equal Voice Network, and two individuals commented that according to an analysis by researchers at New York University and the American Thoracic Society, elevated levels of smog in the El Paso area cause about 11 premature deaths annually, dozens of emergency room visits, and tens of thousands of missed work or school days.

The primary ozone NAAQS are set at levels that are protective of public health with an adequate margin of safety. The one-hour ozone NAAQS, set in 1979, has been revoked and replaced by more stringent standards in 1997, 2008, and 2015. The EPA has designated El Paso attainment for these standards due to air quality controls and strategies established by the TCEQ and the EPA. As previously stated,

the TCEQ takes its responsibilities very seriously and endeavors to protect public health and the environment in every action it takes, including those intended to reduce air pollution.

Sierra Club and Familias Unidas del Chamizal, El Paso Equal Voice Network, and two individuals commented that the El Paso area's air quality would continue to deteriorate due to climate change, and climate models predict worsening ozone pollution.

The EPA establishes the NAAQS to be protective of public health and the environment and the EPA set more stringent ozone standards in 1997, 2008, and 2015 to replace the revoked one-hour ozone NAAQS. As detailed in the proposed SIP revision, monitored data show that the El Paso area has been attaining the one-hour ozone NAAQS since 1998. Additionally, the EPA has designated the El Paso area as attainment for the 1997, 2008, and 2015 eight-hour ozone NAAQS. The FCAA establishes criteria the state must meet for the EPA to redesignate an area to attainment. This SIP revision provides the monitored air quality data and shows that the El Paso area has met the legal criteria for redesignation for the one-hour ozone NAAQS.

To help ensure against potential increases in ozone pollution in the future, including potential increases due to climate change, the FCAA, §107(d)(3)(E) requires that there be an approved maintenance plan in place prior to redesignating an area to attainment. The current maintenance plan included with the redesignation request would help ensure the El Paso area remains in attainment of the one-hour ozone NAAQS through 2032. Should a violation of the one-hour ozone NAAQS occur for any reason, the maintenance plan also includes a contingency plan to promptly correct the violation.

El Paso Equal Voice Network commented that a metal, electronic, and battery recycling plant is located directly behind Douglass Elementary School and functions under a grandfather clause that does not hold them accountable to the FCAA and that metal recycling damages air quality.

The TCEQ takes its commitment to protect the environment and public health very seriously. The facility referenced in the comment does not report to the point source emissions inventory and does not appear to be a significant source of ozone precursor emissions, nitrogen oxides (NO_x) or volatile organic compounds (VOC). Regulated entities are required to report their emissions if they meet any of the reporting thresholds as defined in 30 Texas Administrative Code §101.10 ([https://texreg.sos.state.tx.us/public/readtac\\$ext.TacPage?sl=R&app=9&p_dir=&p_rl oc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=30&pt=1&ch=101&rl=10](https://texreg.sos.state.tx.us/public/readtac$ext.TacPage?sl=R&app=9&p_dir=&p_rl oc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=30&pt=1&ch=101&rl=10)). However, the NO_x and VOC emissions related to this facility are accounted for in this SIP revision in the non-point source inventory. Emissions of air pollutants other than ozone precursors are outside the scope of this one-hour ozone SIP revision.

REDESIGNATION REQUIREMENTS

Sierra Club and Familias Unidas del Chamizal commented that the EPA cannot redesignate the El Paso area to attainment because the state has not met the “good neighbor” requirements under FCAA, §110.

As noted in Section 2.3.1: *Section 110 General SIP Requirements* of the proposed SIP revision, the EPA did not require states to make specific certifications regarding infrastructure provisions under FCAA, §110(a)(1) and (2), which includes the “good neighbor” provision, for the one-hour ozone NAAQS. Texas has met all FCAA requirements necessary for redesignation of the El Paso area to attainment for the one-hour ozone NAAQS. FCAA, §110 requirements associated with the 2015 eight-hour ozone NAAQS are outside the scope of this SIP revision.

Sierra Club and Familias Unidas del Chamizal commented that the El Paso area is significantly contributing to nonattainment in Sunland Park, New Mexico, based on the analysis in the EPA’s *Area Designations for the 2015 Ozone NAAQS Technical Support Document* (TSD).¹ Sierra Club and Familias Unidas del Chamizal commented that the redesignation of the El Paso area cannot proceed because the proposed SIP revision does not contain provisions to prohibit or control emissions affecting the Sunland Park nonattainment area. The commenters urged the TCEQ to initiate a broader rulemaking to prevent violation of the “good neighbor” provision.

