State of South Carolina Annual Ambient Air Monitoring Network Plan

July 1, 2026 – December 31, 2027

SC DEPARTMENT of ENVIRONMENTAL SERVICES

Bureau of Air Quality

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Certification

This document contains the planned changes and final description of the sites, monitors, and samplers of the South Carolina Ambient Air Monitoring Network (Monitoring Network) for criteria pollutants and related parameters for the eighteen-month period of July 1, 2026, through December 31, 2027. The South Carolina Department of Environmental Services (Department) certifies that the network described herein meets or exceeds the minimum requirements needed to support the State Implementation Plan, national air quality assessments, and policy decisions as required in 40 Code of Federal Regulations (CFR) Part 58, Ambient Air Quality Surveillance, at the time of submittal to the U.S. Environmental Protection Agency (EPA), Region 4. Due to circumstances that may arise during the implementation of the Network Plan from July 1, 2026 through December 31, 2027, some elements of the network may require modification. A notification of modifications will be posted on the Department website and provided to the EPA Region 4 office. Where necessary, a request for approval of deviations from this Network Plan and supporting documentation will be submitted to the EPA Region 4 office.

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Acronyms

AADT – Annual Average Daily Traffic
AQI – Air Quality Index
AQS – Air Quality System
CBSA – Core-Based Statistical Area
CFR – Code of Federal Regulation
CO – Carbon Monoxide
CPW – Charleston Public Works
CSA – Combined Statistical Area
CSN – Chemical Speciation Network
DAQA – Department of Air Quality Analysis
DJJ – Department of Juvenile Justice
DNPH – Analysis method using 2,4-dinitrophenylhydrazine
EPA – Environmental Protection Agency
ESC – Employment Security Commission
EtO – Ethylene Oxide
FDMS – Filter Dynamics Measurement System
FEM – Federal Equivalent Method
FRM – Federal Reference Method
GC/MS – Gas Chromatography / Mass Spectroscopy
HPLC – High Performance Liquid Chromatography
IC – Ion Chromatography
IMPROVE – Interagency Monitoring of Protected Visual Environments
ICP/MS – Inductively Coupled Plasma Mass Spectroscopy
ID – Site Identification
JCI – Johnson Controls Incorporated
MET – Meteorology
MOA – Memorandum of Agreement
Monitoring Network – South Carolina Ambient Air Monitoring Network
MSA – Metropolitan Statistical Area
mSA – Micropolitan Statistical Area
$\mu g/m^3$ – Micrograms per cubic meter
NAAQS – National Ambient Air Quality Standards
NATTS – National Air Toxics Trends Site
NCFS – North Charleston Fire Station
NCore – National Core Monitoring Network
Network Plan – South Carolina Annual Ambient Air Monitoring Network Plan
NO – Nitric Oxide
NO_2 – Nitrogen Dioxide
NO_X – Nitrogen Oxides
NO_y – NO_X and other oxidized species
NPAP – National Performance Audit Program
NWR – National Wildlife Refuge
OMB – Office of Management and Budget
PAH – Polycyclic Aromatic Hydrocarbons
PAMS – Photochemical Assessment Monitoring Stations
PEP – Performance Evaluation Program
$PM_{2.5}$ – Particulate Matter ≤ 2.5 microns
PM_{10} – Particulate Matter ≤ 10 microns
PPB – Parts Per Billion
PPM – Parts Per Million
PTFE – Polytetrafluoroethylene
PUF – Polyurethane Foam
PWEI – Population Weighted Emissions Index
QA – Quality Assurance
QAPP – Quality Assurance Project Plan
QC – Quality Control
SCC – Sharp Cut Cyclone
SCDES – South Carolina Department of Environmental Services
SLAMS – State and Local Air Monitoring Station
SO_2 – Sulfur Dioxide
SPM – Special Purpose Monitor
STN – Speciation Trends Network
TAD – Technical Assistance Document
TEOM – Tapered Element Oscillating Microbalance

TPY – Tons Per Year
TSP – Total Suspended Particulate
UV – Ultraviolet
VOC – Volatile Organic Compound
VSCC – Very Sharp Cut Cyclone

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Summary of Changes for July 1, 2026 through December 31, 2027

Augusta-Richmond County, GA-SC MSA
Trenton Monitoring Site – The Trenton Monitoring Site began operating a SPM rotating SO_2 monitor with its certification of data start date on January 1, 2026.

Charleston-North Charleston MSA
North Charleston Fire Station – The QA Collocated $PM_{2.5}$ sampler switched from a 1:3 operating schedule to a 1:1 operating schedule starting July 19, 2025. Additionally, after assessing the comparability of the $PM_{2.5}$ FEM to the collocated FRM, the Department has determined that the $PM_{2.5}$ FEM at this monitoring site does not meet $PM_{2.5}$ comparability requirements for data quality. The Department requests that data from this FEM monitor be excluded from comparison to the NAAQS and used for AQI purposes only. Comparability Assessments can be found in Appendix J.

Cape Romain – The continuous FEM T640 $PM_{2.5}$ monitor will be removed and replaced by the end of the year with an FRM $PM_{2.5}$ sampler in order to address concerns with data produced by the T640 monitors.

Charlotte-Concord-Gastonia, NC-SC MSA
York Landfill Monitoring Site – The SPM rotating SO_2 monitor moved to the Trenton Monitoring Site on December 31, 2025.

Columbia MSA
Parklane Monitoring Site–Precipitation chemistry analysis has been discontinued at this site. The FRM $PM_{2.5}$ samplers located at this monitoring site switched from a 1:3 operating schedule to a 1:1 operating schedule on November 1, 2025. A BAM 1020 continuous $PM_{2.5}$ monitor will intermittently operate at this site for no more than 2 years in order to evaluate the method code for comparison to other $PM_{2.5}$ methods. The monitor is running for testing purposes only and data will be used internally.

Irmo DJJ Monitoring Site- After assessing the comparability of the $PM_{2.5}$ FEM to the collocated FRM, the Department has determined that the $PM_{2.5}$ FEM at this monitoring site does not meet $PM_{2.5}$ comparability requirements for data quality. The Department requests that data from this FEM monitor be excluded from comparison to the NAAQS and used for AQI purposes only. Comparability Assessments can be found in Appendix J.

Florence MSA

Williams Monitoring Site- After assessing the comparability of the $PM_{2.5}$ FEM to the collocated FRM, the Department has determined that the $PM_{2.5}$ FEM at this monitoring site does not meet $PM_{2.5}$ comparability requirements for data quality. The Department requests that data from this FEM monitor be excluded from comparison to the NAAQS and used for AQI purposes only. Comparability Assessments can be found in Appendix J.

Greenville-Anderson-Greer MSA

MSA Requirements- In 2025, the Greenville-Anderson-Greer MSA crossed 1 million in population, triggering the requirement for a near road monitoring site which includes NO_2, $PM_{2.5}$, and CO monitors. In addition, the population increase also triggers the requirements for an additional PM_{10} monitor in the MSA, as well as an area-wide NO_2 monitor. The NO_2 monitor located at the Greenville ESC (45-045-0015) Monitoring Site will serve as the required area wide monitor. The Department has started the process of locating appropriate sites for the near road NO_2, $PM_{2.5}$, and CO monitors, as well as the additional required PM_{10} monitor.

Greenville ESC Monitoring Site- After assessing the comparability of the $PM_{2.5}$ FEM to the collocated FRM, the Department has determined that the $PM_{2.5}$ FEM at this monitoring site does not meet $PM_{2.5}$ comparability requirements for data quality. The Department requests that data from this FEM monitor be excluded from comparison to the NAAQS and used for AQI purposes only. Comparability Assessments can be found in Appendix J.

Hilton Head Island-Bluffton-Port Royal MSA

No changes planned.

Myrtle Beach-Conway-North Myrtle Beach SC MSA

The Department requests concurrence to establish the Maple Monitoring Site (45-051-0009) to serve as the second required ozone monitoring site in the MSA. A detailed site proposal can be found in Appendix I.

Coastal Carolina Monitroing Site- $PM_{2.5}$ monitoring was briefly suspended while the T640 monitor was replaced with a Met One BAM 1020 monitor configured with a Sharp Cut Cyclone (SCC). The BAM 1020 began operating on December 9, 2025, as a non-FEM monitor and the data collected is used for AQI purposes only under the parameter code 88502.

Spartanburg MSA

T.K. Gregg Monitoring Site- The Department requests concurrence to establish an ozone monitor at the T.K. Gregg Monitoring Site to serve as the second required ozone monitor in the MSA. A detailed site proposal can be found in Appendix I. Additionally, after assessing the comparability of the $PM_{2.5}$ FEM to the collocated FRM, the Department has determined that the $PM_{2.5}$ FEM at this monitoring site does not meet $PM_{2.5}$ comparability requirements for data quality. The Department requests that data from this FEM monitor be excluded from comparison to the NAAQS and used for AQI purposes only. Comparability Assessments can be found in Appendix J.

Sumter MSA

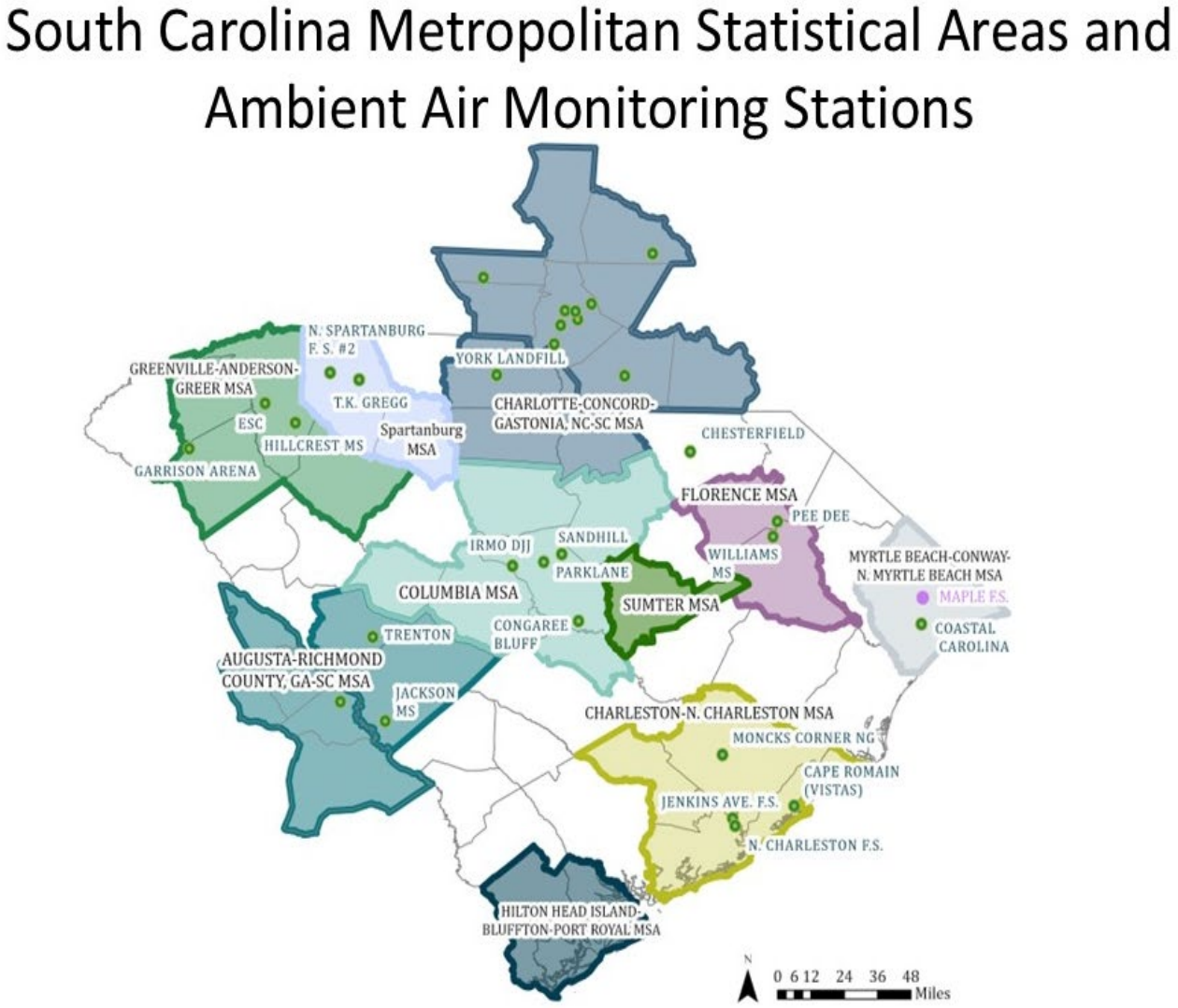
No changes planned.

Remainder of State

Chesterfield Monitoring Site- After assessing the comparability of the $PM_{2.5}$ FEM to the collocated FRM, the Department has determined that the $PM_{2.5}$ FEM at this monitoring site does not meet $PM_{2.5}$ comparability requirements for data quality. The Department requests that data from this FEM monitor be excluded from comparison to the NAAQS and used for AQI purposes only. As well as requesting exclusion moving forward, we request that the data produced by the T640 monitor at the Chesterfield Monitoring Site be excluded from comparison to the NAAQS starting on 9/6/2023 to account for data collected after the firmware update that was not previously able to be excluded. Comparability Assessments can be found in Appendix J. After the replacement of the primary method code 636 $PM_{2.5}$ monitor with an FRM $PM_{2.5}$ sampler at the Cape Romain Monitoring Site, the FRM $PM_{2.5}$ sampler will become the primary monitor at the Chesterfield Monitoring Site.

Introduction

The Department or its predecessors have operated an air quality monitoring network in South Carolina since 1959. During that time, the network has continually evolved to meet the requirements and needs of the Department's Air Program and to comply with federal requirements. In 2026-2027, the network within South Carolina will be comprised of 59 monitors and samplers at 20 sites. Furthermore, the Department is proposing the addition of 2 monitors and 1 site to the network. The South Carolina Monitoring Sites can be seen in the map below. The additional site is shown in purple below.



The Annual Ambient Air Monitoring Network Plan

On October 17, 2006, the EPA published revisions to the ambient monitoring regulations (71 FR 61298) requiring quality assurance (QA), monitor designations, minimum requirements for both number and distribution of monitors among

metropolitan statistical areas (MSAs), and probe siting changes. The regulations also included the requirement for the submission of an annual monitoring network plan and 5-year periodic network assessments.

This document constitutes the 2026-2027 South Carolina Annual Ambient Air Monitoring Network Plan (2026 Network Plan) and covers the eighteen-month period from July 1, 2026, through December 31, 2027. This 2026 Network Plan, as required and described in 40 CFR 58.10, and Periodic Network Assessment, must contain the following information for each monitoring station in the network:

- The Air Quality System (AQS) site identification number (ID) for existing stations,
- Location of each monitoring station, including street address and geographical coordinates,
- The sampling and analysis method used for each measured parameter,
- The operating schedule for each monitor,
- Any proposal to remove or relocate a monitoring station within a period of eighteen months following the network plan submittal,
- The monitoring objective and spatial scale of representativeness for each monitor,
- The identification of any sites that are suitable for comparison against the Particulate Matter < 2.5 microns ($PM_{2.5}$) National Ambient Air Quality Standard (NAAQS), and
- The MSA, Core-Based Statistical Area (CBSA), Combined Statistical Area (CSA), or other area represented by the monitor.

Each MSA and their monitoring sites are listed in the Site Description section. They are organized into two main parts:

- Network Summaries: A table which presents the total number of sites and monitors for the State and a list of all proposed changes to the current network, as well as descriptions of the monitoring network for each pollutant, and
- Air Monitoring Station Descriptions: An outline of the designations, parameters, monitoring methods, and the purpose for each monitor at the site.

The Monitoring Network is reviewed annually, and any planned changes are described in the annual Network Plan. Network Plans go through a 30-day public review and comment period prior to submission to the EPA Region 4 Administrator.

Public Participation Opportunities

In response to public interest, prior to publication of documents, the Department

solicits involvement from both internal (the Department) and external workgroups about the potential impact of the monitoring changes. Opportunities for public involvement include:

A webpage maintained for public review of draft publications, and access to current monitoring plan, reference documents, and announcements.[1]
The proposed 2026 Network Plan was available for public review and comment from April 24, 2026, through May 26, 2026. All public comments received are summarized and addressed in Appendix A of the final 2026 Network Plan submitted to the EPA.

The Department is committed to the continuation of opportunities for input and participation in the development of the annual revisions of the Network Plan and the periodic assessments of the air quality surveillance system.

South Carolina Ambient Air Monitoring
South Carolina monitors for criteria pollutants, air toxics, meteorology, and precipitation. The following sections explain the role that the CBSA and MSA population and design values have in ambient air monitoring.

Population, MSAs, and Design Values
The EPA regulation 40 CFR Part 58 requires each state to maintain a minimum number of ambient air monitors to properly characterize air quality and to meet any required objectives of the air monitoring network.[2] In general, ambient air monitoring requirements are based on the Metropolitan Statistical Area (MSA) population, emissions, and current ambient air monitoring design values.

The current South Carolina MSA names, associated counties, and populations are listed below. An MSA's total population is derived by adding the separate populations of all the counties.

2026 South Carolina MSAs and Shared MSAs with Counties and 2025 Populations	
MSA Name and Counties Included in MSA	**Population**
Augusta-Richmond County, GA-SC MSA Burke County, GA Columbia County, GA	**641,231**

[1] https://gis.des.sc.gov/monitors/
[2] 40 CFR 58.11 paragraph (a)(3)(c) and Appendix D to 40 CFR Part 58.

2026 South Carolina MSAs and Shared MSAs with Counties and 2025 Populations	
MSA Name and Counties Included in MSA	**Population**
Lincoln County, GA McDuffie County, GA Richmond County, GA Aiken County, SC Edgefield County, SC	
Charleston-North Charleston, SC MSA Berkeley County, SC Charleston County, SC Dorchester County, SC	**889,263**
Charlotte-Concord-Gastonia, NC-SC MSA Anson County, NC Cabarrus County, NC Gaston County, NC Iredell County, NC Lincoln County, NC Mecklenburg County, NC Rowan County, NC Union County, NC Chester County, SC Lancaster County, SC York County, SC	**2,938,830**
Columbia, SC MSA Calhoun County, SC Fairfield County, SC Kershaw County, SC Lexington County, SC Richland County, SC Saluda County, SC	**879,918**
Florence, SC MSA Darlington County Florence County	**201,392**
Greenville-Anderson-Greer, SC MSA Anderson County, SC Greenville County, SC Laurens County, SC Pickens County, SC	**1,014,101**

2026 South Carolina MSAs and Shared MSAs with Counties and 2025 Populations	
MSA Name and Counties Included in MSA	**Population**
Hilton Head Island-Bluffton-Port Royal, SC MSA Beaufort County, SC Jasper County, SC	**242,966**
Myrtle Beach-Conway-North Myrtle Beach, SC MSA Horry County, SC	**427,551**
Spartanburg, SC MSA Spartanburg County, SC Union County, SC	**407,656**
Sumter, SC MSA Sumter County, SC	**105,067**

South Carolina has one MSA (Augusta-Richmond County, GA-SC) shared with Georgia and one MSA (Charlotte-Concord-Gastonia, NC-SC MSA) shared with North Carolina. In cooperation with the State of South Carolina, each of the two states have signed Memorandum of Agreements (MOA), which specifies the responsibilities of each party to develop a monitoring network that meets the appropriate monitoring objectives for the shared MSAs. The MOAs (located in Appendix F) are with the Georgia Department of Natural Resources Environmental Protection Division,[3] the North Carolina Department of Environmental Quality Division of Air Quality, and Mecklenburg County, North Carolina Land Use and Environmental Services Agency[4].

Once the MSA boundaries are determined by OMB and their populations are calculated, the ambient air monitors are established at ambient air monitoring sites within the MSAs as determined by federal regulations and EPA guidance for each pollutant.

[3] The Memorandum of Agreement on Air Quality Monitoring for Criteria Pollutants for the Augusta-Richmond County Metropolitan Statistical Area (MSA) was signed on March 6, 2017, by the South Carolina Bureau of Air Quality and the Georgia Environmental Protection Division-Air Protection Branch.

[4] The Memorandum of Agreement on Air Quality Monitoring for Criteria Pollutants for the Charlotte-Gastonia-Concord Metropolitan Statistical Area (MSA) was signed on July 1, 2016, by the South Carolina Bureau of Air Quality, the North Carolina Department of Environmental and Natural Resources-Division of Air Quality and the Mecklenburg County, North Carolina Land Use and Environmental Service Agency-Air Quality.

Network Operation and Summary

The Division of Air Quality Analysis (DAQA) along with regional staff in the Bureau of Regional and Laboratory Services has the primary responsibility for the establishment, maintenance, and operation of the monitoring network using EPA designated Federal Reference Methods (FRM) or Federal Equivalent Methods (FEM). Samples collected as a part of routine monitoring or special projects are analyzed in the DAQA laboratory or sent to another approved laboratory for analysis. Following the validation process, data is reported to the EPA's Air Quality System (AQS) database which is available for public access.

It is the Department's intent that all criteria pollutant monitors and samplers used for compliance monitoring be sited and operated in accordance with all requirements of 40 CFR Part 58, Appendix A, C, D, and E. Appendix G is also discussed below.

Appendix A: As specified in Appendix A, regular calibrations, flow verifications, and Quality Control (QC) checks of the measurement systems are performed to verify that the instruments are operating correctly, and data being collected is accurate. All monitors and samplers are calibrated at least once per year. Calibration is also performed whenever the monitor/sampler fails a routine Quality Control (QC)/precision check or a multi-point check, when maintenance is performed that may affect the monitor response, or if the monitor is located away from the building in which it was calibrated. Where possible, a QC/precision check or flow check precedes any maintenance that is expected to affect monitor response.

The QA activities supporting the Monitoring Network meet or exceed the QA requirements defined in 40 CFR Part 58, Appendix A. Raw data is collected hourly from sites across the state and provided to internal data users (forecasters and data analysts) and to the AIRNow database which is available to the public. Ozone monitors provide hourly data to AIRNow during Ozone Season (March 1-October 31).

Before the data is submitted to AQS, it is verified to meet quality QA/QC requirements through review of the instrument performance documentation. Instrument QA/QC alone is not sufficient to assure monitoring data quality. In addition to periodic site assessments, the Department conducts additional visits to monitoring sites to document comparisons with applicable siting criteria.

Appendix C: All criteria pollutant monitoring in the monitoring networks for comparison to the NAAQS is performed using the EPA designated FRM or FEM.

Appendix D: All criteria pollutant monitoring in the monitoring networks meets the monitoring objectives, spatial scales, and design criteria of this Appendix.

Appendix E: Each site description page in this document contains a statement addressing compliance to 40 CFR Part 58, Appendix E for State and Local Air Monitoring Station (SLAMS) monitors. If the site is not in compliance, a plan is presented to address the deficiency. For special purpose monitor (SPM) monitors, 40 CFR 58.20 states that compliance is optional, but monitoring organizations are encouraged to meet as many of the Appendix E requirements as possible.

Appendix G: The Air Quality Index (AQI) reporting is required if an MSA has a population over 350,000 people. Although not required, the Florence MSA also reports AQI values. The following areas report AQI values:

- Charlotte-Concord-Gastonia, NC-SC MSA
- Greenville-Anderson-Greer MSA
- Columbia MSA
- Charleston-North Charleston MSA
- Augusta-Richmond County, GA-SC MSA
- Myrtle Beach-Conway-North Myrtle Beach MSA
- Spartanburg MSA
- Florence MSA

The Mecklenburg County Air Quality reports AQI values for the Charlotte-Concord-Gastonia, NC-SC MSA. Both the Georgia Environmental Protection Division (GA EPD) and the Department report AQI values for the Augusta-Richmond County GA-SC MSA.

Finally, DAQA operates under the approved SCDES Quality Assurance Management Plan (QMP), the Ambient Air Quality Monitoring Quality Assurance Project Plan (QAPP), Particulate Matter ($PM_{2.5}$) QAPP, and approved plans for specific projects. The EPA Region 4 office may conduct audits of any component of the operation of the network or quality management system. DAQA also participates in the National Performance Audit Program (NPAP) and the Performance Evaluation Program (PEP) administered by the EPA to provide independent audits.

The NAAQS and Design Values

Although all monitoring measurement equipment may be referred to as monitors, there are actually two types of monitoring equipment. A “monitor” samples for data continuously, while a “sampler” monitors intermittently (e.g. once daily (1:1), once every 3 days (1:3), or once every 6 days (1:6)).

Once the monitors collect enough data (1 or 3 years, depending on criteria pollutant), a design value can be calculated and compared to the EPA established NAAQS, which are shown in the table below. The "Primary/Secondary" column in the table refers to the type of standard. A criteria pollutant may have more than one type of standard. The primary standards are for protection of the public's health, while the secondary standards are for the protection of animals, crops, vegetation, and buildings. The "Averaging Time" is how the data is combined and calculated. The "Level" is the NAAQS standard. The "Form" are additional requirements to calculate the standard.

Pollutant	Primary/ Secondary	Averaging Time	Level	Form
Carbon Monoxide (CO)	Primary	8 hours	9 ppm	Not to be exceeded more than once per year
		1 hour	35 ppm	
Lead (Pb)	Primary and Secondary	Rolling 3-month average	0.15 $\mu g/m^3$	Not to be exceeded
Nitrogen Dioxide (NO_2)	Primary	1 hour	100 ppb	98th percentile of 1-hour daily maximum concentrations, averaged over 3 years
	Primary and Secondary	1 year	53 ppb	Annual mean
Ozone (O_3)	Primary and Secondary	8 hours	0.070 ppm	Annual fourth-highest daily maximum 8-hour concentration averaged over 3 years
$PM_{2.5}$	Primary	1 year	9.0 $\mu g/m^3$	Annual mean, averaged over 3 years
	Secondary	1 year	15.0 $\mu g/m^3$	Annual mean, averaged over 3 years
	Primary and Secondary	24 hours	35 $\mu g/m^3$	98th percentile averaged over 3 years
PM_{10}	Primary and Secondary	24 hours	150 $\mu g/m^3$	Not to be exceeded more than once per year
Sulfur Dioxide (SO_2)	Primary	1 hour	75 ppb	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
	Secondary	1 year	10 ppb	Annual mean, averaged over 3 years

[1]The EPA promulgated the revised secondary SO_2 limit on December 11, 2024

The criteria pollutant design values are calculated each year and compared to the standards to determine whether the MSA is in attainment for that criteria pollutant. The two tables presented below indicate the 2024 and 2025 certified design values for the South Carolina criteria pollutant monitoring network.

2024 Criteria Pollutant Design Values

Site ID	County	Site Name	Ozone (ppm)	$PM_{2.5}$ Annual ($\mu g/m^3$)	$PM_{2.5}$ 24-hour ($\mu g/m^3$)	PM_{10} (# Expected Exceedances)	SO_2 1-hour (ppb)	NO_2 1-hour (ppb)	NO_2 Annual (ppb)	CO 8-hour (ppm)	CO 1-hour (ppm)	Lead ($\mu g/m^3$)
003-0003	Aiken	Jackson Middle School	.061									
007-0006	Anderson	Garrison Arena	.063									
015-1002	Berkeley	Moncks Corner	.061									
019-0003	Charleston	Jenkins Avenue					9	33	6.02			
019-0020	Charleston	North Charleston Fire Station		7.5	16							
019-0046	Charleston	Cape Romain	.058									
025-0001	Chesterfield	Chesterfield	.061	7.3	18							
031-0003	Darlington	Pee Dee	.063									
037-	Edgefield	Trenton	.059	8.0	14							

Site ID	County	Site Name	Ozone (ppm)	$PM_{2.5}$ Annual ($\mu g/m^3$)	$PM_{2.5}$ 24-hour ($\mu g/m^3$)	PM_{10} (# Expected Exceedances)	SO_2 1-hour (ppb)	NO_2 1-hour (ppb)	NO_2 Annual (ppb)	CO 8-hour (ppm)	CO 1-hour (ppm)	Lead ($\mu g/m^3$)
0001												
041-0003	Florence	Williams Middle School		7.8	13							
041-8003	Florence	Clarios Woods										0.0*
045-0015	Greenville	Greenville ESC		8.4	18	0	2	39	6.84			
045-0016	Greenville	Hillcrest Middle School	.065	7.8	18							
051-0008	Horry	Coastal Carolina	.062									
079-0007	Richland	Parklane	.061	7.4	13		2			0.60	0.95	
079-0021	Richland	Congaree Bluff	.057									
079-1001	Richland	Sandhill	.064					29	3.44			
083-0009	Spartanburg	North Spartanburg Fire Station	.068									
083-0011	Spartanburg	T.K. Gregg		8.3	19							

Site ID	County	Site Name	Ozone (ppm)	$PM_{2.5}$ Annual ($\mu g/m^3$)	$PM_{2.5}$ 24-hour ($\mu g/m^3$)	PM_{10} (# Expected Exceedances)	SO_2 1-hour (ppb)	NO_2 1-hour (ppb)	NO_2 Annual (ppb)	CO 8-hour (ppm)	CO 1-hour (ppm)	Lead ($\mu g/m^3$)
091-0008	York	York County Landfill	.065									
* denotes design values that did not meet data completeness requirements												

2025 Criteria Pollutant Design Values

Site ID	County	Site Name	Ozone (ppm)	$PM_{2.5}$ Annual ($\mu g/m^3$)	$PM_{2.5}$ 24-hour ($\mu g/m^3$)	PM_{10} (# Expected Exceedances)	SO_2 1-hour (ppb)	NO_2 1-hour (ppb)	NO_2 Annual (ppb)	CO 8-hour (ppm)	CO 1-hour (ppm)
003-0003	Aiken	Jackson Middle School	.060								
007-0006	Anderson	Garrison Arena	.063								
015-1002	Berkeley	Moncks Corner	.061								
019-0003	Charleston	Jenkins Avenue					6	33	6.30		
019-0020	Charleston	North Charleston Fire Station		7.6	16						
019-0046	Charleston	Cape Romain	.059	7.1	17						
025-	Chesterfield	Chesterfield	.060	8.0	20						

Site ID	County	Site Name	Ozone (ppm)	$PM_{2.5}$ Annual ($\mu g/m^3$)	$PM_{2.5}$ 24-hour ($\mu g/m^3$)	PM_{10} (# Expected Exceedances)	SO_2 1-hour (ppb)	NO_2 1-hour (ppb)	NO_2 Annual (ppb)	CO 8-hour (ppm)	CO 1-hour (ppm)
0001											
031-0003	Darlington	Pee Dee	.064								
037-0001	Edgefield	Trenton	.059	8.2	17						
041-0003	Florence	Williams Middle School		7.9	18						
045-0015	Greenville	Greenville ESC		8.4	19	0	2	39	6.13		
045-0016	Greenville	Hillcrest Middle School	.063	8.0	18						
051-0008	Horry	Coastal Carolina	.062								
079-0007	Richland	Parklane	.061	7.8	17		2			0.7	1.18
079-0021	Richland	Congaree Bluff	.056								
079-0022	Richland	Irmo DJJ		7.6	17						
079-1001	Richland	Sandhill	.063					30	3.76		

Site ID	County	Site Name	Ozone (ppm)	$PM_{2.5}$ Annual ($\mu g/m^3$)	$PM_{2.5}$ 24-hour ($\mu g/m^3$)	PM_{10} (# Expected Exceedances)	SO_2 1-hour (ppb)	NO_2 1-hour (ppb)	NO_2 Annual (ppb)	CO 8-hour (ppm)	CO 1-hour (ppm)
083-0009	Spartanburg	North Spartanburg Fire Station	.068								
083-0011	Spartanburg	T.K. Gregg		8.5	19						
091-0008	York	York County Landfill	.065								

Required Minimum Monitoring Summary

Based on the latest MSA population data and design values information, the minimum monitoring requirements for each MSA are:

MSA	Ozone	$PM_{2.5}$	$PM_{2.5}$ Cont.	PM_{10}	SO_2	NO_2	NO/NO_y	CO
*Augusta-Richmond County, GA-SC MSA	2	2	1	1-2	0	0	0	0
Charleston-North Charleston MSA	2	1	1	1-2	1	0	0	0
*Charlotte-Concord-Gastonia, NC-SC MSA	2	3	2	2-4	1	3**	1**	2
Columbia MSA (NCore)	2	1	1	1-2	0	0	1	1
Florence MSA	1	1	1	0	0	0	0	0
Greenville-Anderson-Greer MSA	2	3	2	2-4	0	2	0	1
Hilton Head Island-Bluffton-Port Royal MSA	0	0	0	0	0	0	0	0
Myrtle Beach-Conway-North Myrtle Beach, SC MSA	2	0	0	0-1	0	0	0	0
Spartanburg MSA	2	1	1	0-1	0	0	0	0
Sumter MSA	0	0	0	0	0	0	0	0

*Minimum ambient air monitoring requirements are met cooperatively with the States of Georgia and North Carolina.

**The Charlotte-Concord-Gastonia MSA is required to have two near-road monitors, one area-wide monitor, and a NO/NO_y at the NCore site.

South Carolina also measures air toxics and meteorology. The table below summarizes the 2026-2027 Ambient Air Monitoring Network.

SC Network Summary: Calendar Year July 1, 2026, through December 31, 2027, Air Monitoring Stations and Monitors																		
Region	Sites	$PM_{2.5}$ Intermittent	$PM_{2.5}$ Continuous	$PM_{2.5}$ Speciation	PM_{10}	Lead	Ozone	SO_2	NO_2	NO/NO_y	CO	Metals	Carbonyls	SVOC	VOC	EtO	Precipitation	Meteorology
*Augusta-Richmond County, GA-SC MSA	2	1	1	0	0	0	2	1**	0	0	0	0	0	0	0	0	0	0
Charleston-North Charleston MSA	4	2	2	0	1	0	2	1	1	0	0	0	0	0	0	0	0	1
*Charlotte-Concord-Gastonia, NC-SC MSA	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Columbia MSA	4	3	2	1	2	0	3	1	1	1	1	0	0	0	0	0	1	1
Florence MSA	2	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Greenville-Anderson-Greer MSA	3	3	1	0	1	0	2	1	1	0	0	0	0	0	0	0	0	0
Myrtle Beach-Conway-North Myrtle Beach, SC MSA	2***	0	1	0	0	0	2***	0	0	0	0	0	0	0	0	0	0	0
Spartanburg MSA	2	1	1	0	0	0	2***	0	0	0	0	0	0	0	0	0	0	0
Remainder of State	1	1	1	0	0	0	1	0	0	0	0	2	2	2	2	1	0	0
Totals	**21**	**12**	**10**	**1**	**4**	**0**	**16**	**4***	**3**	**1**	**1**	**2**	**2**	**2**	**2**	**1**	**1**	**2**

*Minimum ambient air monitoring requirements are met cooperatively with the States of Georgia and North Carolina.

**These monitors have been selected to run on a rotational schedule in order to best utilize resources. The monitor moved from York Landfill Monitoring Site to Trenton Monitoring Site as of January 1, 2026.

*** Indicates a newly proposed monitor that requires concurrence by EPA

Monitoring Network Descriptions

The following sections describe each South Carolina Monitoring Network, including the location of each monitor, how the network meets the required objectives, and how the pollutant is measured.

Carbon Monoxide (CO) Network

CO is a colorless, odorless gas that can be harmful when inhaled in large amounts. CO is released when something is burned.

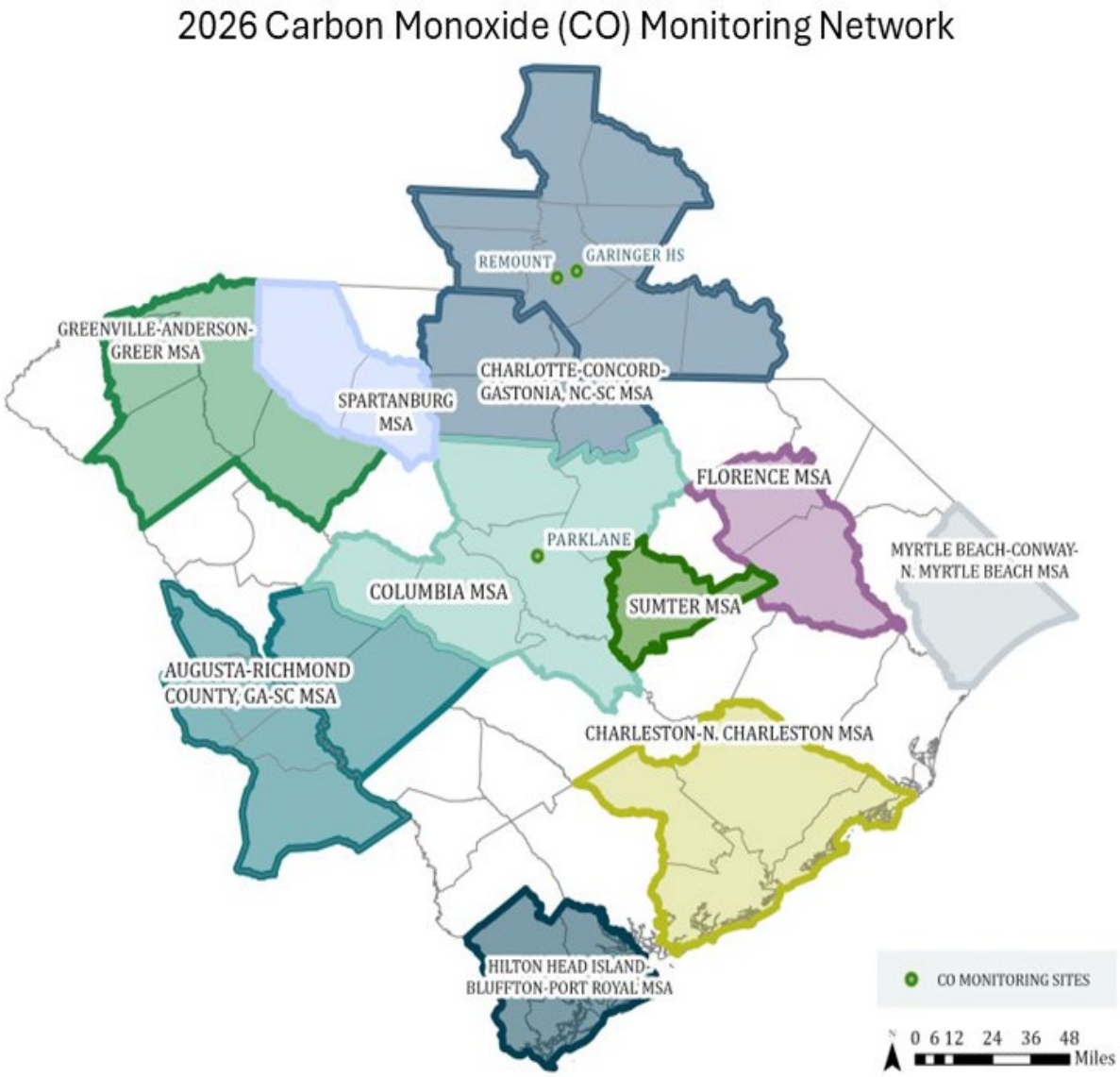
CO has a one-hour NAAQS of 35 ppm and an eight-hour NAAQS of 9 ppm.

Minimum Requirements –

The CO minimum monitoring criteria has two requirements:

1) Near-road CO Monitors – Each state with CBSAs having a population of 1,000,000 or more people must have one CO monitor collocated with one required near-road NO_2 monitor to be operational by January 1, 2017. The Charlotte-Concord-Gastonia, NC-SC MSA is the only CBSA that the Department shares with another air Department that meets the population requirement for a collocated CO monitor. The Mecklenburg County Air Quality office operates a CO monitor at the Remount Road Monitoring Site in Charlotte, North Carolina that became operational on January 1, 2017. The Greenville-Anderson-Greer, SC MSA is a CBSA that has recently crossed the 1 million population threshold. The Greenville MSA will be required to begin operating a collocated CO monitor. The Department has begun searching for an appropriate near road monitoring site.
2) NCore Requirement – Each NCore site in a CBSA with a population of 500,000 or more must include a CO monitor. The Parklane Monitoring Site in the Columbia, SC MSA is the NCore site for South Carolina and supports one CO monitor. The Garinger Monitoring Site in Mecklenburg County is also an NCore site for the Charlotte-Concord-Gastonia, NC-SC MSA and supports a CO monitor.

The CO Monitoring Network Map below indicates the location of the monitors.



Analytical Methods –

FRM non-dispersive infrared correlation monitors are used for continuous monitoring of CO concentrations in ambient air. CO monitors are operated in accordance with SCDES's Quality Assurance Project Plan for Ambient Air Quality Monitoring. Data is stored locally on redundant data acquisition systems and recovered hourly by the DAQA central office computer system (AirVision).

Lead (Pb) Network
Lead may be found in small quantities naturally in the environment or produced in man-made products like gasoline or paint. Exposure to lead can cause neurological damage.

There are three requirements for the minimum monitoring criteria. They are as follows:

1. Non-airport lead source – The minimum monitoring criteria found in 40 CFR Part 58, Appendix D, Section 4.5 requires that there must be one source-oriented monitor located to measure the maximum lead concentration at each non-airport lead source which emits 0.050 or more tons per year. South Carolina does not have any sources that exceed these thresholds.

2. Airport lead source – There must be one source-oriented monitor located to measure the maximum lead concentration from each airport which emits 1.0 or more tons per year. South Carolina does not have any sources that exceed these thresholds.

3. Collocation requirement – The lead collocation requirement found in 40 CFR Part 58, Appendix A, Section 3.4.4. requires 15 percent of the primary monitoring (not counting non-source oriented NCore sites in the primary quality assurance organization (PQAO)) to be collocated and have at least one collocated monitor, if the total number of monitors is less than three. South Carolina has no lead monitors, and thus no lead collocation requirements.

Nitrogen Dioxide (NO_2) Network
Nitrogen Dioxide (NO_2) is a highly reactive gas that is used as an indicator for the larger group of nitrogen oxides. NO_2 in the air primarily comes from burning fossil fuels. Breathing air with a high concentration of NO_2 can cause respiratory issues.

Nitrogen Dioxide has a one-hour NAAQS of 100 ppb and an annual mean NAAQS of 53 ppb.

Minimum Requirements –
The NO_2 minimum monitoring criteria has four requirements:

1) Near-road NO_2 Monitors – Each state must have one microscale near-road NO_2 monitoring site in each CBSA with a population of at least 1,000,000 or more persons. An additional near-road NO_2 monitoring site is required for any CBSA with a population of 2,500,000 or more, or in any CBSA with a population of 1,000,000 or more that has one or more roadway segments with 250,000 or greater Annual Average Daily Traffic (AADT) counts. The Charlotte-Gastonia-Concord NC-SC MSA meets the population requirement of at least 2,500,000 or more persons. The first near-road site is the Remount Road Monitoring Site located in Charlotte, North Carolina. The second near-road monitoring site is the Equipment Drive Monitoring Site, which is also located in Charlotte, North Carolina, and began operation on January 22, 2024. The Greeville-Anderson-Greer MSA has crossed the 1 million population threshold, and is now required to operate a near road NO_2 monitor. The Department has begun searching for an appropriate location to establish a near road monitoring site in the MSA.

