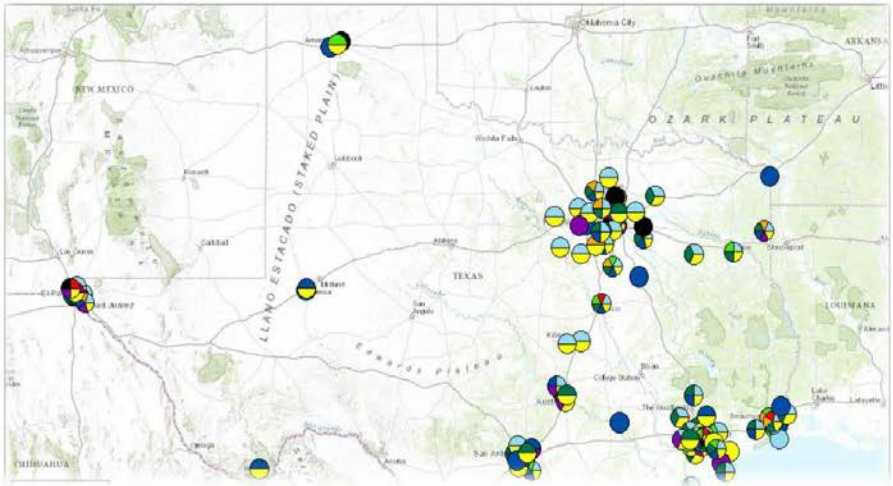
Texas Commission on Environmental Quality

Annual Monitoring Network Plan



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2018

TCEQ

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List of Acronyms and Abbreviations

– number
% – percent
> – greater than
< – less than
µg/m^3 – micrograms per cubic meter
AMNP – annual monitoring network plan
AQS – Air Quality System
autoGC – automated gas chromatograph
BAM – beta attenuation mass (monitor)
CBSA – core based statistical area
CCAQG – Corpus Christi Air Quality Group
CFR – Code of Federal Regulations
CO – carbon monoxide
CSN – Chemical Speciation Network
DRR – Data Requirements Rule
EI – emissions inventory
EPA – Environmental Protection Agency
FEM – federal equivalent method
FRM – federal reference method
HRA – Hillcrest Residents Association
LLC – limited liability company
MSA – metropolitan statistical area
NA – not applicable
NAAQS – National Ambient Air Quality Standards
NATTS – National Air Toxics Trends Stations
NCore – National Core Multipollutant Monitoring Stations
NEI – National Emissions Inventory
NO_2 – nitrogen dioxide
NO – nitrogen oxide
NO_y – total reactive nitrogen compounds
O_3 – ozone
PAMS – Photochemical Assessment Monitoring Stations
Pb – lead

ppm – parts per million
PM_{10} – particulate matter of 10 micrometers or less in diameter
$PM_{2.5}$ – particulate matter of 2.5 micrometers or less in diameter
$PM_{10-2.5}$ – coarse particulate matter
PWEI – population weighted emissions index
QA – quality assurance
RA-40 – Regional Administrator 40
Rd – road
SE – southeast
SETRPC – South East Texas Regional Planning Committee
SIP – state implementation plan
SLAMS – State or Local Air Monitoring Stations
SO_2 – sulfur dioxide
SPM – special purpose monitor
STN – Speciation Trends Network
SVOC – semi-volatile organic compound
TAD – technical assistance document
TCEQ – Texas Commission on Environmental Quality
TEOM – tapered element oscillating microbalance
tpy – tons per year
TSP – total suspended particulate
U.S. – United States
UTEP – University of Texas at El Paso
VOC – volatile organic compound

Introduction

Title 40 Code of Federal Regulations (CFR) Part 58.10 requires states to submit an annual monitoring network plan (AMNP) to the United States (U.S.) Environmental Protection Agency (EPA) by July 1 of each year. This monitoring plan is required to provide the implementation and maintenance framework for an air quality surveillance system, known commonly as the ambient air quality monitoring network. The AMNP must be available for public inspection and comment for at least 30 days prior to submission to the EPA. The Texas Commission on Environmental Quality (TCEQ) submits the AMNP to the EPA for final review and approval along with any comments received during the 30-day inspection period. The associated responses accompany the document as an appendix.

The AMNP provides information on the TCEQ ambient air monitoring network established to meet the National Ambient Air Quality Standards (NAAQS) regulatory requirements outlined in 40 CFR Part 50. The document presents the current Texas network, as well as recommended changes to the network, from July 1, 2017, through December 31, 2019.

Title 40 CFR Part 58, Appendix D provides the minimum design requirements for air monitoring networks including State or Local Air Monitoring Stations (SLAMS), Photochemical Assessment Monitoring Stations (PAMS), and National Core Multipollutant Monitoring Stations (NCore). Appendix A of this plan contains a list of monitors and their respective networks. Based on annual internal audits performed to date, all monitoring sites are meeting the requirements defined in 40 CFR Part 58 Appendices A, B, C, D, and E, with two exceptions. The TCEQ is investigating options, including potential site relocation, to meet siting criteria at Austin Audubon Society and Midlothian OFW due to the distance between the monitoring probes and tree drip lines.

Appendix B contains a summary of core based statistical areas (CBSAs) or metropolitan statistical areas (MSAs), which reference 2017 U.S. Census Bureau population estimates, and a summary count of required monitors. The TCEQ relies on this summary to evaluate monitors as documented in the AMNP. The U.S. Census Bureau defines CBSA as a collective term for MSAs, and the terms are used interchangeably in this plan, according to usage in the federal regulations.

Regulatory Network Review

Nitrogen Dioxide

The TCEQ nitrogen dioxide (NO_2) network includes nitrogen oxide (NO), NO_2, and total reactive nitrogen compounds (NO_y) monitoring requirements. The TCEQ NO_2 network is designed to meet area-wide, Regional Administrator 40 (RA-40), near-road, PAMS, and NCore monitoring requirements. The network is required to operate a total of 22 NO, NO_2 and NO_y monitors. The TCEQ meets and exceeds the requirements with a total of 51 NO/NO_2 and NO_y monitors. Appendix C of this plan summarizes the monitoring requirements and the current number of NO/NO_2 and NO_y monitors in each CBSA in Texas.

Monitoring Requirements

Area-Wide Monitoring Requirements

Title 40 CFR Part 58, Appendix D, Section 4.3.3 requires one area-wide ambient air quality monitoring site in each CBSA with a population of 1,000,000 or more persons. The requirements stipulate that the site must be located in the area with the expected highest NO_2 concentration that is also representative of a neighborhood or larger (urban) spatial scale. Title 40 CFR Part 58, Appendix D, Section 4.3.5 (3) and (4), respectively, defines neighborhood scale monitoring as representative of air quality conditions in an area with dimensions between 0.5 and 4.0 kilometers, and urban scale monitoring as representative of air quality conditions in an area with dimensions between 4.0 and 50 kilometers.

Based on 2017 U.S. Census Bureau population estimates for Texas, area-wide neighborhood or urban scale NO_2 monitoring is required in four CBSAs. The following NO_2 monitors meet these area-wide requirements:

- Austin-Round Rock (Austin) CBSA: Austin Northwest;
- Dallas-Fort Worth-Arlington (DFW) CBSA: Dallas Hinton;
- Houston-The Woodlands-Sugar Land (Houston) CBSA: Clinton; and
- San Antonio-New Braunfels (San Antonio) CBSA: San Antonio Northwest.

Regional Administrator Monitoring Requirements

Title 40 CFR Part 58, Appendix D, Section 4.3.4 states that the EPA Regional Administrators will collaborate with the states to designate a minimum of 40 NO_2 monitoring stations nationwide that are positioned in locations to protect susceptible and vulnerable populations. The TCEQ collaborated with the EPA to identify appropriate monitoring sites meeting the requirement, which includes the following four NO_2 monitors, listed by CBSA:

- Beaumont-Port Arthur (Beaumont) CBSA: Nederland High School;
- DFW CBSA: Arlington Municipal Airport;
- El Paso CBSA: Ascarate Park Southeast (SE); and
- Houston CBSA: Clinton.

Near-Road Monitoring Requirements

Title 40 CFR Part 58, Appendix D, Section 4.3.2 requires one microscale near-road NO_2 monitor in each CBSA with a population of 1,000,000 or more persons to be located near a major road with high annual average daily traffic counts. An additional near-road monitor is required in each CBSA with a population of 2,500,000 or more persons. The current TCEQ near-road monitoring network meets requirements with six near-road sites, listed by CBSA:

- DFW CBSA: Dallas LBJ Freeway and Fort Worth California Parkway North;
- Houston CBSA: Houston Southwest Freeway and Houston North Loop;
- San Antonio CBSA: San Antonio Interstate 35; and
- Austin CBSA: Austin North Interstate 35.

PAMS and NCore Monitoring Requirements

The EPA revisions to the PAMS program under the final rule published on October 26, 2015, and as listed in 40 CFR Part 58, Appendix D, Section 5, require state agencies to collect and report NO_y measurements at NCore sites in CBSAs with 1,000,000 or more persons. Title 40 CFR Part 58.13(h) requires that NO and true NO_2 be measured beginning no later than June 1, 2019. The TCEQ meets the PAMS network monitoring requirements with hourly averaged NO, NO_2, and NO_y measured at the Dallas Hinton and Houston Deer Park number (#) 2 PAMS sites. The TCEQ plans to upgrade the chemiluminescence NO_2 monitors with true, direct-measured NO_2 at PAMS sites as described in the section below.

Title 40 CFR Part 58, Appendix D, Section 3 requires NO and NO_y to be collected at all NCore sites, irrespective of population. The TCEQ meets NCore monitoring requirements with NO and NO_y measured at the NCore sites listed in Table 1.

Table 1: National Core Multipollutant Monitoring Stations

Core Based Statistical Area	Site Name	2017 Population Estimates*	PAMS Site
Dallas-Fort Worth-Arlington	Dallas Hinton	7,399,662	Yes
Houston-The Woodlands-Sugar Land	Houston Deer Park #2	6,892,427	Yes
El Paso	El Paso Chamizal	844,818	No

*United States Census Bureau population estimates as of July 1, 2017.
– number
PAMS – Photochemical Assessment Monitoring Station

Status of Previously Recommended Changes

The 2017 AMNP recommended deploying an NO_2 monitor to Killeen Skylark Field. In its response to TCEQ's AMNP, the EPA approved the recommendation. Effective April 3, 2018, the TCEQ relocated the NO_2 monitor from Waco Mazanec to Killeen Skylark Field. The NO_2 monitor at Waco Mazanec was decommissioned effective December 31, 2017. Additionally, the TCEQ relocated the Lynchburg Ferry site as approved by the EPA in a letter dated March 9, 2017. The NO_2 monitor deployed at Lynchburg Ferry was

temporarily shut down during the relocation and back online at the new site on October 23, 2017.

Changes to the Regulatory NO_2 Monitoring Network

The TCEQ proposes to deploy direct Teledyne T500U cavity attenuated phase shift NO_2 analyzers (EQNA-0514-212) at Dallas Hinton and Houston Deer Park #2 by June 1, 2019, to meet PAMS requirements. The true NO_2 analyzers will be collocated with the existing high sensitivity NO_y and chemiluminescence NO/NO_2 samplers to continue providing the required NO and NO_y PAMS measurements.

Sulfur Dioxide

The TCEQ sulfur dioxide (SO_2) network includes ambient SO_2 and high-sensitivity SO_2 monitoring requirements. The TCEQ SO_2 network is designed to meet population weighted emissions index (PWEI) by CBSA, 2015 *Data Requirements Rule for the 1-Hour Sulfur Dioxide Primary NAAQS* (DRR), and NCore monitoring requirements. The agency is required to operate a total of 20 SO_2 monitors and exceeds the requirements with 32 SO_2 monitors in the network. Appendix D summarizes the PWEI calculations, monitoring requirements, and current number of SO_2 monitors in each CBSA.

Title 40 CFR Part 51.1205(b) requires the TCEQ to submit an annual report that documents SO_2 emissions of each applicable source for areas designated unclassifiable/attainment for the 2010 SO_2 NAAQS. The TCEQ meets all applicable SO_2 requirements and provides this assessment in Appendix E of this document.

Monitoring Requirements

Population Weighted Emissions Index Requirements

Title 40 CFR Part 58, Appendix D, Section 4.4.2, requires states to establish an SO_2 monitoring network based on the PWEI calculation. This index is calculated by multiplying the population of a CBSA with the emissions inventory (EI) data for counties within that CBSA. The calculated value is then divided by one million to obtain the PWEI value. The PWEI monitoring requirements are listed below:

- one monitor in CBSAs with a PWEI value equal to or greater than 5,000, but less than 100,000;
- two monitors in CBSAs with a PWEI value equal to or greater than 100,000, but less than 1,000,000; and
- three monitors in CBSAs with a PWEI value equal to or greater than 1,000,000.

The TCEQ utilized 2017 U.S. Census Bureau population estimates and 2014 National Emissions Inventory (NEI) data with 2016 TCEQ point-source EI data to calculate the PWEI and to determine the minimum monitoring requirements for each CBSA. As shown in Appendix D of this plan, the TCEQ currently meets the SO_2 monitoring requirements determined by the PWEI analysis.

Data Requirements Rule Requirements

The DRR requires air agencies to provide data to characterize air quality around sources emitting 2,000 tons per year (tpy) or more of SO_2 not located in an area previously designated nonattainment. The TCEQ reviewed certified 2016 SO_2 emissions inventory data and determined that no new SO_2 sources require monitoring. The TCEQ

continues to meet the DRR monitoring requirements with monitoring for 11 source-oriented SO_2 monitors located near 13 required sources as shown in Appendix D, Table 2. Additional details related to the TCEQ's evaluation of sources, modeling, and monitoring recommendations are in the 2017 AMNP.

NCore Requirements

Title 40 CFR Part 58, Appendix D, Section 3 requires states to monitor SO_2 at NCore sites. The TCEQ meets this requirement with high sensitivity SO_2 monitors at the NCore sites previously listed in Table 1.

Status of Previously Recommended Changes

In its response to the TCEQ's 2017 AMNP, the EPA approved the recommendation to decommission six SO_2 monitors. The SO_2 monitors and their effective decommission dates are listed below.

- El Paso UTEP effective 12/31/2017;
- Houston Monroe effective 12/21/2017;
- Houston North Wayside effective 12/29/2017;
- Italy effective 12/26/2017;
- Seabrook Friendship Park effective 12/31/2017; and
- Skyline Park effective 12/13/2017.

The 2017 TCEQ AMNP recommended deploying monitors to characterize levels of SO_2 in areas designated nonattainment for the 2010 one-hour SO_2 NAAQS. In a letter dated August 10, 2017, the EPA concurred with the TCEQ's recommended site locations for these new monitors. The TCEQ deployed SO_2 monitors near Big Brown Steam Electric Station at Fairfield FM 2570 Ward Ranch on October 30, 2017, and near Martin Lake Electrical Station at Tatum CR 2181d Martin Creek Lake on November 1, 2017, to determine compliance or progress towards compliance with the 2010 one-hour SO_2 primary standard in these nonattainment areas. No monitors were deployed in the area around Monticello Steam Electric Station, as the source was retired on February 8, 2018.

Changes to the Regulatory SO_2 Monitoring Network

The TCEQ performed an evaluation of the current SO_2 monitoring network, analyzing PWEI and DRR requirements, historical design value trends, and stakeholder requests. The TCEQ determined the existing SO_2 network effectively meets all federal monitoring requirements, therefore no modifications are recommended for 2018.

Lead

The TCEQ total suspended particulate (TSP) lead (Pb) network is designed to meet source-oriented SLAMS monitoring requirements. The TCEQ Pb monitoring network is required to operate a total of three Pb monitors. The TCEQ meets this requirement with eight monitors. Appendix F of this plan summarizes the Pb monitoring requirements and the total number of TSP Pb monitors.

Monitoring Requirements

The TCEQ Pb network meets 40 CFR Part 58, Appendix D, Section 4.5 monitoring requirements. This section requires state agencies to conduct ambient air Pb monitoring near Pb sources expected to show, or have been shown to contribute to a maximum ambient air Pb concentration in excess of the standard. Title 40 CFR Part 58, Appendix D, Section 4.5(a) requires a minimum of one source-oriented ambient air Pb monitoring site to measure maximum concentrations near each non-airport facility emitting 0.50 tpy or more of Pb annually, based on either the most recent NEI data or annual EI data submitted to meet state reporting requirements.

The TCEQ evaluated the 2014, 2015, and 2016, point source EI data. All sources continue to maintain emissions below the 0.50 tpy threshold in 2016, except for the Lower Colorado River Authority Fayette Power Plant discussed further below. Table 2 includes information regarding Pb source oriented monitoring.

Pb Waivers

Pursuant to 40 CFR Part 58, Appendix D, Section 4.5(a)(ii), the EPA Regional Administrator may waive the requirement in 40 CFR Part 58, Appendix D, 4.5(a) for monitoring near specific Pb sources with sufficient demonstration that the Pb source will not contribute to a maximum concentration in ambient air greater than 50% of the standard, based on historical monitoring data, modeling, or other approved means. All approved waivers must be renewed once every five years as part of the network assessment required under 40 CFR Part 58.10(d).

Since 2010, the TCEQ submitted five Pb waivers for source-oriented monitoring. The EPA Region 6 granted each request. Four of the waivers are no longer required due to a decrease in source emissions below the 0.50 tpy threshold. The remaining Pb waiver remains effective. The request to renew the Pb waiver for the Lower Colorado River Authority Fayette Power Plant in Fayette County was submitted in the 2015 TCEQ *Texas Five-Year Ambient Monitoring Network Assessment*. The waiver renewal request included information regarding a Pb modeling analysis indicating the predicted maximum ground level concentration for a rolling three-month average continued to remain below 50% of the standard. The EPA Region 6 approved the waiver renewal request in the TCEQ *2015 Annual Monitoring Network Plan* response letter, dated October 26, 2015. The renewal is valid until July 1, 2020.

Collocation Requirements

Title 40 CFR Part 58, Appendix A, Section 3.4.4 requires a primary quality assurance organization to select 15% of the Pb monitoring sites within its network for collocated monitoring, with the first of these sites measuring the highest Pb concentrations in the network. Based on the current network of primary Pb monitors, the TCEQ is required to maintain one collocated Pb monitor. The TCEQ operates three collocated Pb monitors: Frisco Eubanks in Collin County; Ojo De Agua in El Paso County; and Terrell Temtex in Kaufman County, measuring the highest Pb concentrations in the network.

Table 2: 2014-2016 Lead Point Source Emissions Inventory Data

Facility Name	County	2014 Pb Emissions (tpy)	2015 Pb Emissions (tpy)	2016 Pb Emissions (tpy)	TCEQ Comments
Lower Colorado River Authority	Fayette	0.51	0.49	0.56	Pb waiver renewal approved on October 26, 2015.
Conecsus, LLC	Kaufman	0.33	0.34	0.34	Pb is currently monitored at the Terrell Temtex site.
ASARCO, LLC	Potter	0.33	0.34	0.28	Pb monitoring at the Amarillo SH 136 site is recommended for decommission.

LLC – limited liability company
Pb – lead
SH – state highway
TCEQ – Texas Commission on Environmental Quality
tpy – tons per year

Status of Previously Recommended Changes

The 2017 AMNP recommended decommissioning the Laredo Vidaurri and the Brownsville TSP Pb monitors. In its response to TCEQ's AMNP, the EPA approved the recommendation. Effective December 31, 2017, both monitors were decommissioned.

The TCEQ decommissioned the collocated monitor at Frisco 7 and deployed a new collocated monitor at Terrell Temtex to maintain compliance, as approved in the EPA's response letter to the 2016 AMNP, received October 27, 2016. The collocated monitor at Frisco 7 was decommissioned effective January 31, 2017, and activated at the Terrell Temtex site on April 13, 2017, to sample every 12th day.

Changes to the Regulatory Pb Monitoring Network

In the *Collin County Redesignation Request and Maintenance Plan State Implementation Plan Revision for the 2008 Lead National Ambient Air Quality Standard* published on October 19, 2016, the TCEQ requested the redesignation of the Collin County Pb nonattainment area as attainment for the 2008 Pb standard with the associated maintenance plan [Collin County *Redesignation Request and Maintenance Plan SIP Revision for the 2008 Lead NAAQS* (Non-Rule Project No. 2016-003-SIP-NR)]. The request was submitted to the EPA for approval on November 2, 2016. On June 29, 2017, the EPA published in the *Federal Register* a direct final rule proposing that the Collin County nonattainment area had attained the 2008 Lead NAAQS and to approve a request that the area be redesignated to attainment. Final redesignation was effective on September 27, 2017. Consequently, the TCEQ recommends decommissioning two of four existing primary TSP Pb monitors in Frisco as discussed below.

The TCEQ recommends decommissioning the Frisco 7 TSP Pb monitor by December 31, 2018; the 2017 rolling three-month average design value for the Pb monitor at the site is 0.01 micrograms per cubic meter (µg/m^3), 6% of the standard. Similarly, the TCEQ recommends decommissioning the Frisco 5th Street TSP Pb monitor by December 31,

2018; the 2017 rolling three-month average design value for the Pb monitor at the site is 0.01 µg/m^3, 6% of the standard.

TCEQ will continue monitoring for TSP Pb at Frisco Stonebrook and Frisco Eubanks (both primary and collocated). Data from these two sites will continue to be measured, quality assured, and reported to the EPA according to federal regulations until the end of the maintenance period in 2028.

The TCEQ recommends decommissioning the Amarillo SH 136 TSP Pb monitor by December 31, 2018. This monitor exceeds monitoring requirements and is no longer necessary for source-oriented monitoring. The 2017 rolling three-month average design value for the Pb monitor at the site is 0.00 µg/m^3, 0% of the standard. The monitor was initially deployed in 2010 due to emissions inventory levels from ASARCO, LLC; however, emissions have significantly decreased since monitor deployment. The source emissions inventory for ASARCO, LLC is listed in Table 2. Additionally, based on historical monitoring data from 2010 to 2017, the TCEQ can demonstrate that this Pb source will not contribute to a maximum Pb concentration in ambient air of more than 50% of the standard.

The TCEQ recommends decommissioning the collocated TSP Pb monitor at Ojo de Agua by October 1, 2018. Collocated monitoring is fulfilled at Terrell Temtex and Frisco Eubanks.

Ozone

The TCEQ ozone (O_3) network is designed to meet SLAMS, PAMS, and NCore monitoring requirements. The TCEQ O_3 monitoring network is required to operate a total of 27 O_3 monitors. The TCEQ meets and exceeds this requirement with 69 O_3 monitors designated as SLAMS, PAMS, or special purpose monitors (SPM) in the TCEQ federal network. A summary of the required and current O_3 monitors in each MSA is included in Appendix G.

Monitoring Requirements

SLAMS Requirements

Title 40 CFR Part 58, Appendix D, Section 4.1, requires O_3 monitoring in each MSA with a population of 350,000 or more persons. Monitoring is also required in MSAs with lower populations if the design value for that MSA is at or above 85% of the standard. Monitoring requirements are outlined in Table 3. According to 2017 U.S. Census Bureau population estimates and 2015-2017 eight-hour O_3 design values, the TCEQ must operate a minimum of 24 O_3 monitors to meet SLAMS network requirements. The TCEQ exceeds the requirement with 66 O_3 monitors meeting SLAMS monitoring requirements, as listed in Appendix A.

Table 3: Ozone Monitoring Requirements

MSA Population[1, 2]	Most recent 3-year design value concentrations ≥85% of any O_3 NAAQS[3]	Most recent 3-year design value concentrations <85% of any O_3 NAAQS[4, 5]
>10,000,000	4	2
4,000,000–10,000,000	3	1
350,000–<4,000,000	2	1
50,000–<350,000	1	0

[1]Minimum monitoring requirements apply to the Metropolitan statistical area (MSA)
[2]Population based on latest available census figures
[3]The ozone (O_3) National Ambient Air Quality Standards (NAAQS) levels and forms are defined in 40 CFR Part 50
[4]These minimum monitoring requirements apply in the absence of a design value
[5] Metropolitan statistical areas (MSA) must contain an urbanized area of 50,000 or more population
≥ - greater than or equal to
< - less than
> - greater than

NCore and PAMS Requirements

In addition to SLAMS O_3 requirements, 40 CFR Part 58, Appendix D, Sections 3 and 5, respectively, require O_3 monitoring at NCore sites to meet NCore design criteria, and at NCore sites in CBSAs with a population of 1,000,000 or more persons to meet PAMS requirements. The TCEQ meets combined NCore and PAMS requirements with O_3 monitors at the NCore sites previously listed in Table 1.

Status of Previously Recommended Changes

In its response letter to the 2017 AMNP, the EPA approved the recommendation to decommission the O_3 monitor at Brownsville, which was decommissioned effective December 31, 2017. Additionally, the TCEQ relocated the Lynchburg Ferry site as approved by the EPA in a letter dated March 9, 2017. The O_3 monitor deployed at Lynchburg Ferry was temporarily shut down during the relocation and reactivated at the new site on October 15, 2017.

Changes to the Regulatory O_3 Monitoring Network

The TCEQ recommends discontinuing the submission of data to the EPA Air Quality System (AQS) from the South East Texas Regional Planning Committee (SETRPC) Jefferson County Airport and SETRPC Sabine Pass monitors located near Beaumont, Texas. Ozone data from these sites are not needed to supplement the TCEQ monitoring network in this area. The TCEQ proposes discontinuing the submittal of data from these samplers to AQS, effective August 31, 2018.

Carbon Monoxide

The TCEQ carbon monoxide (CO) network includes ambient CO and high-sensitivity CO monitoring. The TCEQ CO network is designed to meet NCore and near-road monitoring requirements. The agency is required to operate a total of seven CO monitors. The TCEQ exceeds the requirements with the operation of thirteen total CO monitors: eight CO monitors and five high sensitivity CO monitors. A summary of the required and current CO monitors in each CBSA is included in Appendix H.

Monitoring Requirements

NCore Monitoring Requirements

Title 40 CFR Part 58, Appendix D, Section 3.0 requires CO monitoring at NCore sites. EPA's *Technical Assistance Document (TAD) for Precursor Gas Measurements in the NCore Multi-Pollutant Monitoring Network – Version 4* (September 2005) recommends high sensitivity CO monitors at the NCore sites. The TCEQ meets this technical recommendation with high sensitivity CO monitors at the NCore sites previously listed in Table 1.

Near-Road Monitoring Requirements

Title 40 CFR Part 58, Appendix D, Section 4.2 requires collocating one CO monitor with one required near-road NO_2 monitor in CBSAs of 1,000,000 or more persons. The TCEQ meets this requirement with CO monitors at near-road sites in the Austin, DFW, Houston, and San Antonio CBSAs as referenced below.

- Austin CBSA: Austin North Interstate 35;
- DFW CBSA: Fort Worth California Parkway North;
- Houston CBSA: Houston North Loop; and
- San Antonio CBSA: San Antonio Interstate 35.

Status of Previously Recommended Changes

In its October 3, 2017, response letter to the 2017 AMNP, the EPA approved the TCEQ's recommendations to relocate one CO monitor in El Paso and decommission CO monitors in Brownsville and Laredo. The TCEQ decommissioned the CO monitor at Ascarate Park SE effective December 31, 2017, and relocated it to El Paso UTEP effective January 17, 2018. The TCEQ also decommissioned the CO monitors at Brownsville and Laredo Bridge effective December 31, 2017.

Changes to the Regulatory CO Monitoring Network

The EPA revision to the PAMS program, as listed in 40 CFR Part 58, Appendix D, Section 5, removes CO from the list of required PAMS measurements. The CO monitors at Clinton and Beaumont Nederland High School exceed PAMS requirements.

The TCEQ recommends removing the PAMS/SLAMS designations from the high sensitivity CO monitor at Clinton and continuing operation of the monitor as a SPM by December 31, 2018. CO monitoring will continue at the nearby Houston Deer Park #2 site and the Houston North Loop site.

The TCEQ recommends decommissioning the high sensitivity CO monitor at Nederland High School by December 31, 2018. The 2017 eight-hour and one-hour maximum concentrations for the CO monitor at Nederland High School are 0.5 ppm and 1.5 ppm respectively, 6% and 4% of the standard.

Particulate Matter of 10 Micrometers or Less

The TCEQ particulate matter of 10 micrometers or less in diameter (PM_{10}) network is designed to meet SLAMS monitoring requirements based on MSA populations to determine attainment status of the PM_{10} standard. The TCEQ network consists of PM_{10}

monitoring at 26 sites. The TCEQ determined that each MSA listed in Appendix I within the PM_{10} network meets or exceeds minimum PM_{10} monitoring requirements.

Monitoring Requirements

The TCEQ PM_{10} network is designed to meet the area requirements of 40 CFR Part 58, Appendix D, Section 4.6, specifying the number of PM_{10} monitors required in MSAs based on population and measured concentrations, if available. Monitoring requirements are outlined in Table 4. Compliance with the PM_{10} standard is based on the number of measured exceedances of the 150 µg/m^3 standard averaged over a three-year period. The evaluation of PM_{10} monitoring requirements was completed using 2017 U.S. Census Bureau population estimates and 2017 measured PM_{10} concentrations. The evaluation and the associated maximum 2015-2017 concentrations for each MSA are shown in Appendix I, Table 1.

Table 4: Particulate Matter of 10 Micrometers or Less Minimum Monitoring Requirements

Population Category	High Concentration[1]	Medium Concentration[2]	Low Concentration[3]
>1,000,000	6-10	4-8	2-4
500,000–1,000,000	4-8	2-4	1-2
250,000–500,000	3-4	1-2	0-1
100,000–250,000	1-2	0-1	0

[1]High Concentration areas are those for which ambient PM_{10} data show ambient concentrations exceeding the PM_{10} National Ambient Air Quality Standards (NAAQS) by 20 percent or more
[2]Medium Concentration areas are those for which ambient PM_{10} data show ambient concentrations exceeding 80 percent of the PM_{10} NAAQS
[3]Low Concentration areas are those for which ambient PM_{10} data show ambient concentrations less than 80 percent of the PM_{10} NAAQS
PM_{10} - particulate matter of 10 micrometers or less in diameter
> - greater than

Collocation Requirements

Title 40 CFR Part 58, Appendix A, Section 3.3.4 requires a primary quality assurance organization to select 15% of the manual PM_{10} monitoring sites within the network for collocated sampling. At least 50% of the selected sites should have an annual mean particulate matter concentration among the highest in the network. Appendix I, Table 2 lists the maximum concentration measurement during the three-year period from 2015-2017, and includes the 2015, 2016, and 2017 annual mean concentrations for each PM_{10} site. The TCEQ annually evaluates the data to determine network efficacy for the collocated PM_{10} monitors. Based on the current network of PM_{10} samplers, the TCEQ is required to operate four PM_{10} collocated samplers; the TCEQ is currently operating five as shown in Appendix I.

The PM_{10} measured annual average concentration data were evaluated from 2015-2017, as shown in Appendix I, Table 2, to determine appropriate collocation sites within the network. The collocated sites and the justification for the site selections follow. The PM_{10} measurement concentrations at Clinton, Socorro Hueco, and Convention Center sites had annual mean concentrations among the highest in the network and continue to satisfy collocation requirements. The annual mean concentrations at Ojo De Agua measures in the highest 25% of the network according to 2015 and 2016 data, and also support exceptional events analysis in the El Paso area. The PM_{10} collocated monitor at Houston Deer Park #2 is beyond minimum requirements.

Status of Previously Recommended Changes

As approved by the EPA in its response letter to the 2016 AMNP, the TCEQ decommissioned the collocated PM_{10} monitor at Texas City Fire Station effective September 1, 2017, with the primary monitor remaining active.

Changes to the Regulatory PM_{10} Monitoring Network

Due to declining PM_{10} trends and subsequent reduced monitoring requirements, the TCEQ recommends decommissioning the PM_{10} monitors at Dallas North #2, Stage Coach, Houston Aldine, Karnack, and the primary and collocated monitors at Houston Deer Park #2 by December 31, 2018. Table 5 summarizes the PM_{10} decommission recommendations. The remaining monitors in these MSAs continue to meet and/or exceed federal requirements.

To increase site accessibility, the TCEQ proposes to relocate the Riverside PM_{10} FRM sampler less than one mile from the original site, to an adjacent location by December 31, 2019. The TCEQ will notify the EPA with additional siting details as they come available.

Due to industry and population growth in the Portland-Gregory area, the TCEQ Monitoring Division, Toxicology Division, Air Quality Division, and TCEQ Corpus Christi Regional Office continue to evaluate the potential placement of PM_{10} monitors in San Patricio County.

Table 5: Particulate Matter of 10 Micrometers or Less Decommission Recommendation Summary

Site Name	MSA	MSA Required Monitors	MSA Existing Monitors	MSA Monitors if Changes Approved	Rationale
Dallas North #2	Dallas-Fort Worth-Arlington	2-4	4	2	Exceeds area requirements; 2015 - 2017 maximum: 29 µg/m^3; 2017 annual mean: 15.6 µg/m^3
Stage Coach	Dallas-Fort Worth-Arlington	2-4	4	2	Exceeds area requirements; 2015 - 2017 maximum: 35 µg/m^3; 2017 annual mean: 16.1 µg/m^3
Houston Aldine	Houston-The Woodlands-Sugar Land	2-4	7	5	Exceeds area requirements; 2015 - 2017 maximum: 74 µg/m^3; 2017 annual mean: 21.0 µg/m^3
Karnack	Marshall*	0	1	0	No PM_{10} monitoring requirements for MSA; 2015 - 2017 maximum: 24 µg/m^3; 2017 annual mean: 14.1 µg/m^3

Site Name	MSA	MSA Required Monitors	MSA Existing Monitors	MSA Monitors if Changes Approved	Rationale
Houston Deer Park #2	Houston-The Woodlands-Sugar Land	2-4	7	5	Exceeds area requirements; 2015 - 2017 maximum: 74 µg/m^3; 2017 annual mean: 16.9 µg/m^3
Houston Deer Park #2	Houston-The Woodlands-Sugar Land	None	2	1	PM_{10} collocation beyond minimum requirements

– number
µg/m^3 – micrograms per cubic meter
MSA – metropolitan statistical area
*area is classified as a micropolitan statistical area and not subject to SLAMS requirements.
PM_{10} – particulate matter of 10 micrometers or less in diameter

Particulate Matter of 2.5 Micrometers or Less

The TCEQ particulate matter of 2.5 micrometers or less in diameter ($PM_{2.5}$) monitoring network includes a combination of continuous and non-continuous federal reference method (FRM), federal equivalent method (FEM), and non-regulatory monitors designed to meet area, regional background, regional transport, NCore, and near-road network requirements. In total, the TCEQ is required to operate 26 $PM_{2.5}$ monitors, and the TCEQ meets and exceeds the requirements with 73 $PM_{2.5}$ monitors in the network. A detailed analysis of $PM_{2.5}$ monitoring and siting requirements using 2017 U.S. Census Bureau population estimates and 2017 measured $PM_{2.5}$ concentrations is provided in Tables 1 and 2 of Appendix J of this plan.

Monitoring Requirements

General and Continuous Monitoring Requirements

Title 40 CFR Part 58, Appendix D, Section 4.7 requires $PM_{2.5}$ monitoring in MSAs with populations of 500,000 or more persons and in MSAs with lower populations if measured $PM_{2.5}$ design values for an MSA equals or exceeds 85% of the standard as outlined in Table 6. Pursuant to 40 CFR Part 58, Appendix D, Section 4.7.2, the TCEQ must operate continuous $PM_{2.5}$ monitors equal to at least one-half the required number of SLAMS-required sites. At least one of these required continuous analyzers in each MSA must be collocated with one of the required FRM/FEM monitors, unless the FEM monitor is itself a continuous FEM monitor. Additionally, 40 CFR Part 58, Appendix D, Section 4.7.3 requires each state to install and operate at least one $PM_{2.5}$ site to monitor for regional background and at least one $PM_{2.5}$ site to monitor regional transport. Monitors meeting the regional background and transport requirements are detailed in Appendix A of this plan. The TCEQ's assessment of $PM_{2.5}$ monitoring requirements and current FRM and FEM monitors is included in Appendix J of this plan.

Table 6: Particulate Matter of 2.5 Micrometers or Less Minimum Monitoring Requirements

MSA population	Most recent 3-year design value ≥85% of any $PM_{2.5}$ NAAQS	Most recent 3-year design value <85% of any $PM_{2.5}$ NAAQS
> 1,000,000	3	2
500,000–1,000,000	2	1
50,000–<500,000	1	0

< – less than
> – greater than
≥ – greater than or equal to
MSA – metropolitan statistical area
NAAQS – National Ambient Air Quality Standards
$PM_{2.5}$ – particulate matter of 2.5 micrometers or less in diameter

NCore Monitoring Requirements

Title 40 CFR Part 58, Appendix D, Section 3 requires $PM_{2.5}$ FRM mass, $PM_{2.5}$ mass continuous, speciated $PM_{2.5}$, and coarse particulate matter ($PM_{10-2.5}$) mass monitoring at all NCore sites. The TCEQ meets this requirement with the appropriate $PM_{2.5}$ monitors at the NCore sites previously listed in Table 1.

Near-Road $PM_{2.5}$ Monitoring Requirements

Title 40 CFR Part 58, Appendix D, Section 4.7.1(b)(2) requires collocating one $PM_{2.5}$ monitor with one required near-road NO_2 monitor in CBSAs of 1,000,000 or more persons. The TCEQ meets this requirement with $PM_{2.5}$ monitors at near-road sites in the Austin, DFW, Houston, and San Antonio CBSAs as referenced below.

- Austin CBSA: Austin North Interstate 35;
- DFW CBSA: Fort Worth California Parkway North;
- Houston CBSA: Houston North Loop; and
- San Antonio CBSA: San Antonio Interstate 35.

Collocation Requirements

Title 40 CFR Part 58, Appendix A, Section 3.2.3 requires a primary quality assurance organization to select 15% of the $PM_{2.5}$ monitoring sites within the network for collocated sampling, for each distinct monitoring method designation (FRM or FEM). Fifty percent of the collocated quality control monitors must be deployed at sites with annual average or daily concentrations estimated to be within plus or minus 20% of either the annual or 24-hour standard.

Based on the current $PM_{2.5}$ network of 21 FRM monitors, the TCEQ is required to operate three collocated $PM_{2.5}$ FRM monitors. The TCEQ operates three collocated $PM_{2.5}$ FRM monitors at Clinton, Dallas Hinton, and El Paso Chamizal.

To replace aging $PM_{2.5}$ equipment, the TCEQ began deploying $PM_{2.5}$ continuous FEM monitors (method code 209) in 2017. Based on the current $PM_{2.5}$ network of 13 FEM monitors, the TCEQ is required to operate two pairs of collocated monitors pursuant to 40 CFR Part 58, Appendix A, Section 3.2.3.2(b). For the first collocation requirement, a primary $PM_{2.5}$ FRM monitor must be collocated with a $PM_{2.5}$ FEM monitor. The second pair must have a $PM_{2.5}$ FEM monitor collocated with another $PM_{2.5}$ FEM monitor.

The TCEQ deployed a collocated monitor at Austin Webberville Rd in March 2017, to meet the first collocated pair requirement. Subsequently, the TCEQ deployed a collocated pair of $PM_{2.5}$ FEM monitors to Corpus Christi Huisache in March 2018, to replace the existing quality assurance (QA) collocated pair of $PM_{2.5}$ FRM monitors to meet the second collocated pair requirement. A summary of current and future recommended collocation deployments is listed in Table 7.

Table 7: Particulate Matter of 2.5 Micrometers or Less FEM Deployment Recommendations and Collocation Requirements

Number of Primary FEM Monitors (with unique method designation)	Number Collocated	Number Collocated with an FRM	Number Collocated with same Method Designation	Collocation Site
1-9	1	1	0	Austin Webberville Road
10-16	2	1	1	Corpus Christi Huisache
17-23	3	2	1	Houston Aldine*
24-29	4	2	2	Fort Worth California Parkway North*
30-36	5	3	2	San Antonio Northwest*

* – Future planned deployments as collocation thresholds met
FEM – federal equivalent method
FRM – federal reference method

Status of Previously Recommended Changes

The 2017 AMNP recommended $PM_{2.5}$ monitor decommissions and deployments and TCEQ introduced a new $PM_{2.5}$ continuous FEM monitor to the network, a beta attenuation mass (BAM) monitor, method code 209. In some cases, the monitor replaced a stand-alone $PM_{2.5}$ continuous tapered element oscillating microbalance (TEOM) with non-regulatory designations. In other cases, the new FEM monitor replaced a $PM_{2.5}$ FRM filter based monitor collocated with a $PM_{2.5}$ continuous TEOM. In its response to TCEQ's AMNP, the EPA approved all recommendations.

In a letter to the EPA dated February 28, 2018, the TCEQ recommended replacing the collocated pair of $PM_{2.5}$ FRM monitors at Corpus Christi Huisache with a collocated pair of $PM_{2.5}$ FEM monitors, and replacing the $PM_{2.5}$ continuous TEOM monitors at Eagle Pass and National Seashore with $PM_{2.5}$ continuous FEM monitors. In the letter dated March 6, 2018, the EPA approved these recommendations. Table 8 details the 2017 and 2018 changes to the TCEQ $PM_{2.5}$ network.

Table 8: Particulate Matter of 2.5 Micrometers or Less Summary of Decommissions and Deployments

Site Name	Monitor(s) Replaced	New Monitor	Action	Effective Date
Austin Audubon Society	$PM_{2.5}$ TEOM	NA	Decommission	10/2/2017
Selma	$PM_{2.5}$ TEOM	NA	Decommission	12/31/2017
Port Arthur Memorial	$PM_{2.5}$ TEOM	$PM_{2.5}$ FEM continuous	Method code change	7/25/2017
SETRPC 42 Mauriceville	$PM_{2.5}$ TEOM	$PM_{2.5}$ FEM continuous	Method code change	7/27/2017
Houston East	$PM_{2.5}$ TEOM	$PM_{2.5}$ FEM continuous	Method code change	7/13/2017
Corpus Christi Huisache*	$PM_{2.5}$ FRM collocated pair	$PM_{2.5}$ FEM continuous collocated pair	Method code change	3/13/2018
National Seashore*	$PM_{2.5}$ TEOM	$PM_{2.5}$ FEM continuous	Method code change	3/14/2018
Brownsville	$PM_{2.5}$ FRM	$PM_{2.5}$ FEM continuous	Method code change	1/24/2018
Mission	$PM_{2.5}$ TEOM	$PM_{2.5}$ FEM continuous	Method code change	1/24/2018
Eagle Pass*	$PM_{2.5}$ TEOM	$PM_{2.5}$ FEM continuous	Method code change	3/28/2018
World Trade Bridge	$PM_{2.5}$ TEOM	$PM_{2.5}$ FEM continuous	Method code change	3/28/2018

*Changes to site were recommended to EPA, Region 6 in a supplemental letter to the AMNP, and approved in EPA response letter dated 3/6/2018
FEM – federal equivalent method
FRM – federal reference method
NA – not applicable
$PM_{2.5}$ – particulate matter of 2.5 micrometers or less in diameter
TEOM – tapered element oscillating microbalances

Changes to the Regulatory $PM_{2.5}$ Monitoring Network

The TCEQ recommends decommissioning the $PM_{2.5}$ continuous monitor at Arlington Municipal Airport by December 31, 2018. This monitor has a 2017 annual average concentration of 8.4 µg/m^3, comparable to the nearby $PM_{2.5}$ monitor at the Fort Worth California Parkway North near-road monitoring site. The remaining monitors in the DFW MSA continue to meet and exceed federal requirements.

The TCEQ recommends reducing the sampling frequency of the $PM_{2.5}$ FRM monitor at Dallas Hinton from daily sampling, to every third day sampling by October 31, 2018. $PM_{2.5}$ FRM data from this site do not determine the 24-hour design value for the area and are not required by 40 CFR Part 58.12(iii). The daily operating schedule was maintained at this site since deployment in 1999, and the data demonstrate that the design value is not within five percent of the standard. The TCEQ is evaluating the need for additional $PM_{2.5}$ FEM continuous monitoring in Dallas for spatial coverage and population exposure.

The TCEQ recommends relocating the $PM_{2.5}$ FEM primary and collocated monitors at Corpus Christi Huisache to Corpus Christi West by December 31, 2019. The relocation of these $PM_{2.5}$ monitors will provide better spatial coverage in populated areas. Additionally, the TCEQ recommends relocating the $PM_{2.5}$ continuous monitor at Palo Alto in the San Antonio-New Braunfels MSA to a position along the border of the southern Bexar and northern Atascosa counties to provide better spatial coverage for the area by December 31, 2019.

The TCEQ continues to replace aging $PM_{2.5}$ non-regulatory equipment with new FEM technology. The replacement of the aging $PM_{2.5}$ non-regulatory monitors and $PM_{2.5}$ filter based non-continuous monitors with continuous FEM monitors will provide hourly averaged data to the public, for use in determining the Air Quality Index, and for submittal to the AirNow webpage. In addition, data from the new FEM monitors will be comparable to the NAAQS, thus strengthening the monitoring resources in each affected MSA. The TCEQ proposes to replace the $PM_{2.5}$ FRM non-continuous monitors or the non-regulatory $PM_{2.5}$ continuous monitors ($PM_{2.5}$ TEOM) listed in Table 9 with $PM_{2.5}$ FEM continuous monitors by December 31, 2019. Of special note, the $PM_{2.5}$ FEM continuous monitors that will be deployed to Houston Aldine and San Antonio Northwest will become the primary $PM_{2.5}$ monitors and will be collocated with the $PM_{2.5}$ FRM monitors located at the sites.