The TCEQ disagrees with the commenters’ interpretation of the EPA’s TSD for area designations under the 2015 eight-hour ozone NAAQS. The TSD referenced by the commenters does not conclude that the El Paso area is significantly contributing to nonattainment in Sunland Park, which is located in Doña Ana County, New Mexico. Because the El Paso area is part of the El Paso-Las Cruces, Texas-New Mexico Combined Statistical Area that also includes Doña Ana County, the EPA analyzed whether El Paso County should be included as part of the Sunland Park nonattainment area based on contribution to the violating monitor in Doña Ana County.² On page 16 of the final TSD, the EPA concluded that the majority of emissions impacting the violating monitor in Doña Ana County can be attributed to nearby areas in Mexico and that El Paso County should not be designated nonattainment for the 2015 eight-hour ozone NAAQS.

Whether or not the El Paso area is contributing to nonattainment of the 2015 eight-hour ozone NAAQS in another state is outside the scope of this SIP revision. Texas addressed interstate transport requirements for the 2015 eight-hour ozone NAAQS in the 2015 Ozone NAAQS Transport SIP Revision adopted by the commission on August 8, 2018. The proposed El Paso SIP revision is a redesignation request and maintenance plan SIP revision for the one-hour ozone NAAQS and is not required to

¹ *Doña Ana County, New Mexico: Area Designations for the 2015 Ozone National Ambient Air Quality Standards Technical Support Document (TSD)*. EPA. May 2018.

https://www.epa.gov/sites/production/files/2018-05/documents/nm_tsd_final.pdf.

² *El Paso, Texas and Doña Ana County, New Mexico: Intended Area Designations for the 2015 Ozone National Ambient Air Quality Standards Technical Support Document (TSD)*. EPA. December 2017.

https://www.epa.gov/sites/production/files/2017-12/documents/nm_tsd_final.pdf.

include control measures to address possible emissions transported to New Mexico for the 2015 eight-hour ozone NAAQS.

Sierra Club and Familias Unidas del Chamizal, El Paso Equal Voice Network, and two individuals commented that the TCEQ should increase efforts to reduce mobile source emissions by requiring the El Paso area to opt in to California's Low Emission Vehicle (LEV) and Zero Emission Vehicle (ZEV) programs under §177 of the FCAA.

The commission does not agree with the commenters' claim that the TCEQ should require the El Paso area to opt in to California's LEV and ZEV programs under §177 of the FCAA. The requested action is outside the scope of this SIP revision. This SIP revision demonstrates that the El Paso area is attaining the revoked one-hour ozone NAAQS and does not require any additional control requirements. The TCEQ has met all the FCAA requirements for EPA redesignation under those standards, including a 10-year maintenance plan and a contingency plan in case the area fails to continue to maintain the one-hour ozone NAAQS.

Through the TERP program, the TCEQ works to incentivize faster fleet turnover and provides assistance with LEV and ZEV purchases, which can assist with ozone and particulate matter reductions. For more information on the TERP program, see Section 2.5.4: *Texas Emissions Reduction Plan (TERP)* of the proposed SIP revision and the TCEQ's TERP webpage at <https://www.tceq.texas.gov/airquality/terp>. In addition, the TCEQ adopted an I/M SIP revision on May 29, 1996 that implemented a vehicle I/M program in the El Paso one-hour ozone nonattainment area. On January 1, 2007, El Paso County transitioned to a low-enhanced program using OBD inspections for 1996 and newer model-year vehicles and TSI inspections on pre-1996 model-year vehicles to increase emission reductions. The I/M program remains in place in El Paso County under the area's maintenance plan for the 1997 eight-hour ozone standard.

El Paso Equal Voice Network and two individuals commented that the TCEQ should work with community groups, the City of El Paso, and El Paso Independent School District to ensure that school buses stationed at the Bowie High School Bus Hub are zero-emitting.

The requested action is outside the scope of this SIP revision. This SIP revision demonstrates that the El Paso area is attaining the revoked one-hour ozone NAAQS and does not require any additional control requirements. The TCEQ has met all the FCAA requirements for EPA redesignation under those standards, including a 10-year maintenance plan and a contingency plan in case the area fails to continue to maintain the one-hour ozone NAAQS. Additionally, the TERP Clean School Bus Program provides monetary incentives for school districts in the state to retrofit older school buses or replace them with newer, lower-emitting models. For more information on the Clean School Bus Program see Section 2.5.5: *Clean School Bus Program* of the proposed SIP revision and the TCEQ's Texas Clean School Bus Program webpage at <https://www.tceq.texas.gov/airquality/terp/school-buses.html>.

El Paso Equal Voice Network commented that the TCEQ should address unacceptable health impacts and prevent the El Paso area's air quality from continuing to decline and that the TCEQ must adopt a pro-active approach to reducing emissions, independent of any requirement under the FCAA. Sierra Club and Familias Unidas del Chamizal, El Paso Equal Voice Network, and two individuals commented that the TCEQ should implement control measures to restrict idling at international border crossings and other high-traffic areas in the El Paso area. The commenters also mentioned other ideas to improve air quality in the El Paso area, such as modernizing the ports of entry, requiring power plants to be zero-emission units, creating a special fund under the EPA's Diesel Emission Reduction Act, writing a letter to Texas' Congressional delegation regarding amendments to the North American Free Trade Agreement, and collaborating with Mexico.