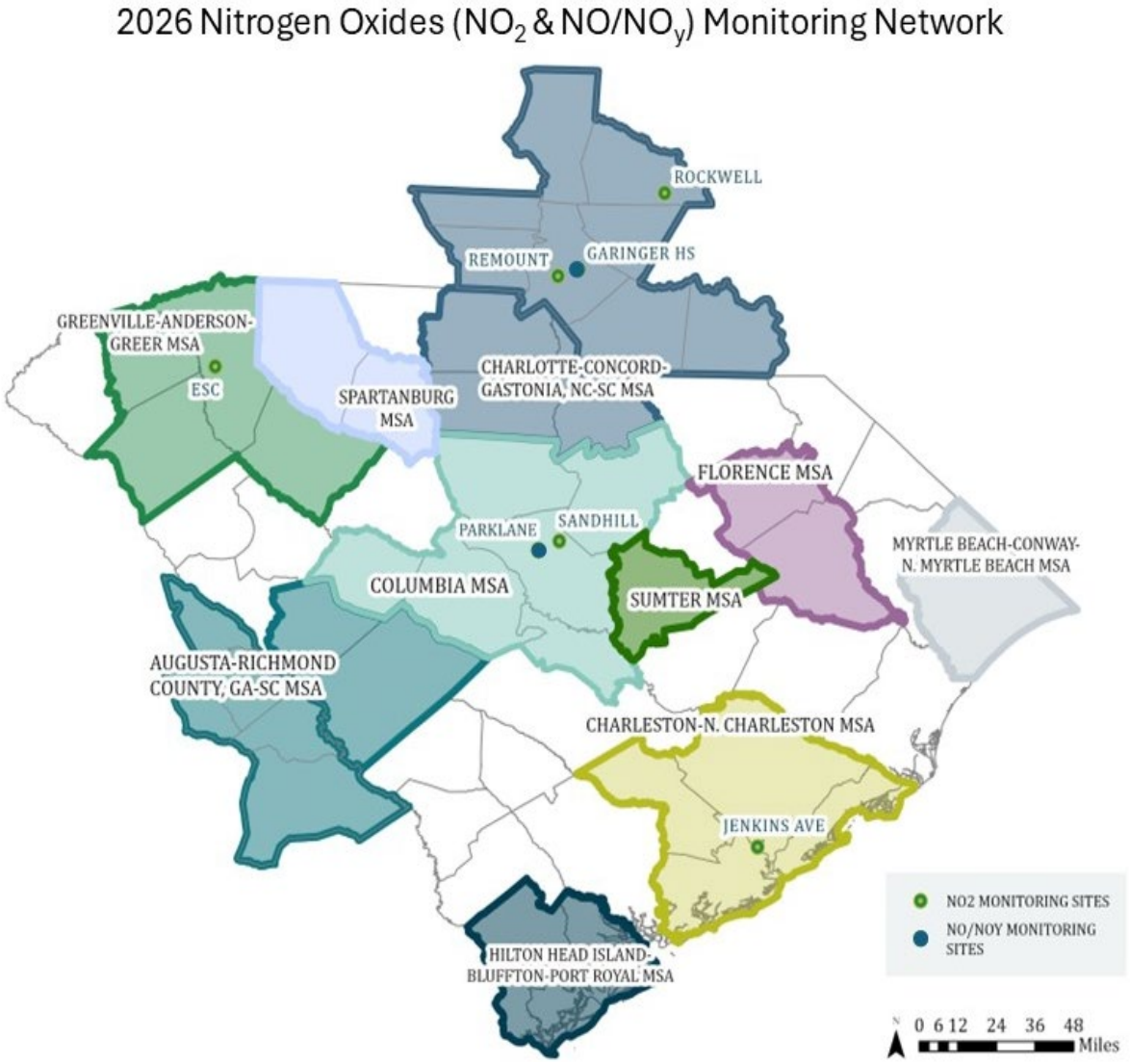
2) Area-Wide NO_2 Monitoring – Each state must have one monitoring site in each CBSA with a population of 1,000,000 or more persons which will monitor a location of expected highest NO_2 concentrations representing the neighborhood or larger spatial scales. The Garinger High School Monitoring Site in the Charlotte-Gastonia-Concord, NC-SC MSA operates an area wide NO_2 monitor. The Rockwell (37-159-0021) Site in North Carolina also operates an SPM NO_2 monitor at the urban scale for the purpose of AQI reporting. The Greenville-Anderson-Greer MSA has crossed the 1 million population threshold for operating an area-wide NO_2 monitor as of the 2025 Population Estimates. The NO_2 monitor currently located at the Greenville ESC Monitoring Site (45-045-0015) will serve as the area wide monitor for the MSA.

3) Regional Administrator Required Monitoring – The Regional Administrators, in collaboration with states, require a minimum of forty additional NO_2 monitoring sites above the minimum monitoring requirements (nationwide) in any area, with a primary focus on siting these monitors in locations to protect susceptible and vulnerable populations. The Greenville ESC Monitoring Site is a Regional Administrator Required Monitoring site.

4) NCore Requirement (NO/NO_y Monitoring) – Each NCore site must include a NO/NO_y monitor that will collect data to be used to produce conservative estimates for NO_2 and further ozone research. The Parklane Monitoring Site in Columbia, South Carolina is the NCore site for South Carolina. The Garinger High School Monitoring Site in Mecklenburg County is also an NCore site for

the Charlotte-Concord-Gastonia, NC-SC MSA and supports a NO/NO_y monitor.

Additionally, the network operates two SPM NO_2 monitors: one at the Jenkins Monitoring Site in the Charleston-North Charleston MSA, and one at the Sandhills Monitoring Site in the Columbia MSA. The $NO_2/NO/NO_y$ Monitoring Network Map below indicates the location of the monitors.



Analytical Methods –

Nitrogen Dioxide (NO_2) – The FRM gas-phase chemiluminescence monitors are used for continuous monitoring of NO_2 concentrations in ambient air. The FRM gas-phase chemiluminescence NO_2 monitors directly measure NO and indirectly measure both NO_2 and NO_X. The NO_2 monitors are operated in accordance with the Department's QAPP for Ambient Air Quality Monitoring. The continuous data output from the instrument is stored locally on redundant data acquisition systems and recovered hourly by a central office computer system (AirVision).

Sulfur Dioxide (SO_2) Network

SO_2 is a gas and is used as an indicator for the larger group of sulfur oxides. The largest source of SO_2 in the atmosphere is the burning of fossil fuels by power plants and other industrial facilities. Short-term exposures to SO_2 can harm the respiratory system and make breathing difficult.

Sulfur dioxide has two NAAQS standards. The primary standard is the 99^{th} percentile of 1-hour daily maximum concentrations at a level of 75 ppb. The secondary standard is a 1 year average at a level of 10 ppb.

Minimum Requirements –

The SO_2 minimum monitoring criteria has three requirements:

1) Monitoring by the Population Weighted Emissions Index – The population weighted emissions index (PWEI) is determined using the most current population of each CBSA and the most recent level of SO_2 emissions for each county within the CBSA. The emissions data is available from the National Emissions Inventory. For any CBSA with a calculated PWEI value equal to or greater than 1,000,000, a minimum of three SO_2 monitors are required. For any CBSA with a calculated PWEI value equal to or greater than 100,000, but less than 1,000,000, a minimum of two SO_2 monitors are required. For any CBSA with a calculated PWEI value equal to or greater than 5,000, but less than 100,000, a minimum of one SO_2 monitor is required.

The following table presents each CBSA's 2025 population, 2020 SO_2 emissions, calculated index, and minimum monitoring requirements. The process for calculating the index can be found at the bottom of the table.

CBSA	2025 CBSA Population	2020 CBSA SO_2 Emissions (Tons)	PWEI	SO_2 Minimum Monitors Required
*Charlotte-Concord-Gastonia, NC-SC	2,938,830	6,244.53	18,352	1
Greenville-Anderson-Greer, SC	1,014,101	603.99	613	0
Columbia, SC	879,918	2490.33	2,191	0
Charleston-North Charleston, SC	889,263	7502.77	6,672	1
*Augusta-Richmond	641,231	3698.37	2,372	0

CBSA	2025 CBSA Population	2020 CBSA SO_2 Emissions (Tons)	PWEI	SO_2 Minimum Monitors Required
County, GA-SC				
Myrtle Beach-Conway-North Myrtle Beach, SC	427,551	167.20	71	0
Spartanburg, SC	407,656	275.77	112	0
Hilton Head Island-Bluffton-Port Royal, SC	242,966	323.65	79	0
Florence, SC	201,392	776.35	156	0
Sumter, SC	105,067	246.51	26	0

The PWEI is calculated using the latest US Census population data and the latest NEI county level data. The population for each CBSA is multiplied by the CBSA total SO_2 emissions (reported in tons using the latest National Emissions Inventory data). This product is divided by 1,000,000 to derive the index. A CBSA with index greater than 1,000,000 will require three monitors. CBSA with index less than 1,000,000 but greater than 100,000 will require two monitors. CBSA with index less than 100,000 but greater than 5,000 will require one monitor. CBSA with index less than 5,000 will require no monitors.
*Monitors may be operated in the non-South Carolina portion of the CBSA.

In the Charleston-North Charleston MSA, the Jenkins Ave. Fire Station Monitoring Site hosts the required SO_2 monitor. The Department also operates an additional SLAMS monitor in the Greenville ESC Monitoring Site located in the Greenville-Anderson-Greer MSA. The Garinger High School Monitoring Site in North Carolina fulfills the minimum monitoring requirements for the Charlotte-Concord-Gastonia, NC-SC MSA.

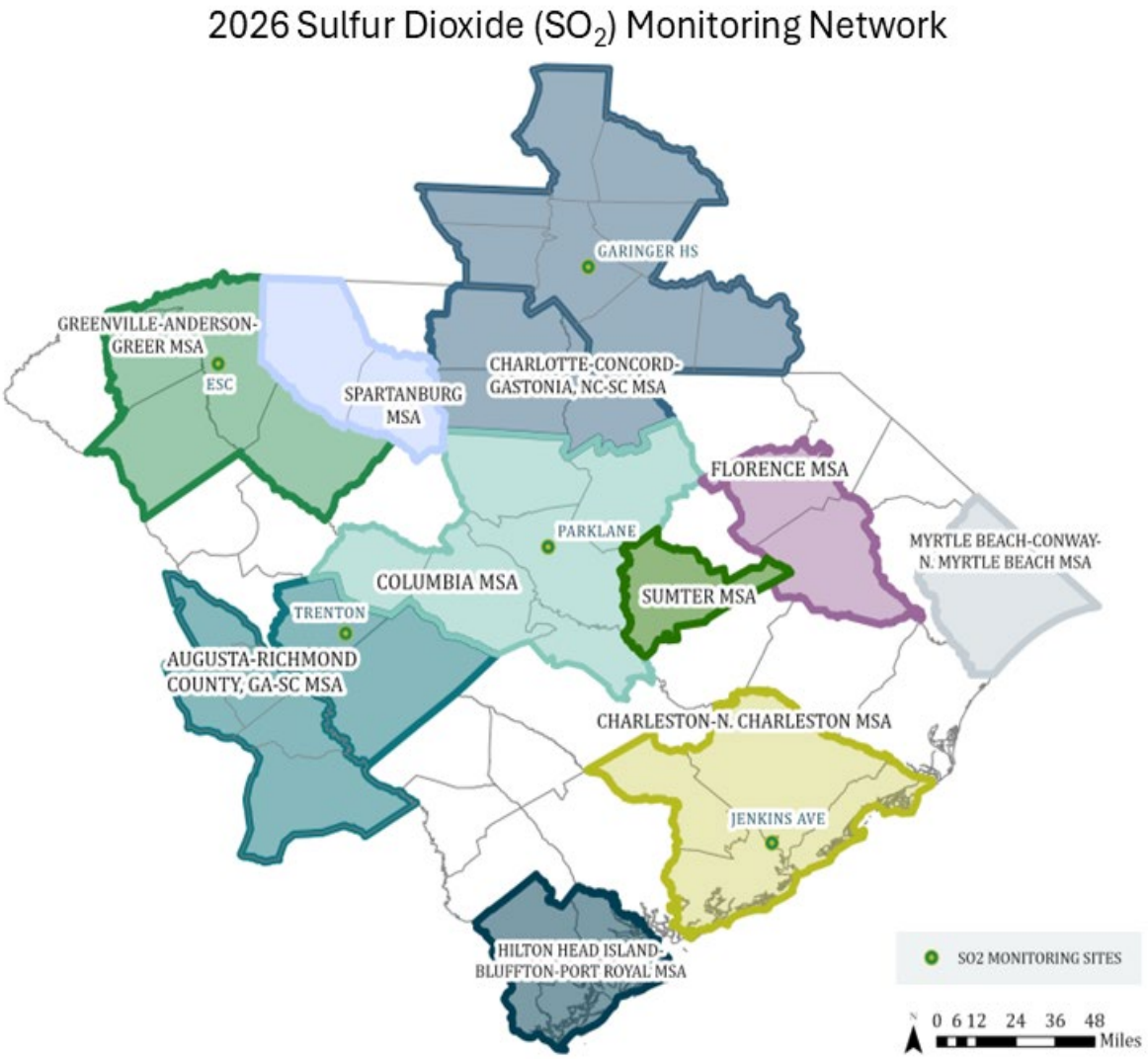
2) Regional Administrator Required Monitoring – The Regional Administrator may require additional SO_2 monitoring sites above the minimum number of monitors required by the PWEI in areas that have the potential to have high SO_2 concentrations, in areas impacted by sources which are not conducive to modeling, or in locations with susceptible and vulnerable populations that are not otherwise being monitored. South Carolina does not have any SO_2 Regional Administrator Required Monitoring.

3) NCore Requirement – Each NCore site must include an SO_2 monitor. The Parklane Monitoring Site in Columbia, South Carolina is the NCore site for South Carolina. The Garinger High School Monitoring Site in Mecklenburg County is also an NCore site for the Charlotte-Concord-Gastonia, NC-SC MSA and supports a SO_2 monitor.

The Department also operates one additional rotating SPM SO_2 monitor at the

Trenton Monitoring Site in the Augusta-North Augusta, GA-SC MSA. This will continue operation until 2027. Rotational monitors operate for approximately two consecutive years in one location and then are moved to a new site. The York Monitoring Site is scheduled to operate the SPM SO_2 monitor in 2028 and 2029.

The SO_2 Monitoring Network Map below indicates the location of each SO_2 monitor.



Analytical Methods –

The FEM ultraviolet (UV) fluorescence monitors are used for continuous monitoring of SO_2 concentrations in ambient air. SO_2 monitors are operated in accordance with the Department's Quality Assurance Project Plan for Ambient Air Quality Monitoring. The continuous data output from the instrument is stored locally on redundant data acquisition systems and recovered hourly by central office computer system (AirVision).

Ozone (O_3) Network

Ground level ozone is created by chemical reactions between nitrogen oxides (NO_X) and volatile organic compounds (VOC) in the presence of sunlight. Breathing in high levels of ozone can cause respiratory issues, especially in vulnerable populations, the elderly, and children.

Ozone has one eight-hour three-year design value NAAQS level that is 0.070 ppm.

Minimum Requirements –

The ozone minimum monitoring criteria has two requirements:

1) Required Ozone SLAMS Sites – A minimum number of required ozone SLAMS sites for each CBSA that is determined by CBSA population and the peak ozone concentrations.

2) NCore Requirement – Each NCore site must include an ozone monitor. The Parklane Monitoring Site in Columbia, South Carolina is the NCore site for South Carolina. The Garinger High School Monitoring Site in Mecklenburg County is also an NCore site for the Charlotte-Concord-Gastonia, NC-SC MSA and supports an ozone monitor.

The number of required ozone SLAMS sites for each CBSA and the site where each monitor is located is summarized below.

Augusta-Richmond County GA-SC – Two required monitors

Two SLAMS monitors are located at the Jackson Middle School and Trenton Sites. One additional SLAMS sites is operated in Georgia by the Georgia Environmental Protection Division: Augusta Monitoring Site.

Charleston-North Charleston, SC – Two required monitors

The two required SLAMS monitors are located at the Moncks Corner National Guard and Cape Romain Monitoring Sites.

Charlotte-Concord-Gastonia, NC-SC – Two required monitors

South Carolina operates one of the required monitors at the York Landfill Monitoring Site. Five additional SLAMS monitors for the CBSA are located in the Charlotte Metro area and are operated by the North Carolina Department of Air Quality and Mecklenburg County Air Quality. These Sites include ozone monitors at the Crouse, Garinger, University Meadows, Rockwell, and Monroe Monitoring Sites.

Columbia, SC MSA – Two required monitors
The two required SLAMS monitors are located at the Parklane and Sandhill Monitoring Sites. There is an additional ozone SPM at the Congaree Bluff Monitoring Site.

Florence, SC MSA – One required monitor
The required SLAMS monitor is located at the Pee Dee Experimental Station Monitoring Site.

Greenville-Anderson-Greer, SC MSA – Two required monitors
The two required SLAMS monitors are located at the Garrison Arena and Hillcrest Monitoring Sites.

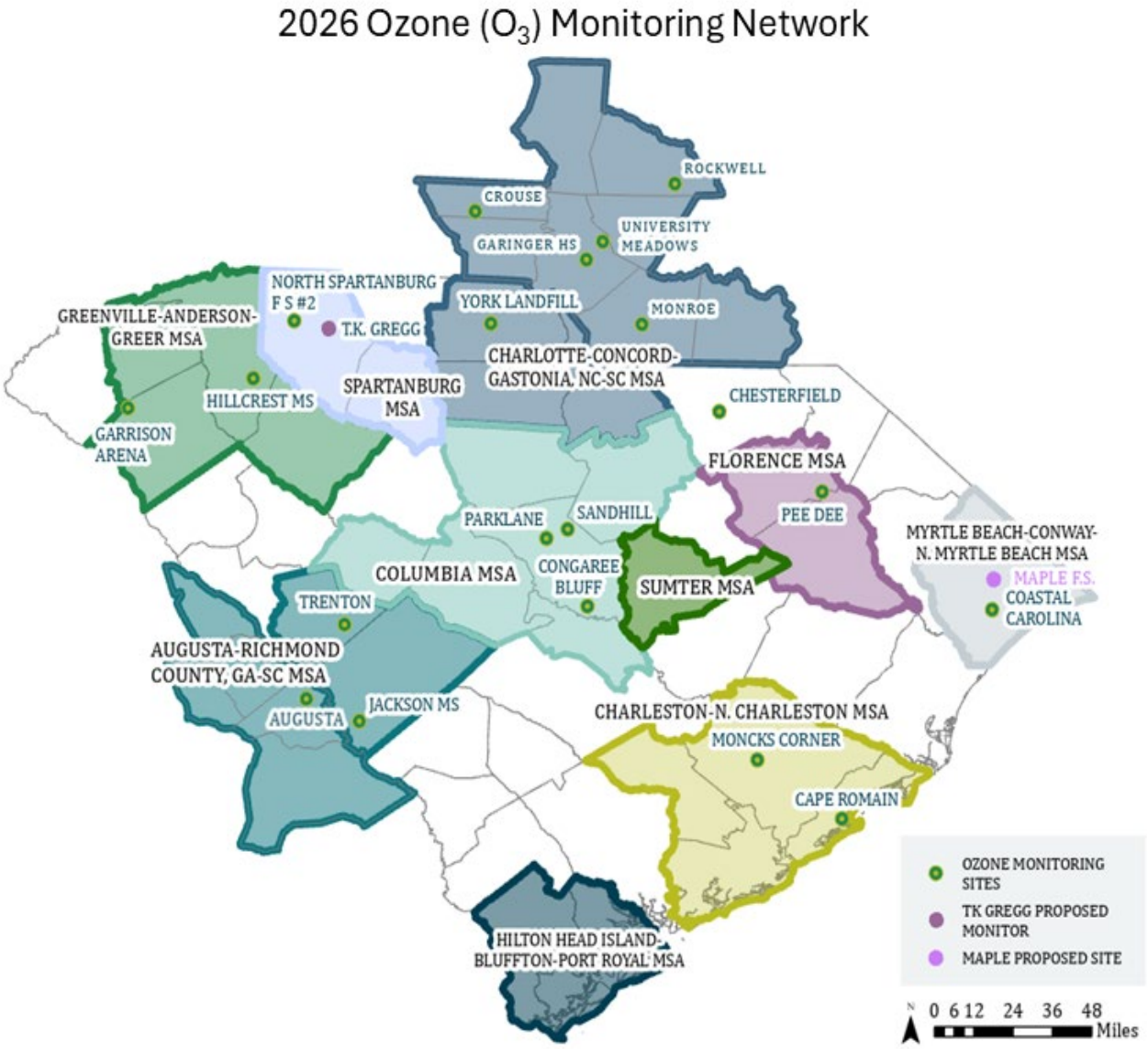
Hilton Head Island-Bluffton-Port Royal, SC MSA – No required monitors

Myrtle Beach-North Myrtle Beach-Conway, SC MSA – Two required monitors
One required SLAMS monitor is located at the Coastal Carolina Monitoring Site. The Department has proposed a new monitoring site at the Maple Fire Station, site proposal can be found in Appendix I.

Spartanburg, SC MSA – Two required monitors
One required monitor is located at the North Spartanburg Fire Station Monitoring Site. The Department has proposed adding the second required monitor to the existing T.K. Gregg monitoring site, the site proposal can be found in Appendix I.

Sumter, SC MSA – No required monitors

The Ozone Monitoring Network map below indicates the location of the monitors.



Analytical Methods –

The FEM UV photometry monitors are used for continuous monitoring of ozone concentrations in the ambient air. Ozone monitors are operated in accordance with the Department's Ambient Air Quality Monitoring QAPP. The continuous data output from the instrument is stored locally on redundant data acquisition systems and recovered hourly by the central office computer system (AirVision). Effective October 12, 2023 (88 FR 70598), the absorption cross-section value used for ozone measurement via UV photometry was updated to 304.39 atm-1 cm-1 (CCQM.O3.2019). All monitors in the SCDES ozone network were made traceable to CCQM.O3.2019 prior to the start of the 2025 ozone season.

$PM_{2.5}$ Network

Particulate matter (PM) is not a single pollutant, but a complex mixture of many liquid and solid chemicals in the air. For regulatory and scientific use, air particles are defined by their size. Fine particulate matter ($PM_{2.5}$) is defined as particles that are 2.5 microns or less in diameter. Some of the sources of $PM_{2.5}$ are chemical reactions of gases, smoke from fires, industrial processes, vehicle emissions and dust. $PM_{2.5}$ can cause respiratory and heart issues.

The Department began operating Teledyne T640 (method code 236) and T640X (method code 238) FEM monitors in 2020 to collect continuous $PM_{2.5}$ data at multiple sites throughout the state. These monitors showed a significantly higher bias when compared to FRM samplers. On June 13, 2023, Teledyne released a data alignment firmware update that was meant to correct this bias and make the data collected by the T640 and T640X more comparable to the FRM samplers. On September 6, 2023, the Department applied this firmware update to all T640 and T640X monitors, which changed their method codes to 636 and 638, respectively. All data collected by the T640 and T640X monitors before the firmware update (method codes 236 and 238) have had a NAAQS Exclusion applied by EPA, and bias corrected data for this period has been uploaded to AQS by EPA under method codes 736 and 738. A NAAQS Exclusion was applied for 23 months after the firmware update at most $PM_{2.5}$ monitoring sites to evaluate the comparability of the new method code to the FRM samplers. After this evaluation period, the Department has determined that multiple sites do not meet the comparability requirements listed in 40 CFR §58.11 (e) and §53 Table C-4. We are requesting that the continuous $PM_{2.5}$ monitors at the following sites are excluded from comparison to the NAAQS and are used for AQI purposes only: North Charleston Fire Station (45-019-0020), Chesterfield (45-025-0001), Williams Middle School (45-041-0003), Greenville ESC (45-045-0015), Irmo DJJ (45-079-0022), T.K. Gregg (45-083-0011). Further explanation and comparability assessments for all collocated $PM_{2.5}$ sites can be found in Appendix J.

In 2023, the 2012 $PM_{2.5}$ annual mean NAAQS was 12.0 $\mu g/m^3$ with a 24-hour NAAQS of 35 $\mu g/m^3$. As of February 07, 2024, the EPA lowered the $PM_{2.5}$ annual mean NAAQS to 9.0 $\mu g/m^3$ and the 24-hour NAAQS of 35 $\mu g/m^3$ was retained.

The $PM_{2.5}$ minimum monitoring criteria has seven requirements:

1) Required $PM_{2.5}$ SLAMS sites – A minimum number of required $PM_{2.5}$ SLAMS sites for each CBSA.

2) Collocated Requirement – Collocated monitors are two $PM_{2.5}$ monitors that are located at the same monitoring site and compared to ensure that high quality data is being collected. The Department is required to collocate at least 15 percent of the monitors of a method code for each distinct primary monitor method code it operates (FRM or FEM only). Method codes are a way to categorize the different methods that the monitors use to collect data. The Department operates one primary FEM monitor with method code 636 and eight primary FRM samplers with method code 145. Based on the number of monitors operated by the Department, each primary method code requires one collocated monitor. The collocation requirement is met for method code 145 at the Hillcrest, Parklane, and North Charleston Fire Station Monitoring Sites. The collocation requirement is met for the method code 636 at the Chesterfield Monitoring Site. The Department plans on replacing the primary method code 636 monitor at Cape Romain with a method code 145 FRM sampler which will remove method code collocation requirements for method code 636. Once this switch has occurred, the method code 145 sampler at the Chesterfield Monitoring Site will become primary.

   In addition, primary FRM samplers designated for collocation must be collocated with another FRM, and for primary FEM monitors designated for collocation, 50 percent must be collocated with an FRM and 50 percent must be collocated with an FEM of the same method code. At each of the sites mentioned, the QA collocated monitor is an FRM. Since there is only one required collocated monitor for each method code, this meets the required ratio between FRM and FEM collocated monitors. The details of each monitor, their method codes, and the primary monitor and collocation status of site can be seen in more detail in the Site Description section of this 2026 Network Plan.

3) Continuous Monitoring – A continuous $PM_{2.5}$ monitoring requirement which is equal to at least one-half (round up) the minimum required sites listed in Table D-5 to 40 CFR Part 53, Appendix D. At least one required continuous analyzer in each MSA must be collocated with one of the required FRM/FEM monitors, unless at least one of the required FRM/FEM monitors is itself a continuous FEM monitor in which case no collocation requirement applies.

4) Regional Background and Transport – At least one $PM_{2.5}$ site must be established in each state to monitor for regional background and at least one $PM_{2.5}$ site to monitor regional transport. The Cape Romain Monitoring Site in Charleston County is the regional background site, and the Chesterfield Monitoring Site in Chesterfield County is the regional transport site.

5) NCore Requirement – Each state is required to operate at least one NCore site which measures $PM_{2.5}$ using both continuous and integrated/filter-based samplers. The Parklane Monitoring Site in Columbia, South Carolina is the NCore site for South Carolina. The Garinger High School Monitoring Site in Mecklenburg County is also an NCore site for the Charlotte-Concord-Gastonia, NC-SC MSA and supports the required $PM_{2.5}$ monitors.

Near-road $PM_{2.5}$ Monitoring – The EPA required the collocation of one $PM_{2.5}$ monitor with a near-road NO_2 monitor in urban areas having populations of 1,000,000 or more by January 1, 2017. The near-road monitoring requirement for the Charlotte-Concord-Gastonia, NC-SC MSA is being fulfilled at the Remount Road Monitoring Site by the Mecklenburg County Air Quality Commission. The Greenville-Anderson-Greer, SC MSA crossed the population threshold for operating a near-road $PM_{2.5}$ monitor in 2025 and the Department has begun searching for a suitable location.

The required number of $PM_{2.5}$ SLAMS monitors and continuous monitors for each CBSA and the site where each monitor is located is summarized below.

Augusta-Richmond County, GA-SC MSA – Required: two SLAMS monitors, one continuous monitor
One required SLAMS site is the Trenton Monitoring Site, which has one FRM sampler as the required SLAMS monitor and one continuous monitor. The additional required SLAMS monitor is located at the Augusta Monitoring Site in Georgia, operated by the Georgia Environmental Protection Division.

Charleston-North Charleston, SC MSA – Required: one SLAMS monitor, one continuous monitor
The North Charleston Fire Station Monitoring Site operates two SLAMS FRM samplers and one continuous SPM monitor. The Cape Romain Monitoring Site is the $PM_{2.5}$ background site for the state and operates one continuous SLAMS monitor. The Cape Romain continuous SLAMS monitor will be replaced with a SLAMS FRM sampler by the end of the year.

Charlotte-Concord-Gastonia, NC-SC MSA – Required: three SLAMS monitors, two continuous monitors
All required monitors for this CBSA are operated in North Carolina. The Monitoring Sites in North Carolina are the Garinger High School, Remount Road, Friendship Park, and Rockwell Monitoring Sites. Each of these Sites operates a continuous monitor.

Columbia, SC MSA – Required: one SLAMS monitor, one continuous monitor
There are four SLAMS monitors located in this CBSA. At the Parklane Monitoring Site, there are two SLAMS FRM samplers, one continuous SLAMS monitor. The Irmo DJJ Monitoring Site operates one SLAMS FRM and one continuous SPM monitor.

Florence, SC MSA – Required: one SLAMS monitor, one continuous monitor
There is one SLAMS FRM and one continuous SPM monitor located at the Williams Monitoring Site.

Greenville-Anderson-Greer, SC MSA – Required: three SLAMS monitors, two continuous monitor
There are three SLAMS monitors and one SPM in this CBSA. Two SLAMS FRM samplers are located at the Hillcrest Monitoring site, one of which is considered a required montior. One required SLAMS FRM and one SPM continuous monitor are located at the Greenville ESC Monitoring Site. In 2025, the Greenville-Anderson-Greer MSA crossed 1 million in population, triggering the requirement for a near road monitoring site, including one $PM_{2.5}$ monitor. The Department has started the process of locating an appropriate near road site. The requirements for a third SLAMS monitor and a second continuous monitor in the MSA are expected to be met at the near road site once it is established.

Hilton Head Island-Bluffton-Port Royal, SC MSA – No required monitors

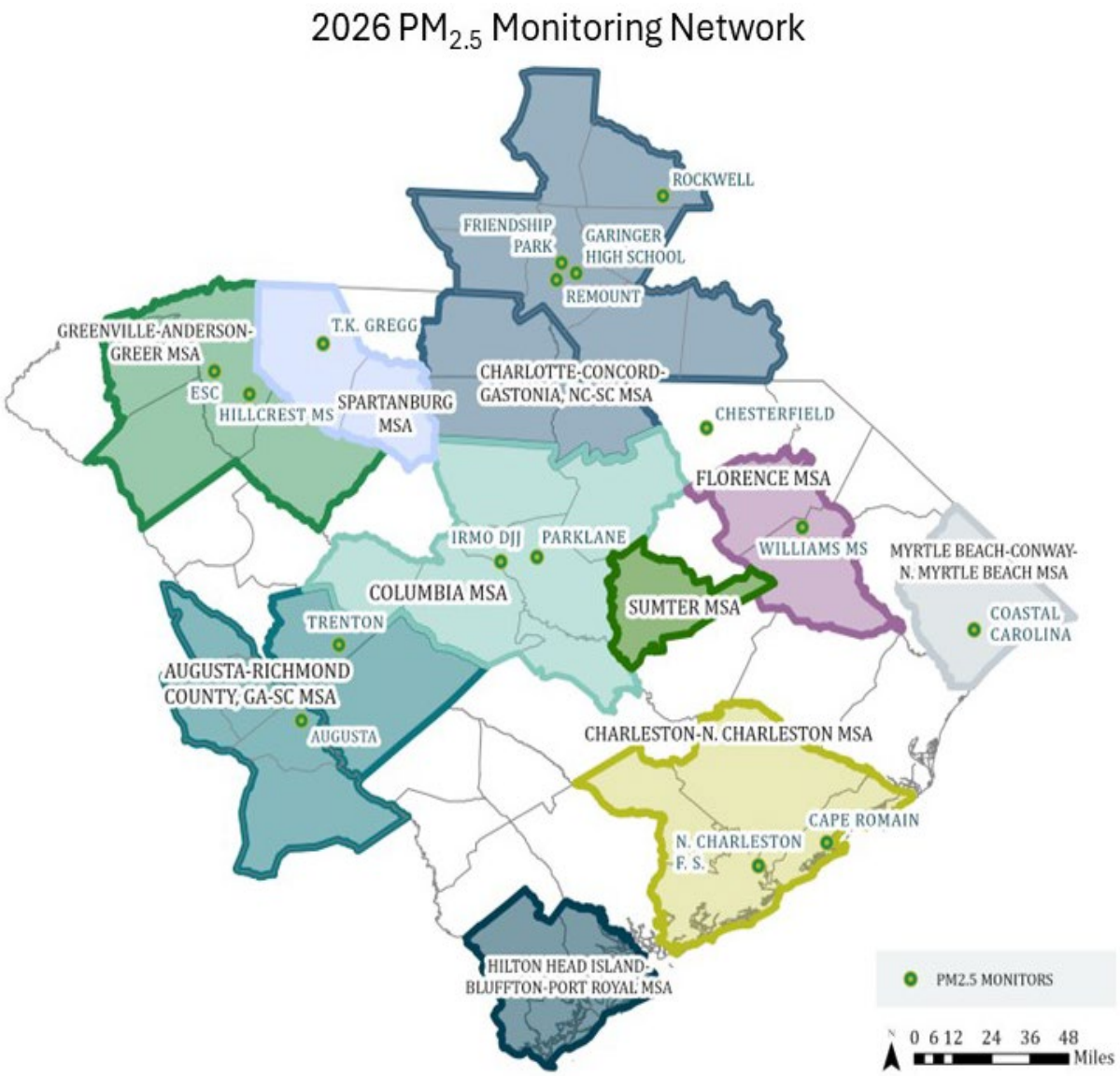
Myrtle Beach-North Myrtle Beach-Conway, SC MSA – No required monitors
The Coastal Carolina Monitoring Site has one SPM continuous monitor.

Spartanburg, SC MSA – Required: one SLAMS monitor, one continuous monitor
The T.K. Gregg Monitoring Site has one SLAMS FRM and one continuous SPM monitor.

Sumter, SC MSA – No required monitors

Chesterfield County (not in an MSA) – No required monitors
The Chesterfield Monitoring Site is the $PM_{2.5}$ regional transport site for the state and operates one FRM and one continuous monitor.

The $PM_{2.5}$ Monitoring Network map below indicates the location of each $PM_{2.5}$ monitor.



Analytical Methods – The network consists of both $PM_{2.5}$ monitors and $PM_{2.5}$ samplers. The analytical method for each one is described below.

a) All $PM_{2.5}$ samplers operated by the Department for comparison to the NAAQS are designated FRM samplers. The $PM_{2.5}$ sampler operation, sample collection, and sample analysis are done in accordance with the Department's Quality Assurance Project Plan for the $PM_{2.5}$ Ambient Air Monitoring Program.

b) Continuous $PM_{2.5}$ monitors, unless designated a FEM, do not provide concentration data suitable for comparison to the NAAQS. Non-FEM

continuous monitors that provide reasonably comparable measurements may be used to provide data for calculation of an area AQI. Continuous $PM_{2.5}$ monitors provide continuous concentration measurements every day. All $PM_{2.5}$ monitors operated by the Department for comparison to the NAAQS are designated FEM monitors using the broadband spectroscopy method. The continuous $PM_{2.5}$ monitors are operated in accordance with the Department's Quality Assurance Project Plan for the $PM_{2.5}$ Ambient Air Monitoring Program. Concentration measurements are averaged over 1-minute, 1-hour and 24-hour periods. Data is stored locally on redundant data acquisition systems and recovered hourly by a central office computer system (AirVision). The 24-hour daily averages from FEM monitors are used for comparison to the ambient standards.

7. $PM_{2.5}$ Speciation Monitoring – Chemical speciation is the testing of the $PM_{2.5}$ sample to examine what air pollutants are in the sample. Chemical speciation monitoring is required at all NCore sites and is conducted at the Parklane Monitoring Site. It is funded as part of the $PM_{2.5}$ STN. There is also $PM_{2.5}$ speciation monitoring at the Garinger Monitoring Site in Mecklenburg County for the Charlotte-Concord-Gastonia, NC-SC MSA.

   Analytical Methods – The Department operates a $PM_{2.5}$ Speciation sampler to collect samples for analysis to determine the chemical makeup of the particulate. The $PM_{2.5}$ speciation samplers are operated according to the Department's Quality Assurance Project Plan for $PM_{2.5}$ Chemical Speciation Sampling at Trends, NCore, Supplemental, and Tribal Sites. The samples are collected on a set of two cartridges on the Met-One SuperSASS sampler for nitrates, sulfates, and metals and on a single cartridge in the URG 3000N sampler for carbon containing material. The samples are collected over a 24-hour sampling period. The individual cartridges contain denuders and filters designed to efficiently capture the major components of $PM_{2.5}$.

   After collection, the samples are shipped to an EPA contract laboratory for analysis. At the laboratory, the samples are analyzed using thermal optical analysis (for carbon), ion chromatography (IC) for nitrates and sulfates, and x-ray fluorescence for metals to determine the presence and concentration of specific compounds. Sample results are available on the EPA website.

PM_{10} Network

PM_{10} particles 10 micrometers in size or less. These particles usually come from roadways, construction sites, windblown dust and industrial sources. High PM_{10} levels can cause issues with a person's throat and lungs.

PM_{10} has a 24-hour NAAQS of 150 $\mu g/m^3$ that cannot be exceeded more than once per year on average over three years.

The PM_{10} minimum monitoring criteria has one requirement that is based on the CBSA population, the number of exceedances of the NAAQS, and the percentage of PM_{10} concentrations over or under the NAAQS. Unlike other criteria pollutants, the minimum monitoring requirement for PM_{10} is given as a range of required monitoring sites for a CBSA, depending on the level of PM_{10} pollution.

Minimum Requirements –
The required number of SLAMS monitors in each CBSA are summarized below.

Augusta-Richmond County, GA-SC MSA – 1-2 required monitors
One SLAMS monitor is located at the Augusta Monitoring Site in Georgia, operated by the GA EPD.

Charleston-North Charleston, SC MSA – 1-2 required monitors
One SLAMS monitor is located at the North Charleston Fire Station Monitoring Site.

Charlotte-Concord-Gastonia, NC-SC MSA – 2-4 required monitors
Two SLAMS monitors are operated by the MCAQ in North Carolina at the Garinger and Ramblewood Park Monitoring Sites.

Columbia, SC MSA – 1-2 required monitors
One SLAMS monitor and one SPM sampler are located at the Parklane Monitoring Site.

Florence, SC MSA – No required monitors

Greenville-Anderson-Greer, SC MSA – 2-4 required monitors
One SLAMS monitor is located at the Greenville ESC Monitoring Site. In 2025, the Greenville MSA crossed the 1 million population threshold, triggering requirements for an addition PM_{10} monitor to be placed in the MSA. The Department has begun searching for a suitable location for the additional required monitor.

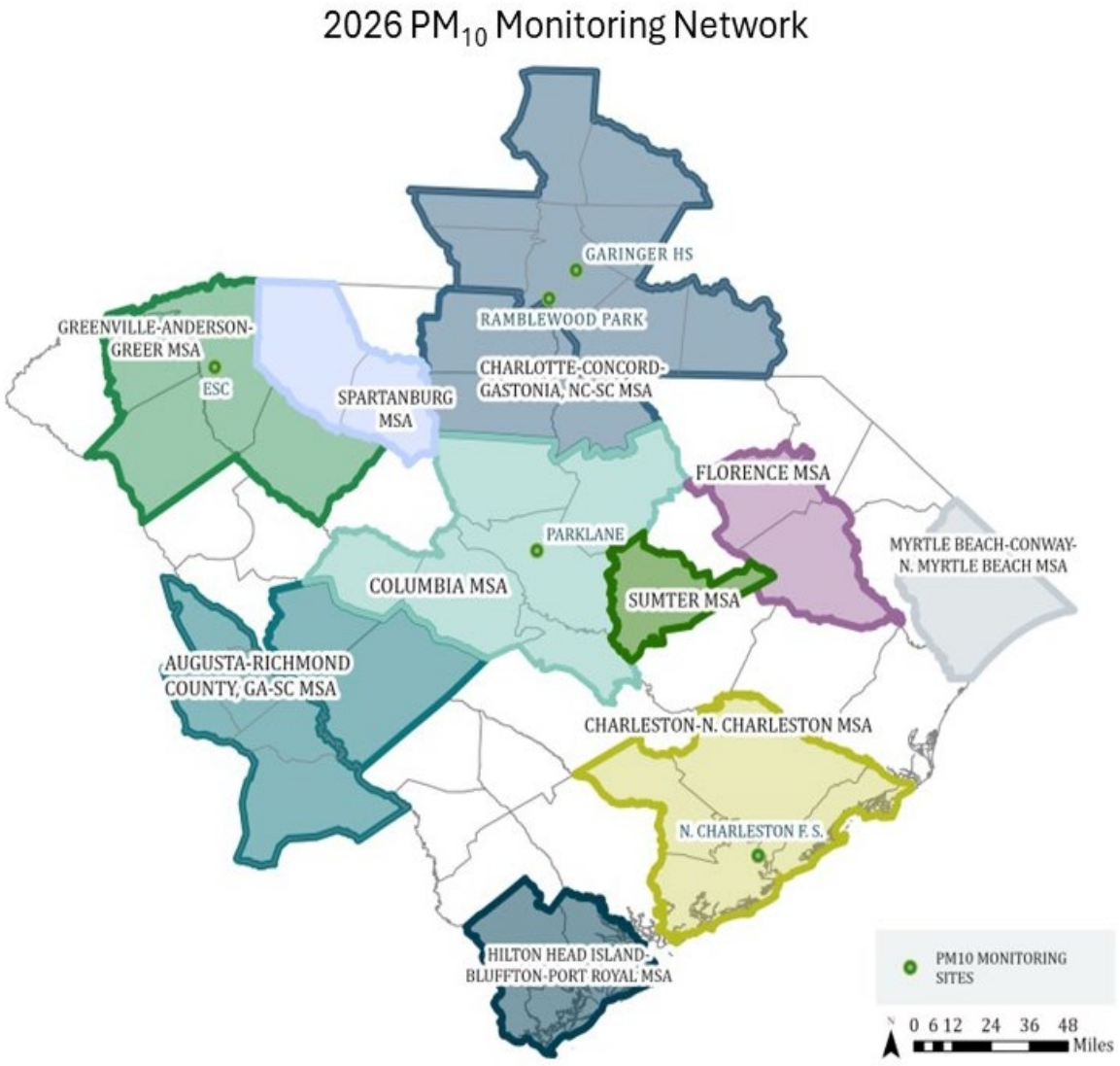
Hilton Head Island-Bluffton-Port Royal, SC MSA – No required monitors

Myrtle Beach-Conway-North Myrtle Beach, SC MSA – 0-1 required monitors

Spartanburg, SC MSA – 0-1 required monitors

Sumter, SC MSA – No required monitors

The PM_{10} Monitoring Network map below indicates the locations of the monitors.



Analytical Methods –
The network consists of both PM_{10} monitors and PM_{10} samplers. The analysis for each one is described below.

a. PM_{10} samplers operated by the Department are designated as either FRM or FEM and are operated consistent with the requirements in 40 CFR Part 50, Appendix J and 40 CFR Part 58. The PM_{10} samplers located at the Chesterfield Monitoring Site are used for the National Air Toxics Trends Station (NATTS) metals. Filters collected from these samplers are analyzed as described in subsection "d" of the Air Toxics Network Analytical Methods. The Parklane Monitoring Site operates a low volume, FRM PM_{10} sampler to fullfill the NCore $PM_{10-2.5}$ monitoring requirement.

b. Continuous PM_{10} monitors provide continuous concentration measurements every day. All PM_{10} monitors operated by the Department for comparison to the NAAQS are designated FEM monitors using the broadband spectroscopy method. The continuous PM_{10} monitors are operated in accordance with the Department's QAPP for Ambient Air Quality Monitoring. The concentration measurements are averaged over 1-minute, 1-hour, and 24-hour periods. Data is stored locally on redundant data acquisition systems and recovered hourly by a central office computer system (AirVision). Only 24-hour daily averages from FEM monitors are used for comparison to the ambient standards.

Photochemical Assessment Monitoring Station (PAMS) Network

South Carolina is not subject to the PAMS requirement.