Table 9: Particulate Matter of 2.5 Micrometers or Less Planned Deployment Recommendations and Method Codes

Site Name	Monitor(s) to be Replaced	FEM Monitor to be Added	Current Method Code(s)	New Method Code
Houston Aldine*	$PM_{2.5}$ TEOM	$PM_{2.5}$ FEM continuous	702 (non-regulatory)	209
Fort Worth California Parkway North*	$PM_{2.5}$ FRM	$PM_{2.5}$ FEM continuous collocated pair	145	209
San Antonio Northwest*	$PM_{2.5}$ TEOM	$PM_{2.5}$ FEM continuous	702 (non-regulatory)	209
Amarillo A&M	$PM_{2.5}$ TEOM	$PM_{2.5}$ FEM continuous	702 (non-regulatory)	209
Lubbock 12th Street	$PM_{2.5}$ TEOM	$PM_{2.5}$ FEM continuous	702 (non-regulatory)	209
Convention Center	$PM_{2.5}$ FRM	$PM_{2.5}$ FEM continuous	145	209

Site Name	Monitor(s) to be Replaced	FEM Monitor to be Added	Current Method Code(s)	New Method Code
Corsicana Airport	$PM_{2.5}$ TEOM	$PM_{2.5}$ FEM continuous	702 (non-regulatory)	209
Denton Airport South	$PM_{2.5}$ TEOM	$PM_{2.5}$ FEM continuous	702 (non-regulatory)	209
Fort Worth Northwest	$PM_{2.5}$ FRM	$PM_{2.5}$ FEM continuous	145	209
Haws Athletic Center	$PM_{2.5}$ FRM and $PM_{2.5}$ TEOM pair	$PM_{2.5}$ FEM continuous	145 and 702 (non-regulatory)	209
Kaufman	$PM_{2.5}$ TEOM	$PM_{2.5}$ FEM continuous	702 (non-regulatory)	209
Texarkana New Boston	$PM_{2.5}$ FRM and $PM_{2.5}$ TEOM pair	$PM_{2.5}$ FEM continuous	145 and 702 (non-regulatory)	209
Odessa Gonzales	$PM_{2.5}$ TEOM	$PM_{2.5}$ FEM continuous	702 (non-regulatory)	209
Austin North Interstate 35	$PM_{2.5}$ FRM	$PM_{2.5}$ FEM continuous	145	209
Galveston 99th Street	$PM_{2.5}$ FRM and $PM_{2.5}$ TEOM pair	$PM_{2.5}$ FEM continuous	145 and 702 (non-regulatory)	209
Houston North Loop	$PM_{2.5}$ FRM	$PM_{2.5}$ FEM continuous	145	209
Calaveras Lake	$PM_{2.5}$ FRM and $PM_{2.5}$ TEOM pair	$PM_{2.5}$ FEM continuous	145 and 702 (non-regulatory)	209
San Antonio Interstate 35	$PM_{2.5}$ FRM	$PM_{2.5}$ FEM continuous	145	209
Isla Blanca Park	$PM_{2.5}$ TEOM	$PM_{2.5}$ FEM continuous	702 (non-regulatory)	209

*Site meets $PM_{2.5}$ FEM collocation requirements
FRM – federal reference method
FEM – federal equivalent method
$PM_{2.5}$ – particulate matter of 2.5 micrometers or less in diameter
TEOM – tapered element oscillating microbalance

Volatile Organic Compounds

The TCEQ VOC network is designed to meet PAMS requirements. The TCEQ is required to operate two volatile organic compound (VOC) monitors, and currently operates a total of fifteen. The TCEQ VOC network includes eight automated gas chromatograph (autoGC) continuous monitors and seven non-continuous canister samplers. A summary of the required and current VOC monitors in each CBSA is included in Appendix K, Table 1.

Monitoring Requirements

Title 40 CFR Part 58, Appendix D, Section 5 requires hourly averaged speciated VOC monitoring at NCore sites located in CBSAs with a population of 1,000,000 or more persons as part of the PAMS network requirements. The TCEQ meets VOC monitoring requirements with autoGCs at all three NCore sites previously listed in Table 1.

Status of Previously Recommended Changes

No changes to the VOC monitoring network were recommended in the 2017 AMNP.

Changes to the VOC Monitoring Network

The TCEQ recommends removing the PAMS/SLAMS/SPM federal network designations and data submittal to AQS for the VOC canisters at Johnson County Luisa, Fort Worth Northwest, and Dallas Hinton, effective December 31, 2018. The TCEQ will continue to operate these monitors as state-initiative special purpose monitors. Volatile organic compound sampling by canister is not necessary to fulfill PAMS network requirements.

Carbonyls

The TCEQ carbonyl compounds monitoring network is designed to meet PAMS requirements. The TCEQ meets the requirements with a total of five carbonyl samplers in the network. A summary of the required and current carbonyl monitors in each CBSA is included in Appendix K, Table 2.

Monitoring Requirements

According to PAMS network requirements outlined in 40 CFR Part 58, Appendix D, Section 5, the TCEQ is required to collect three eight-hour averaged carbonyl samples every third day at each NCore site located in a CBSA with a population of 1,000,000 or more persons. The TCEQ currently collects carbonyl samples at the Clinton and Dallas Hinton PAMS sites, as approved in the 2017 AMNP, to fulfill this new PAMS requirement.

Status of Previously Recommended Changes

In its October 3, 2017, response letter to the 2017 AMNP, the EPA approved modifying the sampling schedule to collect three eight-hour carbonyl samples every third day at Clinton and Dallas Hinton during the ozone season. After further evaluation of the existing TCEQ PAMS network and PAMS requirements, the TCEQ recommends revising Clinton and Houston Deer Park #2 carbonyl sampling as outlined below. Carbonyl sampling at Dallas Hinton will fulfill the PAMS requirements as previously approved in the 2017 AMNP.

Changes to the Carbonyl Monitoring Network

The TCEQ recommends decommissioning the carbonyl sampler at Ascarate Park by October 31, 2018; the data are no longer required for PAMS and are no longer needed for modeling in the El Paso area. The TCEQ recommends reducing carbonyl collection to one 24-hour sample, every sixth day, only during ozone season, April through October, at the Fort Worth Northwest and Clinton sites as of October 31, 2018. The TCEQ recommends collecting three eight-hour carbonyl samples every third day, during June, July, and August, to meet the requirements listed in 40 CFR Part 58, Appendix D, Section 5(b)(2) at the Houston Deer Park #2 site as of October 31, 2018. Additionally, the TCEQ recommends 24-hour carbonyl sampling every sixth day, at Houston Deer Park #2 and Dallas Hinton during the months of April, May, September, and October; with no carbonyl sampling at these sites November through March.

Meteorology

The TCEQ meteorology monitoring network includes surface meteorology parameters (solar radiation, wind speed, wind direction, and temperature), upper air measurements (mixing height), and other meteorological parameters. Surface meteorology is measured at most air monitoring stations, and additional meteorology parameters are required as PAMS measurements. All meteorology monitors in the TCEQ network are included in the Appendix A site list.

Monitoring Requirements

Title 40 CFR Part 58, Appendix D, Section 5 requires surface and upper air meteorology measurements at all PAMS sites located at NCore stations in CBSAs with a population of 1,000,000 or more persons. PAMS meteorology measurements include wind speed, wind direction, outdoor temperature, atmospheric pressure, relative humidity, precipitation, hourly averaged mixing-height, solar radiation, and ultraviolet radiation. The EPA revision to the PAMS program under the final rule published on October 26, 2015, and as listed in 40 CFR Part 58, Appendix D, Section 5, requires PAMS measurements to begin by June 1, 2019.

The TCEQ collects wind and outdoor temperature data at PAMS sites and most network sites. The TCEQ collects relative humidity and solar radiation data at PAMS sites, and plans to deploy monitors to meet additional requirements as described below.

Status of Previously Recommended Changes

The TCEQ deployed surface meteorology to the relocated Lynchburg Ferry site on October 15, 2017. The TCEQ also deployed meteorological monitors at Fairfield FM 2570 Ward Ranch on October 30, 2017, and at Tatum CR 2181d Martin Creek Lake on November 1, 2017.

Changes to the Meteorology Monitoring Network

The TCEQ plans to deploy ceilometers to the La Porte Airport and Dallas Hinton sites by June 1, 2019, to meet PAMS network monitoring requirements. The TCEQ recommends locating the ceilometer at the La Porte Airport site, approximately four miles east of the Houston Deer Park #2 NCore site, to be collocated with a radar profiler. This collocation of instruments will provide a means to measure winds and mixing heights, important for meteorological model performance evaluations. The TCEQ will also deploy atmospheric pressure, precipitation, and ultraviolet radiation monitors to the Houston Deer Park #2 and Dallas Hinton sites to meet PAMS requirements by June 1, 2019.

National Air Toxics Trends Stations Program

As of July 1, 2018, the TCEQ will no longer apply for a grant under the voluntary National Air Toxics Trends Stations (NATTS) program to support monitoring and analyses at the Karnack and Houston Deer Park #2 sites. Although some NATTS parameters will no longer be collected, VOCs, carbonyls, CO, NO_2/NO, NO_y, O_3, $PM_{2.5}$ (mass and speciation), $PM_{10-2.5}$, and SO_2 will continue to be collected at Houston Deer

Park #2 and VOCs, O_3, NO_2/NO, and $PM_{2.5}$ (mass and speciation) will continue to be collected at Karnack.

Changes to Sites with NATTS Program Monitoring

The TCEQ will decommission monitors and make network designation changes for NATTS parameters as listed in Table 10, by July 1, 2018.

Table 10: NATTS Network Changes

Site Name	Sampler Type	Change
Houston Deer Park #2	Speciated VOC (Canister)	Change designation from NATTS to state-initiative SPM*
Houston Deer Park #2	Speciated VOC (Canister) - QA Collocated	Decommission
Houston Deer Park #2	SVOC	Decommission
Houston Deer Park #2	SVOC – QA Collocated	Decommission
Houston Deer Park #2	Carbonyl	None
Houston Deer Park #2	PM_{10} (speciation)	Decommission
Houston Deer Park #2	PM_{10} (speciation) – QA Collocated	Decommission
Karnack	Speciated VOC (canister)	Change designation from NATTS to state-initiative SPM*
Karnack	SVOC	Decommission
Karnack	Carbonyl	Decommission
Karnack	PM_{10} (speciation)	Decommission

* Data will not be submitted to AQS; monitors will continue to operate as state-initiative special purpose monitors
# - number
VOC – volatile organic compound
NATTS – National Air Toxics Trends Stations
QA – quality assurance
SVOC – semi-volatile organic compound
PM_{10} - particulate matter of 10 micrometers or less in diameter
SPM – special purpose monitor

Summary

2018 Proposed Network Changes

The following is a summary of proposed changes discussed in the 2018 assessment.

- The TCEQ recommends deploying a Teledyne T500U cavity-attenuated phase-shift NO_2 analyzer (EQNA-0514-212) at Houston Deer Park #2 and Dallas Hinton by June 1, 2019.
- The TCEQ recommends decommissioning the TSP Pb monitors at Frisco 7 and Frisco 5th Street by December 31, 2018.
- The TCEQ recommends decommissioning the Amarillo SH 136 TSP Pb monitor by December 31, 2018.
- The TCEQ recommends decommissioning the collocated TSP Pb monitor at Ojo de Agua by October 1, 2018.
- The TCEQ recommends discontinuing the submittal of O_3 data to AQS from SETRPC Jefferson County Airport and SETRPC Sabine Pass effective August 31, 2018.
- The TCEQ recommends removing the PAMS/SLAMS network designations from the high sensitivity CO monitor at Clinton by December 31, 2018, and continuing to operate the monitor as an SPM.
- The TCEQ recommends decommissioning the high sensitivity CO monitor at Nederland High School by December 31, 2018.
- The TCEQ recommends decommissioning the following PM_{10} monitors by December 31, 2018:
  - Dallas North #2;
  - Stage Coach;
  - Houston Aldine;
  - Karnack; and
  - Houston Deer Park #2 (primary and collocated).
- The TCEQ recommends relocating the Riverside site and associated monitoring equipment, including a PM_{10} FRM sampler, less than one mile from the original site location by December 31, 2019.
- Due to industry and population growth in the Portland-Gregory area, the TCEQ continues to evaluate the potential placement of PM_{10} monitors in San Patricio County.
- The TCEQ recommends decommissioning the $PM_{2.5}$ continuous monitor at Arlington Municipal Airport by December 31, 2018.
- The TCEQ recommends reducing the sampling frequency of the $PM_{2.5}$ FRM monitor at Dallas Hinton from daily sampling, to every third day sampling, by October 31, 2018.

- The TCEQ recommends replacing $PM_{2.5}$ TEOM continuous and $PM_{2.5}$ FRM monitors with $PM_{2.5}$ FEM continuous monitors by December 31, 2019, as listed in Table 9.
- The TCEQ is evaluating the need for additional $PM_{2.5}$ FEM continuous monitoring in Dallas.
- The TCEQ recommends relocating the $PM_{2.5}$ FEM primary and collocated monitors at Corpus Christi Huisache to Corpus Christi West by December 31, 2019.
- The TCEQ recommends relocating the $PM_{2.5}$ continuous monitor at Palo Alto in the San Antonio-New Braunfels MSA to a position along the border of the southern Bexar and northern Atascosa counties by December 31, 2019.
- The TCEQ recommends removing the PAMS/SLAMS/SPM network designations and discontinuing the submittal of data to AQS for the Johnson County Luisa, Fort Worth Northwest and Dallas Hinton VOC canister samplers by December 31, 2018.
- The TCEQ recommends decommissioning the carbonyl sampler at Ascarate Park by October 31, 2018.
- The TCEQ recommends collecting 24-hour carbonyl samples every sixth day only during ozone season, April through October, at Fort Worth Northwest and Clinton, beginning October 31, 2018.
- The TCEQ recommends collecting three eight-hour averaged carbonyl samples every third day, June through August, at Houston Deer Park #2, to meet PAMS requirements. Additionally, the TCEQ recommends performing 24-hour carbonyl sampling every sixth day at Houston Deer Park #2 and Dallas Hinton during the months of April, May, September, and October; with no carbonyl sampling at these sites November through March, beginning October 31, 2018.
- The TCEQ recommends deploying ceilometers to the La Porte Airport and Dallas Hinton PAMS sites by June 1, 2019, to meet new PAMS meteorology requirements. The TCEQ also recommends deploying atmospheric pressure, precipitation, and ultraviolet radiation monitors to the Houston Deer Park #2 and Dallas Hinton sites by June 1, 2019.

Conclusion

After consideration of the federal regulations, 2017 U.S. Census Bureau population data, and 2017 design values, the TCEQ will meet or exceed all monitoring requirements with the above-mentioned recommendations for the next calendar year.

Appendix A

Ambient Air Monitoring Network Site List

Texas Commission on Environmental Quality
2018 Annual Monitoring Network Plan

Appendix A: Ambient Air Monitoring Network Site List

MSA / CBSA	AQS Site ID	Site Name	Address/Location	Latitude	Longitude	Location Setting	Sampler Type	AQS Network & Monitor Type	Methods	Operating Schedule	Monitoring Objective	Spatial Scale
Amarillo, TX	483751025	Amarillo 24th Avenue	4205 NE 24th Avenue, Amarillo	35.23674	-101.78741	Suburban	SO2	SLAMS	Pulsed Fluorescence	Continuous	Population Exposure	Neighborhood
Amarillo, TX	483751025	Amarillo 24th Avenue	4205 NE 24th Avenue, Amarillo	35.23674	-101.78741	Suburban	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	General/Background	Neighborhood
Amarillo, TX	483751025	Amarillo 24th Avenue	4205 NE 24th Avenue, Amarillo	35.23674	-101.78741	Suburban	Wind	Spm	Potentiometer Cup Anemometer	Continuous	General/Background	Neighborhood
Amarillo, TX	483750320	Amarillo A&M	6500 Amarillo Blvd West, Amarillo	35.20159	-101.90927	Urban and Center City	PM2.5 (TEOM)**	Spm	TEOM Gravimetric	Continuous	Population Exposure	Urban Scale
Amarillo, TX	483750024	Amarillo SH 136	7100 State Highway 136, Amarillo	35.28027	-101.71564	Rural	TSP (Pb)	SLAMS	HiVol ICP-MS	24 Hours; 1/6 Days	Population Exposure; Source Oriented	Middle Scale
Amarillo, TX	483751077	Amarillo Xcel El Rancho	Folsom Rd. & El Rancho Rd., Amarillo	35.31650	-101.74180	Rural	SO2	SLAMS	Pulsed Fluorescence	Continuous	Source Oriented	Neighborhood
Amarillo, TX	483751077	Amarillo Xcel El Rancho	Folsom Rd. & El Rancho Rd., Amarillo	35.31650	-101.74180	Rural	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	General/Background	Neighborhood
Amarillo, TX	483751077	Amarillo Xcel El Rancho	Folsom Rd. & El Rancho Rd., Amarillo	35.31650	-101.74180	Rural	Wind	Spm	Potentiometer Cup Anemometer	Continuous	General/Background	Neighborhood
Austin-Round Rock, TX	484530020	Austin Audubon Society	12200 Lime Creek Rd, Leander	30.48317	-97.87230	Rural	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Neighborhood
Austin-Round Rock, TX	484530020	Austin Audubon Society	12200 Lime Creek Rd, Leander	30.48317	-97.87230	Rural	PM10 (FRM)	SLAMS	HiVol Gravimetric	24 Hours; 1/6 Days	Population Exposure	Neighborhood
Austin-Round Rock, TX	484530020	Austin Audubon Society	12200 Lime Creek Rd, Leander	30.48317	-97.87230	Rural	Solar Radiation	Spm	Photovoltaic	Continuous	Population Exposure	Urban Scale
Austin-Round Rock, TX	484530020	Austin Audubon Society	12200 Lime Creek Rd, Leander	30.48317	-97.87230	Rural	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	Population Exposure	Urban Scale
Austin-Round Rock, TX	484530020	Austin Audubon Society	12200 Lime Creek Rd, Leander	30.48317	-97.87230	Rural	Wind	Spm	Potentiometer Cup Anemometer	Continuous	Population Exposure	Urban Scale
Austin-Round Rock, TX	484531068	Austin North Interstate 35	8912 N IH 35 SVRD SB, Austin	30.35386	-97.69166	Urban and Center City	CO	Near Road/SLAMS	Gas Filter Correlation	Continuous	Max Precursor Emissions Impact	Microscale
Austin-Round Rock, TX	484531068	Austin North Interstate 35	8912 N IH 35 SVRD SB, Austin	30.35386	-97.69166	Urban and Center City	NO/NO2/NOx	Near Road/SLAMS	Chemiluminescence	Continuous	Max Precursor Emissions Impact	Microscale

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Austin-Round Rock, TX	484531068	Austin North Interstate 35	8912 N IH 35 SVRD SB, Austin	30.26321	-97.71288	Urban and Center City	PM2.5 (FRM)	Near Road/SLAMS	Sequential FRM Gravimetric	24 Hours; 1/3 Days	Max Precursor Emissions Impact	Microscale
Austin-Round Rock, TX	484531068	Austin North Interstate 35	8912 N IH 35 SVRD SB, Austin	30.35386	-97.69166	Urban and Center City	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	Max Precursor Emissions Impact	Microscale
Austin-Round Rock, TX	484531068	Austin North Interstate 35	8912 N IH 35 SVRD SB, Austin	30.35386	-97.69166	Urban and Center City	Wind	Spm	Potentiometer Cup Anemometer	Continuous	Max Precursor Emissions Impact	Microscale
Austin-Round Rock, TX	484530014	Austin Northwest	3724 North Hills Dr, Austin	30.35386	-97.69166	Suburban	NO/NO2/NOx	SLAMS	Chemiluminescence	Continuous	Population Exposure	Urban Scale
Austin-Round Rock, TX	484530014	Austin Northwest	3724 North Hills Dr, Austin	30.35444	-97.76026	Suburban	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Neighborhood
Austin-Round Rock, TX	484530014	Austin Northwest	3724 North Hills Dr, Austin	30.35444	-97.76026	Suburban	PM2.5 (TEOM)**	Spm	TEOM Gravimetric	Continuous	Population Exposure	Neighborhood
Austin-Round Rock, TX	484530014	Austin Northwest	3724 North Hills Dr, Austin	30.35444	-97.76026	Suburban	SO2	SLAMS	Pulsed Fluorescence	Continuous	Population Exposure	Urban Scale
Austin-Round Rock, TX	484530014	Austin Northwest	3724 North Hills Dr, Austin	30.35444	-97.76026	Suburban	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	General/Background	Neighborhood
Austin-Round Rock, TX	484530014	Austin Northwest	3724 North Hills Dr, Austin	30.35444	-97.76026	Suburban	Wind (3m)	Spm	Potentiometer Cup Anemometer	Continuous	General/Background	Neighborhood
Austin-Round Rock, TX	484530021	Austin Webberville Rd	2600B Webberville Rd, Austin	30.35444	-97.76026	Urban and Center City	PM10 (FRM)	SLAMS	HiVol Gravimetric	24 Hours; 1/6 Days	Population Exposure	Neighborhood
Austin-Round Rock, TX	484530021	Austin Webberville Rd	2600B Webberville Rd, Austin	30.26321	-97.71288	Urban and Center City	PM2.5 (Beta)	SLAMS	Beta Attenuation	Continuous	Population Exposure	Neighborhood
Austin-Round Rock, TX	484530021	Austin Webberville Rd	2600B Webberville Rd, Austin	30.26321	-97.71288	Urban and Center City	PM2.5 (FRM)	QA Collocated SLAMS	Sequential FRM Gravimetric	24 Hours; 1/6 Days	Population Exposure	Neighborhood
Austin-Round Rock, TX	484530021	Austin Webberville Rd	2600B Webberville Rd, Austin	30.26321	-97.71288	Urban and Center City	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	Population Exposure	Neighborhood
Austin-Round Rock, TX	484530021	Austin Webberville Rd	2600B Webberville Rd, Austin	30.26321	-97.71288	Urban and Center City	Wind	Spm	Potentiometer Cup Anemometer	Continuous	Population Exposure	Neighborhood
AUSTIN-SAN MARCOS, TX	481490001	Fayette County	636 Roznov Rd, Round Top	29.96247	-96.74587	Rural	PM2.5 (TEOM)**	Spm	TEOM Gravimetric	Continuous	Regional Transport; Source Oriented	Regional Scale

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MSA / CBSA	AQS Site ID	Site Name	Address/Location	Latitude	Longitude	Location Setting	Sampler Type	AQS Network & Monitor Type	Methods	Operating Schedule	Monitoring Objective	Spatial Scale
Beaumont-Port Arthur, TX	482450009	Beaumont Downtown	1086 Vermont Avenue, Beaumont	30.03642	-94.07106	Suburban	NO/NO2/NOx	PAMS/SLAMS	Chemiluminescence	Continuous	Population Exposure	Neighborhood
Beaumont-Port Arthur, TX	482450009	Beaumont Downtown	1086 Vermont Avenue, Beaumont	30.03642	-94.07106	Suburban	O3	PAMS/SLAMS	UV Photometric	Continuous	Max Precursor Emissions Impact; Population Exposure	Neighborhood
Beaumont-Port Arthur, TX	482450009	Beaumont Downtown	1086 Vermont Avenue, Beaumont	30.03642	-94.07106	Suburban	SO2	SLAMS	Pulsed Fluorescence	Continuous	Population Exposure	Neighborhood
Beaumont-Port Arthur, TX	482450009	Beaumont Downtown	1086 Vermont Avenue, Beaumont	30.03642	-94.07106	Suburban	Solar Radiation	PAMS/SLAMS	Photovoltaic	Continuous	Max Precursor Emissions Impact	Neighborhood
Beaumont-Port Arthur, TX	482450009	Beaumont Downtown	1086 Vermont Avenue, Beaumont	30.03642	-94.07106	Suburban	Speciated VOC (AutoGC)	PAMS/SLAMS	GC	Continuous	Max Precursor Emissions Impact; Population Exposure	Neighborhood
Beaumont-Port Arthur, TX	482450009	Beaumont Downtown	1086 Vermont Avenue, Beaumont	30.03642	-94.07106	Suburban	Temperature (Outdoor)	PAMS/SLAMS	Aspirated Thermister	Continuous	Max Precursor Emissions Impact	Neighborhood
Beaumont-Port Arthur, TX	482450009	Beaumont Downtown	1086 Vermont Avenue, Beaumont	30.03642	-94.07106	Suburban	TNMOC (AutoGC)	PAMS/SLAMS	GC	Continuous	Max Precursor Emissions Impact; Population Exposure	Neighborhood
Beaumont-Port Arthur, TX	482450009	Beaumont Downtown	1086 Vermont Avenue, Beaumont	30.03642	-94.07106	Suburban	Wind	PAMS/SLAMS	Potentiometer Cup Anemometer	Continuous	Max Precursor Emissions Impact	Neighborhood
Beaumont-Port Arthur, TX	482450022	Hamshire	12552 Second St, Not In A City	29.86396	-94.31780	Suburban	NO/NO2/NOx	SLAMS	Chemiluminescence	Continuous	General/Background; Regional Transport	Neighborhood; Urban Scale
Beaumont-Port Arthur, TX	482450022	Hamshire	12552 Second St, Not In A City	29.86396	-94.31780	Suburban	O3	SLAMS	UV Photometric	Continuous	General/Background; Regional Transport	Urban Scale
Beaumont-Port Arthur, TX	482450022	Hamshire	12552 Second St, Not In A City	29.86396	-94.31780	Suburban	PM2.5 (Beta)	Spm	Beta Attenuation	Continuous	Population Exposure	Neighborhood
Beaumont-Port Arthur, TX	482450022	Hamshire	12552 Second St, Not In A City	29.86396	-94.31780	Suburban	Solar Radiation	Spm	Photovoltaic	Continuous	General/Background	Neighborhood
Beaumont-Port Arthur, TX	482450022	Hamshire	12552 Second St, Not In A City	29.86396	-94.31780	Suburban	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	General/Background	Neighborhood
Beaumont-Port Arthur, TX	482450022	Hamshire	12552 Second St, Not In A City	29.86396	-94.31780	Suburban	Wind	Spm	Potentiometer Cup Anemometer	Continuous	General/Background	Neighborhood
Beaumont-Port Arthur, TX	482450018	Jefferson County Airport	End of 90th Street @ Jefferson County Airport, Port Arthur	29.94280	-94.00077	Suburban	Precipitation	PAMS/SLAMS	Rain Gauge	Continuous	General/Background	Neighborhood

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MSA / CBSA	AQS Site ID	Site Name	Address/Location	Latitude	Longitude	Location Setting	Sampler Type	AQS Network & Monitor Type	Methods	Operating Schedule	Monitoring Objective	Spatial Scale
Beaumont-Port Arthur, TX	482450018	Jefferson County Airport	End of 90th Street @ Jefferson County Airport, Port Arthur	29.94280	-94.00077	Suburban	Temperature (Outdoor)	PAMS/SLAMS	Aspirated Thermister	Continuous	General/Background	Neighborhood
Beaumont-Port Arthur, TX	482450018	Jefferson County Airport	End of 90th Street @ Jefferson County Airport, Port Arthur	29.94280	-94.00077	Suburban	Wind	PAMS/SLAMS	Potentiometer Cup Anemometer	Continuous	General/Background	Neighborhood
Beaumont-Port Arthur, TX	482451035	Nederland High School	1800 N. 18th Street, Nederland	29.97893	-94.01087	Suburban	Barometric Pressure	PAMS/SLAMS	Barometer	Continuous	Max Precursor Emissions Impact	Neighborhood
Beaumont-Port Arthur, TX	482451035	Nederland High School	1800 N. 18th Street, Nederland	29.97893	-94.01087	Suburban	CO (High Sensitivity)	PAMS/SLAMS	Gas Filter Correlation	Continuous	Max Precursor Emissions Impact; Population Exposure	Neighborhood
Beaumont-Port Arthur, TX	482451035	Nederland High School	1800 N. 18th Street, Nederland	29.97893	-94.01087	Suburban	Dew Point	Spm	Derived at site	Continuous	Population Exposure	Neighborhood
Beaumont-Port Arthur, TX	482451035	Nederland High School	1800 N. 18th Street, Nederland	29.97893	-94.01087	Suburban	NO/NO2/NOx	PAMS/SLAMS	Chemiluminescence	Continuous	Max Precursor Emissions Impact; Population Exposure	Neighborhood
Beaumont-Port Arthur, TX	482451035	Nederland High School	1800 N. 18th Street, Nederland	29.97893	-94.01087	Suburban	O3	PAMS/SLAMS	UV Photometric	Continuous	Max Precursor Emissions Impact; Population Exposure	Neighborhood
Beaumont-Port Arthur, TX	482451035	Nederland High School	1800 N. 18th Street, Nederland	29.97893	-94.01087	Suburban	Relative Humidity	PAMS/SLAMS	Humidity Sensor	Continuous	Max Precursor Emissions Impact	Neighborhood
Beaumont-Port Arthur, TX	482451035	Nederland High School	1800 N. 18th Street, Nederland	29.97893	-94.01087	Suburban	Solar Radiation	PAMS/SLAMS	Photovoltaic	Continuous	Max Precursor Emissions Impact	Neighborhood
Beaumont-Port Arthur, TX	482451035	Nederland High School	1800 N. 18th Street, Nederland	29.97893	-94.01087	Suburban	Speciated VOC (AutoGC)	PAMS/SLAMS	GC	Continuous	Max Precursor Emissions Impact; Population Exposure	Neighborhood
Beaumont-Port Arthur, TX	482451035	Nederland High School	1800 N. 18th Street, Nederland	29.97893	-94.01087	Suburban	Temperature (Outdoor)	PAMS/SLAMS	Aspirated Thermister	Continuous	Max Precursor Emissions Impact	Neighborhood
Beaumont-Port Arthur, TX	482451035	Nederland High School	1800 N. 18th Street, Nederland	29.97893	-94.01087	Suburban	TNMOC (AutoGC)	PAMS/SLAMS	GC	Continuous	Max Precursor Emissions Impact; Population Exposure	Neighborhood
Beaumont-Port Arthur, TX	482451035	Nederland High School	1800 N. 18th Street, Nederland	29.97893	-94.01087	Suburban	UV Radiation	PAMS/SLAMS	Photovoltaic	Continuous	Max Precursor Emissions Impact	Neighborhood
Beaumont-Port Arthur, TX	482451035	Nederland High School	1800 N. 18th Street, Nederland	29.97893	-94.01087	Suburban	Wind	PAMS/SLAMS	Potentiometer Cup Anemometer	Continuous	Max Precursor Emissions Impact	Neighborhood
Beaumont-Port Arthur, TX	483611083	Orange 1st Street	2239 1st Street, Orange	30.15368	-93.72590	Urban and Center City	SO2	SLAMS	Pulsed Fluorescence	Continuous	Source Oriented	Neighborhood

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Beaumont-Port Arthur, TX	483611083	Orange 1st Street	2239 1st Street, Orange	30.15368	-93.72590	Urban and Center City	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	General/Background	Neighborhood
Beaumont-Port Arthur, TX	483611083	Orange 1st Street	2239 1st Street, Orange	30.15368	-93.72590	Urban and Center City	Wind	Spm	Potentiometer Cup Anemometer	Continuous	General/Background	Neighborhood
Beaumont-Port Arthur, TX	482451071	Port Arthur 7th Street	7th Street / Texaco Island Road, Port Arthur	29.84855	-93.96219	Rural	SO2	SLAMS	Pulsed Fluorescence	Continuous	Source Oriented	Neighborhood
Beaumont-Port Arthur, TX	482451071	Port Arthur 7th Street	7th Street / Texaco Island Road, Port Arthur	29.84855	-93.96219	Rural	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	General/Background	Neighborhood
Beaumont-Port Arthur, TX	482451071	Port Arthur 7th Street	7th Street / Texaco Island Road, Port Arthur	29.84855	-93.96219	Rural	Wind	Spm	Potentiometer Cup Anemometer	Continuous	General/Background	Neighborhood
Beaumont-Port Arthur, TX	482450021	Port Arthur Memorial School	2200 Jefferson Drive, Port Arthur	29.92289	-93.90902	Rural	PM2.5 (Beta)	Spm	Beta Attenuation	Continuous	Population Exposure	Neighborhood
Beaumont-Port Arthur, TX	482450011	Port Arthur West	623 Ellias Street, Port Arthur	29.89752	-93.99108	Urban and Center City	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Neighborhood
Beaumont-Port Arthur, TX	482450011	Port Arthur West	623 Ellias Street, Port Arthur	29.89752	-93.99108	Urban and Center City	SO2	SLAMS	Pulsed Fluorescence	Continuous	Source Oriented	Neighborhood
Beaumont-Port Arthur, TX	482450011	Port Arthur West	623 Ellias Street, Port Arthur	29.89752	-93.99108	Urban and Center City	Solar Radiation	Spm	Photovoltaic	Continuous	Population Exposure; Source Oriented	Neighborhood
Beaumont-Port Arthur, TX	482450011	Port Arthur West	623 Ellias Street, Port Arthur	29.89752	-93.99108	Urban and Center City	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	Source Oriented	Neighborhood
Beaumont-Port Arthur, TX	482450011	Port Arthur West	623 Ellias Street, Port Arthur	29.89752	-93.99108	Urban and Center City	Wind	Spm	Potentiometer Cup Anemometer	Continuous	Population Exposure; Source Oriented	Neighborhood
Beaumont-Port Arthur, TX	482450101	SETRPC 40 Sabine Pass	5200 Mechanic, Not In A City	29.72793	-93.89408	Rural	O3	PAMS/SLAMS	UV Photometric	Continuous	Max Ozone Concentration	Neighborhood
Beaumont-Port Arthur, TX	483611100	SETRPC 42 Mauriceville	Intersection of TX Hwys 62 & 12, Port Arthur	30.19456	-93.86724	Suburban	PM2.5 (Beta)	Spm	Beta Attenuation	Continuous	Regional Transport; Upwind Background	Regional Scale
Beaumont-Port Arthur, TX	482450102	SETRPC 43 Jefferson Co Airport	Jefferson County Airport, Port Arthur	29.94275	-94.00068	Suburban	O3	Spm	UV Photometric	Continuous	Max Precursor Emissions Impact	Middle Scale
Beaumont-Port Arthur, TX	483611001	West Orange	2700 Austin Ave, West Orange	30.08526	-93.76134	Urban and Center City	NO/NO2/NOx	SLAMS	Chemiluminescence	Continuous	Population Exposure	Neighborhood

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Beaumont-Port Arthur, TX	483611001	West Orange	2700 Austin Ave, West Orange	30.08526	-93.76134	Urban and Center City	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Neighborhood
Beaumont-Port Arthur, TX	483611001	West Orange	2700 Austin Ave, West Orange	30.08526	-93.76134	Urban and Center City	Solar Radiation	Spm	Photovoltaic	Continuous	Source Oriented	Neighborhood
Beaumont-Port Arthur, TX	483611001	West Orange	2700 Austin Ave, West Orange	30.08526	-93.76134	Urban and Center City	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	Source Oriented	Neighborhood
Beaumont-Port Arthur, TX	483611001	West Orange	2700 Austin Ave, West Orange	30.08526	-93.76134	Urban and Center City	Wind	Spm	Potentiometer Cup Anemometer	Continuous	Source Oriented	Neighborhood
Big Spring, TX***	482271072	Big Spring Midway	1218 N. Midway Rd, Big Spring	32.28028	-101.40722	Rural	SO2	SLAMS	Pulsed Fluorescence	Continuous	Source Oriented	Neighborhood
Big Spring, TX***	482271072	Big Spring Midway	1218 N. Midway Rd, Big Spring	32.28028	-101.40722	Rural	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	General/Background	Neighborhood
Big Spring, TX***	482271072	Big Spring Midway	1218 N. Midway Rd, Big Spring	32.28028	-101.40722	Rural	Wind	Spm	Potentiometer Cup Anemometer	Continuous	General/Background	Neighborhood
Borger, TX***	482331073	Borger FM 1559	19440 FM 1559, Borger	35.67620	-101.44010	Rural	SO2	SLAMS	Pulsed Fluorescence	Continuous	Source Oriented	Neighborhood
Borger, TX***	482331073	Borger FM 1559	19440 FM 1559, Borger	35.67620	-101.44010	Rural	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	General/Background	Neighborhood
Borger, TX***	482331073	Borger FM 1559	19440 FM 1559, Borger	35.67620	-101.44010	Rural	Wind	Spm	Potentiometer Cup Anemometer	Continuous	General/Background	Neighborhood
Brownsville-Harlingen, TX	480610006	Brownsville	344 Porter Drive, Brownsville	25.89252	-97.49383	Urban and Center City	PM2.5 (Beta)	SLAMS	Beta Attenuation	Continuous	Population Exposure	Regional Scale
Brownsville-Harlingen, TX	480610006	Brownsville	344 Porter Drive, Brownsville	25.89252	-97.49383	Urban and Center City	Solar Radiation	Spm	Photovoltaic	Continuous	Highest Concentration	Neighborhood
Brownsville-Harlingen, TX	480610006	Brownsville	344 Porter Drive, Brownsville	25.89252	-97.49383	Urban and Center City	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	Population Exposure	Urban Scale
Brownsville-Harlingen, TX	480610006	Brownsville	344 Porter Drive, Brownsville	25.89252	-97.49383	Urban and Center City	Wind	Spm	Potentiometer Cup Anemometer	Continuous	Highest Concentration	Neighborhood
Brownsville-Harlingen, TX	480611023	Harlingen Teege	1602 W Teege Avenue, Harlingen	25.89252	-97.49383	Suburban	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Neighborhood

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Brownsville-Harlingen, TX	480611023	Harlingen Teege	1602 W Teege Avenue, Harlingen	25.89252	-97.49383	Suburban	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	Population Exposure	Neighborhood
Brownsville-Harlingen, TX	480611023	Harlingen Teege	1602 W Teege Avenue, Harlingen	25.89252	-97.49383	Suburban	Wind	Spm	Potentiometer Cup Anemometer	Continuous	Population Exposure	Neighborhood
Brownsville-Harlingen, TX	480612004	Isla Blanca Park	Lot B 69 1/2, South Padre Island	26.20033	-97.71268	Rural	PM2.5 (TEOM)**	Spm	TEOM Gravimetric	Continuous	Regional Transport	Urban Scale
Brownsville-Harlingen, TX	480612004	Isla Blanca Park	Lot B 69 1/2, South Padre Island	26.20033	-97.71268	Rural	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	Regional Transport	Regional Scale
Brownsville-Harlingen, TX	480612004	Isla Blanca Park	Lot B 69 1/2, South Padre Island	26.20033	-97.71268	Rural	Wind (3m)	Spm	Potentiometer Cup Anemometer	Continuous	Regional Transport	Regional Scale
College Station-Bryan, TX	483951076	Franklin Oak Grove	8127 Oak Grove Road, Franklin	31.16889	-96.48194	Rural	SO2	SLAMS	Pulsed Fluorescence	Continuous	Source Oriented	Neighborhood
College Station-Bryan, TX	483951076	Franklin Oak Grove	8127 Oak Grove Road, Franklin	31.16889	-96.48194	Rural	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	General/Background	Neighborhood
College Station-Bryan, TX	483951076	Franklin Oak Grove	8127 Oak Grove Road, Franklin	31.16889	-96.48194	Rural	Wind	Spm	Potentiometer Cup Anemometer	Continuous	General/Background	Neighborhood
Corpus Christi, TX	483550032	Corpus Christi Huisache	3810 Huisache Street, Corpus Christi	27.80451	-97.43158	Urban and Center City	PM2.5 (Beta)	SLAMS	Beta Attenuation	Continuous	Population Exposure	Neighborhood
Corpus Christi, TX	483550032	Corpus Christi Huisache	3810 Huisache Street, Corpus Christi	27.80451	-97.43158	Urban and Center City	PM2.5 (Beta)	QA Collocated SLAMS	Beta Attenuation	Continuous	Population Exposure	Neighborhood
Corpus Christi, TX	483550032	Corpus Christi Huisache	3810 Huisache Street, Corpus Christi	27.80451	-97.43158	Urban and Center City	SO2	SLAMS	Pulsed Fluorescence	Continuous	Highest Concentration; Population Exposure	Neighborhood
Corpus Christi, TX	483550032	Corpus Christi Huisache	3810 Huisache Street, Corpus Christi	27.80451	-97.43158	Urban and Center City	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	Population Exposure	Middle Scale
Corpus Christi, TX	483550032	Corpus Christi Huisache	3810 Huisache Street, Corpus Christi	27.80451	-97.43158	Urban and Center City	Wind	Spm	Potentiometer Cup Anemometer	Continuous	Population Exposure	Middle Scale
Corpus Christi, TX	483550026	Corpus Christi Tuloso	9860 La Branch, Corpus Christi	27.83241	-97.55538	Suburban	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Neighborhood
Corpus Christi, TX	483550026	Corpus Christi Tuloso	9860 La Branch, Corpus Christi	27.83241	-97.55538	Suburban	SO2	SLAMS	Pulsed Fluorescence	Continuous	Population Exposure	Neighborhood

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MSA / CBSA	AQS Site ID	Site Name	Address/Location	Latitude	Longitude	Location Setting	Sampler Type	AQS Network & Monitor Type	Methods	Operating Schedule	Monitoring Objective	Spatial Scale
Corpus Christi, TX	483550026	Corpus Christi Tuloso	9860 La Branch, Corpus Christi	27.83241	-97.55538	Suburban	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	Highest Concentration	Neighborhood
Corpus Christi, TX	483550026	Corpus Christi Tuloso	9860 La Branch, Corpus Christi	27.83241	-97.55538	Suburban	Wind	Spm	Potentiometer Cup Anemometer	Continuous	Highest Concentration	Neighborhood
Corpus Christi, TX	483550025	Corpus Christi West	Corpus Christi State School, 902 Airport Blvd, Corpus Christi	27.76534	-97.43426	Suburban	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Neighborhood
Corpus Christi, TX	483550025	Corpus Christi West	Corpus Christi State School, 902 Airport Blvd, Corpus Christi	27.76534	-97.43426	Suburban	SO2	SLAMS	Pulsed Fluorescence	Continuous	Population Exposure	Neighborhood
Corpus Christi, TX	483550025	Corpus Christi West	Corpus Christi State School, 902 Airport Blvd, Corpus Christi	27.76534	-97.43426	Suburban	Solar Radiation	Spm	Photovoltaic	Continuous	Population Exposure	Neighborhood
Corpus Christi, TX	483550025	Corpus Christi West	Corpus Christi State School, 902 Airport Blvd, Corpus Christi	27.76534	-97.43426	Suburban	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	Population Exposure	Neighborhood
Corpus Christi, TX	483550025	Corpus Christi West	Corpus Christi State School, 902 Airport Blvd, Corpus Christi	27.76534	-97.43426	Suburban	Wind	Spm	Potentiometer Cup Anemometer	Continuous	Population Exposure	Neighborhood
Corpus Christi, TX	483550034	Dona Park	5707 Up River Rd, Corpus Christi	27.81182	-97.46570	Urban and Center City	PM10 (FRM)	SLAMS	HiVol Gravimetric	24 Hours; 1/6 Days	Population Exposure	Neighborhood
Corpus Christi, TX	483550034	Dona Park	5707 Up River Rd, Corpus Christi	27.81182	-97.46570	Urban and Center City	PM2.5 (FRM)	Csn Supplemental SLAMS	Sequential FRM Gravimetric	24 Hours; 1/6 Days	Population Exposure	Neighborhood
Corpus Christi, TX	483550034	Dona Park	5707 Up River Rd, Corpus Christi	27.81182	-97.46570	Urban and Center City	PM2.5 (Speciation)	Csn Supplemental SLAMS	Carbons | Elements | Ions | Sequential Non-FRM Gravimetric	24 Hours; 1/6 Days	Population Exposure	Urban Scale
Corpus Christi, TX	483550034	Dona Park	5707 Up River Rd, Corpus Christi	27.81182	-97.46570	Urban and Center City	PM2.5 (TEOM)**	Spm	TEOM Gravimetric	Continuous	Regional Transport	Urban Scale
Corpus Christi, TX	483550034	Dona Park	5707 Up River Rd, Corpus Christi	27.81182	-97.46570	Urban and Center City	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	Highest Concentration	Regional Scale
Corpus Christi, TX	483550034	Dona Park	5707 Up River Rd, Corpus Christi	27.81182	-97.46570	Urban and Center City	Wind	Spm	Potentiometer Cup Anemometer	Continuous	Highest Concentration	Regional Scale
Corsicana, TX***	483491051	Corsicana Airport	Corsicana Airport, Corsicana	32.03193	-96.39914	Rural	PM2.5 (TEOM)**	Spm	TEOM Gravimetric	Continuous	Source Oriented	Neighborhood
Corsicana, TX***	483491081	Richland Southeast 1220 Road	Southeast 1220 Road, Richland	31.90410	-96.35200	Rural	SO2	SLAMS	Pulsed Fluorescence	Continuous	Source Oriented	Neighborhood

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MSA / CBSA	AQS Site ID	Site Name	Address/Location	Latitude	Longitude	Location Setting	Sampler Type	AQS Network & Monitor Type	Methods	Operating Schedule	Monitoring Objective	Spatial Scale
Corsicana, TX***	483491081	Richland Southeast 1220 Road	Southeast 1220 Road, Richland	31.90410	-96.35200	Rural	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	General/Background	Neighborhood
Corsicana, TX***	483491081	Richland Southeast 1220 Road	Southeast 1220 Road, Richland	31.90410	-96.35200	Rural	Wind	Spm	Potentiometer Cup Anemometer	Continuous	General/Background	Neighborhood
Dallas-Fort Worth-Arlington, TX	484393011	Arlington Municipal Airport	5504 South Collins Street, Arlington	32.65636	-97.08858	Suburban	NO/NO2/NOx	SLAMS	Chemiluminescence	Continuous	Population Exposure	Neighborhood
Dallas-Fort Worth-Arlington, TX	484393011	Arlington Municipal Airport	5504 South Collins Street, Arlington	32.65636	-97.08858	Suburban	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Neighborhood
Dallas-Fort Worth-Arlington, TX	484393011	Arlington Municipal Airport	5504 South Collins Street, Arlington	32.65636	-97.08858	Suburban	PM2.5 (TEOM)**	Spm	TEOM Gravimetric	Continuous	Highest Concentration	Neighborhood
Dallas-Fort Worth-Arlington, TX	484393011	Arlington Municipal Airport	5504 South Collins Street, Arlington	32.65636	-97.08858	Suburban	Solar Radiation	Spm	Photovoltaic	Continuous	Highest Concentration	Neighborhood
Dallas-Fort Worth-Arlington, TX	484393011	Arlington Municipal Airport	5504 South Collins Street, Arlington	32.65636	-97.08858	Suburban	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	Highest Concentration	Neighborhood
Dallas-Fort Worth-Arlington, TX	484393011	Arlington Municipal Airport	5504 South Collins Street, Arlington	32.65636	-97.08858	Suburban	Wind	Spm	Potentiometer Cup Anemometer	Continuous	Highest Concentration	Neighborhood
Dallas-Fort Worth-Arlington, TX	482510003	Cleburne Airport	1650 Airport Drive, Cleburne	32.35359	-97.43674	Suburban	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Urban Scale
Dallas-Fort Worth-Arlington, TX	482510003	Cleburne Airport	1650 Airport Drive, Cleburne	32.35359	-97.43674	Suburban	Solar Radiation	PAMS/SLAMS	Photovoltaic	Continuous	Highest Concentration	Neighborhood
Dallas-Fort Worth-Arlington, TX	482510003	Cleburne Airport	1650 Airport Drive, Cleburne	32.35359	-97.43674	Suburban	Temperature (Outdoor)	PAMS/SLAMS	Aspirated Thermister	Continuous	Highest Concentration	Neighborhood
Dallas-Fort Worth-Arlington, TX	482510003	Cleburne Airport	1650 Airport Drive, Cleburne	32.35359	-97.43674	Suburban	Wind	PAMS/SLAMS	Potentiometer Cup Anemometer	Continuous	Highest Concentration	Neighborhood
Dallas-Fort Worth-Arlington, TX	481130050	Convention Center	717 South Akard, Dallas	32.77426	-96.79769	Urban and Center City	PM10 (FRM)	SLAMS	HiVol Gravimetric	24 Hours; 1/6 Days	Population Exposure	Neighborhood
Dallas-Fort Worth-Arlington, TX	481130050	Convention Center	717 South Akard, Dallas	32.77426	-96.79769	Urban and Center City	PM10 (FRM)	QA Collocated SLAMS	HiVol Gravimetric	24 Hours; 1/6 Days	Population Exposure	Neighborhood
Dallas-Fort Worth-Arlington, TX	481130050	Convention Center	717 South Akard, Dallas	32.77426	-96.79769	Urban and Center City	PM2.5 (FRM)	SLAMS	Sequential FRM Gravimetric	24 Hours; 1/3 Days	Highest Concentration; Population Exposure	Neighborhood