Design values in the El Paso area are meeting the one-hour ozone standard as detailed in Figure 2-1: *One-Hour Ozone Design Values for the El Paso Area* on page 2-2 of the proposed SIP revision. Monitored data show that the El Paso area has been attaining the one-hour ozone NAAQS since 1998. As noted in Section 2.8: *Trend Analysis for Ozone Precursors*, strong downward trends in ambient NO_x concentrations depicted in the emission-trend data are evidence of the effectiveness of emission controls implemented in the El Paso area and would be expected to support declining ozone values, as observed in the El Paso area. There have been significant decreases in the one-hour ozone design value in the El Paso area since 1990. The preliminary 2018 one-hour ozone design value of 105 parts per billion (ppb) represents a 30% decrease from the 1990 design value of 150 ppb.

The comments regarding control measures are outside the scope of this SIP revision. This SIP revision demonstrates that the El Paso area is attaining the revoked one-hour ozone NAAQS and does not require any additional control requirements. The TCEQ has met all the FCAA requirements for EPA redesignation under the one-hour ozone standard, including a 10-year maintenance plan and a contingency plan.

Sierra Club and Familias Unidas del Chamizal commented that the TCEQ must take all practical and economically feasible steps to reduce emissions from the power sector. The commenters suggested gas-fired power plants, like Newman Station should be controlled for NO_x and VOC and that the TCEQ should also impose performance standards that require all new power plants built in the El Paso area to be zero-emission. The commenters suggested several control measures that they assert are practical and economically feasible.

This SIP revision demonstrates that the El Paso area is attaining the revoked one-hour ozone NAAQS and does not require any additional control requirements. The requested action is outside the scope of this SIP revision. The TCEQ has met all the FCAA requirements for EPA redesignation under the one-hour ozone standard, including a 10-year maintenance plan and a contingency plan. The current maintenance plan included with the redesignation request would help ensure the El Paso area remains in attainment of the one-hour ozone NAAQS through 2032. Should a violation of the one-hour ozone NAAQS occur, the maintenance plan also

includes a contingency plan to correct the violation. The TCEQ disagrees that the contingency plan included in the maintenance plan must be prescriptive.

CONTINGENCY PLAN

Sierra Club and Familias Unidas del Chamizal commented that the maintenance plan included in the proposed SIP revision is not adequate because the contingency plan does not ensure that the commission will promptly correct any violation of the one-hour ozone NAAQS. The commenters indicated that the federal appeals court ruling in *Sierra Club v. EPA*, 356 F.3d 296 (D.C. Cir. 2004) supports EPA disapproval of the maintenance plan.

The TCEQ disagrees that the contingency plan included in the maintenance plan fails to meet the corresponding requirements under FCAA, §175A. The commission relied on the EPA's guidance provided in its memo titled *Procedures for Processing Requests to Redesignate Areas to Attainment* (September 4, 1992) detailing requirements for contingency measures contained in maintenance plans. The memo highlights the difference between contingency measures in nonattainment SIPs and maintenance plans, clarifying that "a State is not required to have fully adopted contingency measures that will take effect without further action by the State in order for the maintenance plan to be approved." The memo states that the contingency measures should be adopted expediently if triggered and lists the other considerations that should be included in the SIP revision accompanying the contingency measures. Accordingly, the contingency plan for the El Paso area identifies specific measures that could be contemplated for adoption along with the other considerations such as a schedule and procedure for adoption and implementation. The contingency plan included in this SIP revision was developed in accordance with the FCAA requirements and the EPA's currently accepted guidance.

Contrary to the commenters' claim, federal courts have upheld EPA approval of FCAA, §175A maintenance plans in several states that contain similar contingency measures and timelines. The commenters stated that the federal appeals court ruling in *Sierra Club v. EPA*, 356 F.3d 296 (D.C. Cir. 2004) supports EPA disapproval of the maintenance plan; however, this case does not apply to §175A maintenance plans. As the 7th Circuit Court of Appeals noted in its decision to uphold the EPA's redesignation of the Saint Louis area under FCAA, §107(d)(3)(E), the FCAA maintenance plans do not require specificity in describing contingency measures as does the statutory requirement for attainment demonstration contingency measures. (*Sierra Club v. EPA*, 375 F.3d 537 (7th Cir. 2004)); see also *Greenbaum v. EPA*, 370 F.3d (6th Cir. 2004)).

The Sierra Club and Familias Unidas del Chamizal commented that the proposed maintenance plan is deficient because the commission fails to include any measures to address NO_x emissions in its contingency plan.