Air Toxics Network

South Carolina monitors for air toxics in the ambient air. Volatile organic compounds (VOCs), Polycyclic Aromatic Hydrocarbons (PAHs), carbonyls, and metals are sampled at the Chesterfield Monitoring Site.

Analytical Methods –

a) Volatile Organic Compounds – Volatile organic compounds (VOCs) are collected into passivated or silica lined stainless steel canisters. The canisters are cleaned, tested, and evacuated at the laboratory prior to installation at the sampling site. At the sampling location, the canisters are filled and pressurized with ambient air throughout the sampling period (typically 24 hours). Measured portions of the captured air are concentrated at low temperature and analyzed using gas chromatography with a mass spectrometer detector (GC/MS) to identify and quantitate target compounds. The VOC samplers are operated in accordance with the Department's QAPP for the Chesterfield, South Carolina National Air Toxics Trends Station. The collection and analysis

method are based on the EPA Method TO-15A and the NATTS Technical Assistance Document (TAD). The EtO canisters are sent to a contract laboratory for analysis.

b) Polycyclic Aromatic Hydrocarbons – PAHs are collected using polyurethane foam (PUF) and a solid adsorbent to trap the compounds from air pulled through the material by a high-volume sampler. High-volume PUF samplers are operated in accordance with the Department's Quality Assurance Project Plan for the Chesterfield, South Carolina National Air Toxics Trends Station. The PAHs are extracted from the collection cartridge using a solvent, and the rinses are concentrated for analysis. Measured portions of the extract are analyzed using GC/MS to identify and quantitate the collected compounds. The collection and analysis method are based on the EPA Method TO-13A and the NATTS TAD.

c) Carbonyls – Carbonyls (including aldehydes and ketones) are extracted from ambient air by reaction with a compound that stabilizes them enough to capture and hold. The reaction of the target compounds with Dinitrophenylhydrazine (DNPH) removes them from the sampled air and concentrates them in the sample cartridge. The carbonyl samplers are operated in accordance with the Department's Quality Assurance Project Plan for the Chesterfield, South Carolina National Air Toxics Trends Station. The carbonyls are extracted from the collection cartridge using solvent. Measured portions of the extract are analyzed using HPLC to identify and quantitate the collected compounds. The collection and analysis method are based on the EPA Method TO-11A and the NATTS TAD.

d) NATTS Metals – NATTS metals in particulate are collected on filters using the PM_{10} High Volume samplers. PM_{10} High Volume samplers are operated in accordance with the Department's Quality Assurance Project Plan for the Chesterfield, South Carolina NATTS. Metals are extracted from a portion of the filter using hot block digestion in an acid solution. Detection, identification, and quantitation of the target metals inductively coupled plasma with a mass spectrometer. The collection and analysis method are based on the EPA Method IO-3.1, IO-3.5, and the NATTS TAD.

Meteorology and Precipitation Network

Meteorological parameters are monitored at the Cape Romain and Parklane Monitoring Sites. Precipitation monitoring is conducted at the Parklane Monitoring

Site.

Analytical Methods –

Meteorology consists of wind direction, wind speed, temperature, and pressure. Collection and/or analysis methods are discussed below.

a) Wind Direction and Speed – Wind data is collected using systems that incorporate high precision 'Air Quality' systems. The systems use separate or combined wind vanes and anemometers mounted 10 meters above ground. The systems provide supporting information about the local meteorology.

b) Ambient Temperature and Pressure – Ambient temperature is available from sensors that are part of the sampling systems for the FRM $PM_{2.5}$ samplers and FEM $PM_{2.5}$ continuous monitors. Ambient temperature measurement is necessary for the systems to maintain the required flow rate used to reproducibly separate the desired particulate size fractions as conditions change. Although the primary use of the measurement is for sampler flow control, the sensors are accurate and regularly audited. Temperature and pressure sensors are compared to reference systems at least once per month. In addition to the $PM_{2.5}$ samplers, the Parklane Monitoring Site also has a Met-One Model 597 Ambient Temperature, Pressure, and Relative Humidity probe. The readings are stored on the data logger in both 1-minute and 1-hour averages.

c) Precipitation – Precipitation is measured by tipping bucket gauges that provide a signal indicating the occurrence, rate, and amount of precipitation. The gauges are not heated, so they may not accurately provide the time and rate for frozen precipitation events. The monitors are checked periodically for operation and accuracy using a known volume of water and compared with actual volumes of collected precipitation where there are collocated samplers.

Site Descriptions

Specific siting information for each site and monitor or sampler is stored in the EPA's AQS, the national ambient air database. The AQS Site Description includes the exact location of the site, local and regional population, and description of the site location, monitor types, and monitoring objectives. This site and monitor/sampler information are routinely updated whenever there is a change in site characteristics or pollutants monitored. Pictures for each monitoring site can be viewed at: https://gis.des.sc.gov/monitors/.

The AQS is used as the primary repository for all South Carolina ambient air monitoring information, including site descriptions. All ambient air monitoring data is stored in AQS, including criteria pollutants, non-NAAQS parameters, ambient air toxics at the NATTS location, and supporting QA data.

Each network station description contained in this document includes a Site Description and Monitor Details. An explanation of the information in each station description is presented below.

Site Description – The site description includes specific information about each ambient air monitoring site. The site description header includes the following:

1) Site Name – The name that is given to the site.
2) CSA/MSA – The area where the site is located as defined by the United States Census.[5]
3) AQS Site ID – The unique site ID used in AQS is in the form of 45-ccc-ssss where:
    a. 45 is the federal identification code for South Carolina,
    b. ccc is the county identification code, and
    c. ssss is the site identification code within the county.
4) Location – Typically the street address of the site, where available.
5) County – County in which the site is located.
6) Coordinates – Latitude (N), then Longitude (W) listed in decimal degrees.
7) Date Established – The date when each existing monitoring station was established is shown in the description. Individual monitors at a site may have differing start and stop dates.
8) Site Evaluation (most recent date visited) – Each monitoring station in the network is visited annually to determine whether all required probe exposure criteria for monitors are met. If necessary, corrective action is scheduled to address deficiencies. If a new monitoring site has not yet been evaluated, it will be denoted with the word “PENDING”.

Monitor Details – Each station description has a table that lists the parameter(s) and the descriptive information associated with that particular parameter. An explanation of the information in the tables is presented below.

[5] The US Census Bureau periodically adjusts CSA and MSA names and boundaries. This plan uses the latest available revision (July 21, 2023).

1) Parameter – The chemicals that are being measured. These may be criteria pollutants (compounds for which a NAAQS has been established), non-criteria pollutants, and/or supporting information (primarily meteorological measurements) measured at the site.

2) Scale – Each monitor or sampler in the monitoring network is described in terms of the approximate physical dimensions of the air parcel nearest the monitoring station throughout which pollutant concentrations are expected to be reasonably similar. This is most often referred to as the "Scale" of the monitor. Different pollutants monitored at the same location may represent different scales depending on the characteristics of the pollutant. Area dimensions or scales of representativeness used in the network description are:
    a. Microscale – Air volumes associated with area dimensions ranging from several meters up to about 100 meters.
    b. Middle scale – Areas up to several city blocks in size with dimensions ranging from approximately 100 meters to 0.5 kilometers.
    c. Neighborhood scale – Extended areas of a city that have relatively uniform land use with dimensions ranging from 0.5 to 4.0 kilometers.
    d. Urban scale – Citywide or equivalent rural areas with dimensions ranging from 4 to 50 kilometers.
    e. Regional scale – Areas ranging from 50 to hundreds of kilometers in diameter.

    The true representative area may best be described by an irregular shape of the approximate dimensions indicated above to account for local sources, topography, and differing land use. The representative scale of a monitor is closely associated with the monitoring objective.

3) Objective – The ambient air monitoring network is designed to meet three primary objectives:
    a. Provide air pollution data to the public in a timely manner. Near real-time data is made available on the internet through AIRNow and Air Quality Index (AQI) reporting and forecasting in the major metropolitan areas.
    b. Support compliance with ambient air quality standards and emissions strategy development. Monitors are operated to measure concentrations for comparison to NAAQS and to provide information to

aid in the development of strategies to improve air quality.

c. Support air pollution research studies. Data from the monitoring network support greater understanding of the impacts and effects of ambient air pollution.

Individual monitors within a monitoring network that support these basic objectives generally serve one or more of the following purposes:

i. Determine highest concentrations of pollutants,
ii. Determine representative concentrations in areas of high population density,
iii. Determine impact on air quality of significant sources or source categories,
iv. Determine general background concentrations,
v. Determine extent of regional pollutant transport, and
vi. Determine welfare-related impacts in more rural and remote areas (ex. visibility impairment and impacts to vegetation).

The design intent in siting monitors is to correctly match the area represented by the sample of monitored air with the scale most appropriate to meet the monitoring objective of the monitor. The relationship of appropriate scale to the six basic purposes is as follows:

Monitoring Purpose	**Siting Scale**
Highest concentration	Micro, Middle, Neighborhood
Population exposure	Neighborhood, Urban
Source impact	Micro, Middle, Neighborhood
General/background	Neighborhood, Urban, Regional
Regional transport	Urban, Regional
Welfare-related impacts	Urban, Regional

Monitor and sampler data is regularly reviewed to assure the assigned scale is correct and appropriate for the intended objective.

4) Designation – Monitor designations that may be found in the tables include the SLAMS, SPM, and Other monitoring. Definitions of these designations are:
   a. SLAMS – Monitors that are required by 40 CFR Part 58, Appendix D, and are needed for the monitoring objectives of Appendix D, including NAAQS comparisons, but may serve other data purposes. These

stations must meet regulatory requirements that relate to four major areas: QA/QC, monitoring methodology, sampling interval, and siting of instruments and instrument probes.

b. SPM – Monitors which support investigations addressing complaints, areas and pollutants of concern, network refinement, modeling verification, and compliance. These monitors are committed to investigation and projects as described in the associated QAPP. They may be located as separate monitoring stations or be included at existing monitoring locations. The SPM may also monitor for particulate, criteria pollutants, precipitation, and meteorology. Supplemental speciation is a type of SPM monitor that operates according to Chemical Speciation Network (CSN) protocols but is not contained in the Speciation Trends Network (STN). This monitoring data is reported to AQS by the University of California – Davis. Although siting and probe exposure will conform to all requirements for SLAMS monitors whenever possible, 40 CFR 58.20 states that compliance for SPM monitors is optional.
c. Other Monitor/Sampler – A monitor or sampler that measures data on a pollutant that will not be used for regulatory purposes, such as the NATTS samplers.
d. Collocated QA/QC Sampler – A particulate matter sampler that is paired with, but operated independent of, a similar sampler. It is used to indicate measurement precision.

The SLAMS and SPM data may be used in the reporting of an area's AQI. The AQI is a method of reporting that converts concentration levels of pollution to a simple number scale of 0-500. Index reporting is required for all urban areas with a population exceeding 350,000. Intervals on the AQI scale are related to potential health effects of the daily measured concentration of the measured pollutants. All stations in a metropolitan area provide data for daily index reporting. Data from continuous ozone and $PM_{2.5}$ monitors is collected hourly and reported as AQI maps on the EPA's AIRNow website. A daily AQI is provided for the areas in and around Aiken, Charleston, Columbia, Florence/Darlington, Greenville-Spartanburg, Myrtle Beach, and York/Chester/Lancaster.

5) Probe Height – The monitor or sampler probe is the point where ambient air enters the analytical or sample collection system. Ideally, air would be sampled approximately at nose height, but due to operational, exposure, and security

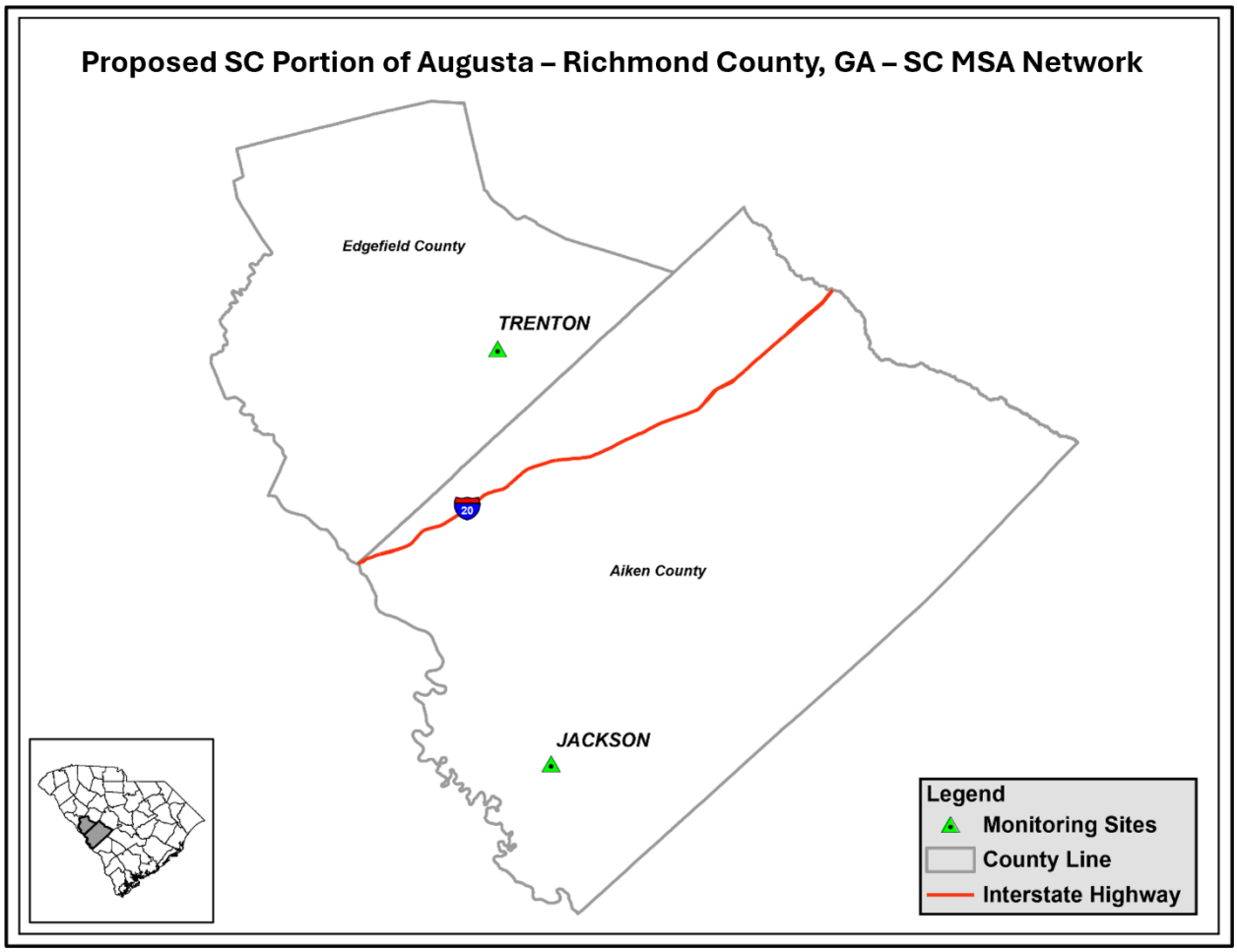
considerations, air may be sampled further from ground level. Proper probe height is specified in the monitoring regulations (typically between two and fifteen meters) and is checked as part of the periodic site evaluations.

6) Sampling and Analysis Methods – All sampling and analytical procedures used to determine ambient concentrations of criteria pollutants for comparison to the NAAQS will use either FRM or FEM. For the reactive gases, acceptable probe materials defined in 40 CFR Part 58 Appendix E are used in the sampling train.

   Where appropriate for specific monitoring objectives, well characterized, non-equivalent methods may be used. The analysis method for the parameters most commonly measured and listed in the station descriptions are described in the corresponding pollutant's Network Descriptions section.

The following sections describe each of the South Carolina monitoring sites organized by MSA.

Augusta-Richmond County, GA-SC MSA



Classification of Monitoring Type by Sites:

Site ID	Site Name	$PM_{2.5}$	$PM_{2.5}$ Cont.	PM_{10}	Lead	Ozone	SO_2	NO_2	CO
45-003-0003	Jackson Middle School					●			
45-037-0001	Trenton	●	○			●	○*		
	Total	1	1	0	0	2	1	0	0

○ SPM / Other ● SLAMS Duplicate / QA Monitors ○○/●●
*Please refer to the site description page for details on this monitor's operational schedule.

Jackson Middle School
CSA/MSA: none/Augusta-Richmond County MSA
AQS Site ID: 45-003-0003
Location: 8217 Atomic Road, Jackson
County: Aiken
Coordinates: +33.342226, -81.788731
Date Established: October 24, 1985
Site Evaluation: March 9, 2026

The Jackson Middle School Monitoring Site is located in southwestern Aiken County, within the town limits of Jackson at Jackson Middle School. This Site is located in a suburban setting. The Site supports an ozone monitor that measures ozone concentrations upwind of the Augusta urbanized area. The sample inlet is 128 meters from the nearest road.

This site meets all 40 CFR Part 58 Appendix E siting criteria.

Changes for 2026-2027
There are no changes planned for 2026-2027.

Monitors:

Parameter	Scale	Objective	Designation	Probe Height (m)	Analysis & (Method Code)	Sampling Frequency
Ozone 44201-2	Urban	Upwind Background	SLAMS	3.55	Ultraviolet Absorption (087)	Continuous

Trenton

CSA/MSA: none/Augusta-Richmond County MSA
AQS Site ID: 45-037-0001
Location: 660 Woodyard Road (Hwy 121), Trenton
County: Edgefield
Coordinates: +33.739963, -81.853635
Date Established: March 28, 1980
Site Evaluation: March 9, 2026

The Trenton Monitoring Site is located in southeastern Edgefield County. This Site was originally established to monitor ozone crossing into South Carolina from Georgia. The Trenton Monitoring Site supports an ozone monitor and the required FRM $PM_{2.5}$ sampler and a continuous FEM $PM_{2.5}$ monitor that fulfills 40 CFR Part 58, Appendix D, Section 4.7 requirements. This Site also has been designated as a rotational site for SO_2. The SO_2 monitoring will run from 2026 through 2027. The sample inlets are 30.3 meters from the nearest road.

This Site meets all 40 CFR Part 58, Appendix E siting criteria.

Changes for 2026-2027:
During a 23-month assessment period in which the FEM T640X monitor at this site was labeled with a NAAQS Exclusion, the continuous $PM_{2.5}$ data collected by the monitor has met data quality requirements and has been determined to be comparable to the NAAQS. Starting on September 6, 2025, the NAAQS Exclusion will be lifted moving forward. Comparability Assessments can be found in Appendix J.

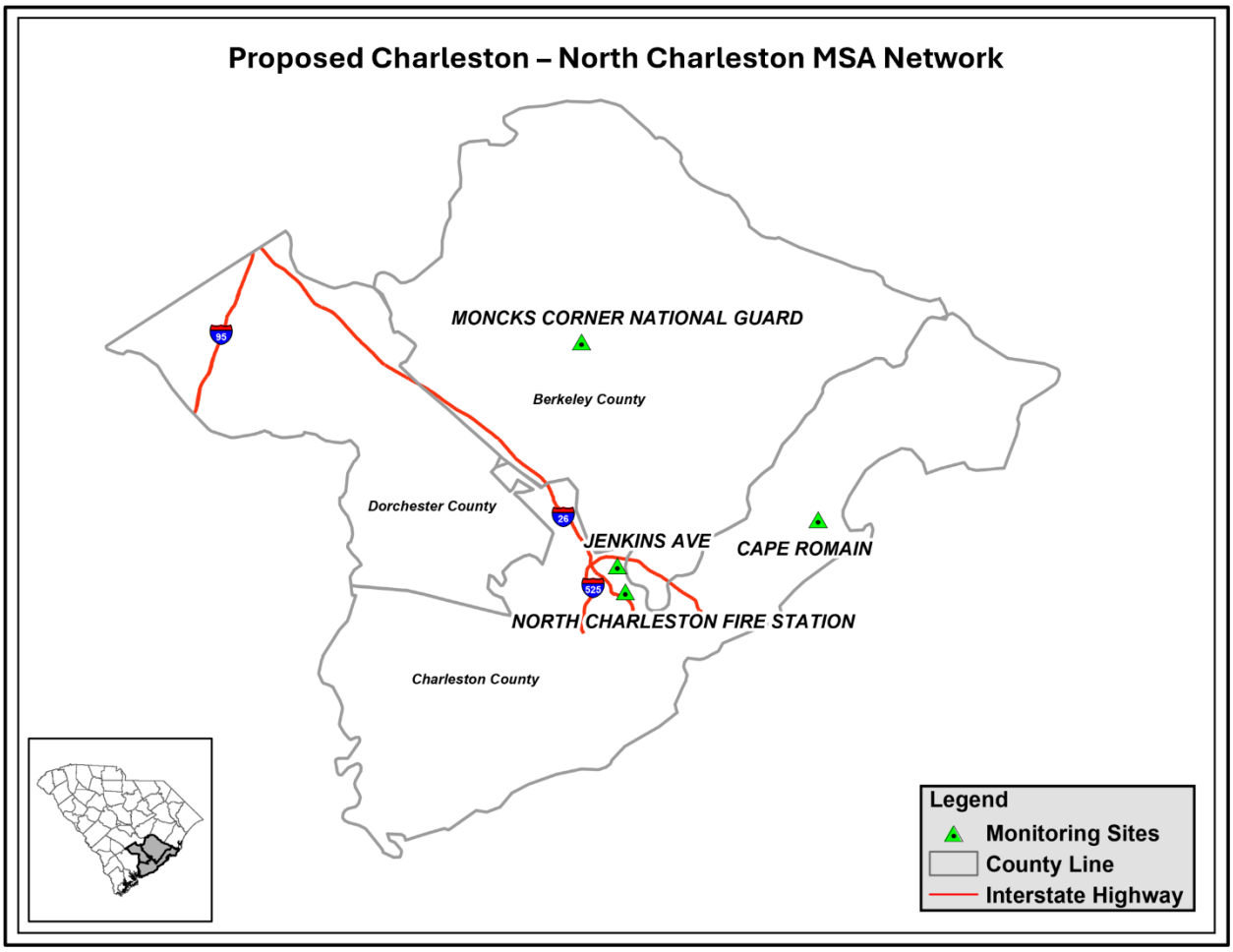
The SO_2 monitoring began in January 2026. There are no other changes planned for 2026-2027.

Monitors:

Parameter	Scale	Objective	Designa-tion	Probe Height (m)	Analysis & (Method Code)	Sampling Frequency
Ozone 44201-1	Urban	Maximum Ozone Concentration/ Extreme Downwind	SLAMS	4.34	Ultraviolet Absorption (087)	Continuous
$PM_{2.5}$	Urban	Extreme	SLAMS	4.72	FRM	1:3

Parameter	Scale	Objective	Designa-tion	Probe Height (m)	Analysis & (Method Code)	Sampling Frequency
88101-1		Downwind			Gravimetric w/ VSCC (145)	
$PM_{2.5}$ 88101-3	Urban	Extreme Downwind	SPM	4.26	FEM Broadband Spectroscopy (636)	Continuous
Sulfur Dioxide 42401-1	Urban	Upwind Background	SPM	4.34	Pulsed Florescent (560)	Continuous

Charleston-North Charleston MSA



Classification of Monitoring Type by Site:

Site ID	Site Name	$PM_{2.5}$	$PM_{2.5}$ Cont.	PM_{10}	Ozone	SO_2	NO_2	Meteorology
45-015-1002	Moncks Corner National Guard				●			
45-019-0003	Jenkins Ave. Fire Station					●	○	
45-019-0020	North Charleston Fire Station (NCFS)	●●	○	●				
45-019-0046	Cape Romain		●		●			●
	Total	2	2	1	2	1	1	1

○ SPM / Other ● SLAMS Duplicate / QA Monitors ○○/●●

Moncks Corner National Guard
CSA/MSA: none/Charleston-North Charleston MSA
AQS Site ID: 45-015-1002
Location: 320 Airport Road, Moncks Corner
County: Berkeley
Coordinates: +33.183016, -80.030712
Date Established: February 28, 2020
Site Evaluation: April 16, 2026

The Moncks Corner National Guard Monitoring Site is located in Moncks Corner, downwind from the Charleston urban area. The Site operates a required ozone monitor that fulfills the 40 CFR Part 58, Appendix D, Section 4.1 minimum monitoring requirements for this MSA and measures maximum ozone concentrations. The sample inlet is 177 meters from the nearest road.

This Site meets all 40 CFR Part 58 Appendix E requirements except for Appendix E, Section 2.3-Spacing from Obstructions. The distance from a group of trees to the probe is not at least twice the height that the obstacles protrude above the probe, however, there are still at least 270 degrees of continuous airflow around the probe as required.

Changes for 2026-2027:
There are no changes planned for 2026-2027.

Monitors:

Parameter	Scale	Objective	Designation	Probe Height (m)	Analysis & (Method Code)	Sampling Frequency
Ozone 44201-1	Urban	Max Ozone Concentration	SLAMS	4.40	FEM Ultraviolet Absorption (087)	Continuous

Jenkins Ave. Fire Station

CSA/MSA: none/Charleston-North Charleston MSA
AQS Site ID: 45-019-0003
Location: 4830 Jenkins Avenue, North Charleston
County: Charleston
Coordinates: +32.882289, -79.977538
Date Established: February 14, 1969
Site Evaluation: March 3, 2026

The Jenkins Ave. Fire Station Monitoring Site is located in the city of North Charleston behind a fire station in an urban and central city setting. This Site supports a required SO_2 monitor that fulfills the 40 CFR Part 58, Appendix D, Section 4.4 minimum monitoring requirements (PWEI) for the MSA and a NO_2 monitor. The sample inlets are 33.5 meters from the nearest road.

This Site meets all 40 CFR Part 58, Appendix E siting requirements.

Changes for 2026-2027:
There are no changes planned for 2026-2027.

Monitors:

Parameter	Scale	Objective	Designation	Probe Height (m)	Analysis & (Method Code)	Sampling Frequency
Sulfur Dioxide 42401-1	Neighbor-hood	Population Exposure	SLAMS	4.77	Pulsed Fluorescent (560)	Continuous
Nitrogen Dioxide 42602-2	Neighbor-hood	Highest Concentration /Source Oriented	SPM	4.77	Chemilumi-nescence (599)	Continuous

North Charleston Fire Station (NCFS)

CSA/MSA: none/Charleston-North Charleston MSA
AQS Site ID: 45-019-0020
Location: 2800 Carner Avenue, North Charleston
County: Charleston
Coordinates: +32.84755, -79.96517
Date Established: November 8, 2021
Site Evaluation: April 16, 2026

The North Charleston Fire Station (NCFS) Monitoring Site is located in the central portion of the Charleston peninsula on the grounds of the North Charleston Fire Station #3. This Site was selected for its heavy exposure to population and industry. This Site supports a continuous PM_{10} monitor that fulfills the 40 CFR Part 58, Appendix D, Section 4.6 requirements.

Also, this Site operates collocated $PM_{2.5}$ intermittent samplers that fulfill the 40 CFR Part 58, Appendix A, Section 3.2 collocation requirements and a continuous $PM_{2.5}$ monitor that fulfills the 40 CFR Part 58, Appendix D, Section 4.7.2 requirements. The sample inlets are 24.6 meters from the nearest road.

This Site meets all 40 CFR Part 58, Appendix E siting requirements.

Changes for 2026-2027:
The QA Collocated $PM_{2.5}$ sampler switched from a 1:3 operating schedule to a 1:1 operating schedule starting July 19, 2025. Additionally, after assessing the comparability of the $PM_{2.5}$ FEM to the collocated FRM, the Department has determined that the $PM_{2.5}$ FEM at this monitoring site does not meet $PM_{2.5}$ comparability requirements for data quality. The Department requests that data from this FEM monitor be excluded from comparison to the NAAQS and used for AQI purposes only. Comparability Assessments can be found in Appendix J.

There are no other changes planned for 2026-2027.

Monitors:

Parameter	Scale	Objective	Designation	Probe Height (m)	Analysis & (Method Code)	Sampling Frequency
PM_{10} 81102-1	Neighbor-hood	Highest Concentra-tion/ Population Exposure	SLAMS	2.63	FEM Broadband Spectroscopy (639)	Continuous
$PM_{2.5}$ 88101-1	Neighbor-hood	Highest Concentra-tion/ Population Exposure	SLAMS	2.05	FRM Gravimetric w/ VSCC (145)*	1:1
$PM_{2.5}$ 88101-2	Neighbor-hood	Highest Concentra-tion/ Population Exposure	QA Collocated SLAMS	2.05	FRM Gravimetric w/ VSCC (145)	1:1
$PM_{2.5}$ 88101-3	Neighbor-hood	Highest Concentra-tion/ Population Exposure	SPM	2.63	FEM Broadband Spectroscopy (638)	Continuous

*Indicates the Primary Monitoring Method for $PM_{2.5}$

Cape Romain

CSA/MSA: none/Charleston-North Charleston MSA
AQS Site ID: 45-019-0046
Location: 390 Bulls Island Road, Awendaw
County: Charleston
Coordinates: +32.941023, -79.657187
Date Established: July 11, 1983
Site Evaluation: March 3, 2026

The Cape Romain Monitoring Site is located in Charleston County at the Cape Romain National Wildlife Refuge (NWR) near Moore's Landing. The Cape Romain NWR is a Class I area about 20 miles northeast of Charleston. The majority of the Refuge area is offshore, extending from Bull Island 20 miles northeast to Cape Romain. The Refuge is bordered on the west by the Intracoastal Waterway. Inland are large tracts of forests with scattered residences. Several miles inland, a primary coastal route, US Highway (Hwy) 17, parallels the coast, with some development along the section of highway that is closest to the Refuge.

The Cape Romain Monitoring Site has a required ozone monitor that fulfills the 40 CFR Part 58, Appendix D, Section 4.1 requirement, and a continuous FEM $PM_{2.5}$ monitor that fulfills the 40 CFR Part 58, Appendix D, Section 4.7.3 monitoring requirement for regional background of $PM_{2.5}$. Also, meteorological parameters are being measured. The sample inlets are 86 meters from the nearest road.

This Site meets all 40 CFR Part 58, Appendix E siting requirements.

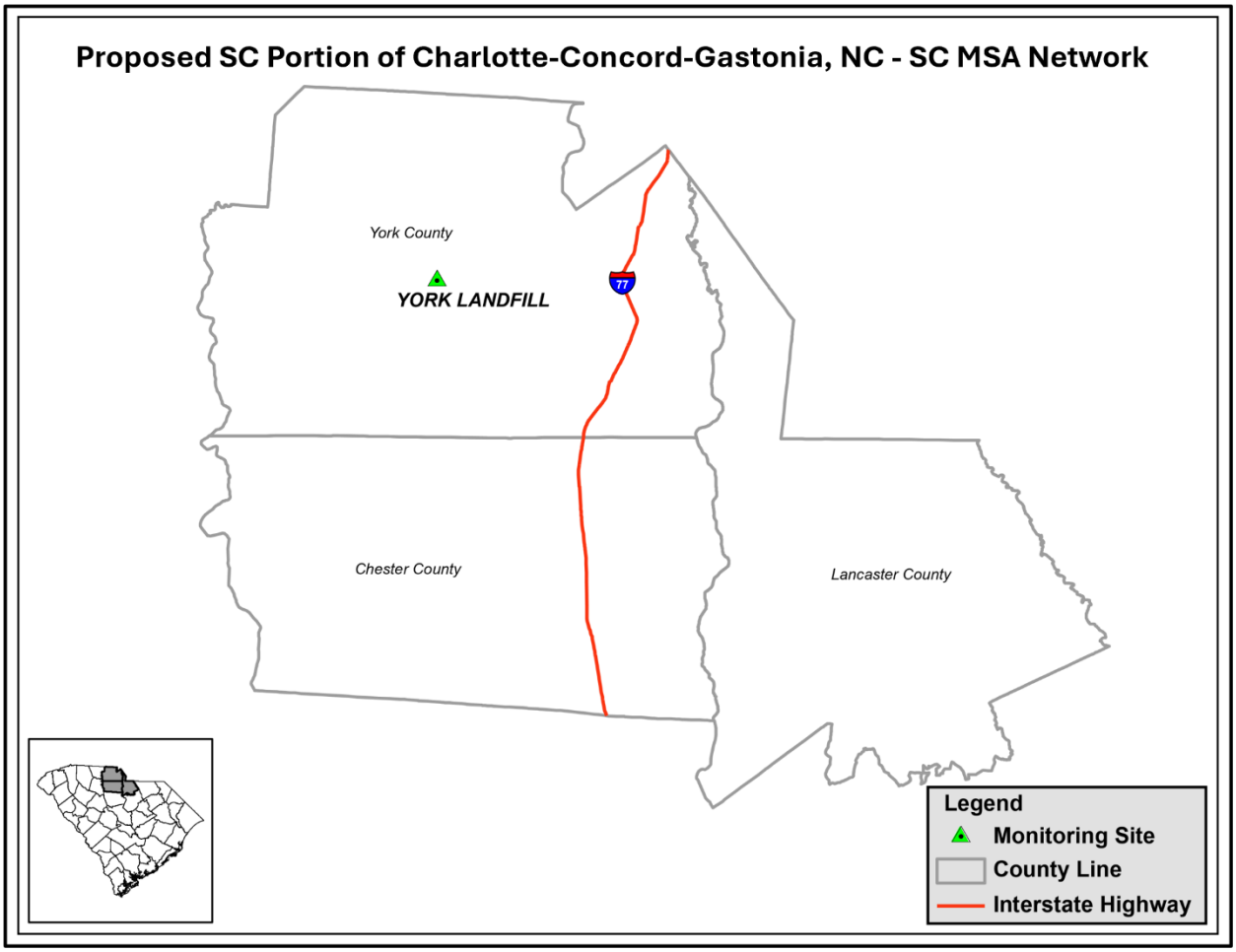
Changes for 2026-2027:
The continuous FEM T640 $PM_{2.5}$ monitor will be removed and replaced by the end of the year with an FRM $PM_{2.5}$ sampler in order to address concerns with data produced by the T640 monitors. The $PM_{2.5}$ sampler will meet $PM_{2.5}$ regional background monitoring requirements

Monitors:

Parameter	Scale	Objective	Designation	Probe Height (m)	Analysis & (Method Code)	Sampling Frequency
Ozone 44201-1	Regional	General/ Background	SLAMS	4.13	Ultraviolet Absorption	Continuous

Parameter	Scale	Objective	Designation	Probe Height (m)	Analysis & (Method Code)	Sampling Frequency
					(087)	
$PM_{2.5}$ 88101-3	Regional	General/ Background	SLAMS	5.01	FEM Broadband Spectrosco-py (636)	Continuous
Wind Speed and Wind Direction	Neigh-borhood	Other	SLAMS	N/A	Instruments for wind speed and direction (020)	Continuous

Charlotte-Concord-Gastonia, NC-SC MSA



Classification of Monitoring Type by Site:

Site ID	Site Name	$PM_{2.5}$	$PM_{2.5}$ Cont.	PM_{10}	Lead	Ozone	SO_2	NO_2	CO
45-091-0008	York Landfill					●			
	Total	0	0	0	0	1	0	0	0
○ SPM / Other ● SLAMS ○○/●● Duplicate / QA Monitors									

York Landfill

CSA/MSA: Charlotte-Concord CSA / Charlotte-Concord-Gastonia, NC-SC MSA
AQS Site ID: 45-091-0008
Location: 310 Langrum Branch Road, York
County: York
Coordinates: +34.977000, -81.207000
Date Established: February 27, 2017
Site Evaluation: May 5, 2026

The York Landfill Monitoring Site is located in south central York County in a rural setting. This Site currently operates an ozone monitor and represents ozone background levels near the Charlotte urban area. This site has been designated as a rotational site for SO_2 and operated an SO_2 monitor from December 15, 2023 through December 2025. The sample inlets are 34.8 meters from the nearest road.

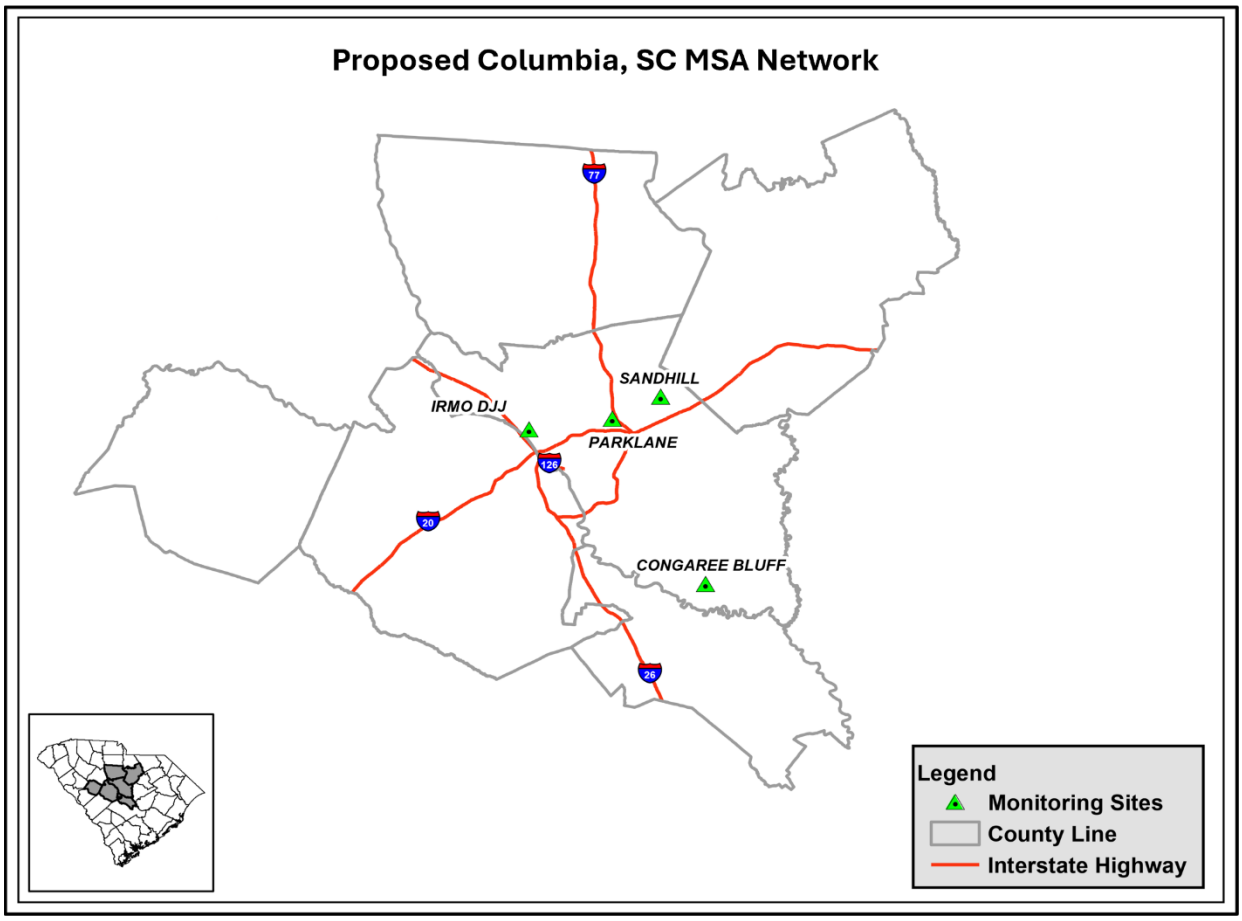
This Site meets all 40 CFR Part 58, Appendix E siting requirements.

Changes for 2026-2027:
The SO_2 rotational monitor stopped operating in December 2025. There are no other changes planned for 2026-2027.

Monitors:

Parameter	Scale	Objective	Designation	Probe Height (m)	Analysis & (Method Code)	Sampling Frequency
Ozone 44201-1	Urban	Upwind Background	SLAMS	4.61	Ultraviolet Absorption (087)	Continuous

Columbia MSA



Classification of Monitoring Type by Site:

Site ID	Site Name	$PM_{2.5}$	$PM_{2.5}$ Cont.	$PM_{2.5}$ Speciation	PM_{10}	$PM_{10-2.5}$	Ozone	SO_2	$NO_2/NO/NO_y$	CO	Precipitation Chem.	Precipitation	Meteorology
45-079-0007	Parklane (NCore)	●●	○	●	●○	●	●	●	●	●		○	●
45-079-0021	Congaree Bluff						○						
45-079-0022	Irmo DJJ	●	○										
45-079-1001	Sandhill						●		○				
	Total	3	2	1	2	1	3	1	2	1	0	1	1
○ SPM / Other ● SLAMS ○○/●● Duplicate / QA Monitors													

Parklane (NCore)
CSA/MSA: Columbia-Orangeburg-Newberry CSA / Columbia MSA
AQS Site ID: 45-079-0007
Location: 8311 Parklane Road, Columbia
County: Richland
Coordinates: +34.093959, -80.962304
Date Established: April 3, 1980
Site Evaluation: April 22, 2026

The Parklane Monitoring Site is in north central Richland County within the city limits of Columbia. This Site was originally established to provide downwind population exposure measurements at the edge of the Columbia urban area population. The Parklane Monitoring Site is the required national core (NCore) multi-pollutant monitoring site as designated in 40 CFR Part 58, Appendix D, Section 3. It supports the required continuous monitors that sample for $PM_{2.5}$, speciated $PM_{2.5,}$ $PM_{10\text{-}2.5}$, ozone, SO_2, CO, and NO/NO_y. Also, an intermittent sampler for $PM_{2.5}$, and instruments for wind speed, wind direction, relative humidity, and ambient temperature are operated here. Besides the NCore requirement, the ozone monitor also fulfills the 40 CFR Part 58, Appendix D, Section 4.1 requirement. The Site also operates a pair of collocated FRM $PM_{2.5}$ samplers to fulfill the required 40 CFR Part 58, Appendix A, Section 3.2 requirement, a low volume PM_{10}, and precipitation samplers. The site supports the required PM_{10} monitor that fulfills the 40 CFR Part 58, Appendix D, Section 4.6 requirement. The sample inlets are 41.6 meters from the nearest road.

This Site meets all 40 CFR Part 58, Appendix E requirements. The NO/NO_Y monitor will be left at 8.6 meters as recommended by the EPA in 2018.

Changes for 2026-2027:
During a 23-month assessment period in which the FEM T640X monitor at this site was labeled with a NAAQS Exclusion, the continuous $PM_{2.5}$ data collected by the monitor has met data quality requirements and has been determined to be comparable to the NAAQS. Starting on September 6, 2025, the NAAQS Exclusion will be lifted moving forward. Comparability Assessments can be found in Appendix J.

The Parklane Monitoring Site has discontinued Precipitation Chemistry. Hourly rainfall analysis will be continued. The FRM $PM_{2.5}$ samplers located at this monitoring site switched from a 1:3 operating schedule to a 1:1 operating schedule on November 1, 2025.

A BAM 1020 continuous $PM_{2.5}$ monitor will intermittently operate at this site for no more than 2 years in order to evaluate the method code for comparison to other $PM_{2.5}$ methods. The monitor is running for testing purposes only and data will be used internally.
There are no other changes planned for 2026-2027.

Monitors:
***Bolded** parameters are an NCore requirement.