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MSA / CBSA	AQS Site ID	Site Name	Address/Location	Latitude	Longitude	Location Setting	Sampler Type	AQS Network & Monitor Type	Methods	Operating Schedule	Monitoring Objective	Spatial Scale
Dallas-Fort Worth-Arlington, TX	481130050	Convention Center	717 South Akard, Dallas	32.77426	-96.79769	Urban and Center City	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	Population Exposure	Neighborhood
Dallas-Fort Worth-Arlington, TX	481130050	Convention Center	717 South Akard, Dallas	32.77426	-96.79769	Urban and Center City	Wind	Spm	Potentiometer Cup Anemometer	Continuous	Population Exposure	Neighborhood
Dallas-Fort Worth-Arlington, TX	481130069	Dallas Hinton	1415 Hinton Street, Dallas	32.82006	-96.86012	Urban and Center City	Carbonyl	PAMS/SLAMS	DNPH Silica HPLC	3 8-Hours; 1/3 Days (Jun-Aug); 24 Hours; 1/6 days	Max Precursor Emissions Impact	Neighborhood
Dallas-Fort Worth-Arlington, TX	481130069	Dallas Hinton	1415 Hinton Street, Dallas	32.82006	-96.86012	Urban and Center City	CO (High Sensitivity)	NCORE/PAMS SLAMS	Gas Filter Correlation	Continuous	Max Precursor Emissions Impact; Population Exposure	Neighborhood
Dallas-Fort Worth-Arlington, TX	481130069	Dallas Hinton	1415 Hinton Street, Dallas	32.82006	-96.86012	Urban and Center City	Dew Point	Spm	Derived at site	Continuous	Population Exposure	Neighborhood
Dallas-Fort Worth-Arlington, TX	481130069	Dallas Hinton	1415 Hinton Street, Dallas	32.82006	-96.86012	Urban and Center City	NO/NO2/NOx	PAMS/SLAMS	Chemiluminescence	Continuous	Max Precursor Emissions Impact; Population Exposure	Neighborhood
Dallas-Fort Worth-Arlington, TX	481130069	Dallas Hinton	1415 Hinton Street, Dallas	32.82006	-96.86012	Urban and Center City	NOy (High Sensitivity)	NCORE/SLAMS	Chemiluminescence	Continuous	Highest Concentration	Neighborhood
Dallas-Fort Worth-Arlington, TX	481130069	Dallas Hinton	1415 Hinton Street, Dallas	32.82006	-96.86012	Urban and Center City	O3	NCORE/PAMS SLAMS	UV Photometric	Continuous	Max Precursor Emissions Impact; Population Exposure	Neighborhood
Dallas-Fort Worth-Arlington, TX	481130069	Dallas Hinton	1415 Hinton Street, Dallas	32.82006	-96.86012	Urban and Center City	PM10-2.5	NCORE/SLAMS	Beta Attenuation	Continuous	Population Exposure	Neighborhood
Dallas-Fort Worth-Arlington, TX	481130069	Dallas Hinton	1415 Hinton Street, Dallas	32.82006	-96.86012	Urban and Center City	PM2.5	NCORE/SLAMS	Beta Attenuation	Continuous	Population Exposure	Neighborhood
Dallas-Fort Worth-Arlington, TX	481130069	Dallas Hinton	1415 Hinton Street, Dallas	32.82006	-96.86012	Urban and Center City	PM2.5 (FRM)	QA Collocated SLAMS	Sequential FRM Gravimetric	24 Hours; 1/6 Days	Population Exposure	Neighborhood
Dallas-Fort Worth-Arlington, TX	481130069	Dallas Hinton	1415 Hinton Street, Dallas	32.82006	-96.86012	Urban and Center City	PM2.5 (FRM)	NCORE/SLAMS	Sequential FRM Gravimetric	24 Hours; 1/1 Days	Population Exposure	Neighborhood
Dallas-Fort Worth-Arlington, TX	481130069	Dallas Hinton	1415 Hinton Street, Dallas	32.82006	-96.86012	Urban and Center City	PM2.5 (Speciation)	Csn Stn/ NCORE/SLAMS	Carbons | Elements | Ions | Sequential Non-FRM Gravimetric	24 Hours; 1/3 Days	Population Exposure	Neighborhood
Dallas-Fort Worth-Arlington, TX	481130069	Dallas Hinton	1415 Hinton Street, Dallas	32.82006	-96.86012	Urban and Center City	Relative Humidity	NCORE/PAMS SLAMS	Humidity Sensor	Continuous	Max Precursor Emissions Impact	Neighborhood

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MSA / CBSA	AQS Site ID	Site Name	Address/Location	Latitude	Longitude	Location Setting	Sampler Type	AQS Network & Monitor Type	Methods	Operating Schedule	Monitoring Objective	Spatial Scale
Dallas-Fort Worth-Arlington, TX	481130069	Dallas Hinton	1415 Hinton Street, Dallas	32.82006	-96.86012	Urban and Center City	SO2 (High Sensitivity)	NCORE/SLAMS	Pulsed Fluorescence	Continuous	Population Exposure	Neighborhood
Dallas-Fort Worth-Arlington, TX	481130069	Dallas Hinton	1415 Hinton Street, Dallas	32.82006	-96.86012	Urban and Center City	Solar Radiation	PAMS/SLAMS	Photovoltaic	Continuous	Max Precursor Emissions Impact	Neighborhood
Dallas-Fort Worth-Arlington, TX	481130069	Dallas Hinton	1415 Hinton Street, Dallas	32.82006	-96.86012	Urban and Center City	Speciated VOC (AutoGC)	PAMS/SLAMS	GC	Continuous	Highest Concentration; Max Precursor Emissions Impact	Neighborhood
Dallas-Fort Worth-Arlington, TX	481130069	Dallas Hinton	1415 Hinton Street, Dallas	32.82006	-96.86012	Urban and Center City	Speciated VOC (Canister)	PAMS/SLAMS	Canister GC-MS	24 Hours; 1/6 Days	Max Precursor Emissions Impact	Neighborhood
Dallas-Fort Worth-Arlington, TX	481130069	Dallas Hinton	1415 Hinton Street, Dallas	32.82006	-96.86012	Urban and Center City	Temperature (Outdoor)	PAMS/SLAMS	Aspirated Thermister	Continuous	Max Precursor Emissions Impact	Neighborhood
Dallas-Fort Worth-Arlington, TX	481130069	Dallas Hinton	1415 Hinton Street, Dallas	32.82006	-96.86012	Urban and Center City	TNMOC (AutoGC)	PAMS/SLAMS	GC	Continuous	Highest Concentration; Max Precursor Emissions Impact	Neighborhood
Dallas-Fort Worth-Arlington, TX	481130069	Dallas Hinton	1415 Hinton Street, Dallas	32.82006	-96.86012	Urban and Center City	Visibility	Spm	Visibility Sensor	Continuous	Population Exposure	Neighborhood
Dallas-Fort Worth-Arlington, TX	481130069	Dallas Hinton	1415 Hinton Street, Dallas	32.82006	-96.86012	Urban and Center City	Wind	PAMS/SLAMS	Potentiometer Cup Anemometer	Continuous	Max Precursor Emissions Impact	Neighborhood
Dallas-Fort Worth-Arlington, TX	481131067	Dallas LBJ Freeway	8652 LBJ Freeway, Dallas	32.92118	-96.75355	Urban and Center City	NO/NO2/NOx	Near Road/SLAMS	Chemiluminescence	Continuous	Max Precursor Emissions Impact	Microscale
Dallas-Fort Worth-Arlington, TX	481131067	Dallas LBJ Freeway	8652 LBJ Freeway, Dallas	32.92118	-96.75355	Urban and Center City	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	Max Precursor Emissions Impact	Microscale
Dallas-Fort Worth-Arlington, TX	481131067	Dallas LBJ Freeway	8652 LBJ Freeway, Dallas	32.92118	-96.75355	Urban and Center City	Wind	Spm	Potentiometer Cup Anemometer	Continuous	Max Precursor Emissions Impact	Microscale
Dallas-Fort Worth-Arlington, TX	481130075	Dallas North #2	12532 1/2 Nuestra Drive, Dallas	32.91921	-96.80850	Suburban	NO/NO2/NOx	SLAMS	Chemiluminescence	Continuous	Population Exposure	Neighborhood
Dallas-Fort Worth-Arlington, TX	481130075	Dallas North #2	12532 1/2 Nuestra Drive, Dallas	32.91921	-96.80850	Suburban	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Urban Scale
Dallas-Fort Worth-Arlington, TX	481130075	Dallas North #2	12532 1/2 Nuestra Drive, Dallas	32.91921	-96.80850	Suburban	PM10 (FRM)	SLAMS	HiVol Gravimetric	24 Hours; 1/6 Days	Population Exposure	Urban Scale
Dallas-Fort Worth-Arlington, TX	481130075	Dallas North #2	12532 1/2 Nuestra Drive, Dallas	32.91921	-96.80850	Suburban	Solar Radiation	Spm	Photovoltaic	Continuous	General/Background	Neighborhood

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Dallas-Fort Worth-Arlington, TX	481130075	Dallas North #2	12532 1/2 Nuestra Drive, Dallas	32.91921	-96.80850	Suburban	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	General/Background	Neighborhood
Dallas-Fort Worth-Arlington, TX	481130075	Dallas North #2	12532 1/2 Nuestra Drive, Dallas	32.91921	-96.80850	Suburban	Wind	Spm	Potentiometer Cup Anemometer	Continuous	General/Background	Neighborhood
Dallas-Fort Worth-Arlington, TX	481130087	Dallas Redbird Airport Executive	3277 W Redbird Lane, Dallas	32.67645	-96.87206	Suburban	NO/NO2/NOx	SLAMS	Chemiluminescence	Continuous	Population Exposure	Neighborhood
Dallas-Fort Worth-Arlington, TX	481130087	Dallas Redbird Airport Executive	3277 W Redbird Lane, Dallas	32.67645	-96.87206	Suburban	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Urban Scale
Dallas-Fort Worth-Arlington, TX	481130087	Dallas Redbird Airport Executive	3277 W Redbird Lane, Dallas	32.67645	-96.87206	Suburban	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	General/Background	Neighborhood
Dallas-Fort Worth-Arlington, TX	481130087	Dallas Redbird Airport Executive	3277 W Redbird Lane, Dallas	32.67645	-96.87206	Suburban	Wind	Spm	Potentiometer Cup Anemometer	Continuous	General/Background	Neighborhood
Dallas-Fort Worth-Arlington, TX	481210034	Denton Airport South	Denton Airport South, Denton	33.21907	-97.19628	Rural	Dew Point	Spm	Derived at site	Continuous	Population Exposure	Urban Scale
Dallas-Fort Worth-Arlington, TX	481210034	Denton Airport South	Denton Airport South, Denton	33.21907	-97.19628	Rural	NO/NO2/NOx	PAMS/SLAMS	Chemiluminescence	Continuous	Max Ozone Concentration; Population Exposure	Urban Scale
Dallas-Fort Worth-Arlington, TX	481210034	Denton Airport South	Denton Airport South, Denton	33.21907	-97.19628	Rural	NOy (High Sensitivity)	PAMS/SLAMS	Chemiluminescence	Continuous	Max Ozone Concentration; Population Exposure	Urban Scale
Dallas-Fort Worth-Arlington, TX	481210034	Denton Airport South	Denton Airport South, Denton	33.21907	-97.19628	Rural	O3	PAMS/SLAMS	UV Photometric	Continuous	Max Ozone Concentration; Population Exposure	Urban Scale
Dallas-Fort Worth-Arlington, TX	481210034	Denton Airport South	Denton Airport South, Denton	33.21907	-97.19628	Rural	PM2.5 (TEOM)**	Spm	TEOM Gravimetric	Continuous	Population Exposure	Urban Scale
Dallas-Fort Worth-Arlington, TX	481210034	Denton Airport South	Denton Airport South, Denton	33.21907	-97.19628	Rural	Precipitation	PAMS/SLAMS	Rain Gauge	Continuous	Max Ozone Concentration	Urban Scale
Dallas-Fort Worth-Arlington, TX	481210034	Denton Airport South	Denton Airport South, Denton	33.21907	-97.19628	Rural	Relative Humidity	PAMS/SLAMS	Humidity Sensor	Continuous	Max Ozone Concentration	Urban Scale
Dallas-Fort Worth-Arlington, TX	481210034	Denton Airport South	Denton Airport South, Denton	33.21907	-97.19628	Rural	Solar Radiation	PAMS/SLAMS	Photovoltaic	Continuous	Max Ozone Concentration	Urban Scale
Dallas-Fort Worth-Arlington, TX	481210034	Denton Airport South	Denton Airport South, Denton	33.21907	-97.19628	Rural	Speciated VOC (Canister)	PAMS/SLAMS	Canister GC-MS	24 Hours; 1/6 Days	Max Ozone Concentration; Population Exposure	Urban Scale

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MSA / CBSA	AQS Site ID	Site Name	Address/Location	Latitude	Longitude	Location Setting	Sampler Type	AQS Network & Monitor Type	Methods	Operating Schedule	Monitoring Objective	Spatial Scale
Dallas-Fort Worth-Arlington, TX	481210034	Denton Airport South	Denton Airport South, Denton	33.21907	-97.19628	Rural	Temperature (Outdoor)	PAMS/SLAMS	Aspirated Thermister	Continuous	Max Ozone Concentration	Urban Scale
Dallas-Fort Worth-Arlington, TX	481210034	Denton Airport South	Denton Airport South, Denton	33.21907	-97.19628	Rural	Wind	PAMS/SLAMS	Potentiometer Cup Anemometer	Continuous	Max Ozone Concentration	Urban Scale
Dallas-Fort Worth-Arlington, TX	484390075	Eagle Mountain Lake	14290 Morris Dido Newark Rd, Eagle Mountain	32.98789	-97.47718	Rural	O3	SLAMS	UV Photometric	Continuous	Max Ozone Concentration	Neighborhood
Dallas-Fort Worth-Arlington, TX	484390075	Eagle Mountain Lake	14290 Morris Dido Newark Rd, Eagle Mountain	32.98789	-97.47718	Rural	Solar Radiation	Spm	Photovoltaic	Continuous	Highest Concentration	Middle Scale
Dallas-Fort Worth-Arlington, TX	484390075	Eagle Mountain Lake	14290 Morris Dido Newark Rd, Eagle Mountain	32.98789	-97.47718	Rural	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	Highest Concentration	Middle Scale
Dallas-Fort Worth-Arlington, TX	484390075	Eagle Mountain Lake	14290 Morris Dido Newark Rd, Eagle Mountain	32.98789	-97.47718	Rural	Wind	Spm	Potentiometer Cup Anemometer	Continuous	Highest Concentration	Middle Scale
Dallas-Fort Worth-Arlington, TX	481130061	Earhart	3434 Bickers (Earhart Elem School), Dallas	32.78536	-96.87657	Urban and Center City	PM10 (FRM)	SLAMS	HiVol Gravimetric	24 Hours; 1/6 Days	Population Exposure	Neighborhood
Dallas-Fort Worth-Arlington, TX	484391053	Fort Worth California Parkway North	1198 California Parkway North,	32.66472	-97.33806	Urban and Center City	CO	Near Road/SLAMS	Gas Filter Correlation	Continuous	Max Precursor Emissions Impact	Microscale
Dallas-Fort Worth-Arlington, TX	484391053	Fort Worth California Parkway North	1198 California Parkway North,	32.66472	-97.33806	Urban and Center City	NO/NO2/NOx	Near Road/SLAMS	Chemiluminescence	Continuous	Max Precursor Emissions Impact	Microscale
Dallas-Fort Worth-Arlington, TX	484391053	Fort Worth California Parkway North	1198 California Parkway North,	32.66472	-97.33806	Urban and Center City	PM2.5 (FRM)	Near Road/SLAMS	Sequential FRM Gravimetric	24 Hours; 1/3 Days	Max Precursor Emissions Impact	Microscale
Dallas-Fort Worth-Arlington, TX	484391053	Fort Worth California Parkway North	1198 California Parkway North,	32.66472	-97.33806	Urban and Center City	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	Max Precursor Emissions Impact	Microscale
Dallas-Fort Worth-Arlington, TX	484391053	Fort Worth California Parkway North	1198 California Parkway North,	32.66472	-97.33806	Urban and Center City	Wind	Spm	Potentiometer Cup Anemometer	Continuous	Max Precursor Emissions Impact	Microscale
Dallas-Fort Worth-Arlington, TX	484391002	Fort Worth Northwest	3317 Ross Ave, Fort Worth	32.80582	-97.35657	Urban and Center City	Carbonyl	Spm	DNPH Silica HPLC	24 Hours; 1/6 Days	Max Precursor Emissions Impact	Neighborhood
Dallas-Fort Worth-Arlington, TX	484391002	Fort Worth Northwest	3317 Ross Ave, Fort Worth	32.80582	-97.35657	Urban and Center City	Dew Point	Spm	Derived at site	Continuous	Population Exposure	Middle Scale
Dallas-Fort Worth-Arlington, TX	484391002	Fort Worth Northwest	3317 Ross Ave, Fort Worth	32.80582	-97.35657	Urban and Center City	NO/NO2/NOx	PAMS/SLAMS	Chemiluminescence	Continuous	Max Precursor Emissions Impact; Population Exposure	Neighborhood

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MSA / CBSA	AQS Site ID	Site Name	Address/Location	Latitude	Longitude	Location Setting	Sampler Type	AQS Network & Monitor Type	Methods	Operating Schedule	Monitoring Objective	Spatial Scale
Dallas-Fort Worth-Arlington, TX	484391002	Fort Worth Northwest	3317 Ross Ave, Fort Worth	32.80582	-97.35657	Urban and Center City	O3	PAMS/SLAMS	UV Photometric	Continuous	Max Precursor Emissions Impact; Population Exposure	Neighborhood
Dallas-Fort Worth-Arlington, TX	484391002	Fort Worth Northwest	3317 Ross Ave, Fort Worth	32.80582	-97.35657	Urban and Center City	PM2.5 (FRM)	SLAMS	Sequential FRM Gravimetric	24 Hours; 1/3 Days	Population Exposure	Neighborhood
Dallas-Fort Worth-Arlington, TX	484391002	Fort Worth Northwest	3317 Ross Ave, Fort Worth	32.80582	-97.35657	Urban and Center City	Relative Humidity	PAMS/SLAMS	Humidity Sensor	Continuous	Max Precursor Emissions Impact	Neighborhood
Dallas-Fort Worth-Arlington, TX	484391002	Fort Worth Northwest	3317 Ross Ave, Fort Worth	32.80582	-97.35657	Urban and Center City	Solar Radiation	PAMS/SLAMS	Photovoltaic	Continuous	Max Precursor Emissions Impact	Neighborhood
Dallas-Fort Worth-Arlington, TX	484391002	Fort Worth Northwest	3317 Ross Ave, Fort Worth	32.80582	-97.35657	Urban and Center City	Speciated VOC (AutoGC)	PAMS/SLAMS	GC	Continuous	Max Precursor Emissions Impact; Population Exposure	Neighborhood
Dallas-Fort Worth-Arlington, TX	484391002	Fort Worth Northwest	3317 Ross Ave, Fort Worth	32.80582	-97.35657	Urban and Center City	Speciated VOC (Canister)	PAMS/SLAMS	Canister GC-MS	24 Hours; 1/6 Days	Max Precursor Emissions Impact; Population Exposure	Neighborhood
Dallas-Fort Worth-Arlington, TX	484391002	Fort Worth Northwest	3317 Ross Ave, Fort Worth	32.80582	-97.35657	Urban and Center City	Temperature (Outdoor)	PAMS/SLAMS	Aspirated Thermister	Continuous	Max Precursor Emissions Impact	Neighborhood
Dallas-Fort Worth-Arlington, TX	484391002	Fort Worth Northwest	3317 Ross Ave, Fort Worth	32.80582	-97.35657	Urban and Center City	TNMOC (AutoGC)	PAMS/SLAMS	GC	Continuous	Max Precursor Emissions Impact; Population Exposure	Neighborhood
Dallas-Fort Worth-Arlington, TX	484391002	Fort Worth Northwest	3317 Ross Ave, Fort Worth	32.80582	-97.35657	Urban and Center City	Wind	PAMS/SLAMS	Potentiometer Cup Anemometer	Continuous	Max Precursor Emissions Impact	Neighborhood
Dallas-Fort Worth-Arlington, TX	480850005	Frisco	6590 Hillcrest Road, Frisco	33.13240	-96.78642	Suburban	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Urban Scale
Dallas-Fort Worth-Arlington, TX	480850005	Frisco	6590 Hillcrest Road, Frisco	33.13240	-96.78642	Suburban	Solar Radiation	Spm	Photovoltaic	Continuous	General/Background	Urban Scale
Dallas-Fort Worth-Arlington, TX	480850005	Frisco	6590 Hillcrest Road, Frisco	33.13240	-96.78642	Suburban	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	General/Background	Urban Scale
Dallas-Fort Worth-Arlington, TX	480850005	Frisco	6590 Hillcrest Road, Frisco	33.13240	-96.78642	Suburban	Wind	Spm	Potentiometer Cup Anemometer	Continuous	General/Background	Urban Scale
Dallas-Fort Worth-Arlington, TX	480850003	Frisco 5th St	7471 South 5th Street, Frisco	33.14234	-96.82468	Suburban	TSP (Pb)	SLAMS	HiVol ICP-MS	24 Hours; 1/6 Days	Population Exposure; Source Oriented	Middle Scale
Dallas-Fort Worth-Arlington, TX	480850007	Frisco 7	6931 Ash Street, Frisco	33.14741	-96.82577	Suburban	TSP (Pb)	SLAMS	HiVol ICP-MS	24 Hours; 1/6 Days	Population Exposure; Source Oriented	Neighborhood

Appendix A: Ambient Air Monitoring Network Site List

MSA / CBSA	AQS Site ID	Site Name	Address/Location	Latitude	Longitude	Location Setting	Sampler Type	AQS Network & Monitor Type	Methods	Operating Schedule	Monitoring Objective	Spatial Scale
Dallas-Fort Worth-Arlington, TX	480850009	Frisco Eubanks	6601 Eubanks, Frisco	33.14466	-96.82881	Suburban	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	Population Exposure; Source Oriented	Neighborhood
Dallas-Fort Worth-Arlington, TX	480850009	Frisco Eubanks	6601 Eubanks, Frisco	33.14466	-96.82881	Suburban	TSP (Pb)	SLAMS	HiVol ICP-MS	24 Hours; 1/6 Days	Population Exposure; Source Oriented	Neighborhood
Dallas-Fort Worth-Arlington, TX	480850009	Frisco Eubanks	6601 Eubanks, Frisco	33.14466	-96.82881	Suburban	TSP (Pb)	QA Collocated SLAMS	HiVol ICP-MS	24 Hours; 1/6 Days	Population Exposure; Source Oriented	Neighborhood
Dallas-Fort Worth-Arlington, TX	480850009	Frisco Eubanks	6601 Eubanks, Frisco	33.14466	-96.82881	Suburban	Wind (3m)	Spm	Potentiometer Cup Anemometer	Continuous	Population Exposure	Neighborhood
Dallas-Fort Worth-Arlington, TX	480850029	Frisco Stonebrook	7202 Stonebrook Parkway, Frisco	33.13602	-96.82447	Urban and Center City	TSP (Pb)	Spm	HiVol ICP-MS	24 Hours; 1/6 Days	Population Exposure; Source Oriented	Neighborhood
Dallas-Fort Worth-Arlington, TX	482210001	Granbury*	200 N Gordon Street, Granbury	32.44230	-97.80353	Suburban	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Neighborhood
Dallas-Fort Worth-Arlington, TX	482210001	Granbury*	200 N Gordon Street, Granbury	32.44230	-97.80353	Suburban	Solar Radiation	Spm	Photovoltaic	Continuous	General/Background	Middle Scale
Dallas-Fort Worth-Arlington, TX	482210001	Granbury*	200 N Gordon Street, Granbury	32.44230	-97.80353	Suburban	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	General/Background	Middle Scale
Dallas-Fort Worth-Arlington, TX	482210001	Granbury*	200 N Gordon Street, Granbury	32.44230	-97.80353	Suburban	Wind	Spm	Potentiometer Cup Anemometer	Continuous	General/Background	Middle Scale
Dallas-Fort Worth-Arlington, TX	484393009	Grapevine Fairway	4100 Fairway Dr, Grapevine	32.98426	-97.06372	Suburban	Barometric Pressure	PAMS/SLAMS	Barometer	Continuous	Max Ozone Concentration	Neighborhood
Dallas-Fort Worth-Arlington, TX	484393009	Grapevine Fairway	4100 Fairway Dr, Grapevine	32.98426	-97.06372	Suburban	Dew Point	Spm	Derived at site	Continuous	Highest Concentration; Max Ozone Concentration	Neighborhood
Dallas-Fort Worth-Arlington, TX	484393009	Grapevine Fairway	4100 Fairway Dr, Grapevine	32.98426	-97.06372	Suburban	NO/NO2/NOx	PAMS/SLAMS	Chemiluminescence	Continuous	Max Ozone Concentration; Population Exposure	Neighborhood
Dallas-Fort Worth-Arlington, TX	484393009	Grapevine Fairway	4100 Fairway Dr, Grapevine	32.98426	-97.06372	Suburban	O3	PAMS/SLAMS	UV Photometric	Continuous	Max Ozone Concentration; Population Exposure	Neighborhood
Dallas-Fort Worth-Arlington, TX	484393009	Grapevine Fairway	4100 Fairway Dr, Grapevine	32.98426	-97.06372	Suburban	Relative Humidity	PAMS/SLAMS	Humidity Sensor	Continuous	Max Ozone Concentration	Neighborhood
Dallas-Fort Worth-Arlington, TX	484393009	Grapevine Fairway	4100 Fairway Dr, Grapevine	32.98426	-97.06372	Suburban	Solar Radiation	PAMS/SLAMS	Photovoltaic	Continuous	Max Ozone Concentration	Neighborhood

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Dallas-Fort Worth-Arlington, TX	484393009	Grapevine Fairway	4100 Fairway Dr, Grapevine	32.98426	-97.06372	Suburban	Speciated VOC (Canister)	PAMS/SLAMS	Canister GC-MS	24 Hours; 1/6 Days	Max Ozone Concentration; Population Exposure	Neighborhood
Dallas-Fort Worth-Arlington, TX	484393009	Grapevine Fairway	4100 Fairway Dr, Grapevine	32.98426	-97.06372	Suburban	Temperature (Outdoor)	PAMS/SLAMS	Aspirated Thermister	Continuous	Max Ozone Concentration	Neighborhood
Dallas-Fort Worth-Arlington, TX	484393009	Grapevine Fairway	4100 Fairway Dr, Grapevine	32.98426	-97.06372	Suburban	Wind	PAMS/SLAMS	Potentiometer Cup Anemometer	Continuous	Max Ozone Concentration	Neighborhood
Dallas-Fort Worth-Arlington, TX	482311006	Greenville	824 Sayle Street, Greenville	33.15309	-96.11557	Suburban	NO/NO2/NOx	SLAMS	Chemiluminescence	Continuous	Population Exposure; Upwind Background	Neighborhood
Dallas-Fort Worth-Arlington, TX	482311006	Greenville	824 Sayle Street, Greenville	33.15309	-96.11557	Suburban	O3	SLAMS	UV Photometric	Continuous	Population Exposure; Upwind Background	Neighborhood
Dallas-Fort Worth-Arlington, TX	482311006	Greenville	824 Sayle Street, Greenville	33.15309	-96.11557	Suburban	Solar Radiation	Spm	Photovoltaic	Continuous	General/Background	Neighborhood
Dallas-Fort Worth-Arlington, TX	482311006	Greenville	824 Sayle Street, Greenville	33.15309	-96.11557	Suburban	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	General/Background	Neighborhood
Dallas-Fort Worth-Arlington, TX	482311006	Greenville	824 Sayle Street, Greenville	33.15309	-96.11557	Suburban	Wind	Spm	Potentiometer Cup Anemometer	Continuous	General/Background	Neighborhood
Dallas-Fort Worth-Arlington, TX	484391006	Haws Athletic Center	600 1/2 Congress St, Fort Worth	32.75914	-97.34233	Urban and Center City	PM2.5 (FRM)	SLAMS	Sequential FRM Gravimetric	24 Hours; 1/3 Days	Highest Concentration; Population Exposure	Neighborhood
Dallas-Fort Worth-Arlington, TX	484391006	Haws Athletic Center	600 1/2 Congress St, Fort Worth	32.75914	-97.34233	Urban and Center City	PM2.5 (TEOM)**	Spm	TEOM Gravimetric	Continuous	Highest Concentration	Neighborhood
Dallas-Fort Worth-Arlington, TX	481391044	Italy	900 FM 667 Ellis County, Italy	32.17542	-96.87019	Rural	Dew Point	Spm	Derived at site	Continuous	Upwind Background	Urban Scale
Dallas-Fort Worth-Arlington, TX	481391044	Italy	900 FM 667 Ellis County, Italy	32.17542	-96.87019	Rural	NO/NO2/NOx	PAMS/SLAMS	Chemiluminescence	Continuous	Upwind Background	Urban Scale
Dallas-Fort Worth-Arlington, TX	481391044	Italy	900 FM 667 Ellis County, Italy	32.17542	-96.87019	Rural	O3	PAMS/SLAMS	UV Photometric	Continuous	Upwind Background	Urban Scale
Dallas-Fort Worth-Arlington, TX	481391044	Italy	900 FM 667 Ellis County, Italy	32.17542	-96.87019	Rural	Relative Humidity	PAMS/SLAMS	Humidity Sensor	Continuous	Upwind Background	Urban Scale
Dallas-Fort Worth-Arlington, TX	481391044	Italy	900 FM 667 Ellis County, Italy	32.17542	-96.87019	Rural	Solar Radiation	PAMS/SLAMS	Photovoltaic	Continuous	Upwind Background	Urban Scale

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Dallas-Fort Worth-Arlington, TX	481391044	Italy	900 FM 667 Ellis County, Italy	32.17542	-96.87019	Rural	Speciated VOC (Canister)	PAMS/SLAMS	Canister GC-MS	24 Hours; 1/6 Days	Upwind Background	Urban Scale
Dallas-Fort Worth-Arlington, TX	481391044	Italy	900 FM 667 Ellis County, Italy	32.17542	-96.87019	Rural	Temperature (Outdoor)	PAMS/SLAMS	Aspirated Thermister	Continuous	Upwind Background	Urban Scale
Dallas-Fort Worth-Arlington, TX	481391044	Italy	900 FM 667 Ellis County, Italy	32.17542	-96.87019	Rural	UV Radiation	PAMS/SLAMS	Photovoltaic	Continuous	Upwind Background	Urban Scale
Dallas-Fort Worth-Arlington, TX	481391044	Italy	900 FM 667 Ellis County, Italy	32.17542	-96.87019	Rural	Wind	PAMS/SLAMS	Potentiometer Cup Anemometer	Continuous	Upwind Background	Urban Scale
Dallas-Fort Worth-Arlington, TX	482511008	Johnson County Luisa	2420 Luisa Ln, Alvarado	32.46970	-97.16927	Suburban	Speciated VOC (Canister)	Spm	Canister GC-MS	24 Hours; 1/6 Days	Population Exposure	Neighborhood
Dallas-Fort Worth-Arlington, TX	482511008	Johnson County Luisa	2420 Luisa Ln, Alvarado	32.46970	-97.16927	Suburban	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	Population Exposure	Neighborhood
Dallas-Fort Worth-Arlington, TX	482511008	Johnson County Luisa	2420 Luisa Ln, Alvarado	32.46970	-97.16927	Suburban	Wind	Spm	Potentiometer Cup Anemometer	Continuous	Population Exposure	Neighborhood
Dallas-Fort Worth-Arlington, TX	482570005	Kaufman	3790 S Houston St, Kaufman	32.56497	-96.31769	Suburban	Dew Point	Spm	Derived at site	Continuous	Highest Concentration	Neighborhood
Dallas-Fort Worth-Arlington, TX	482570005	Kaufman	3790 S Houston St, Kaufman	32.56497	-96.31769	Suburban	NO/NO2/NOx	PAMS/SLAMS	Chemiluminescence	Continuous	Population Exposure; Upwind Background	Neighborhood; Urban Scale
Dallas-Fort Worth-Arlington, TX	482570005	Kaufman	3790 S Houston St, Kaufman	32.56497	-96.31769	Suburban	O3	PAMS/SLAMS	UV Photometric	Continuous	Population Exposure; Upwind Background	Urban Scale
Dallas-Fort Worth-Arlington, TX	482570005	Kaufman	3790 S Houston St, Kaufman	32.56497	-96.31769	Suburban	PM2.5 (TEOM)**	Spm	TEOM Gravimetric	Continuous	Upwind Background	Regional Scale
Dallas-Fort Worth-Arlington, TX	482570005	Kaufman	3790 S Houston St, Kaufman	32.56497	-96.31769	Suburban	Relative Humidity	PAMS/SLAMS	Humidity Sensor	Continuous	Upwind Background	Urban Scale
Dallas-Fort Worth-Arlington, TX	482570005	Kaufman	3790 S Houston St, Kaufman	32.56497	-96.31769	Suburban	SO2	SLAMS	Pulsed Fluorescence	Continuous	Population Exposure; Upwind Background	Urban Scale
Dallas-Fort Worth-Arlington, TX	482570005	Kaufman	3790 S Houston St, Kaufman	32.56497	-96.31769	Suburban	Solar Radiation	PAMS/SLAMS	Photovoltaic	Continuous	Upwind Background	Urban Scale
Dallas-Fort Worth-Arlington, TX	482570005	Kaufman	3790 S Houston St, Kaufman	32.56497	-96.31769	Suburban	Temperature (Outdoor)	PAMS/SLAMS	Aspirated Thermister	Continuous	Upwind Background	Urban Scale

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MSA / CBSA	AQS Site ID	Site Name	Address/Location	Latitude	Longitude	Location Setting	Sampler Type	AQS Network & Monitor Type	Methods	Operating Schedule	Monitoring Objective	Spatial Scale
Dallas-Fort Worth-Arlington, TX	482570005	Kaufman	3790 S Houston St, Kaufman	32.56497	-96.31769	Suburban	Wind	PAMS/SLAMS	Potentiometer Cup Anemometer	Continuous	Upwind Background	Urban Scale
Dallas-Fort Worth-Arlington, TX	484392003	Keller	FAA Site off Alta Vista Road, Fort Worth	32.92247	-97.28209	Suburban	O3	SLAMS	UV Photometric	Continuous	Max Ozone Concentration; Population Exposure	Neighborhood
Dallas-Fort Worth-Arlington, TX	484392003	Keller	FAA Site off Alta Vista Road, Fort Worth	32.92247	-97.28209	Suburban	Solar Radiation	Spm	Photovoltaic	Continuous	General/Background	Urban Scale
Dallas-Fort Worth-Arlington, TX	484392003	Keller	FAA Site off Alta Vista Road, Fort Worth	32.92247	-97.28209	Suburban	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	General/Background	Urban Scale
Dallas-Fort Worth-Arlington, TX	484392003	Keller	FAA Site off Alta Vista Road, Fort Worth	32.92247	-97.28209	Suburban	Wind	Spm	Potentiometer Cup Anemometer	Continuous	General/Background	Urban Scale
Dallas-Fort Worth-Arlington, TX	481390016	Midlothian OFW	2725 Old Fort Worth Road, Midlothian	32.48208	-97.02690	Suburban	NO/NO2/NOx	SLAMS	Chemiluminescence	Continuous	Source Oriented	Neighborhood
Dallas-Fort Worth-Arlington, TX	481390016	Midlothian OFW	2725 Old Fort Worth Road, Midlothian	32.48208	-97.02690	Suburban	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Urban Scale
Dallas-Fort Worth-Arlington, TX	481390016	Midlothian OFW	2725 Old Fort Worth Road, Midlothian	32.48208	-97.02690	Suburban	PM2.5 (FRM)	Spm	Sequential FRM Gravimetric	24 Hours; 1/6 Days	Population Exposure; Source Oriented	Microscale
Dallas-Fort Worth-Arlington, TX	481390016	Midlothian OFW	2725 Old Fort Worth Road, Midlothian	32.48208	-97.02690	Suburban	PM2.5 (Speciation)	Spm	Carbons | Elements | Ions | Sequential Non-FRM Gravimetric	24 Hours; 1/6 Days	Population Exposure; Source Oriented	Neighborhood
Dallas-Fort Worth-Arlington, TX	481390016	Midlothian OFW	2725 Old Fort Worth Road, Midlothian	32.48208	-97.02690	Suburban	PM2.5 (TEOM)**	Spm	TEOM Gravimetric	Continuous	Regional Transport	Regional Scale
Dallas-Fort Worth-Arlington, TX	481390016	Midlothian OFW	2725 Old Fort Worth Road, Midlothian	32.48208	-97.02690	Suburban	SO2	SLAMS	Pulsed Fluorescence	Continuous	Source Oriented	Neighborhood
Dallas-Fort Worth-Arlington, TX	481390016	Midlothian OFW	2725 Old Fort Worth Road, Midlothian	32.48208	-97.02690	Suburban	Solar Radiation	Spm	Photovoltaic	Continuous	General/Background	Neighborhood
Dallas-Fort Worth-Arlington, TX	481390016	Midlothian OFW	2725 Old Fort Worth Road, Midlothian	32.48208	-97.02690	Suburban	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	General/Background	Neighborhood
Dallas-Fort Worth-Arlington, TX	481390016	Midlothian OFW	2725 Old Fort Worth Road, Midlothian	32.48208	-97.02690	Suburban	Wind	Spm	Potentiometer Cup Anemometer	Continuous	General/Background	Neighborhood
Dallas-Fort Worth-Arlington, TX	483670081	Parker County	3033 New Authon Rd, Weatherford	32.86877	-97.90593	Rural	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Urban Scale

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MSA / CBSA	AQS Site ID	Site Name	Address/Location	Latitude	Longitude	Location Setting	Sampler Type	AQS Network & Monitor Type	Methods	Operating Schedule	Monitoring Objective	Spatial Scale
Dallas-Fort Worth-Arlington, TX	483670081	Parker County	3033 New Authon Rd, Weatherford	32.86877	-97.90593	Rural	Solar Radiation	Spm	Photovoltaic	Continuous	Source Oriented	Neighborhood
Dallas-Fort Worth-Arlington, TX	483670081	Parker County	3033 New Authon Rd, Weatherford	32.86877	-97.90593	Rural	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	Source Oriented	Neighborhood
Dallas-Fort Worth-Arlington, TX	483670081	Parker County	3033 New Authon Rd, Weatherford	32.86877	-97.90593	Rural	Wind	Spm	Potentiometer Cup Anemometer	Continuous	Source Oriented	Neighborhood
Dallas-Fort Worth-Arlington, TX	481211032	Pilot Point	792 E Northside Dr, Pilot Point	33.41065	-96.94459	Suburban	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Regional Scale
Dallas-Fort Worth-Arlington, TX	481211032	Pilot Point	792 E Northside Dr, Pilot Point	33.41065	-96.94459	Suburban	Solar Radiation	Spm	Photovoltaic	Continuous	Upwind Background	Regional Scale
Dallas-Fort Worth-Arlington, TX	481211032	Pilot Point	792 E Northside Dr, Pilot Point	33.41065	-96.94459	Suburban	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	Upwind Background	Regional Scale
Dallas-Fort Worth-Arlington, TX	481211032	Pilot Point	792 E Northside Dr, Pilot Point	33.41065	-96.94459	Suburban	Wind	Spm	Potentiometer Cup Anemometer	Continuous	Upwind Background	Regional Scale
Dallas-Fort Worth-Arlington, TX	483970001	Rockwall Heath	100 E Heath St, Rockwall	32.93652	-96.45921	Suburban	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Neighborhood
Dallas-Fort Worth-Arlington, TX	483970001	Rockwall Heath	100 E Heath St, Rockwall	32.93652	-96.45921	Suburban	Solar Radiation	Spm	Photovoltaic	Continuous	Population Exposure	Neighborhood
Dallas-Fort Worth-Arlington, TX	483970001	Rockwall Heath	100 E Heath St, Rockwall	32.93652	-96.45921	Suburban	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	Population Exposure	Neighborhood
Dallas-Fort Worth-Arlington, TX	483970001	Rockwall Heath	100 E Heath St, Rockwall	32.93652	-96.45921	Suburban	Wind	Spm	Potentiometer Cup Anemometer	Continuous	Population Exposure	Neighborhood
Dallas-Fort Worth-Arlington, TX	484393010	Stage Coach	8900 West Freeway, White Settlement	32.73920	-97.47033	Suburban	PM10 (FRM)	SLAMS	HiVol Gravimetric	24 Hours; 1/6 Days	Population Exposure	Neighborhood
Dallas-Fort Worth-Arlington, TX	482570020	Terrell Temtex	2988 Temtex Blvd, Terrell	32.73192	-96.31791	Rural	TSP (Pb)	SLAMS	HiVol ICP-MS	24 Hours; 1/6 Days	Population Exposure; Source Oriented	Neighborhood
Dallas-Fort Worth-Arlington, TX	482570020	Terrell Temtex	2988 Temtex Blvd, Terrell	32.73192	-96.31791	Rural	TSP (Pb)	QA Collocated SLAMS	HiVol ICP-MS	24 Hours; 1/6 Days	Population Exposure; Source Oriented	Neighborhood
Eagle Pass, TX***	483230004	Eagle Pass	265 Foster Maldonado, Eagle Pass	28.70461	-100.45116	Urban and Center City	PM2.5 (Beta)	Spm	Beta Attenuation	Continuous	Regional Transport	Regional Scale

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MSA / CBSA	AQS Site ID	Site Name	Address/Location	Latitude	Longitude	Location Setting	Sampler Type	AQS Network & Monitor Type	Methods	Operating Schedule	Monitoring Objective	Spatial Scale
Eagle Pass, TX***	483230004	Eagle Pass	265 Foster Maldonado, Eagle Pass	28.70461	-100.45116	Urban and Center City	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	Regional Transport	Regional Scale
Eagle Pass, TX***	483230004	Eagle Pass	265 Foster Maldonado, Eagle Pass	28.70461	-100.45116	Urban and Center City	Visibility	Spm	Visibility Sensor	Continuous	Regional Transport	Regional Scale
Eagle Pass, TX***	483230004	Eagle Pass	265 Foster Maldonado, Eagle Pass	28.70461	-100.45116	Urban and Center City	Wind	Spm	Potentiometer Cup Anemometer	Continuous	Regional Transport	Regional Scale
El Paso, TX	481410055	Ascarate Park SE	650 R E Thomason Loop, El Paso	31.74678	-106.40281	Suburban	Barometric Pressure	PAMS/SLAMS	Barometer	Continuous	Max Ozone Concentration; Upwind Background	Neighborhood
El Paso, TX	481410055	Ascarate Park SE	650 R E Thomason Loop, El Paso	31.74678	-106.40281	Suburban	Carbonyl	Spm	DNPH Silica HPLC	24 Hours; 1/6 Days	Max Ozone Concentration; Upwind Background	Neighborhood
El Paso, TX	481410055	Ascarate Park SE	650 R E Thomason Loop, El Paso	31.74678	-106.40281	Suburban	Dew Point	Spm	Derived at site	Continuous	Highest Concentration; Upwind Background	Urban Scale
El Paso, TX	481410055	Ascarate Park SE	650 R E Thomason Loop, El Paso	31.74678	-106.40281	Suburban	NO/NO2/NOx	PAMS/SLAMS	Chemiluminescence	Continuous	Highest Concentration; Upwind Background	Neighborhood; Urban Scale
El Paso, TX	481410055	Ascarate Park SE	650 R E Thomason Loop, El Paso	31.74678	-106.40281	Suburban	O3	PAMS/SLAMS	UV Photometric	Continuous	Max Ozone Concentration; Upwind Background	Neighborhood
El Paso, TX	481410055	Ascarate Park SE	650 R E Thomason Loop, El Paso	31.74678	-106.40281	Suburban	PM2.5 (TEOM)**	Spm	TEOM Gravimetric	Continuous	Population Exposure	Neighborhood
El Paso, TX	481410055	Ascarate Park SE	650 R E Thomason Loop, El Paso	31.74678	-106.40281	Suburban	Relative Humidity	PAMS/SLAMS	Humidity Sensor	Continuous	Max Ozone Concentration; Upwind Background	Neighborhood
El Paso, TX	481410055	Ascarate Park SE	650 R E Thomason Loop, El Paso	31.74678	-106.40281	Suburban	Solar Radiation	PAMS/SLAMS	Photovoltaic	Continuous	Max Ozone Concentration; Upwind Background	Neighborhood
El Paso, TX	481410055	Ascarate Park SE	650 R E Thomason Loop, El Paso	31.74678	-106.40281	Suburban	Temperature (Outdoor)	PAMS/SLAMS	Aspirated Thermister	Continuous	Max Ozone Concentration; Upwind Background	Neighborhood
El Paso, TX	481410055	Ascarate Park SE	650 R E Thomason Loop, El Paso	31.74678	-106.40281	Suburban	Visibility	Spm	Visibility Sensor	Continuous	Highest Concentration; Population Exposure	Urban Scale
El Paso, TX	481410055	Ascarate Park SE	650 R E Thomason Loop, El Paso	31.74678	-106.40281	Suburban	Wind	PAMS/SLAMS	Potentiometer Cup Anemometer	Continuous	Max Ozone Concentration; Upwind Background	Neighborhood
El Paso, TX	481410044	El Paso Chamizal	800 S San Marcial Street, El Paso	31.76569	-106.45523	Urban and Center City	CO (High Sensitivity)	NCORE/SLAMS	Gas Filter Correlation	Continuous	Highest Concentration	Neighborhood