The §182(f) NO_x waiver was approved for the El Paso nonattainment area based on attainment demonstration modeling (818 El Paso SIP, September 21, 1994) that showed NO_x reductions would be more than the reductions necessary for

attainment and that the area would attain the one-hour ozone NAAQS but for emissions emanating from Mexico. Under FCAA, §182(f), nonattainment areas could omit NO_x control measures if modeling demonstrated the area would attain the ozone NAAQS without the reductions from such measures. The El Paso area has since attained all ozone NAAQS, so additional attainment demonstration SIP revisions containing further evaluation of NO_x controls have not been required.

The commission relied on the EPA's guidance provided in its memo titled *Procedures for Processing Requests to Redesignate Areas to Attainment* (September 4, 1992) detailing requirements for contingency measures contained in maintenance plans. The memo indicates that "a State is not required to have fully adopted contingency measures that will take effect without further action by the State in order for the maintenance plan to be approved." While the contingency measures specifically listed in the maintenance plan provide for additional controls to limit VOC emissions, the contingency measures contemplated in the proposed maintenance plan are not an exhaustive list of measures that the commission may consider. Should a violation occur in the future, the commission will evaluate and implement necessary measures, including potential measures to reduce NO_x emissions, to promptly correct any violation of the one-hour ozone NAAQS.

**ORDER ADOPTING
REVISION TO THE STATE IMPLEMENTATION PLAN**

**Docket No. 2018-1670-SIP
Project No. 2018-029-SIP-NR**

On April 24, 2019, the Texas Commission on Environmental Quality (Commission), during a public meeting, considered adoption of the El Paso Redesignation Request and Maintenance Plan State Implementation Plan (SIP) revision for the One-Hour Ozone National Ambient Air Quality Standards (NAAQS). The Commission adopts this Redesignation Request and Maintenance Plan SIP revision. The SIP revision includes a request that the El Paso area be redesignated to attainment for the revoked one-hour ozone NAAQS. The SIP revision also includes a maintenance plan for the El Paso area for the revoked one-hour ozone NAAQS that will ensure the area remains in attainment of both standards through 2032. The maintenance plan includes base and interim year emission inventories, motor vehicle emissions budgets, and a contingency plan. Additionally, the SIP revision contains a request that EPA consider the maintenance plan as a second 10-year maintenance plan for El Paso for the revoked one-hour ozone NAAQS. Under Tex. Health & Safety Code Ann. §§ 382.011, 382.012, and 382.023 (West 2016), the Commission has the authority to control the quality of the state's air and to issue orders consistent with the policies and purposes of the Texas Clean Air Act, Chapter 382 of the Tex. Health & Safety Code. Notice of the proposed Redesignation Request and Maintenance Plan SIP revision was published for comment in the February 1, 2019, issue of the *Texas Register* (44 TexReg 493).

Pursuant to 40 Code of Federal Regulations § 51.102 and after proper notice, the Commission offered a public hearing to consider the Redesignation Request and Maintenance Plan SIP revision. Proper notice included prominent advertisement in the areas affected at least 30 days prior to the date of the hearing. A public hearing was held in El Paso, Texas on February 19, 2019.

The Commission circulated hearing notices of its intended action to the public, including interested persons, the Regional Administrator of the EPA, and all applicable local air pollution control agencies. The public was invited to submit data, views, and recommendations on the proposed SIP revision, either orally or in writing, at the hearing or during the comment period. Prior to the scheduled hearing, copies of the proposed SIP revision were available for public inspection at the Commission's central office and on the Commission's website.

Data, views, and recommendations of interested persons regarding the proposed SIP revision were submitted to the Commission during the comment period, and were considered by the Commission as reflected in the analysis of testimony incorporated by reference to this Order. The Commission finds that the analysis of testimony includes the names of all interested groups or associations offering comment on the proposed SIP revision and their position concerning the same.

IT IS THEREFORE ORDERED BY THE COMMISSION that the El Paso Redesignation Request and Maintenance Plan SIP revision for the One-Hour Ozone NAAQS incorporated by reference to this Order is hereby adopted. The adopted revision to the SIP is incorporated by reference in this Order as if set forth at length verbatim in this Order.

IT IS FURTHER ORDERED BY THE COMMISSION that on behalf of the Commission, the Chairman should transmit a copy of this Order, together with the adopted revision to the SIP, to the Regional Administrator of EPA as a proposed revision to the Texas SIP pursuant to the Federal Clean Air Act, codified at 42 U.S. Code Ann. §§ 7401 - 7671q, as amended.

If any portion of this Order is for any reason held to be invalid by a court of competent jurisdiction, the invalidity of any portion shall not affect the validity of the remaining portions.

TEXAS COMMISSION ON
ENVIRONMENTAL QUALITY

Jon Niermann, Chairman

Date Signed