Parameter *Required	Scale	Objective	Designa-tion	Probe Height (m)	Analysis & (Method Code)	Sampling Frequency
Carbon Monoxide 42101-1	Neighbor-hood	NCore Population Exposure	SLAMS	4.34	Gas filter Correlation (593)	Continuous
Sulfur Dioxide 42401-1	Neighbor-hood	NCore Population Exposure/ Other	SLAMS	4.34	Pulsed Fluorescent (560)	Continuous
Nitric Oxide /NO_y 42600-2 42601-2	Neighbor-hood	NCore Population Exposure	SLAMS	8.4	Chemilumi-nesence (674)	Continuous
Ozone 44201-1	Urban	NCore Max Ozone Concentration	SLAMS	4.34	Ultraviolet Absorption (087)	Continuous
PM_{10} 81102-3	Neighbor-hood	Population Exposure	SLAMS	4.72	FEM Broadband Spectrosco-py (639)	Continuous
$PM_{2.5}$ 88101-1	Neighbor-hood	NCore Population Exposure	SLAMS	4.76	FRM Gravimetric w/ VSCC (145)*	1:1
$PM_{2.5}$ 88101-2	Neighbor-hood	Population Exposure	Collocated SLAMS	4.76	FRM Gravimetric w/ VSCC (145)	1:1

Parameter *Required	Scale	Objective	Designa-tion	Probe Height (m)	Analysis & (Method Code)	Sampling Frequency
$PM_{2.5}$ 88101-3	Neighbor-hood	NCore Population Exposure	SPM	4.79	FEM Broadband Spectrosco-py (638)	Continuous
Speciated $PM_{2.5}$	Neighbor-hood	NCore Population Exposure	SLAMS	2.88	CSN Protocol (811,812,826,838,839,841, 842)	1:3
Low Volume PM_{10} 85101-1	Urban	Population Exposure	SPM	4.77	Gravimetric (127)	1:1
$PM_{10-2.5}$ 86101-1	Neighbor-hood	NCore Population Exposure	SLAMS	4.77	Gravimetric (176)	1:1
Precipitation	Neighbor-hood	General / Background	SPM	N/A	Tipping bucket (011)	Continuous and Sample
Wind Speed / Direction	Neighbor-hood	NCore Local Conditions	SLAMS	N/A	Instruments for wind speed/wind direction (020)	Continuous

*Indicates the Primary Monitoring Method for $PM_{2.5}$.

Congaree Bluff

CSA/MSA: Columbia-Orangeburg-Newberry CSA / Columbia MSA
AQS Site ID: 45-079-0021
Location: 1850 South Cedar Creek Road, Gadsden
County: Richland
Coordinates: +33.814680, -80.781135
Date Established: December 27, 1999
Site Evaluation: May 29, 2026

The Congaree Bluff Monitoring Site is located in southern Richland County which is in a rural setting within the boundaries of the Congaree National Park. Monitoring within the Congaree Bluff area began in 1981 with the establishment of the Congaree Swamp Monitoring Site. The original Site was established in cooperation with the Department of the Interior, with the support of the General Assembly, to provide long term monitoring in this unique area, but, because of flooding issues, had to be relocated to the current Congaree Bluff Monitoring Site in 2001. Ozone monitoring at this Site only represents conditions found in the National Park. The sample inlet is 187.5 meters from the nearest road.

This site meets all 40 CFR Part 58 Appendix E siting criteria except for Section 2.3-Spacing From Obstructions. The site has numerous tree obstructions and does not have 270 degrees of airflow around the probe. The site has a waiver for both the tree obstructions and airflow requirements granted by EPA on October 28, 2025. The approval letter is included in Appendix G.

Changes for 2026-2027:
There are no changes planned for 2026-2027.

Monitors:

Parameter	Scale	Objective	Designation	Probe Height (m)	Analysis & (Method Code)	Sampling Frequency
Ozone 44201-1	Neighbor-hood	General / Background	SPM	4.45	Ultraviolet (087)	Continuous

Irmo DJJ

CSA/MSA: Columbia-Orangeburg-Newberry CSA / Columbia MSA
AQS Site ID: 45-079-0022
Location: 4900 Broad River Road, Columbia
County: Richland
Coordinates: +34.0757, -81.1248
Date Established: January 20, 2023
Site Evaluation: April 22, 2026

The Irmo DJJ Monitoring Site was established on January 20, 2023 to serve as the replacement for the Irmo Monitoring Site. It operates a $PM_{2.5}$ sampler and a $PM_{2.5}$ continuous monitor that fulfills 40 CFR Part 58, Appendix D, Section 4.7.2. The sample inlets are 33.0 meters from the nearest road.

This Site meets all the 40 CFR Part 58, Appendix E siting requirements.

Changes for 2026-2027:
After assessing the comparability of the $PM_{2.5}$ FEM to the collocated FRM, the Department has determined that the $PM_{2.5}$ FEM at this monitoring site does not meet $PM_{2.5}$ comparability requirements for data quality. The Department requests that data from this FEM monitor be excluded from comparison to the NAAQS and used for AQI purposes only. Comparability Assessments can be found in Appendix J.
No further changes are planned for 2026-2027.

Monitors: * Indicates the Primary Monitoring Method for $PM_{2.5}$

Parameter	Scale	Objective	Designation	Probe Height (m)	Analysis & (Method Code)	Sampling Frequency
$PM_{2.5}$ 88101-1	Neighbor-hood	Population Exposure	SLAMS	2.39	FRM Gravimetric w/ VSCC (145)*	1:1
$PM_{2.5}$ 88101-3	Neighbor-hood	Population Exposure	SPM	2.64	FEM Broadband Spectrosco-py (636)	Continuous

* Indicates the Primary Monitoring Method for $PM_{2.5}$

Sandhill Experimental Station
CSA/MSA: Columbia-Orangeburg-Newberry CSA / Columbia MSA
AQS Site ID: 45-079-1001
Location: 900 Clemson Road, Columbia
County: Richland
Coordinates: +34.131262, -80.868318
Date Established: January 1, 1959
Site Evaluation: March 20, 2026

The Sandhill Experimental Station Monitoring Site is located in northeastern Richland County, downwind from the Columbia metropolitan area. This Site is located in a rapidly urbanizing portion of the City of Columbia. This Site operates a NO_2 monitor and a required ozone monitor that fulfills 40 CFR Part 58, Appendix D, Section 4.1 for this MSA. The sample inlets are 31.1 meters from the nearest road.

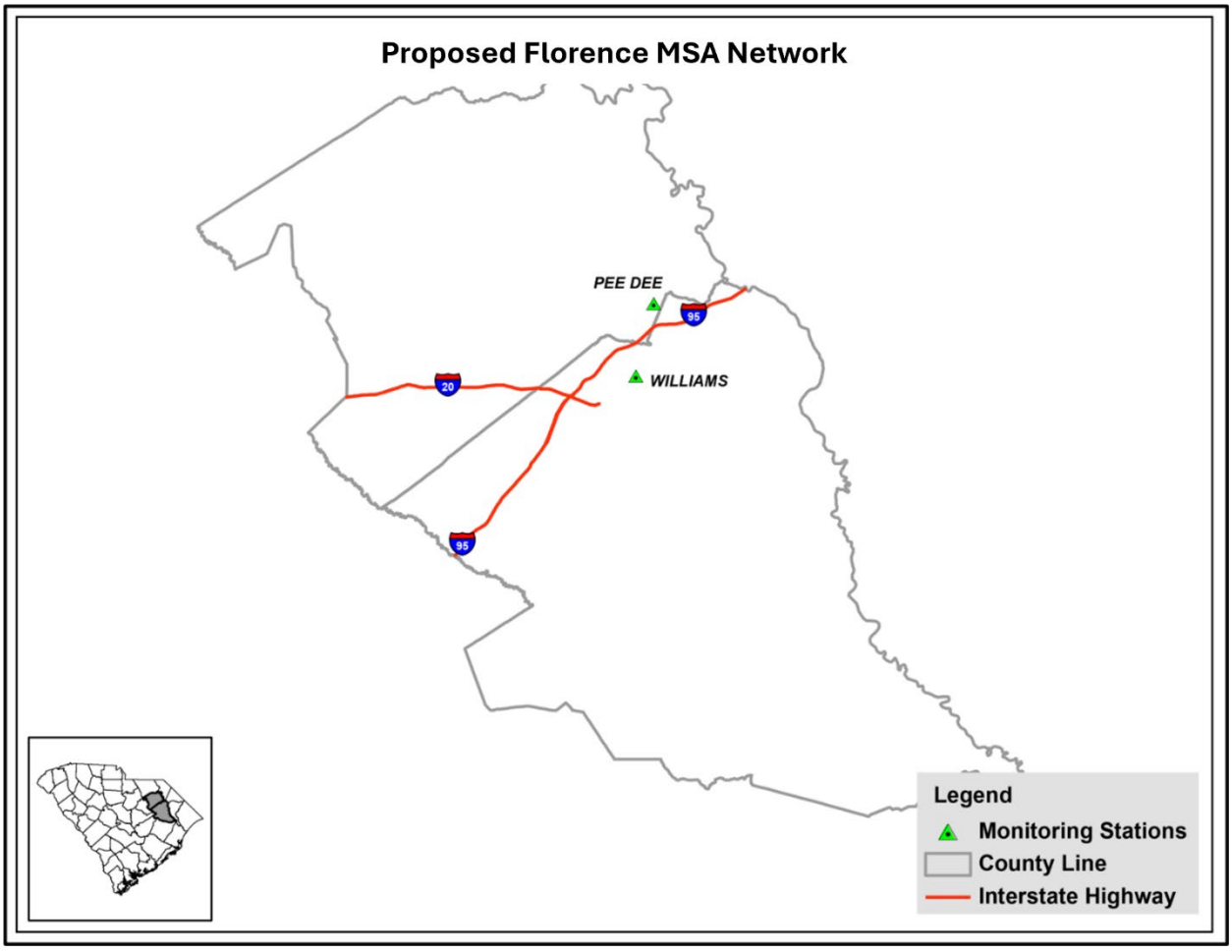
This Site meets all 40 CFR Part 58, Appendix E siting criteria.

Changes for 2026-2027:
There are no changes planned for 2026-2027.

Monitors:

Parameter	Scale	Objective	Designation	Probe Height (m)	Analysis & (Method Code)	Sampling Frequency
Nitrogen Dioxide 42602-1	Urban	General / Background Max Precursor Emissions Impact	SPM	4.14	Chemilumi-nesence (599)	Continuous
Ozone 44201-1	Urban	Max Ozone Concentration	SLAMS	4.14	Ultraviolet Absorption (087)	Continuous

Florence MSA



Classification of Monitoring Type by Site:

Site ID	Site Name	$PM_{2.5}$	$PM_{2.5}$ Cont.	PM_{10}	Lead	Ozone	SO_2	NO_2	CO
45-031-0003	Pee Dee Experimental Station					●			
45-041-0003	Williams Middle School	●	○						
	Total	1	1	0	0	1	0	0	0
○ SPM / Other ● SLAMS ○○/●● Duplicate / QA Monitors									

Pee Dee Experimental Station

CSA/MSA: none/Florence MSA
AQS Site ID: 45-031-0003
Location: 2200 Pocket Road, Darlington
County: Darlington
Coordinates: +34.285696, -79.744859
Date Established: February 25, 1993
Site Evaluation: March 27, 2026

The Pee Dee Experimental Station Monitoring Site is located in northeastern Darlington County. This Site has an ozone monitor. The sample inlets are 193.3 meters from the nearest road.

This Site meets all 40 CFR Part 58 Appendix E siting criteria.

Changes for 2026-2027:
There are no changes planned for 2026-2027.

Monitors:

Parameter	Scale	Objective	Designation	Probe Height (m)	Analysis & (Method Code)	Sampling Frequency
Ozone 44201-1	Urban	Max Ozone Concentration/ General / Background	SLAMS	4.10	Ultraviolet Absorption (087)	Continuous

Williams Middle School

CSA/MSA: none/Florence MSA
AQS Site ID: 45-041-0003
Location: 1119 N. Irby Street, Florence
County: Florence
Coordinates: +34.214263, -79.767347
Date Established: August 4, 2008
Site Evaluation: March 27, 2026

The Williams Middle School Monitoring Site is located in Florence County and operates one $PM_{2.5}$ FRM sampler and one $PM_{2.5}$ FEM continuous monitor. Sample inlets are 110 meters from the nearest road.

This Site meets all 40 CFR Part 58, Appendix E requirements.

Changes for 2026-2027:
After assessing the comparability of the $PM_{2.5}$ FEM to the collocated FRM, the Department has determined that the $PM_{2.5}$ FEM at this monitoring site does not meet $PM_{2.5}$ comparability requirements for data quality. The Department requests that data from this FEM monitor be excluded from comparison to the NAAQS and used for AQI purposes only. Comparability Assessments can be found in Appendix J.

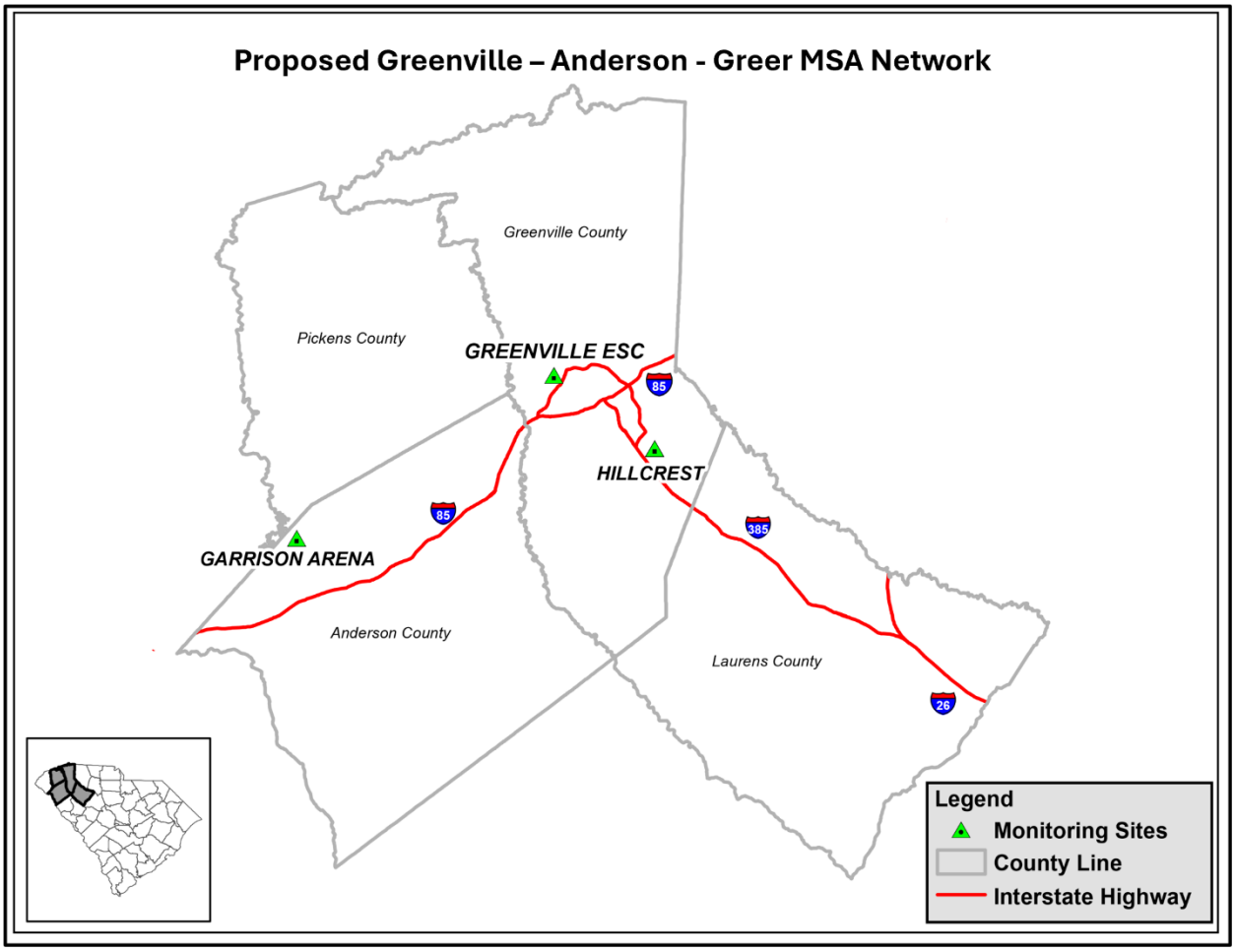
There are no further changes planned for 2026-2027.

Monitors:

Parameter	Scale	Objective	Designa-tion	Probe Height (m)	Analysis & (Method Code)	Sampling Frequency
$PM_{2.5}$ 88101-1	Neighbor-hood	Population Exposure/ Highest Concentration	SLAMS	2.68	FRM Gravimetric w/ VSCC (145)*	1:3
$PM_{2.5}$ 88101-3	Neighbor-hood	Population Exposure/ Highest Concentration	SPM	2.78	FEM Broadband Spectroscopy (636)	Continuous

*Indicates the Primary Monitoring Method for $PM_{2.5}$

Greenville-Anderson-Greer MSA



Classification of Monitoring Type by Site:

Site ID	Site Name	$PM_{2.5}$	$PM_{2.5}$ Cont.	PM_{10}	Lead	Ozone	SO_2	NO_2	CO
45-007-0006	Garrison Arena					●			
45-045-0015	Greenville ESC	●	○	●			●	●	
45-045-0016	Hillcrest	●●				●			
	Total	3	1	1	0	2	1	1	0

○ SPM / Other ● SLAMS ○○/●● Duplicate / QA Monitors

Garrison Arena

CSA/MSA: Greenville-Spartanburg-Anderson CSA / Greenville-Anderson-Greer MSA
AQS Site ID: 45-007-0006
Location: 1101 W. Queen Street, Pendleton
County: Anderson
Coordinates: +34.635958, -82.810667
Date Established: February 28, 2020
Site Evaluation: May 20, 2026

The Garrison Arena Monitoring Site is located on the grounds of Clemson University at the T. Ed Garrison Arena near the northern border of Anderson County. This Site supports a required ozone monitor that fulfills the 40 CFR Part 58, Appendix D, Section 4.1 minimum monitoring requirements. The monitor measures ozone concentrations upwind of the Greenville-Spartanburg urbanized area. This Site is 14.25 meters from the nearest road.

This Site meets all 40 CFR Part 58, Appendix E siting criteria.

Changes for 2026-2027:
There are no changes planned for 2026-2027.

Monitors:

Parameter	Scale	Objective	Designation	Probe Height (m)	Analysis & (Method Code)	Sampling Frequency
Ozone 44201-1	Urban	Max Ozone Concentra-tion	SLAMS	4.56	Ultraviolet Absorption (087)	Continuous

Greenville Employment Security Commission (ESC)

CSA/MSA: Greenville-Spartanburg-Anderson CSA / Greenville-Anderson-Greer MSA
AQS Site ID: 45-045-0015
Location: 133 Perry Avenue, Greenville
County: Greenville
Coordinates: +34.843895, -82.414585
Date Established: April 11, 2008
Site Evaluation: April 7, 2026

The Greenville ESC Monitoring Site was established on April 11, 2008, in the City of Greenville. This Site supports a $PM_{2.5}$ FRM sampler and a T640X monitor, which measures both continuous $PM_{2.5}$ and PM_{10}. The continuous $PM_{2.5}$ monitor fulfills the 40 CFR Part 58, Appendix A Section 3.2 and the 40 CFR Part 58, Appendix D, Section 4.7 minimum monitoring requirements. The continuous PM_{10} monitor fulfills the 40 CFR Part 58, Appendix D, Section 4.6 requirements.

In addition, this Site monitors for SO_2 and NO_2. The EPA Region 4 selected this Site as one of the locations for a Regional Administrator required NO_2 monitor to help protect susceptible and vulnerable populations, as required by 40 CFR Part 58, Appendix D, Section 4.3.4. Since the Greenville-Anderson-Greer MSA has a population greater than 1 million, the NO_2 monitor at this site also serves as the required area-wide NO_2 monitor.

The sample inlets are 12.1 meters from the nearest road.

This Site meets all 40 CFR Part 58 Appendix E siting criteria except for Appendix E, Section 2.3 - Spacing from Obstructions. This site does not have at least 270 degrees of continuous airflow due tree obstructions. EPA approved a waiver for the Section 2.3 airflow requirements on October 28, 2025. The waiver approval is located in Appendix G.

Changes for 2026-2027:
In 2025, the Greenville-Anderson-Greer MSA crossed 1 million in population, triggering the requirement for a near road monitoring site which includes NO_2, $PM_{2.5}$, and CO monitors. In addition, the population increase also triggers the requirements for an additional PM_{10} monitor in the MSA, as well as an area-wide NO_2 monitor. The NO_2 monitor located at the Greenville ESC (45-045-0015) Monitoring Site will serve as the required area-wide monitor. The Department has started the process of locating

appropriate sites for the near road NO_2, $PM_{2.5}$, and CO monitors, as well as the additional required PM_{10} monitor.
After assessing the comparability of the $PM_{2.5}$ FEM to the collocated FRM, the Department has determined that the $PM_{2.5}$ FEM at this monitoring site does not meet $PM_{2.5}$ comparability requirements for data quality. The Department requests that data from this FEM monitor be excluded from comparison to the NAAQS and used for AQI purposes only. Comparability Assessments can be found in Appendix J.
There are no other changes planned for 2026-2027.

Monitors:

Parameter	Scale	Objective	Designation	Probe Height (m)	Analysis & (Method Code)	Sampling Frequency
Sulfur Dioxide 42401-1	Neighbor-hood	Population Exposure	SLAMS	4.26	Pulsed fluorescent (560)	Continuous
Nitrogen Dioxide 42602-1	Neighbor-hood	Population Exposure	SLAMS	4.26	Chemilumi-nescence (599)	Continuous
PM_{10} 81102-1	Neighbor-hood	Population Exposure	SLAMS	4.92	FEM Broadband Spectrosco-py (639)	Continuous
$PM_{2.5}$ 88101-1	Neighbor-hood	Population Exposure / Welfare Related Impacts	SLAMS	4.8	FRM Gravimetric w/ VSCC (145) *	1:1
$PM_{2.5}$ 88101-3	Neighbor-hood	Population Exposure/ Welfare Related Impacts	SPM	4.92	FEM Broadband Spectrosco-py (638)	Continuous

*Indicates the Primary Monitoring Method for $PM_{2.5}$

Hillcrest Middle School

CSA/MSA: Greenville-Spartanburg-Anderson CSA / Greenville-Anderson-Greer MSA
AQS Site ID: 45-045-0016
Location: 510 Garrison Road, Simpsonville
County: Greenville
Coordinates: +34.751848, -82.256701
Date Established: February 17, 2009
Site Evaluation: April 7, 2026

The Hillcrest Middle School Monitoring Site is located in Simpsonville and represents suburban areas near the interstate corridors in the Greenville MSA. Initiated in 2008, this Site was selected as a monitoring location based on results of the Greenville MSA Ozone Study. This Site supports an ozone monitor that fulfills the 40 CFR Part 58, Appendix D, Section 4.1 requirement and a required collocated $PM_{2.5}$ FRM sampler pair that fulfills 40 CFR Part 58, Appendix A, Section 3.2. The sample inlets are 259 meters from the nearest road.

This Site meets all 40 CFR Part 58, Appendix E requirements.

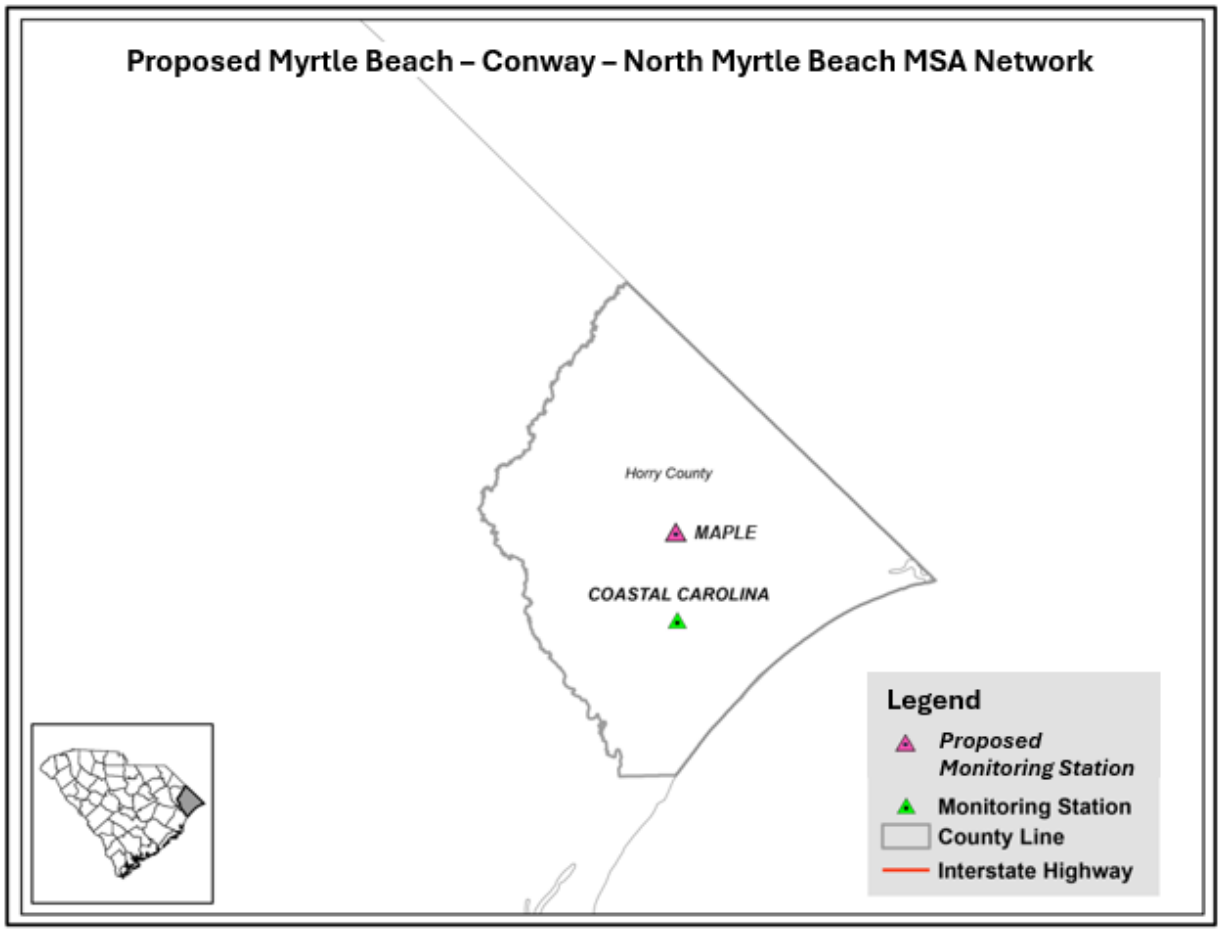
Changes for 2026-2027:
There are no changes planned for 2026-2027.

Monitors:

Parameter	Scale	Objective	Designation	Probe Height (m)	Analysis & (Method Code)	Sampling Frequency
Ozone 44201-1	Urban	Population Exposure	SLAMS	3.89	Ultraviolet Adsorption (087)	Continuous
$PM_{2.5}$ 88101-1	Urban	Population Exposure	SLAMS	3.42	FRM Gravimetric w/ VSCC (145)*	1:3
$PM_{2.5}$ 88101-2	Urban	Population Exposure	QA Collocated SLAMS	3.42	FRM Gravimetric w/ VSCC (145)	1:3

*Indicates the Primary Monitoring Method for $PM_{2.5}$

Myrtle Beach-Conway-North Myrtle Beach MSA



Classification of Monitoring Type by Site:

Site ID	Site Name	$PM_{2.5}$	$PM_{2.5}$ Cont.	PM_{10}	Lead	Ozone	SO_2	NO_2	CO
45-051-0008	Coastal Carolina		○			●			
45-051-0009	Maple					●			
	Total	0	1	0	0	2	0	0	0
○ SPM / Other ● SLAMS ○○/●● Duplicate / QA Monitors Proposed monitor									

Coastal Carolina

CSA/MSA: Myrtle Beach-Conway-North Myrtle Beach MSA
AQS Site ID: 45-051-0008
Location: 485 Century Circle, Conway
County: Horry
Coordinates: +33.800500, -78.994100
Date Established: June 27, 2016
Site Evaluation: April 1, 2026

In 2016, the Department established the Coastal Carolina Monitoring Site on the grounds of the Coastal Carolina University in Conway. This Site supports a $PM_{2.5}$ monitor and a required ozone monitor that fulfills 40 CFR Part 58, Appendix D, Section 4.1 for the MSA and measures maximum ozone concentrations.

The sample inlet is 18.3 meters from the nearest road. This Site meets all 40 CFR Part 58, Appendix E requirements.

Changes for 2026-2027:
$PM_{2.5}$ monitoring was briefly suspended while the T640 monitor was replaced with a Met One BAM 1020 monitor configured with a Sharp Cut Cyclone (SCC). The BAM 1020 began operating on December 9, 2025, as a non-FEM monitor and the data collected is used for AQI purposes only under the parameter code 88502.

Monitors:

Parameter	Scale	Objective	Designation	Probe Height (m)	Analysis & (Method Code)	Sampling Frequency
Ozone 44201-1	Urban	Population Exposure	SLAMS	4.08	Ultraviolet (087)	Continuous
$PM_{2.5}$ 88502-3	Urban	Population Exposure	SPM	4.49	Beta Attenuation (170)	Continuous

Proposed Maple Monitoring Site

CSA/MSA: Myrtle Beach-Conway-North Myrtle Beach MSA
AQS Site ID: 45-051-0009
Location: 5443 Hwy 65, Conway, SC 29526
County: Horry
Coordinates: 33.925, -78.987
Date Established: TBD
Site Evaluation: April 1, 2026

The 2023 ozone design value measured at the Coastal Carolina monitoring site was 85% of the NAAQS, triggering the requirement for a second ozone monitoring site to be established in the MSA.

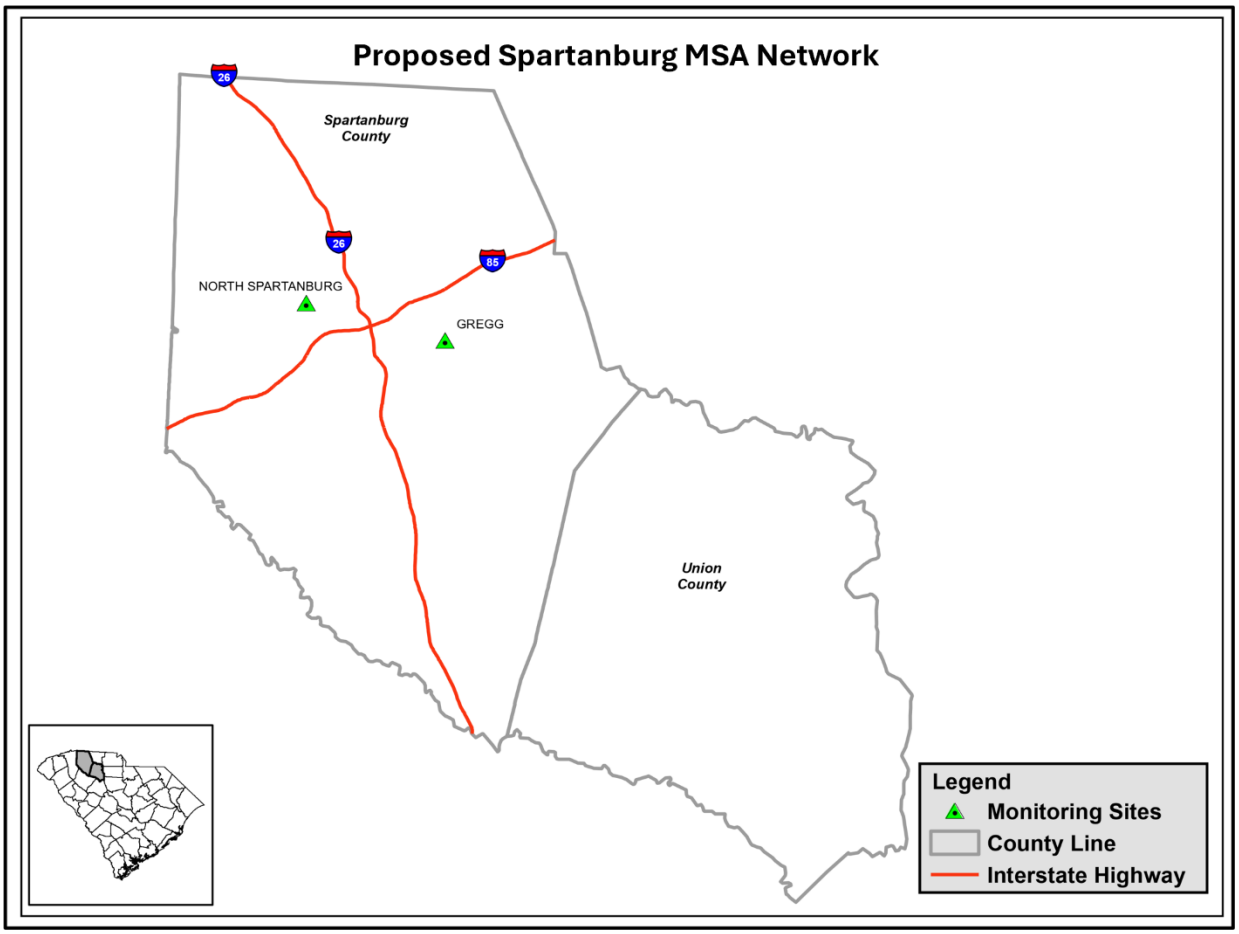
The Department requests concurrence to establish the Maple Monitoring Site (45-051-0009). The Maple Monitoring Site is located on the grounds of Horry County Fire Rescue Station 21 (Maple Fire Station) off of Highway 65 in Conway, SC. The site will monitor for ozone with an objective of maximum concentration at the urban scale in the Myrtle Beach-Conway-North Myrtle Beach, SC MSA. The designation of the monitor will be SLAMS, This monitor will meet all siting requirements of 40 CFR Part 58 Appendices A, C, D, and E. A detailed site proposal can be found in Appendix I.

Changes for 2026-2027:
The Maple Monitoring Site will be established.

Monitors:

Parameter	Scale	Objective	Designation	Probe Height (m)	Analysis & (Method Code)	Sampling Frequency
Ozone 44201-1	Urban	Maximum Concentration	SLAMS	TBD	Ultraviolet (087)	Continuous

Spartanburg, SC MSA



Classification of Monitoring Type by Site:

Site ID	Site Name	$PM_{2.5}$	$PM_{2.5}$ Cont.	PM_{10}	Lead	Ozone	SO_2	NO_2	CO
45-083-0009	North Spartanburg Fire Station #2					●			
45-083-0011	T.K. Gregg	●	○			●			
	Total	1	1	0	0	2	0	0	0

○ SPM / Other ● SLAMS ○○/●● Duplicate / QA Monitors Proposed monitor

North Spartanburg Fire Station #2

CSA/MSA: Greenville-Spartanburg-Anderson CSA / Spartanburg MSA
AQS Site ID: 45-083-0009
Location: 1556 John Dodd Road, Inman
County: Spartanburg
Coordinates: +34.988706, -82.075802
Date Established: April 4, 1990
Site Evaluation: May 1, 2026

The North Spartanburg Fire Station #2 Monitoring Site was established on April 4, 1990, in rural Spartanburg County, northwest of the City of Spartanburg. This Site supports a required ozone monitor to fulfill the 40 CFR Part 58, Appendix D, Section 4.1 requirements. The objective is to measure maximum ozone concentration. The sample inlet is 92.5 meters from the nearest road.

This site meets all the 40 CFR Part 58 Appendix E siting criteria except Section 2.3(a)-Spacing from Obstructions. There is one tree that is an obstruction, but the site still meets the requirement for at least 270 degrees of continuous airflow.

Changes for 2026-2027:
There are no changes planned for 2026-2027.

Monitors:

Parameter	Scale	Objective	Designation	Probe Height (m)	Analysis & (Method Code)	Sampling Frequency
Ozone 44201-1	Urban	Max Ozone Concentration	SLAMS	3.81	Ultraviolet Absorption (087)	Continuous

T.K. Gregg Recreation Center

CSA/MSA: Greenville-Spartanburg-Anderson CSA / Spartanburg MSA
AQS Site ID: 45-083-0011
Location: 267 Northview Street, Spartanburg
County: Spartanburg
Coordinates: +34.955566, -81.924797
Date Established: December 29, 2008
Site Evaluation: May 1, 2026

The T.K. Gregg Recreation Center Monitoring Site is located in downtown Spartanburg in Spartanburg County. This Site has a $PM_{2.5}$ FRM sampler and a continuous $PM_{2.5}$ monitor. The sample inlets are 48.2 meters from the nearest road.

This Site meets all 40 CFR Part 58, Appendix E requirements.

Changes for 2026-2027:
In 2023, the Spartanburg, SC MSA crossed the population threshold requiring a second ozone monitor to be placed in the MSA. The Department requests concurrence to operate the second required ozone monitor for the MSA at the T.K. Gregg monitoring site. A detailed proposal can be found in Appendix I.
Additionally, after assessing the comparability of the $PM_{2.5}$ FEM to the collocated FRM, the Department has determined that the $PM_{2.5}$ FEM at this monitoring site does not meet $PM_{2.5}$ comparability requirements for data quality. The Department requests that data from this FEM monitor be excluded from comparison to the NAAQS and used for AQI purposes only. Comparability Assessments can be found in Appendix J.
There are no other changes planned for 2026-2027.

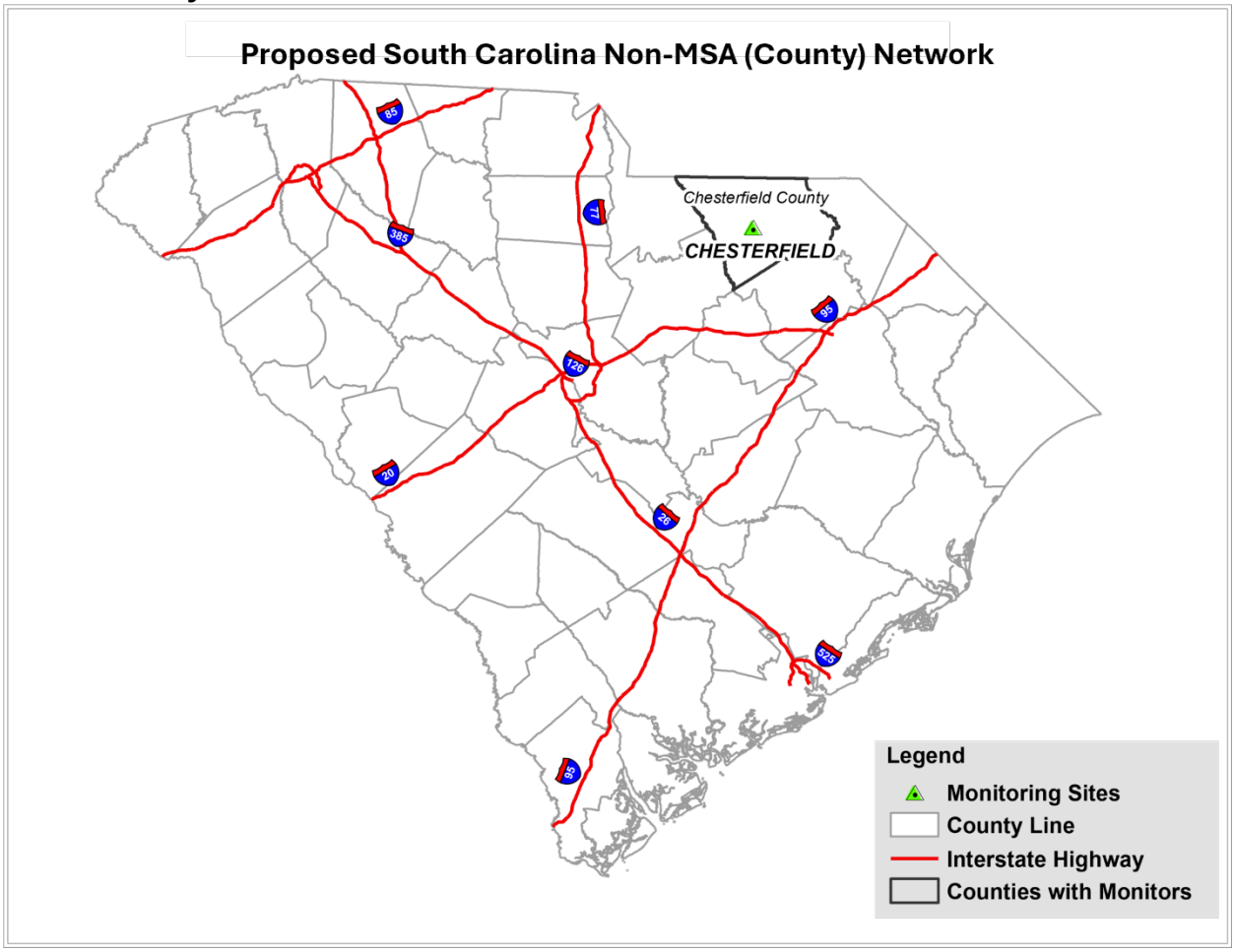
Monitors:

Parameter	Scale	Objective	Designation	Probe Height (m)	Analysis & (Method Code)	Sampling Frequency
$PM_{2.5}$ 88101-1	Neigh-borhood	Highest Concentration	SLAMS	2.47	FRM Gravimetric w/VSCC (145)*	1:1
$PM_{2.5}$ 88101-3	Neigh-borhood	Highest Concentration	SPM	2.82	Broadband Spectrosco	Continuous

Parameter	Scale	Objective	Designation	Probe Height (m)	Analysis & (Method Code)	Sampling Frequency
					py (636)	
Ozone 44201-1	Neigh-borhood	Maximum Concentration	SLAMS	TBD	Ultraviolet (087)	Continuous

*Indicates the Primary Monitoring Method for $PM_{2.5}$

Remainder of State



Classification of Monitoring Type by Site:

Site ID	Site Name	$PM_{2.5}$	$PM_{2.5}$ Cont.	Ozone	Metals	Carbonyls	PAHs	VOCs	EtO
45-025-0001	Chesterfield	●	●	○	○○	○○	○○	○○	○
	Total	1	1	1	2	2	2	2	1
○ SPM / Other ● SLAMS ○○/●● Duplicate / QA Monitors									

Chesterfield (NATTS)

CSA/MSA: none/none
AQS Site ID: 45-025-0001
Location: SC Hwy 145, McBee (Route 2 Box 100)
County: Chesterfield
Coordinates: +34.615367, -80.198787
Date Established: January 6, 2000
Site Evaluation: May 12, 2026

The Chesterfield Monitoring Site is located in central Chesterfield County. This Site has an ozone monitor and a continuous FEM $PM_{2.5}$ monitor that is collocated with a FRM $PM_{2.5}$ sampler, which fulfills the 40 CFR Part 58, Appendix A, Section 3.2 collocation requirement. The FRM $PM_{2.5}$ sampler also fulfills the Appendix D, Section 4.7.3 requirement for regional transport concentrations.

The Chesterfield Monitoring Site is a rural NATTS Site which includes carbonyls, total VOCs, EtO, PAHs, and metals sampling. The sample inlets are 34 meters from the nearest road.

The criteria pollutants meet all 40 CFR Part 58, Appendix E requirements. The duplicate metal samplers have a tree that is an obstruction, but the samplers still meets the requirement for at least 270 degrees of continuous airflow.

Changes for 2026-2027:
After assessing the comparability of the $PM_{2.5}$ FEM to the collocated FRM, the Department has determined that the $PM_{2.5}$ FEM at this monitoring site does not meet $PM_{2.5}$ comparability requirements for data quality. The Department requests that data from this FEM monitor be excluded from comparison to the NAAQS and used for AQI purposes only. As well as requesting exclusion moving forward, we request that the data produced by the T640 monitor at the Chesterfield Monitoring Site be excluded from comparison to the NAAQS starting on 9/6/2023 to account for data collected after the firmware update that was not previously able to be excluded. Comparability Assessments can be found in Appendix J. After the replacement of the primary method code 636 $PM_{2.5}$ monitor with an FRM $PM_{2.5}$ sampler at the Cape Romain Monitoring Site, the FRM $PM_{2.5}$ sampler will become the primary monitor at the Chesterfield Monitoring Site.
There are no other changes planned for 2026-2027.