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El Paso, TX	481410044	El Paso Chamizal	800 S San Marcial Street, El Paso	31.76569	-106.45523	Urban and Center City	Dew Point	Spm	Derived at site	Continuous	Highest Concentration; Max Precursor Emissions Impact	Neighborhood
El Paso, TX	481410044	El Paso Chamizal	800 S San Marcial Street, El Paso	31.76569	-106.45523	Urban and Center City	NO/NO2/NOx	PAMS/SLAMS	Chemiluminescence	Continuous	Highest Concentration; Max Precursor Emissions Impact	Neighborhood
El Paso, TX	481410044	El Paso Chamizal	800 S San Marcial Street, El Paso	31.76569	-106.45523	Urban and Center City	NOy (High Sensitivity)	NCORE/SLAMS	Chemiluminescence	Continuous	Highest Concentration	Neighborhood
El Paso, TX	481410044	El Paso Chamizal	800 S San Marcial Street, El Paso	31.76569	-106.45523	Urban and Center City	O3	NCORE/PAMS SLAMS	UV Photometric	Continuous	Max Precursor Emissions Impact; Population Exposure	Neighborhood
El Paso, TX	481410044	El Paso Chamizal	800 S San Marcial Street, El Paso	31.76569	-106.45523	Urban and Center City	PM10-2.5	NCORE/SLAMS	Beta Attenuation	Continuous	Highest Concentration; Population Exposure	Neighborhood
El Paso, TX	481410044	El Paso Chamizal	800 S San Marcial Street, El Paso	31.76569	-106.45523	Urban and Center City	PM2.5	NCORE/SLAMS	Beta Attenuation	Continuous	Highest Concentration; Population Exposure	Neighborhood
El Paso, TX	481410044	El Paso Chamizal	800 S San Marcial Street, El Paso	31.76569	-106.45523	Urban and Center City	PM2.5 (FRM)	QA Collocated SLAMS	Sequential FRM Gravimetric	24 Hours; 1/6 Days	Highest Concentration; Population Exposure	Neighborhood
El Paso, TX	481410044	El Paso Chamizal	800 S San Marcial Street, El Paso	31.76569	-106.45523	Urban and Center City	PM2.5 (FRM)	SLAMS	Sequential FRM Gravimetric	24 Hours; 1/3 Days	Highest Concentration; Population Exposure	Neighborhood
El Paso, TX	481410044	El Paso Chamizal	800 S San Marcial Street, El Paso	31.76569	-106.45523	Urban and Center City	PM2.5 (Speciation)	Csn Stn/ NCORE/SLAMS	Carbons | Elements | Ions | Sequential Non-FRM Gravimetric	24 Hours; 1/3 Days	Highest Concentration	Neighborhood
El Paso, TX	481410044	El Paso Chamizal	800 S San Marcial Street, El Paso	31.76569	-106.45523	Urban and Center City	Relative Humidity	PAMS/SLAMS	Humidity Sensor	Continuous	Max Precursor Emissions Impact	Neighborhood
El Paso, TX	481410044	El Paso Chamizal	800 S San Marcial Street, El Paso	31.76569	-106.45523	Urban and Center City	SO2 (High Sensitivity)	NCORE/SLAMS	Pulsed Fluorescence	Continuous	Highest Concentration	Neighborhood
El Paso, TX	481410044	El Paso Chamizal	800 S San Marcial Street, El Paso	31.76569	-106.45523	Urban and Center City	Solar Radiation	PAMS/SLAMS	Photovoltaic	Continuous	Max Precursor Emissions Impact	Neighborhood
El Paso, TX	481410044	El Paso Chamizal	800 S San Marcial Street, El Paso	31.76569	-106.45523	Urban and Center City	Speciated VOC (AutoGC)	PAMS/SLAMS	GC	Continuous	Highest Concentration; Max Precursor Emissions Impact	Neighborhood
El Paso, TX	481410044	El Paso Chamizal	800 S San Marcial Street, El Paso	31.76569	-106.45523	Urban and Center City	Temperature (Outdoor)	PAMS/SLAMS	Aspirated Thermister	Continuous	Max Precursor Emissions Impact	Neighborhood
El Paso, TX	481410044	El Paso Chamizal	800 S San Marcial Street, El Paso	31.76569	-106.45523	Urban and Center City	TNMOC (AutoGC)	PAMS/SLAMS	GC	Continuous	Highest Concentration; Max Precursor Emissions Impact	Neighborhood

Appendix A: Ambient Air Monitoring Network Site List

MSA / CBSA	AQS Site ID	Site Name	Address/Location	Latitude	Longitude	Location Setting	Sampler Type	AQS Network & Monitor Type	Methods	Operating Schedule	Monitoring Objective	Spatial Scale
El Paso, TX	481410044	El Paso Chamizal	800 S San Marcial Street, El Paso	31.76569	-106.45523	Urban and Center City	Wind	PAMS/SLAMS	Potentiometer Cup Anemometer	Continuous	Max Precursor Emissions Impact	Neighborhood
El Paso, TX	481410037	El Paso UTEP	250 Rim Rd, El Paso	31.76829	-106.50126	Urban and Center City	CO	Spm	Gas Filter Correlation	Continuous	Highest Concentration	Neighborhood
El Paso, TX	481410037	El Paso UTEP	250 Rim Rd, El Paso	31.76829	-106.50126	Urban and Center City	Dew Point	Spm	Derived at site	Continuous	Max Ozone Concentration; Population Exposure	Neighborhood
El Paso, TX	481410037	El Paso UTEP	250 Rim Rd, El Paso	31.76829	-106.50126	Urban and Center City	NO/NO2/NOx	PAMS/SLAMS	Chemiluminescence	Continuous	Max Ozone Concentration; Population Exposure	Neighborhood
El Paso, TX	481410037	El Paso UTEP	250 Rim Rd, El Paso	31.76829	-106.50126	Urban and Center City	O3	PAMS/SLAMS	UV Photometric	Continuous	Max Ozone Concentration; Population Exposure	Neighborhood
El Paso, TX	481410037	El Paso UTEP	250 Rim Rd, El Paso	31.76829	-106.50126	Urban and Center City	PM2.5 (FRM)	SLAMS	Sequential FRM Gravimetric	24 Hours; 1/6 Days	General/Background; Population Exposure	Neighborhood
El Paso, TX	481410037	El Paso UTEP	250 Rim Rd, El Paso	31.76829	-106.50126	Urban and Center City	PM2.5 (TEOM)**	Spm	TEOM Gravimetric	Continuous	Highest Concentration	Neighborhood
El Paso, TX	481410037	El Paso UTEP	250 Rim Rd, El Paso	31.76829	-106.50126	Urban and Center City	Precipitation	PAMS/SLAMS	Rain Gauge	Continuous	Max Ozone Concentration	Neighborhood
El Paso, TX	481410037	El Paso UTEP	250 Rim Rd, El Paso	31.76829	-106.50126	Urban and Center City	Relative Humidity	PAMS/SLAMS	Humidity Sensor	Continuous	Max Ozone Concentration	Neighborhood
El Paso, TX	481410037	El Paso UTEP	250 Rim Rd, El Paso	31.76829	-106.50126	Urban and Center City	Solar Radiation	PAMS/SLAMS	Photovoltaic	Continuous	Max Ozone Concentration	Neighborhood
El Paso, TX	481410037	El Paso UTEP	250 Rim Rd, El Paso	31.76829	-106.50126	Urban and Center City	Temperature (Outdoor)	PAMS/SLAMS	Aspirated Thermister	Continuous	Max Ozone Concentration	Neighborhood
El Paso, TX	481410037	El Paso UTEP	250 Rim Rd, El Paso	31.76829	-106.50126	Urban and Center City	TSP (Pb)	SLAMS	HiVol ICP-AES	24 Hours; 1/6 Days	Population Exposure	Neighborhood
El Paso, TX	481410037	El Paso UTEP	250 Rim Rd, El Paso	31.76829	-106.50126	Urban and Center City	UV Radiation	PAMS/SLAMS	Photovoltaic	Continuous	Max Ozone Concentration	Neighborhood
El Paso, TX	481410037	El Paso UTEP	250 Rim Rd, El Paso	31.76829	-106.50126	Urban and Center City	Wind	PAMS/SLAMS	Potentiometer Cup Anemometer	Continuous	Max Ozone Concentration	Neighborhood
El Paso, TX	481410029	Ivanhoe	10834 Ivanhoe (Ivanhoe Fire Station), El Paso	31.78577	-106.32358	Suburban	O3	Spm	UV Photometric	Continuous	Population Exposure	Neighborhood

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MSA / CBSA	AQS Site ID	Site Name	Address/Location	Latitude	Longitude	Location Setting	Sampler Type	AQS Network & Monitor Type	Methods	Operating Schedule	Monitoring Objective	Spatial Scale
El Paso, TX	481410029	Ivanhoe	10834 Ivanhoe (Ivanhoe Fire Station), El Paso	31.78577	-106.32358	Suburban	PM10 (FRM)	SLAMS	HiVol Gravimetric	24 Hours; 1/6 Days	Population Exposure	Neighborhood
El Paso, TX	481410029	Ivanhoe	10834 Ivanhoe (Ivanhoe Fire Station), El Paso	31.78577	-106.32358	Suburban	Relative Humidity	Border Grant/SLAMS	Humidity Sensor	Continuous	General/Background	Neighborhood
El Paso, TX	481410029	Ivanhoe	10834 Ivanhoe (Ivanhoe Fire Station), El Paso	31.78577	-106.32358	Suburban	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	General/Background	Neighborhood
El Paso, TX	481410029	Ivanhoe	10834 Ivanhoe (Ivanhoe Fire Station), El Paso	31.78577	-106.32358	Suburban	Wind	Border Grant/SLAMS	Potentiometer Cup Anemometer	Continuous	General/Background	Neighborhood
El Paso, TX	481411021	Ojo De Agua	6767 Ojo De Agua, El Paso	31.86247	-106.54730	Suburban	CO	SLAMS	Gas Filter Correlation	Continuous	Population Exposure	Neighborhood
El Paso, TX	481411021	Ojo De Agua	6767 Ojo De Agua, El Paso	31.86247	-106.54730	Suburban	PM10 (FRM)	QA Collocated SLAMS	HiVol Gravimetric	24 Hours; 1/12 Days	Population Exposure	Neighborhood
El Paso, TX	481411021	Ojo De Agua	6767 Ojo De Agua, El Paso	31.86247	-106.54730	Suburban	PM10 (FRM)	SLAMS	HiVol Gravimetric	24 Hours; 1/6 Days	Population Exposure	Neighborhood
El Paso, TX	481411021	Ojo De Agua	6767 Ojo De Agua, El Paso	31.86247	-106.54730	Suburban	TSP (Pb)	QA Collocated SLAMS	HiVol ICP-AES	24 Hours; 1/12 Days	Population Exposure	Neighborhood
El Paso, TX	481411021	Ojo De Agua	6767 Ojo De Agua, El Paso	31.86247	-106.54730	Suburban	TSP (Pb)	SLAMS	HiVol ICP-AES	24 Hours; 1/6 Days	Population Exposure	Neighborhood
El Paso, TX	481411021	Ojo De Agua	6767 Ojo De Agua, El Paso	31.86247	-106.54730	Suburban	Wind	Spm	Potentiometer Cup Anemometer	Continuous	Population Exposure	Neighborhood
El Paso, TX	481410038	Riverside	301 Midway Dr (Riverside High School), El Paso	31.73380	-106.37210	Suburban	PM10 (FRM)	SLAMS	HiVol Gravimetric	24 Hours; 1/6 Days	Population Exposure	Neighborhood
El Paso, TX	481410058	Skyline Park	5050A Yvette Drive, El Paso	31.89391	-106.42583	Suburban	O3	Border Grant/SLAMS	UV Photometric	Continuous	Population Exposure	Neighborhood
El Paso, TX	481410058	Skyline Park	5050A Yvette Drive, El Paso	31.89391	-106.42583	Suburban	Temperature (Outdoor)	Border Grant/SLAMS	Aspirated Thermister	Continuous	Population Exposure	Neighborhood
El Paso, TX	481410058	Skyline Park	5050A Yvette Drive, El Paso	31.89391	-106.42583	Suburban	Wind	Border Grant/SLAMS	Potentiometer Cup Anemometer	Continuous	Population Exposure	Neighborhood
El Paso, TX	481410057	Socorro Hueco	320 Old Hueco Tanks Road, El Paso	31.66750	-106.28800	Suburban	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Neighborhood

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MSA / CBSA	AQS Site ID	Site Name	Address/Location	Latitude	Longitude	Location Setting	Sampler Type	AQS Network & Monitor Type	Methods	Operating Schedule	Monitoring Objective	Spatial Scale
El Paso, TX	481410057	Socorro Hueco	320 Old Hueco Tanks Road, El Paso	31.66750	-106.28800	Suburban	PM10 (FRM)	Border Grant QA Collocated SLAMS	HiVol Gravimetric	24 Hours; 1/6 Days	Population Exposure	Neighborhood
El Paso, TX	481410057	Socorro Hueco	320 Old Hueco Tanks Road, El Paso	31.66750	-106.28800	Suburban	PM10 (FRM)	Border Grant/SLAMS	HiVol Gravimetric	24 Hours; 1/6 Days	General/Background; Population Exposure	Neighborhood
El Paso, TX	481410057	Socorro Hueco	320 Old Hueco Tanks Road, El Paso	31.66750	-106.28800	Suburban	PM2.5 (TEOM)**	Spm	TEOM Gravimetric	Continuous	Population Exposure	Neighborhood
El Paso, TX	481410057	Socorro Hueco	320 Old Hueco Tanks Road, El Paso	31.66750	-106.28800	Suburban	SVOC	Spm	HiVol PUF XAD GC-MS	24 Hours; 1/6 Days	Population Exposure	Neighborhood
El Paso, TX	481410057	Socorro Hueco	320 Old Hueco Tanks Road, El Paso	31.66750	-106.28800	Suburban	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	Population Exposure	Neighborhood
El Paso, TX	481410057	Socorro Hueco	320 Old Hueco Tanks Road, El Paso	31.66750	-106.28800	Suburban	Wind	Spm	Potentiometer Cup Anemometer	Continuous	Population Exposure	Neighborhood
El Paso, TX	481410693	Van Buren	2700 Harrison Avenue, El Paso	31.81337	-106.46452	Urban and Center City	PM10 (FRM)	Spm	HiVol Gravimetric	24 Hours; 1/6 Days	Population Exposure	Neighborhood
El Paso, TX	481410693	Van Buren	2700 Harrison Avenue, El Paso	31.81337	-106.46452	Urban and Center City	Relative Humidity	Spm	Humidity Sensor	Continuous	Population Exposure	Neighborhood
El Paso, TX	481410693	Van Buren	2700 Harrison Avenue, El Paso	31.81337	-106.46452	Urban and Center City	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	Population Exposure	Neighborhood
El Paso, TX	481410693	Van Buren	2700 Harrison Avenue, El Paso	31.81337	-106.46452	Urban and Center City	Wind	Spm	Potentiometer Cup Anemometer	Continuous	Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482010058	Baytown	7210 1/2 Bayway Drive, Baytown	29.77070	-95.03123	Suburban	PM2.5 (Beta)	SLAMS	Beta Attenuation	Continuous	Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482010058	Baytown	7210 1/2 Bayway Drive, Baytown	29.77070	-95.03123	Suburban	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	Highest Concentration	Neighborhood
Houston-Sugar Land-Baytown, TX	482010058	Baytown	7210 1/2 Bayway Drive, Baytown	29.77070	-95.03123	Suburban	Wind	Spm	Potentiometer Cup Anemometer	Continuous	Highest Concentration	Neighborhood
Houston-Sugar Land-Baytown, TX	482011017	Baytown Garth	8622 Garth Road Unit A, Baytown	29.82332	-94.98379	Suburban	O3	SLAMS	UV Photometric	Continuous	Max Ozone Concentration	Neighborhood
Houston-Sugar Land-Baytown, TX	482011017	Baytown Garth	8622 Garth Road Unit A, Baytown	29.82332	-94.98379	Suburban	SO2	SLAMS	Pulsed Fluorescence	Continuous	Population Exposure	Neighborhood

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MSA / CBSA	AQS Site ID	Site Name	Address/Location	Latitude	Longitude	Location Setting	Sampler Type	AQS Network & Monitor Type	Methods	Operating Schedule	Monitoring Objective	Spatial Scale
Houston-Sugar Land-Baytown, TX	482011017	Baytown Garth	8622 Garth Road Unit A, Baytown	29.82332	-94.98379	Suburban	Solar Radiation	Spm	Photovoltaic	Continuous	Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482011017	Baytown Garth	8622 Garth Road Unit A, Baytown	29.82332	-94.98379	Suburban	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482011017	Baytown Garth	8622 Garth Road Unit A, Baytown	29.82332	-94.98379	Suburban	Wind	Spm	Potentiometer Cup Anemometer	Continuous	Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482010026	Channelview	1405 Sheldon Road, Channelview	29.80271	-95.12549	Suburban	Dew Point	Spm	Derived at site	Continuous	Highest Concentration	Neighborhood
Houston-Sugar Land-Baytown, TX	482010026	Channelview	1405 Sheldon Road, Channelview	29.80271	-95.12549	Suburban	NO/NO2/NOx	PAMS/SLAMS	Chemiluminescence	Continuous	Population Exposure	Middle Scale; Neighborhood
Houston-Sugar Land-Baytown, TX	482010026	Channelview	1405 Sheldon Road, Channelview	29.80271	-95.12549	Suburban	O3	PAMS/SLAMS	UV Photometric	Continuous	Max Precursor Emissions Impact; Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482010026	Channelview	1405 Sheldon Road, Channelview	29.80271	-95.12549	Suburban	Relative Humidity	PAMS/SLAMS	Humidity Sensor	Continuous	Max Precursor Emissions Impact	Neighborhood
Houston-Sugar Land-Baytown, TX	482010026	Channelview	1405 Sheldon Road, Channelview	29.80271	-95.12549	Suburban	Solar Radiation	PAMS/SLAMS	Photovoltaic	Continuous	Max Precursor Emissions Impact	Neighborhood
Houston-Sugar Land-Baytown, TX	482010026	Channelview	1405 Sheldon Road, Channelview	29.80271	-95.12549	Suburban	Speciated VOC (AutoGC)	PAMS/SLAMS	GC	Continuous	Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482010026	Channelview	1405 Sheldon Road, Channelview	29.80271	-95.12549	Suburban	Temperature (Outdoor)	PAMS/SLAMS	Aspirated Thermister	Continuous	Max Precursor Emissions Impact	Neighborhood
Houston-Sugar Land-Baytown, TX	482010026	Channelview	1405 Sheldon Road, Channelview	29.80271	-95.12549	Suburban	TNMOC (AutoGC)	PAMS/SLAMS	GC	Continuous	Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482010026	Channelview	1405 Sheldon Road, Channelview	29.80271	-95.12549	Suburban	Wind	PAMS/SLAMS	Potentiometer Cup Anemometer	Continuous	Max Precursor Emissions Impact	Neighborhood
Houston-Sugar Land-Baytown, TX	482011035	Clinton	9525 1/2 Clinton Dr, Houston	29.73373	-95.25759	Urban and Center City	Barometric Pressure	PAMS/SLAMS	Barometer	Continuous	Max Precursor Emissions Impact	Neighborhood
Houston-Sugar Land-Baytown, TX	482011035	Clinton	9525 1/2 Clinton Dr, Houston	29.73373	-95.25759	Urban and Center City	Carbonyl	PAMS/SLAMS	DNPH Silica HPLC	3 8-Hours; 1/3 Days (Jun-Aug); 24 Hours; 1/6 days	Max Precursor Emissions Impact	Neighborhood
Houston-Sugar Land-Baytown, TX	482011035	Clinton	9525 1/2 Clinton Dr, Houston	29.73373	-95.25759	Urban and Center City	CO (High Sensitivity)	PAMS/SLAMS	Gas Filter Correlation	Continuous	Max Precursor Emissions Impact; Population Exposure	Neighborhood

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MSA / CBSA	AQS Site ID	Site Name	Address/Location	Latitude	Longitude	Location Setting	Sampler Type	AQS Network & Monitor Type	Methods	Operating Schedule	Monitoring Objective	Spatial Scale
Houston-Sugar Land-Baytown, TX	482011035	Clinton	9525 1/2 Clinton Dr, Houston	29.73373	-95.25759	Urban and Center City	Dew Point	Spm	Derived at site	Continuous	Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482011035	Clinton	9525 1/2 Clinton Dr, Houston	29.73373	-95.25759	Urban and Center City	NO/NO2/NOx	PAMS/SLAMS	Chemiluminescence	Continuous	Max Precursor Emissions Impact; Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482011035	Clinton	9525 1/2 Clinton Dr, Houston	29.73373	-95.25759	Urban and Center City	O3	PAMS/SLAMS	UV Photometric	Continuous	Max Precursor Emissions Impact; Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482011035	Clinton	9525 1/2 Clinton Dr, Houston	29.73373	-95.25759	Urban and Center City	PM10 (FRM)	SLAMS	HiVol Gravimetric	24 Hours; 1/6 Days	Highest Concentration; Source Oriented	Neighborhood
Houston-Sugar Land-Baytown, TX	482011035	Clinton	9525 1/2 Clinton Dr, Houston	29.73373	-95.25759	Urban and Center City	PM10 (FRM)	QA Collocated SLAMS	HiVol Gravimetric	24 Hours; 1/6 Days	Highest Concentration; Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482011035	Clinton	9525 1/2 Clinton Dr, Houston	29.73373	-95.25759	Urban and Center City	PM2.5 (FRM)	QA Collocated SLAMS	Sequential FRM Gravimetric	24 Hours; 1/6 Days	Highest Concentration; Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482011035	Clinton	9525 1/2 Clinton Dr, Houston	29.73373	-95.25759	Urban and Center City	PM2.5 (FRM)	SLAMS	Sequential FRM Gravimetric	24 Hours; 1/1 Days	Highest Concentration; Population Exposure; Source Oriented	Neighborhood
Houston-Sugar Land-Baytown, TX	482011035	Clinton	9525 1/2 Clinton Dr, Houston	29.73373	-95.25759	Urban and Center City	PM2.5 (TEOM)**	Spm	TEOM Gravimetric	Continuous	Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482011035	Clinton	9525 1/2 Clinton Dr, Houston	29.73373	-95.25759	Urban and Center City	Precipitation	Spm	Rain Gauge	Continuous	Max Precursor Emissions Impact; Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482011035	Clinton	9525 1/2 Clinton Dr, Houston	29.73373	-95.25759	Urban and Center City	Relative Humidity	PAMS/SLAMS	Humidity Sensor	Continuous	Max Precursor Emissions Impact	Neighborhood
Houston-Sugar Land-Baytown, TX	482011035	Clinton	9525 1/2 Clinton Dr, Houston	29.73373	-95.25759	Urban and Center City	SO2	SLAMS	Pulsed Fluorescence	Continuous	Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482011035	Clinton	9525 1/2 Clinton Dr, Houston	29.73373	-95.25759	Urban and Center City	Solar Radiation	PAMS/SLAMS	Photovoltaic	Continuous	Max Precursor Emissions Impact	Neighborhood
Houston-Sugar Land-Baytown, TX	482011035	Clinton	9525 1/2 Clinton Dr, Houston	29.73373	-95.25759	Urban and Center City	Speciated VOC (AutoGC)	PAMS/SLAMS	GC	Continuous	Highest Concentration; Population Exposure; Source Oriented	Neighborhood
Houston-Sugar Land-Baytown, TX	482011035	Clinton	9525 1/2 Clinton Dr, Houston	29.73373	-95.25759	Urban and Center City	Temperature (Outdoor)	PAMS/SLAMS	Aspirated Thermister	Continuous	Max Precursor Emissions Impact	Neighborhood
Houston-Sugar Land-Baytown, TX	482011035	Clinton	9525 1/2 Clinton Dr, Houston	29.73373	-95.25759	Urban and Center City	TNMOC (AutoGC)	PAMS/SLAMS	GC	Continuous	Highest Concentration; Population Exposure; Source Oriented	Neighborhood

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MSA / CBSA	AQS Site ID	Site Name	Address/Location	Latitude	Longitude	Location Setting	Sampler Type	AQS Network & Monitor Type	Methods	Operating Schedule	Monitoring Objective	Spatial Scale
Houston-Sugar Land-Baytown, TX	482011035	Clinton	9525 1/2 Clinton Dr, Houston	29.73373	-95.25759	Urban and Center City	UV Radiation	PAMS/SLAMS	Photovoltaic	Continuous	Max Precursor Emissions Impact	Neighborhood
Houston-Sugar Land-Baytown, TX	482011035	Clinton	9525 1/2 Clinton Dr, Houston	29.73373	-95.25759	Urban and Center City	Wind	PAMS/SLAMS	Potentiometer Cup Anemometer	Continuous	Max Precursor Emissions Impact	Neighborhood
Houston-Sugar Land-Baytown, TX	483390078	Conroe Relocated	9472A Hwy 1484, Conroe	30.35030	-95.42513	Suburban	NO/NO2/NOx	SLAMS	Chemiluminescence	Continuous	General/Background; Population Exposure	Urban Scale
Houston-Sugar Land-Baytown, TX	483390078	Conroe Relocated	9472A Hwy 1484, Conroe	30.35030	-95.42513	Suburban	O3	PAMS/SLAMS	UV Photometric	Continuous	General/Background; Population Exposure	Urban Scale
Houston-Sugar Land-Baytown, TX	483390078	Conroe Relocated	9472A Hwy 1484, Conroe	30.35030	-95.42513	Suburban	PM2.5 (TEOM)**	Spm	TEOM Gravimetric	Continuous	General/Background	Neighborhood
Houston-Sugar Land-Baytown, TX	483390078	Conroe Relocated	9472A Hwy 1484, Conroe	30.35030	-95.42513	Suburban	Solar Radiation	PAMS/SLAMS	Photovoltaic	Continuous	Highest Concentration	Neighborhood
Houston-Sugar Land-Baytown, TX	483390078	Conroe Relocated	9472A Hwy 1484, Conroe	30.35030	-95.42513	Suburban	Temperature (Outdoor)	PAMS/SLAMS	Aspirated Thermister	Continuous	Highest Concentration	Neighborhood
Houston-Sugar Land-Baytown, TX	483390078	Conroe Relocated	9472A Hwy 1484, Conroe	30.35030	-95.42513	Suburban	Wind	PAMS/SLAMS	Potentiometer Cup Anemometer	Continuous	Highest Concentration	Neighborhood
Houston-Sugar Land-Baytown, TX	481671034	Galveston 99th Street	9511 Avenue V 1/2, Galveston	29.25447	-94.86129	Suburban	Dew Point	Spm	Derived at site	Continuous	General/Background; Upwind Background	Middle Scale
Houston-Sugar Land-Baytown, TX	481671034	Galveston 99th Street	9511 Avenue V 1/2, Galveston	29.25447	-94.86129	Suburban	NO/NO2/NOx	PAMS/SLAMS	Chemiluminescence	Continuous	General/Background; Upwind Background	Middle Scale; Urban Scale
Houston-Sugar Land-Baytown, TX	481671034	Galveston 99th Street	9511 Avenue V 1/2, Galveston	29.25447	-94.86129	Suburban	O3	PAMS/SLAMS	UV Photometric	Continuous	Max Ozone Concentration; Upwind Background	Urban Scale
Houston-Sugar Land-Baytown, TX	481671034	Galveston 99th Street	9511 Avenue V 1/2, Galveston	29.25447	-94.86129	Suburban	PM2.5 (FRM)	Spm	Sequential FRM Gravimetric	24 Hours; 1/6 Days	Regional Transport	Regional Scale
Houston-Sugar Land-Baytown, TX	481671034	Galveston 99th Street	9511 Avenue V 1/2, Galveston	29.25447	-94.86129	Suburban	PM2.5 (TEOM)**	Spm	TEOM Gravimetric	Continuous	Regional Transport	Regional Scale
Houston-Sugar Land-Baytown, TX	481671034	Galveston 99th Street	9511 Avenue V 1/2, Galveston	29.25447	-94.86129	Suburban	Relative Humidity	PAMS/SLAMS	Humidity Sensor	Continuous	Max Ozone Concentration; Upwind Background	Urban Scale
Houston-Sugar Land-Baytown, TX	481671034	Galveston 99th Street	9511 Avenue V 1/2, Galveston	29.25447	-94.86129	Suburban	Solar Radiation	PAMS/SLAMS	Photovoltaic	Continuous	Max Ozone Concentration; Upwind Background	Urban Scale

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MSA / CBSA	AQS Site ID	Site Name	Address/Location	Latitude	Longitude	Location Setting	Sampler Type	AQS Network & Monitor Type	Methods	Operating Schedule	Monitoring Objective	Spatial Scale
Houston-Sugar Land-Baytown, TX	481671034	Galveston 99th Street	9511 Avenue V 1/2, Galveston	29.25447	-94.86129	Suburban	Temperature (Outdoor)	PAMS/SLAMS	Aspirated Thermister	Continuous	Max Ozone Concentration; Upwind Background	Urban Scale
Houston-Sugar Land-Baytown, TX	481671034	Galveston 99th Street	9511 Avenue V 1/2, Galveston	29.25447	-94.86129	Suburban	Wind	PAMS/SLAMS	Potentiometer Cup Anemometer	Continuous	Max Ozone Concentration; Upwind Background	Urban Scale
Houston-Sugar Land-Baytown, TX	482010024	Houston Aldine	4510 1/2 Aldine Mail Rd, Houston	29.90104	-95.32614	Suburban	Barometric Pressure	PAMS/SLAMS	Barometer	Continuous	Max Ozone Concentration	Neighborhood
Houston-Sugar Land-Baytown, TX	482010024	Houston Aldine	4510 1/2 Aldine Mail Rd, Houston	29.90104	-95.32614	Suburban	Dew Point	Spm	Derived at site	Continuous	Population Exposure	Urban Scale
Houston-Sugar Land-Baytown, TX	482010024	Houston Aldine	4510 1/2 Aldine Mail Rd, Houston	29.90104	-95.32614	Suburban	NO/NO2/NOx	PAMS/SLAMS	Chemiluminescence	Continuous	Max Ozone Concentration; Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482010024	Houston Aldine	4510 1/2 Aldine Mail Rd, Houston	29.90104	-95.32614	Suburban	NOy (High Sensitivity)	PAMS/SLAMS	Chemiluminescence	Continuous	Max Ozone Concentration; Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482010024	Houston Aldine	4510 1/2 Aldine Mail Rd, Houston	29.90104	-95.32614	Suburban	O3	PAMS/SLAMS	UV Photometric	Continuous	Max Ozone Concentration; Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482010024	Houston Aldine	4510 1/2 Aldine Mail Rd, Houston	29.90104	-95.32614	Suburban	PM10 (FRM)	SLAMS	HiVol Gravimetric	24 Hours; 1/6 Days	Population Exposure	Middle Scale
Houston-Sugar Land-Baytown, TX	482010024	Houston Aldine	4510 1/2 Aldine Mail Rd, Houston	29.90104	-95.32614	Suburban	PM2.5 (FRM)	SLAMS	Sequential FRM Gravimetric	24 Hours; 1/6 Days	Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482010024	Houston Aldine	4510 1/2 Aldine Mail Rd, Houston	29.90104	-95.32614	Suburban	PM2.5 (Speciation)	Spm	Carbons | Elements | Ions | Sequential Non-FRM Gravimetric	24 Hours; 1/6 Days	Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482010024	Houston Aldine	4510 1/2 Aldine Mail Rd, Houston	29.90104	-95.32614	Suburban	PM2.5 (TEOM)**	Spm	TEOM Gravimetric	Continuous	Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482010024	Houston Aldine	4510 1/2 Aldine Mail Rd, Houston	29.90104	-95.32614	Suburban	Relative Humidity	PAMS/SLAMS	Humidity Sensor	Continuous	Max Ozone Concentration	Neighborhood
Houston-Sugar Land-Baytown, TX	482010024	Houston Aldine	4510 1/2 Aldine Mail Rd, Houston	29.90104	-95.32614	Suburban	Solar Radiation	PAMS/SLAMS	Photovoltaic	Continuous	Max Ozone Concentration	Neighborhood
Houston-Sugar Land-Baytown, TX	482010024	Houston Aldine	4510 1/2 Aldine Mail Rd, Houston	29.90104	-95.32614	Suburban	Temperature (Outdoor)	PAMS/SLAMS	Aspirated Thermister	Continuous	Max Ozone Concentration	Neighborhood
Houston-Sugar Land-Baytown, TX	482010024	Houston Aldine	4510 1/2 Aldine Mail Rd, Houston	29.90104	-95.32614	Suburban	Wind	PAMS/SLAMS	Potentiometer Cup Anemometer	Continuous	Max Ozone Concentration	Neighborhood

Appendix A: Ambient Air Monitoring Network Site List

MSA / CBSA	AQS Site ID	Site Name	Address/Location	Latitude	Longitude	Location Setting	Sampler Type	AQS Network & Monitor Type	Methods	Operating Schedule	Monitoring Objective	Spatial Scale
Houston-Sugar Land-Baytown, TX	482010055	Houston Bayland Park	6400 Bissonnet Street, Houston	29.69573	-95.49922	Suburban	NO/NO2/NOx	SLAMS	Chemiluminescence	Continuous	Population Exposure	Middle Scale; Neighborhood
Houston-Sugar Land-Baytown, TX	482010055	Houston Bayland Park	6400 Bissonnet Street, Houston	29.69573	-95.49922	Suburban	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Middle Scale
Houston-Sugar Land-Baytown, TX	482010055	Houston Bayland Park	6400 Bissonnet Street, Houston	29.69573	-95.49922	Suburban	Solar Radiation	Spm	Photovoltaic	Continuous	General/Background; Max Precursor Emissions Impact	Middle Scale
Houston-Sugar Land-Baytown, TX	482010055	Houston Bayland Park	6400 Bissonnet Street, Houston	29.69573	-95.49922	Suburban	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	General/Background; Max Precursor Emissions Impact	Middle Scale
Houston-Sugar Land-Baytown, TX	482010055	Houston Bayland Park	6400 Bissonnet Street, Houston	29.69573	-95.49922	Suburban	Wind	Spm	Potentiometer Cup Anemometer	Continuous	General/Background; Max Precursor Emissions Impact	Middle Scale
Houston-Sugar Land-Baytown, TX	482010051	Houston Croquet	13826 1/2 Croquet, Houston	29.62389	-95.47417	Suburban	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482010051	Houston Croquet	13826 1/2 Croquet, Houston	29.62389	-95.47417	Suburban	SO2	Spm	Pulsed Fluorescence	Continuous	Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482010051	Houston Croquet	13826 1/2 Croquet, Houston	29.62389	-95.47417	Suburban	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482010051	Houston Croquet	13826 1/2 Croquet, Houston	29.62389	-95.47417	Suburban	Wind	Spm	Potentiometer Cup Anemometer	Continuous	Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482011039	Houston Deer Park #2	4514 1/2 Durant St, Deer Park	29.67003	-95.12851	Urban and Center City	Carbonyl	PAMS/SLAMS	DNPH Silica HPLC	24 Hours; 1/6 Days	Max Precursor Emissions Impact; Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482011039	Houston Deer Park #2	4514 1/2 Durant St, Deer Park	29.67003	-95.12851	Urban and Center City	CO (High Sensitivity)	NCORE/SLAMS	Gas Filter Correlation	Continuous	Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482011039	Houston Deer Park #2	4514 1/2 Durant St, Deer Park	29.67003	-95.12851	Urban and Center City	Dew Point	Spm	Derived at site	Continuous	Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482011039	Houston Deer Park #2	4514 1/2 Durant St, Deer Park	29.67003	-95.12851	Urban and Center City	NO/NO2/NOx	PAMS/SLAMS	Chemiluminescence	Continuous	Population Exposure; Source Oriented	Neighborhood
Houston-Sugar Land-Baytown, TX	482011039	Houston Deer Park #2	4514 1/2 Durant St, Deer Park	29.67003	-95.12851	Urban and Center City	NOy (High Sensitivity)	NCORE/SLAMS	Chemiluminescence	Continuous	Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482011039	Houston Deer Park #2	4514 1/2 Durant St, Deer Park	29.67003	-95.12851	Urban and Center City	O3	NCORE/PAMS SLAMS	UV Photometric	Continuous	Max Precursor Emissions Impact; Population Exposure	Neighborhood

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MSA / CBSA	AQS Site ID	Site Name	Address/Location	Latitude	Longitude	Location Setting	Sampler Type	AQS Network & Monitor Type	Methods	Operating Schedule	Monitoring Objective	Spatial Scale
Houston-Sugar Land-Baytown, TX	482011039	Houston Deer Park #2	4514 1/2 Durant St, Deer Park	29.67003	-95.12851	Urban and Center City	PM10 (FRM)	QA Collocated SLAMS	HiVol Gravimetric	24 Hours; 1/6 Days	Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482011039	Houston Deer Park #2	4514 1/2 Durant St, Deer Park	29.67003	-95.12851	Urban and Center City	PM10 (FRM)	SLAMS	HiVol Gravimetric	24 Hours; 1/6 Days	Max Precursor Emissions Impact; Population Exposure; Source Oriented	Neighborhood
Houston-Sugar Land-Baytown, TX	482011039	Houston Deer Park #2	4514 1/2 Durant St, Deer Park	29.67003	-95.12851	Urban and Center City	PM10-2.5	NCORE/SLAMS	Beta Attenuation	Continuous	Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482011039	Houston Deer Park #2	4514 1/2 Durant St, Deer Park	29.67003	-95.12851	Urban and Center City	PM2.5	NCORE/SLAMS	Beta Attenuation	Continuous	Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482011039	Houston Deer Park #2	4514 1/2 Durant St, Deer Park	29.67003	-95.12851	Urban and Center City	PM2.5 (FRM)	NCORE/SLAMS	Sequential FRM Gravimetric	24 Hours; 1/3 Days	Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482011039	Houston Deer Park #2	4514 1/2 Durant St, Deer Park	29.67003	-95.12851	Urban and Center City	PM2.5 (Speciation)	Csn Stn/ NCORE/SLAMS	Carbons | Elements | Ions | Sequential Non-FRM Gravimetric	24 Hours; 1/3 Days	Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482011039	Houston Deer Park #2	4514 1/2 Durant St, Deer Park	29.67003	-95.12851	Urban and Center City	PM2.5 (Speciation)	Csn Stn QA Collocated NCORE/SLAMS	Carbons | Elements | Ions | Sequential Non-FRM Gravimetric	24 Hours; 1/6 Days	Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482011039	Houston Deer Park #2	4514 1/2 Durant St, Deer Park	29.67003	-95.12851	Urban and Center City	PM2.5 (TEOM)**	Spm	TEOM Gravimetric	Continuous	Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482011039	Houston Deer Park #2	4514 1/2 Durant St, Deer Park	29.67003	-95.12851	Urban and Center City	Relative Humidity	NCORE/PAMS SLAMS	Humidity Sensor	Continuous	Max Precursor Emissions Impact	Neighborhood
Houston-Sugar Land-Baytown, TX	482011039	Houston Deer Park #2	4514 1/2 Durant St, Deer Park	29.67003	-95.12851	Urban and Center City	SO2 (High Sensitivity)	NCORE/SLAMS	Pulsed Fluorescence	Continuous	Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482011039	Houston Deer Park #2	4514 1/2 Durant St, Deer Park	29.67003	-95.12851	Urban and Center City	Solar Radiation	PAMS/SLAMS	Photovoltaic	Continuous	Max Precursor Emissions Impact	Neighborhood
Houston-Sugar Land-Baytown, TX	482011039	Houston Deer Park #2	4514 1/2 Durant St, Deer Park	29.67003	-95.12851	Urban and Center City	Speciated VOC (AutoGC)	PAMS/SLAMS	GC	Continuous	Max Precursor Emissions Impact; Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482011039	Houston Deer Park #2	4514 1/2 Durant St, Deer Park	29.67003	-95.12851	Urban and Center City	Temperature (Outdoor)	PAMS/SLAMS	Aspirated Thermister	Continuous	Max Precursor Emissions Impact	Neighborhood
Houston-Sugar Land-Baytown, TX	482011039	Houston Deer Park #2	4514 1/2 Durant St, Deer Park	29.67003	-95.12851	Urban and Center City	TNMOC (AutoGC)	PAMS/SLAMS	GC	Continuous	Max Precursor Emissions Impact; Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482011039	Houston Deer Park #2	4514 1/2 Durant St, Deer Park	29.67003	-95.12851	Urban and Center City	Wind	PAMS/SLAMS	Potentiometer Cup Anemometer	Continuous	Max Precursor Emissions Impact	Neighborhood

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MSA / CBSA	AQS Site ID	Site Name	Address/Location	Latitude	Longitude	Location Setting	Sampler Type	AQS Network & Monitor Type	Methods	Operating Schedule	Monitoring Objective	Spatial Scale
Houston-Sugar Land-Baytown, TX	482011034	Houston East	1262 1/2 Mae Drive, Houston	29.76800	-95.22058	Suburban	NO/NO2/NOx	SLAMS	Chemiluminescence	Continuous	Highest Concentration; Population Exposure	Middle Scale; Neighborhood
Houston-Sugar Land-Baytown, TX	482011034	Houston East	1262 1/2 Mae Drive, Houston	29.76800	-95.22058	Suburban	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482011034	Houston East	1262 1/2 Mae Drive, Houston	29.76800	-95.22058	Suburban	PM2.5 (Beta)	Spm	Beta Attenuation	Continuous	Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482011034	Houston East	1262 1/2 Mae Drive, Houston	29.76800	-95.22058	Suburban	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	Population Exposure	Urban Scale
Houston-Sugar Land-Baytown, TX	482011034	Houston East	1262 1/2 Mae Drive, Houston	29.76800	-95.22058	Suburban	Wind	Spm	Potentiometer Cup Anemometer	Continuous	Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482010060	Houston Kirkpatrick	5565 Kirkpatrick, Houston	29.80741	-95.29362	Suburban	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482010060	Houston Kirkpatrick	5565 Kirkpatrick, Houston	29.80741	-95.29362	Suburban	Wind	Spm	Potentiometer Cup Anemometer	Continuous	Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482010062	Houston Monroe	9726 1/2 Monroe, Houston	29.62556	-95.26722	Suburban	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482010062	Houston Monroe	9726 1/2 Monroe, Houston	29.62556	-95.26722	Suburban	PM10 (FRM)	SLAMS	HiVol Gravimetric	24 Hours; 1/6 Days	Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482010062	Houston Monroe	9726 1/2 Monroe, Houston	29.62556	-95.26722	Suburban	Precipitation	Spm	Rain Gauge	Continuous	General/Background	Neighborhood
Houston-Sugar Land-Baytown, TX	482011052	Houston North Loop	822 North Loop, Houston	29.81453	-95.38769	Urban and Center City	CO	Near Road/SLAMS	Gas Filter Correlation	Continuous	Max Precursor Emissions Impact	Microscale
Houston-Sugar Land-Baytown, TX	482011052	Houston North Loop	822 North Loop, Houston	29.81453	-95.38769	Urban and Center City	NO/NO2/NOx	Near Road/SLAMS	Chemiluminescence	Continuous	Max Precursor Emissions Impact	Microscale
Houston-Sugar Land-Baytown, TX	482011052	Houston North Loop	822 North Loop, Houston	29.81453	-95.38769	Urban and Center City	PM2.5 (FRM)	Near Road/SLAMS	Sequential FRM Gravimetric	24 Hours; 1/3 Days	Max Precursor Emissions Impact	Microscale
Houston-Sugar Land-Baytown, TX	482011052	Houston North Loop	822 North Loop, Houston	29.81453	-95.38769	Urban and Center City	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	Max Precursor Emissions Impact	Microscale
Houston-Sugar Land-Baytown, TX	482011052	Houston North Loop	822 North Loop, Houston	29.81453	-95.38769	Urban and Center City	Wind	Spm	Potentiometer Cup Anemometer	Continuous	Max Precursor Emissions Impact	Microscale

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MSA / CBSA	AQS Site ID	Site Name	Address/Location	Latitude	Longitude	Location Setting	Sampler Type	AQS Network & Monitor Type	Methods	Operating Schedule	Monitoring Objective	Spatial Scale
Houston-Sugar Land-Baytown, TX	482010046	Houston North Wayside	7330 1/2 North Wayside, Houston	29.82809	-95.28410	Suburban	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482011066	Houston Southwest Freeway	5617 Westward Avenue, Houston	29.72160	-95.49265	Urban and Center City	NO/NO2/NOx	Near Road/SLAMS	Chemiluminescence	Continuous	Max Precursor Emissions Impact	Microscale
Houston-Sugar Land-Baytown, TX	482011066	Houston Southwest Freeway	5617 Westward Avenue, Houston	29.72160	-95.49265	Urban and Center City	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	Max Precursor Emissions Impact	Microscale
Houston-Sugar Land-Baytown, TX	482011066	Houston Southwest Freeway	5617 Westward Avenue, Houston	29.72160	-95.49265	Urban and Center City	Wind	Spm	Potentiometer Cup Anemometer	Continuous	Max Precursor Emissions Impact	Microscale
Houston-Sugar Land-Baytown, TX	482010066	Houston Westhollow	3333 1/2 Hwy 6 South, Houston	29.72333	-95.63583	Suburban	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482010066	Houston Westhollow	3333 1/2 Hwy 6 South, Houston	29.72333	-95.63583	Suburban	PM10 (FRM)	SLAMS	HiVol Gravimetric	24 Hours; 1/6 Days	Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482010066	Houston Westhollow	3333 1/2 Hwy 6 South, Houston	29.72333	-95.63583	Suburban	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482010066	Houston Westhollow	3333 1/2 Hwy 6 South, Houston	29.72333	-95.63583	Suburban	Wind	Spm	Potentiometer Cup Anemometer	Continuous	Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482011043	La Porte Airport C243	La Porte Airport, 2434 Buchanan Street, La Porte	29.67200	-95.06470	Suburban	Precipitation	PAMS/SLAMS	Rain Gauge	Continuous	General/Background	Neighborhood
Houston-Sugar Land-Baytown, TX	482011043	La Porte Airport C243	La Porte Airport, 2434 Buchanan Street, La Porte	29.67200	-95.06470	Suburban	Radar profiler	PAMS/SLAMS	Radar profiler	Continuous	Regional Transport	Regional Scale
Houston-Sugar Land-Baytown, TX	482011043	La Porte Airport C243	La Porte Airport, 2434 Buchanan Street, La Porte	29.67200	-95.06470	Suburban	Temperature (Outdoor)	PAMS/SLAMS	Aspirated Thermister	Continuous	General/Background	Neighborhood
Houston-Sugar Land-Baytown, TX	482011043	La Porte Airport C243	La Porte Airport, 2434 Buchanan Street, La Porte	29.67200	-95.06470	Suburban	Wind	PAMS/SLAMS	Potentiometer Cup Anemometer	Continuous	General/Background	Neighborhood
Houston-Sugar Land-Baytown, TX	480391016	Lake Jackson	109B Brazoria Hwy 332 West, Lake Jackson	29.04376	-95.47295	Suburban	NO/NO2/NOx	SLAMS	Chemiluminescence	Continuous	Population Exposure; Source Oriented	Middle Scale; Neighborhood
Houston-Sugar Land-Baytown, TX	480391016	Lake Jackson	109B Brazoria Hwy 332 West, Lake Jackson	29.04376	-95.47295	Suburban	O3	SLAMS	UV Photometric	Continuous	Population Exposure; Source Oriented	Neighborhood
Houston-Sugar Land-Baytown, TX	480391016	Lake Jackson	109B Brazoria Hwy 332 West, Lake Jackson	29.04376	-95.47295	Suburban	Solar Radiation	Spm	Photovoltaic	Continuous	Highest Concentration	Middle Scale

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MSA / CBSA	AQS Site ID	Site Name	Address/Location	Latitude	Longitude	Location Setting	Sampler Type	AQS Network & Monitor Type	Methods	Operating Schedule	Monitoring Objective	Spatial Scale
Houston-Sugar Land-Baytown, TX	480391016	Lake Jackson	109B Brazoria Hwy 332 West, Lake Jackson	29.04376	-95.47295	Suburban	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	Highest Concentration	Middle Scale
Houston-Sugar Land-Baytown, TX	480391016	Lake Jackson	109B Brazoria Hwy 332 West, Lake Jackson	29.04376	-95.47295	Suburban	Wind	Spm	Potentiometer Cup Anemometer	Continuous	Highest Concentration	Middle Scale
Houston-Sugar Land-Baytown, TX	482010047	Lang	4401 1/2 Lang Rd, Houston	29.83417	-95.48917	Suburban	NO/NO2/NOx	SLAMS	Chemiluminescence	Continuous	Population Exposure	Middle Scale; Urban Scale
Houston-Sugar Land-Baytown, TX	482010047	Lang	4401 1/2 Lang Rd, Houston	29.83417	-95.48917	Suburban	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Urban Scale
Houston-Sugar Land-Baytown, TX	482010047	Lang	4401 1/2 Lang Rd, Houston	29.83417	-95.48917	Suburban	PM10 (FRM)	SLAMS	HiVol Gravimetric	24 Hours; 1/6 Days	Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482011015	Lynchburg Ferry	4364 Independence Parkway South, Baytown	29.75889	-95.07944	Suburban	NO/NO2/NOx	SLAMS	Chemiluminescence	Continuous	Source Oriented	Middle Scale; Neighborhood
Houston-Sugar Land-Baytown, TX	482011015	Lynchburg Ferry	4364 Independence Parkway South, Baytown	29.75889	-95.07944	Suburban	O3	SLAMS	UV Photometric	Continuous	Source Oriented	Middle Scale
Houston-Sugar Land-Baytown, TX	482011015	Lynchburg Ferry	4364 Independence Parkway South, Baytown	29.75889	-95.07944	Suburban	Solar Radiation	Spm	Photovoltaic	Continuous	Highest Concentration	Neighborhood
Houston-Sugar Land-Baytown, TX	482011015	Lynchburg Ferry	4364 Independence Parkway South, Baytown	29.75889	-95.07944	Suburban	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	Highest Concentration	Neighborhood
Houston-Sugar Land-Baytown, TX	482011015	Lynchburg Ferry	4364 Independence Parkway South, Baytown	29.75889	-95.07944	Suburban	Wind	Spm	Potentiometer Cup Anemometer	Continuous	Highest Concentration	Neighborhood
Houston-Sugar Land-Baytown, TX	480391004	Manvel Croix Park	4503 Croix Pkwy, Manvel	29.52044	-95.39251	Suburban	NO/NO2/NOx	SLAMS	Chemiluminescence	Continuous	Population Exposure	Urban Scale
Houston-Sugar Land-Baytown, TX	480391004	Manvel Croix Park	4503 Croix Pkwy, Manvel	29.52044	-95.39251	Suburban	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Urban Scale
Houston-Sugar Land-Baytown, TX	480391004	Manvel Croix Park	4503 Croix Pkwy, Manvel	29.52044	-95.39251	Suburban	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	480391004	Manvel Croix Park	4503 Croix Pkwy, Manvel	29.52044	-95.39251	Suburban	Wind	Spm	Potentiometer Cup Anemometer	Continuous	Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482010029	Northwest Harris County	16822 Kitzman, Tomball	30.03952	-95.67395	Rural	Dew Point	Spm	Derived at site	Continuous	Source Oriented	Microscale

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MSA / CBSA	AQS Site ID	Site Name	Address/Location	Latitude	Longitude	Location Setting	Sampler Type	AQS Network & Monitor Type	Methods	Operating Schedule	Monitoring Objective	Spatial Scale
Houston-Sugar Land-Baytown, TX	482010029	Northwest Harris County	16822 Kitzman, Tomball	30.03952	-95.67395	Rural	NO/NO2/NOx	PAMS/SLAMS	Chemiluminescence	Continuous	Extreme Downwind; Population Exposure; Upwind Background	Urban Scale
Houston-Sugar Land-Baytown, TX	482010029	Northwest Harris County	16822 Kitzman, Tomball	30.03952	-95.67395	Rural	O3	PAMS/SLAMS	UV Photometric	Continuous	Extreme Downwind; Population Exposure; Upwind Background	Urban Scale
Houston-Sugar Land-Baytown, TX	482010029	Northwest Harris County	16822 Kitzman, Tomball	30.03952	-95.67395	Rural	Relative Humidity	PAMS/SLAMS	Humidity Sensor	Continuous	Extreme Downwind; Upwind Background	Urban Scale
Houston-Sugar Land-Baytown, TX	482010029	Northwest Harris County	16822 Kitzman, Tomball	30.03952	-95.67395	Rural	Solar Radiation	PAMS/SLAMS	Photovoltaic	Continuous	Extreme Downwind; Upwind Background	Urban Scale
Houston-Sugar Land-Baytown, TX	482010029	Northwest Harris County	16822 Kitzman, Tomball	30.03952	-95.67395	Rural	Temperature (Outdoor)	PAMS/SLAMS	Aspirated Thermister	Continuous	Extreme Downwind; Upwind Background	Urban Scale
Houston-Sugar Land-Baytown, TX	482010029	Northwest Harris County	16822 Kitzman, Tomball	30.03952	-95.67395	Rural	Wind	PAMS/SLAMS	Potentiometer Cup Anemometer	Continuous	Extreme Downwind; Upwind Background	Urban Scale
Houston-Sugar Land-Baytown, TX	482010416	Park Place	7421 Park Place Blvd, Houston	29.68639	-95.29472	Urban and Center City	Barometric Pressure	Spm	Barometer	Continuous	General/Background	Neighborhood
Houston-Sugar Land-Baytown, TX	482010416	Park Place	7421 Park Place Blvd, Houston	29.68639	-95.29472	Urban and Center City	Dew Point	Spm	Derived at site	Continuous	General/Background	Neighborhood
Houston-Sugar Land-Baytown, TX	482010416	Park Place	7421 Park Place Blvd, Houston	29.68639	-95.29472	Urban and Center City	NO/NO2/NOx	Spm	Chemiluminescence	Continuous	Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482010416	Park Place	7421 Park Place Blvd, Houston	29.68639	-95.29472	Urban and Center City	O3	Spm	UV Photometric	Continuous	Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482010416	Park Place	7421 Park Place Blvd, Houston	29.68639	-95.29472	Urban and Center City	Precipitation	Spm	Rain Gauge	Continuous	General/Background	Neighborhood
Houston-Sugar Land-Baytown, TX	482010416	Park Place	7421 Park Place Blvd, Houston	29.68639	-95.29472	Urban and Center City	Relative Humidity	Spm	Humidity Sensor	Continuous	General/Background	Neighborhood
Houston-Sugar Land-Baytown, TX	482010416	Park Place	7421 Park Place Blvd, Houston	29.68639	-95.29472	Urban and Center City	SO2	Spm	Pulsed Fluorescence	Continuous	Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482010416	Park Place	7421 Park Place Blvd, Houston	29.68639	-95.29472	Urban and Center City	Solar Radiation	Spm	Photovoltaic	Continuous	General/Background	Neighborhood
Houston-Sugar Land-Baytown, TX	482010416	Park Place	7421 Park Place Blvd, Houston	29.68639	-95.29472	Urban and Center City	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	General/Background	Neighborhood

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MSA / CBSA	AQS Site ID	Site Name	Address/Location	Latitude	Longitude	Location Setting	Sampler Type	AQS Network & Monitor Type	Methods	Operating Schedule	Monitoring Objective	Spatial Scale
Houston-Sugar Land-Baytown, TX	482010416	Park Place	7421 Park Place Blvd, Houston	29.68639	-95.29472	Urban and Center City	UV Radiation	Spm	Photovoltaic	Continuous	General/Background	Neighborhood
Houston-Sugar Land-Baytown, TX	482010416	Park Place	7421 Park Place Blvd, Houston	29.68639	-95.29472	Urban and Center City	Wind	Spm	Potentiometer Cup Anemometer	Continuous	General/Background	Neighborhood
Houston-Sugar Land-Baytown, TX	482011050	Seabrook Friendship Park	4522 Park Rd, Seabrook	29.58305	-95.01554	Suburban	NO/NO2/NOx	SLAMS	Chemiluminescence	Continuous	Population Exposure	Middle Scale; Neighborhood
Houston-Sugar Land-Baytown, TX	482011050	Seabrook Friendship Park	4522 Park Rd, Seabrook	29.58305	-95.01554	Suburban	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Neighborhood
Houston-Sugar Land-Baytown, TX	482011050	Seabrook Friendship Park	4522 Park Rd, Seabrook	29.58305	-95.01554	Suburban	PM2.5 (TEOM)**	Spm	TEOM Gravimetric	Continuous	Highest Concentration	Middle Scale
Houston-Sugar Land-Baytown, TX	482011050	Seabrook Friendship Park	4522 Park Rd, Seabrook	29.58305	-95.01554	Suburban	Solar Radiation	Spm	Photovoltaic	Continuous	Highest Concentration	Middle Scale
Houston-Sugar Land-Baytown, TX	482011050	Seabrook Friendship Park	4522 Park Rd, Seabrook	29.58305	-95.01554	Suburban	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	Highest Concentration	Middle Scale
Houston-Sugar Land-Baytown, TX	482011050	Seabrook Friendship Park	4522 Park Rd, Seabrook	29.58305	-95.01554	Suburban	Wind	Spm	Potentiometer Cup Anemometer	Continuous	Highest Concentration	Middle Scale
Houston-Sugar Land-Baytown, TX	480710013	Smith Point Hawkins Camp	1850 Hawkins Camp Rd, Anahuac	29.54624	-94.78697	Suburban	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	Source Oriented	Neighborhood
Houston-Sugar Land-Baytown, TX	480710013	Smith Point Hawkins Camp	1850 Hawkins Camp Rd, Anahuac	29.54624	-94.78697	Suburban	Wind	Spm	Potentiometer Cup Anemometer	Continuous	Source Oriented	Neighborhood
Houston-Sugar Land-Baytown, TX	481670004	Texas City Fire Station	2516 Texas Avenue, Texas City	29.38523	-94.93152	Urban and Center City	PM10 (FRM)	SLAMS	HiVol Gravimetric	24 Hours; 1/6 Days	Highest Concentration	Neighborhood
Killeen-Temple-Fort Hood, TX	480271047	Killeen Skylark Field	1605 Stone Tree Drive, Killeen	31.08800	-97.67973	Urban and Center City	NO/NO2/NOx	SPM	Chemiluminescence	Continuous	Population Exposure	Urban Scale
Killeen-Temple-Fort Hood, TX	480271047	Killeen Skylark Field	1605 Stone Tree Drive, Killeen	31.08800	-97.67973	Urban and Center City	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Urban Scale
Killeen-Temple-Fort Hood, TX	480271047	Killeen Skylark Field	1605 Stone Tree Drive, Killeen	31.08800	-97.67973	Urban and Center City	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	Population Exposure	Urban Scale
Killeen-Temple-Fort Hood, TX	480271047	Killeen Skylark Field	1605 Stone Tree Drive, Killeen	31.08800	-97.67973	Urban and Center City	Wind	Spm	Potentiometer Cup Anemometer	Continuous	Population Exposure	Urban Scale

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MSA / CBSA	AQS Site ID	Site Name	Address/Location	Latitude	Longitude	Location Setting	Sampler Type	AQS Network & Monitor Type	Methods	Operating Schedule	Monitoring Objective	Spatial Scale
Killeen-Temple-Fort Hood, TX	480271045	Temple Georgia	8406 Georgia Avenue, Temple	31.12242	-97.43105	Suburban	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Urban Scale
Killeen-Temple-Fort Hood, TX	480271045	Temple Georgia	8406 Georgia Avenue, Temple	31.12242	-97.43105	Suburban	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	General/Background	Neighborhood
Killeen-Temple-Fort Hood, TX	480271045	Temple Georgia	8406 Georgia Avenue, Temple	31.12242	-97.43105	Suburban	Wind	Spm	Potentiometer Cup Anemometer	Continuous	General/Background	Neighborhood
Kingsville, TX***	482730314	National Seashore	20420 Park Road, Corpus Christi	27.42698	-97.29869	Rural	PM2.5 (Beta)	Spm	Beta Attenuation	Continuous	Regional Transport	Regional Scale
Kingsville, TX***	482730314	National Seashore	20420 Park Road, Corpus Christi	27.42698	-97.29869	Rural	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	Regional Transport	Regional Scale
Kingsville, TX***	482730314	National Seashore	20420 Park Road, Corpus Christi	27.42698	-97.29869	Rural	Wind	Spm	Potentiometer Cup Anemometer	Continuous	Regional Transport	Regional Scale
Laredo, TX	484790017	Laredo Bridge	700 Zaragosa St, Laredo	27.50183	-99.50298	Urban and Center City	PM10 (FRM)	Border Grant/SLAMS	HiVol Gravimetric	24 Hours; 1/6 Days	Highest Concentration	Microscale
Laredo, TX	484790017	Laredo Bridge	700 Zaragosa St, Laredo	27.50183	-99.50298	Urban and Center City	Speciated VOC (Canister)	Border Grant/SLAMS	Canister GC-MS	24 Hours; 1/6 Days	Highest Concentration	Neighborhood
Laredo, TX	484790017	Laredo Bridge	700 Zaragosa St, Laredo	27.50183	-99.50298	Urban and Center City	Temperature (Outdoor)	Border Grant/SLAMS	Aspirated Thermister	Continuous	Population Exposure	Neighborhood
Laredo, TX	484790017	Laredo Bridge	700 Zaragosa St, Laredo	27.50183	-99.50298	Urban and Center City	Wind	Border Grant/SLAMS	Potentiometer Cup Anemometer	Continuous	Population Exposure	Neighborhood
Laredo, TX	484790016	Laredo Vidaurri	2020 Vidaurri Ave, Laredo	27.51745	-99.51522	Suburban	CO	Border Grant/SLAMS	Gas Filter Correlation	Continuous	Population Exposure	Neighborhood
Laredo, TX	484790016	Laredo Vidaurri	2020 Vidaurri Ave, Laredo	27.51745	-99.51522	Suburban	O3	Border Grant/SLAMS	UV Photometric	Continuous	Population Exposure	Neighborhood
Laredo, TX	484790016	Laredo Vidaurri	2020 Vidaurri Ave, Laredo	27.51745	-99.51522	Suburban	PM10 (FRM)	Border Grant/SLAMS	HiVol Gravimetric	24 Hours; 1/6 Days	Population Exposure	Neighborhood
Laredo, TX	484790016	Laredo Vidaurri	2020 Vidaurri Ave, Laredo	27.51745	-99.51522	Suburban	Temperature (Outdoor)	Border Grant/SLAMS	Aspirated Thermister	Continuous	Population Exposure	Neighborhood
Laredo, TX	484790016	Laredo Vidaurri	2020 Vidaurri Ave, Laredo	27.51745	-99.51522	Suburban	Wind	Border Grant/SLAMS	Potentiometer Cup Anemometer	Continuous	Population Exposure	Neighborhood

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MSA / CBSA	AQS Site ID	Site Name	Address/Location	Latitude	Longitude	Location Setting	Sampler Type	AQS Network & Monitor Type	Methods	Operating Schedule	Monitoring Objective	Spatial Scale
Laredo, TX	484790313	World Trade Bridge	Mines Road 11601 FM 1472, Laredo	27.59944	-99.53333	Suburban	PM2.5 (Beta)	Border Grant/SLAMS	Beta Attenuation	Continuous	Source Oriented	Microscale
Longview, TX	481830001	Longview	Gregg Co Airport near Longview, Longview	32.37868	-94.71181	Rural	NO/NO2/NOx	Spm	Chemiluminescence	Continuous	Population Exposure	Neighborhood
Longview, TX	481830001	Longview	Gregg Co Airport near Longview, Longview	32.37868	-94.71181	Rural	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Neighborhood
Longview, TX	481830001	Longview	Gregg Co Airport near Longview, Longview	32.37868	-94.71181	Rural	Precipitation	Spm	Rain Gauge	Continuous	General/Background	Neighborhood
Longview, TX	481830001	Longview	Gregg Co Airport near Longview, Longview	32.37868	-94.71181	Rural	SO2	SLAMS	Pulsed Fluorescence	Continuous	General/Background; Population Exposure	Neighborhood
Longview, TX	481830001	Longview	Gregg Co Airport near Longview, Longview	32.37868	-94.71181	Rural	Solar Radiation	Spm	Photovoltaic	Continuous	General/Background	Neighborhood
Longview, TX	481830001	Longview	Gregg Co Airport near Longview, Longview	32.37868	-94.71181	Rural	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	General/Background	Neighborhood
Longview, TX	481830001	Longview	Gregg Co Airport near Longview, Longview	32.37868	-94.71181	Rural	Wind	Spm	Potentiometer Cup Anemometer	Continuous	General/Background	Neighborhood
Longview, TX	484011082	Tatum CR 2181d Martin Creek Lake	9515 County Road 2181d, Tatum	32.27780	-94.57080	Rural	SO2	Spm	Pulsed Fluorescence	Continuous	Source Oriented	Neighborhood
Longview, TX	484011082	Tatum CR 2181d Martin Creek Lake	9515 County Road 2181d, Tatum	32.27780	-94.57080	Rural	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	General/Background	Neighborhood
Longview, TX	484011082	Tatum CR 2181d Martin Creek Lake	9515 County Road 2181d, Tatum	32.27780	-94.57080	Rural	Wind	Spm	Potentiometer Cup Anemometer	Continuous	General/Background	Neighborhood
Lubbock, TX	483031028	Lubbock 12th Street	3901 East 12th Street, Lubbock	33.58553	-101.78698	Urban and Center City	PM2.5 (TEOM)**	Spm	TEOM Gravimetric	Continuous	Population Exposure	Urban Scale
Lubbock, TX	483031028	Lubbock 12th Street	3901 East 12th Street, Lubbock	33.58553	-101.78698	Urban and Center City	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	General/Background	Regional Scale
Lubbock, TX	483031028	Lubbock 12th Street	3901 East 12th Street, Lubbock	33.58553	-101.78698	Urban and Center City	Wind (3m)	Spm	Potentiometer Cup Anemometer	Continuous	General/Background	Regional Scale
Marshall, TX***	482031079	Hallsville Red Oak Road	9206 Red Oak Road, Hallsville	32.47020	-94.48150	Rural	SO2	SLAMS	Pulsed Fluorescence	Continuous	Source Oriented	Neighborhood

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MSA / CBSA	AQS Site ID	Site Name	Address/Location	Latitude	Longitude	Location Setting	Sampler Type	AQS Network & Monitor Type	Methods	Operating Schedule	Monitoring Objective	Spatial Scale
Marshall, TX***	482031079	Hallsville Red Oak Road	9206 Red Oak Road, Hallsville	32.47020	-94.48150	Rural	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	General/Background	Neighborhood
Marshall, TX***	482031079	Hallsville Red Oak Road	9206 Red Oak Road, Hallsville	32.47020	-94.48150	Rural	Wind	Spm	Potentiometer Cup Anemometer	Continuous	General/Background	Neighborhood
Marshall, TX***	482030002	Karnack	Hwy 134 & Spur 449, Not In A City	32.66899	-94.16746	Rural	NO/NO2/NOx	SLAMS	Chemiluminescence	Continuous	General/Background	Regional Scale; Urban Scale
Marshall, TX***	482030002	Karnack	Hwy 134 & Spur 449, Not In A City	32.66899	-94.16746	Rural	O3	SLAMS	UV Photometric	Continuous	General/Background	Regional Scale
Marshall, TX***	482030002	Karnack	Hwy 134 & Spur 449, Not In A City	32.66899	-94.16746	Rural	PM10 (FRM)	Spm	HiVol Gravimetric	24 Hours; 1/6 Days	General/Background	Neighborhood
Marshall, TX***	482030002	Karnack	Hwy 134 & Spur 449, Not In A City	32.66899	-94.16746	Rural	PM2.5 (FRM)	Spm	Sequential FRM Gravimetric	24 Hours; 1/6 Days	General/Background	Urban Scale
Marshall, TX***	482030002	Karnack	Hwy 134 & Spur 449, Not In A City	32.66899	-94.16746	Rural	PM2.5 (Speciation)	Csn Stn/SLAMS	Carbons | Elements | Ions | Sequential Non-FRM Gravimetric	24 Hours; 1/6 Days	General/Background; Regional Transport	Regional Scale
Marshall, TX***	482030002	Karnack	Hwy 134 & Spur 449, Not In A City	32.66899	-94.16746	Rural	PM2.5 (TEOM)**	Spm	TEOM Gravimetric	Continuous	General/Background	Regional Scale
Marshall, TX***	482030002	Karnack	Hwy 134 & Spur 449, Not In A City	32.66899	-94.16746	Rural	Solar Radiation	Spm	Photovoltaic	Continuous	General/Background	Urban Scale
Marshall, TX***	482030002	Karnack	Hwy 134 & Spur 449, Not In A City	32.66899	-94.16746	Rural	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	General/Background	Urban Scale
Marshall, TX***	482030002	Karnack	Hwy 134 & Spur 449, Not In A City	32.66899	-94.16746	Rural	Visibility	Spm	Visibility Sensor	Continuous	General/Background	Urban Scale
Marshall, TX***	482030002	Karnack	Hwy 134 & Spur 449, Not In A City	32.66899	-94.16746	Rural	Wind	Spm	Potentiometer Cup Anemometer	Continuous	General/Background	Urban Scale
McAllen-Edinburg-Mission, TX	482151046	Edinburg East Freddy Gonzalez Drive	1491 East Freddy Gonzalez Drive, Edinburg	26.28862	-98.15207	Urban and Center City	PM10 (FRM)	SLAMS	HiVol Gravimetric	24 Hours; 1/6 Days	Population Exposure	Regional Scale
McAllen-Edinburg-Mission, TX	482151046	Edinburg East Freddy Gonzalez Drive	1491 East Freddy Gonzalez Drive, Edinburg	26.28862	-98.15207	Urban and Center City	PM2.5 (FRM)	SLAMS	Sequential FRM Gravimetric	24 Hours; 1/3 Days	Population Exposure	Regional Scale
McAllen-Edinburg-Mission, TX	482151046	Edinburg East Freddy Gonzalez Drive	1491 East Freddy Gonzalez Drive, Edinburg	26.28862	-98.15207	Urban and Center City	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	Population Exposure	Regional Scale

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McAllen-Edinburg-Mission, TX	482151046	Edinburg East Freddy Gonzalez Drive	1491 East Freddy Gonzalez Drive, Edinburg	26.28862	-98.15207	Urban and Center City	Wind (3m)	Spm	Potentiometer Cup Anemometer	Continuous	Population Exposure	Regional Scale
McAllen-Edinburg-Mission, TX	482150043	Mission	2300 North Glasscock, Mission	26.22621	-98.29107	Suburban	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Neighborhood
McAllen-Edinburg-Mission, TX	482150043	Mission	2300 North Glasscock, Mission	26.22621	-98.29107	Suburban	PM10 (FRM)	SLAMS	HiVol Gravimetric	24 Hours; 1/6 Days	Population Exposure	Urban Scale
McAllen-Edinburg-Mission, TX	482150043	Mission	2300 North Glasscock, Mission	26.22621	-98.29107	Suburban	PM2.5 (Beta)	SLAMS	Beta Attenuation	Continuous	Population Exposure	Urban Scale
McAllen-Edinburg-Mission, TX	482150043	Mission	2300 North Glasscock, Mission	26.22621	-98.29107	Suburban	Solar Radiation	Spm	Photovoltaic	Continuous	Population Exposure	Microscale
McAllen-Edinburg-Mission, TX	482150043	Mission	2300 North Glasscock, Mission	26.22621	-98.29107	Suburban	SVOC	Spm	HiVol PUF XAD GC-MS	24 Hours; 1/6 Days	Population Exposure	Microscale
McAllen-Edinburg-Mission, TX	482150043	Mission	2300 North Glasscock, Mission	26.22621	-98.29107	Suburban	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	Population Exposure	Microscale
McAllen-Edinburg-Mission, TX	482150043	Mission	2300 North Glasscock, Mission	26.22621	-98.29107	Suburban	Wind	Spm	Potentiometer Cup Anemometer	Continuous	Population Exposure	Microscale
Mount Pleasant, TX***	484491078	Cookville FM 4855	385 CR 4855, Not In A City	33.07520	-94.84740	Rural	SO2	SLAMS	Pulsed Fluorescence	Continuous	Source Oriented	Neighborhood
Mount Pleasant, TX***	484491078	Cookville FM 4855	385 CR 4855, Not In A City	33.07520	-94.84740	Rural	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	General/Background	Neighborhood
Mount Pleasant, TX***	484491078	Cookville FM 4855	385 CR 4855, Not In A City	33.07520	-94.84740	Rural	Wind	Spm	Potentiometer Cup Anemometer	Continuous	General/Background	Neighborhood
None****	480430101	Bravo Big Bend	Big Bend National Park	29.30255	-103.17791	Rural	PM2.5 (Beta)	Spm	Beta Attenuation	Continuous	General/Background	Neighborhood
None****	480430101	Bravo Big Bend	Big Bend National Park	29.30255	-103.17791	Rural	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	General/Background	Microscale
None****	480430101	Bravo Big Bend	Big Bend National Park	29.30255	-103.17791	Rural	Wind	Spm	Potentiometer Cup Anemometer	Continuous	General/Background	Neighborhood
None****	481611084	Fairfield FM 2570 Ward Ranch	488 FM 2570, Fairfield	29.30255	-103.17791	Rural	SO2	Spm	Pulsed Fluorescence	Continuous	Source Oriented	Neighborhood

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MSA / CBSA	AQS Site ID	Site Name	Address/Location	Latitude	Longitude	Location Setting	Sampler Type	AQS Network & Monitor Type	Methods	Operating Schedule	Monitoring Objective	Spatial Scale
None****	481611084	Fairfield FM 2570 Ward Ranch	488 FM 2570, Fairfield	29.30255	-103.17791	Rural	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	Source Oriented	Neighborhood
None****	481611084	Fairfield FM 2570 Ward Ranch	488 FM 2570, Fairfield	31.79780	-96.10310	Rural	Wind	Spm	Potentiometer Cup Anemometer	Continuous	Source Oriented	Neighborhood
None****	483311075	Rockdale John D. Harper Road	3990 John D Harper Road, Rockdale	31.79780	-96.10310	Rural	SO2	SLAMS	Pulsed Fluorescence	Continuous	Source Oriented	Neighborhood
None****	483311075	Rockdale John D. Harper Road	3990 John D Harper Road, Rockdale	31.79780	-96.10310	Rural	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	General/Background	Neighborhood
None****	483311075	Rockdale John D. Harper Road	3990 John D Harper Road, Rockdale	30.56944	-97.07611	Rural	Wind	Spm	Potentiometer Cup Anemometer	Continuous	General/Background	Neighborhood
Odessa, TX	481351014	Odessa Gonzales	2700 Disney, Odessa	30.56944	-97.07611	Suburban	PM2.5 (TEOM)**	Spm	TEOM Gravimetric	Continuous	Highest Concentration	Neighborhood
Odessa, TX	481351014	Odessa Gonzales	2700 Disney, Odessa	30.56944	-97.07611	Suburban	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	Population Exposure	Neighborhood
Odessa, TX	481351014	Odessa Gonzales	2700 Disney, Odessa	31.87025	-102.33476	Suburban	Wind	Spm	Potentiometer Cup Anemometer	Continuous	Population Exposure	Neighborhood
San Antonio, TX	480290059	Calaveras Lake	14620 Laguna Rd, San Antonio	29.27538	-98.31169	Rural	NO/NO2/NOx	SLAMS	Chemiluminescence	Continuous	Source Oriented; Upwind Background	Urban Scale
San Antonio, TX	480290059	Calaveras Lake	14620 Laguna Rd, San Antonio	29.27538	-98.31169	Rural	O3	SLAMS	UV Photometric	Continuous	Source Oriented; Upwind Background	Urban Scale
San Antonio, TX	480290059	Calaveras Lake	14620 Laguna Rd, San Antonio	29.27538	-98.31169	Rural	PM2.5 (FRM)	SLAMS	Sequential FRM Gravimetric	24 Hours; 1/6 Days	Population Exposure; Upwind Background	Urban Scale
San Antonio, TX	480290059	Calaveras Lake	14620 Laguna Rd, San Antonio	29.27538	-98.31169	Rural	PM2.5 (TEOM)**	Spm	TEOM Gravimetric	Continuous	Regional Transport	Regional Scale
San Antonio, TX	480290059	Calaveras Lake	14620 Laguna Rd, San Antonio	29.27538	-98.31169	Rural	SO2	SLAMS	Pulsed Fluorescence	Continuous	Population Exposure; Source Oriented	Neighborhood
San Antonio, TX	480290059	Calaveras Lake	14620 Laguna Rd, San Antonio	29.27538	-98.31169	Rural	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	Source Oriented	Urban Scale
San Antonio, TX	480290059	Calaveras Lake	14620 Laguna Rd, San Antonio	29.27538	-98.31169	Rural	Wind	Spm	Potentiometer Cup Anemometer	Continuous	Source Oriented	Urban Scale

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San Antonio, TX	480290052	Camp Bullis	F Range (1000 yard marker off Wilderness Trail), Near Wilderness Rd, San Antonio	29.63206	-98.56494	Rural	O3	SLAMS	UV Photometric	Continuous	Max Ozone Concentration; Population Exposure	Urban Scale
San Antonio, TX	480290052	Camp Bullis	F Range (1000 yard marker off Wilderness Trail), Near Wilderness Rd, San Antonio	29.63206	-98.56494	Rural	Solar Radiation	Spm	Photovoltaic	Continuous	Highest Concentration	Urban Scale
San Antonio, TX	480290052	Camp Bullis	F Range (1000 yard marker off Wilderness Trail), Near Wilderness Rd, San Antonio	29.63206	-98.56494	Rural	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	Highest Concentration	Urban Scale
San Antonio, TX	480290052	Camp Bullis	F Range (1000 yard marker off Wilderness Trail), Near Wilderness Rd, San Antonio	29.63206	-98.56494	Rural	Wind	Spm	Potentiometer Cup Anemometer	Continuous	Highest Concentration	Urban Scale
San Antonio, TX	480290060	Frank Wing Municipal Court	401 South Frio St, San Antonio	29.42218	-98.50538	Urban and Center City	PM10 (FRM)	SLAMS	HiVol Gravimetric	24 Hours; 1/6 Days	Population Exposure	Middle Scale
San Antonio, TX	480290677	Old Hwy 90	911 Old Hwy 90 West, San Antonio	29.42394	-98.58050	Urban and Center City	PM2.5 (TEOM)**	Spm	TEOM Gravimetric	Continuous	Population Exposure	Neighborhood
San Antonio, TX	480290676	Palo Alto	9011 Poteet Jourdanton Hwy, San Antonio	29.33279	-98.55138	Urban and Center City	PM2.5 (TEOM)**	Spm	TEOM Gravimetric	Continuous	Population Exposure	Neighborhood
San Antonio, TX	480290676	Palo Alto	9011 Poteet Jourdanton Hwy, San Antonio	29.33279	-98.55138	Urban and Center City	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	General/Background	Neighborhood
San Antonio, TX	480290676	Palo Alto	9011 Poteet Jourdanton Hwy, San Antonio	29.33279	-98.55138	Urban and Center City	Wind	Spm	Potentiometer Cup Anemometer	Continuous	General/Background	Neighborhood
San Antonio, TX	480291080	San Antonio Gardner Road	7145 Gardner Road, San Antonio	29.35291	-98.33281	Suburban	SO2	SLAMS	Pulsed Fluorescence	Continuous	Source Oriented	Neighborhood
San Antonio, TX	480291080	San Antonio Gardner Road	7145 Gardner Road, San Antonio	29.35291	-98.33281	Suburban	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	General/Background	Neighborhood
San Antonio, TX	480291080	San Antonio Gardner Road	7145 Gardner Road, San Antonio	29.35291	-98.33281	Suburban	Wind (3m)	Spm	Potentiometer Cup Anemometer	Continuous	General/Background	Neighborhood
San Antonio, TX	480291069	San Antonio Interstate 35	9904 IH 35 N, San Antonio	29.52940	-98.39139	Urban and Center City	CO	Near Road/SLAMS	Gas Filter Correlation	Continuous	Max Precursor Emissions Impact	Microscale
San Antonio, TX	480291069	San Antonio Interstate 35	9904 IH 35 N, San Antonio	29.52940	-98.39139	Urban and Center City	NO/NO2/NOx	Near Road/SLAMS	Chemiluminescence	Continuous	Max Precursor Emissions Impact	Microscale
San Antonio, TX	480291069	San Antonio Interstate 35	9904 IH 35 N, San Antonio	29.52940	-98.39139	Urban and Center City	PM2.5 (FRM)	Near Road/SLAMS	Sequential FRM Gravimetric	24 Hours; 1/3 Days	Max Precursor Emissions Impact	Microscale

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MSA / CBSA	AQS Site ID	Site Name	Address/Location	Latitude	Longitude	Location Setting	Sampler Type	AQS Network & Monitor Type	Methods	Operating Schedule	Monitoring Objective	Spatial Scale
San Antonio, TX	480291069	San Antonio Interstate 35	9904 IH 35 N, San Antonio	29.52940	-98.39139	Urban and Center City	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	Max Precursor Emissions Impact	Microscale
San Antonio, TX	480291069	San Antonio Interstate 35	9904 IH 35 N, San Antonio	29.52940	-98.39139	Urban and Center City	Wind	Spm	Potentiometer Cup Anemometer	Continuous	Max Precursor Emissions Impact	Microscale
San Antonio, TX	480290032	San Antonio Northwest	6655 Bluebird Lane, San Antonio	29.51509	-98.62017	Suburban	NO/NO2/NOx	SLAMS	Chemiluminescence	Continuous	Population Exposure	Neighborhood
San Antonio, TX	480290032	San Antonio Northwest	6655 Bluebird Lane, San Antonio	29.51509	-98.62017	Suburban	O3	SLAMS	UV Photometric	Continuous	Max Ozone Concentration; Population Exposure	Urban Scale
San Antonio, TX	480290032	San Antonio Northwest	6655 Bluebird Lane, San Antonio	29.51509	-98.62017	Suburban	PM2.5 (FRM)	SLAMS	Sequential FRM Gravimetric	24 Hours; 1/6 Days	Population Exposure	Urban Scale
San Antonio, TX	480290032	San Antonio Northwest	6655 Bluebird Lane, San Antonio	29.51509	-98.62017	Suburban	PM2.5 (TEOM)**	Spm	TEOM Gravimetric	Continuous	Population Exposure	Urban Scale
San Antonio, TX	480290032	San Antonio Northwest	6655 Bluebird Lane, San Antonio	29.51509	-98.62017	Suburban	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	Highest Concentration	Urban Scale
San Antonio, TX	480290032	San Antonio Northwest	6655 Bluebird Lane, San Antonio	29.51509	-98.62017	Suburban	Wind	Spm	Potentiometer Cup Anemometer	Continuous	Highest Concentration	Urban Scale
San Antonio, TX	480290053	Selma	16289 North Evans Rd #2, Selma	29.58774	-98.31251	Suburban	PM10 (FRM)	SLAMS	HiVol Gravimetric	24 Hours; 1/6 Days	Population Exposure	Neighborhood
Texarkana, TX-Texarkana, AR	480371031	Texarkana New Boston	2700 New Boston Rd, Texarkana	33.43611	-94.07778	Urban and Center City	PM2.5 (FRM)	SLAMS	Sequential FRM Gravimetric	24 Hours; 1/6 Days	Population Exposure	Urban Scale
Texarkana, TX-Texarkana, AR	480371031	Texarkana New Boston	2700 New Boston Rd, Texarkana	33.43611	-94.07778	Urban and Center City	PM2.5 (TEOM)**	Spm	TEOM Gravimetric	Continuous	Population Exposure	Urban Scale
Texarkana, TX-Texarkana, AR	480371031	Texarkana New Boston	2700 New Boston Rd, Texarkana	33.43611	-94.07778	Urban and Center City	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	Population Exposure	Urban Scale
Texarkana, TX-Texarkana, AR	480371031	Texarkana New Boston	2700 New Boston Rd, Texarkana	33.43611	-94.07778	Urban and Center City	Wind (3m)	Spm	Potentiometer Cup Anemometer	Continuous	Population Exposure	Urban Scale
Tyler, TX	484230007	Tyler Airport Relocated	14790 County Road 1145, Tyler	32.34401	-95.41575	Rural	NO/NO2/NOx	Spm	Chemiluminescence	Continuous	General/Background	Urban Scale
Tyler, TX	484230007	Tyler Airport Relocated	14790 County Road 1145, Tyler	32.34401	-95.41575	Rural	O3	SLAMS	UV Photometric	Continuous	General/Background	Urban Scale

Appendix A: Ambient Air Monitoring Network Site List

MSA / CBSA	AQS Site ID	Site Name	Address/Location	Latitude	Longitude	Location Setting	Sampler Type	AQS Network & Monitor Type	Methods	Operating Schedule	Monitoring Objective	Spatial Scale
Tyler, TX	484230007	Tyler Airport Relocated	14790 County Road 1145, Tyler	32.34401	-95.41575	Rural	Precipitation	Spm	Rain Gauge	Continuous	General/Background	Neighborhood
Tyler, TX	484230007	Tyler Airport Relocated	14790 County Road 1145, Tyler	32.34401	-95.41575	Rural	Solar Radiation	Spm	Photovoltaic	Continuous	General/Background	Neighborhood
Tyler, TX	484230007	Tyler Airport Relocated	14790 County Road 1145, Tyler	32.34401	-95.41575	Rural	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	General/Background	Neighborhood
Tyler, TX	484230007	Tyler Airport Relocated	14790 County Road 1145, Tyler	32.34401	-95.41575	Rural	Wind	Spm	Potentiometer Cup Anemometer	Continuous	General/Background	Neighborhood
Victoria, TX	484690003	Victoria	106 Mockingbird Lane, Victoria	28.83617	-97.00553	Urban and Center City	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Neighborhood
Victoria, TX	484690003	Victoria	106 Mockingbird Lane, Victoria	28.83617	-97.00553	Urban and Center City	Solar Radiation	Spm	Photovoltaic	Continuous	Highest Concentration	Neighborhood
Victoria, TX	484690003	Victoria	106 Mockingbird Lane, Victoria	28.83617	-97.00553	Urban and Center City	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	Highest Concentration	Neighborhood
Victoria, TX	484690003	Victoria	106 Mockingbird Lane, Victoria	28.83617	-97.00553	Urban and Center City	Wind	Spm	Potentiometer Cup Anemometer	Continuous	Highest Concentration	Neighborhood
Waco, TX	483091037	Waco Mazanec	4472 Mazanec Rd, Waco	31.65307	-97.07070	Rural	CO	SLAMS	Gas Filter Correlation	Continuous	Upwind Background	Urban Scale
Waco, TX	483091037	Waco Mazanec	4472 Mazanec Rd, Waco	31.65307	-97.07070	Rural	O3	SLAMS	UV Photometric	Continuous	Upwind Background	Regional Scale
Waco, TX	483091037	Waco Mazanec	4472 Mazanec Rd, Waco	31.65307	-97.07070	Rural	PM2.5 (TEOM)**	Spm	TEOM Gravimetric	Continuous	Regional Transport	Regional Scale
Waco, TX	483091037	Waco Mazanec	4472 Mazanec Rd, Waco	31.65307	-97.07070	Rural	SO2	SLAMS	Pulsed Fluorescence	Continuous	Upwind Background	Urban Scale
Waco, TX	483091037	Waco Mazanec	4472 Mazanec Rd, Waco	31.65307	-97.07070	Rural	Solar Radiation	Spm	Photovoltaic	Continuous	Regional Transport	Urban Scale
Waco, TX	483091037	Waco Mazanec	4472 Mazanec Rd, Waco	31.65307	-97.07070	Rural	Temperature (Outdoor)	Spm	Aspirated Thermister	Continuous	Regional Transport	Urban Scale
Waco, TX	483091037	Waco Mazanec	4472 Mazanec Rd, Waco	31.65307	-97.07070	Rural	Wind	Spm	Potentiometer Cup Anemometer	Continuous	Regional Transport	Urban Scale

Appendix A: Ambient Air Monitoring Network Site List

Symbol / Acronym	Description
*	Granbury, Texas, is not a Metropolitan Statistical Area on the US Census Bureaus's list, but is designated as such in AQS, Grandbury, Texas is located in Hood County, Texas and in the Dallas-Fort Worth-Arlington MSA
**	Monitor is not suitable for comparison against the annual $PM_{2.5}$ NAAQS as described in 40 Code of Federal Regulations §58.30
***	Micropolitan Statistical Area
****	County is not a Metropolitan or Micropolitan Statistical Area
@	at
24-Hour Avg, 1/6 Days	1 24-Hour Average, Once every Sixth Day
24-Hour; 1/3 Days	1 24-Hour Sample, Once every Third Day
24-Hours, Daily	1 24-Hour Sample, Daily
24 1-Hour Avg; Daily	24 1-Hour Average, Daily
3 8-Hours; 1/3 Days (Jun - Aug)	8 3-Hour Samples, Once every Third Day from June through August
24-Hour; 1/6 Days	1 24-Hour Sample, Once every Sixth Day
AMNP	Annual Monitoring Network Plan
AQS	Air Quality System
AutoGC	automated gas chromatograph
Ave	Avenue
Blvd	Boulevard
Border	The Border network designation is part of the SLAMS network for monitors within 100 kilometers of the United States/Mexico border.
CBSA	core based statistical area
Csn Stn	Chemical Speciation Network Speciation Trends Network site (includes NCore monitors/requirements, samples analyzed by EPA contracted laboratory)
Csn Supplemental	Chemical Speciation Network supplemental speciation site (samples analyzed by TCEQ contracted laboratory)
CO	carbon monoxide
Co	County
Dr	Drive
E	East
Elem	Elementary
FM	Farm-to-Market
FRM	federal reference method
Hwy	Highway
IH	Interstate Highway
Max	Maximum
MSA	metropolitan statistical area/micropolitan statistical area
N	North
NCore	National Core Multipollutant Monitoring Stations

Appendix A: Ambient Air Monitoring Network Site List

Symbol / Acronym	Description
NE	Northeast
$NO/NO_2/NO_x$	nitrogen oxides
NO_y	total reactive nitrogen
O_3	ozone
PAMS	Photochemical Assessment Monitoring Stations
PM_{10}	particulate matter of 10 micrometers or less in diameter
$PM_{10-2.5}$	coarse particulate matter
$PM_{2.5}$	particulate matter of 2.5 micrometers or less in diameter
QA Collocated	quality assurance collocated monitor
Rd	Road
S	South
SB	South Bound
SETRPC	Southeast Texas Regional Planning Commission
SLAMS	State or Local Air Monitoring Stations
SO_2	sulfur dioxide (one-hour and five-minute maximum monitors)
SPM	special purpose monitor
St	Street
SVOC	semi-volatile organic compound
TCEQ	Texas Commission on Environmental Quality
TEOM	tapered element oscillating microbalance (not NAAQS comparablie)
TSP	total suspended particulate
TSP (Pb)	total suspended particulate (lead)
TX	Texas
UV	ultraviolet
VOC	volatile organic compound
Wind	All wind sampler types produce data for parameters 61101, 61103, 61104, 61105, and 61106.
W	West
Yd	Yard

Appendix B

Population and Criteria Pollutant Monitoring Requirements by Metropolitan Statistical Area

Texas Commission on Environmental Quality
2018 Annual Monitoring Network Plan

Appendix B: Population and Criteria Pollutant Monitoring Requirements by Metropolitan Statistical Area

Texas Metropolitan Statistical Areas	Population*	$NO/NO_2/NO_y$ Required	$NO/NO_2/NO_y$ Existing†	SO_2 Required	SO_2 Existing†	Pb Required	Pb Existing†	O_3 Required	O_3 Existing†	CO Required	CO Existing†	PM_{10} Required	PM_{10} Existing†	$PM_{2.5}$ Required	$PM_{2.5}$ Existing†
Dallas-Fort Worth-Arlington	7,399,662	7	15	2	3	3	5	4	19	2	2	2 - 4	4	6	14
Houston-The Woodlands-Sugar Land	6,892,427	7	19	3	5	0	0	4	20	2	3	2 - 4	7	7	16
San Antonio-New Braunfels	2,473,974	2	3	2	2	0	0	2	3	1	1	2 - 4	2	3	7
Austin-Round Rock	2,115,827	2	2	0	1	0	0	2	2	1	1	2 - 4	2	3	4
McAllen-Edinburg-Mission	860,661	0	0	0	0	0	0	1	1	0	0	1 - 2	2	2	2
El Paso	844,818	3	4	1	1	0	2	3	6	1	3	4 - 8	5	4	7
Corpus Christi	454,008	0	0	0	3	0	0	2	2	0	0	0 - 1	1	0	4
Killeen-Temple	443,773	0	1	0	0	0	0	2	2	0	0	0 - 1	0	0	0
Brownsville-Harlingen	423,725	0	0	0	0	0	0	1	1	0	0	0 - 1	0	1	2
Beaumont-Port Arthur	412,437	1	4	3	4	0	0	2	7	0	1	0 - 1	0	0	3
Lubbock	316,983	0	0	0	0	0	0	0	0	0	0	0 - 1	0	0	1
Laredo	274,794	0	0	0	0	0	0	0	1	0	1	0 - 1	2	0	1
Waco	268,696	0	0	0	1	0	0	1	1	0	1	0 - 1	0	0	1
Amarillo	264,925	0	0	1	2	0	1	0	0	0	0	0 - 1	0	0	1
College Station-Bryan	258,044	0	0	1	1	0	0	0	0	0	0	0 - 1	0	0	0
Tyler	227,727	0	1	0	0	0	0	1	1	0	0	0	0	0	0
Longview	217,481	0	1	1	2	0	0	1	1	0	0	0	0	0	0
Midland	170,675	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Abilene	170,219	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Odessa	157,087	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Wichita Falls	151,230	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Texarkana	150,355	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Sherman-Denison	131,140	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Angelo	119,535	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Victoria	99,646	0	0	0	0	0	0	1	1	0	0	0	0	0	0
Marshall[1]	66,661	0	1	1	1	0	0	0	1	0	0	0	1	0	3
Eagle Pass[1]	58,216	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Corsicana[1]	48,701	0	0	1	1	0	0	0	0	0	0	0	0	0	1
Big Spring[1]	37,388	0	0	1	1	0	0	0	0	0	0	0	0	0	0
Mount Pleasant[1]	32,904	0	0	1	1	0	0	0	0	0	0	0	0	0	0
Kingsville[1]	31,505	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Milam County[1]	25,053	0	0	1	1	0	0	0	0	0	0	0	0	0	0
Borger[1]	21,375	0	0	1	1	0	0	0	0	0	0	0	0	0	0
Freestone County[2]	19,625	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Big Bend National Park[2]	not available	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Totals**		**22**	**51**	**20**	**32**	**3**	**8**	**27**	**69**	**7**	**13**	**13-35**	**26**	**26**	**73**

†Monitors may fulfill multiple monitoring requirements, but are only counted once. Quality assurance monitors are not counted. Planned deployment of required monitors is discussed in the applicable section of the AMNP document.