Monitors:

Parameter	Scale	Objective	Designation	Probe Height (m)	Analysis & (Method Code)	Sampling Frequency
Ozone 44201-1	Regional	General / Background	SPM	4.47	Ultraviolet Absorption (087)	Continuous
$PM_{2.5}$ 88101-1	Regional	Regional Transport	QA Collocated SLAMS	2.91	FRM Gravimetric w/ VSCC (145)	1:3
$PM_{2.5}$ 88101-3	Regional	Regional Transport	SLAMS	3.05	FEM Broadband Spectrosco-py (636)*	Continuous
Carbonyls	Regional	NATTS	Other	4.2	DNPH/HPLC	1:6
Collocated Carbonyls	Regional	NATTS	Other	4.2	DNPH/HPLC	1:6
PAHs	Regional	NATTS	Other	1.97	PUF/GCMS	1:6
Collocated PAHs	Regional	NATTS	Other	1.97	PUF/GCMS	1:6
VOC	Regional	NATTS	Other	4.43	Canister/ GCMS	1:6
Collocated VOC	Regional	NATTS	Other	4.43	Canister/ GCMS	1:6
Ethylene Oxide	Regional	NATTS	SPM	4.43	Canister/ GCMS	1:6
Metals	Regional	NATTS	Other	2.36	PM_{10} / ICP/MS	1:6
Collocated Metals	Regional	NATTS	Other	2.32	PM_{10} / ICP/MS	1:6

*Indicates the Primary Monitoring Method for $PM_{2.5}$

Appendix A: Summary of Public Comments

The public comment period lasted from 4/24/2026 until 5/26/2026. The Department received the following comment from EPA regarding the Ongoing Data Requirements Rule for 2010 1-hour SO2 NAAQS Verification Calendar Year 2025: Please explain the reason for the SO_2 emission increases between 2024 and 2025 for each source. This comment is addressed in Appendix H.

Appendix B: Site Evaluations Summary for CFR 40 Part 58, Appendix E Table

Site Evaluations are conducted yearly on each monitoring site to ensure compliance to requirements found in 40 CFR Part 58, Appendix E. After appropriate administrative review, the Site Evaluations are sent to the EPA Region 4. The following tables summarize the information about the latest Site Evaluation for each of the monitoring sites.
The first table gives the column number and the shortened Column Name listed in the columns of the second table. It also gives the Section number and the regulatory requirement it represents from 40 CFR, Part 58, Appendix E. The second table lists each monitoring site, their individual criteria pollutant monitors, and the fulfillment and/or measurements of the 40 CFR Part 58, Appendix E requirements. For brevity, the column titles in the second table have been shortened as follows:

Column	Column Name	40 CFR Part 58, Appendix E Requirements
Column 1:	Site ID, Site Name and Date Visited	Site Identification information and date the Site Evaluation was conducted.
Column 2:	Parameter	Criteria Pollutant.
Column 3:	Sampling Train	Section 2.6. For reactive gases, is sampling train made of borosilicate glass, FEP Teflon or their equivalent?
Column 4:	Sampling Time	Section 2.6. For reactive gases, is sampling time <20 seconds?
Column 5:	Probe Height	Section 2.1. Horizontal and Vertical Placement: Height from ground to probe must be 2-15 meters.
Column 6:	Support Structure	Section 2.1. Horizontal and Vertical Placement: Is Horizontal and vertical distance from supporting structure >1 meter.
Column 7:	Collocation Placement	Section 11. Horizontal and Vertical Placement: Collocated monitors must be within 4 meters of each other.
Column 8:	Flow Rates	Section 11. Horizontal and Vertical Placement: For PM collocation, flow rates greater than 200 liters/min must be at least 2 meters apart or at least 1-meter flow rates for less than 200 liters/min.
Column 9:	Minor Sources	Section 2.2. Spacing from Minor Sources: Probe should be away from minor sources.
Column 10:	Obstructions	Section 2.3. Spacing from Obstructions: Distance from probe to obstacle must be at least twice the height the obstacle protrudes above the probe.
Column 11:	Airflow	Section 2.3. Spacing from Obstructions: Must have continuous unrestricted airflow 270 degrees around probe. (Yes means the probe has at least 270 degrees around the probe).
Column 12:	Dripline	Section 2.4. Spacing from Trees: Distance from dripline of trees to probe must be <10 meters.
Column 13:	Roadway	Section 2.5. Spacing from Roadways: Does it meet distance from roadway to probe?

Site ID; Site Name; Date Visited	Parameter	Sam-pling Train	Sam-pling Time	Probe Height (m)	Vertical Distance from Support (m)	Collocation Placement (m)	Flow Rate	Minor Sources	Obstructions	Airflow	Drip-line (m)	Roadway (m)
Augusta-Richmond County, GA-SC MSA												
45-003-0003; Jackson; March 9, 2026	Ozone	Yes	Yes	3.55	0.92	N/A	N/A	Yes	Yes	Yes	13.4	128
45-037-0001; Trenton; March 9, 2026	Ozone	Yes	Yes	4.26	1.63	N/A	N/A	Yes	Yes	Yes	32.2	30.3
45-037-0001; Trenton; March 9, 2026	$PM_{2.5}$ Cont.	N/A	N/A	4.34	1.71	N/A	Yes	Yes	Yes	Yes	32.2	30.3
45-037-0001; Trenton; March 9, 2026	$PM_{2.5}$ Int.	N/A	N/A	4.72	2.09	N/A	Yes	Yes	Yes	Yes	32.2	30.3
Charleston-North Charleston MS												
45-015-1002; Moncks Corner; April 16, 2026	Ozone	Yes	Yes	4.40	1.74	N/A	N/A	Yes	No	Yes	15.4	177
45-019-0003; Jenkins Ave; March 3, 2026	NO_2	Yes	Yes	4.77	2.01	N/A	N/A	Yes	Yes	Yes	17.0	33.5
45-019-0003; Jenkins Ave; March 3, 2026	SO_2	Yes	Yes	4.77	2.01	N/A	N/A	Yes	Yes	Yes	17.0	33.5

45-019-0020 N. Charleston F.S. April 16, 2026	$PM_{2.5}$ Int.	N/A	N/A	2.05	1.79	2.1	Yes	Yes	Yes	Yes	21.0	24.6
45-019-0020 N. Charleston F.S. April 16, 2026	$PM_{2.5}$ Int.	N/A	N/A	2.05	1.79	2.1	Yes	Yes	Yes	Yes	21.0	24.6
45-019-0020 N. Charleston F.S. April 16, 2026	$PM_{2.5}$ Cont.	N/A	N/A	2.63	2.37	N/A	Yes	Yes	Yes	Yes	21.0	24.6
45-019-0020 N. Charleston F.S. April 16, 2026	PM_{10} Cont.	N/A	N/A	2.63	2.37	N/A	Yes	Yes	Yes	Yes	21.0	24.6
45-019-0046; Cape Romain; March 3, 2026	Ozone	Yes	Yes	4.13	1.38	N/A	N/A	Yes	Yes	Yes	11.5	86
45-019-0046; Cape Romain; March 3, 2026	$PM_{2.5}$ Cont.	N/A	N/A	5.01	2.26	N/A	Yes	Yes	Yes	Yes	11.5	86
Charlotte-Concord-Gastonia MSA												
45-091-0008; York Landfill; May 5, 2026	Ozone	Yes	Yes	4.61	2.06	N/A	N/A	Yes	Yes	Yes	24.8	34.8
Columbia MSA												
45-079-0022; Irmo DJJ; April 22, 2026	$PM_{2.5}$ Int.	N/A	N/A	2.39	2.07	2.11	Yes	Yes	Yes	Yes	18.4	33.0
45-079-0022; Irmo DJJ; April 22, 2026	$PM_{2.5}$ Cont.	N/A	N/A	2.64	2.32	2.11	Yes	Yes	Yes	Yes	18.4	33.0

45-079-0007; Parklane; April 22, 2026	$PM_{2.5}$ Int.	N/A	N/A	4.76	2.07	2.26	Yes	Yes	Yes	Yes	15.0	41.6
45-079-0007; Parklane; April 22, 2026	$PM_{2.5}$ Int.	N/A	N/A	4.76	2.07	2.26	Yes	Yes	Yes	Yes	15.6	41.6
45-079-0007; Parklane; April 22, 2026	$PM_{2.5}$ Cont.	N/A	N/A	4.79	2.15	N/A	Yes	Yes	Yes	Yes	15.0	41.6
45-079-0007; Parklane; April 22, 2026	Speciated $PM_{2.5}$	N/A	N/A	2.12	2.08	N/A	Yes	Yes	Yes	Yes	15.4	41.6
45-079-0007; Parklane; April 22, 2026	PM_{10}	N/A	N/A	4.77	2.08	N/A	Yes	Yes	Yes	Yes	15.0	41.6
45-079-0007; Parklane; April 22, 2026	PM_{10} Cont.	N/A	N/A	4.72	2.08	N/A	Yes	Yes	Yes	Yes	15.0	41.6
45-079-0007; Parklane; April 22, 2026	Ozone	Yes	Yes	4.34	1.7	N/A	N/A	Yes	Yes	Yes	15.0	41.6
45-079-0007; Parklane; April 22, 2026	SO_2	Yes	Yes	4.34	1.7	N/A	N/A	Yes	Yes	Yes	15.0	41.6
45-079-0007; Parklane; April 22, 2026	CO	Yes	Yes	4.34	1.7	N/A	N/A	Yes	Yes	Yes	15.0	41.6
45-079-0007; Parklane; April 22, 2026	NO/NO_y	Yes	Yes	8.4	N/A	N/A	N/A	Yes	Yes	Yes	15.0	41.6

45-079-0021; Congaree Bluff; May 29, 2026	Ozone	Yes	Yes	4.45	1.75	N/A	N/A	Yes	No	No	16.4	187.5
45-079-1001; Sandhill; March 20, 2026	Ozone	Yes	Yes	4.14	1.44	N/A	N/A	Yes	Yes	Yes	14.5	31.1
45-079-1001; Sandhill; March 20, 2026	NO_2	Yes	Yes	4.14	1.44	N/A	N/A	Yes	Yes	Yes	14.5	31.1
Florence MSA												
45-031-0003; Pee Dee; March 27, 2026	Ozone	Yes	Yes	4.1	1.36	N/A	N/A	Yes	Yes	Yes	No Trees	193.3
45-041-0003; Williams Middle School; March 27, 2026	$PM_{2.5}$ Cont.	N/A	N/A	2.78	2.24	N/A	Yes	Yes	Yes	Yes	19.8	110
45-041-0003; Williams Middle School; March 27, 2026	$PM_{2.5}$ Int.	N/A	N/A	2.68	2.34	N/A	Yes	Yes	Yes	Yes	19.8	110
Greenville-Anderson-Greer MSA												
45-007-0006; Garrison Arena; May 20, 2026	Ozone	Yes	Yes	4.56	1.9	N/A	N/A	Yes	Yes	Yes	43.8	14.25
45-045-0015; Greenville ESC; April 7, 2026	SO_2	Yes	Yes	4.26	1.52	N/A	N/A	Yes	No	Yes	14.6	12.1
45-045-0015; Greenville ESC; April 7, 2026	NO_2	Yes	Yes	4.26	1.52	N/A	N/A	Yes	No	Yes	14.6	12.1

45-045-0015; Greenville ESC; April 7, 2026	$PM_{2.5}$ Cont.	N/A	N/A	4.92	2.18	N/A	Yes	Yes	No	Yes	12.2	12.1
45-045-0015; Greenville ESC; April 7, 2026	PM_{10} Cont.	N/A	N/A	4.92	2.18	N/A	Yes	Yes	No	Yes	12.2	12.1
45-045-0015; Greenville ESC; April 7, 2026	$PM_{2.5}$ Int.	N/A	N/A	4.8	2.06	N/A	Yes	Yes	No	No	12.2	12.1
45-045-0016; Hillcrest; April 7, 2026	Ozone	Yes	Yes	3.89	1.25	N/A	N/A	Yes	Yes	Yes	No Trees	259
45-045-0016; Hillcrest; April 7, 2026	$PM_{2.5}$ Int.	N/A	N/A	3.42	2.07	1.36	Yes	Yes	Yes	Yes	No Trees	259
45-045-0016; Hillcrest; April 7, 2026	$PM_{2.5}$ Int.	N/A	N/A	3.42	2.07	1.36	Yes	Yes	Yes	Yes	No Trees	259
Myrtle Beach-Conway-North Myrtle Beach MSA												
45-051-0008; Coastal Carolina; April 1, 2026	Ozone	Yes	Yes	4.08	1.53	N/A	N/A	Yes	Yes	Yes	28.4	18.3
45-051-0008; Coastal Carolina; April 1, 2026	$PM_{2.5}$ Cont.	N/A	N/A	4.49	1.94	N/A	Yes	Yes	Yes	Yes	28.4	18.3
Spartanburg MSA												
45-083-0009; N. Spartanburg #2; May 1, 2026	Ozone	Yes	Yes	3.81	1.03	N/A	N/A	Yes	No	Yes	20.4	92.5

45-083-0011; T.K. Gregg; May 1, 2026	$PM_{2.5}$ Int.	N/A	N/A	2.82	2.43	3.55	Yes	Yes	Yes	Yes	37.4	48.2
45-083-0011; T.K. Gregg; May 1, 2026	$PM_{2.5}$ Cont.	N/A	N/A	2.47	2.08	3.55	Yes	Yes	Yes	Yes	34.0	48.2
Remainder of State												
45-025-0001; Chesterfield; May 12, 2026	$PM_{2.5}$ Cont.	N/A	N/A	3.05	2.22	1.06	Yes	Yes	Yes	Yes	14.8	34
45-025-0001; Chesterfield; May 12, 2026	Ozone	Yes	Yes	4.47	1.75	N/A	N/A	Yes	No	Yes	12.6	34
45-025-0001; Chesterfield; May 12, 2026	$PM_{2.5}$ Int.	N/A	N/A	2.91	2.08	1.06	Yes	Yes	Yes	Yes	>14.8	34

Appendix C: Alphabetical Order of Monitoring Sites

Monitoring Site Name	MSA/County	Page
Cape Romain	Charleston-North Charleston MSA	61
Chesterfield	Chesterfield County	88
Coastal Carolina	Myrtle Beach-Conway-North Myrtle Beach MSA	81
Congaree Bluff	Columbia MSA	69
Garrison Arena	Greenville-Anderson-Greer MSA	76
Greenville Employment Security Commission (ESC)	Greenville-Anderson-Greer MSA	77
Hillcrest Middle School	Greenville-Anderson-Greer	79
Irmo DJJ	Columbia MSA	70
Jackson Middle School	Augusta-Richmond County, GA-SC MSA	53
Jenkins Ave. Fire Station	Charleston-North Charleston MSA	58
Moncks Corner National Guard	Charleston-North Charleston MSA	57
North Charleston Fire Station	Charleston-North Charleston MSA	59
North Spartanburg Fire Station #2	Spartanburg MSA	84
Parklane (NCore)	Columbia MSA	66
Pee Dee Experimental Station	Florence MSA	73
Sandhill Experimental Station	Columbia MSA	71
T.K. Gregg Recreational Center	Spartanburg MSA	85
Trenton	Augusta-Richmond County, GA-SC MSA	54
Williams Middle School	Florence MSA	74
York Landfill	Charlotte-Concord-Gastonia, SC-NC MSA	64

Appendix D: Summary of Changes for July 1, 2025 through December 31, 2026

Augusta-Richmond County, GA-SC MSA
Trenton Monitoring Site – The Trenton Monitoring Site will begin operating a SPM rotating SO_2 monitor on January 1, 2026.

Charleston-North Charleston MSA
No changes planned.

Charlotte-Concord-Gastonia, NC-SC MSA
York Landfill Monitoring Site – The SPM rotating SO_2 monitor will be moved to the Trenton Monitoring Site on December 31, 2025.

Columbia MSA
The waiver renewal request for the Congaree Bluff Monitoring Site is in Appendix G.

Florence MSA
Lead monitoring has been discontinued at the Clarios Woods Monitoring Site. The last day of sampling was March 26, 2025.

Greenville-Anderson-Greer MSA
The waiver renewal request for the Greenville ESC Monitoring Site is in Appendix G.

Hilton Head Island-Bluffton-Port Royal MSA
No changes planned.

Myrtle Beach-Conway-North Myrtle Beach SC MSA
The Department has started the process of finding an appropriate Site for a second ozone monitor in the MSA.

Spartanburg MSA
The Department has started the process of finding an appropriate Site for a second ozone monitor in the MSA.

Sumter MSA
No changes planned.

Remainder of State No changes planned.

Appendix E: EPA Correspondence

REGION 4
ATLANTA, GA 30303

October 28, 2025

Rhonda B. Thompson
South Carolina Department
of Environmental Services
2600 Bull Street
Columbia, South Carolina 29201

Dear Ms. Thompson:

Thank you for submitting the 2025 Annual Ambient Air Monitoring Network Plan (Network Plan) for the South Carolina Department of Environmental Services (SCDES), which was received on July 1, 2025. The Network Plan is required by 40 Code of Federal Regulations (CFR) §58.10 and is an essential part of implementing sections 103, 110 and 319 of the Clean Air Act.

The Environmental Protection Agency understands that SCDES provided the public an inspection and comment period for the draft Network Plan from April 25, 2025 – May 27, 2025. SCDES did not receive any public comments. The Network Plan meets the minimum requirements of 40 CFR Part 58. The EPA approves the 2025 South Carolina Network Plan and the proposed monitoring network changes.

On July 21, 2023, the Office of Management and Budget released revised delineations of Metropolitan Statistical Areas (MSAs) and their associated counties. Based on the population estimates in these revised MSAs and the most recent ozone design values, two new ozone sites are required in the network. SCDES is investigating possible locations for the two newly required sites in the Spartanburg, SC MSA and the Myrtle Beach-Conway-North Myrtle Beach SC MSA. The EPA supports SCDES searching for new sites and will be happy to collaborate with SCDES. The EPA requests that the location of the new sites and all information required by 40 CFR § 58.10(b) for proposed sites be included in the Network Plan due July 1, 2026. Recently, SCDES shut down the special purpose lead (Pb) monitor at JCI Woods site since the nearby Pb emissions source has ceased operation. SCDES worked with the EPA when deciding to shut down the site and the EPA Region 4 acknowledges the shutdown.

The 5-year Network assessment was submitted to the EPA on July 1, 2025. This satisfies the submission requirement of 40 CFR Part 58.10(d). Detailed comments on the SCDES Network Plan are enclosed. Thank you for working with the EPA Region 4 to monitor air pollution and promote clean air in South Carolina. If you have any questions or concerns, please contact Katy R. Lusky at (404) 562-9130 or Katie Marie Beck at (404) 562-8166.

Sincerely,

Denisse D. Diaz
Director
Air and Radiation Division

Enclosure

cc: Micheal Mattocks, Assistant Bureau Chief, Bureau of Regional and Laboratory Services BRLS
Connie Turner, Director, Bureau of Regional and Laboratory Services BRLS
Heinz Kaiser, Division of Emissions Evaluation and Support, BAQ
Mary Peyton Wall, Air Regulation and Data Support Section BAQ
Joel Hodges, Air Regulation and Data Support Section, BAQ
Keith Harris, EPA Region 4 LSASD

U.S. EPA Region 4 – South Carolina Department of Environmental Sciences (SCDES) Ambient Air Monitoring Network Plan Review

This enclosure documents the EPA Region 4 review of SCDES Ambient Air Monitoring Network Plan. Ambient air monitoring rules, which include regulatory requirements that address network plans, data certification, and minimum monitoring requirements, among other requirements, are found in 40 CFR Part 58. Minimum monitoring requirements for criteria pollutants are listed in 40 CFR Part 58, Appendix D. Minimum monitoring requirements are listed for ozone (O_3), particulate matter less than 2.5 microns ($PM_{2.5}$), particulate matter less than 10 microns (PM_{10}), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), carbon monoxide (CO), and lead (Pb).

A. Proposed Changes and the EPA Comments 40 CFR §58.10(b), §58.14

The EPA has approval authority for changes to state or local air monitoring stations (SLAMS). SLAMS include the ambient air quality monitoring sites and monitors that are required by Appendix D of 40 CFR Part 58 and are needed to meet the monitoring objectives of Appendix D, including comparisons to the national ambient air quality standards (NAAQS), but may also serve other data purposes. The EPA is not required to approve changes made to special purpose monitors (SPMs). SPMs are monitors designated by the monitoring agency as special purpose and do not count towards meeting minimum monitoring requirements of 40 CFR Part 58. SPMs are required to be identified in the Network Plan for the public and the EPA review.

Monitors proposed for discontinuation, start-up, reconfiguration, or relocation and the EPA's decision and rationale for approval/disapproval/acknowledgement of each proposed change are summarized in Table A-1. For any relocated monitors, unless noted below, the EPA approves the use of a combined dataset between the existing and proposed sites for the purpose of calculating air quality design values. The detailed rationale for approval/disapproval of each proposed change is contained in the following pollutant-specific sections.

Table A-1: Proposed Changes in Monitoring Network

Core-based Statistical Area (CBSA)	AQS ID and Site Name	Pollutant	Type	Comments
Florence Metropolitan Statistical Area (MSA)	JCI Woods (AQS ID: 45-041-8003)	Lead (Pb)	SPM	Acknowledged. South Carolina shut down the Clarios Woods Monitoring Site on March 26, 2025. SCDES worked with the EPA Region 4 when deciding to shut down this location.
Myrtle Beach-Conway-North Myrtle Beach, SC MSA	None	Ozone	SLAMS	Acknowledged. SCDES has started the process of finding an appropriate site for a second ozone monitor in the MSA. The EPA thanks SCDES for sending in information for a possible location and requests that SCDES include a

Core-based Statistical Area (CBSA)	AQS ID and Site Name	Pollutant	Type	Comments
				full site proposal in the Network Plan due July 1, 2026.
Spartanburg, SC MSA	None	Ozone	SLAMS	Acknowledged. SCDES has started the process of finding an appropriate site for a second ozone monitor in the MSA. The EPA will work with SCDES to select an appropriate location and requests that SCDES include a full site proposal in the Network Plan due July 1, 2026.
Augusta-Richmond County, GA-SC MSA	Trenton (AQS ID: 45-037-0001)	SO_2	SPM	Acknowledged. The Trenton monitoring site will begin operating an SPM rotating SO_2 monitor on January 1, 2026.
Charlotte-Concord-Gastonia, NC-SC MSA	York Landfill (AQS ID: 45-091-0008)	SO_2	SPM	Acknowledged. The SPM rotating SO_2 monitor will be moved to the Trenton Monitoring site on December 31, 2025.
Columbia, SC MSA	Congaree Bluff (AQS ID: 45-079-0021)	N/A	Waiver Request	Approved. The EPA approves the waiver request for the spacing of trees requirement.
Greenville-Anderson-Greer, SC MSA	Greenville ESC (AQS ID: 45-045-0015)	N/A	Waiver Request	Approved. The EPA approves the waiver request for the spacing of trees requirement.

B. Public Comments
40 CFR § 58.10 (a)(1)

The requirement for a public comment period and response from the Agency in the final Network Plan is found in 40 CFR § 58.10 (a)(1):

> "The annual monitoring network plan must be made available for public inspection and comment for at least 30 days prior to submission to the EPA and the submitted plan shall also include and address, as appropriate, any received comments."

The public comment period for the Network Plan was held from April 25, 2025 – May 27, 2025. South Carolina received no public comments on this network plan.

Table B-1: Public Comments and Responses (40 CFR § 58.10 (a)(1))

Summary of Public Comment	Agency Response	The EPA Comments
No Public Comments were received	NA	NA

The submitted Network Plan meets the public comment requirements of 40 CFR § 58.10.

C. Regulatory Requirements

40 CFR § 58.10(a)(1) requires that each Network Plan shall provide for the documentation of the establishment and maintenance of an air quality surveillance system that consists of a network of SLAMS monitoring stations that can include Federal Reference Method (FRM) and Federal Equivalent Method (FEM) monitors that are part of SLAMS, National Core Monitoring Sites (NCore), Chemical Speciation Network (CSN), Photochemical Assessment Monitoring System (PAMS), and SPM stations.

40 CFR § 58.10(a)(1) further directs that, "The plan shall include a statement of whether the operation of each monitor meets the requirements of appendices A, B, C, D, and E of this part, where applicable. The Regional Administrator may require additional information in support of this statement." On this basis, review of the Network Plan is based on the requirements listed in 40 CFR § 58.10 along with those in Appendices A, C, D, and E.

Table C-1: Monitoring Network Plan Checklist

	Network Plan requirement	Citation within 40 CFR 58[1]	Was the information submitted?[2] If yes, list section or page #s.	Requirement Met?[3]	Notes
GENERAL PLAN REQUIREMENTS					
1.	Submit plan by July 1st	58.10 (a)(1)	Yes	Yes	
2.	30-day public comment / inspection period	58.10 (a)(1); 58.10 (c)	Yes	Yes	
3.	Statement of whether the operation of each monitor meets the requirements of appendices A, B, C, D, and E, where applicable	58.10 (a)(1)	Yes	Yes	
4.	Modifications to SLAMS network	58.10 (a)(2); 58.10 (b)(5); 58.10 (e); 58.14	Yes	Yes	
5.	Does plan include documentation (e.g., attached approval letter) for system modifications that have been approved since last Annual Network Plan (ANP) approval?		NA	NA	There have not been any modifications to the network plan that require the EPA approval.
6.	Any proposals to remove or move a monitoring station within a period of 18 months following plan submittal	58.10 (b)(5)	Yes	Yes	

[1] Unless otherwise noted.

[2] Response options: NA (Not Applicable), Yes, No, or Incomplete.

[3] Response options: NA (Not Applicable) – [reason], Yes, No, Insufficient to Judge, or Incorrect

	Network Plan requirement	Citation within 40 CFR 58[1]	Was the information submitted?[2] If yes, list section or page #s.	Requirement Met?[3]	Notes
7.	Statement that SPMs operating an FRM/FEM/ARM that meet Appendix E also meet either Appendix A or an approved alternative. Documentation for any Appendix A approved alternative should be included.[4]	58.11 (a)(2)	Yes	Yes	
8.	SPMs operating FRM/FEM/ARM monitors for over 24 months are listed as comparable to the NAAQS or the agency provided documentation that requirements from Appendices A, C, or E were not met.[5]	58.20 (c)	Yes	Yes	
9.	For agencies that share monitoring responsibilities in an MSA/Combined Statistical Area (CSA): this agency meets full monitoring requirements or an agreement between the affected agencies and the EPA Regional Administrator is in place	App D 2(e)	Yes	Yes	
$PM_{2.5}$ SPECIFIC MONITORING REQUIREMENTS					
10.	Document how states and local agencies provide for the review of changes to a $PM_{2.5}$ monitoring network that impact the location of a violating $PM_{2.5}$ monitor.	58.10 (c)	N/A	N/A	No relocation of violating monitor proposed. 30-day comment period conducted for entire plan.
11.	Identification of any $PM_{2.5}$ FEMs and/or ARMs not eligible to be compared to the NAAQS due to poor comparability to FRM(s) [Note 1: must include required data assessment.] [Note 2: Required SLAMS must monitor $PM_{2.5}$ with NAAQS-comparable monitor at the required sample frequency.]	58.10 (b)(13) 58.11 (e)	NA	NA	Current NAAQS exclusions are for SPM $PM_{2.5}$ FEMs while comparability with FRMs is assessed.
12.	Minimum # of monitoring sites for $PM_{2.5}$ [Note 1: should be supported by MSA ID, MSA population, DV, # monitoring sites, and # required monitoring sites] [Note 2: Only monitors considered to be required SLAMs are eligible to be counted towards meeting minimum monitoring requirements.]	App. D 4.7.1(a) and Table D-5	Yes, Pg 36-37	Yes	
13.	Requirements for continuous $PM_{2.5}$ monitoring (number of monitors and collocation)	App. D 4.7.2	Yes, Pg 34-35	Yes	
14.	FRM/FEM/ARM $PM_{2.5}$ QA collocation	App. A 3.2.3	Yes	Yes	

[4] Alternatives to the requirements of appendix A may be approved for an SPM site as part of the approval of the annual monitoring plan, or separately.

[5] This requirement only applies to monitors that are eligible for comparison to the NAAQS per 40 CFR §§58.11(e) and 58.30.

	Network Plan requirement	Citation within 40 CFR 58[1]	Was the information submitted?[2] If yes, list section or page #s.	Requirement Met?[3]	Notes
15.	$PM_{2.5}$ Chemical Speciation requirements for official STN sites	App. D 4.7.4	Yes, Pg 39	Yes	
16.	Identification of sites suitable and sites not suitable for comparison to the annual $PM_{2.5}$ NAAQS as described in Part 58.30	58.10 (b)(7)	Yes	Yes	Done at each site-specific page
17.	Required $PM_{2.5}$ sites represent area-wide air quality	App. D 4.7.1(b)	Yes	Yes	
18.	For $PM_{2.5}$, within each MSA, at least one site at neighborhood or larger scale in an area of expected maximum concentration	App. D 4.7.1(b)(1)	Yes	Yes	
19.	If additional SLAMS $PM_{2.5}$ is required, there is a site in an area of poor air quality	App. D 4.7.1(b)(3)	NA	NA	No additional SLAMS $PM_{2.5}$ required
20.	States must have at least one $PM_{2.5}$ regional background and one $PM_{2.5}$ regional transport site.	App. D 4.7.3	Yes	Yes	Listed with each site-specific page
21.	Sampling schedule for $PM_{2.5}$ - applies to year-round and seasonal sampling schedules (note: date of waiver approval must be included if the sampling season deviates from requirement)	58.10 (b)(4); 58.12(d); App. D 4.7	Yes	Yes	Listed with each site-specific page
PM_{10} SPECIFIC MONITORING REQUIREMENTS					
22.	Minimum # of monitoring sites for PM_{10} [Note: Only monitors considered to be required SLAMs are eligible to be counted towards meeting minimum monitoring requirements.]	App. D, 4.6 (a) and Table D-4	Yes, Pg 40-41	Yes	
23.	Manual PM_{10} method collocation (note: continuous PM_{10} does not have this requirement)	App. A 3.3.4	NA	NA	All monitors are continuous
24.	Sampling schedule for PM_{10}	58.10 (b)(4); 58.12(e); App. D 4.6	Yes	Yes	Continuous monitors are operated year-round
Pb SPECIFIC MONITORING REQUIREMENTS					
25.	Minimum # of monitors for Pb [Note: Only monitors considered to be required SLAMs are eligible to be counted towards meeting minimum monitoring requirements.]	App D 4.5	NA	NA	There are no sources in South Carolina with required Pb monitoring.
26.	Pb collocation	App A 3.4.4 and 3.4.5	NA	NA	There are no sources in South Carolina with required Pb monitoring.

	Network Plan requirement	Citation within 40 CFR 58[1]	Was the information submitted?[2] If yes, list section or page #s.	Requirement Met?[3]	Notes
27.	Any source-oriented Pb site for which a waiver has been granted by the EPA Regional Administrator	58.10 (b)(10)	NA	NA	There are no sources in South Carolina with required Pb monitoring.
28.	Any Pb monitor for which a waiver has been requested or granted by the EPA Regional Administrator for use of Pb-PM_{10} in lieu of Pb-TSP	58.10 (b)(11)	NA	NA	There are no sources in South Carolina with required Pb monitoring.
29.	Designation of any Pb monitors as either source-oriented or non-source-oriented	58.10 (b)(9)	NA	NA	There are no sources in South Carolina with required Pb monitoring.
30.	Sampling schedule for Pb	58.10 (b)(4); 58.12(b); App A 3.4.4.2 (c) and 3.4.5.3 (c)	NA	NA	There are no sources in South Carolina with required Pb monitoring.
O_3 SPECIFIC MONITORING REQUIREMENTS					
31.	Minimum # of monitoring sites for O_3 [Note 1: should be supported by MSA ID, MSA population, DV, # monitoring sites, and # required monitoring sites] [Note 2: Only monitors considered to be required SLAMs are eligible to be counted towards meeting minimum monitoring requirements.] [Note 3: monitors that do not meet traffic count/distance requirements to be neighborhood or urban scale (40 CFR Appendix E, Table E-1) cannot be counted towards meeting minimum monitoring requirements]	App D 4.1(a) and Table D-2	Yes	Yes	South Carolina is currently searching for locations for two required Ozone monitors for Myrtle Beach-North Myrtle Beach-Conway, SC MSA and Spartanburg, SC MSA. The EPA requests that SCDES include site proposals for both sites in the network plan due July 1, 2026.
32.	Identification of maximum concentration O_3 site(s)	App D 4.1 (b)	Yes	Yes	
33.	Sampling season for O_3 (Note: Waivers must be renewed annually. The EPA expects agencies to submit re-evaluations of the relevant data each year with the ANP. The EPA will then respond as part of the ANP response.)	58.10 (b)(4); App D 4.1(i)	Yes	Yes	All ozone monitors in South Carolina are operated from March – October as required. NCore ozone operates year-round.
34.	An Enhanced Monitoring Plan for O_3, if applicable, no later than October 1, 2019, or two years following the effective date of a designation to a classification of Moderate or above O_3 nonattainment, whichever is later.	58.10 (a)(11); App D 5 (h)	NA	NA	No enhanced monitoring plan required as there are no ozone nonattainment areas in South Carolina.
NO_2 SPECIFIC MONITORING REQUIREMENTS					

	Network Plan requirement	Citation within 40 CFR 58[1]	Was the information submitted?[2] If yes, list section or page #s.	Requirement Met?[3]	Notes
35.	Minimum monitoring requirements for area-wide NO_2 monitor in location of expected highest NO_2 concentrations representing neighborhood or larger scale	App D 4.3.3	Yes	Yes	
36.	Minimum monitoring requirements for susceptible and vulnerable populations monitoring (aka RA40) NO_2	App D 4.3.4	Yes, Pg 26	Yes	RA40
37.	Identification of required NO_2 monitors as either near-road, area-wide, or vulnerable and susceptible population (aka RA40)	58.10 (b)(12)	Yes, Pg 25	Yes	
NEAR ROADWAY SPECIFIC MONITORING REQUIREMENTS					
38.	NO_2 near- road monitors (See table D-7 for calculated minimums by CBSA)	App. D 4.3.2(a); 58.13(c)(3) and (4)	Yes, Pg. 25	Yes	Fulfilled at the Remount Road and Equipment Drive monitoring sites operated by Mecklenburg County Air Quality (MCAQ)
39.	CO near-road monitors	App. D 4.2.1(a); 58.13(e)(2)	Yes, Pg 22	Yes	Fulfilled by the Remount Road monitoring site operated by MCAQ
40.	$PM_{2.5}$ near-road monitors	App. D 4.7.1(b)(2); 58.13(f)(2)	Yes, Pg 36	Yes	Fulfilled at the Remount Road monitoring site operated by MCAQ
SO_2 SPECIFIC MONITORING REQUIREMENTS					
41.	Minimum monitoring requirements for SO_2 based on population weighted emissions index and/or RA required monitors under Appendix D 4.4.3 [Note: Only monitors considered to be required SLAMs are eligible to be counted towards meeting minimum monitoring requirements.]	App D 4.4	Yes	Yes	
42.	Monitors used to meet Data Requirements Rule	51.1203(c)	NA	NA	There are no SO_2 DRR Monitors in South Carolina.
NCORE SPECIFIC MONITORING REQUIREMENTS					
43.	NCore site and all required parameters operational: year-round O_3, SO_2, CO, NO_y, NO, $PM_{2.5}$ mass, $PM_{2.5}$ continuous, $PM_{2.5}$ speciation, $PM_{10\text{-}2.5}$ mass, resultant wind speed at 10m, resultant wind direction at 10m, ambient temperature, relative humidity. NOy waiver, if applicable.	App. D 3(b)	Yes, Pg. 65	Yes	

	Network Plan requirement	Citation within 40 CFR 58[1]	Was the information submitted?[2] If yes, list section or page #s.	Requirement Met?[3]	Notes
44.	PAMS site and all required parameters operational.	58.10 (a)(10); 58.13 (h)	Yes, Pg 42	Yes	
SITE OR MONITOR SPECIFIC REQUIREMENTS					
45.	AQS site identification number for each site	58.10 (b)(1)	Yes	Yes	
46.	Location of each site: street address and geographic coordinates	58.10 (b)(2)	Yes	Yes	
47.	MSA, CBSA, CSA or other area represented by the monitor	58.10 (b)(8)	Yes	Yes	
48.	Basic monitoring objective for each monitor	App D 1.1; 58.10 (b)(6)	Yes	Yes	
49.	Site type for each monitor	App D 1.1.1	Yes	Yes	
50.	Monitor type for each monitor, and Network Affiliation(s) as appropriate	Needed to determine if other requirements (e.g., min # and collocation) are met	Yes	Yes	
51.	Scale of representativeness for each monitor as defined in Appendix D	58.10(b)(6); App D	Yes	Yes	
52.	Method code and description (e.g., manufacturer & model) for each monitor	58.10 (b)(3); App C 2.4.1.2	Yes	Yes	
RECOMMENDED SITE OR MONITOR SPECIFIC INFORMATION (Appendix E information required for new sites)					
53.	Parameter occurrence code for each monitor	Needed to determine if other requirements (e.g., min # and collocation) are met	Yes	Yes	
54.	Parameter code for each monitor	Needed to determine if other requirements (e.g., min # and collocation) are met	Yes	Yes	
55.	Sampling start date for each monitor	Needed to determine if other requirements (e.g., min # and collocation) are met	No	Yes	Site establishment date is included.

	Network Plan requirement	Citation within 40 CFR 58[1]	Was the information submitted?[2] If yes, list section or page #s.	Requirement Met?[3]	Notes
56.	Distance of monitor from nearest road	App E 6	No	Yes	Not required. They do include the site evaluation date for each monitoring site
57.	Traffic count of nearest road	App E	No	Yes	Not required. They do include the site evaluation date for each monitoring site
58.	Groundcover	App E 3(a)	No	Yes	Not required. They do include the site evaluation date for each monitoring site
59.	Probe height	App E 2	No	Yes	Not required. They do include the site evaluation date for each monitoring site
60.	Distance from supporting structure (vertical and horizontal, if applicable, should be provided)	App E 2	No	Yes	Not required. They do include the site evaluation date for each monitoring site
61.	Distance from obstructions on roof (horizontal distance to the obstruction and vertical height of the obstruction above the probe should be provided)	App E 4(b)	No	Yes	Not required. They do include the site evaluation date for each monitoring site
62.	Distance from obstructions not on roof (horizontal distance to the obstruction and vertical height of the obstruction above the probe should be provided)	App E 4(a)	No	Yes	Not required. They do include the site evaluation date for each monitoring site
63.	Distance from the drip line of closest tree(s)	App E 5	No	Yes	Not required. They do include the site evaluation date for each monitoring site
64.	Unrestricted airflow (expressed as degrees around probe/inlet or percentage of monitoring path)	App E, 4(a) and 4(b)	No	Yes	Not required. They do include the site evaluation date for each monitoring site

C.1. Additional Discussion

Lead monitoring has been discontinued at the Clarios Woods Monitoring Site. The last day of sampling was March 26, 2025. South Carolina has no sources that exceed the emissions thresholds for Pb monitoring. Previously, the SCDES and Clarios, LLC (formerly Johnson Controls Battery Group) conducted source-oriented ambient Pb monitoring at three SPM sites around the Florence Recycling Center in Florence, South Carolina. The facility ceased production March 22, 2021, and has had emissions well below the NAAQS in the years following the shutdown. Although the EPA approval is not explicitly required, SCDES worked with the EPA Region 4 when deciding to shut down the Pb site.

On July 21, 2023, the Office of Management and Budget released revised delineations[6] of MSAs and their associated counties. This removed Brunswick County, North Carolina from the Myrtle Beach-Conway-North Myrtle Beach, SC MSA and added Union County to the Spartanburg, SC MSA. A second ozone monitor is now required for both MSAs due to the most recent population estimates and O_3 design values in each MSA. The SCDES is investigating possible locations for a new site and working with the EPA Region 4. The EPA requests that SCDES submit site proposals in the network plan due July 1, 2026, and include the information required by 40 CFR 58.10(b) for each proposed site.

The EPA approves a renewal of the Congaree Bluff (AQS ID: 45-079-0021) siting waiver. The objective of the Congaree Bluff site is to measure O_3 and SO_2 within the Congaree National Park boundaries. Within the national park boundaries this monitor cannot be reasonably located to meet the siting criteria because of physical constraints. The EPA staff visited the Congaree Bluff site on January 25, 2016, and agree that this is the best monitoring location within the park boundaries. The site meets the requirements for a siting criteria waiver under 40 CFR Part 58, Appendix E Section 4.1.2. The EPA waives the requirements for spacing of trees under 40 CFR Part 58, Appendix E, Section 2.4(a) and spacing from obstructions under 40 CFR Part 58, Appendix E, Section 2.3(a). The EPA encourages the SCDES to meet siting criteria requirements as much as possible at this site but understands the National Park Service's and SCDES's hesitation to remove trees in an old growth forest. Thus, the EPA waives the spacing from trees requirement for the one branch identified by SCDES in the Network Plan. This site must still meet all other siting requirements found in Appendix E to 40 CFR Part 58.

The EPA approves the submitted siting criteria waiver renewal request for the Greenville Site (AQS ID: 45-045-0015) under 40 CFR Part 58, Appendix E, Section 4.1.1. The EPA recognizes that the site met previous siting criteria for $PM_{2.5}$ of having at least 270 degrees clearance but does not meet the updated siting criteria of 270 *continuous* clearance under 40 CFR Part 58, Appendix E, Section 2.3(b). EPA also recognizes that SCDES is limited by the presence of underground utilities and are unable to remove the trees. The site meets all other siting criteria and can be waved under 40 CFR Part 58, Appendix E, Section 4.1.1 because it does have a combined 270 degrees of clearance and is as representative of the monitoring area as it would be if the siting criteria were being met. The EPA waives the "continuous arc of at least 270 degrees" requirement under 40 CFR Part 58, Appendix E Section E 2.3(b).

[6] OMB Bulletin No. 23-01. Revised Delineations of Metropolitan Statistical Areas, Micropolitan Statistical Areas, and Combined Statistical Areas, and Guidance on Uses of the Delineations of These Areas. July 21, 2023. https://www.whitehouse.gov/wp-content/uploads/2023/07/OMB-Bulletin-23-01.pdf.

D. Monitoring Network Details

The following tables compare the monitors listed in the Network Plan to the pollutant-specific network design requirements found in 40 CFR Part 58, Appendix D.