*United States Census Bureau population estimates as of July 1, 2017.

**Totals do not include collocated monitors

[1]Area is classified as a micropolitan statistical area and not subject to SLAMS requirements.

[2]Area does not fall within a metropolitan or micropolitan statistical area. No population data is available for Big Bend National Park.

Only primary monitors included in Appendix A are included in this table.

Required and existing monitor counts include NOy, high sensitivity SO_2, and high sensitivity CO.

$PM_{10-2.5}$ NCore requirements are not included in particulate matter counts.

$NO/NO_2/NO_y$ - oxides of nitrogen and total reactive nitrogen compounds

SO_2 - sulfur dioxide

Pb - lead

O_3 - ozone

CO - carbon monoxide

PM_{10} - particulate matter of 10 micrometers or less

$PM_{2.5}$ - particulate matter of 2.5 micrometers or less

Appendix C

Nitrogen Dioxide, Nitrogen Oxide, and Total Reactive Nitrogen Monitoring Requirements

Texas Commission on Environmental Quality
2018 Annual Monitoring Network Plan

Appendix C: Nitrogen Dioxide, Nitrogen Oxide, and Total Reactive Nitrogen Monitoring Requirements

Core Based Statistical Areas	2017 Population Estimates[1]	Required NO_2 Area Wide Monitors	Required NO_2 RA 40 Monitors	Required NO_2 Near Road Monitors	Required NO_2 PAMS Monitors	Required NO_y PAMS / NCore Monitors	Required NO PAMS / NCore Monitors	Total Required NO, NO_2, and NO_y Monitors	Total Existing NO / NO_2 and NO_y Monitors[2]
Dallas-Fort Worth-Arlington	7,399,662	1	1	2	1	1	1	7	15
Houston-The Woodlands-Sugar Land	6,892,427	1	1	2	1	1	1	7	19
San Antonio-New Braunfels	2,473,974	1	0	1	0	0	0	2	3
Austin-Round Rock	2,115,827	1	0	1	0	0	0	2	2
McAllen-Edinburg-Mission	860,661	0	0	0	0	0	0	0	0
El Paso	844,818	0	1	0	0	1	1	3	4
Corpus Christi	454,008	0	0	0	0	0	0	0	0
Killeen-Temple	443,773	0	0	0	0	0	0	0	1
Brownsville-Harlingen	423,725	0	0	0	0	0	0	0	0
Beaumont-Port Arthur	412,437	0	1	0	0	0	0	1	4
Lubbock	316,983	0	0	0	0	0	0	0	0
Laredo	274,794	0	0	0	0	0	0	0	0
Waco	268,696	0	0	0	0	0	0	0	0
Amarillo	264,925	0	0	0	0	0	0	0	0
College Station-Bryan	258,044	0	0	0	0	0	0	0	0
Tyler	227,727	0	0	0	0	0	0	0	1
Longview	217,481	0	0	0	0	0	0	0	1
Midland	170,675	0	0	0	0	0	0	0	0
Abilene	170,219	0	0	0	0	0	0	0	0
Odessa	157,087	0	0	0	0	0	0	0	0
Wichita Falls	151,230	0	0	0	0	0	0	0	0
Texarkana	150,355	0	0	0	0	0	0	0	0
Sherman-Denison	131,140	0	0	0	0	0	0	0	0
San Angelo	119,535	0	0	0	0	0	0	0	0
Victoria	99,646	0	0	0	0	0	0	0	0
Marshall*	66,661	0	0	0	0	0	0	0	1
Totals		**4**	**4**	**6**	**2**	**3**	**3**	**22**	**51**

[1]United States Census Bureau population estimates as of July 1, 2017.

[2]Monitors may fulfill multiple monitoring requirements but are only counted once.

*Area is classified as a micropolitan statistical area and not subject to SLAMS requirements.

PAMS - Photochemical Assessment Monitoring Stations

NCore - National Core Multipollutant Monitoring Stations

RA-40 - Regional Administrator 40

NO - nitrogen oxide

NO_2 - nitrogen dioxide

NO_Y - total reactive nitrogen compounds

Appendix D

Sulfur Dioxide Monitoring Information

Texas Commission on Environmental Quality
2018 Annual Monitoring Network Plan

Appendix D: Sulfur Dioxide Monitoring Information

Table 1: Sulfur Dioxide Monitoring Requirements

Core Based Statistical Area	County	2017 Population Estimates*	2014 Point Source (tpy)	2014 NEI Data (tpy)	2016 Point Source Data (tpy)	2014 NEI Non Point Source Data with 2016 Point Source Data (tpy)	PWEI	Required SO_2 PWEI Monitors	Required SO_2 DRR Monitors in CBSAs	Required High Sensitivity SO_2 NCore Monitors	Total Required SO_2 Monitors	Existing Monitors**
Dallas-Fort Worth-Arlington		**7,399,662**				**4,544.03**	**33,624**	**1**	**0**	**1**	**2**	**3**
	Collin	969,603	21.24	171.38	19.94	170.08						
	Dallas	2,618,148	321.70	1,103.05	319.02	1,100.37						
	Denton	836,210	344.98	438.95	356.81	450.78						
	Ellis	173,620	2,193.63	2,267.02	2,018.71	2,092.10						
	Hunt	93,872	0.19	63.43	0.09	63.33						
	Kaufman	122,883	63.01	119.75	100.85	157.59						
	Rockwall	96,788	0.03	11.16	0.03	11.16						
	Johnson	167,301	84.45	133.46	98.43	147.44						
	Parker	133,463	180.02	211.12	252.77	283.87						
	Tarrant	2,054,475	25.71	41.65	0.57	16.51						
	Wise	66,181	109.41	127.71	11.73	30.03						
	Hood	58,273	9.05	16.26	9.81	17.02						
	Somervell	8,845	0.00	3.74	0.00	3.74						
Houston-The Woodlands-Sugar Land		**6,892,427**				**48,139.99**	**331,801**	**2**	**0**	**1**	**3**	**5**
	Austin	29,786	74.43	144.24	33.78	103.59						
	Brazoria	362,457	554.39	702.59	589.22	737.42						
	Chambers	41,441	392.40	437.17	220.08	264.85						
	Fort Bend	764,828	42,700.08	42,799.13	34,165.97	34,265.02						
	Galveston	335,036	1,326.04	2,790.68	1,895.21	3,359.85						
	Harris	4,652,980	7,238.30	9,129.88	7,341.58	9,233.16						
	Liberty	83,658	15.91	41.80	12.98	38.87						
	Montgomery	570,934	13.45	106.42	20.68	113.65						
	Waller	51,307	0.31	22.12	1.78	23.59						
San Antonio-New Braunfels		**2,473,974**				**18,656.48**	**46,156**	**1**	**1**	**0**	**2**	**2**
	Atascosa	48,981	5,596.43	7,209.73	6,837.35	8,450.65						
	Bandera	22,351	0.18	3.76	0.17	3.75						
	Bexar	1,958,578	10,947.85	11,350.51	8,755.90	9,158.56						
	Comal	141,009	420.01	451.89	389.97	421.85						
	Guadalupe	159,659	109.94	159.23	107.89	157.18						
	Kendall	44,026	0.01	10.05	1.11	11.15						
	Medina	50,066	0.00	11.84	0.00	11.84						
	Wilson	49,304	321.38	516.39	246.49	441.50						
Austin-Round Rock		**2,115,827**				**2,214.46**	**4,685**	**0**	**0**	**0**	**0**	**1**
	Bastrop	84,761	296.48	313.48	257.20	274.20						
	Caldwell	42,338	322.52	335.86	386.06	399.40						
	Hays	214,485	1,103.60	1,138.38	1,132.88	1,167.66						
	Travis	1,226,698	62.65	367.31	0.50	305.16						
	Williamson	547,545	3.49	67.03	4.49	68.03						

Appendix D: Sulfur Dioxide Monitoring Information

Table 1: Sulfur Dioxide Monitoring Requirements

Core Based Statistical Area	County	2017 Population Estimates*	2014 Point Source (tpy)	2014 NEI Data (tpy)	2016 Point Source Data (tpy)	2014 NEI Non Point Source Data with 2016 Point Source Data (tpy)	PWEI	Required SO_2 PWEI Monitors	Required SO_2 DRR Monitors in CBSAs	Required High Sensitivity SO_2 NCore Monitors	Total Required SO_2 Monitors	Existing Monitors**
McAllen-Edinburg-Mission		**860,661**				**158.11**	**136**	**0**	**0**	**0**	**0**	**0**
	Hidalgo	860,661	57.79	176.65	39.25	158.11						
El Paso		**844,818**				**425.51**	**359**	**0**	**0**	**1**	**1**	**1**
	El Paso	840,410	295.14	437.72	274.53	417.11						
	Hudspeth	4,408	6.02	7.65	6.77	8.40						
Corpus Christi		**454,008**				**964.28**	**438**	**0**	**0**	**0**	**0**	**3**
	Aransas	25,572	0.00	75.69	0.00	75.69						
	Nueces	361,221	694.49	785.67	697.76	788.94						
	San Patricio	67,215	27.86	106.16	21.35	99.65						
Brownsville-Harlingen		**423,725**				**86.30**	**37**	**0**	**0**	**0**	**0**	**0**
	Cameron	423,725	0.25	86.21	0.34	86.30						
Beaumont-Port Arthur		**412,437**				**19,825.25**	**8,177**	**1**	**2**	**0**	**3**	**4**
	Hardin	57,139	1.00	16.98	0.78	16.76						
	Jefferson	256,299	12,054.62	12,382.53	13,467.74	13,795.65						
	Orange	85,047	5,225.23	5,279.43	5,944.69	5,998.89						
	Newton	13,952	15.39	18.89	10.45	13.95						
Waco		**268,696**				**2,131.27**	**573**	**0**	**0**	**0**	**0**	**1**
	McLennan	251,259	1,786.72	1,910.11	1,996.45	2,119.84						
	Falls	17,437	0.00	11.43	0.00	11.43						
Amarillo		**264,925**				**14,554.44**	**3,856**	**0**	**1**	**0**	**1**	**2**
	Armstrong	1,879	0.05	2.75	0.00	2.70						
	Carson	6,032	0.16	4.24	0.24	4.32						
	Potter	120,458	15,187.40	15,267.79	14,338.94	14,419.33						
	Randall	134,442	100.30	119.14	101.11	119.95						
	Oldham	2,114	0.00	8.14	0.00	8.14						
College Station-Bryan		**258,044**				**10,409.56**	**2,686**	**0**	**1**	**0**	**1**	**1**
	Brazos	222,830	11.59	97.85	14.01	100.27						
	Burleson	18,011	0.00	19.65	0.00	19.65						
	Robertson	17,203	9,096.62	9,139.15	10,247.10	10,289.63						
Longview		**217,481**				**26,056.40**	**5,667**	**1**	**0**	**0**	**1**	**2**
	Gregg	123,367	39.87	282.09	18.87	261.09						
	Rusk	52,833	23,175.02	23,223.79	25,733.52	25,782.29						
	Upshur	41,281	36.22	47.15	2.10	13.03						
Midland		**170,675**				**2,917.46**	**498**	**0**	**0**	**0**	**0**	**0**
	Midland	165,049	110.56	1,000.12	156.06	1,045.62						
	Martin	5,626	16.97	1,872.60	16.21	1,871.84						

Appendix D: Sulfur Dioxide Monitoring Information

Table 1: Sulfur Dioxide Monitoring Requirements

Core Based Statistical Area	County	2017 Population Estimates*	2014 Point Source (tpy)	2014 NEI Data (tpy)	2016 Point Source Data (tpy)	2014 NEI Non Point Source Data with 2016 Point Source Data (tpy)	PWEI	Required SO_2 PWEI Monitors	Required SO_2 DRR Monitors in CBSAs	Required High Sensitivity SO_2 NCore Monitors	Total Required SO_2 Monitors	Existing Monitors**
Abilene		**170,219**				**77.00**	**13**	**0**	**0**	**0**	**0**	**0**
	Callahan	13,946	0.00	3.36	0.00	3.36						
	Jones	19,983	0.00	6.52	0.00	6.52						
	Taylor	136,290	0.02	41.65	25.49	67.12						
Marshall[1]		**66,661**				**4,828.29**	**322**	**0**	**1**	**0**	**1**	**1**
	Harrison	66,661	3,440.74	3,510.69	4,758.34	4,828.29						
Corsicana[1]		**48,701**				**3,758.69**	**183**	**0**	**1**	**0**	**1**	**1**
	Navarro	48,701	3,748.08	3,787.27	3,719.50	3,758.69						
Big Spring[1]		**37,388**				**8,008.42**	**299**	**0**	**1**	**0**	**1**	**1**
	Glassock	1,348	778.53	1,137.68	326.93	686.0836						
	Howard	36040	7,593.99	7,898.73	7,017.60	7,322.3386						
Mount Pleasant[1]		**32,904**				**36,043.7962**	**1,186**	**0**	**1**	**0**	**1**	**1**
	Titus	32,904	32,648.51	32,684.48	36,007.83	36,043.7962						
Borger[1]		**21,375**				**9,465.5572**	**202**	**0**	**1**	**0**	**1**	**1**
	Hutchinson	21,375	9,144.60	9,162.95	9,447.21	9,465.5572						
None							**N/A**	**N/A**	**N/A**	**0**	**1**	**2**
	Freestone[2]	19,625	50,019.61	50,029.76	42,484.24	42,494.39			**0**			
	Milam[2]	25,053	22,720.12	22,733.35	14,371.64	14,384.87			**1**			
Total Monitors								**6**	**11**	**3**	**20**	**32**

*United States Census Bureau population estimates as of July 1, 2017.

** Individual monitors may fulfill more than one monitoring requirement but are only counted once.

[1]Micropolitan statistical area

[2]County is not in a Metropolitan or Micropolitan Statistical Area

DRR - Data Requirements Rule

N/A - not applicable

NCore - National Core Multipollutant Monitoring Stations

NEI - National Emissions Inventory

PWEI - population weighted emission index (Population *[2014 NEI non-point source data and 2015 point source data]/1,000,000)

SO_2 - sulfur dioxide

tpy - tons per year

Appendix D: Sulfur Dioxide Monitoring Information

Table 2: Sulfur Dioxide Emissions Inventory Evaluation

Regulated Entity Number (RN)	Facility Name	County	2016 SO_2 Emissions (tons per year)	Characterization Method
RN101198059	Big Brown Steam Electric Station	Freestone	42,469.94	Modeling
RN100888312	WA Parish Electric Generating Station	Fort Bend	34,137.14	Modeling
RN102583093	Martin Lake Electrical Station	Rusk	25,472.22	Modeling
RN102285921	Monticello Steam Electric Station*	Titus	24,960.83	Modeling
RN100542927	Limestone Electric Generation Station	Limestone	20,829.73	Modeling
RN100224534	Tolk Station	Lamb	14,968.25	Modeling
RN100224849	Harrington Station Power Plant	Potter	14,248.28	Monitoring
RN102147881	Sandow Steam Electric Station*	Milam	12,108.26	Monitoring
RN100209287	Oxbow Calcining	Jefferson	11,182.65	Monitoring
RN100213370	Welsh Power Plant	Titus	11,047.00	Monitoring
RN100217975	Calaveras Plant	Bexar	8,243.74	Monitoring
RN100226919	Coleto Creek Power Station	Goliad	8,231.20	Modeling
RN100216191	Oak Grove Steam Electric Station	Robertson	7,060.56	Monitoring
RN100226539	San Miguel Electric Plant	Atascosa	6,814.70	Modeling
RN100226026	Big Spring Carbon Black	Howard	6,042.90	Monitoring
RN100222413	Borger Carbon Black Plant (Sid Richardson)	Hutchinson	5,184.13	Monitoring
RN100214287	AEP Pirkey Power Plant	Harrison	4,441.00	Monitoring
RN100209386	Echo Carbon Black Plant	Orange	3,911.91	Monitoring
RN100211283	Streetman Plant	Navarro	3,422.48	Monitoring
RN100209659	Borger Carbon Black Plant (Orion)	Hutchinson	3,290.02	Monitoring
RN100226570	Twin Oaks	Robertson	3,186.50	Modeling
RN105369805	Sandow 5 Generating Plant*	Milam	2,263.38	Monitoring

SO_2 - sulfur dioxide

*site retired February 2018

Appendix E

Sulfur Dioxide Ongoing Data Requirements Annual Report

Texas Commission on Environmental Quality
2018 Annual Monitoring Network Plan

Appendix E: Sulfur Dioxide Ongoing Data Requirements Annual Report

As required by 40 Code of Federal Regulations (CFR) Part 51.1205(b), this report provides the Texas Commission on Environmental Quality's (TCEQ) annual assessment of sulfur dioxide (SO_2) emissions changes for areas designated unclassifiable/attainment for the 2010 SO_2 National Ambient Air Quality Standard (NAAQS), where the designations were based on modeling actual SO_2 emissions.

For the eight Texas counties currently designated unclassifiable/attainment for the 2010 SO_2 NAAQS, seven were designated based on modeled actual SO_2 emissions. The eighth, McLennan County, is described below. Table 1 provides the most recent (2016) quality assured data available showing total estimated SO_2 emissions from relevant sources in each of these seven counties. The table includes emissions from previous years (2014 and 2015) and the change in SO_2 emissions from 2014 to 2016. The emissions decrease in each of these counties provides reasonable assurance that these sources continue to meet the 2010 one-hour SO_2 primary NAAQS based on the modeling previously conducted. The TCEQ recommends that no additional modeling is needed to characterize SO_2 air quality in any of the seven Texas counties listed in Table 1.

McLennan County, Texas was designated unclassifiable/attainment for the 2010 SO_2 NAAQS based on modeled allowable SO_2 emissions from the Sandy Creek Energy Station. Pursuant to 40 CFR 51.1205(c), this area is not subject to ongoing data requirements, and Texas is not required to report future annual SO_2 emissions assessments for McLennan County because allowable emissions were used for the modeling.

Table 1: 2014 to 2016 Emission Comparison

County	Relevant Source	2014 SO_2 (tpy)	2015 SO_2 (tpy)	2016 SO_2 (tpy)	Difference 2014 to 2016
Atascosa	San Miguel Electric Plant	6,909.49	5,520.56	6,814.70	-94.79
Fort Bend	W.A. Parish Electric Generating Station	43,980.80	42,689.83	34,137.14	-9,843.66
Goliad	Coleto Creek Power Station	16,934.04	8,261.10	8,231.20	-8,702.84
Lamb	Tolk Station Power Plant	16,752.94	16,080.38	14,968.25	-1,784.69
Limestone	Limestone Electric Generating Station	27,862.28	17,218.49	20,829.73	-7,032.54
Robertson	Twin Oaks Power Station	5,761.77	4,493.91	3,186.50	-2,575.27
Wilbarger	Oklaunion Power Station	3,505.80	1,479.70	1,529.80	-1,976.00

SO_2 – sulfur dioxide
tpy – tons per year

Appendix F

Total Suspended Particulate Lead Monitoring Requirements

Texas Commission on Environmental Quality
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Appendix F: Total Suspended Particulate Lead Monitoring Requirements

County	Pb Source (Facility Name)	2014 Pb Source Emissions (tpy)	2015 Pb Source Emissions (tpy)	2016 Pb Source Emissions (tpy)	Site Name	Required Monitors	Existing Monitors
Potter	ASARCO, LLC	0.33	0.34	0.28	Amarillo SH 136	0	1
Collin	Maintenance Area	N/A	N/A	N/A	Frisco 5th Street	0	1
Collin	Maintenance Area	N/A	N/A	N/A	Frisco 7	0	1
Collin	Maintenance Area	N/A	N/A	N/A	Frisco Eubanks*	1	1
Collin	Maintenance Area	N/A	N/A	N/A	Frisco Stonebrook*	1	1
Kaufman	Conecsus, LLC	0.33	0.34	0.34	Terrell Temtex	1	1
El Paso	None	N/A	N/A	N/A	El Paso UTEP	0	1
El Paso	None	N/A	N/A	N/A	Ojo De Agua	0	1
Totals**						**3**	**8**

* Monitor required to fulfill State Implementation Plan commitments.

**Totals do not include collocated monitors

N/A - not applicable

Pb - lead

tpy - tons per year

Appendix G

Ozone Monitoring Requirements

Texas Commission on Environmental Quality
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Appendix G: Ozone Monitoring Requirements

Metropolitan Statistical Area	2017 Population Estimates[1]	2015-2017 8 Hour Design Value (ppm)	Design Value as Percent of NAAQS[2]	Total Required SLAMS Monitors	Total Required NCore/PAMS Monitors	Total Required Monitors[3]	Total Existing Monitors[4]
Dallas-Fort Worth-Arlington	7,399,662	0.079	113%	3	1	4	19
Houston-The Woodlands-Sugar Land	6,892,427	0.081	116%	3	1	4	20
San Antonio-New Braunfels	2,473,974	0.074	106%	2	0	2	3
Austin-Round Rock	2,115,827	0.069	99%	2	0	2	2
McAllen-Edinburg-Mission	860,661	0.055	79%	1	0	1	1
El Paso	844,818	0.072	103%	2	1	3	6
Corpus Christi	454,008	0.062	89%	2	0	2	2
Killeen-Temple	443,773	0.069	99%	2	0	2	2
Brownsville-Harlingen	423,725	0.057	81%	1	0	1	1
Beaumont-Port Arthur	412,437	0.067	96%	2	0	2	7
Lubbock	316,983	N/A	N/A	0	0	0	0
Laredo	274,794	0.053	76%	0	0	0	1
Waco	268,696	0.065	93%	1	0	1	1
Amarillo	264,925	N/A	N/A	0	0	0	0
College Station-Bryan	258,044	N/A	N/A	0	0	0	0
Tyler	227,727	0.064	91%	1	0	1	1
Longview	217,481	0.065	93%	1	0	1	1
Midland	170,675	N/A	N/A	0	0	0	0
Abilene	170,219	N/A	N/A	0	0	0	0
Odessa	157,087	N/A	N/A	0	0	0	0
Wichita Falls	151,230	N/A	N/A	0	0	0	0
Texarkana	150,355	N/A	N/A	0	0	0	0
Sherman-Denison	131,140	N/A	N/A	0	0	0	0
San Angelo	119,535	N/A	N/A	0	0	0	0
Victoria	99,646	0.065	93%	1	0	1	1
Marshall*	66,661	0.061	87%	0	0	0	1
Totals				**24**	**3**	**27**	**69**

[1]United States Census Bureau population estimates as of July 1, 2017.

[2]2015 eight-hour ozone National Ambient Air Quality Standard (NAAQS) is 0.070 parts per million.

[3]Total Required Monitors is a count of individual requirements for SLAMS, PAMS, and NCore.

[4]Individual monitors may fulfill more than one monitoring requirement, but are only counted once in the total monitoring counts.

*Classified as Micropolitan Statistical Area and does not apply to SLAMS requirements.

N/A - not applicable

PAMS - Photochemical Assessment Monitoring Stations

ppm - parts per million

SLAMS - State or Local Air Monitoring Stations

NCore - National Core Multipollutant Monitoring Stations

Appendix H

Carbon Monoxide Monitoring Requirements

Texas Commission on Environmental Quality
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Appendix H: Carbon Monoxide Monitoring Requirements

Core Based Statistical Area	2017 Population Estimates[1]	Site Name	Required CO Near Road Monitors	Required CO NCore Monitors	Total Required Monitors	Total Existing Monitors[2]
Dallas-Fort Worth-Arlington	7,399,662				2	2
		Parkway	1	0		
		Dallas Hinton*	0	1		
Houston-The Woodlands-Sugar Land	6,892,427				2	3
		Houston North Loop	1	0		
		Houston Deer Park #2*	0	1		
		Clinton*	0	0		
San Antonio-New Braunfels	2,473,974				1	1
		San Antonio Interstate 35	1	0		
Austin-Round Rock	2,115,827				1	1
		Austin North Interstate 35	1	0		
El Paso	844,818				1	3
		El Paso Chamizal*	0	1		
		El Paso UTEP	0	0		
		Ojo De Agua	0	0		
Beaumont-Port Arthur	412,437				0	1
		Nederland High School*	0	0		
Laredo	274,794				0	1
		Laredo Vidaurri	0	0		
Waco	268,696				0	1
		Waco Mazanec	0	0		
Total			**4**	**3**	**7**	**13**

This list does not include Metropolitan Statistical Areas with zero requirements and zero monitors.

[1]United States Census Bureau population estimates as of July 1, 2017.

[2]Monitors may fulfill multiple monitoring requirements, but are only counted once in the total monitor counts.

*High sensitivity CO monitor (High sensitivity CO monitors are recommended at NCore sites)

CO - carbon monoxide

NCore - National Core Multipollutant Monitoring Stations

Appendix I

Particulate Matter of 10 Micrometers or Less Monitoring Requirements

Texas Commission on Environmental Quality
2018 Annual Monitoring Network Plan

Appendix I: Particulate Matter of 10 Micrometers or Less Monitoring Requirements

Table 1: Particulate Matter of 10 Micrometers or Less Monitoring Requirements and Monitor Locations

Metropolitan Statistical Area	2017 Population Estimates[1]	Site Name	2015-2017 Maximum Concentration ($\mu g/m^3$)	Percent of NAAQS[2] (%)	Required Monitors	Existing Monitors
Dallas-Fort Worth-Arlington	7,399,662				2-4	4
		Earhart	83	55		
		Convention Center **(collocated pair)**	93	62		
		Dallas North #2	74	49		
		Stage Coach	72	48		
Houston-The Woodlands-Sugar Land	6,892,427				2-4	7
		Clinton **(collocated pair)**	115	77		
		Houston Monroe	84	56		
		Houston Westhollow	85	57		
		Lang	87	58		
		Texas City Fire Station	62	41		
		Houston Deer Park #2 **(collocated pair)**	74	49		
		Houston Aldine	82	55		
San Antonio-New Braunfels	2,473,974				2-4	2
		Selma	78	52		
		Frank Wing Municipal Court	117	78		
Austin-Round Rock	2,115,827				2-4	2
		Austin Webberville Road	81	54		
		Austin Audubon Society	74	49		
McAllen-Edinburg-Mission	860,661				1-2	2
		Mission	79	53		
		Edinburg East Freddy Gonzalez Drive	74	49		

Table 1: Particulate Matter of 10 Micrometers or Less Monitoring Requirements and Monitor Locations (Cont.)

Metropolitan Statistical Area	2017 Population Estimates[1]	Site Name	2015-2017 Maximum Concentration ($\mu g/m^3$)	Percent of NAAQS[2] (%)	Required Monitors	Existing Monitors
El Paso	844,818				4-8	5
		Socorro Hueco[5] **(collocated pair)**	104	69		
		Riverside	111	74		
		Ojo De Agua **(collocated pair)**	119	79		
		Van Buren	85	57		
		Ivanhoe	79	53		
Corpus Christi	454,008				0-1	1
		Dona Park	83	55		
Laredo	274,794				0-1	2
		Laredo Vidaurri	65	43		
		Laredo Bridge	56	37		
Marshall[4]	66,661				0	1
		Karnack	66	44		
Killeen-Temple	443,773			0	0-1	0
Brownsville-Harlingen	423,725			0	0-1	0
Beaumont-Port Arthur	412,437			0	0-1	0
Lubbock	316,983			0	0-1	0
Waco	268,696			0	0-1	0
Amarillo	264,925			0	0-1	0
College Station-Bryan	258,044			0	0-1	0
Totals[3]					**13-35**	**26**

This list does not include Metropolitan Statistical Areas with zero requirements and zero monitors.

[1]United States Census Bureau population estimates as of July 1, 2017.

[2]Current PM_{10} NAAQS is 150 $\mu g/m^3$.

[3]Totals do not include collocated monitors.

[4]Area is classified as a micropolitan area, and is not subject to SLAMS requirements.

[5]The second highest measurement is listed. The maximum concentration measured on April 25, 2017, has been excluded and will be submitted to the EPA with an exceptonal event package.

$\mu g/m^3$ - micrograms per cubic meter

NAAQS - National Ambient Air Quality Standards

PM_{10} - particulate matter of 10 micrometers or less

Appendix I: Particulate Matter of 10 Micrometers or Less Monitoring Requirements

Table 2: Particulate Matter of 10 Micrometers or Less Monitor Concentrations

Site Name	2015-2017 Maximum Concentration (µg/m³)	2017 Annual Mean Concentration (µg/m³)	2016 Annual Mean Concentration (µg/m³)	2015 Annual Mean Concentration (µg/m³)
Socorro Hueco[1] **(collocated pair)**	104	32.1*	24.5*	31.6*
Riverside	111	27.8*	22.8	25.8*
Clinton **(collocated pair)**	115	27.4*	44.4*	42.4*
Mission	79	24.8*	26.3*	27.0*
Earhart	83	23.6*	24.1*	25.1*
Edinburg East Freddy Gonzalez Drive	74	22.9*	22.2	N/A
Austin Webberville Road	81	22.0*	23.6	25.7*
Laredo Vidaurri	65	22.0*	19.6	23.3
Frank Wing Municipal Court	117	21.7	21.9	25.1*
Houston Monroe	84	21.4	25.2*	24.4
Ojo De Agua **(collocated pair)**	119	21.3	23.6*	17.7
Lang	87	21.2	25.1*	23.8
Houston Aldine	82	21.0	22.9	23.6
Convention Center **(collocated pair)**	93	20.9	24.0*	26.9*
Van Buren	85	20.4	14.0	19.8
Dona Park	83	19.9	23.3	24.4
Selma	78	19.7	18.4	22.7
Ivanhoe	79	19.4	18.6	19.9
Laredo Bridge	56	18.7	19.5	19.6
Houston Deer Park #2 **(collocated pair)**	74	16.9	19.5	19.4
Houston Westhollow	85	16.2	20.6	20.0
Stage Coach	72	16.1	17.2	19.7
Dallas North #2	74	15.6	18.5	18.3
Austin Audubon Society	74	14.8	16.8	18.8
Karnack	66	14.1	15.3	15.4
Texas City Fire Station	62	13.6	18.5	19.5

*sites having annual mean particulate matter concentration among the highest 25 percent

[1] The second highest measurement is listed. The maximum concentration measured on April 25, 2017, has been excluded and will be submitted to the EPA with an exceptonal event package.

µg/m³ - micrograms per cubic meter

NAAQS - National Ambient Air Quality Standards

N/A - not applicable

PM_{10} - particulate matter of 10 micrometers or less

Appendix J

Particulate Matter of 2.5 Micrometers or Less Monitoring Requirements

Texas Commission on Environmental Quality
2018 Annual Monitoring Network Plan

Appendix J: Particulate Matter of 2.5 Micrometers or Less Monitoring Requirements

Table 1: Particulate Matter of 2.5 Micrometers or Less Monitoring Requirements

Metropolitan Statistical Area	2017 Population Estimates[1]	2015-2017 DV (µg/m^3) Annual (for Area)	2015-2017 DV (µg/m^3) 24-Hour (for Area)	Percent of NAAQS Annual[2] (for Area)	Percent of NAAQS 24-Hour[3] (for Area)	Required FRM/FEM Monitors	Required Near Road Monitors	Required NCore Monitors	Total Required Monitors	Total Existing Monitors[4]
Dallas-Fort Worth-Arlington	7,399,662	8.9	18	74	51	2	1	3	6	14
Houston-The Woodlands-Sugar Land	6,892,427	10.8	23	90	66	3	1	3	7	16
San Antonio-New Braunfels	2,473,974	8.9	22	74	63	2	1	0	3	7
Austin-Round Rock	2,115,827	9.6	20	80	57	2	1	0	3	4
McAllen-Edinburg-Mission	860,661	10.2	26	85	74	2	0	0	2	2
El Paso	844,818	8.9	23	74	66	1	0	3	4	7
Corpus Christi	454,008	9.3	24	78	69	0	0	0	0	4
Brownsville-Harlingen	423,725	10.3	24	86	69	1	0	0	1	2
Beaumont-Port Arthur[6]	412,437	N/A	N/A	N/A	N/A	0	0	0	0	3
Lubbock	316,983	N/A	N/A	N/A	N/A	0	0	0	0	1
Laredo	274,794	N/A	N/A	N/A	N/A	0	0	0	0	1
Waco	268,696	N/A	N/A	N/A	N/A	0	0	0	0	1
Amarillo	264,925	N/A	N/A	N/A	N/A	0	0	0	0	1
Odessa	157,087	N/A	N/A	N/A	N/A	0	0	0	0	1
Texarkana	150,355	8.7	18	73	51	0	0	0	0	2
Marshall[5]	66,661	8.6	17	72	49	0	0	0	0	3
Eagle Pass[5]	58,216	N/A	N/A	N/A	N/A	0	0	0	0	1
Corsicana[5]	48,701	N/A	N/A	N/A	N/A	0	0	0	0	1
Kingsville[5]	31,505	N/A	N/A	N/A	N/A	0	0	0	0	1
Big Bend National Park[6,7]	N/A	6.6	14	55	40	0	0	0	0	1
Totals*						**13**	**4**	**9**	**26**	**73**

*Totals do not include collocated monitors.

[1]United States Census Bureau population estimates as of July 1, 2017.

[2]Current $PM_{2.5}$ Annual NAAQS is 12 micrograms per cubic meter (µg/m^3).

[3]Current $PM_{2.5}$ 24-hour NAAQS is 35 µg/m^3.

[4]Individual monitors may fulfill one or more requirements including: State or Local Air Monitoring Stations (SLAMS), National Core (NCore), Near-road, Regional Background, Regional Transport and Regional Haze requirements.

[5]Area is classified as a micropolitan area, and is not subject to SLAMS requirements.

[6]Annual values do not meet completeness criteria; monitors deployed in 2017. Incomplete design value information is not used for the purposes of regulatory compliance.

[7]Area not classified as a metropolitan or micropolitan statistical area.

µg/m^3 - micrograms per cubic meter

DV - Design Value

FEM - federal equivalent method

FRM - federal reference method

N/A - not applicable

NAAQS - National Ambient Air Quality Standards

This list does not include Metropolitan Statistical Areas with no requirement and no monitors.

$PM_{10-2.5}$ NCore requirements are not included in particulate matter counts.

Appendix J: Particulate Matter of 2.5 Micrometers or Less Monitoring Requirements

Table 2: Particulate Matter of 2.5 Micrometers or Less Monitor Locations and Method Codes

Metropolitan Statistical Area	2017 Population Estimates[1]	Site Name	Method Code(s)	2015-2017 DV (µg/m^3) Annual	2015-2017 DV (µg/m^3) 24-Hour	Percent of NAAQS Annual[2]	Percent of NAAQS 24-Hour[3]	Existing FRM/FEM Monitors[4]	Existing Near-Road Monitors	Existing NCore Monitors	Existing Speciation Monitors	Existing Non-Regulatory Monitors	Total Existing Monitors[4]
Dallas-Fort Worth-Arlington	**7,399,662**			**8.9**	**18**	**74**	**51**						**14**
		Arlington Municipal Airport	702*	N/A	N/A	N/A	N/A	0	0	0	0	1	
		Convention Center	145	8.9	18	74	51	1	0	0	0	0	
		Dallas Hinton (collocated pair)***	145, 145, 810, 811, 812, 838	8.6	18	72	51	0	0	2	1	0	
		Denton Airport South	702*	N/A	N/A	N/A	N/A	0	0	0	0	1	
		Fort Worth California Parkway North	145	8.7	18	73	51	0	1	0	0	0	
		Fort Worth Northwest	145	8.4	17	70	49	1	0	0	0	0	
		Haws Athletic Center	145, 702*	8.7	17	73	49	1	0	0	0	1	
		Kaufman	702*	N/A	N/A	N/A	N/A	0	0	0	0	1	
		Midlothian OFW	145, 702*, 826, 831, 838, 839, 840, 841, 842, 846, 849	8.7	18	73	51	1	0	0	1	1	
Houston-The Woodlands-Sugar Land	**6,892,427**			**10.8**	**23**	**90**	**66**						**16**
		Baytown	209	9.4	22	78	63	1	0	0	0	0	
		Clinton (collocated pair)	145, 145, 702*	10.7	22	89	63	1	0	0	0	1	
		Conroe Relocated	702*	N/A	N/A	N/A	N/A	0	0	0	0	1	
		Galveston 99th Street	145, 702*	6.7	22	56	63	1	0	0	0	1	
		Houston Aldine	145, 702*, 826, 831, 838, 839, 840, 841, 842, 846, 849	10.0	22	83	63	1	0	0	1	1	
		Houston Deer Park #2***	145, 702*, 810, 811, 812, 838	8.6	20	72	57	0	0	2	1	1	
		Houston East	209	10.6	26	88	74	1	0	0	0	0	
		Houston North Loop	145	10.8	23	90	66	0	1	0	0	0	
		Seabrook Friendship Park	702*	N/A	N/A	N/A	N/A	0	0	0	0	1	
San Antonio-New Braunfels	**2,473,974**			**8.9**	**22**	**74**	**63**						**7**
		Calaveras Lake	145, 702*	8.2	20	68	57	1	0	0	0	1	
		Old Hwy 90	702*	N/A	N/A	N/A	N/A	0	0	0	0	1	
		Palo Alto	702*	N/A	N/A	N/A	N/A	0	0	0	0	1	
		San Antonio Interstate 35	145	8.9	22	74	63	0	1	0	0	0	
		San Antonio Northwest	145, 702*	8.4	20	70	57	1	0	0	0	1	

Appendix J: Particulate Matter of 2.5 Micrometers or Less Monitoring Requirements

Table 2: Particulate Matter of 2.5 Micrometers or Less Monitor Locations and Method Codes

Metropolitan Statistical Area	2017 Population Estimates[1]	Site Name	Method Code(s)	2015-2017 DV (µg/m^3) Annual	2015-2017 DV (µg/m^3) 24-Hour	Percent of NAAQS Annual[2]	Percent of NAAQS 24-Hour[3]	Existing FRM/FEM Monitors[4]	Existing Near-Road Monitors	Existing NCore Monitors	Existing Speciation Monitors	Existing Non-Regulatory Monitors	Total Existing Monitors[4]
Austin-Round Rock	**2,115,827**			**9.6**	**20**	**80**	**57**						**4**
		Austin North Interstate 35[4]	145	9.3	23	78	66	0	1	0	0	0	
		Austin Northwest	702*	N/A	N/A	N/A	N/A	0	0	0	0	1	
		Austin Webberville Rd (collocated pair)	209, 145	9.6	20	80	57	1	0	0	0	0	
		Fayette County	702*	N/A	N/A	N/A	N/A	0	0	0	0	1	
McAllen-Edinburg-Mission	**860,661**			**10.2**	**26**	**85**	**74**						**2**
		Edinburg East Freddy Gonzalez Drive	145	8.7	22	73	63	1	0	0	0	0	
		Mission	209	10.2	26	85	74	1	0	0	0	0	
El Paso	**844,818**			**8.9**	**23**	**74**	**66**						**7**
		Ascarate Park SE	702*	N/A	N/A	N/A	N/A	0	0	0	0	1	
		El Paso Chamizal (collocated pair)***	145, 145, 810, 811, 812, 838	8.9	23	74	66	0	0	2	1	0	
		El Paso UTEP	145, 702*	7.2	16	60	46	1	0	0	0	1	
		Socorro Hueco	702*	N/A	N/A	N/A	N/A	0	0	0	0	1	
Corpus Christi	**454,008**			**9.3**	**24**	**78**	**69**						**4**
		Corpus Christi Huisache (collocated pair)	209, 209	9.3	24	78	69	1	0	0	0	0	
		Dona Park	145, 702*, 826, 831, 838, 839, 840, 841, 842, 846, 849	8.4	22	70	63	1	0	0	1	1	
Brownsville-Harlingen	**423,725**			**10.3**	**24**	**86**	**69**						**2**
		Brownsville	209	10.3	24	86	69	1	0	0	0	0	
		Isla Blanca Park	702*	N/A	N/A	N/A	N/A	0	0	0	0	1	
Beaumont-Port Arthur	**412,437**			**N/A**	**N/A**	**N/A**	**N/A**						**3**
		Hamshire[6]	209	8.1	23	68	66	1	0	0	0	0	
		Port Arthur Memorial School[6]	209	9.9	20	83	57	1	0	0	0	0	
		SETRPC 42 Mauriceville[6]	209	10.2	24	85	69	1	0	0	0	0	
Lubbock	**316,983**			**N/A**	**N/A**	**N/A**	**N/A**						**1**
		Lubbock 12th Street	702*	N/A	N/A	N/A	N/A	0	0	0	0	1	
Laredo	**274,794**			**N/A**	**N/A**	**N/A**	**N/A**						**1**
		World Trade Bridge	209	N/A	N/A	N/A	N/A	1	0	0	0	0	
Waco	**268,696**			**N/A**	**N/A**	**N/A**	**N/A**						**1**
		Waco Mazanec	702*	N/A	N/A	N/A	N/A	0	0	0	0	1	

Appendix J: Particulate Matter of 2.5 Micrometers or Less Monitoring Requirements

Table 2: Particulate Matter of 2.5 Micrometers or Less Monitor Locations and Method Codes

Metropolitan Statistical Area	2017 Population Estimates[1]	Site Name	Method Code(s)	2015-2017 DV (µg/m^3) Annual	2015-2017 DV (µg/m^3) 24-Hour	Percent of NAAQS Annual[2]	Percent of NAAQS 24-Hour[3]	Existing FRM/FEM Monitors[4]	Existing Near-Road Monitors	Existing NCore Monitors	Existing Speciation Monitors	Existing Non-Regulatory Monitors	Total Existing Monitors[4]
Amarillo	**264,925**			**N/A**	**N/A**	**N/A**	**N/A**						**1**
		Amarillo A&M	702*	N/A	N/A	N/A	N/A	0	0	0	0	1	
Odessa	**157,087**			**N/A**	**N/A**	**N/A**	**N/A**						**1**
		Odessa Gonzales	702*	N/A	N/A	N/A	N/A	0	0	0	0	1	
Texarkana	**150,355**			**8.7**	**18**	**73**	**51**						**2**
		Texarkana New Boston	145, 702*	8.7	18	73	51	1	0	0	0	1	
Marshall[5]	**66,661**			**8.6**	**17**	**72**	**49**						**3**
		Karnack***	145, 702*, 810, 811, 812, 838	8.6	17	72	49	1	0	0	1	1	
Eagle Pass[5]	**58,216**			**N/A**	**N/A**	**N/A**	**N/A**						**1**
		Eagle Pass	209	N/A	N/A	N/A	N/A	1	0	0	0	0	
Corsicana[5]	**48,701**			**N/A**	**N/A**	**N/A**	**N/A**						**1**
		Corsicana Airport	702*	N/A	N/A	N/A	N/A	0	0	0	0	1	
Kingsville[5]	**31,505**			**N/A**	**N/A**	**N/A**	**N/A**						**1**
		National Seashore	209	N/A	N/A	N/A	N/A	1	0	0	0	0	
Big Bend National Park[6,7]	**N/A**			**6.6**	**14**	**55**	**40**						**1**
		Bravo Big Bend	209	6.6	14	55	40	1	0	0	0	0	
Totals**								**27**	**4**	**6**	**7**	**29**	**73**

*Method code 702 identifies a $PM_{2.5}$ TEOM which is non-FEM/FRM (not NAAQS comparable)

**Totals do not include collocated monitors.

***Speciation monitor for NCore and/or Chemical Speciation Network requirements.

[1]United States Census Bureau population estimates as of July 1, 2017.

[2]Current $PM_{2.5}$ Annual NAAQS is 12 micrograms per cubic meter (µg/m^3).

[3]Current $PM_{2.5}$ 24-hour NAAQS is 35 µg/m^3.

[4]Individual monitors may fulfill one or more requirements.

[5]Area is classified as a micropolitan area, and is not subject to SLAMS requirements.

[6]Annual values do not meet completeness criteria; monitors deployed in 2017. The TCEQ does not use incomplete design value information for the purposes of regulaotry compliance.

[7]Area not classified as a metropolitan or micropolitan statistical area.