Table D-1: July 1, 2024, Population Estimates from U.S. Census Bureau and AQI Reporting by Core Based Statistical Area (40 CFR §58.50)

CBSA	Population	AQI Requirement Met? (Y/N)[7]
Augusta-Richmond County, GA-SC MSA	636,760	Y
Charleston-North Charleston, SC MSA	869,940	Y
Charlotte-Concord-Gastonia, NC-SC MSA	2,883,370	Y
Columbia, SC MSA	870,193	Y
Florence, SC MSA	200,474	Y
Greenville-Anderson-Greer, SC MSA	996,680	Y
Hilton Head Island-Bluffton-Port Royal, SC MSA	237,393	Y
Myrtle Beach-Conway-North Myrtle Beach, SC MSA	413,391	Y
Spartanburg, SC MSA	395,934	Y
Sumter, SC MSA	104,776	y

[7] AQI reporting is required in MSAs with populations over 350,000

Table D-2: NCore Monitoring Sites (40 CFR Part 58, Appendix D, Section 3.0)

CBSA	AQS ID and Site Name	Requirement Met? (Y/N)
Columbia MSA	Parklane (45-079-0007)	Y

Table D-3: Requirements and Counts of SLAMS O_3, Area Wide NO_2, and SO_2 Monitors (40 CFR Part 58, Appendix D, Sections 4.2, 4.3.2, and 4.7.1(b)(2))

CBSA	AQS ID and Site Name	SLAMS Monitors			O_3			Area Wide NO_2			SO_2		
		O_3	Area Wide NO_2	SO_2	Min.	Tot.	Met	Min.	Tot.	Met	Min.	Tot.	Met
Augusta-Richmond County, GA-SC MSA	Jackson Middle School (AQS ID: 45-003-0003)	X			2	3	Y	0	0	Y	1	1	Y
	Trenton (AQS ID: 45-037-0001)	X											
	Augusta (AQS ID: 13-245-0091)[1]	X		X									
Charleston-North Charleston, SC MSA	Moncks Corner National Guard (AQS ID: 45-015-1002)	X			2	2	Y	0	0	Y	1	1	Y
	Jenkins Ave. Fire Station (AQS ID: 45-019-0003)			X									
	Cape Romain (AQS IQ: 45-019-0046)	X											
Charlotte-Concord-Gastonia, NC-SC MSA	York Landfill (AQS ID: 45-091-0008)	X			2	4	Y	1	1	Y	1	1	Y
	Garinger NCore (AQS ID: 37-119-0041) [2]	X	X	X									
	University Meadows (AQS ID: 37-119-0046) [2]	X											
	Crouse (AQS ID: 37-109-0004) [3]	X											
Columbia, SC MSA	Parklane (AQS ID: 45-079-0007) (NCore)	X	X	X	2	2	Y	1	1	Y	1	1	Y
	Sandhill (AQS ID: 45-079-1001)	X											
Florence, SC MSA	Pee Dee Experimental Station (AQS ID: 45-031-0003)	X			1	1	Y	0	0	Y	0	0	Y
Greenville-Anderson-Greer, SC MSA	Garrison Arena (AQS ID: 45-007-0006)	X			2	2	Y	0	1	Y	0	1	Y
	Greenville ESC (AQS ID: 45-045-0015)		X	X									
	Hillcrest (AQS ID: 45-045-0016)	X											
Myrtle Beach-Conway-North Myrtle Beach, SC MSA	Coastal Carolina (AQS ID: 45-051-0008)	X			2	1	N[3]	0	0	Y	0	0	Y

CBSA	AQS ID and Site Name	SLAMS Monitors			O_3			Area Wide NO_2			SO_2		
		O_3	Area Wide NO_2	SO_2	Min.	Tot.	Met	Min.	Tot.	Met	Min.	Tot.	Met
Spartanburg, SC MSA	North Spartanburg Fire Station #2 (AQS ID: 45-019-0020	X			2	1	N[3]	0	0	Y	0	0	Y

1. Required Ozone and SO_2 monitors for the CBSA are located in the Augusta-Richmond County, GA-SC MSA, which is operated by the Georgia Environmental Protection Division at the Augusta site.
2. Required Ozone monitors for the CBSA are located in the Charlotte Metro area and are operated by Mecklenburg County Air Quality.
3. Required Ozone monitor for the CBSA are located in the Charlotte Metro area and is operated by the North Carolina Department of Air Quality.
4. SCDES is investigating new site locations for the second required Ozone monitor in the MSA. The EPA will work with SC to meet these new requirements that resulted from new CBSA definitions and population estimates.

Table D-4: Requirements and Counts of SLAMS Near-road Monitors (40 CFR Part 58, Appendix D, Sections 4.2, 4.3.2, and 4.7.1(b)(2))

CBSA	AQS ID and Site Name	Near-Road Monitors			CO			NO_2			$PM_{2.5}$		
		CO	NO_2	$PM_{2.5}$	Min.	Tot.	Met	Min.	Tot.	Met	Min.	Tot.	Met
Charlotte-Concord-Gastonia NC-SC MSA	Remount Road Monitoring Site[1] (AQS ID: 37-119-0045)	X	X	X	1	1	Y	2	2	Y	1	1	Y
	Equipment Drive Monitoring Site[1] (AQS ID: 37-119-0050)		X										

1. Required Near-road monitors for the CBSA are located in the Charlotte Metro area and are operated by Mecklenburg County Air Quality.

Table D-5: Minimum Required SLAMS RA Monitors (40 CFR Part 58, Appendix D Sections 4.2.2, 4.3.4, and 4.4.2)

CBSA	AQS ID and Site Name	Pollutant	# of Minimum Required RA Monitors	# of RA Monitors in Plan	Requirement Met? (Y/N)
Greenville-Spartanburg-Anderson CSA / Greenville-Anderson-Greer, SC MSA	Greenville Employment Security Commission (ESC) (AQS ID: 45-045-0015)	NO_2	1	1	Y

Table D-6: Minimum Required SLAMS Source-Oriented and Collocated Pb Monitors (40 CFR Part 58, Appendix A, 3.4.4 and 40 CFR Part 58, Appendix D, Section 4.5)

CBSA	AQS ID and Site Name	Source Name	Source-oriented Pb			Collocated Pb		
			Min.	Tot.	Met	Min.	Tot.	Met
NA	NA	There are no required Pb monitors for SCDES because no sources emit > 0.5 tpy of Pb.	0	0	Y	0	0	Y

Table D-7: Minimum Required SLAMS PM_{10} and Collocated PM_{10} Monitors (40 CFR Part 58, Appendix A, Section 3.3 and 40 CFR Part 58, Appendix D, Section 4.6, and Table D-4)

CBSA	AQS ID and Site Name	Monitors		PM_{10}			Collocated PM_{10}		
		PM_{10}	Col.	Min.	Tot.	Met	Min.	Tot.	Met
Columbia, SC MSA	Parklane (NCore) (AQS ID: 45-079-0007)	X		1	1	Y	0	0	Y
Greenville-Anderson-Greer, SC MSA	Greenville ESC (AQS ID: 45-045-0015)	X		1	1	Y	0	0	Y
Augusta-Richmond County, Ga-SC MSA	Augusta Monitoring Site (GA)[1] (AQS ID: 13-245-0091)	X		1	1	Y	0	0	Y
Charleston-North Charleston, SC MSA	North Charleston Fire Station (AQS ID: 45-019-0020)	X		1	1	Y	0	0	Y
Charlotte-Concord-Gastonia, NC-SC MSA	Garinger[2] (AQS ID: 37-119-0041)	X		2	2	Y	0	0	Y
	Ramblewood Park (37-119-0047)[2]	X							

1. Required PM_{10} monitor for the CBSA is located in the Augusta-Richmond County, GA-SC MSA, which is operated by the Georgia Environmental Protection Division.
2. Required PM_{10} monitors for the CBSA are located in the Charlotte Metro area and are operated by the Mecklenburg County Air Quality.

Table D-8: Minimum Required $PM_{2.5}$ and Collocated $PM_{2.5}$ Monitors (40 CFR Part 58, Appendix A, Section 3.2 and 40 CFR Part 58, Appendix D, Section 4.7, and Table D-5)

CBSA	AQS ID and Site Name	$PM_{2.5}$ Monitor					SLAMS Sites/Primary Monitors			Continuous		
		Type	Method Code	Cont.	Collocated Method Code	Other	Min.	Tot.	Met	Min.	Tot.	Met
Augusta-Richmond County, GA-SC MSA	Augusta (AQS ID: 13-245-0091)[1]	SLAMS	145 [P]		145		2	2	Y	1	1	Y
		SPM	638	X		NE						
	Trenton (AQS ID: 45-037-0001)	SLAMS	145[p]									
Charleston-North Charleston, SC MSA	North Charleston Fire Station (NCFS) (AQS ID: 45-019-0020)	SLAMS	145[p]	X	145, 638		1	2	Y	1	2	Y
	Cape Romain (AQS ID: 45-019-0046)	SLAMS	636[p]	X	NA	BG						
Charlotte-Gastonia-Concord NC-SC	Garinger (37-119-0041)[2]	SLAMS	170	X	145		3	3	Y	2	3	Y
	Friendship Park (37-119-0048)[2]	SLAMS	209	X								
	Remount (37-119-0045)[2]	SLAMS	209	X	145	NR						
Columbia, SC MSA	Parklane (NCore) (AQS ID: 45-079-0007)	SLAMS	145[P]	X	145, 638	NCore	1	2	Y	1	2	1
	Irmo DJJ (AQS ID: 45-079-0022)	SLAMS	145[P]	X	636							
Florence, SC MSA	Williams Middle School (AQS ID: 45-041-0003)	SLAMS	145[P]	X	636		1	1	Y	1	1	Y
Greenville-Anderson-Greer, SC MSA	Greenville ESC (AQS ID: 45-045-0015)	SLAMS	145[P]	X	638		2	2	Y	1	1	Y
	Hillcrest (AQS ID: 45-045-0016)	SLAMS	145[P]		145							
Spartanburg, SC MSA	T.K. Gregg (AQS ID: 45-083-0011)	SLAMS	145[P]	X	636		1	1	Y	1	1	Y
None	Chesterfield (AQS ID: 45-025-0001)	SLAMS	636[p]	X	145	TP	1	1	Y	0	1	Y

BG = Background; TP = Transport; I = IMPROVE; NR = Near-road; [P] = Primary monitor NE = NAAQS Exclusion (See Table D-10);

1. Required $PM_{2.5}$ monitors for the CBSA are located in the Augusta-Richmond County, GA-SC MSA, which is operated by the Georgia Environmental Protection Division at the Augusta site.
2. Required $PM_{2.5}$ monitors for the CBSA are located in the Charlotte Metro area and are operated by Mecklenburg County Air Quality.

Table D-9: Minimum Required Collocated $PM_{2.5}$ Monitors (40 CFR Part 58 Appendix A, Section 3.2.3.1)

PQAO	AQS ID and Site Name	Method	AQS Method Code	# of Primary $PM_{2.5}$ Monitors	# of Minimum Required Collocated $PM_{2.5}$ Monitors	# of Collocated $PM_{2.5}$ Monitors	Requirement Met? (Y/N)
SCDES	Hillcrest (AQS ID: 45-019-0020) Parklane (AQS ID: 45-079-0007) North Charleston Fire Station (AQS ID: 45-019-0020)	FRM	145	7	1	3	Y
	Chesterfield (AQS ID: 45-025-0001)	Teledyne T640	636	2	1	1	Y

Table D-10: $PM_{2.5}$ NAAQS Exclusions (40 CFR Part 58.11(e))

CBSA	AQS ID and Site Name	FEM Method Description	FEM Method Code	Comments
Augusta-Richmond County, GA-SC MSA	Trenton (AQS ID: 45-037-0001)	Teledyne T640 with Network Data Alignment Enabled	636	Data collected by the FEM T640 monitor at this site will be labeled with a NAAQS Exclusion for up to 23 months after the data alignment firmware update from September 6, 2023-September 6, 2025, to assess the comparability of the data to the FRM sampler. Now that the exclusion period has expired, the EPA will coordinate with the State to evaluate the $PM_{2.5}$ comparability assessments for these FEMs and determine a path forward for those data.
Charleston-North Charleson, SC MSA	North Charleston Fire Station (AQS ID: 45-019-0020)	Teledyne T640 with Network Data Alignment Enabled	638	Data collected by the FEM T640X monitor at this site will be labeled with a NAAQS Exclusion for up to 23 months after the data alignment firmware update from September 6, 2023-September 6, 2025, to assess the comparability of the data to the FRM sampler. Now that the exclusion period has expired, the EPA will coordinate with the State to evaluate the $PM_{2.5}$ comparability assessments for these FEMs and determine a path forward for those data.
Columbia, SC MSA	Irmo DJJ (AQS ID: 45-079-0022)	Teledyne T640 with Network Data Alignment Enabled	636	Data collected by the FEM T640 monitor at this site will be labeled with a NAAQS Exclusion for up to 23 months after the data alignment firmware update from September 6, 2023-September 6, 2025, to assess the comparability of the data to the FRM sampler. Now that the exclusion period has expired, the EPA will

				coordinate with the State to evaluate the $PM_{2.5}$ comparability assessments for these FEMs and determine a path forward for those data.
Florence, SC MSA	Williams Middle School (AQS ID: 45-041-0003)	Teledyne T640 with Network Data Alignment Enabled	636	Data collected by the FEM T640 monitor at this site will be labeled with a NAAQS Exclusion for up to 23 months after the data alignment firmware update from September 6, 2023-September 6, 2025, to assess the comparability of the data to the FRM sampler. Now that the exclusion period has expired, the EPA will coordinate with the State to evaluate the $PM_{2.5}$ comparability assessments for these FEMs and determine a path forward for those data.
Spartanburg. SC MSA	T.K. Gregg Recreation Center (AQS ID: 45-083-0011)	Teledyne T640 with Network Data Alignment Enabled	636	Data collected by the FEM T640 monitor at this site will be labeled with a NAAQS Exclusion for up to 23 months after the data alignment firmware update from September 6, 2023-September 6, 2025, to assess the comparability of the data to the FRM sampler. Now that the exclusion period has expired, the EPA will coordinate with the State to evaluate the $PM_{2.5}$ comparability assessments for these FEMs and determine a path forward for those data.
Columbia, SC MSA	Parklane (AQS ID: 45-079-0007)	Teledyne T640X with Network Data Alignment Enabled	638	Data collected by the FEM T640X monitor at this site will be labeled with a NAAQS Exclusion for up to 23 months after the data alignment firmware update from. September 6, 2023-September 6, 2025, to assess the comparability of the data to the FRM sampler. Now that the exclusion period has expired, the EPA will coordinate with the State to evaluate the $PM_{2.5}$ comparability assessments for these FEMs and determine a path forward for those data.
Greenville-Anderson-Greer, SC MSA	Greenville Employment Security Commission (AQS ID: 45-045-0015)	Teledyne T640X with Network Data Alignment Enabled	638	Data collected by the FEM T640X monitor at this site will be labeled with a NAAQS Exclusion for up to 23 months after the data alignment firmware update from September 6, 2023-September 6, 2025, to assess the comparability of the data to the FRM sampler. Now that the exclusion period has expired, the EPA will coordinate with the State to evaluate the $PM_{2.5}$ comparability assessments for these FEMs and determine a path forward for those data.

Table D-11: $PM_{2.5}$ Chemical Speciation Monitoring (40 CFR Part 58 Appendix D, Section 4.7.4)

CBSA	AQS ID and Site Name	Network	Sampling Frequency
Columbia, SC MSA	Parklane (AQS ID: 45-079-0007)	CSN, STN, NCore	1-in-3 days
Charlotte-Concord-Gastonia, NC-SC MSA	Garinger Monitoring Site[1] (AQS ID: 37-119-0041)	NCore/STN	1-in-3 days

1. Required $PM_{2.5}$ Chemical Speciation monitoring for the CBSA is located in the Charlotte Metro area and is operated by the Mecklenburg County Air Quality.

Table D-12: Air Toxics Monitoring

CBSA	AQS ID and Site Name	Network	Compounds Measured	Sampling Frequency
None	Chesterfield (AQS ID: 45-025-0001)	NATTS	Volatile Organic Compounds	1 in 6 days
		NATTS	Polycyclic Aromatic Hydrocarbons	1-in-6 days
		NATTS	Carbonyls	1-in-6 days
		NATTS	NATTS Metals	1-in-6 days

Table D-13: Non-SLAMS Monitors

CBSA	AQS ID and Site Name	Pollutant	Monitor Type
Augusta-Richmond County, GA-SC MSA	Trenton (AQS ID 45-037-0001)	$PM_{2.5}$ Continuous	SPM
Charleston-North Charleston, SC MSA	Jenkins Ave. First Station (AQS ID: 45-019-0003)	NO_2	SPM
Charleston-North Charleson, SC MSA	North Charleston Fire Station (NCFS) (AQS ID: 45-019-0020)	$PM_{2.5}$ Continuous	SPM
Charlotte-Concord-Gastonia, NC-SC MSA	York Landfill (AQS ID 45-091-0008)	SO_2	SPM, Rotational Site
Columbia, SC MSA	Congaree Bluff (AQS ID: 45-079-0021)	O_3	SPM
Columbia, SC MSA	Sandhill (AQS ID: 45-079-1001)	NO_2 /NO/NO_y	SPM

CBSA	AQS ID and Site Name	Pollutant	Monitor Type
Florence, SC MSA	Williams Middle School (AQS ID: 45-041-0003)	$PM_{2.5}$ Continuous	SPM
Greenville-Anderson-Greer, SC MSA	Greenville ESC (AQS ID: 45-045-0015)	$PM_{2.5}$ Continuous	SPM
Myrtle Beach-Conway-North Myrtle Beach, SC MSA	Coastal Carolina (AQS ID: 45-051-0008)	$PM_{2.5}$ Continuous	SPM

Table D-14: Summary of the EPA Approved Waivers of Requirements

CBSA	AQS ID and Site Name	Pollutant(s)	CFR Requirement Waived	The EPA Waiver Authority/ Rationale	Year Waiver First Granted	Waiver Expiration Year	Comments
Greenville-Anderson-Greer, SC MSA	Greenville ESC (AQS ID: 45-045-0015)	SO_2, NO_2, $PM_{2.5}$, PM_{10}	40 CFR Part 58 Appendix E Section 4.1	40 CFR Part 58, Appendix E, Section 4.1.1	2025	2030	Approval of Spacing from Trees
Columbia, SC MSA	Congaree Bluff (AQS ID: 45-079-0021)	O_3, SO_2	40 CFR Part 58, Appendix E, Section 4 & 11	40 CFR Part 58, Appendix E, Section 4.1.2	2025	2030	Approval of Spacing from Trees



REGION 4
ATLANTA, GA 30303

November 6, 2024

Rhonda B. Thompson, PE
Chief, Bureau of Air Quality Control
South Carolina Department
of Health and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

Dear Ms. Thompson:

Thank you for submitting the 2024 Annual Ambient Air Monitoring Network Plan (Network Plan) dated July 7, 2024, for the South Carolina Department of Environmental Services (SC DES). The Network Plan is required by 40 Code of Federal Regulations (CFR) §58.10. The U.S. Environmental Protection Agency Region 4 understands that the SC DES provided the public with a 30-day review period for the draft Network Plan and that no comments were received other than comments from the EPA on the draft Network Plan. The EPA approves the proposed monitoring network changes and all components of South Carolina's Network Plan.

On July 21, 2023, the Office of Management and Budget (OMB) updated the core based statistical areas for the nation. Due to these updates, the increase in population in the Spartanburg metropolitan statistical area (MSA) and the Myrtle Beach-Conway-North Myrtle Beach MSA have triggered the requirement to add a second ozone monitor. The SC DES has begun the process of finding second ozone monitor locations in both MSAs.

The SC DES has requested a waiver of a specific siting requirement of 270 degrees continuous unobstructed air flow for the Greenville ESC site (AQS ID: 45-045-0015) in Appendix G of the Network Plan. This site met siting requirements under the previous rules, which required 270 degrees of unobstructed airflow, but does not meet the updated requirements of having at least 270 continuous degrees of unobstructed air flow. Appendix G references "Tree D' as the obstruction causing the lack of continuous airflow. The EPA has determined that this request meets waiver provisions in 40 CFR 58 Appendix E Section 4 and approves the requested waiver of the word "continuous" in the 40 CFR 58 Appendix E Section 2.3 (b) requirement.

The EPA recommends SC DES continue to seek permission to remove "Tree D". If the tree cannot be removed, SC DEC should reassess and again request this waiver in the 2025 Network Plan along with the next 5-year network assessment. All other siting criteria must continue to be met at the Greenville ESC site.

Thank you for working with the EPA to monitor air pollution and safeguard the air quality in South Carolina. If you have any questions or concerns, please contact Darren Palmer at (404) 562-9052 or Katherine Beck at (404) 562-8166.

Sincerely,

DENISSE DIAZ

Digitally signed by DENISSE DIAZ
Date: 2024.11.06 13:59:31 -05'00'

Denisse D. Diaz
Director
Air and Radiation Division

Enclosure

cc: Micheal Mattocks, Assistant Bureau Chief, BEHS
Connie Turner, Director, Division of Air Quality Analysis, BEHS
Heinz Kaiser, Director, Division of Air Emissions Evaluation and Support BAQ
Mary Peyton Wall, Air Regulation and Data Support Section BAQ
Joel Hodges, Air Regulation and Data Support Section, BAQ
Keith Harris, Region 4 LSASD

2024 State of South Carolina Ambient Air Monitoring Network Plan
U.S. EPA Region 4 Comments and Recommendations

This document contains the U.S. Environmental Protection Agency's comments and recommendations on the state of South Carolina's 2024 Ambient Air Monitoring Network Plan (Network Plan). Ambient air monitoring rules, which include regulatory requirements that address network plans, data certification, and minimum monitoring requirements, among other requirements, are found in 40 CFR Part 58. Minimum monitoring requirements for criteria pollutants are listed in 40 CFR Part 58, Appendix D. Minimum monitoring requirements are listed for ozone (O_3), particulate matter less than 2.5 microns ($PM_{2.5}$), particulate matter less than 10 microns (PM_{10}), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), carbon monoxide (CO), and lead (Pb).

The minimum monitoring requirements are based on core based statistical area (CBSA) boundaries as defined by the U.S. Office of Management and Budget (OMB), July 1, 2023, population estimates from the U.S. Census Bureau, and historical ambient air monitoring data. Minimum monitoring requirements for O_3, $PM_{2.5}$, and PM_{10} only apply to metropolitan statistical areas (MSAs), which are a subset of CBSAs. OMB currently defines 10 MSAs in the state of South Carolina. The July 1, 2023, population estimates from the U.S. Census Bureau for each MSA in South Carolina and the total population estimates of MSAs shared with North Carolina and Georgia are shown in Table 1.

Table 1: Metropolitan Statistical Areas and July 1, 2023, Population Estimates

MSA Name	Population
Charlotte-Concord-Gastonia, NC-SC	2,805,115
Greenville-Anderson-Greer, SC	975,480
Columbia, SC	858,302
Charleston-North Charleston, SC	849,417
Augusta-Richmond County, GA-SC	629,429
Myrtle Beach-Conway-North Myrtle Beach, SC	397,478
Spartanburg, SC	383,327
Hilton Head Island-Bluffton-Port Royal, SC	232,523
Florence, SC	199,630
Sumter, SC	104,165

The estimated 2022 census numbers indicated that the population of the Myrtle Beach-Conway-North Myrtle Beach, SC-NC MSA was over 500,000 people, however with the redefined MSA boundary the 2023 estimated population is now less than 500,000 and will not trigger the anticipated additional PM_{10} monitoring requirements.

Proposed Monitoring Network Changes

The EPA has approval authority for changes to regulatorily required state or local air monitoring stations (SLAMS). SLAMS include the ambient air quality monitoring sites and monitors required by 40 CFR Part 58, Appendix D and are needed to meet the monitoring objectives of Appendix D, including national ambient air quality standards (NAAQS) comparisons, and may also serve other data purposes. The EPA is not required to approve changes made to special purpose monitors (SPMs). SPMs are

monitors designated by the monitoring agency as special purpose and do not count towards minimum monitoring requirements of 40 CFR Part 58. SPMs are required to be identified in the Network Plan for public and the EPA review.

The South Carolina Department of Environmental Services (SC DES) proposed changes to its monitoring network for 2024 through 2025 Table 2 summarizes the requested monitor discontinuations and relocations. Information related to each proposed change as well as the EPA's decision and rationale for approval/disapproval of each proposed change are contained in the following pollutant sections.

Table 2: Proposed Monitoring Changes

AQS ID	CBSA	Site Name	Pollutant	Type	Comments
45-019-0048	Charleston-North Charleston, SC MSA	Cape Romain Monitoring Site	NO_2	SPM	On January 3, 2024, the SPM NO_2 monitor was discontinued. Acknowledged.
45-091-0008	Charlotte-Concord-Gastonia, NC-SC MSA	York Landfill	SO_2	SPM	On January 2, 2024, the York Landfill monitoring site began operating a rotating SPM SO_2 monitor. Acknowledged.
45-037-0001	August-Richmond County, GA-SC MSA	Trenton	SO_2	SPM	On January 3, 2024, the rotational SPM SO_2 monitor was discontinued. Acknowledged.
45-045-0015	Greenville-Anderson-Greer, SC MSA	Greenville ESC	$PM_{2.5}$, PM_{10}, SO_2, NO_2	SLAMS	The EPA approves the waiver request submitted with the 2024 Network Plan. More information is found in the "Waivers of Requirements" section.

Network Plan Public Comments
40 CFR § 58.10(a)(1)

The requirement for a public comment period and response from the agency in the final Network Plan is found in 40 CFR 58.10(a)(1):

"The annual monitoring network plan must be made available for public inspection and comment for at least 30 days prior to submission to the EPA and the submitted plan shall also include and address, as appropriate, any received comments."

The proposed 2024 Network Plan was available for public review and comment from April 26, 2024, through May 28, 2024. The Network Plan meets the public comment requirements of 40 CFR 58.10.

Among other things, Executive Order 14096: *Revitalizing Our Nation's Commitment to Environmental Justice for All*[1] directs federal agencies to seek out and encourage the involvement of persons and communities potentially affected by providing timely opportunities for members of the public to share information or concerns and participate in decision-making processes, ensuring that agencies offer or provide information in a manner that provides meaningful access to individuals with limited English

[1] https://www.whitehouse.gov/briefing-room/presidential-actions/2023/04/21/executive-order-on-revitalizing-our-nations-commitment-to-environmental-justice-for-all/

proficiency, individuals with disabilities, and communities or groups of people who are potentially affected and who are not regular participants in Federal decision-making. While the EO does not impose new requirements on states, the EPA encourages states to adopt public comment and engagement practices that are sufficiently inclusive to inform all potentially impacted communities.

Operating Schedules
40 CFR § 58.12

The operating schedules proposed by the SC DES in its Network Plan meet the requirements for continuous analyzers and all manual Pb, PM_{10}, $PM_{2.5}$, and $PM_{2.5}$ Speciation Trends Network (STN) monitors.

Air Quality Index (AQI) Reporting
40 CFR § 58.50

AQI reporting is required in MSAs with populations over 350,000. Six MSAs in the state of South Carolina have populations over 350,000 (see Table 3). The SC DES reports AQI values for these MSAs and one additional MSA. The Mecklenburg County Air Quality reports AQI values for the Charlotte-Concord-Gastonia, NC-SC MSA. Both the Georgia Environmental Protection Division (GA EPD) and the SC DES report AQI values for the Augusta-Richmond County GA-SC MSA.

Table 3: AQI Reporting

MSAs Reporting
Greenville-Anderson-Greer, SC
Columbia, SC
Charleston-North Charleston, SC
Augusta-Richmond County, GA-SC
Myrtle Beach-Conway-North Myrtle Beach, SC
Florence, SC
Charlotte-Concord-Gastonia, NC-SC

The South Carolina monitoring network satisfies the minimum AQI reporting requirements in 40 CFR Part 58.

National Core (NCore) Monitoring Network
40 CFR Part 58, Appendix D, Section 3.0

A requirement that each state operate at least one NCore site is found in 40 CFR Part 58, Appendix D, Section 3. The NCore site must measure, at a minimum, $PM_{2.5}$ particulate mass using continuous and integrated/filter-based samplers, speciated $PM_{2.5}$, $PM_{10-2.5}$ particle mass, O_3, SO_2, CO, NO/NO_y, wind speed, wind direction, relative humidity, and ambient temperature. This section requires each state to operate at least one NCore site. The SC DES meets the NCore requirement by operating the Parklane site in Columbia.

Table 4: NCore Monitoring Sites

AQS ID	Site Name	CBSA	Requirement Met (Y/N)
45-079-0007	Parklane	Columbia, SC	Y

The NCore monitoring network described in the Network Plan and listed in Table 4 meets all design criteria of 40 CFR Part 58.

O_3 Monitoring Requirements
40 CFR Part 58, Appendix D, Section 4.1 and Table D-2

Ambient air monitoring network design criteria for O_3 are found in 40 CFR Part 58, Appendix D, Section 4.1. This section requires state agencies to operate O_3 sites for various locations depending upon area size and typical peak concentrations.

Table 5: Ozone Design Criteria – Minimum Required SLAMS Monitors

CBSA	Minimum Required SLAMS	Number of SLAMS	Number of SPMs or Other Regulatory Monitors	Site Names (AQS IDs) of SLAMS	Requirement Met (Y/N)
Augusta-Richmond County, GA-SC	2	4	0	Jackson Middle School (AQS ID: 45-003-0003) Trenton (AQS ID: 45-037-0001) Evans (AQS ID 13-073-0001)[1] Augusta (AQS ID 13-245-0091)[1]	Y
Charleston-North Charleston, SC	2	2	0	Moncks Corner National Guard (AQS ID: 45-015-1002) Cape Romain (AQS ID: 45-019-0046)	Y
Charlotte-Concord-Gastonia, NC-SC	2	4	3	York Landfill (AQS ID: 45-091-0008) Crouse (AQS ID: 37-109-0004)[2] Garinger (AQS ID: 37-119-0041)[3] University Meadows (AQS ID: 37-119-0046)[3] Rockwell (AQS ID: 37-159-0021)[1]	Y
Columbia, SC	2	2	1	Parklane (AQS ID: 45-079-0007) Sandhill (AQS ID: 45-079-1001)	Y
Florence, SC	1	1	0	Pee Dee Exp. Station (AQS ID: 45-031-0003)	Y
Greenville-Anderson-Greer, SC	2	2	0	Garrison Arena (AQS ID: 45-007-0006) Hillcrest (AQS ID: 45-045-0016)	Y
Myrtle Beach-Conway-North Myrtle Beach, SC	2	1	0	Coastal Carolina (AQS ID: 45-051-0008)	N
Spartanburg, SC	2	1	0	North Spartanburg Fire Station #2 (AQS ID: 45-083-0009)	N

[1]Evans and Augusta sites are operated by the Georgia Environmental Protection Division
[2]Crouse and Rockwell sites are operated by the North Carolina Department of Air Quality
[3]Garinger and University Meadows sites are operated by Mecklenburg County Air Quality

The Coastal Carolina site (AQS ID 45-051-0008) is operated by the SC DES. 40 CFR Part 58, Appendix D, Section 4.1 states that if the most recent 3-year ozone design value exceeds 85 percent of the ozone NAAQS (which is 0.070 ppm), then another ozone monitor must be added in the MSA. In 2023, the 3-year ozone design value exceeded 85 percent of the ozone NAAQS. The EPA supports SC DES searching for a new site and will be happy to collaborate with SC DES. The EPA requests that the location of the new ozone site be included in the Network Plan due July 1, 2025, with a proposed startup date of March 1, 2026.

When OMB added Union County to the Spartanburg MSA, it triggered a second ozone monitor requirement due to the increase in population. The Department is investigating possible locations for the new site. The EPA supports SC DES searching for a new site and will be happy to collaborate with SCDES. The EPA requests that the location of the new ozone site be included in the Network Plan due July 1, 2025, with a proposed start-up date of March 1, 2026.

More information about O_3 site selection can be found in the EPA's Guideline on Ozone Monitoring Site Selection, which can be found at: https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=2000D45M.TXT.

Except for the two MSAs where there are new requirements, the O_3 monitoring network outlined in the Network Plan and Table 5 meets the minimum monitoring requirements found in 40 CFR Part 58, Appendix D, Table D-2 for all MSAs in South Carolina.

CO Monitoring Requirements
40 CFR Part 58, Appendix D, Section 4.2

Ambient air monitoring network design criteria for CO are found in 40 CFR Part 58, Appendix D, Section 4.2. CBSAs with populations over one million are required to operate one CO monitor collocated with a near-road NO_2 site. There is one CBSA in South Carolina with a population over 1,000,000, the Charlotte-Concord-Gastonia, NC-SC CBSA. The CO requirement for this area is met by the Mecklenburg County Air Quality (MCAQ) operating a CO monitor at its Remount near-road site.

Table 6: CO Design Criteria – Minimum Required SLAMS Near-road Monitors

CBSA	Minimum Required Near-road CO Monitors	Number of Near-road CO Monitors	Site Names (AQS IDs) of Existing Near-road CO Monitors	Requirement Met (Y/N)
Charlotte-Concord-Gastonia, NC-SC	1	1	Remount (37-119-0045)[1]	Y

[1]Remount site is operated by the MCAQ.

The Regional Administrator monitoring requirements for CO are found in 40 CFR Part 58, Appendix D 4.2.2. The section states, "The Regional Administrators, in collaboration with states, may require additional CO monitors above the minimum number of monitors required in 4.2.1." The Regional Administrator is not requiring the SC DES to operate an additional CO monitor at this time.

Table 7: CO Design Criteria – Minimum Required SLAMS RA-Required Monitors

CBSA	Minimum RA-required CO Monitors	Number of RA-required CO Monitors	Site Names (AQS IDs) of Existing RA-required CO Monitors	Requirement Met (Y/N)
None	0	0	None	Y

The CO monitoring network described in the Network Plan meets the design criteria of 40 CFR Part 58 for both near-road and RA-required monitors as identified in Tables 6 and 7 above.

NO_2 Monitoring Requirements
40 CFR Part 58, Appendix D, Section 4.3

Ambient air monitoring network design criteria for NO_2 are found in 40 CFR Part 58, Appendix D, Section 4.3. Three types of NO_2 monitoring are required: near-road, area-wide, and Regional Administrator. These types of NO_2 monitoring are described in Sections 4.3.2, 4.3.3, and 4.3.4, respectively.

Ambient air monitoring design criteria for near-road NO_2 monitoring sites are found in 40 CFR Part 58, Appendix D, Section 4.3.2.

In the Charlotte-Gastonia-Concord, NC-SC CBSA, the MCAQ operates one near-road monitoring site at the Remount site (AQS ID: 37-119-0045). When the initial near-road monitoring network was funded by the EPA and established, the Charlotte area was below the 2.5 million population threshold for a second near-road NO_2 monitoring site. However, the recent census population estimate for the Charlotte-Concord-Gastonia, NC-SC CBSA is over 2.5 million people. The MCAQ has identified a suitable location for the additional near-road NO_2 monitoring site and was preparing to install and operate the new near-road site in 2023. However, due to delays outside the control of the MCAQ, the site began operation in early 2024.

Table 8: NO_2 Design Criteria – Minimum Required SLAMS Near-road Monitors

CBSA	Minimum Required Near-road NO_2	Number of Near-road NO_2	Site Names (AQS IDs) of Existing NO_2 Near-Road	Requirement Met (Y/N)
Charlotte-Concord-Gastonia, NC-SC	2	2	Remount (AQS ID: 37-119-0045)[1] Equipment Drive (AQS ID 37-119-0050)[1]	Y

[1]The Remount and Equipment Drive sites are operated by the MCAQ.

Ambient air monitoring network design criteria for area wide NO_2 sites are found in Section 4.3.3 of Appendix D to 40 CFR Part 58. The MCAQ operates a NO_2 monitor at its Garinger site to meet the minimum requirement for the Charlotte-Gastonia-Concord, NC-SC CBSA.

Table 9: NO_2 Design Criteria – Minimum Required SLAMS Area-Wide Monitors

CBSA	Minimum Required Area-Wide NO_2	Number of Area-Wide NO_2	Site Names (AQS IDs) of Existing NO_2 Area-Wide Sites	Requirement Met (Y/N)
Charlotte-Gastonia-Concord, NC-SC	1	1	Garinger (AQS ID: 37-119-0041)[1]	Y

[1]The Garinger site is operated by the MCAQ.

Ambient air monitoring network design criteria for Regional Administrator-required NO_2 monitoring, often referred to as RA-40 monitoring, are found in 40 CFR Part 58, Appendix D, Section 4.3.4. Under these provisions, Regional Administrators must require a minimum of 40 additional NO_2 monitoring stations nationwide, with a primary focus on siting these monitors in locations to protect susceptible and vulnerable populations. The full list of NO_2 monitors identified by the EPA's Regional Administrators can be found on the EPA's website at https://www.epa.gov/amtic/no2-monitoring-susceptible-and-vulnerable-populations. The SC DES operates one RA-40 monitor at its Greenville ESC site in the Greenville-Anderson-Greer, SC CBSA.

Table 10: NO_2 Design Criteria – Minimum Required SLAMS RA-40 Monitors

CBSA	Minimum Required RA-40 Monitors	Number of RA-40 Monitors	Site Names (AQS IDs) of Existing RA-40 Sites	Requirement Met (Y/N)
Greenville-Anderson-Greer, SC	1	1	Greenville ESC (AQS ID: 45-045-0015)	Y

The NO_2 monitoring network described by the Network Plan meets all design criteria of 40 CFR Part 58.

SO_2 Monitoring Requirements
40 CFR Part 58, Appendix D, Section 4.4

Ambient air monitoring network design criteria for SO_2 are found in 40 CFR Part 58, Appendix D, Section 4.4. This section requires that the population weighted emissions index (PWEI) be calculated by states for each CBSA. As a result, the SO_2 monitoring site(s) required in each CBSA will satisfy minimum monitoring requirements if the monitor(s) is sited within the boundaries of the parent CBSA and is one of the following site types: population exposure, maximum concentration, source-oriented, general background, or regional transport. A SO_2 monitor at an NCore station may satisfy minimum monitoring requirements if that monitor is located within a CBSA with minimally required monitors consistent with Appendix D, Section 4.4

Based upon PWEIs calculated using 2023 population estimates and 2020 emission inventory data, the minimum numbers of monitors required for the CBSAs in South Carolina are summarized in Table 11.

Table 11: SO_2 Design Criteria – Minimum Required SLAMS PWEI Monitors

CBSA	2023 Population Estimate	2020 NEI Emissions (Tons per year)	PWEI	Number of Minimum Required PWEI SO_2 Monitors	Number of SO_2 SLAMS	Site Names (AQS IDs) of Existing SO_2 monitors	Requirement Met (Y/N)
Charlotte-Concord-Gastonia, NC-SC	2,805,115	3527	9894	1	1	Garinger (AQS ID:37-119-0041)[1]	Y
Columbia, SC	858,302	2292	1967	0	1	Parklane (AQS ID: 45-079-0007)	Y
Charleston-North Charleston, SC	849,417	6914	5873	1	1	Jenkins Ave. (AQS ID: 45-019-003)	Y
Greenville-Anderson-Greer, SC	975,480	169	165	0	0	Greenville ESC (AQS ID: 45-045-0015)	Y

[1]The Garinger site is operated by Mecklenburg County Air Quality.

The SO_2 monitoring network outlined in the Network Plan meets the SO_2 PWEI requirements specified in 40 CFR Part 58, Appendix D, Section 4.4.

The EPA finalized the SO_2 Data Requirements Rule (DRR) on August 10, 2015 (40 CFR Part 51, Subpart BB). This rule requires air quality near sources with SO_2 emissions of 2,000 tons per year (tpy) or greater be characterized using ambient air monitoring or modeling. On January 15, 2016, the SC DES submitted to the EPA a list of eight sources in the state around which SO_2 air quality must be characterized. These eight sources were characterized using modeling and/or took federally enforceable emissions limits. The SC DES does not operate any SO_2 monitoring sites to meet the DRR requirements.

Table 12: SO_2 Design Criteria – Data Requirement Rule Monitors

CBSA	Minimum Required DRR Monitors	Number of DRR Monitors	Site Names (AQS IDs) of Existing DRR Sites	Requirement Met (Y/N)
None	0	0	None	Y

The DRR also requires annual emissions reporting for sources that used modeling to show attainment with the standard under the rule. Forty (40) CFR § 51.1205 (b) requires that:

> "For any area where modeling of actual SO_2 emissions serve as the basis for designating such area as attainment for the 2010 SO_2 NAAQS, the air agency shall submit an annual report to the EPA Regional Administrator by July 1 of each year, either as a stand-alone document made available for public inspection, or as an appendix to its Annual Monitoring Network Plan (also due on July 1 each year under 40 CFR §58.10), that documents the annual SO_2 emissions of each applicable source in each such area and provides an assessment of the cause of any emissions increase from the previous year."

The SC DES submitted its 2023 annual emission report with its 2024 Network Plan to meet this requirement. The report applies to areas designated attainment/unclassifiable based on modeling of

actual SO_2 emissions for Santee Cooper Cross Generating Station, New-Indy Catawba (formerly Resolute Industries), Sylvamo Eastover Mill (formerly International Paper – Eastover), and Dominion Wateree Station (formerly SCE&G Wateree Station).

For the DRR portion found in Appendix I of the Network Plan. The EPA will respond in a separate correspondence. The next annual SO_2 emissions report for these facilities is due July 1, 2025.

The Regional Administrator may require additional SO_2 monitoring stations above the minimum number of monitors required in 40 CFR Part 58, Appendix D, Section 4.4.2, where the minimum monitoring requirements are not sufficient to meet monitoring objectives. The SC DES is not required by the Regional Administrator to operate an SO_2 monitor at this time.

Table 13: SO_2 Design Criteria – Minimum Required SLAMS RA Monitors

CBSA	Minimum Required RA-40 Monitors	Number of RA-40 Monitors	Site Names (AQS IDs) of Existing RA-40 Sites	Requirement Met (Y/N)
None	0	0	None	Y

The SC DES operates an additional SO_2 monitoring network to provide background concentration data. Two years of data are collected every four years at two monitoring sites. These are SPMs and do not require approval from the EPA for startup or shutdown. For the data to be useable to support the SC DES's prevention of significant deterioration (PSD) modeling and permitting activities, the rotating SO_2 monitoring network must meet the requirements in Appendix B to 40 CFR Part 58. Section 8.3 of Appendix W to 40 CFR Part 51 discusses using air monitoring data for background concentrations and Appendix B to 40 CFR Part 58 discusses quality assurance requirements for PSD air monitoring procedures that must be followed for the data to be useable for PSD and permitting purposes.

Table 14 lists the two monitors that the SC DES includes in its SO_2 rotating background network and that are currently operating. The SC DES has updated the monitoring objective for the Trenton SO_2 site from source oriented to upwind background. The EPA believes this better represents the monitoring objectives of the site.

Table 14: SO_2 Rotating Background Monitoring

CBSA	Site Name (AQS ID)	Frequency of Operation	Next Expected Years of Operation	Monitoring Objective in Network Plan
Charlotte-Concord CSA	York Landfill (45-091-0008)	Every other 2 years	2024-2025	Upwind Background
August-Richmond County, GA-SC	Trenton (AQS ID: 45-037-0001)	Every other 2 years	2026-2027	Upwind Background

The South Carolina SO_2 monitoring network meets the monitoring requirements in 40 CFR Part 58.

Pb Monitoring Requirements
40 CFR Part 58, Appendix D, Section 4.5

The monitoring requirements for Pb found at 40 CFR Part 58, Appendix D, Section 4.5 require that, at a minimum, there must be one source-oriented SLAMS site located to measure the maximum Pb concentration in ambient air resulting from each non-airport Pb source which emits 0.5 or more tons per year and from each airport which emits 1.0 or more tons per year.

Although South Carolina has no sources that exceed the emissions thresholds for Pb monitoring, the SC DES and Clarios, LLC (formerly Johnson Controls Battery Group) conducted source oriented ambient Pb monitoring at three sites around the Florence Recycling Center in Florence, South Carolina. The resulting air monitoring data are comparable to the 2008 lead NAAQS. The company and the SC DES conducted this monitoring under terms of a settlement agreement reached with several petitioners who commented on the construction permit for the facility. The locations of the monitoring sites were selected based upon an agreement between the company and stakeholders. As of March 22, 2021, Clarios ceased production at the recycling center. The SC DES discontinued two of three sites as of November 6, 2021, near the Clarios facility – JCI Entrance site (AQS ID: 45-041-8002) and JCI Railroad site (AQS ID: 45-041-8001).