µg/m^3 - micrograms per cubic meter

DV - Design Value

FEM - federal equivalent method

FRM - federal reference method

N/A - not applicable

NAAQS - National Ambient Air Quality Standards

This list does not include Metropolitan Statistical Areas with no requirement and no monitors.

Appendix K

Volatile Organic Compounds and Carbonyl Monitoring Requirements

Texas Commission on Environmental Quality
2018 Annual Monitoring Network Plan

Appendix K: Volatile Organic Compound and Carbonyl Monitoring Requirements

Table 1: Volatile Organic Compound Monitoring Requirements

Core Based Statistical Area	2017 Population Estimates*	Required PAMS VOC AutoGC Monitors	Existing VOC Canister Monitors	Existing VOC AutoGC Monitors	Total Existing VOC Monitors
Dallas-Fort Worth-Arlington	7,399,662	1	6	2	8
Houston-The Woodlands-Sugar Land	6,892,427	1	0	3	3
El Paso	844,818	0	0	1	1
Beaumont-Port Arthur	412,437	0	0	2	2
Laredo	274,794	0	1	0	1
Totals		**2**	**7**	**8**	**15**

This list does not include Metropolitan Statistical Areas with zero requirements and zero monitors.

*United States Census Bureau population estimates as of July 1, 2017.

AutoGC – automated gas chromatograph

PAMS – Photochemical Assessment Monitoring Stations

VOC – volatile organic compound

Table 2: Carbonyl Monitoring Requirements

Core Based Statistical Area	2017 Population Estimates*	Required PAMS Carbonyl Samplers	Total Existing Carbonyl Samplers
Dallas-Fort Worth-Arlington	7,399,662	1	2
Houston-The Woodlands-Sugar Land	6,892,427	1	2
El Paso	844,818	0	1
Totals		**2**	**5**

This list does not include Metropolitan Statistical Areas with zero requirements and zero monitors.

*United States Census Bureau population estimates as of July 1, 2017.

PAMS – Photochemical Assessment Monitoring Stations

Appendix L

TCEQ Response to Comments Received on the 2018 Annual Monitoring Network Plan

Texas Commission on Environmental Quality
2018 Annual Monitoring Network Plan

Appendix L: TCEQ Response to Comments Received on the 2018 Annual Monitoring Network Plan

Introduction

As required by 40 Code of Federal Regulations (CFR) Part 58.10, the Texas Commission on Environmental Quality (TCEQ) posted the *2018 Annual Monitoring Network Plan* (AMNP) for public inspection for 30 days prior to submittal to the United States (U.S.) Environmental Protection Agency (EPA). During the public comment period from May 1, 2018, to May 30, 2018, the TCEQ received four sets of comments on the posted document. The comments included a request for evaluation of whether ozone (O_3) monitor locations in the Corpus Christi area were meeting federal requirements and a request for O_3 monitoring in San Patricio County. Additionally, one citizen commented that particulate monitoring in Corpus Christi was not located in areas of significant population, one citizen expressed concern regarding pollution monitoring in the Dallas area, and thirty-one citizens (with additional petitions) requested particulate monitoring along the borders of Atascosa and Bexar counties.

Summary and Response

Comment: The Hillcrest Residents Association (HRA) commented that a statement confirming that each monitor in the AMNP meets the 40 CFR Part 58 requirements could not be located.

Response: The statement, "*Based on annual internal audits performed to date, all monitoring sites are meeting the requirements defined in 40 CFR Part 58 Appendices A, B, C, D, and E,*" is located in the Introduction section of the plan on page 7, in the last sentence of the third paragraph.

Comment: The HRA commented that Corpus Christi O_3 monitors must be placed where they are most likely to measure the highest O_3 concentrations. In addition, HRA commented that the Corpus Christi monitor locations aren't selected to determine the effects of significant sources, general background levels, regional transport, visibility, or typical concentrations in areas of high population density.

Response: Title 40 CFR Part 58, Appendix D 4.1 (b) requires at least one O_3 site to be located to measure the maximum area concentration. The TCEQ evaluated likely precursor emission sources and area topographical and meteorological information to select an upwind location (to evaluate transport into the urban core) and a downwind location that was most likely to observe the highest O_3 concentrations. The predominant winds in Corpus Christi flow from the south-southeast from the Gulf of Mexico. Corpus Christi West is located in the urban core (upwind) while Corpus Christi Tuloso is located to the far northwest (downwind of the urban core). Due to the unique geographic terrain, marsh lands, and large water body surrounding the city, Corpus Christi Tuloso is the ideal placement for measuring the maximum downwind area concentrations. The current O_3 monitor placements at Corpus Christi West and Corpus Christi Tuloso continue to fulfill federal monitoring requirements based on the area's population, population density, terrain, meteorology, and transport from neighboring areas. The placement of these regulatory monitors, in addition to the supplemental

information provided by non-regulatory monitors, provides a high degree of certainty that the monitored O_3 concentrations are representative of the entire Corpus Christi metropolitan statistical area (MSA).

Through cooperative work with local entities, including the Corpus Christi Air Quality Group (CCAQG), ambient O_3 concentrations in the Corpus Christi area have decreased by 25 percent (%) since 2000. The annual O_3 data and subsequent three-year design values demonstrate a decreasing trend at both TCEQ regulatory monitors. The decreasing trend also correlates with the data measured by the non-regulatory research grade monitors maintained and operated under the CCAQG program. The use of both regulatory and non-regulatory data from the area's current O_3 monitoring network provides the TCEQ with a sufficient dataset upon which to base decisions that will help continue to keep the Corpus Christi MSA in attainment.

Comment: The HRA commented that EPA's technical guidance for air monitoring networks should be applied.

Response: The TCEQ conforms to all federal requirements listed in 40 CFR Part 58. The statements included with any EPA technical guidance documents, are intended solely as guidance, and are not mandatory, although the TCEQ follows EPA guidance where appropriate. Information in guidance documents is not intended, nor can it be relied upon, to create any rights enforceable by any party.

Comment: The HRA commented that the data measured by non-regulatory monitors registered violations of the current O_3 standard and cast doubt on the placement of the regulatory monitors. The HRA reported that the fourth-highest measured concentrations from non-regulatory monitors were sometimes above the standard in 2013, 2014, 2015, and 2016, according to information provided on the TCEQ yearly summary report.

Response: The TCEQ notes that the data do not indicate violations of the current O_3 standard, since the data from the HRA report included one-hour daily maximum concentrations which cannot be used in comparison to the fourth-highest eight-hour measured concentrations, as defined by the standard. Table 1 shows fourth-highest daily maximum eight-hour ozone concentrations for the regulatory and non-regulatory O_3 monitors in the Corpus Christi area. All air monitoring stations listed in Table 1 show measurements at or below the 70 parts per billion (ppb) O_3 eight-hour primary standard since 2015.

Comment: The HRA recommended that an air monitoring station be deployed to San Patricio County to record the highest ozone concentrations.

Response: The Corpus Christi 2017 three-year O_3 design value is below the 70 ppb standard established in 2015. This standard is based on the annual fourth-highest daily maximum eight-hour concentration, averaged over three years. Corresponding annual fourth-highest daily maximum eight-hour concentration data from two TCEQ regulatory monitors, three non-regulatory CCAQG monitors, and previous years' data from inactive area non-regulatory monitors are listed in Table 1. The TCEQ considers more than regulatory monitors in evaluating the area's air monitoring needs. One of the three CCAQG supported non-regulatory monitors is in San Patricio County (Ingleside). The CCAQG previously supported additional San Patricio County air monitoring stations at the Odem, Taft, and Aransas Pass stations, decommissioned in

May 2016. Although the non-regulatory O_3 data from the CCAQG monitors are not comparable to the standard due to differing data quality objectives, the TCEQ considers these data for the area's air quality monitoring decisions. If these non-regulatory monitors indicated an air quality issue, the TCEQ would then determine whether additional regulatory air monitoring sites were necessary.

Data provided by the non-regulatory monitors located in Taft and Odem, active during the complete years of 2007 through 2015, and the currently active Ingleside monitor, do not indicate an O_3 concentration concern further downwind of the regional refineries. Data from these three monitors are included in Table 1. As common with Texas growing communities, the TCEQ continues to evaluate the air monitoring needs of San Patricio County and other areas due to industry and population growth.

Table 1: Ozone Air Monitoring Data* in the Corpus Christi Area

CAMS Number	Site Name	Reporting Organization	2013*	2014*	2015*	2016*	2017*	2018*	Three-Year Trend Average
4	Corpus Christi West	TCEQ	66	65	65	62	60	59	60
21	Corpus Christi Tuloso	TCEQ	66	66	62	61	61	60	61
87	Victoria	TCEQ	62	62	70	64	63	63	63
609	Inez (inactive as of 11/16/2017)	UT Austin	58	55	66	56	61	NA	61
659	Aransas Pass (inactive as of 5/30/2016)	TAMUK	63	67	60	NA	NA	NA	63
660	Holly Road	TAMUK	68	66	60	69	63	60	64
664	Violet	TAMUK	72	63	69	65	57	51	58
685	Ingleside	TAMUK	64	61	54	51	60	59	57
686	Odem (inactive as of 5/30/2016)	TAMUK	70	62	59	NA	NA	NA	64
687	Taft (inactive as of 5/30/2016)	TAMUK	73	66	53	NA	NA	NA	64

*Fourth-highest daily maximum eight-hour ozone concentration in parts per billion from https://www.tceq.texas.gov/cgi-bin/compliance/monops/8hr_4highest.pl
TAMUK – Texas A&M University-of Kingsville
UT Austin – The University of Texas at Austin
CAMS – continuous air monitoring station
TCEQ – Texas Commission on Environmental Quality
NA – not applicable

Comment: The HRA commented that the TCEQ Dona Park air monitoring station should measure O_3 and that these data would expand information available about O_3 formation in a potentially vulnerable neighborhood.

Response: Since O_3 is a regional pollutant that is formed and not emitted, O_3 concentrations at the Dona Park station would be expected to correlate well with data obtained at the Corpus Christi West station, 3.7 miles to the southeast. The placement of the TCEQ regulatory monitors, in addition to the placement of non-regulatory monitors, provides a high degree of certainty that monitored O_3 concentrations are representative of the entire Corpus Christi MSA.

Comment: The HRA commented that community based monitoring should be encouraged by the TCEQ and that this strategy, as well as acknowledging the importance of ongoing funding for these monitors, should be included in the AMNP.

Response: As stated in the Introduction section on page 7, the AMNP is designed to provide information on the TCEQ ambient air monitoring network established to meet the NAAQS regulatory requirements outlined in 40 CFR Part 50. The commenter's suggestion is outside of the AMNP scope.

Comment: A Corpus Christi resident expressed concern that ambient air monitoring for $PM_{2.5}$ is not performed in the most highly populated areas and stated that Corpus Christi was not in attainment for $PM_{2.5}$ last winter. The commenter suggested relocating the $PM_{2.5}$ monitor from Corpus Christi Huisache or Dona Park to Corpus Christi West or Holly Road to provide better coverage.

Response: All areas in Texas are in attainment for the $PM_{2.5}$ standard as shown in Appendix J of this AMNP. To maximize resources and provide improved spatial geographic coverage in the Corpus Christi area, the TCEQ would support the suggested relocation of the $PM_{2.5}$ primary and collocated monitors from Corpus Christi Huisache to Corpus Christi West. The TCEQ must obtain EPA concurrence to relocate a regulatory monitor. This information has been added to the plan, and if the relocation is approved by the EPA, the TCEQ will relocate the monitors.

Comment: Thirty-one individual commenters (four commenters provided petitions with 235 total signatures), requested that the TCEQ implement ambient air monitoring at the Atascosa–Bexar county line (i.e., northern Atascosa County and southern Bexar County). Of particular concern to the commenters are the industrial growth and influx of sand mines in the area. As a result, the commenters and petitioners request particulate monitoring (both $PM_{2.5}$ and PM_{10}) at the county line.

Response: The federal regulatory requirements for monitoring $PM_{2.5}$ and PM_{10} are based on the MSA population and measured concentrations. Particulate matter (PM) is composed of a complex mixture of particles and liquid droplets and can be emitted from a variety of natural and anthropogenic sources. PM monitor placement is generally dispersed to represent area-wide air quality to provide information about trends and compliance with the standards representing areas where people commonly live and work. Current PM monitors are placed in the greater San Antonio area; however, due to recent industry and population growth in southern Bexar and northern Atascosa Counties, additional assessment could be valuable to determine area-wide air quality. As a result, the TCEQ will evaluate the relocation of the $PM_{2.5}$ continuous monitor at the Palo Alto air monitoring station located in south San Antonio to southern Bexar/northern Atascosa counties to provide better coverage for the area. This information has been added to the AMNP. If the relocation is approved by the EPA, the TCEQ will relocate this monitor. The TCEQ will further evaluate area

point-source emissions data to determine if the need for PM_{10} monitoring is also indicated.

Comment: A Dallas resident expressed concern about the number of pollution monitors in Dallas (four), how the data are averaged by day instead of by minute, and the two-day delay before data are made available to the public.

Response: The TCEQ operates an air monitoring network in the Dallas-Fort Worth-Arlington (DFW) area that meets or exceeds all federal monitoring requirements, as detailed in Appendix B of this AMNP. Ambient air monitoring in the DFW area includes a network of more than 50 continuous monitors and more than 25 non-continuous monitors. Data from continuous monitors are collected every 15 minutes, averaged hourly, and made available to the public within three hours on the TCEQ website at https://www.tceq.texas.gov/airquality/monops/hourly_data.html, on the Air Quality Index Report at https://www.tceq.texas.gov/cgi-bin/compliance/monops/aqi_rpt.pl, and on the EPA AirNow website at https://airnow.gov/index.cfm?action=aqibasics.aqi. Non-continuous data are reported no later than 90 days after the end of each quarter to allow for sample transport to the laboratory, laboratory analyses, laboratory data verification, and data validation.

From: Citizen Ball
To: MONOPS
Subject: Petition
Date: Tuesday, May 29, 2018 11:13:09 AM

I am sending in this public comment requesting that Northern Atascosa and Southern Bexar area be added to the list of ambient air monitoring sites due to the influx of Industrial Sand mines and processing plants in the area. I am requesting this to be done to ensure regulatory compliance, inform nearby citizens and for public health and safety.

Micki Ball
23203 Hickory Shadow
Elmendorf, TX
512-922-9091
mball4sandyoaks@att.net

From: Kristy Jo Brown
To: MONOPS
Subject: Air Monitoring Network Plan additions requested
Date: Wednesday, May 30, 2018 3:22:54 PM

I am requesting that Southern Bexar and Northern Atascosa Counties be added to the Air Monitoring Network Plan. It is needed to ensure regulatory compliance, to inform neighboring communities and to protect public health.

We just built our home in the country outside Poteet where we hope to raise our three children. They spend the majority of their days playing outside as children should. Please help us ensure that playing outdoors in their own yard doesn't become a health risk due to air pollution brought on by industrial activities. It's sad enough that our beautiful starry nights have been marred by a frac sand mine that looks like a football stadium glowing on the horizon. Please help us at least be able to safely breathe the air around our home.

Sincerely,
Kristy Jo Brown
1125 Williams Rd
Poteet, TX 78065
210-912-1856

Sent from myMail for iOS

From: Monte L. Brown
To: MONOPS
Subject: Request
Date: Wednesday, May 30, 2018 3:48:20 PM

I am requesting that Southern Bexar and Northern Atascosa Counties be added to the Air Monitoring Network Plan. It is needed to ensure regulatory compliance, to inform neighboring communities and to protect public health.

We just built our home in the country outside Poteet where we hope to raise our three children. They spend the majority of their days playing outside as children should. Please help us ensure that playing outdoors in their own yard doesn't become a health risk due to air pollution brought on by industrial activities. It's sad enough that our beautiful starry nights have been marred by a frac sand mine that looks like a football stadium glowing on the horizon. Please help us at least be able to safely breathe the air around our home.

Sincerely,

Monte Brown

1125 Williams Rd

Poteet, TX 78065

210-216-6673

Monte L Brown
Foreman
2915 W Southcross Blvd
San Antonio, TX 78211
Office (210) 200-3655
Fax (402) 271-3494

**

**

From:	louie calderon
To:	MONOPS
Subject:	Frac sand mining monitoring
Date:	Wednesday, May 30, 2018 4:46:46 PM

To whom it may concern:

Please add the northern Atascosa/southern Bexar county region to your list of monitoring duties.

There are a growing number of these frac sand mining operations either already started and planned on.

As you know, these companies to nothing protect the environment and the voters living in the area. These types of operations should be severely limited in terms of the number of these operations allowed to operate in the vicinity of neighborhoods and schools. They should also be limited as to how many operate in a defined area; for example, 150 sq miles.

We will be keeping a close eye on this commission and these operations.

Thank you

Luis Calderon Jr

From: Jana Colgate
To: MONOPS
Subject: Ambient Air Monitoring NetworkSite List
Date: Tuesday, May 29, 2018 7:30 AM

I request Northern Atascosa and Southern Bexar be added to the Ambient Air Monitoring NetworkSite List. Monitoring is important to ensure regulatory compliance, inform nearby communities and protect public health. As evidenced by satellite images of African dust traveling across the Atlantic ocean, dust/particulates do not stay within property lines.

Jana Colgate

78010

From:	MONOPS
To:	Holly Landuyt
Cc:	James Janysek
Subject:	FW: Air Monitoring
Date:	Tuesday, May 29, 2018 8:45:31 AM
Importance:	High

Holly,

The email below was received in the monops@ email inbox regarding the AMNP – the standard response has been sent. This one is from Clarence Conn – the next one is from Paula Conn, both were sent from the same email address.

~Heather

From: Clarence Conn [mailto:cccranch@hughes.net]
Sent: Tuesday, May 29, 2018 7:56 AM
To: MONOPS <MONOPS@tceq.texas.gov>
Subject: Air Monitoring

TCEQ
Attention: Holly Landuyt, MC-165

I am requesting that due to the major influx of Industrial Sand Mines and Processing Plants in Northern Atascosa and Southern Bexar , that this area be added to the Annual Monitoring Network Plan. Monitoring around these sites is needed to ensure regulatory compliance, inform nearby communities and protect public health.

Clarence Conn

From:	MONOPS
To:	Holly Landuyt
Cc:	James Janysek
Subject:	FW: Air Monitoring
Date:	Tuesday, May 29, 2018 8:45:47 AM
Importance:	High

Holly,

The email below was received in the monops@ email inbox regarding the AMNP – the standard response has been sent. This one is from Paula Conn – the previous one is from Clarence Conn, both were sent from the same email address.

~Heather

From: Clarence Conn [mailto:paulaconn@hughes.net]
Sent: Tuesday, May 29, 2018 7:57 AM
To: MONOPS <MONOPS@tceq.texas.gov>
Subject: Air Monitoring

TCEQ
Attention: Holly Landuyt, MC-165

I am requesting that due to the major influx of Industrial Sand Mines and Processing Plants in Northern Atascosa and Southern Bexar , that this area be added to the Annual Monitoring Network Plan. Monitoring around these sites is needed to ensure regulatory compliance, inform nearby communities and protect public health.

Paula Conn

From: herez.mine
To: MONOPS
Subject: Air Quality re Sand Minds
Date: Tuesday, May 29, 2018 12:42:25 PM

I am sending in this public comment requesting that Northern Atascosa and Southern Bexar area be added to the list of ambient air monitoring sites due to the influx of Industrial Sand mines and processing plants in the area. I am requesting this to be done to ensure regulatory compliance, inform nearby citizens and for public health and safety.
Thank you,
Jean Ellis
3001 CR 153
Georgetown, TX 78626
512 635 2074

From:	MONOPS
To:	Holly Landuyt
Cc:	James Janysek
Subject:	FW:
Date:	Tuesday, May 29, 2018 10:22:52 AM
Importance:	High

Holly,

The email below was received in the monops@ email inbox regarding the AMNP – the standard response has been sent.

~Heather

From: sandy brown [mailto:applepie431@gmail.com]
Sent: Tuesday, May 29, 2018 9:47 AM
To: MONOPS <MONOPS@tceq.texas.gov>
Subject:

Hi my name is Rose Gomez. I live on the area is going to or taking place of the project that is taking place. I am a recent Cancer person that has just been cleared of Cancer. And now that is going to take place would not be right or fair to me and all of the other families that live around the area of the air quality. Please, please take under consideration of all of us and all of the animals we have. And the generations of the lands from one generation to another our parents have left us. So Please think about our future and especially our health. Sincerely, Rose Gomez.

From: Benjamin Griffith (Chaotic Aquatics)
To: MONOPS
Subject: Air pollution.
Date: Tuesday, May 29, 2018 11:47:59 AM

I am sending in this public comment requesting that Northern Atascosa and Southern Bexar area be added to the list of ambient air monitoring sites due to the influx of Industrial Sand mines and processing plants in the area. I am requesting this to be done to ensure regulatory compliance, inform nearby citizens and for public health and safety.
Benjamin Griffith
San Antonio resident
839-299-8967
Thank you.

Sent from AOL Mobile Mail

From: Courtney Guevara
To: MONOPS
Subject: Sand Mines
Date: Tuesday, May 29, 2018 11:58:41 AM

I am sending in this public comment requesting that Northern Atascosa and Southern Bexar area be added to the list of ambient air monitoring sites due to the influx of Industrial Sand mines and processing plants in the area. I am requesting this to be done to ensure regulatory compliance, inform nearby citizens and for public health and safety.
Courtney Guevara
501 E Westmeyer
Poth, TX 78146
Thank you.

From:	MONOPS
To:	Holly Landuyt
Cc:	James Janysek
Subject:	FW: Comments on Air Monitor Plan for 2018
Date:	Friday, May 11, 2018 3:25:07 PM

Holly,

Below is a comment we received for the 2018 AMNP.

~Heather

From: alcoa1961@gmail.com [mailto:alcoa1961@gmail.com] **On Behalf Of** Richard Guldi
Sent: Friday, May 11, 2018 3:14 PM
To: MONOPS <MONOPS@tceq.texas.gov>
Subject: Comments on Air Monitor Plan for 2018

A plan that puts only four pollution monitors in Dallas, reports data averaged by day instead of showing minute by minute readings, and doesn't get any data to the public for at least two days is totally useless, especially when all you do is pick on the little guys whose small amounts of pollution don't really matter that much because but they can't fight back, while you let the big corporate polluters go scott free. You should be so ashamed !

Richard Guldi
7228 La Sobrina Dr
Dallas, TX 75248

From:	MONOPS
To:	Holly Landuyt
Cc:	James Janysek
Subject:	FW: petions for comments
Date:	Tuesday, May 29, 2018 10:22:48 AM
Attachments:	hardy.pdf
Importance:	High

Holly,

The email below was received in the monops@ email inbox regarding the AMNP – the standard response has been sent.

~Heather

From: The UPS Store #4617 [mailto:store4617@theupsstore.com]
Sent: Tuesday, May 29, 2018 10:05 AM
To: MONOPS <MONOPS@tceq.texas.gov>
Cc: jessicahardy@netzero.net
Subject: petions for comments

THE UPS STORE 4617

703 W. OAKLAWN

PLEASANTON, TEXAS 78064

PHONE: 830-569-8877

FAX: 830-569-8878

Like us on Facebook!!

https://www.facebook.com/theupsstore4617/

Petition to TCEQ for Air Monitoring

We, the undersigned, call to TCEQ to action to implement air monitoring for the Atascosa - Bexar County Line area. This area has shown significant Industrial growth in the last several years with Industrial Sand Mines/Processing Plants. We the undersigned are asking TCEQ to take into consideration that the cumulative effect of these frac sand sites for Particulate Matter PM2.5 and PM10 is not being considered when these permits are being reviewed and approved. Fugitive dust from these facilities are currently being emitted through mining, hauling, drying, loading, cleaning, stockpiling, and the moving of the Industrial Sand. TCEQ Permit applications on the mines and processing plants in this area claim both PM2.5 and PM10 emissions. Proven data from OSHA, American Lung Association, The National Cancer Insitute, MSHA, the EPA, and others all state that inhalation of dust particles causes increased mortality, cardiovascular disease, lung disease, and lung cancer. The EPA also states that numerous scientific studies have linked particle pollution exposure to a variety of problems, including: nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms, such as irritation of the airways, coughing or difficulty breathing. We the undersigned, strongly feel that knowledge is power and by knowing what the air quality is in our area on a daily basis we would then have the power to choose whether or not we needed to limit our activities accordingly. Monitoring around these frac sand sites is needed to ensure regulatory compliance, inform nearby communities and protect public health.

Name	Date	Address
VINCENT ARREGUIN	5-20-18	3024 CENIZO SA TX 78264
Juan D. Alemán	5-20-18	21270 Spanish Grant Rd SA TX 78264
JUAN D. GARCIA	5-20-18	23007 Pet Wood Dr. SA TX 78264
Juanita Dupart	5-20-18	22640 Pet Wood SA TX 78264
Ruth Clark	5-20-18	23142 ALAN WOOD SA TX 78264
Mr. & Mrs. James M. Garcia	5/20/18	22193 Mathis Rd San Antonio TX 78264

Petition to TCEQ for Air Monitoring

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Name	Date	Address	
Janie Gutierrez	5/24/18	22211 Mathis Rd SA TX 78264	210 836 7430 janiegtrz15@gmail

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We, the undersigned, call to TCEQ to action to implement air monitoring for the Atascosa - Bexar County Line area. This area has shown significant Industrial growth in the last several years with Industrial Sand Mines/Processing Plants. We the undersigned are asking TCEQ to take into consideration that the cumulative effect of these frac sand sites for Particulate Matter PM2.5 and PM10 is not being considered when these permits are being reviewed and approved. Fugitive dust from these facilities are currently being emitted through mining, hauling, drying, loading, cleaning, stockpiling, and the moving of the Industrial Sand. TCEQ Permit applications on the mines and processing plants in this area claim both PM2.5 and PM10 emissions. Proven data from OSHA, American Lung Association, The National Cancer Insitute, MSHA, the EPA, and others all state that inhalation of dust particles causes increased mortality, cardiovascular disease, lung disease, and lung cancer. The EPA also states that numerous scientific studies have linked particle pollution exposure to a variety of problems, including: nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms, such as irritation of the airways, coughing or difficulty breathing. We the undersigned, strongly feel that knowledge is power and by knowing what the air quality is in our area on a daily basis we would then have the power to choose whether or not we needed to limit our activities accordingly. Monitoring around these frac sand sites is needed to ensure regulatory compliance, inform nearby communities and protect public health.

Name	Date	Address
Rosendo Garza	5-20-2018	1015 Brighton San Antonio, TX 78211
Norma Flores	5-20-2018	19416 FM 1937
Leonard & Estela Hernandez	5/20/18	20360 Campbellton Rd S.A. TX 78264
Jacob, Kathy, & Bobby Compton		21379 Campbellton Rd SA, TX
Arturo & Janie Zavala	5/20/18	22211 Mathis Rd SA TX 78264
Bobby & Kathy Compton		
Janet Jones	5/20/18	8010 Aeromedical Rd Apt 2103 SA, Tx 78235

Petition to TCEQ for Air Monitoring

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Name	Date	Address
Delores Swayer	5-20-18	990 Hickory Ln SA Tx 78264
Doris Stallcup	5-20-18	21153 Campbellton Rd 78264
Pete Bella	5/20/18	110 Hibiscus Ln. 78213
Virginia L. Tucker	5-20/18	23230 Campbellton Road 78264
Virginia R. Littlepage	5/20/18	25815 Campbellton Rd 78264
David A Littlepage	5/20/18	25815 Campbellton Rd 78264

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Name	Date	Address
~~Ann~~ annecantsilva@gmail.com please send info.		
Anna + David Silva	5-20-18	22220 Mathis Rd #3 SAT 78264
Kerri + Edward Brickerson	5-20-18	22220 Mathis Rd #2 SAT 78264
Jon & Maria Hudson	5-20-18	22959 Silver Chalice, Elmendorf, TX 78112

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Name	Date	Address
~~Rogelio Cruz Sr~~	~~5/20/18~~	~~2306 Hickory Pass San Antonio Tx 78264~~
Cecilio Cavazos	5-2018	1925 S. Loop 1604 E
Samantha Lopez	5-2018	2941 Ranch Trail SA Tx 78264
Eduardo Garcia	5/20/18	2941 RANCH TRAIL RD SA. TX 78264
Alfredo Ornelas	5/20/18	21637 Campbellton Rd SA Tx 78264

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Name	Date	Address
Cheryl L. King	05/20/2018	24N30 Camp Site Rd, SATX 78264
Rod Smith	"	" "
Fred + Cheryl Cox	05/20/2018	428 Hallmark Path SATX 78264
Lupe + Richard	5/20/18	2220 Mathis Rd SAT 78264
Teresa + Johnny Canto	05/20/2018	2840 Rabal Rd, SA Tx 78221
JANIE R. MARTINEZ	5/20/18	24461 CAMP S. Ke Rd, SATX78264
REINALDO MEDELLIN	5/20/18	24461 CAMP Site Rd SATX 78264

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Name	Date	Address
THAD BLESSING	5-20-18	1525 DuPONT RD 78264
Celeste H. Blessing	5-20-18	" " "
GERALD W. NIX	5-20-18	21301 SPANISH GRANT 78264
Raquel Shuler	5-20-18	21315 Spanish Grant rd 78264
Andy Shuler	5-20-18	21315 Spanish Grant rd 78264
Casey Shuler	5-20-18	21315 Spanish Grant rd 78264

Public Comment Petition to TCEQ for Air Monitoring

We, the undersigned, call to TCEQ to action to implement air monitoring for the Atascosa - Bexar County Line area. This area has shown significant Industrial growth in the last several years with Industrial Sand Mines/Processing Plants. We the undersigned are asking TCEQ to take into consideration that the cumulative effect of these frac sand sites for Particulate Matter PM2.5 and PM10 is not being considered when these permits are being reviewed and approved. Fugitive dust from these facilities are currently being emitted through mining, hauling, drying, loading, cleaning, stockpiling, and the moving of the Industrial Sand. TCEQ Permit applications on the mines and processing plants in this area claim both PM2.5 and PM10 emissions. Proven data from OSHA, American Lung Association, The National Cancer Insitute, MSHA, the EPA, and others all state that inhalation of dust particles causes increased mortality, cardiovascular disease, lung disease, and lung cancer. The EPA also states that numerous scientific studies have linked particle pollution exposure to a variety of problems, including: nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms, such as irritation of the airways, coughing or difficulty breathing. We the undersigned, strongly feel that knowledge is power and by knowing what the air quality is in our area on a daily basis we would then have the power to choose whether or not we needed to limit our activities accordingly. Monitoring around these frac sand sites is needed to ensure regulatory compliance, inform nearby communities and protect public health.

Name	Date	Address
Alma Gallegos	5-25-18	P.O.Box 62 Big Foot TX 78005
Monica Garcia	5-25-18	323 Tamarix Rd Jourdanton, Tx 78026
Sandra Montenegro	5-25-18	10494 FM 2196 Jourdanton Tx 78026
Daysha Lawton	5/25/18	622 Trade St Pleasanton Tx 78064
Ruthie Timberlake	5/25/18	305 Applewhite Rd - Poteet Tx 78065
Mike Timberlake	5/25/18	305 Applewhite Rd Poteet Tx 78065
Steph Hardy	5/29/18	1210 BRUCE RD. POTEET TX 78065

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Name	Date	Address
Ashley Swift	5/23/18	2625 FM 536 Pleasanton Tx. 78064
Valarie Brough	05/23/18	1631 Parkview, Pleasanton, TX 78064
Yubia Reyes	5/23/18	1108 Pecan St Jourdanton, Tx 78026
Jennifer Medina	05/23/18	13730 Astros Ln, San Antonio TX, 78245
Tammy Thomas	5/23/18	1889 E. FM 476 Poteet Tx 78065

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Name	Date	Address
Daniella Suarez	5/23/18	3903 SE Military Dr. SA, TX 78064
Yolanda Telles	5/23/18	1560 Chant st # 10 pleasanton TX 78064
Billy Ramos	5/23/18	639 Rindon Rd. Poteet, TX. 78065
Anita Meyer	5-23-18	633 Deer Trail Jourdanton, TX 78026
Juan Espinoza	5-23-18	3223 Howard st San Tx 78212
Patricia Garcia	5/23/18	120 Winship Rd Pleasanton Tx 78064
Leticia Romero	5/23/18	851 East Trail Pleasanton TX 78064
Mercedes Mendez	5-23-18	19775 FRANK Hoffman Rd Somerset Tx 78069

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Name	Date	Address
Angie C. Vasquez	5/23/18	PO Box 1183 Poteet TX 78065
Traci Guevara	5-23-18	4785 Lucas Rd Floresville TX 78114
Phyllis E Gray	5-23-18	2334 Hesta Ave San Antonio TX 78210
Maria C Mancuso	5-23-18	P.O. Box 1264, Poteet, TX 78065
Angelica Aguirre	5-23-18	306 Patrick St Pleasanton TX 78064
Mary Bowers-Gomez	5/23/18	7300 Mustang Dr W San Antonio Tx 78227
Rosana Vela	5-23-18	23216 W Addison San Antonio TX 78266

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Name	Date	Address
James Van Horn	5/25/2018	659 N Trail Pleasanton, TX
Robin Hiatt-Reed	5/25/2018	809 Canterbury Hill San Antonio, TX 78209
Griselda Hilburn	5-25-18	P.O. Box 1412 Poteet TX 78065
Israel Sanchez	5-25-18	114 Pauls street Pleasanton TX.
Dina Lodge	5-25-18	1164 Donna Louise Poteet TX 78065
Lilly S. Mata	5-25-18	317 Lyons Pleasanton 78064
Elizabeth V. Mata	5-25-18	739 Houston Pleasanton, 78064
Sara Ruiz	5-25-18	1325 CR 307 Jourdanton 78026

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Name	Date	Address
Rochelly Perez	5/25/18	10414 Cub Valley San Antonio TX
PETER KOBERLE	5/25/18	11020 HUEBNER OAKS, SAN ANTONIO TX
[illegible]	5/25/18	[illegible]
MaryLee Vrana	5/25/18	2840 E CR331 Jourdanton, TX 78026
Debbie DeBosquez	5/25/18	285 Oak St. Lemiva tx 78050
Maclestri Summers	5/25/18	595 Cimarron Sq Poteet Tx 78065
Elvira Critchley	5/25/18	172 Woodland Hills Rd. Poteet 78065

Public Comment Petition to TCEQ for Air Monitoring

We, the undersigned, call to TCEQ to action to implement air monitoring for the Atascosa - Bexar County Line area. This area has shown significant Industrial growth in the last several years with Industrial Sand Mines/Processing Plants. We the undersigned are asking TCEQ to take into consideration that the cumulative effect of these frac sand sites for Particulate Matter PM2.5 and PM10 is not being considered when these permits are being reviewed and approved. Fugitive dust from these facilities are currently being emitted through mining, hauling, drying, loading, cleaning, stockpiling, and the moving of the Industrial Sand. TCEQ Permit applications on the mines and processing plants in this area claim both PM2.5 and PM10 emissions. Proven data from OSHA, American Lung Association, The National Cancer Insitute, MSHA, the EPA, and others all state that inhalation of dust particles causes increased mortality, cardiovascular disease, lung disease, and lung cancer. The EPA also states that numerous scientific studies have linked particle pollution exposure to a variety of problems, including: nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms, such as irritation of the airways, coughing or difficulty breathing. We the undersigned, strongly feel that knowledge is power and by knowing what the air quality is in our area on a daily basis we would then have the power to choose whether or not we needed to limit our activities accordingly. Monitoring around these frac sand sites is needed to ensure regulatory compliance, inform nearby communities and protect public health.

Name	Date	Address
Dora Hooper	5/28/18	183 Old Applewhite Rd Poteet Tx 78065
Clarence Hooper	5/28/18	183 Old Applewhite Rd Poteet Tx 78065

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Name	Date	Address
Kathryn Carter	5-24-18	900 Jaggy Ln Poteet tx 78065
Dean Munn	5-24-18	5717 S. Edwards
Pete Pawlik	5-24-18	1216 Cheryl Dr Pleasanton TX 78064
Abby Pawlik	5-24-18	1216 Cheryl Dr Pleasanton TX 78064
Scotty Smith	5-24-18	326 MARK ST PLEASANTON TX 78064
Amber Huber	5-24-18	1213 Hickory St Unit B Jourdanton, TX 78026
[illegible]	5-24-18	685 DEER TRAIL, JOURDANTON TX 78026
Paul Jones	5-24-18	707 San Antonio St., Pleasanton, TX 78064

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Name	Date	Address
Randi Mahula	5/24/18	2115 E ST Hwy 97 Pleasanton, TX
Nina Munoz	5/24/18	110 A Cootill Jourdanton, TX
Kelly House	5/24/18	1462 Deer Run Pleasanton, TX
Kathryn House	5/24/18	2618 CR 303 Jourdanton, TX
Kimberley Clifton	5/24/18	1145 CR 307 Jourdanton TX
Juana K. Beutz	5/24/18	3722 E FM 476 Poteet TX 78065
Carol LaBrant	5/24/18	905 Peach Jourdanton Tx. 78026

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Name	Date	Address
Janice Jones	5/23/18	685 Deer Trail, Jourdanton, Tx. 78026
Stan Jones	5/24/18	685 Deer Trail, Jourdanton, TX 78026
Donna Wilson	5/24/18	681 Deer Trail, Jourdanton, TX 78026
David R. Purcell	5-24-18	697 Deer Trail, Jourdanton Tx 78026
Clint Boyd	5-24-18	810 Sanchez Ave, Pleasanton Tx 78064
Carol Wilkinson	5-29-18	509 maple St, Jourdanton TX 78026
J. B Salazar	5-24-18	205 N Byrant Pleasanton Tx 78064
John S. Vyvlecka	5-29-18	1308 Simmons Jourdanton 78026
John Vyvlecka		

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Name	Date	Address
[signature]	5/25/18	3180 CR 314W Charlotte, Tx 78011
[signature]	5/25/18	3258 FM 1784 Pleasanton, Tx 78064
[signature]	5/25/18	Charlotte Tx 78011
[signature]	5-25-18	Charlotte, Tx 78011
[signature]	5-26-18	677 Deer Trail tx 78026
[signature]	5-26-18	714 Deer Trail Tx 78026
[signature]	5-29-18	1210 Brue Rd Poteet, TX 78065

From:	MONOPS
To:	Holly Landuyt
Cc:	James Janysek
Subject:	FW: Attention: Holly Landuyt, MC-165
Date:	Wednesday, May 30, 2018 4:58:55 PM
Attachments:	Scanned Documents.pdf
Importance:	High

Holly,

The email below was received in the monops@ email inbox regarding the AMNP – the standard response has been sent.

~Heather

From: Jessica Hardy [mailto:jessiehardy@netzero.net]
Sent: Wednesday, May 30, 2018 12:45 PM
To: MONOPS <MONOPS@tceq.texas.gov>
Subject: Attention: Holly Landuyt, MC-165

TCEQ
Attention: Holly Landuyt, MC-165

Petitions towards public commenting on Annual Monitoring Network Plan.

Public Comment Petition to TCEQ for Air Monitoring

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Name	Date	Address
Jamie Albert-Schaefer	5-23-2018	3248 FM 743 Kenedy Tx 78119
Arthur R. Troell	5-23-2018	7035 CR. Pleasanton Tx 78064
Savannah Johnson	5-23-2018	2483 S. Riverdale Ln Goliad, Tx
	5-23-2018	1120 Winn Rd Poteet, Tx 78065
Morris Conley	5-23-18	Po Box 515 Poteet Tx 78065
Robert L Wyatt	5-23-18	1873 Brandon Rd Pleasanton Tx 78064
	5-23-18	11237 FM 743 Kenedy Tx 78119

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Name	Date	Address
Cody Shearman	5-23-18	9116 Fm 743 Kenedy, Tx 78119
Barbara Patterson	5-23-18	3031 Coady Rd-183 Kenedy, Tx 78119
Mary Hawsden	5-23-18	337 Sherri Lane, Lake Jackson, Tx 77566
[illegible]	5-23-18	Fm 743 Kenedy, Tx 78119
[illegible]	5/23/18	FM 743 Kenedy Tx. 78119

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Name	Date	Address
Tina Shearman	5-23-18	9116 FM 743, Kenedy, Tx 78119
TERRELL GRAHAM	5-23-18	18645 HWY 239 WEST 78119
Patricia Graham	5-23-18	18645 St Hy 239 W 78119
Kathy Morgan	5-23-18	181 PR 8200 Kenedy Tx 78119
David N. Morgan	5-23-18	181 PR 8200 Kenedy Tx 78119
Wayne McGary	5-23-18	209 Nueces - Portland, TX 78374
Judy Pevski	5-23-18	P.O. Box 812, Poth, Tx 78147

LAW OFFICE OF
TEXAS RIOGRANDE LEGAL AID, INC.
Austin Office
4920 N. I-35
Austin, TX 78751
Telephone (512) 374-2700 Toll Free (800) 369-9270
Fax (512) 447-3940

May 30, 2018

Texas Commission on Environmental Quality
P.O. Box 13087
Attention: Holly Landuyt, MC-165
Austin, Texas 78711-3087
Via email **monops@tceq.texas.gov**

Re: Comments, 2018 Annual Monitoring Network Plan

Dear TCEQ:

Please consider these comments on behalf of Corpus Christi's Hillcrest Residents Association. We make these comments to promote clean air and to protect environmental justice communities, which are particularly susceptible to ozone-induced health problems. In these comments, we ask that TCEQ require that one Corpus Christi ozone monitor be moved to ensure that the monitors in the region capture the three highest ozone readings as required by law.

The Hillcrest Residents Association (HRA) has a long history of speaking out for its community on environmental issues. From fighting an ill-conceived wastewater plant to working to ensure that the Harbor Bridge's true impacts on the community are acknowledged, the association advocates for its neighborhood. In 1944, the Corpus Christi City Council designated Hillcrest for black residents. The neighborhood has a rich history of well-attended schools, vibrant churches, restaurants, locally owned businesses and community activism. Ray Charles and B.B. King both played at clubs on the Northside, where Hillcrest is located.

The Northside has endured through growth of the Port, the expansion of the petrochemical industry, and encroachment by Interstate 37 and the planned Harbor Bridge. Because of the expansion of the Harbor Bridge, Hillcrest neighbors recently negotiated an agreement with the Texas Department of Transportation allowing homeowners to sell their homes and move to another neighborhood. Not all residents will leave, and the Association will continue to advocate for environmental justice for Hillcrest residents.

HRA believes in making constructive contributions to air quality efforts in Corpus Christi. HRA has commented to the Corpus Christi Air Quality Group regarding

suggested changes to its annual report and ways to reach out to the entire community to reduce ozone. HRA members have attended Air Quality Group meetings, consulted outside experts, and brought substantive suggestions to the process.

A map showing the location of the Hillcrest neighborhood is below. As you can see, Hillcrest is located north of interstate 37, adjacent to the petrochemical industry, and near the Harbor Bridge. This map was prepared as part of the technical evaluation of the effects of the proposed Harbor Bridge on Hillcrest residents:

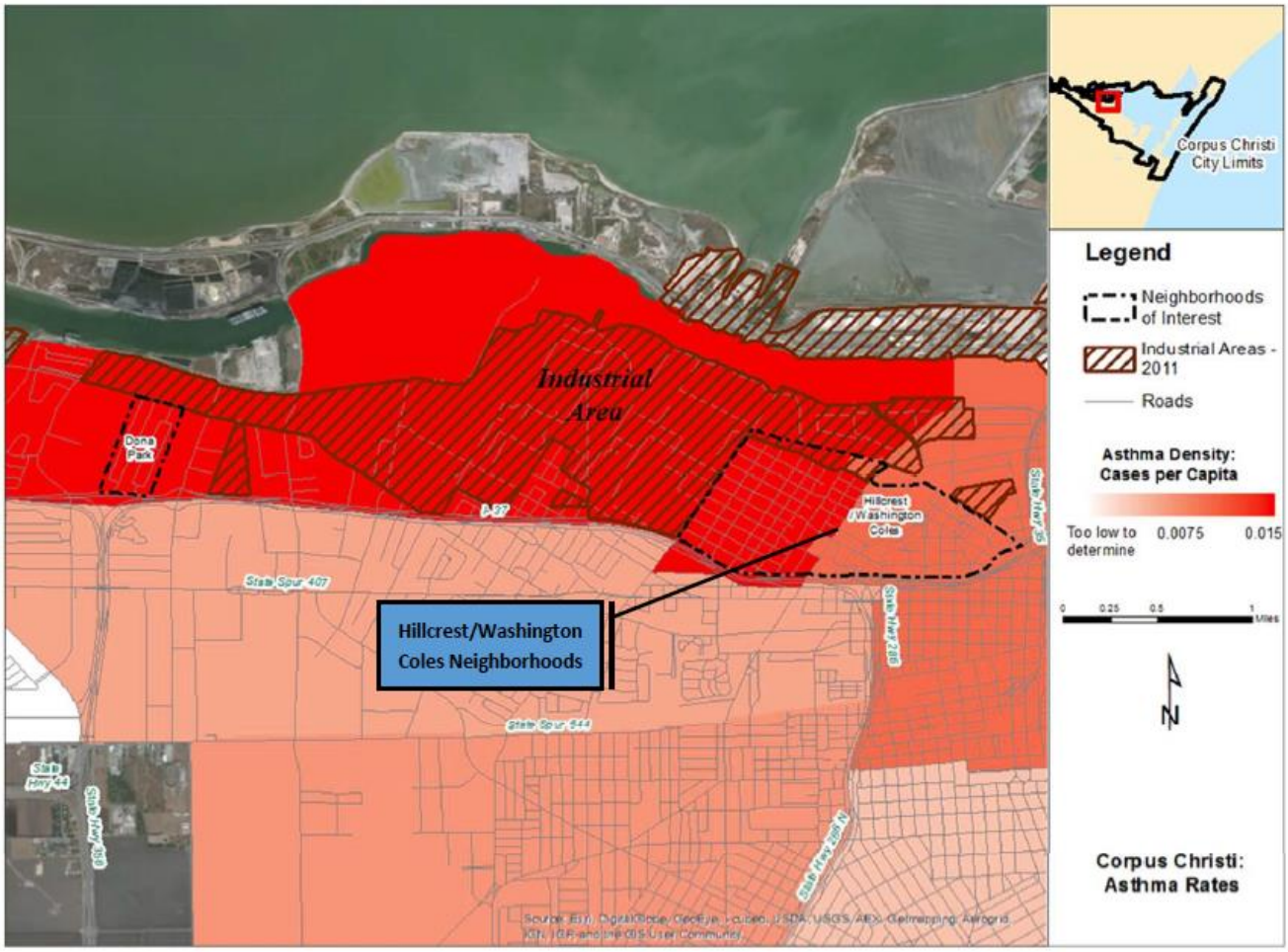


Figure 5. Asthma density by zipcode

[1]

We make these comments on behalf of the Hillcrest community and all residents of Corpus Christi who want clean air—and who want this region to grow responsibly, so children can play outside without an increased risk of respiratory problems,

[1] Sustainable Systems Research, LLC, *Technical Memorandum The Harbor Bridge: Benzene, Noise, Asthma, Traffic* (July 14, 2015) at p. 8.

families can have summer barbecues without breathing in polluted air, and growth can provide economic opportunities without harming residents' health.