The EPA requested that the SC DES continue to monitor for Pb near the Clarios facility at one site – the JCI Woods site (AQS ID: 45-041-8003). Pb monitoring should continue if there is a possibility of Pb emissions or re-entrainment of Pb dust. Pb monitoring should continue until meets the requirements for discontinuation under 40 CFR 58.14(c)(1) and the following occurs:

- The permit is revoked, so that operations cannot restart, and
- A cleanup plan that addresses dust suppression and/or monitoring of potentially Pb-containing dust should be put in place.

The EPA recommends that the SC DES provide documentation of the permit being revoked and of a cleanup plan that addresses minimizing the re-entrainment of Pb containing dust.

Table 15: Pb Design Criteria – Minimum Required Source-Oriented Monitors

Source	CBSA	Minimum Required Source-Oriented Pb Sites	Number of Source-Oriented Pb Sites	Site Names (AQS IDs) of Existing Source-Oriented Sites	Requirement Met (Y/N)
Clarios[1]	Florence, SC	0	1	JCI Woods (AQS ID: 45-041-8003)	Y

[1]This monitoring is not required by the EPA rules but is part of a settlement agreement between the SC DES, the facility, and community groups. The SC DES operates this sampler as a SPM to evaluate Pb NAAQS compliance.

The Pb monitoring collocation requirements are found in 40 CFR Part 58, Appendix A, 3.4.4. These requirements include that: 15 percent of the primary monitors are collocated and have at least one collocated quality control monitor (if the total number of monitors is less than three). These collocation requirements are assessed at the PQAO level. The SC DES is required to operate one collocated Pb monitor, and it operates it at the JCI Woods site (AQS ID: 45-041-8003) (see Table 16).

Table 16: Pb Design Criteria – Minimum Required Collocated Monitors

PQAO	Minimum Required Collocated Monitors	Number of Collocated Monitors	Site Names (AQS IDs) of Existing Collocated Sites	Requirement Met (Y/N)
SC DES	1	1	JCI Woods (AQS ID: 45-041-8003)	Y

The Pb monitoring network described in the Network Plan meets all design criteria of 40 CFR Part 58.

PM_{10} Monitoring Requirements
40 CFR Part 58, Appendix A, Section 3.3
40 CFR Part 58, Appendix D, Section 4.6 and Table D-4

Ambient air monitoring network design criteria for PM_{10} are found in 40 CFR Part 58, Appendix D, Section 4.6. Table D-4, in this section, indicates the approximate number of PM_{10} stations required in MSAs with populations exceeding 100,000 to characterize national and regional PM_{10} air quality trends and geographical patterns. The SC DES, the GA EPD and the MCAQ are required to operate six PM_{10} monitors at five sites in CBSAs in or abutting the state (see Table 18).

Table 17: PM_{10} Design Criteria – Minimum Required SLAMS Monitors

CBSA	Minimum Required SLAMS	Number of SLAMS	Number of SPMs or Other Regulatory Monitors	Site Names (AQS IDs) of SLAMS	Requirement Met (Y/N)
Augusta-Richmond County, GA-SC	1	1	0	Augusta (AQS ID: 13-245-0091)[1]	Y
Charleston-North Charleston, SC	1	1	0	Jenkins Ave. Fire Station (AQS ID: 45-019-0003)	Y
Charlotte-Concord-Gastonia, NC-SC	2	2	0	Garinger (AQS ID: 37-119-0041)[2] Ramblewood Park (AQS ID: 37-119-0047)[2]	Y
Columbia, SC	1	1	1	Cayce City Hall (AQS ID: 45-063-0010)	Y
Greenville-Anderson-Greer, SC	1	1	0	Greenville ESC (AQS ID: 45-045-0015)	Y

[1]The Augusta site is operated by the GA EPD.
[2]The Garinger and Ramblewood Park sites are operated by the MCAQ.

The PM_{10} collocation requirements for manual methods are found in 40 CFR Part 58, Appendix A, 3.3.4. Those requirements include that: 15 percent of each network of manual PM_{10} methods (at least one site) must be collocated and the sites with collocated monitors should be among those measuring annual mean concentrations in the highest 25 percent of the network. These collocation requirements are assessed at the PQAO level. The SC DES is not required to operate any PM_{10} collocated monitors.

Table 18: PM_{10} Design Criteria – Minimum Required Collocated Monitors

PQAO	Sites with Manual PM_{10} Method	Minimum Required Collocated Monitors	Number of Collocated PM_{10} Monitors	Site Names (AQS IDs) of Collocated Sites	Requirement Met (Y/N)
SC DES	0	0	0	None	Y

The proposed PM_{10} monitoring network described in the Network Plan meets all design criteria of 40 CFR Part 58.

$PM_{2.5}$ Monitoring Requirements
40 CFR Part 58, Appendix A, Section 3.2
40 CFR Part 58, Appendix D, Section 4.7 and Table D-5

Ambient air monitoring network design criteria for $PM_{2.5}$ are found in 40 CFR Part 58, Appendix D, Section 4.7. This section requires that state and, where applicable, local agencies operate the minimum number of required $PM_{2.5}$ SLAMS sites listed in Appendix D, Table D-5. The SC DES, GA EPD and MCAQ operate $PM_{2.5}$ SLAMS monitors at 15 sites in CBSAs in or abutting the state (see Table 19).

Table 19: $PM_{2.5}$ Design Criteria – Minimum Required SLAMS Monitors

CBSA	Minimum Required SLAMS	Number of SLAMS Sites	Number of SPMs or Other Regulatory Monitoring Sites	Site Names (AQS IDs) of SLAMS	Requirement Met (Y/N)
Augusta-Richmond County, GA-SC	2	2	0	Augusta (AQS ID: 13-245-0091)[1] Trenton (AQS ID 45-037-0001)	Y
Charleston-North Charleston, SC	1	2	1	NCFS (AQS ID: 45-019-0020) Cape Romain (AQS ID: 45-019-0046)	Y
Charlotte-Concord-Gastonia, NC-SC	2	3	2	Garinger (AQS ID: 37-119-0041)[2] Remount (AQS ID: 37-119-0045)[2] Friendship Park (AQS ID: 37-119-0048)[2]	Y
Columbia, SC	1	2	0	Irmo DJJ (AQS ID: 45-079-0022) Parklane (AQS ID: 45-079-0007)	Y
Greenville-Anderson-Greer, SC	2	2	0	Greenville ESC (AQS ID: 45-045-0015) Hillcrest (AQS ID: 45-045-0016)	Y
Florence, SC	1	1	0	Williams Middle School (AQS ID: 45-041-0003)	Y
Spartanburg, SC	1	1	0	T.K. Gregg (AQS ID: 45-083-0011)	Y
Myrtle Beach-Conway-North Myrtle Beach SC	1	1	0	Coastal Carolina (AQS ID 45-051-0008)[3]	Y
None	0	1	1	Chesterfield (AQS ID: 45-025-0001)	Y

[1]The Augusta site is operated by the GA EPD.
[2]The Garinger, Remount, and Friendship Park sites are operated by the MCAQ.
[3]$PM_{2.5}$ monitoring at the Coastal Carolina Site began in 2023.

$PM_{2.5}$ Collocation Requirements
40 CFR Part 58, Appendix A, Section 3.2

Forty (40) CFR Part 58, Appendix A, Section 3.2.3 states that 15 percent of each network of manual $PM_{2.5}$ methods (at least one site) must be collocated. Section 3.2.3.1 states that for each distinct monitoring method designation (FRM or FEM) a PQAO is using for a primary monitor, the PQAO must have 15 percent of the primary monitors of each method designation collocated and have at least one collocated quality control monitor. The first collocated monitor must be a designated a FRM monitor.

Section 3.2.3.2 states that for each primary monitor designated as an FEM used by the PQAO, 50 percent of the monitors designated for collocation (or the first if only one collocation is necessary) shall be collocated with a FRM quality control monitor and 50 percent of the monitors shall be collocated with a monitor having the same method designation as the FEM primary monitor.

The SC DES is transitioning its $PM_{2.5}$ network to include more continuous FEM equipment and reduce the number of filter based FRM equipment. Specifically, the SC DES will operate more Teledyne T640 and T640x monitors (AQS method codes 636 and 638 respectively). The EPA staff recently had a discussion with SC DES staff on plans to continue to meet regulatory collocation requirements in 2024. The EPA believes that the SC DES has a good plan for maintaining compliance with $PM_{2.5}$ collocation requirements.

Table 20: $PM_{2.5}$ Design Criteria – Minimum Required Collocated Monitors

PQAO	Method	AQS Method Code	Number of Primary Monitors	Minimum Required Collocated Monitors	Number of Collocated Monitors	Site Names (AQS IDs) of Collocated Sites	Requirements Met (Y/N)
SC DES	FRM Gravimetric w/ VSCC	145	8	1	3	Hillcrest (AQS ID: 45-045-0016) Parklane (AQS ID: 45-079-0007) NCFS (AQS ID 45-019-0020)	Y
SC DES	Teledyne T640X at 16.67 LPM	638	0	0	0	Greenville ESC (AQS ID: 45-045-0015)	Y
SC DES	Teledyne T640 at 5.0 LPM	636	3	1	1	Chesterfield (AQS ID: 45-025-0001)	Y

The $PM_{2.5}$ monitoring network meets all design criteria of 40 CFR Part 58.

$PM_{2.5}$ Near-Road Monitoring Requirements
40 CFR Part 58, Appendix D, Section 4.7.1(b)(2)

Regulatory requirements in 40 CFR Part 58, Appendix D, Section 4.1.1(b)(2) require that "CBSAs with a population of 1,000,000 or more persons, at least one $PM_{2.5}$ monitor is to be collocated at a near-road NO_2 station." One CBSA with a population of 1,000,000 or more persons is partially in the State of

South Carolina, the Charlotte-Gastonia-Concord, NC-SC CBSA, and the MCAQ operates the required $PM_{2.5}$ near-road monitor at the Remount site.

Table 21: $PM_{2.5}$ Design Criteria – Minimum Required SLAMS Near-Road Monitors

CBSA	Minimum Required Near-road $PM_{2/5}$	Number of Near-road $PM_{2.5}$	Site Names (AQS IDs) of Existing $PM_{2.5}$ Near-Road	Requirement Met (Y/N)
Charlotte-Concord-Gastonia, NC-SC	1	1	Remount (AQS ID: 37-119-0045)[1]	Y

[1]The Remount site is operated by the MCAQ.

The near-road $PM_{2.5}$ monitoring network described in the Network Plan meets the design criteria of 40 CFR Part 58.

$PM_{2.5}$ Continuous Monitoring Requirements
40 CFR Part 58, Appendix D, Section 4.7.2

Regulatory requirements for continuous $PM_{2.5}$ monitoring require that "...State, or where appropriate, local agencies must operate continuous $PM_{2.5}$ analyzers equal to at least one-half (round up) the minimum required sites listed in Table D-5 of this appendix.

At least one required continuous analyzer in each MSA must be collocated with one of the required FRM/FEM/ARM (federal reference method/federal equivalent method/approved regional method) monitors, unless at least one of the required FRM/FEM/ARM monitors is itself a continuous FEM or ARM monitor in which case no collocation requirement applies."

Six MSAs listed in Table 23, below, are required to have continuous monitors. Eight MSAs in or partially in South Carolina have continuous $PM_{2.5}$ monitors as does one site not in an MSA. The requirements are met in all areas in the state.

Table 22: $PM_{2.5}$ Design Criteria – Continuous Monitors

MSA	Minimum Required Continuous $PM_{2.5}$	Number of Continuous $PM_{2.5}$ Monitors	Site Names (AQS IDs) of Existing $PM_{2.5}$ Monitors	Requirement Met (Y/N)
Augusta-Richmond County, GA-SC	1	1	Trenton (AQS ID: 45-037-0001)	Y
Charleston-North Charleston, SC	1	2	Cape Romain (AQS ID: 45-019-0046) NCFS (AQS ID: 45-019-0020)	Y
Charlotte-Concord-Gastonia, NC-SC	1	5	Garinger (AQS ID: 37-119-0041)[1] Friendship Park (AQS ID: 37-119-0048)[1] Remount (AQS ID: 37-119-0045)[1] Rockwell (AQS ID: 37-159-0021)[2] Catawba Longhouse (AQS ID: 45-091-8801)[3]	Y
Columbia, SC	1	2	Irmo DJJ (AQS ID: 45-079-0022) Parklane (AQS ID: 45-079-0007)	Y
Florence, SC	0	1	Williams Middle School (AQS ID: 45-041-0003)	Y

Greenville-Anderson-Greer, SC	1	1	Greenville ESC (AQS ID: 45-045-0015)	Y
Myrtle Beach-Conway-North Myrtle Beach SC-NC	1	1	Coastal Carolina (AQS ID 45-051-0008)[4]	
Spartanburg, SC	0	1	T.K. Gregg (AQS ID: 45-083-0011)	Y
Remainder of State	0	1	Chesterfield (AQS ID: 45-025-0001)	Y

[1]The Garinger, Friendship Park, and Remount sites are operated by the MCAQ.
[2]The Rockwell site is operated by the North Carolina Department of Air Quality.
[3]The Catawba Longhouse site is operated by the Catawba Nation (CN).

$PM_{2.5}$ Continuous Federal Equivalent Methods

40 CFR § 58.11(e)

The EPA regulations contain provisions for handling data collected using continuous $PM_{2.5}$ FEMs. These procedures are found at 40 CFR §58.11(e). If an agency can demonstrate that the FEM data are not of sufficient comparability to a collocated FRM, then the monitoring agency may request that the FEM data not be used in comparison to the NAAQS.

As long as there is a collocated FRM at a site meeting sample frequency requirements, a NAAQS exclusion may be applied to the $PM_{2.5}$ data from a T640/x for up to two years via the SPM provision in §58.20. In the Network Plan to be submitted in 2025, agencies operating either the T640 or the T640x FEMs must include information on when the firmware upgrade occurred, and when the data alignment function was enabled for each monitor. Also, each agency must include whether the evaluation period caused the FEM to no longer be the primary monitor at the site. If any monitors are proposed to change from a SLAMS to an SPM, then this change must be submitted in an addendum to the Network Plan for the EPA approval.

The SC DES has requested NAAQS exclusion under 40 CFR §58.11(e) for 7 $PM_{2.5}$ continuous FEMs in the Network Plan. Table 23 lists the $PM_{2.5}$ FEM monitors that have been requested by the SC DES to be approved as not comparable to the NAAQS.

Table 23: Continuous $PM_{2.5}$ Monitors Collecting Data Not Comparable to the NAAQS

CBSA	Site Name (AQS ID)	FEM Method Description	FEM Method Code	Comments
Charleston-North Charleson, SC	North Charleston Fire Station(AQS ID: 45-019-0020)	FEM Broadband Spectroscopy	638	NAAQS exclusion for 07/25/22 - 09/05/23 while the monitor did NOT have the data alignment enabled; NAAQS exclusion starting 09/06/23 because this is the first day with the data alignment enabled, resulting in a new method code.
Augusta-Richmond County, GA-SC	Trenton (AQS ID: 45-037-0001)	FEM Broadband Spectroscopy	636	NAAQS exclusion for 06/07/22 - 09/05/23 while the monitor did NOT have the data

				alignment enabled; NAAQS exclusion starting 09/06/23 because this is the first day with the data alignment enabled, resulting in a new method code.
Florence, SC	Williams (AQS ID: 45-041-0003)	FEM Broadband Spectroscopy	636	NAAQS exclusion for 05/11/22 - 09/05/23 while the monitor did NOT have the data alignment enabled; NAAQS exclusion starting 09/06/23 because this is the first day with the data alignment enabled, resulting in a new method code.
Greeville-Anderson-Greer, SC	Greenville ESC (AQS ID: 45-045-0015)	FEM Broadband Spectroscopy	638	NAAQS exclusion starting 09/06/23 because this is the first day with the data alignment enabled, resulting in a new method code.
Columbia, SC	Parklane (AQS ID: 45-079-0007)	FEM Broadband Spectroscopy	638	NAAQS exclusion for 03/18/22 - 09/05/23 while the monitor did NOT have the data alignment enabled; NAAQS exclusion starting 09/06/23 because this is the first day with the data alignment enabled, resulting in a new method code.
Columbia, SC	Irmo DJJ (AQS ID: 45-079-0022)	FEM Broadband Spectroscopy	636	NAAQS exclusion for 01/20/23 - 09/05/23 while the monitor did NOT have the data alignment enabled; NAAQS exclusion starting 09/06/23 because this is the first day with the data alignment enabled, resulting in a new method code.
Spartanburg, SC	TK Gregg (AQS ID: 45-083-0011)	FEM Broadband Spectroscopy	636	NAAQS exclusion for 05/11/22 - 09/05/23 while the monitor did NOT have the data alignment enabled; NAAQS exclusion starting 09/06/23 because this is the first day with the data alignment enabled, resulting in a new method code.

The (Agency) has applied the updated data alignment for all T640s across the South Carolina network and enabled it on September 6, 2023. The EPA appreciates SC DES's cooperation in updating the firmware and enabling it so quickly. The state may evaluate the methods at each site for up to two years with a regionally concurred NAAQS exclusion. Once the evaluation period is over, the state must provide a $PM_{2.5}$ Comparability Assessment for each site to assess the performance and bias statistics to

ensure the data are suitable for comparison to the $PM_{2.5}$ NAAQSs. These assessments can be generated here: https://www.epa.gov/outdoor-air-quality-data/pm25-continuous-monitor-comparability-assessments.

$PM_{2.5}$ Background and Transport Sites
40 CFR Part 58, Appendix D, Section 4.7.3

Monitoring requirements in 40 CFR Part 58, Appendix D, Section 4.7.3 require that each state install and operate at least one $PM_{2.5}$ site to monitor for regional background concentrations and at least one $PM_{2.5}$ site to monitor for regional transport.

Table 24: $PM_{2.5}$ Regional Background and Transport Monitors

Requirement	Minimum Required	Number of Monitors	Site Names (AQS IDs) of SLAMS	Requirement Met (Y/N)
Background	1	1	Cape Romain (AQS ID: 45-019-0046)	Y
Transport	1	1	Chesterfield (AQS ID: 45-025-0001)	Y

On April 10, 2020, the SC DES temporarily replaced the Chesterfield site (AQS ID: 45-025-0001) continuous $PM_{2.5}$ TEOM sampler with a T640 and redesignated the monitor as an SPM in AQS. Use of the TEOM sampler resumed on April 23, 2021, but the monitor was not returned to a SLAMS designation. The EPA requests that the SC DES update the monitor's designation in AQS to reflect what is represented in the Network Plan.

As identified in Table 24, the SC DES meets the requirements of 40 CFR Part 58 by operating one background site and one transport site.

$PM_{2.5}$ Chemical Speciation Network (CSN)
40 CFR Part 58, Appendix D, Section 4.7.4

Monitoring rules in 40 CFR Part 58, Appendix D, Section 4.7.4 require that each state conduct chemical speciation monitoring and analyses at sites designated to be part of the $PM_{2.5}$ Speciation Trends Network (STN). The selection and modification of these STN sites must be approved by the Administrator. The $PM_{2.5}$ CSN includes STN stations and supplemental speciation stations that provide chemical species data of fine particulate. The EPA funds one STN monitor in South Carolina at the Parklane site (see Table 25).

Table 25: $PM_{2.5}$ Chemical Speciation Network – Non-SLAMS Monitors

CBSA	Site Name (AQS ID) of CSN Monitor
Columbia, SC	Parklane (AQS ID: 45-079-0007)

Photochemical Assessment Monitoring Stations (PAMS)
40 CFR Part 58, Appendix D, Section 5.0

With the promulgation of a new O_3 NAAQS on October 1, 2015, the EPA finalized changes to the PAMS requirements. On December 20, 2019, the EPA revised the start date for the updated stations. The

revision was published in the *Federal Register* on January 8, 2020, and extends the date by which the stations were to begin operating from June 1, 2019, to June 1, 2021. Since the state does not have a CBSA with a population of one million or more, it is not required to meet the PAMS requirement.

Air Toxics Monitoring Network

As part of the National Air Toxics Trends Station (NATTS) network, the SC DES samples for metals, semi-volatile organic compounds, carbonyls, and volatile organic compounds (SVOCS) at the Chesterfield monitoring site (AQS ID: 45-025-0001). The SC DES added ethylene oxide (EtO) sampling as part of the Tier 1 target analytes at Chesterfield in November 2020 and contracted with Eastern Research Group (ERG) to analyze EtO samples. All other NATTS analytes are analyzed by the SC DES. The collection and analysis of NATTS samples at the Chesterfield site is conducted in accordance with an EPA-approved quality assurance project plan (QAPP).

The SC DES was awarded a community-scale Air Toxics Monitoring Grant to collect air samples for a one-year period at three locations in several North Charleston area environmental justice communities and at one high traffic location. The sampling started on May 11, 2022, and the samples will be analyzed for EtO. The sites are Irving site (AQS ID: 45-019-0021), Rosemont site (AQS ID: 45-019-0009), and Gethsemane site (AQS ID: 45-019-0022), and FAA site (45-019-0048) (high traffic site). The results will be uploaded to AQS. The EPA appreciates the SC DES's efforts on this study and for the operation of the NATTS program.

The SC DES also collects samples for SVOCs in the Columbia, SC MSA at the Parklane site(AQS ID: 45-079-0020) site. Air toxics sampling at Parklane is conducted at the SC DES's discretion, and according to SC DES, it is not collected using the EPA or state-match funds. The EPA recommends that the SC DES develop and approve a QAPP for air toxics sampling to ensure that the data is of sufficient quality for SC DES's intended use, such as a risk screening analysis and/or sharing with the public.

Non-SLAMS Monitoring

The Network Plan also includes the following non-SLAMS monitors summarized in Table 26. These monitors include criteria pollutant monitoring comparable to the NAAQS, continuous $PM_{2.5}$ monitoring used for the AQI, air toxics monitoring, and/or tribal air monitoring.

Table 26: Non-SLAMS Monitors

CBSA	Pollutant(s)	Site Name (AQS ID) of Non-SLAMS Monitor	Monitor Type	NAAQS Comparable
Augusta-Richmond County, GA-SC	SO_2	Trenton (AQS ID: 45-037-0001)	SPM – 2yr rotating	Y - but only operating for 2 years
Charleston-North Charleston, SC	NO_2	Jenkins Ave. Fire Station (AQS ID: 45-019-0003)	SPM	Y
Charleston-North Charleston, SC	NO_2	Cape Romain (AQS ID: 45-019-0046)	SPM	Y
Charleston-North Charleston, SC	$PM_{2.5}$ Cont.	NCFS (AQS ID: 45-019-0020)	SPM	Y

Charleston-North Charleston, SC	SO2	York Landfill (AQS ID: 45-091-0008)	SPM – 2yr rotating	Y - but only operating for 2 years
Charlotte-Concord-Gastonia, NC-SC	$PM_{2.5}$ Cont., O_3	Catawba Longhouse (AQS ID: 45-091-8801)[1]	Tribal	Y
Columbia, SC	$PM_{2.5}$ Cont.	DJJ (AQS ID: 45-079-0022)	SPM	Y
Columbia, SC	SVOC, Precipitation, PM_{10}, Chemicals	Parklane (AQS ID: 45-079-0007)	SPM	Y – only for PM_{10}
Columbia, SC	O_3	Congaree Bluff (AQS ID: 45-079-0021)	SPM	Y for Congaree National Park Only
Columbia, SC	NO_2	Sandhill Experimental Station (AQS ID: 45-079-1001)	SPM	Y
Florence, SC	Pb	JCI Entrance (AQS ID: 45-041-8002) JCI Woods (AQS ID: 45-041-8003)	SPM	Y
Greenville-Anderson, SC	$PM_{2.5}$ Cont.	Greenville ESC (AQS ID: 45-045-0015)	SPM	Y
Spartanburg, SC	$PM_{2.5}$ Cont.	T.K. Gregg (AQS ID: 45-083-0011)	SPM	Y
Not in an MSA	O_3, Metals, Carbonyls, SVOCs, VOCs, Precipitation	Chesterfield (AQS ID: 45-025-0001)	SPM	Y for O_3, N/A for all else

[1]The Catawba Longhouse site is operated by the CN

Memoranda of Agreement (MOA) with Neighboring State and Local Air Monitoring Agencies 40 CFR Part 58, Appendix D, 2(e)

Section 2(e) of Appendix D to 40 CFR Part 58 states:

> "The EPA recognizes that State or local agencies must consider MSA/CSA boundaries and their own political boundaries and geographical characteristics in designing their air monitoring networks. The EPA recognizes that there may be situations where the EPA Regional Administrator and the affected State or local agencies may need to augment or to divide the overall MSA/CSA monitoring responsibilities and requirements among these various agencies to achieve an effective network design. Full monitoring requirements apply separately to each affected State or local agency in the absence of an agreement between the affected agencies and the EPA Regional Administrator."

The SC DES maintains MOAs to address minimum monitoring requirements with the GA EPD, the NC DAQ, and the MCAQ. These MOAs are summarized in Table 27.

Table 27: MOAs to Meet Monitoring Requirements for CBSAs Crossing Jurisdictional Boundaries

CBSA	Agencies on the MOA	Pollutants	Date of Agreement	Expiration
Augusta-Richmond County, GA-SC	SC DES, GA EPD	PM_{10}, $PM_{2.5}$, O_3, and other criteria pollutants as necessary	January 2017	Every 10 years
Charlotte-Concord-Gastonia, NC-SC	SC DES, NC DAQ, MCAQ	Criteria pollutant monitoring required by 40 CFR 58, Appendix D	July 1, 2016	Every 10 years
Myrtle Beach-Conway-North Myrtle Beach, SC MSA	SC DES, NC DAQ	O_3 and other criteria pollutants as necessary	July 1, 2015	Every 10 years

The EPA approves of the SC DES agreements to share regulatory monitoring requirements for the Charlotte, Myrtle Beach, and Augusta areas.

Monitoring Siting Criteria and Site Assessments
40 CFR Part 58, Appendix E

In reference to the Network Plan, 40 CFR § 58.10(a)(1) states:

> "The plan shall include a statement of whether the operation of each monitor meets the requirements of appendices A, B, C, D, and E of this part, where applicable. The Regional Administrator may require additional information in support of this statement."

The Network Plan includes assessment information for all monitoring sites. The EPA appreciates the inclusion of this information and the work that the SC DES has done to evaluate siting criteria at all its monitoring sites. The EPA understands that the SC DES is still working to resolve siting criteria issues identified by its own assessments and in recent EPA audits and appreciates the SC DES's continued progress in resolving these issues.

Areas with Environmental Justice Concerns

The EPA recognizes that the Network Plan submitted in 2024 meets the federal regulatory requirements outlined at 40 CFR § 58.10 and Appendices A through E, including consideration of areas with susceptible and vulnerable populations. Executive Order 14096: Revitalizing Our Nation's Commitment to Environmental Justice for All defines environmental justice as:

"The just treatment and meaningful involvement of all people, regardless of income, race, color, national origin, Tribal affiliation, or disability, in agency decision-making and other Federal activities that affect human health and the environment so that people:

(i) are fully protected from disproportionate and adverse human health and environmental effects (including risks) and hazards, including those related to climate change, the cumulative impacts of environmental and other burdens, and the legacy of racism or other structural or systemic barriers; and

(ii) have equitable access to a healthy, sustainable, and resilient environment in which to live, play, work, learn, grow, worship, and engage in cultural and subsistence practices."

For future plans, including next year's plan, we encourage the SC DES to continue to evaluate areas with environmental justice concerns related to ambient air monitoring. When proposing future changes to the air monitoring network (such as relocating existing air monitoring sites or proposing new sites) and in the upcoming five-year Network Assessment due in 2025 as required by 40 CFR § 58.10(d), the EPA recommends that SC DES describe which factors it relied on in its air monitoring network design decisions and how weight was apportioned to each. Where possible, SC DES should include additional detail about the environmental justice considerations taken into account related to the ambient air quality network. This would support transparency in the decision-making process and provide the impacted communities and their representatives with the information needed to meaningfully participate.

American Rescue Plan

The SC DES and the CN received funding in 2022 under the American Rescue Plan (ARP) to upgrade the existing ambient air monitoring network. As a recipient of this ARP direct award grants, the SC DES and the CN initiated procurement requests for equipment purchases and began installation of equipment once received. The remaining equipment will be purchased before the end of the grant period unless an extension is received. The Table 28 below indicates for the SC DES the receipt and installation status of equipment funded under the ARP and Table 29 below indicates the planned equipment upgrades for the CN. Quarterly reports must be submitted as well as a final progress report that is due within 120 days of the project end date. Prior to collecting environmental information, the SCDES and the CN must submit to the EPA a QAPP for all new pollutants to be monitored and methods to be used for approval 180 days prior to collection of environmental data.

Table 28. SC DES ARP Monitoring Equipment Upgrades

AQS Site ID (Location)	Equipment Description	Date Received
45-037-0001	T640 Monitor	5/2023
45-037-0001	2025i Sampler	4/2024
45-041-0003	T640 and Enclosure	5/2023
45-045-0016	T640 and Enclosure	5/2023
45-079-0007	T640X	5/2023
45-063-0010	T640X Enclosure	5/2023
45-083-0011	T640 and Enclosure	5/2023
45-051-0008	T640 and Enclosure	5/2023
45-025-0001	T640 and Enclosure	5/2023

45-045-0015	T640X	5/2023
45-063-0010	T640 and Enclosure	5/2023
45-019-0046	T640	5/2023
Multiple	4 x Agilaire 8864	5/2023
Multiple	2 x Teledyne T703U	12/2023

Table 29: Catawba Nation ARP Equipment Upgrades

PQAO	Equipment Description
Catawba Nation (CN)	Ozone Analyzer – 1 Wind Speed and Direction Sensor – 1 FEM $PM_{2.5}$ monitor – 1 Flow calibrator - 1 Flow meter – 1 Zero Air Generator - 1

Inflation Reduction Act – Clean Air Act (CAA) Section 103 Direct Award

The SCDES will receive funding in 2023 under Section 60105(f) of the Inflation Reduction Act, which provides for "grants and other activities authorized under subsections (a) through (c) of section 103 and section 105 of the Clean Air Act." The CAA Section 103 statutory authority for this action specifically authorizes "the coordination and acceleration of, research, investigations, experiments, demonstrations, surveys, and studies relating to the causes, effects (including health and welfare effects), extent, prevention, and control of air pollution." As recipients of IRA CAA grants, these agencies will prepare and initiate procurement requests for equipment purchases and/or contract support service, and plan for timely set-up and installation of equipment. Remaining equipment will be purchased before the end of the grant period unless an extension is approved. The table below indicates the air monitoring equipment funded under these IRA CAA grants. Since some agencies are using these funds for activities other than air monitoring, not all agencies receiving grants are listed below. Quarterly reports will be submitted as well as a final progress report within 120 days of the applicable project end date. Prior to the collection of environmental information, including air monitoring data, agencies must have a QAPP in place that has been approved by the EPA. The QAPP, which should cover all pollutants and monitoring methods not already covered in an approved QAPP, to be submitted to the EPA for approval 180 days prior to the planned collection of environmental information.

Table 30. IRA CAA Monitoring Equipment Upgrades

Location	Equipment Description
TBD between Chesterfield and Parklane	Large shelter Upgrade
TBD between Chesterfield and Parklane	Small Shelter Upgrade
NA	Laptop with Docking Shelter and Bag
NA	Laptop with Docking Shelter and Bag with Air Modeling Enhancement
NA	EtO NATTS Sampling Analysis (65 per year x 3 years)

Waivers of Requirements

The EPA's air monitoring regulations allow for the waiver of requirements in specific instances. The EPA requires ongoing waivers to be renewed every five years as part of the network assessment.

SC DES requests in the Network Plan a waiver of a specific 40 CFR Part 58, Appendix E siting requirement at the Greenville ESC site (AQS ID: 45-045-0015). Specifically, a waiver of the word "continuous" in the requirement for at least 270 degrees of continuous unobstructed airflow in 40 CFR Part 58 Appendix E, Section 2.3 (b).

Forty CFR Part 58, Appendix E Section 2.3 "Spacing From Obstructions" subpart (b) states that

> A probe inlet located near or along a vertical wall is undesirable because air moving along the wall may be subject to removal mechanisms. A probe inlet must have unrestricted airflow with no obstructions (as defined in paragraph (a) of this section – see https://www.ecfr.gov/current/title-40/appendix-Appendix%20E%20to%20Part%2058#p-Appendix-E-to-Part-58(a)) in a continuous arc of at least 270 degrees. An unobstructed continuous arc of 180 degrees is allowable when the applicable network design criteria specified in appendix D of this part (see https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-58/appendix-Appendix%20D%20to%20Part%2058) require monitoring in street canyons and the probe is located on the side of a building. This arc must include the predominant wind direction for the season of greatest pollutant concentration potential. For particle sampling, there must be a minimum of 2.0 meters of horizontal separation from walls, parapets, and structures for rooftop site placement.

In 40 CFR Part 58, Appendix E Section 4 "Waiver Provisions", section 4.2 states that "For an existing site, a waiver may be granted if either the criterion in section 4.1.1 or the criterion in 4.1.2 of this appendix is met.":

> 4.1.1 The site can be demonstrated to be as representative of the monitoring area as it would be if the siting criteria were being met.
>
> 4.1.2 The monitor or probe cannot reasonably be located so as to meet the siting criteria because of physical constraints (e.g., inability to locate the required type of site the necessary distance from roadways or obstructions).

The Greenville ESC site (AQS ID: 45-045-0015) has two obstructions: Tree C and Tree D, as referenced in Appendix G of the Network Plan, that prevent at least 270 degrees of continuous unobstructed air flow. This site met previous siting requirements for at least 270 degrees of non-continuous unobstructed airflow until requirements were updated with the 2024 $PM_{2.5}$ NAAQS update. The EPA recognizes that due to underground utilities SC DES is unable to remove either tree to meet the new siting requirements. After reviewing the waiver request, the EPA believes that the airflow arc being noncontinuous at this site will not impact the representativeness of the measurements as if siting criteria were being met.

The EPA approves the waiver of the word "continuous" in the 40 CFR 58 Appendix E Section 2.3 (b) requirement that "...a probe inlet must have unrestricted airflow with no obstructions (as defined in paragraph (a) of this section) in a continuous arc of at least 270 degrees". This waiver does not waive any other siting requirements for the Greenville Site, including the requirement for at least 270 degrees of total unobstructed airflow.

All other siting criteria must continue to be met at this site. The EPA recommends SC DES continue to seek permission to remove "Tree D" as referenced in Appendix G to the Network Plan. If the tree cannot be removed, SC DES should reassess and re-request this this waiver in the 2025 Network Plan along with the next Network Assessment.

Table 31: Summary of EPA Approved Waivers of Requirements

CBSA	Monitoring Site(s) Affected	Pollutant(s)	CFR Requirement Waived	EPA Waiver Authority/Rationale	Year Waiver First Granted	Waiver Expiration Date	Comments
Columbia, SC	Congaree Bluff (AQS ID: 45-079-0021)	O_3, SO_2	40 CFR Part 58, Appendix E, Section 2.3(b) & 2.4(a)[1]	40 CFR Part 58, Appendix E, Section 4.1.2[2]	2016	2025	Approval of spacing from trees requirements
Florence, SC	JCI Woods (AQS ID: 45-041-8003)	Pb	40 CFR Part 58, Appendix E, Section 2.3(b)[1]	40 CFR Part 58, Appendix E, Section 4.1.1[3]	2020	2025	Approval of spacing from obstructions
Greenville-Anderson-Greer, SC	Greenville ESC (45-045-0015)	SO_2, NO_2, $PM_{2.5}$, PM_{10}	"continuous" aspect of 40 CFR Part 58 Appendix E Section 2.3(b)	40 CFR Part 58, Appendix E, Section 4.1.1	2024	2025	Approval of Non-continuous 270 degree unrestricted airflow arc

[1]These waivers were granted prior to the rule update. These are the citations to the current requirements.

[2] This waiver was requested under the previous rule and the waiver provision was located under 40 CFR Part 58 Appendix E, Section 10.1.2

[3] This waiver was requested under the previous rule and the waiver provision was located under 40 CFR Part 58 Appendix E, Section 10.1.1

Appendix F: Memorandum of Agreements

SCDES MOA# 2026-041 A

MEMORANDUM OF AGREEMENT

ON AIR QUALITY MONITORING FOR CRITERIA POLLUTANTS FOR

THE AUGUSTA-RICHMOND COUNTY, GA-SC

METROPOLITAN STATISTICAL AREA (MSA)

January 2027

Participating Agencies:

Georgia
Georgia Department of Natural Resources
Environmental Protection Division
Air Protection Branch (GA EPD)

South Carolina
Department of Environmental Services (SCDES)
Bureau of Air Quality

I. PURPOSE/OBJECTIVES/GOALS

The purpose of this Memorandum of Agreement (MOA) is to establish the Augusta-Richmond County, GA-SC Metropolitan Statistical Area (MSA) Criteria Pollutant Air Quality Monitoring Agreement between SCDES and GA EPD (collectively referred to as the "affected agencies") to collectively meet United States Environmental Protection Agency (EPA) minimum monitoring requirements for particles of an aerodynamic diameter of 10 micrometers and less (PM_{10}), particles of an aerodynamic diameter of 2.5 micrometers and less ($PM_{2.5}$), and ozone; as well as other criteria pollutant air quality monitoring deemed necessary to meet the needs of the MSA as determined reasonable by all parties. This MOA will establish the terms and conditions of this collective agreement to provide adequate criteria pollutant monitoring for the Augusta-Richmond County, GA-SC MSA as required by 40 CFR 58 Appendix D, Section 2(e).

II. BACKGROUND

The Augusta-Richmond County, GA-SC MSA consists of the following counties: Burke, Columbia, McDuffee, Lincoln, Richmond, Aiken and Edgefield. GA EPD has jurisdiction over Burke, Columbia, McDuffee, Lincoln and Richmond Counties in Georgia and SCDES has jurisdiction over Aiken and Edgefield Counties, South Carolina. The SCDES and GA EPD are required by the Clean Air Act to measure for certain criteria pollutants in the ambient air in the Augusta-Richmond County, GA-SC MSA. The EPA has established minimum monitoring requirements based on the size of the MSA and the quality of the air in the MSA for PM_{10}, $PM_{2.5}$, and ozone.

40 CFR 58 Appendix D, Section 2(e) states (in part):

> "...The EPA recognizes that there may be situations where the EPA Regional Administrator and the affected State or local agencies may need to augment or to divide the overall MSA/CSA monitoring responsibilities and requirements among these various agencies to achieve an effective network design. Full monitoring requirements apply separately to each affected State or local agency in the absence of an agreement between the affected agencies and the EPA Regional Administrator."

Currently each air pollution control agency (affected agency) conducts monitoring in its respective jurisdiction and coordinates its monitoring with the other air pollution control agencies within the MSA.

III. ROLES AND RESPONSIBILITIES

The parties agree to the following terms and conditions:

- SCDES and GA EPD (the "affected agencies") commit to conducting appropriate monitoring in their respective jurisdictions of the MSA; as needed, to collectively meet EPA minimum monitoring requirements for the entire MSA for PM_{10}, $PM_{2.5}$, and ozone, as well as other criteria air pollutant monitoring deemed necessary to meet the needs of the MSA as determined reasonable by all affected agencies. The minimum air quality monitoring requirements (for PM_{10}, $PM_{2.5}$, and ozone described in 40 CFR 58) for the MSA shall apply to the MSA in its entirety and shall not apply to any sole affected agency within the MSA unless agreed upon by all affected agencies.

- The affected agencies commit to coordinating monitoring "responsibilities and requirements...to achieve an effective network design" regarding criteria air pollutant monitoring conducted in the MSA and commit to communicate unexpected or unplanned changes in monitoring activities within their jurisdictions to the other affected agency. As conditions warrant, the affected agencies may conduct telephone conference calls, meetings, or other communications to discuss monitoring activities for the MSA. Each affected agency shall inform the other

affected agencies via telephone or e-mail of any monitoring changes occurring in its jurisdiction of the MSA at its earliest convenience after learning of the need for the change or making the changes. Such unforeseen changes may include evictions from monitoring sites, destruction of monitoring sites due to natural disasters, or similar occurrences that result in an extended (greater than 1 quarter) or permanent change in the monitoring network. At least once a year in the second quarter of the year or before June 15th, each agency shall make available to the other affected agency, a copy of its proposed monitoring plan for its jurisdiction within the MSA for the next year.

- Each party reserves the right to revoke or terminate this MOA at any time and for any reason by giving thirty (30) days written notice prior to the date of termination.

IV. LIMITATIONS

A. All commitments made in this MOA are subject to the availability of appropriated funds and each party's budget priorities. Nothing in this MOA, in and of itself, obligates SCDES or GA EPD to expend appropriations or to enter into any contract, assistance agreement, interagency agreement or other financial obligation.

B. This MOA is neither a fiscal nor a funds obligation document. Any endeavor involving reimbursement or contribution of funds between parties to this MOA will be handled in accordance with applicable laws, regulations, and procedures, and will be subject to separate subsidiary agreements that will be effected in writing by representatives of the parties.

C. Except as provided in Section III, this MOA does not create any right or benefit, substantive or procedural, enforceable by law or equity against SCDES or GA EPD, their officers or employees, or any other person. This MOA does not direct or apply to any person outside SCDES or GA EPD.

V. PROPRIETARY INFORMATION AND INTELLECTUAL PROPERTY

No proprietary information or intellectual property is anticipated to arise out of this MOA.

VI. POINTS OF CONTACT

The following individuals are designated points of contact for the MOA:

GA EPD APB: Jaime Gore
Program Manager
Air Protection Branch
Environmental Protection Division
Georgia Department of Natural Resources

4244 International Parkway, Suite 120
Atlanta, GA 30354

Jaime.Gore@dnr.ga.gov
Office: (470) 524-0495
Cell: (770) 633-5136

SCDES: Dr. Courtney Grimes
Division Director
Division of Air Quality Analysis
Bureau of Regional and Laboratory Services
South Carolina Department of Environmental Services
8231 Parklane Road
Columbia, SC 29223

Courtney.Grimes@des.sc.gov
Office: (803) 896-0903
Cell: (839) 292-8585

In the event that a point of contact needs to be changed, notification may be made via email to the other parties.

VII. MODIFICATION/DURATION/TERMINATION

This MOA will be effective when signed by all parties. This MOA may be amended at any time by the mutual written consent of the parties. The parties will review this MOA at least once every 10 years to determine whether it should be revised, renewed, or cancelled. This MOA may be revoked or terminated by an affected agency at any time and for any reason by giving thirty (30) days written notice prior to the date of termination.

VIII. REFERENCE

United States Environmental Protection Agency, Title 40 Code of Federal Regulations, Parts 53 and 58, "Network Design Criteria for Ambient Air Quality Monitoring", Section 2(e), "General Monitoring Requirements."

IX. APPROVALS

Georgia Department of Natural Resources, Environmental Protection Division (GA EPD)

BY: Jeffrey W. Cown

Director

TITLE: _____

DATE: 04/17/2026

South Carolina Department of Environmental Services (SCDES) Bureau of Air Quality

BY: _____

TITLE: Bureau Chief

DATE: 04/27/2026

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MEMORANDUM OF AGREEMENT

ON AIR QUALITY MONITORING FOR CRITERIA POLL UT ANTS FOR THE CHARLOTTE-CONCORD-GASTONIA

METROPOLITAN STATISTICAL AREA (MSA)

Date: May 1, 2026

Participating Agencies:
North Carolina
Department of Environmental Quality (NCDEQ)
Division of Air Quality (NCDAQ)

South Carolina
Department of Environmental Services (SCDES)
Bureau of Air Quality

Mecklenburg County, North Carolina
Land Use and Environmental Services Agency
Air Quality (MCAQ)

I.PURPOSE/OBJECTIVES/GOALS

The purpose of this Memorandum of Agreement (MOA) is to establish the Charlotte-Concord-Gastonia Metropolitan Statistical Area (MSA) Criteria Pollutant Air Quality Monitoring Agreement among NCDAQ, SCDES, and the MCAQ (collectively referred to as the "affected agencies") to collectively meet United States Environmental Protection Agency (EPA) minimum monitoring requirements for criteria pollutants deemed necessary to meet the needs of the MSA as determined reasonable by all parties. This MOA will renew the terms and conditions of this collective agreement to provide adequate criteria pollutant monitoring for the Charlotte-Concord-Gastonia MSA as required by 40 CFR 58 Appendix D, Section 2(e).