We comment regarding whether the two official ozone monitors, CAMS 4, 902 Airport Blvd., Corpus Christi, and CAMS 21, 9860 La Branch Road, Corpus Christi are placed to accurately determine ozone problems in the Corpus Christ region. We are concerned that the current placement of monitors in similar locations no longer accurately records the highest ozone concentrations in the region.

1. **Corpus Christi ozone monitors should be placed where they are most likely to measure highest ozone concentrations, as required by law.**

Federal regulations require that Corpus Christi's ozone monitors be placed "in a direction from the city that is *most likely to observe the highest 03 concentrations,* more specifically downwind during periods of photochemical activity." [2] All neighborhoods in Corpus Christi should be assured that monitors measure the highest concentration of ozone. The annual monitoring network plan is required to include "a statement of whether the operation of each monitor meets the requirements of appendices A. B, C, D and E of this part [40 CFR § 58.10], where applicable." 40 CFR § 58.10(a)(1). HRA has not located such a statement regarding the ozone monitors for Corpus Christi and does not believe the evidence supports such a conclusion.

The continuous air monitors (CAMS) for ozone in the Corpus Christi region are:

- CAMS 4 -902 Airport Blvd., Corpus Christi
- CAMS 21 – Tuloso, 9860 La Branch Road, Corpus Christi

Both official CAMS are in suburban neighborhoods of the city. CAMS 4 and 21 are south of Interstate 37 and south of industrial activity.

The following map depicts Corpus Christi's two official ozone CAMS and the location of the Hillcrest neighborhood. CAMS 21 is the dark blue flag most northwest in the map. CAMS 4 is the dark blue flag most southeast. And the Hillcrest neighborhood is the dark blue flag just above the words Corpus Christi on the map.

[2] Network Design Criteria for Ambient Air Quality Monitoring, 40 C.F.R. § 58, App. D at 4(f) (emphasis added).

Corpus Christi has a robust petrochemical industry, mostly located north of Interstate 37. Hillcrest is also north of IH-37. The prevailing wind in Corpus Christi is from the southeast to the northwest.[3] Based on these factors, it is not clear that either CAMS 21 or 4 is located to monitor ozone concentrations affected by both vehicles and the petrochemical industry.

"Monitoring sites must be capable of informing managers about many things including the peak air pollution levels, typical levels in populated areas, air pollution transported into and outside of a city or region, and air pollution levels near specific sources." 40 CFR § 58, Appendix D, 1.1.1. There are six general types of sites for monitors:

> "(a) Sites located to determine the highest concentrations expected to occur in the area covered by the network.
>
> (b) Sites located to measure typical concentrations in areas of high population density.
>
> (c) Sites located to determine the impact of significant sources or source categories on air quality.
>
> (d) Sites located to determine general background concentration levels.
>
> (e) Sites located to determine the extent of regional pollutant transport among populated areas; and in support of secondary standards.

[3] *Corpus Christi Airport*, WINDFINDER, https://www.windfinder.com/windstatistics/corpus_cristi_airport (last visited May 30, 2018).

(f) Sites located to measure air pollution impacts on visibility, vegetation damage, or other welfare-based impacts." *Id.*

The two Corpus Christi monitors operate, according to TCEQ, "as required based on [the] area's population and ozone design values"[4] and are located in suburban areas, which are normally low- density population regions. The sites of the two Corpus Christi monitors do not seem to fit into any of the above six criteria. The Corpus Christi monitor locations aren't selected to determine highest concentrations, the effect of significant sources, general background levels, regional transport, visibility, or even "typical concentrations in areas of high population density." The Corpus Christi monitors must be evaluated for conformance to these criteria.

EPA's technical guidance for air monitoring networks also should be applied.[5] The technical guidance requires an analysis of environmental justice issues in the placement of monitors.[6] The guidance requires an analysis of a number of factors to determine the best monitors to use:

- *Number of Parameters Monitored* – the more parameters monitored the higher value the site;
- *Trend Impacts* – sites with the longest continuous monitoring are ranked higher;
- *Measured Concentrations* – sites that measure higher rather than lower concentrations are ranked higher;
- *Deviation from NAAQS* – sites that measure close deviation from NAAQS are more valuable;
- *Area Served* – the larger the area of coverage, the higher the site is ranked;
- *Monitor-to-Monitor Correlation* – monitor pairs that correlate well may be redundant and are ranked lower;
- *Emission Inventory* – these data are used to determine whether pollutants are most concentrated; monitors placed in counties with the maximum emission density;
- *Population Change* – using block group or census tract data, the areas with the highest population change get the most weight; also can be used to assess population change for minority or low income groups;

---

[4] TEXAS COMMISSION ON ENVIRONMENTAL QUALITY, TEXAS FIVE-YEAR AMBIENT MONITORING NETWORK ASSESSMENT 29 (2015), https://www.tceq.texas.gov/assets/public/compliance/monops/air/annual_review/historical/2015-5yrAAMNA.pdf.

[5] Sean Raffuse et al., *Ambient Air Monitoring Network Assessment Guidance: Analytical Techniques for Technical Assessments of Ambient Air Monitoring Networks*, EPA-454/D-07-001 (2007), https://www3.epa.gov/ttnamti1/files/ambient/pm25/datamang/network-assessment-guidance.pdf.

[6] *Id.* at 2-5.

- *Population Served* –sites in high-population areas get the most weight;
- *Principal Component Analysis* – used to find sites with variability similar to other sites, to see if the site is redundant;
- *Removal Bias* – measured values are interpolated using the entire network; one site is removed, and values are interpolated; the difference between the site removed and the values predicted for that site are then recorded; the greater the bias, the more valuable the site;
- *Positive Matrix Factorization* – another method to determine whether sites are redundant of each other; and
- *Suitability Modeling* – factors are used to model the best place to locate a monitor; inputs are emission source influence, proximity to populations, etc.[7]

The locations of CAMS 21 and CAMS 4 do not indicate that EPA's technical guidance, including the requirement of a review of environmental justice issues, has been reviewed..

Remarkably, in TCEQ's five-year report on monitors, unlike the conclusion regarding monitors in Houston, there is no statement that Corpus Christi monitors "are providing ambient concentration data in areas that are frequented by the public, likely impacted by maximum ozone concentrations, or are representative of background concentrations." [8] TCEQ makes a similar statement regarding the placement of the Beaumont monitors, and also references the requirement that the area be "representative of background or transported ozone."[9] No such statement is included in the similar discussion of the Corpus Christi and Victoria region's ozone monitoring network.[10]

The Corpus Christi region has grown since the official monitors began measuring ozone. This includes new industrial development and increased emission of HRVOCs. Additionally, production in the Eagle Ford Shale has begun, which is likely affecting air quality in the region. Modeling would predict where highest ozone formation should occur, and the CAMS should be placed in those locations to most accurately record ozone.

2. Ozone readings from research-grade monitors cast further doubt on "official" monitors.

---

[7] *Id.* at 3-1 – 3-3.

[8] TEXAS COMMISSION ON ENVIRONMENTAL QUALITY, TEXAS FIVE-YEAR AMBIENT MONITORING NETWORK ASSESSMENT 28 (2015), https://www.tceq.texas.gov/assets/public/compliance/monops/air/annual_review/historical/2015-5yrAAMNA.pdf.

[9] *Id.*

[10] *Id.* at 29.

Texas A&M-Kingsville (TAMUK) and University of North Texas (UNT) have strategically placed six additional ozone monitors in the region, as part of a scientific study and as part of a Supplemental Environmental Project (SEP). In 2013, the scientists were using six CAMS, with CAMS 685 and 687 being the SEP sites, and CAMS 659, 660, 664, and 686 being additional monitoring sites. The CAMS monitor for ozone, temperature, humidity, and wind speed. CAMS 660 was selected as an urban site, CAMS 664 upwind, and CAMS 659 downwind. CAMS 686 and 659 have since been decommissioned. However, these monitors are not official, and their results are not part of the monitoring results reported to EPA. Further, according to TCEQ, "data from this instrument [each study CAMS] does not meet EPA quality assurance criteria and cannot be used for regulatory purposes."[11]

The existing research CAMS are:

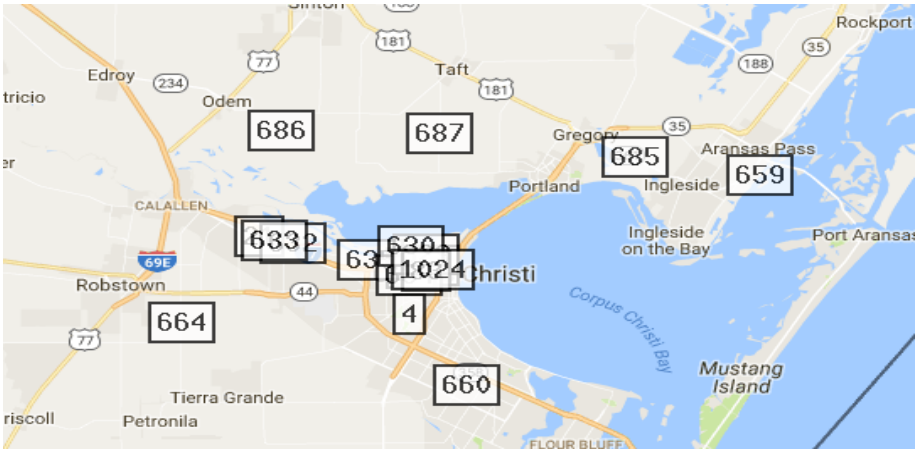
- CAMS 660 – 4801 Holly Road, Corpus Christi
- CAMS 664 – Violet, 3515 RM 1694, Robstown
- CAMS 685 – Ingleside, San Patricio Municipal Water, off Highway 361, Aransas Pass

The Corpus Christi/Victoria region includes an additional ozone monitor:

- CAMS 687 – 106 Mockingbird Ln., Victoria, Texas

Figure 1 shows the location of the CAMS in the Corpus Christi region. The TAMUK study CAMS are 664, the most western CAMS; 660, the most southern; and 659, the most eastern.

Figure 1



[11] *E.g.*, *CAMS 660 Monthly Summary for May 2018*, TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (last visited May 30, 2018), https://www.tceq.texas.gov/cgi-bin/compliance/monops/monthly_summary.pl.

In October 2016, as shown, three of the five study monitors registered violations of the current ozone standards. Corpus Christi admits in its 2014–2015 report to EPA that the study CAMS have measured high ozone concentrations.[12]

October 2016: Three *Unofficial* Corpus Christi Ozone Research Monitors Show Three Year Averages that Violate Current Ozone Standards[13]
These results are not reported officially to TCEQ or EPA

Monitor	**4th high in 2013**	**4th high in 2014**	**4th high in 2015**	**4th high to date in 2016**	**Three year average**
CAMS 660[14] 4801 Holly Road, Corpus Christi		76	69	76	73.6
CAMS 659[15] 527 Ransom Rd, Aransas Pass	74	76	74	No data available. To be decommissioned in December 2016	74.6
CAMS 685[16] San Patricio Municipal Water off Hwy 361 Aransas Pass	70	70	62	58	63.3
CAMS 686 San Patricio Municipal Water NW of	No data available on line; should be	No data available on line; should be	No data available on line; should be	decommissioned	

[12] CORPUS CHRISTI AIR QUALITY GROUP, CORPUS CHRISTI OZONE ADVANCE ANNUAL REPORT MAY 2014 – APRIL 2015 3 (2015), https://www.epa.gov/sites/production/files/2016-01/documents/corpusupdate.pdf.
[13] https://www.tceq.texas.gov/cgi-bin/compliance/monops/yearly_summary.pl
[14] Per TCEQ, data from this instrument does not meet EPA quality assurance criteria and cannot be used for regulatory purposes.
[15] Per TCEQ, data from this instrument does not meet EPA quality assurance criteria and cannot be used for regulatory purposes.
[16] Per TCEQ, data from this instrument does not meet EPA quality assurance criteria and cannot be used for regulatory purposes.

Corpus Odem	in possession of TCEQ	in possession of TCEQ	in possession of TCEQ		
CAMS 664 [17] 3515 FM 1694 Robstown	80	78	73	75	75.3
CAMS 687[18] 48409687 San Patricio Municipal Water Dist Pumping Station San Patricio	80	74	60	66	66.6

3. **One CAMS should be in San Patricio County, at a location selected to record the highest ozone concentrations.**

All residents of the region deserve clean air. The region's official monitors are both in Nueces County upwind of the industrialized refinery area. Many residents of San Patricio County breathe air that has blown over the refineries, but no official monitor measures the ozone concentration of that air. The industrial area in Nueces County could emit pollutants that amplify the formation of ozone. Without a monitor downwind of the refineries in San Patricio County, there can be no assurance of accurate ozone results for that part of the region.

We recommend that one ozone monitor be placed to record ozone concentrations of air in San Patricio County that has passed through the refineries in Nueces County.

4. **CAMS in Dona Park should measure ozone.**

CAMS 635 monitor is located on Up River Road near the Dona Park neighborhood. The monitor records particulate matter, sulfur dioxide, hydrogen sulfide, and various weather conditions. Since the monitor frequently measures air passing over the refineries and would record whether those refinery emissions amplify the formation of ozone, monitoring ozone at CAMS 635 would expand information

[17] Per TCEQ, data from this instrument does not meet EPA quality assurance criteria and cannot be used for regulatory purposes.
[18] Per TCEQ, data from this instrument does not meet EPA quality assurance criteria and cannot be used for regulatory purposes.

available about ozone formation and would provide specific information about a potentially vulnerable neighborhood.

We recommend that in the discussion of the monitors, the report discuss the opportunity to monitor ozone at CAMS 635 near the Dona Park neighborhood. The report should identify the opportunity to measure the effect of refinery emissions on ozone. The report should recommend that CAMS 635 collect ozone data to better inform the community.

5. **Community based monitoring should be developed.**

Corpus Christi has vulnerable populations living close to large industries emitting pollutants. The opportunity to study air quality with affordable community-based monitoring should be encouraged by TCEQ. Such a strategy should be listed in this report and funding through SEPS should be encouraged.

6. **Predictable funding for research monitors should be encouraged.**

Funding sources for the research-grade monitors in the Corpus Christi region have become unpredictable. These monitors contribute important information about air quality in the region. HRA supports ongoing efforts by state universities to study air quality in this region. We ask TCEQ's report to acknowledge the importance of ongoing funding for these monitors, to recognize the precarious status of funding for these scientific studies, to support ongoing use of SEP funding for these programs, and to identify any other funding sources to support this research.

Conclusion

Thank you for the opportunity to comment on monitors in the Corpus Christi region. The Hillcrest Residents Association asks TCEQ to consider moving one of the region's ozone monitors so that one monitor is situated to collect the highest ozone in the region in San Patricio County. The placement of that monitor should be based on modeling. We request ozone monitoring be added to the Dona Park monitor and that community monitoring be supported.

Hillcrest Residents Association looks forward to further work to protect air quality for all Corpus Christi residents.

Yours truly,

Rachel Zummo
Amy Johnson

Cc: Hillcrest Residents Association Officers:
Lamont Taylor, Daniel Pena, and Henry Williams

From: Tina Holmes
To: MONOPS
Subject: Air Monitoring
Date: Tuesday, May 29, 2018 10:48 AM

I am sending in this public comment requesting that Northern Atascosa and Southern Bexar area be added to the list of ambient air monitoring sites due to the influx of Industrial Sand mines and processing plants in the area. I am requesting this to be done to ensure regulatory compliance, inform nearby citizens and for public health and safety.

Christina Holmes
22977 Alanwood Drive
San Antonio, TX 78264
210-721-2302

From:	Patrick Holt
To:	MONOPS
Subject:	air monitoring
Date:	Tuesday, May 29, 2018 11:14:02 AM

To Whom it may concern,
I am sending in this public comment requesting that Northern Atascosa and Southern Bexar area be added to the list of ambient air monitoring sites due to the influx of Industrial Sand mines and processing plants in the area. I am requesting this to be done to ensure regulatory compliance, inform nearby citizens and for public health and safety.
Patrick Holt
1540 Coble Rd Poteet, TX 78065
210-386-4193

Thank you,
Patrick Holt

From:	MONOPS
To:	Holly Landuyt
Cc:	James Janysek
Subject:	FW: Air Monitoring request in Atascosa County
Date:	Wednesday, May 30, 2018 4:58:31 PM
Attachments:	letter.pdf
Importance:	High

Holly,

The email below was received in the monops@ email inbox regarding the AMNP – the standard response has been sent.

~Heather

From: Robbie Denson [mailto:rdenson@atascosacounty.texas.gov]
Sent: Wednesday, May 30, 2018 3:58 PM
To: MONOPS <MONOPS@tceq.texas.gov>
Cc: jessiehardy@netzero.net; County Judge <countyjudge@atascosacounty.texas.gov>
Subject: Air Monitoring request in Atascosa County

Please attached letter from Atascosa County Judge Robert L. Hurley.

Thank you,
Robbie L. Denson
Atascosa County Judge's Office
830-769-3093

May 29, 2018

Atascosa County Judge
Robert L. Hurley
101 Courthouse Circle Dr.
Jourdanton, Texas 78026
830-769-3093

To Whom It May Concern,

As the County Judge for Atascosa County, I would like to request that the Texas Commission on Environmental Quality consider monitoring the air in north Atascosa County due to the influx of sand mines in the area.

The mission of TCEQ is to protect the state's public health and natural resources consistent with sustainable economic development. The goal is clean air, clean water, and the safe management of waste.

I would respectfully ask that your organization take steps necessary to make certain that the air for northern Atascosa County is clean. Air quality monitoring would ensure that our residents, their pets and livestock are not being subjected to inferior air, dangerous pathogens, carcinogens and other pollutants that could ultimately cause them undue illness and harm.

Please feel free to contact my office for more detailed information regarding location of sand mines and status of the subdivisions subjected to them.

Respectfully,

Robert L. Hurley
Atascosa County Judge

From: Roxanne Lopez
To: MONOPS
Subject: Ambient Monitor list
Date: Tuesday, May 29, 2018 11:36:39 AM

I request Northern Atascosa and Southern Bexar be added to their Ambient Air Monitoring NetworkSite List.

Sent from my iPhone

From:	Tally Luna
To:	MONOPS
Subject:	Air monitoring
Date:	Tuesday, May 29, 2018 12:11:14 PM

Attn: Holly Landuyt. MC-165

I am requesting that due to the major influx of Industrial Sand Mines and Processing Plants in Northern Atascosa and Southern Bexar , that this area be added to the Annual Monitoring Network Plan. Monitoring around these sites is needed to ensure regulatory compliance, inform nearby communities and protect public health.

Thank you
Athatlia Luna
210- 514-6803

From: saustinmarlin
To: MONOPS
Subject: Air monitoring
Date: Tuesday, May 29, 2018 12:12:20 PM

I am sending in this public comment requesting that Northern Atascosa and Southern Bexar area be added to the list of ambient air monitoring sites due to the influx of Industrial Sand mines and processing plants in the area. I am requesting this to be done to ensure regulatory compliance, inform nearby citizens and for public health and safety.

Austin Marlin
2990 Ranchtrrail Rd.
San Antonio, TX 78264
210 296 4495

From:	MONOPS
To:	Holly Landuyt
Cc:	James Janysek
Subject:	FW: signatures for petition
Date:	Tuesday, May 29, 2018 10:48:25 AM
Attachments:	Scan.pdf
Importance:	High

Holly,

The email below was received in the monops@ email inbox regarding the AMNP – the standard response has been sent.

~Heather

From: S. Marlin [mailto:slucasmarlin@gmail.com]
Sent: Tuesday, May 29, 2018 10:30 AM
To: MONOPS <MONOPS@tceq.texas.gov>
Subject: signatures for petition

The citizens of Southern Bexar and Northern Atascosa requests that their area be added to the list of ambient air monitoring sites due to the influx of Industrial Sand mines and processing plants in the area. We are requesting this to be done to ensure regulatory compliance, inform nearby citizens and for public health and safety.

Petition to TCEQ for Air Monitoring

We, th[illegible]ned, call to TCEQ to action to implement air monitoring for the Atascosa - Bexar County Line area. This area has shown significant Industrial growth in the last several years with Industrial Sand Mines/Processing Plants. We the undersigned are asking TCEQ to take into consideration that the cumulative effect of these frac sand sites for Particulate Matter PM2.5 and PM10 is not being considered when these permits are being reviewed and approved. Fugitive dust from these facilities are currently being emitted through mining, hauling, drying, loading, cleaning, stockpiling, and the moving of the Industrial Sand. TCEQ Permit applications on the mines and processing plants in this area claim both PM2.5 and PM10 emissions. Proven data from OSHA, American Lung Association, The National Cancer Insitute, MSHA, the EPA, and others all state that inhalation of dust particles causes increased mortality, cardiovascular disease, lung disease, and lung cancer. The EPA also states that numerous scientific studies have linked particle pollution exposure to a variety of problems, including: nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms, such as irritation of the airways, coughing or difficulty breathing. We the undersigned, strongly feel that knowledge is power and by knowing what the air quality is in our area on a daily basis we would then have the power to choose whether or not we needed to limit our activities accordingly. Monitoring around these frac sand sites is needed to ensure regulatory compliance, inform nearby communities and protect public health.

Name	Date	Address
David Cordeiro	5-28-18	3071 Nunch House Rd San Antonio TX 78264

Petition to TCEQ for Air Monitoring

Name	Date	Address
J.S Marlin	5/24/18	2990 Ranch Trail Rd San Antonio Tx 78264
Sherrian McAnn	5/24/2018	3031 Cross Trail Rad San Antonio, TX 78264
Gilbert L. Nunn		8021 Horse Ranch Rd San Antonio Tx 78264
Helen Harris	5/25/18	3065 Ranch Trail San Antonio 78264
Carl Harris	5/26/18	1818 Castle Arms San Antonio Tx 78218
David Smith	5-24-18	3031 Ranch Hoose Rd
David Cardenas		3071 Ranch House Rd S.A. Tx 78264
Ana M Elizalde	5/28/18	3051 Horse Ranch Rd

From: Wanda McCurdy
To: MONOPS
Subject: Sand Pits
Date: Tuesday, May 29, 2018 11:49:53 AM

My name is Wanda McCurdy. My address is 3065 Ranch Trail Rd (in Bexar County), San Antonio, TX 78264. My phone number is 913-915-4466!
I am sending in this public comment requesting that Northern Atascosa and Southern Bexar area be added to the list of ambient air monitoring sites due to the influx of Industrial Sand mines and processing plants in the area. I am requesting this to be done to ensure regulatory compliance, inform nearby citizens and for public health and safety!

Sent from my iPhone

From:	Talia Melber
To:	MONOPS
Subject:	Public comment/air quality monitoring
Date:	Tuesday, May 29, 2018 2:04:01 PM

Hello,
I am sending in this public comment requesting that Northern Atascosa and Southern Bexar area be added to the list of ambient air monitoring sites due to the influx of Industrial Sand mines and processing plants in the area. I am requesting this to be done to ensure regulatory compliance, inform nearby citizens and for public health and safety.

Talia Melber
1540 Coble Road, Poteet, TX 78065
210-683-5030

Thank you,

Talia Melber, Ph.D.
talia.melber@gmail.com
210-683-5030

From: Pl Narvaez
To: MONOPS
Subject: Air Monitoring
Date: Wednesday, May 30, 2018 4:56:16 PM

I am requesting that southern Bexar and northern atascosa counties be added to the air monitoring network plan. It is needed to ensure regulatory compliance, to inform neighboring communities and to protect public health.

LaToya Narvaez - 180 Box Elder Lane Von Ormy, TX 78073 - 210-473-8304

From:	MONOPS
To:	Holly Landuyt
Cc:	James Janysek
Subject:	FW: Worried!
Date:	Tuesday, May 29, 2018 8:44:22 AM
Importance:	High

Holly,

The email below was received in the monops@ email inbox regarding the AMNP – the standard response has been sent.

~Heather

From: Joe Neira [mailto:joethepainterr@gmail.com]
Sent: Tuesday, May 29, 2018 6:50 AM
To: MONOPS <MONOPS@tceq.texas.gov>
Subject: Worried!

TCEQ
Attention: Holly Landuyt, MC-165

I am requesting that due to the major influx of Industrial Sand Mines and Processing Plants in Northern Atascosa and Southern Bexar , that this area be added to the Annual Monitoring Network Plan. Monitoring around these sites is needed to ensure regulatory compliance, inform nearby communities and protect public health.

From: Danelle Pascarella
To: MONOPS
Subject: Annual Monitoring Network Plan
Date: Tuesday, May 29, 2018 11:28:26 AM

TCEQ
Attention: Holly Landuyt, MC-165

I am requesting that due to the major influx of Industrial Sand Mines and Processing Plants in Northern Atascosa and Southern Bexar , that this area be added to the Annual Monitoring Network Plan. Monitoring around these sites is needed to ensure regulatory compliance, inform nearby communities and protect public health.

Danelle Pascarella
Atascosa County Concerned Citizen

From: Jim Pesek
To: MONOPS
Subject: Annual Monitoring Network Plan
Date: Tuesday, May 29, 2018 3:59:33 PM

Attention: Holly Landuyt, MC-165

As a resident of Northern Atascosa County I have seen and heard about numerous frac and sand mines in my immediate area. I would request you add northern Atascosa and southern Bexar County to the Annual Monitoring Network Plan.

Thank you

James and Darla Pesek
1150 Bruce Rd.
Poteet, Tx 78065
830 281-4446

From: Tara Ramirez
To: MONOPS
Subject: Requesting ambient air monitoring in Northern Atascosa and Southern Bexar
Date: Tuesday, May 29, 2018 3:03:31 PM

I am sending in this public comment requesting that Northern Atascosa and Southern Bexar area be added to the list of ambient air monitoring sites due to the influx of Industrial Sand mines and processing plants in the area. I am requesting this to be done to ensure regulatory compliance, inform nearby citizens and for public health and safety.

Thank you,

Tara Ramirez
210-793-7531

From: Marie Smith
To: MONOPS
CC: Jessie Hardy
Subject: Air Monitors
Date: Tuesday, May 29, 2018 5:07:58 AM CDT

The citizens of Southern Bexar and Northern Atascosa requests that their area be added to the list of ambient air monitoring sites due to the influx of Industrial Sand mines and processing plants in the area. We are requesting this to be done to ensure regulatory compliance, inform nearby citizens and for public health and safety.

Sincerely,

Marie Smith

Not Just Dust Member

Petition to TCEQ for Air Monitoring

We, the undersigned, call to TCEQ to action to implement air monitoring for the Atascosa - Bexar County Line area. This area has shown significant Industrial growth in the last several years with Industrial Sand Mines/Processing Plants. We the undersigned are asking TCEQ to take into consideration that the cumulative effect of these frac sand sites for Particulate Matter PM2.5 and PM10 is not being considered when these permits are being reviewed and approved. Fugitive dust from these facilities are currently being emitted through mining, hauling, drying, loading, cleaning, stockpiling, and the moving of the Industrial Sand. TCEQ Permit applications on the mines and processing plants in this area claim both PM2.5 and PM10 emissions. Proven data from OSHA, American Lung Association, The National Cancer Insitute, MSHA, the EPA, and others all state that inhalation of dust particles causes increased mortality, cardiovascular disease, lung disease, and lung cancer. The EPA also states that numerous scientific studies have linked particle pollution exposure to a variety of problems, including: nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms, such as irritation of the airways, coughing or difficulty breathing. We the undersigned, strongly feel that knowledge is power and by knowing what the air quality is in our area on a daily basis we would then have the power to choose whether or not we needed to limit our activities accordingly. Monitoring around these frac sand sites is needed to ensure regulatory compliance, inform nearby communities and protect public health.

Name	Date	Address
Mary Holmes	5-27-18	11530 Whisper Moss
Linda Wylie	5-27-18	14119 Knit Circle
LaJeane Dyk	5-27-18	14419 Biltmore Dr SA TX
Martha Bane	5 27 18	4043 Willow Green SA TX
Marion Tercios	5-27-18	3139 Samas, S.A.
Robbie Jenkins	5-27-18	9706 Nona Kay SAT 78217
Susan Porr	5.27.18	106 Stanford 78212

Petition to TCEQ for Air Monitoring

We, the undersigned, call to TCEQ to action to implement air monitoring for the Atascosa - Bexar County Line area. This area has shown significant Industrial growth in the last several years with Industrial Sand Mines/Processing Plants. We the undersigned are asking TCEQ to take into consideration that the cumulative effect of these frac sand sites for Particulate Matter PM2.5 and PM10 is not being considered when these permits are being reviewed and approved. Fugitive dust from these facilities are currently being emitted through mining, hauling, drying, loading, cleaning, stockpiling, and the moving of the Industrial Sand. TCEQ Permit applications on the mines and processing plants in this area claim both PM2.5 and PM10 emissions. Proven data from OSHA, American Lung Association, The National Cancer Insitute, MSHA, the EPA, and others all state that inhalation of dust particles causes increased mortality, cardiovascular disease, lung disease, and lung cancer. The EPA also states that numerous scientific studies have linked particle pollution exposure to a variety of problems, including: nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms, such as irritation of the airways, coughing or difficulty breathing. We the undersigned, strongly feel that knowledge is power and by knowing what the air quality is in our area on a daily basis we would then have the power to choose whether or not we needed to limit our activities accordingly. Monitoring around these frac sand sites is needed to ensure regulatory compliance, inform nearby communities and protect public health.

Name	Date	Address
Jacqueline Purvis	5/28/18	8803 Oak Ledge Dr.
Marilyn Seib	5/27/18	403 Heimer Rd
[illegible]	5-27-2018	3610 [illegible]
Judy Langford	5/27/18	9706 Nona Kay 78217
[illegible]	5.27.18	2255 CR 242, 78113
[illegible]	5-27-18	900 Tuxedo Ave. 78209
[illegible]	5/27/18	143 Summertime Dr. 78216
[illegible]	5/27/18	370 Quentin Dr. 78214

Petition to TCEQ for Air Monitoring

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Name	Date	Address
Linda Tolleman	5/28/18	13506 Beltway
Stephanie Engle	5/27/18	2834 Mayfair San 78217
Robert Brown	5-27-18	10306 Fox Hollow 78217
Valda Engle	5-27-18	9823 Gemini Dr. 78217
Jeanie C. Engle	5-27-18	9823 Gemini Dr 78217
Wm A Hammer	5-27-18	3806 Tavern Oaks 78247
Jeanne Hammer	5-27-18	" " "
Jean Seymour	5/27/18	2101 Peach Blossom San 78247

Petition to TCEQ for Air Monitoring

We, the undersigned, call to TCEQ to action to implement air monitoring for the Atascosa - Bexar County Line area. This area has shown significant Industrial growth in the last several years with Industrial Sand Mines/Processing Plants. We the undersigned are asking TCEQ to take into consideration that the cumulative effect of these frac sand sites for Particulate Matter PM2.5 and PM10 is not being considered when these permits are being reviewed and approved. Fugitive dust from these facilities are currently being emitted through mining, hauling, drying, loading, cleaning, stockpiling, and the moving of the Industrial Sand. TCEQ Permit applications on the mines and processing plants in this area claim both PM2.5 and PM10 emissions. Proven data from OSHA, American Lung Association, The National Cancer Insitute, MSHA, the EPA, and others all state that inhalation of dust particles causes increased mortality, cardiovascular disease, lung disease, and lung cancer. The EPA also states that numerous scientific studies have linked particle pollution exposure to a variety of problems, including: nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms, such as irritation of the airways, coughing or difficulty breathing. We the undersigned, strongly feel that knowledge is power and by knowing what the air quality is in our area on a daily basis we would then have the power to choose whether or not we needed to limit our activities accordingly. Monitoring around these frac sand sites is needed to ensure regulatory compliance, inform nearby communities and protect public health.

Name	Date	Address
Marie Smith San Antonio Tx. 78264	5/24/18	3090 Ranch House Rd
Stefanie Garcia San Antonio, Tx 78214	5/24/18	438 Clutter Ave
Natalie Garcia SA, TX 78214	5/24/18	438 Clutter Ave
Gerardo J. Montemez SA, TX 78254	5/24/18	403 Bobcat Hollow
MIKE BARR ATKINS, TX 78101	5/24/18	1911 ACORN CT
Lydia Ramirez San Antonio, TX 78209	24 May 2018	1021 Canterbury Hill
Stella Manzello SAT 78250	5-24-18	5630 Timberhurst
Eloy Cisneros SAT 78250	5-24-18	5630 Timberhurst

Petition to TCEQ for Air Monitoring

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Name	Date	Address
Lil A. MS	5/24/18	303 Congress Ave.
Floranie Welch	5/24/18	16203 LA MADERA RD HELOTES, TX 78023
[signature]	5/24/18	3220 Colony Drive
Joseph Smith	5/27/18	3090 Ranch House Rd., San
Daddy Smith	5/27/18	1014 Ware Blvd # 302 S.A 78214
Donna Miceli	5/27/18	2418 Spokane Rd., San Antonio Tx 78222
Martie Reagan	5/27/18	3090 Ranch House Rd. San Antonio Tx 78264

Hugo E. De León San Antonio, Tx. 78245	24 may 2018	10719 Bayhill Den
Dell Jones San Antonio, Tx. 78229	5/24/2018	6811 Bender Dr
Raul Gonzales	5/24/18	9626 Alamitos Pl.

Public Comment Petition to TCEQ for Air Monitoring

We, the undersigned, call to TCEQ to action to implement air monitoring for the Atascosa - Bexar County Line area. This area has shown significant Industrial growth in the last several years with Industrial Sand Mines/Processing Plants. We the undersigned are asking TCEQ to take into consideration that the cumulative effect of these frac sand sites for Particulate Matter PM2.5 and PM10 is not being considered when these permits are being reviewed and approved. Fugitive dust from these facilities are currently being emitted through mining, hauling, drying, loading, cleaning, stockpiling, and the moving of the Industrial Sand. TCEQ Permit applications on the mines and processing plants in this area claim both PM2.5 and PM10 emissions. Proven data from OSHA, American Lung Association, The National Cancer Institute, MSHA, the EPA, and others all state that inhalation of dust particles causes increased mortality, cardiovascular disease, lung disease, and lung cancer. The EPA also states that numerous scientific studies have linked particle pollution exposure to a variety of problems, including: nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms, such as irritation of the airways, coughing or difficulty breathing. We the undersigned, strongly feel that knowledge is power and by knowing what the air quality is in our area on a daily basis we would then have the power to choose whether or not we needed to limit our activities accordingly. Monitoring around these frac sand sites is needed to ensure regulatory compliance, inform nearby communities and protect public health.

Name	Date	Address
Elaisa Grayton	5-21-18	30177 Fernwood
Mary [illegible]	5-21-18	3017 "Fernwood
Belinda Nolen	5-21-18	22640 Pelwood.
[illegible]	5-21-18	22845 Pelwood Dr.
[illegible]	5-21-18	22785 Pelwood Dr.
[illegible]	5-21-18	22783 Alanwood Dr
[illegible]	5-21-18	22783 Alanwood Dr
[illegible]	5/22/18	22167 Alanwood Dr SA 78264
Shelly Sanchez	5-22-18	22167 Nathis Rd.
[illegible]		22167 Nathis Rd

Public Comment Petition to TCEQ for Air Monitoring

We, the undersigned, call to TCEQ to action to implement air monitoring for the Atascosa - Bexar County Line area. This area has shown significant Industrial growth in the last several years with Industrial Sand Mines/Processing Plants. We the undersigned are asking TCEQ to take into consideration that the cumulative effect of these frac sand sites for Particulate Matter PM2.5 and PM10 is not being considered when these permits are being reviewed and approved. Fugitive dust from these facilities are currently being emitted through mining, hauling, drying, loading, cleaning, stockpiling, and the moving of the Industrial Sand. TCEQ Permit applications on the mines and processing plants in this area claim both PM2.5 and PM10 emissions. Proven data from OSHA, American Lung Association, The National Cancer Institute, MSHA, the EPA, and others all state that inhalation of dust particles causes increased mortality, cardiovascular disease, lung disease, and lung cancer. The EPA also states that numerous scientific studies have linked particle pollution exposure to a variety of problems, including: nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms, such as irritation of the airways, coughing or difficulty breathing. We the undersigned, strongly feel that knowledge is power and by knowing what the air quality is in our area on a daily basis we would then have the power to choose whether or not we needed to limit our activities accordingly. Monitoring around these frac sand sites is needed to ensure regulatory compliance, inform nearby communities and protect public health.

Name	Date	Address
Rebecca Cortez	5-23-18	12910 Club house Blvd
Minnie V Ramos	5-23-18	1835 Martinez Loop #14
Connie Pacheco	5-23-18	21875 US Hwy 281 South
Ruth L Mata	5/23/18	2683 WRIGHT CARPENTER RD.
Dora Herrera	5/23/18	21270 Spanish Dart
Jordan Alegria	5/23/18	21270 Spanish Dart
FRANCISCO L. MATA	" " "	2683 WRIGHT CARPENTER RD.
Jerry Cortez	5-23-18	12910 Clubhouse Blvd.
Faith G Clark	5-23-18	23447 ALANWOOD DR

Public Comment Petition to TCEQ for Air Monitoring

We, the undersigned, call to TCEQ to action to implement air monitoring for the Atascosa - Bexar County Line area. This area has shown significant Industrial growth in the last several years with Industrial Sand Mines/Processing Plants. We the undersigned are asking TCEQ to take into consideration that the cumulative effect of these frac sand sites for Particulate Matter PM2.5 and PM10 is not being considered when these permits are being reviewed and approved. Fugitive dust from these facilities are currently being emitted through mining, hauling, drying, loading, cleaning, stockpiling, and the moving of the Industrial Sand. TCEQ Permit applications on the mines and processing plants in this area claim both PM2.5 and PM10 emissions. Proven data from OSHA, American Lung Association, The National Cancer Institute, MSHA, the EPA, and others all state that inhalation of dust particles causes increased mortality, cardiovascular disease, lung disease, and lung cancer. The EPA also states that numerous scientific studies have linked particle pollution exposure to a variety of problems, including: nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms, such as irritation of the airways, coughing or difficulty breathing. We the undersigned, strongly feel that knowledge is power and by knowing what the air quality is in our area on a daily basis we would then have the power to choose whether or not we needed to limit our activities accordingly. Monitoring around these frac sand sites is needed to ensure regulatory compliance, inform nearby communities and protect public health.

Name	Date	Address
Misty Luna	5/22/18	23167 Alanwood Dr SA. 78264
Kimberly Luna	5/22/18	23167 Alanwood Dr S.A. 78264
Amber L. Luna	5/22/18	23167 Alanwood Dr SA. 78264
Blaha Luna	5/22/18	23167 Alanwood Dr S.A. 78264
Rosa Vargas	5/22/18	3118 Woodfin DR. 78264
Graciela Vargas	5/22/18	3118 Woodfin DR 78264
Christopher Cook	5/23/18	23922 Alanwood Dr 78264
Jennifer Cook	5/23/18	23912 Alanwood Dr 78264

Public Comment Petition to TCEQ for Air Monitoring

We, the undersigned, call to TCEQ to action to implement air monitoring for the Atascosa - Bexar County Line area. This area has shown significant Industrial growth in the last several years with Industrial Sand Mines/Processing Plants. We the undersigned are asking TCEQ to take into consideration that the cumulative effect of these frac sand sites for Particulate Matter PM2.5 and PM10 is not being considered when these permits are being reviewed and approved. Fugitive dust from these facilities are currently being emitted through mining, hauling, drying, loading, cleaning, stockpiling, and the moving of the Industrial Sand. TCEQ Permit applications on the mines and processing plants in this area claim both PM2.5 and PM10 emissions. Proven data from OSHA, American Lung Association, The National Cancer Institute, MSHA, the EPA, and others all state that inhalation of dust particles causes increased mortality, cardiovascular disease, lung disease, and lung cancer. The EPA also states that numerous scientific studies have linked particle pollution exposure to a variety of problems, including: nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms, such as irritation of the airways, coughing or difficulty breathing. We the undersigned, strongly feel that knowledge is power and by knowing what the air quality is in our area on a daily basis we would then have the power to choose whether or not we needed to limit our activities accordingly. Monitoring around these frac sand sites is needed to ensure regulatory compliance, inform nearby communities and protect public health.

Name	Date	Address
Ken Rankin	5/22/18	22479 Bywood Dr 78264
Ruben Ortega	5-22-18	23055 Alanwood 78264
Maria V. Ortega	5-22-18	23055 Alanwood 78264
Kimberley Ortega	5-22-18	23055 Alanwood Dr 78264
[illegible]	5-22-18	3160 Woodfin Dr
[illegible]	5-22-18	3160 Woodfin Dr.
Alicia Diaz	5-22-18	22167 Mathis Rd
Victor A. Esquivel	5-22-18	3240 Woodfin Dr.
Victor Esquivel	5-22-18	3240 Woodfin Dr

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Name	Date	Address
Luz Moreno	May 22, 2018	3102 woodfin Dr. 78264
Juan Mariscal	May 22, 2018	3102 woodfin Dr. 78264
Vincent P Vargas	5/23/2018	3118 Woodfin Dr. 78264
Jose Dubon	5/23/18	3118 Woodfin 78264
Francisco Chavez	5/23/18	3128 Woodfin 78264
David L. Cook	5/23/18	23922 Alanwood Dr 78264
Linda S. Cook	5/23/18	23922 Alanwood Dr 78264

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Name	Date	Address
[signature]	5/28/2018	2990 Ranch Trail Rd, 78264
Noah Marin	5/28/2018	2990 ranch trail Rd
S.L. Marin	5/28/2018	2990 ranch trail Rd 78268

From: MONOPS
Sent: Thursday, May 31, 2018 8:41 AM
To: Holly Landuyt
Cc: James Janysek
Subject: FW: Air Monitoring Request

Importance: High

Holly,

The email below was received in the monops@ email inbox regarding the AMNP – the standard
response has been sent.

~Heather

From: Rebecca Steele [mailto:rebecca.n.steele@gmail.com]
Sent: Wednesday, May 30, 2018 5:13 PM
To: MONOPS <MONOPS@tceq.texas.gov>
Subject: Air Monitoring Request

To Whom it May Concern,
The Steele family would like ask that TCEQ place northern Atascosa Co. & southern Bexar Co. under its
air monitoring program.
Thank You,
Rebecca Steele,
Adam Steele, &
Shelleen Steele

From: MONOPS
To: Holly Landuyt
Cc: James Janysek
Subject: FW: Air Monitoring
Date: Tuesday, May 29, 2018 8:44:53 AM
Attachments: image001.jpg
Importance: High

Holly,

The email below was received in the monops@ email inbox regarding the AMNP – the standard response has been sent.

~Heather

From: Kathy Thomas [mailto:kathy@m-mcontracting.com]
Sent: Tuesday, May 29, 2018 7:07 AM
To: MONOPS <MONOPS@tceq.texas.gov>
Subject: Air Monitoring

TCEQ
Attention: Holly Landuyt, MC-165

I am requesting that due to the major influx of Industrial Sand Mines and Processing Plants in Northern Atascosa and Southern Bexar , that this area be added to the Annual Monitoring Network Plan. Monitoring around these sites is needed to ensure regulatory compliance, inform nearby communities and protect public health. Thank you for your consideration.

Kathy J Thomas
1590 Bruce Rd.
Poteet, Texas 78065
210-218-1242
kathy@m-mcontracting.com

From: Judy Trevino
To: MONOPS
Subject: Sand Mines and public safety!
Date: Tuesday, May 29, 2018 11:06:18 AM

I am sending in this public comment requesting that Northern Atascosa and Southern Bexar area be added to the list of ambient air monitoring sites due to the influx of Industrial Sand mines and processing plants in the area. I am requesting this to be done to ensure regulatory compliance, inform nearby citizens and for public health and safety.

Joe and Judy Trevino
PO Box 285
Leming, TX 78050
(830)569-8131

Thank you,
Mr and Mrs Joe Trevino

From: MONOPS
To: Holly Landuyt
Cc: James Janysek
Subject: FW: 2018 Annual Monitoring Network Plan
Date: Wednesday, May 2, 2018 4:45:29 PM
Importance: High

Holly, the email below was received in the monops@ email inbox in response to the 2018 AMNP. All submitters of comments to the AMNP will receive the following acknowledgement email:

> Thank you for your comments and interest in the Texas Commission on Environmental Quality's (TCEQ) *2018 Annual Monitoring Network Plan* (2018 AMNP). All comments received during the 30-day inspection period, with the associated TCEQ responses, are submitted to the United States Environmental Protection Agency as an appendix to the 2018 AMNP.

Thanks,
Heather

From: John W [mailto:js_weber@hotmail.com]
Sent: Wednesday, May 2, 2018 3:30 PM
To: MONOPS <MONOPS@tceq.texas.gov>
Subject: 2018 Annual Monitoring Network Plan

I believe this last winter that Corpus Christi was not in attainment for PM 2.5. This was because of the many times the wind came from the northerly direction as well as from mobile sources of PM 2.5 from an aging fleet of vehicles. I have experience in air quality from serving on the Treasure Valley Air Quality Advisory Board in the past. The only way to know if Corpus Christi was in attainment or not is to have good data from all areas of the city.

I understand budget concerns. I have suggested to the staff of TCEQ to get better coverage of the Corpus Christi area would be to move a PM 2.5 monitor from either Huisache or Dona Park to either of the other locations that already have monitors (CC West or Holly Rd). The locations are already in use with other monitors. I really believe it is import to sample a wider area. The refinery row only needs one PM 2.5 monitor but the rest of the city needs one as well. Even if just for one year to get some data. Right now we are really in the dark regarding the air quality where most of the population lives.

I did not see a relocation of a PM 2.5 monitor in the 2018 proposed network changes, unless I missed it. Please add the relocation of a PM 2.5 monitor to the 2018 proposed network changes.

Thank you.

John Weber

609 Naples St

Corpus Christi, TX 78404