II.BACKGROUND

The Charlotte-Concord-Gastonia MSA consists of:

Counties *(ordered alphabetically)*	**Principal City/Town** *(ordered by population)*
Anson County, NC	Charlotte, NC
Cabarrus County, NC	Concord, NC
Gaston County, NC	Gastonia, NC
Iredell County, NC	Rock Hill, SC
Lincoln County, NC	Huntersville, NC

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Mecklenburg County, NC	Kannapolis, NC
Rowan County, NC	Mooresville, NC
Union County, NC	Hickory, NC
Chester County, SC	Indian Trail, NC
Lancaster County, SC	Monroe, NC
York County, SC	Salisbury, NC

NCDEQ has jurisdiction over Anson, Cabarrus, Gaston, Iredell, Lincoln, Rowan, and Union Counties; SCDES has jurisdiction over Chester, Lancaster, and York Counties; MCAQ has jurisdiction over Mecklenburg County.

The NCDEQ, SCDES, and MCAQ are required by the Clean Air Act to measure certain criteria pollutants in the ambient air in the Charlotte-Concord-Gastonia MSA. The EPA has established minimum monitoring requirements based on the size of the MSA and the quality of the air in the MSA.

40 CFR 58 Appendix D, Section 2 (e) states (in part):

> *"... The EPA recognizes that State or local agencies must consider MSA/CSA boundaries and their own political boundaries and geographical characteristics in designing their air monitoring networks. The EPA recognizes that there may be situations where the EPA Regional Administrator and the affected State or local agencies may need to augment or to divide the overall MSA/CSA monitoring responsibilities and requirements among these various agencies to achieve an effective network design. Full monitoring requirements apply separately to each affected State or local agency in the absence of an agreement between the affected agencies and the EPA Regional Administrator."*

Currently each air pollution control agency (affected agency) conducts monitoring in its respective jurisdiction and coordinates monitoring with the other air pollution control agencies within the MSA.

III.ROLES AND RESPONSIBILITIES

The parties agree to the following terms and conditions:

- NCDEQ, SCDES, and MCAQ (the "affected agencies") commit to conducting appropriate monitoring in their respective jurisdictions of the MSA; as needed, to collectively meet EPA minimum monitoring requirements for the entire MSA for criteria air pollutant monitoring deemed necessary to meet the needs of the MSA as determined reasonable by all affected agencies. The minimum air quality monitoring requirements for the MSA shall apply to the MSA in its entirety and shall not apply to any sole affected agency within the MSA unless agreed upon by all affected agencies.

- The affected agencies commit to coordinating monitoring responsibilities and requirements to achieve an effective network design regarding criteria air pollutant monitoring conducted

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in the MSA and commit to communicate unexpected or unplanned changes in monitoring activities within their jurisdictions to the other affected agencies. As conditions warrant, the affected agencies may conduct telephone conference calls, meetings, or other communications to discuss monitoring activities for the MSA. Each affected party shall inform the others via telephone or e-mail of any monitoring changes occurring in its jurisdiction of the MSA at its earliest convenience after learning of the need for the change or making the changes. Such unforeseen changes may include evictions from monitoring sites, destruction of monitoring sites due to natural disaster, or similar occurrences that result in extended change (greater than one quarter) or permanent change in the monitoring network. At least once a year in the second quarter or before June 15th, each agency shall make available to the other agency a copy of its proposed monitoring plan for its jurisdiction with the MSA for the next year.

- Each party reserves the right to revoke or terminate this MOA at any time for any reason by giving thirty (30) days written notice prior to the date of termination.

IV. LIMITATIONS

A. All commitments made in this MOA are subject to the availability of funds and each party's budget priorities. Nothing in this MOA, in and of itself, obligates NCDEQ, SCDES, or MCAQ to expend funds or to enter into any contract, assistance agreement, interagency agreement, or other financial obligation.
B. This MOA is neither a fiscal nor a funds obligation document. Any endeavor involving reimbursement or contribution of funds between parties to this MOA will be handled in accordance with applicable laws, regulations, and procedures, and will be subject to separate subsidiary agreements what will be affected in writing by representatives of the parties.
C. Except as provided in Section III, this MOA does not create any right or benefit, substantive or procedural, enforceable by law or equity against NCDEQ, SCDES, or MCAQ, their officers or employees, or any other person. This MOA does not direct or apply to any person outside NCDEQ, SCDES, or MCAQ.

V. PROPRIETARY INFORMATION AND INTELLUCTUAL PROPERTY

No proprietary information or intellectual property is expected to arise out of this MOA.

VI. POINTS OF CONTACT

The following individuals are designated points of contact for the MOA:

NCDEQ:	Patrick Butler, Ambient Monitoring Section Chief NCDEQ Division of Air Quality 1641 Mail Service Center, Raleigh, NC 27699-1641 Patrick.Butler@deq.nc.gov Voice: 919-707-8719
SCDES:	Dr. Courtney Grimes, Director- Division Air Quality Analysis SCDES Bureau of Regional and Laboratory Services 8231 Parklane Road Columbia, SC 29223 Courtney.Grimes@des.sc.gov Voice: 839-292-8585
MCAQ:	Danielle Jones, Environmental Program Manager Mecklenburg County Land Use and Environmental Services Agency - Air Quality 2145 Suttle A venue Charlotte, NC 28208 DanielleM.Jones@mecklenburgcountync.gov Voice: 980-314-3355

If a point of contact needs to be changed, notification may be made via email to the other parties.

VII. MODIFICATION/DURATION/TERMINATION

This MOA will be effective when signed by all parties. This MOA may be amended at any time by the mutual written consent of all parties. The parties will review this MOA at least once every 10 years to determine whether it should be revised, renewed, or cancelled. This MOA may be revoked or terminated by an affected party at any time and for any reason by giving thirty (30) days written notice prior to the date of termination.

VIII. REFERENCE

United States Environmental Protection Agency, Title 40 Code of Federal Regulations, Part 58, Appendix D, "Network Design Criteria for Ambient Air Quality Monitoring", Section 2 (e), "General Monitoring Requirements"

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IX. APPROVALS

North Carolina Department of Environmental Quality (NCDEQ)
Division of Air Quality (NCDAQ)

BY: Signed by: Michael Abraczinskas 3BB15068A33C492...

TITLE: Director

DATE: 4/28/2026

South Carolina Department of Environmental Services (SCDES)
Bureau of Air Quality

BY: Signed by: Rhonda Thompson 1F2882CC28EE434...

TITLE: Chief - Bureau of Air Quality

DATE: 4/28/2026

Mecklenburg County Land Use and Environmental Services Agency (LUESA)
Mecklenburg County Air Quality (MCAQ)

BY: Signed by: Leslie Rhodes B33972590TF840D...

TITLE: Air Quality Director

DATE: 4/28/2026

Appendix G: Waivers



REGION 4
ATLANTA, GA 30303

October 28, 2025

Rhonda B. Thompson
South Carolina Department
of Environmental Services
2600 Bull Street
Columbia, South Carolina 29201

Dear Ms. Thompson:

Thank you for submitting the 2025 Annual Ambient Air Monitoring Network Plan (Network Plan) for the South Carolina Department of Environmental Services (SCDES), which was received on July 1, 2025. The Network Plan is required by 40 Code of Federal Regulations (CFR) §58.10 and is an essential part of implementing sections 103, 110 and 319 of the Clean Air Act.

The Environmental Protection Agency understands that SCDES provided the public an inspection and comment period for the draft Network Plan from April 25, 2025 – May 27, 2025. SCDES did not receive any public comments. The Network Plan meets the minimum requirements of 40 CFR Part 58. The EPA approves the 2025 South Carolina Network Plan and the proposed monitoring network changes.

On July 21, 2023, the Office of Management and Budget released revised delineations of Metropolitan Statistical Areas (MSAs) and their associated counties. Based on the population estimates in these revised MSAs and the most recent ozone design values, two new ozone sites are required in the network. SCDES is investigating possible locations for the two newly required sites in the Spartanburg, SC MSA and the Myrtle Beach-Conway-North Myrtle Beach SC MSA. The EPA supports SCDES searching for new sites and will be happy to collaborate with SCDES. The EPA requests that the location of the new sites and all information required by 40 CFR § 58.10(b) for proposed sites be included in the Network Plan due July 1, 2026. Recently, SCDES shut down the special purpose lead (Pb) monitor at JCI Woods site since the nearby Pb emissions source has ceased operation. SCDES worked with the EPA when deciding to shut down the site and the EPA Region 4 acknowledges the shutdown.

The 5-year Network assessment was submitted to the EPA on July 1, 2025. This satisfies the submission requirement of 40 CFR Part 58.10(d). Detailed comments on the SCDES Network Plan are enclosed. Thank you for working with the EPA Region 4 to monitor air pollution and promote clean air in South Carolina. If you have any questions or concerns, please contact Katy R. Lusky at (404) 562-9130 or Katie Marie Beck at (404) 562-8166.

Sincerely,

DENISSE DIAZ Digitally signed by DENISSE DIAZ
Date: 2025.10.28 23:39:40 -04'00'

Denisse D. Diaz Director
Air and Radiation Division

Enclosure
cc: Micheal Mattocks, Assistant Bureau Chief, Bureau of Regional and Laboratory Services BRLS
Connie Turner, Director, Bureau of Regional and Laboratory Services BRLS
Heinz Kaiser, Division of Emissions Evaluation and Support, BAQ
Mary Peyton Wall, Air Regulation and Data Support Section BAQ
Joel Hodges, Air Regulation and Data Support Section, BAQ
Keith Harris, EPA Region 4 LSASD

U.S. EPA Region 4 – South Carolina Department of Environmental Sciences (SCDES) Ambient Air Monitoring Network Plan Review

This enclosure documents the EPA Region 4 review of SCDES Ambient Air Monitoring Network Plan. Ambient air monitoring rules, which include regulatory requirements that address network plans, data certification, and minimum monitoring requirements, among other requirements, are found in 40 CFR Part 58. Minimum monitoring requirements for criteria pollutants are listed in 40 CFR Part 58, Appendix D. Minimum monitoring requirements are listed for ozone (O_3), particulate matter less than 2.5 microns ($PM_{2.5}$), particulate matter less than 10 microns (PM_{10}), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), carbon monoxide (CO), and lead (Pb).

A. Proposed Changes and the EPA Comments 40 CFR §58.10(b), §58.14

The EPA has approval authority for changes to state or local air monitoring stations (SLAMS). SLAMS include the ambient air quality monitoring sites and monitors that are required by Appendix D of 40 CFR Part 58 and are needed to meet the monitoring objectives of Appendix D, including comparisons to the national ambient air quality standards (NAAQS), but may also serve other data purposes. The EPA is not required to approve changes made to special purpose monitors (SPMs). SPMs are monitors designated by the monitoring agency as special purpose and do not count towards meeting minimum monitoring requirements of 40 CFR Part 58. SPMs are required to be identified in the Network Plan for the public and the EPA review.

Monitors proposed for discontinuation, start-up, reconfiguration, or relocation and the EPA's decision and rationale for approval/disapproval/acknowledgement of each proposed change are summarized in Table A-1. For any relocated monitors, unless noted below, the EPA approves the use of a combined dataset between the existing and proposed sites for the purpose of calculating air quality design values. The detailed rationale for approval/disapproval of each proposed change is contained in the following pollutant-specific sections.

Table A-1: Proposed Changes in Monitoring Network

Core-based Statistical Area (CBSA)	AQS ID and Site Name	Pollutant	Type	Comments
Florence Metropolitan Statistical Area (MSA)	JCI Woods (AQS ID: 45-041-8003)	Lead (Pb)	SPM	Acknowledged. South Carolina shut down the Clarios Woods Monitoring Site on March 26, 2025. SCDES worked with the EPA Region 4 when deciding to shut down this location.
Myrtle Beach-Conway-North Myrtle Beach, SC MSA	None	Ozone	SLAMS	Acknowledged. SCDES has started the process of finding an appropriate site for a second ozone monitor in the MSA. The EPA thanks SCDES for sending in information for a possible location and requests that SCDES include a

Core-based Statistical Area (CBSA)	AQS ID and Site Name	Pollutant	Type	Comments
				full site proposal in the Network Plan due July 1, 2026.
Spartanburg, SC MSA	None	Ozone	SLAMS	Acknowledged. SCDES has started the process of finding an appropriate site for a second ozone monitor in the MSA. The EPA will work with SCDES to select an appropriate location and requests that SCDES include a full site proposal in the Network Plan due July 1, 2026.
Augusta-Richmond County, GA-SC MSA	Trenton (AQS ID: 45-037-0001)	SO_2	SPM	Acknowledged. The Trenton monitoring site will begin operating an SPM rotating SO_2 monitor on January 1, 2026.
Charlotte-Concord-Gastonia, NC-SC MSA	York Landfill (AQS ID: 45-091-0008)	SO_2	SPM	Acknowledged. The SPM rotating SO_2 monitor will be moved to the Trenton Monitoring site on December 31, 2025.
Columbia, SC MSA	Congaree Bluff (AQS ID: 45-079-0021)	N/A	Waiver Request	Approved. The EPA approves the waiver request for the spacing of trees requirement.
Greenville-Anderson-Greer, SC MSA	Greenville ESC (AQS ID: 45-045-0015)	N/A	Waiver Request	Approved. The EPA approves the waiver request for the spacing of trees requirement.

Table D-14: Summary of the EPA Approved Waivers of Requirements

CBSA	AQS ID and Site Name	Pollutant(s)	CFR Requirement Waived	The EPA Waiver Authority/ Rationale	Year Waiver First Granted	Waiver Expiration Year	Comments
Greenville-Anderson-Greer, SC MSA	Greenville ESC (AQS ID: 45-045-0015)	SO_2, NO_2, $PM_{2.5}$, PM_{10}	40 CFR Part 58 Appendix E Section 4.1	40 CFR Part 58, Appendix E, Section 4.1.1	2025	2030	Approval of Spacing from Trees
Columbia, SC MSA	Congaree Bluff (AQS ID: 45-079-0021)	O_3, SO_2	40 CFR Part 58, Appendix E, Section 4 & 11	40 CFR Part 58, Appendix E, Section 4.1.2	2025	2030	Approval of Spacing from Trees

C.1. Additional Discussion

Lead monitoring has been discontinued at the Clarios Woods Monitoring Site. The last day of sampling was March 26, 2025. South Carolina has no sources that exceed the emissions thresholds for Pb monitoring. Previously, the SCDES and Clarios, LLC (formerly Johnson Controls Battery Group) conducted source-oriented ambient Pb monitoring at three SPM sites around the Florence Recycling Center in Florence, South Carolina. The facility ceased production March 22, 2021, and has had emissions well below the NAAQS in the years following the shutdown. Although the EPA approval is not explicitly required, SCDES worked with the EPA Region 4 when deciding to shut down the Pb site.

On July 21, 2023, the Office of Management and Budget released revised delineations[6] of MSAs and their associated counties. This removed Brunswick County, North Carolina from the Myrtle Beach-Conway-North Myrtle Beach, SC MSA and added Union County to the Spartanburg, SC MSA. A second ozone monitor is now required for both MSAs due to the most recent population estimates and O_3 design values in each MSA. The SCDES is investigating possible locations for a new site and working with the EPA Region 4. The EPA requests that SCDES submit site proposals in the network plan due July 1, 2026, and include the information required by 40 CFR 58.10(b) for each proposed site.

The EPA approves a renewal of the Congaree Bluff (AQS ID: 45-079-0021) siting waiver. The objective of the Congaree Bluff site is to measure O_3 and SO_2 within the Congaree National Park boundaries. Within the national park boundaries this monitor cannot be reasonably located to meet the siting criteria because of physical constraints. The EPA staff visited the Congaree Bluff site on January 25, 2016, and agree that this is the best monitoring location within the park boundaries. The site meets the requirements for a siting criteria waiver under 40 CFR Part 58, Appendix E Section 4.1.2. The EPA waives the requirements for spacing of trees under 40 CFR Part 58, Appendix E, Section 2.4(a) and spacing from obstructions under 40 CFR Part 58, Appendix E, Section 2.3(a). The EPA encourages the SCDES to meet siting criteria requirements as much as possible at this site but understands the DESNational Park Service's and SC 's hesitation to remove trees in an old growth forest. Thus, the EPA waives the spacing from trees requirement for the one branch identified by SCDES in the Network Plan. This site must still meet all other siting requirements found in Appendix E to 40 CFR Part 58.

The EPA approves the submitted siting criteria waiver renewal request for the Greenville Site (AQS ID: 45-045-0015) under 40 CFR Part 58, Appendix E, Section 4.1.1. The EPA recognizes that the site met previous siting criteria for $PM_{2.5}$ of having at least 270 degrees clearance but does not meet the updated siting criteria of 270 *continuous* clearance under 40 CFR Part 58, Appendix E, Section 2.3(b). EPA also recognizes that SCDES is limited by the presence of underground utilities and are unable to remove the trees. The site meets all other siting criteria and can be waved under 40 CFR Part 58, Appendix E, Section 4.1.1 because it does have a combined 270 degrees of clearance and is as representative of the monitoring area as it would be if the siting criteria were being met. The EPA waives the "continuous arc of at least 270 degrees" requirement under 40 CFR Part 58, Appendix E Section E 2.3(b).

[6] OMB Bulletin No. 23-01. Revised Delineations of Metropolitan Statistical Areas, Micropolitan Statistical Areas, and Combined Statistical Areas, and Guidance on Uses of the Delineations of These Areas. July 21, 2023.

Appendix H: Ongoing Data Requirements Rule for 2010 1-hour SO_2 NAAQS Verification Calendar Year 2025

On June 2, 2010, the U.S. EPA revised the primary NAAQS for sulfur dioxide (SO_2) by establishing a 1-hour standard at a level of 75 parts per billion. In 2017, the Department of Health and Environmental Control, now the SC Department of Environmental Services, (Department) submitted SO_2 designation modeling for certain facilities in Berkeley, Richland, and York counties to demonstrate these counties should be designated as attainment. These facilities included Santee Cooper Cross Generating Station, New-Indy Catawba (formerly Resolute Industries), Sylvamo Eastover Mill (formerly International Paper – Eastover), and Dominion Wateree Station (formerly SCE&G Wateree Station). On August 15, 2025, the EPA approved the termination of the annual reporting requirement for Santee Cooper Cross Generating Station.

In January 2018, EPA designated each county in South Carolina as attainment/unclassifiable for the 2010 SO_2 standard. Under 40 CFR 51.1205(b), for areas designated as attaining the standard based on modeling of actual emissions, the Department is required to submit an annual report that documents the annual SO_2 emissions of these sources, an assessment of any emissions increase from the prior year, and a recommendation whether further modeling is warranted.

Attached is the Department's annual report satisfying the ongoing data requirements for the affected area's designations. The annual report was provided for a 30-day public comment period, which began on April 24, 2026, and ended May 26, 2026. The EPA provided the following comment: Please explain the reason for the SO_2 emission increases between 2024 and 2025 for each source. This comment is addressed below.

Sylvamo Eastover Mill (Sylvamo) and Wateree Station (Wateree), Richland County

Sylvamo and Wateree were modeled in the same modeling domain for the 1-hr SO_2 attainment modeling. Wateree has taken permit limits matching its modeled rates, and this revised permit was provided to the EPA by letter on May 11, 2017. Sylvamo modeled several units below the permitted emission rates. As shown in Tables 1-5 below, actual SO_2 emissions for all these sources are significantly less than the modeled rates and no further modeling is warranted.

Table 1

Sylvamo No. 1 Power Boiler and No. 1 Recovery Furnace (Combined Stack)			
2024 SO_2 Emissions	2025 SO_2 Emissions	Modeled Emissions	Status
169.3 lbs/hr	109.6 lbs/hr	606.9 lbs/hr	No further action needed

Table 2

Sylvamo Recovery Furnace No. 2 and No. 2 NCG Incinerator (Combined Stack)			
2024 SO_2 Emissions	2025 SO_2 Emissions	Modeled Emissions	Status
204.8 lbs/hr	219.8 lbs/hr	420.8 lbs/hr	No further action needed

In response to the EPA's comment, Sylvamo stated the increase was due to year-over-year increase in gallons of Rectified Methanol burned and treatment of concentrated NCGs in the No. 2 NCG Incinerator and no increase in SO_2 emissions were attributed to the No. 2 Recovery Furnace operation.

Table 3

Sylvamo No. 2 Power Boiler			
2024 SO_2 Emissions	2025 SO_2 Emissions	Modeled Emissions	Status
62.3 lbs/hr	70.0lbs/hr	971.0 lbs/hr	No further action needed

In response to the EPA's comment, Sylvamo stated the increased treatment of dilute NCGs in No. 2 Power Boiler instead of in No. 1 Power Boiler following approval of the No. 2 Power Boiler as a primary control device for dilute NCGs rather than a backup control device.

For Sylvamo, the source of sulfur dioxide (SO_2) pound per hour (lb/hr) emissions rates is actual total emissions per source per year over time period (year). An example calculation is shown below for the combined stack of No. 1 Recovery Furnace (381A) and No. 1 Power Boiler (501A):

$$Emission\ Rate\left(\frac{lb}{hr}\right) = \frac{Total\ SO_2\ tons\ emitted\ from\ 381A\ \&\ 501A}{Total\ time\ in\ Calendar\ Year, days} \times \frac{2000\ lb}{ton} \times \frac{day}{24\ hours}$$

Table 4

Wateree No. 1		
2025 SO_2 Emissions	Modeled Emissions	Status
93.1 lbs/hr	2687.3 lbs/hr 11770.3 TPY, combined stack	No further action needed

Table 5

Wateree No. 2		
2025 SO_2 Emissions	Modeled Emissions	Status
91.0 lbs/hr	2687.3 lbs/hr 11770.34 TPY, combined stack	No further action needed

The data for Wateree is based on actual emissions per actual hours of operation. Since each unit's emissions are measured on one combined stack, the emissions are apportioned by heat rate. The final result is actual pounds/hour.

The Actual SO_2 emissions in tons per year:

Table 6

Wateree Units' Total SO_2 Emissions (tons per year)		
Unit	2024	2025
WAT Unit 1	139	284.1
WAT Unit 2	84.8	189.6
Combined Common Stack	223.9	473.7

<u>New-Indy Catawba (New-Indy), formerly Resolute, York County</u>

The New-Indy 1-hr SO_2 DRR modeling was based on permit allowable SO_2 emissions with the exception that No. 6 fuel oil combustion emissions were based on actual No. 6 fuel oil use at maximum permitted sulfur content. The information used in the assessment (shown in Table 7) for this facility shows that no further modeling is warranted.

Table 7

New-Indy (Resolute) Facility No. 6 Fuel Oil Use			
2024 fuel oil used	2025 fuel oil used	Modeled usage:	Status
2,383,827 gallons	1,310,910 gallons	4,041,888 gallons	No further action needed

The primary sources of SO_2 at New-Indy Catawba LLC (Catawba Mill) are No. 6 fuel oil combustion for process steam generation and incineration of pulp mill non-condensable gases (NCG's) in the combination boilers. The SO_2 DRR modeling for the Catawba Mill was performed using the actual hourly No. 6 fuel oil usage during calendar years 2012 - 2014 year assuming the maximum fuel oil sulfur content (2.1%) as a conservative assumption. The combustion of pulp mill NCG's was modeled at the pulp mill design capacity and the permitted SO_2 emission rate of 10.1 pounds SO_2 per air dried ton pulp (lb SO_2/ ADTP). Other minor sources of SO_2 at the Catawba Mill (biomass and natural gas combustion, etc.) were modeled at the maximum short-term permitted emission rates.

The 2024 and 2025 actual SO_2 emissions are compared to the modeled SO_2 emissions in Tables 8 and 9 and are less than the modeled emissions rates in 2012, 2013, and 2014. As shown in Table 8, the annual SO_2 emissions from No. 6 fuel oil are based on the total fuel oil usage and the average fuel oil sulfur content. The annual SO_2 emissions from pulp mill NCG combustion are based on the total brown pulp production and the actual NCG emissions factor per ton of brown production.

The highest actual hourly emissions rate is compared to the highest modeled hourly emissions rate in Table 9. The highest actual hourly emissions in 2025 from burning No. 6 fuel oil combined with the highest hourly emissions from pulp mill NCG combustion are less than the highest hourly emissions modeled during the 2012-2014 period. These two functions are related but not solely dependent upon each other. This means that the highest hourly emissions from burning No. 6 fuel oil and the highest hourly emission from pulp mill NCG combustion did not occur at the same time (e.g., during the same hour of the year). When the 2025 actual emissions are paired in time, the highest hourly emissions are 1,133 pounds per hour. The 2025 actual SO_2 emissions are less than the SO_2 emissions modeled in 2014. As shown in both Tables 8 and 9 the actual emissions during 2024 – 2025 are well below the maximum modeled SO_2 1-hour emissions rates.

Table 8 – Comparison of Annual SO_2 Emissions

Year	No. 6 Fuel Oil			Pulp Mill NCG Combustion			Sum
	Gallons	% S	tons SO_2	ADTP	lb SO_2/ADTP	tons SO_2	tons SO_2
2012 Model	1,566,028	2.1	258	666,125	10.1	3,364	3,622
2013 Model	1,230,464	2.1	203	666,125	10.1	3,364	3,567

Year	No. 6 Fuel Oil			Pulp Mill NCG Combustion			Sum
	Gallons	% S	tons SO_2	ADTP	lb SO_2/ADTP	tons SO_2	tons SO_2
2014 Model	4,041,888	2.1	666	666,125	10.1	3,364	4,030
2024 Actual	2,383,827	1.64	307	474,027	3.88	920	1,226
2025 Actual	1,310,910	1.85	191	521,712	3.88	1,012	1,203

Table 9 – Comparison of Maximum Hourly SO_2 Emissions

Year	No. 6 Fuel Oil			Pulp Mill NCG Combustion			Sum
	max gallons/hr	% S	lbs SO_2/hr	max ADTP/hr	lb SO_2/ADTP	lbs SO_2/hr	lbs SO_2/hr
2012 Model	6,696	2.1	2,208	76.0	10.1	768	2,976
2013 Model	3,746	2.1	1,235	76.0	10.1	768	2,003
2014 Model	6,086	2.1	2,007	76.0	10.1	768	2,775
2024 Actual	3,311	1.75	910	77.3	3.99	309	1,218
2025 Actual	3,893	1.98	1,210	78.2	3.99	312	1,522

Appendix I: Site Proposals

Regulation 40 CFR Part 58 requires each state to maintain a minimum number of ambient air monitors to properly characterize air quality and to meet any required objectives of the air monitoring network. In general, ambient air monitoring requirements are based on the MSA population, emissions, and current ambient air monitoring design values. Due to its population and peak ozone concentrations, the Myrtle Beach-Conway-North Myrtle Beach, SC MSA is required to operate two ozone monitors. One required SLAMS monitor is located at the Coastal Carolina Monitoring Site. The Department has proposed a new monitoring site (Maple Fire Station) for the second required monitor below. Additionally, due to its population and peak ozone concentrations, the Spartanburg, SC MSA is required to operate two monitors. One required monitor is located at the North Spartanburg Fire Station Monitoring Site. The Department has proposed adding to an existing monitoring site (T.K. Gregg) for the second monitor below.

Maple Fire Station

History of the Ozone Monitoring Network in the Myrtle Beach-Conway-North Myrtle Beach, SC MSA

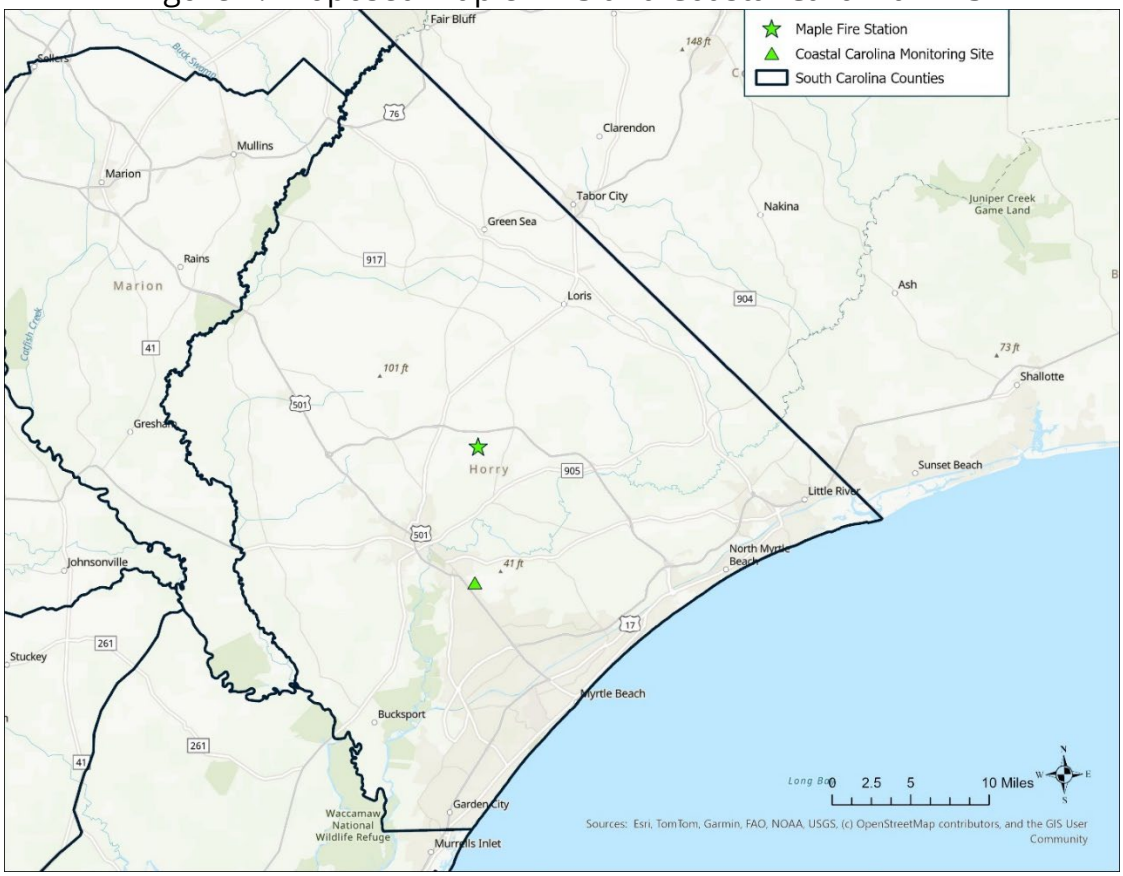
The Myrtle Beach-Conway-North Myrtle Beach, SC MSA is in the easternmost portion of the state. The MSA is made up entirely by Horry County. Prior to 2013, there were no minimum monitoring requirements for ozone in the MSA, however, the Department operated the Green Sea Air Monitoring Site (45-051-0003) during the 2010 and 2011 ozone seasons. In 2013, the Office of Budget and Management (OMB) added Brunswick County, NC to the MSA, increasing the population and triggering the requirement for one ozone monitor to be in the newly named Myrtle Beach-Conway-North Myrtle Beach, SC-NC MSA. In the summer of 2016, the Coastal Carolina Monitoring Site (45-051-0008) began operating as the required ozone monitoring site for the MSA.

The Coastal Carolina Monitoring Site collected its first complete ozone design value in 2019. Its design value for 2017-2019 was at 86 percent of the NAAQS. Since the first design value was so close to the 85 percent threshold for additional minimum monitoring requirements, EPA Region 4 allowed the States of South Carolina and North Carolina to delay implementing new monitoring requirements in order to collect more data. The design value for 2018-2020 dropped slightly and was 84 percent of the NAAQS, bringing the site below the 85 percent of the NAAQS threshold which would require additional ozone monitoring within the MSA. The 2021 and 2022

design values remained below the 85 percent threshold. On July 21, 2023, OMB removed Brunswick County, NC from the MSA. The population of the MSA remained above 350,000, despite the loss of Brunswick County, NC, and the 2023 design value was 63 ppb, over 85 percent of the NAAQS. The 2023 design value trigged the requirement of a second ozone monitor to be placed in the MSA.

The Department has been working to find a suitable location for the second required ozone monitor within Horry County, which has unique geologic and meteorological challenges. To determine an acceptable location, topography and land use, meteorology, population and population density, emissions from Title V facilities and traffic, and modeled ozone concentrations were considered. As a result of these analyses, the Department proposes the establishment of the Maple Air Monitoring Site to operate the second required ozone monitor in the Myrtle Beach-Conway-North Myrtle Beach, SC MSA. The location of the proposed Maple Air Monitoring Site is shown in Figure 1.The proposed Maple Air Monitoring Site is approximately 8.6 miles from the Coastal Carolina ozone monitor.

Figure 1. Proposed Maple AMS and Coastal Carolina AMS



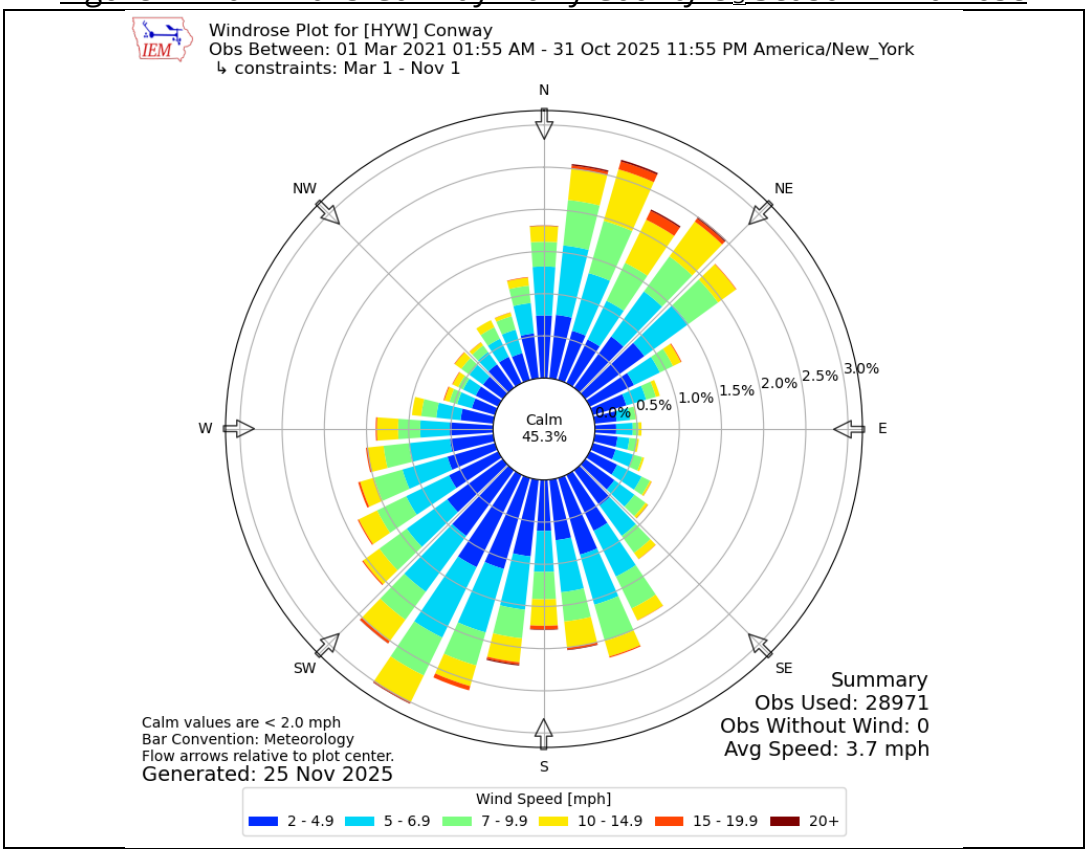
Meteorology

A meteorological analysis for the Conway area in Horry County, South Carolina was conducted to show how that area is a representative location for the new ozone monitor. Temperature, precipitation, wind speed, and direction from the Conway-Horry County Airport (HYW) station were examined.

Mean monthly average temperatures ranged from lows in the 40s in January to highs in the 80s in July. Daily precipitation totals can vary significantly over short time frames in the summer months due to the convective nature of rainfall near the coast. The months with the most precipitation typically occur during the summer (averaging about 6 inches per month), and months with the least precipitation occur during the spring and fall (averaging around 3 inches per month).

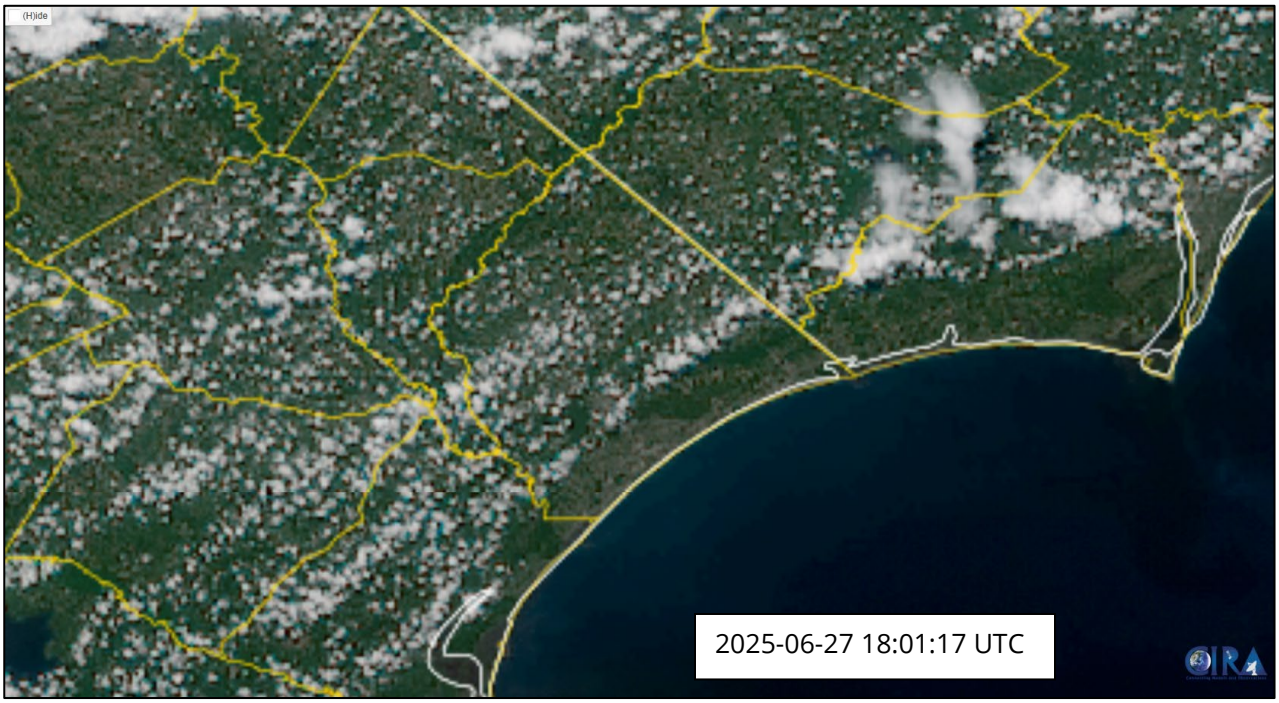
The 2021-2025 ozone season wind rose (Figure 2) from the Conway-Horry County Airport (HYW) weather station was examined. The most dominant wind direction throughout the season is from the south-southwest direction, with a secondary dominant wind direction coming from the northeast/north-northeast direction.

Figure 2 - 2021-2025 Conway-Horry County O_3 Season Wind Rose



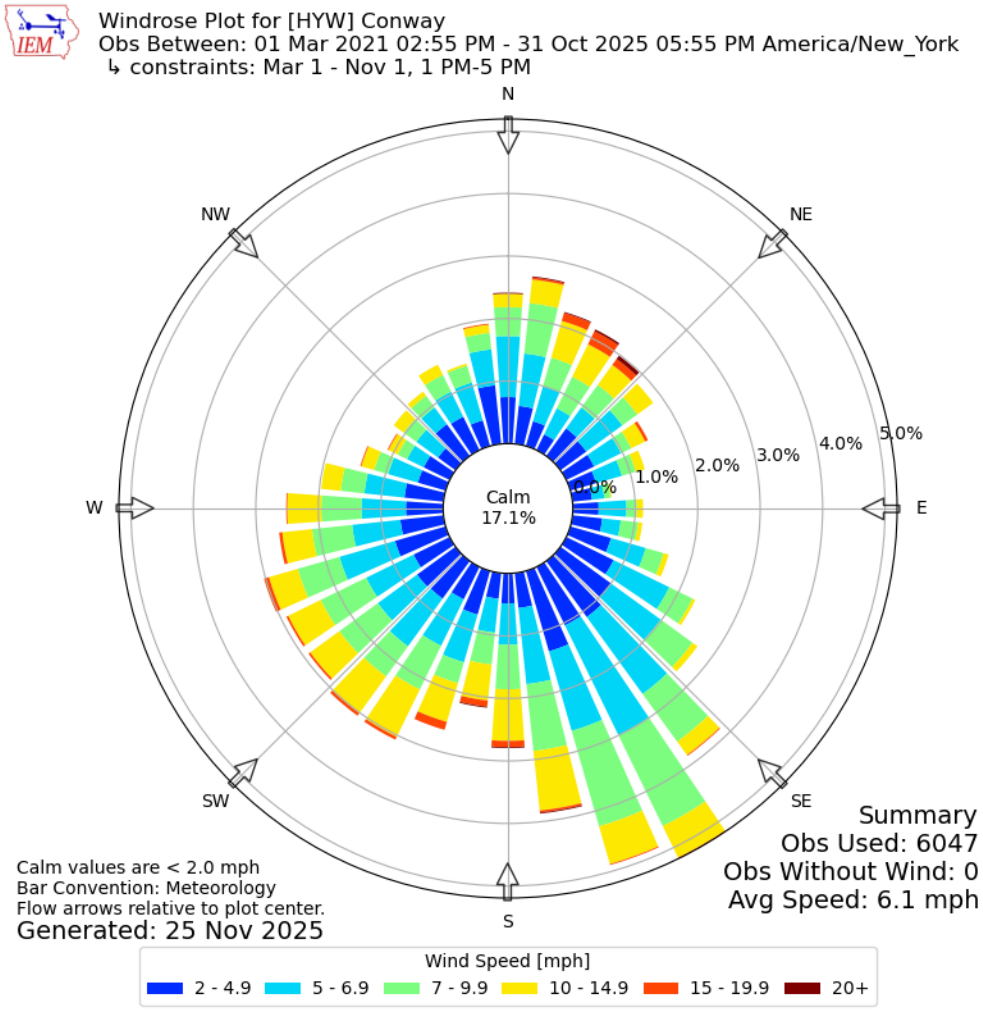
The Conway-Horry County weather station during peak production hours (1 PM through 5 PM) averaged 6.1 mph and contained a significantly lower percentage of calm winds. The difference in average wind speed supports the concept that coastal areas tend to experience more windy conditions in the afternoon, typically due to the sea breeze effect. Better air quality is expected around coastal plains because the wind disperses much of the pollution that may have originated in the immediate coastal metro areas, replacing the airmass with, typically, cleaner offshore air during afternoon hours. Sea breezes are a common occurrence near the coast, and emissions are transported towards inland locations through the day along sea breeze. This convergent boundary tends to pool emissions along it and further inland. Figure 3 depicts the sea breeze convergent boundary on a summer afternoon in Horry County, indicated by the line of clouds parallel to the coast.

Figure 3- RAMBB Slider Satellite Imagery of the Sea Breeze Convergent Boundary on 6/27/2025



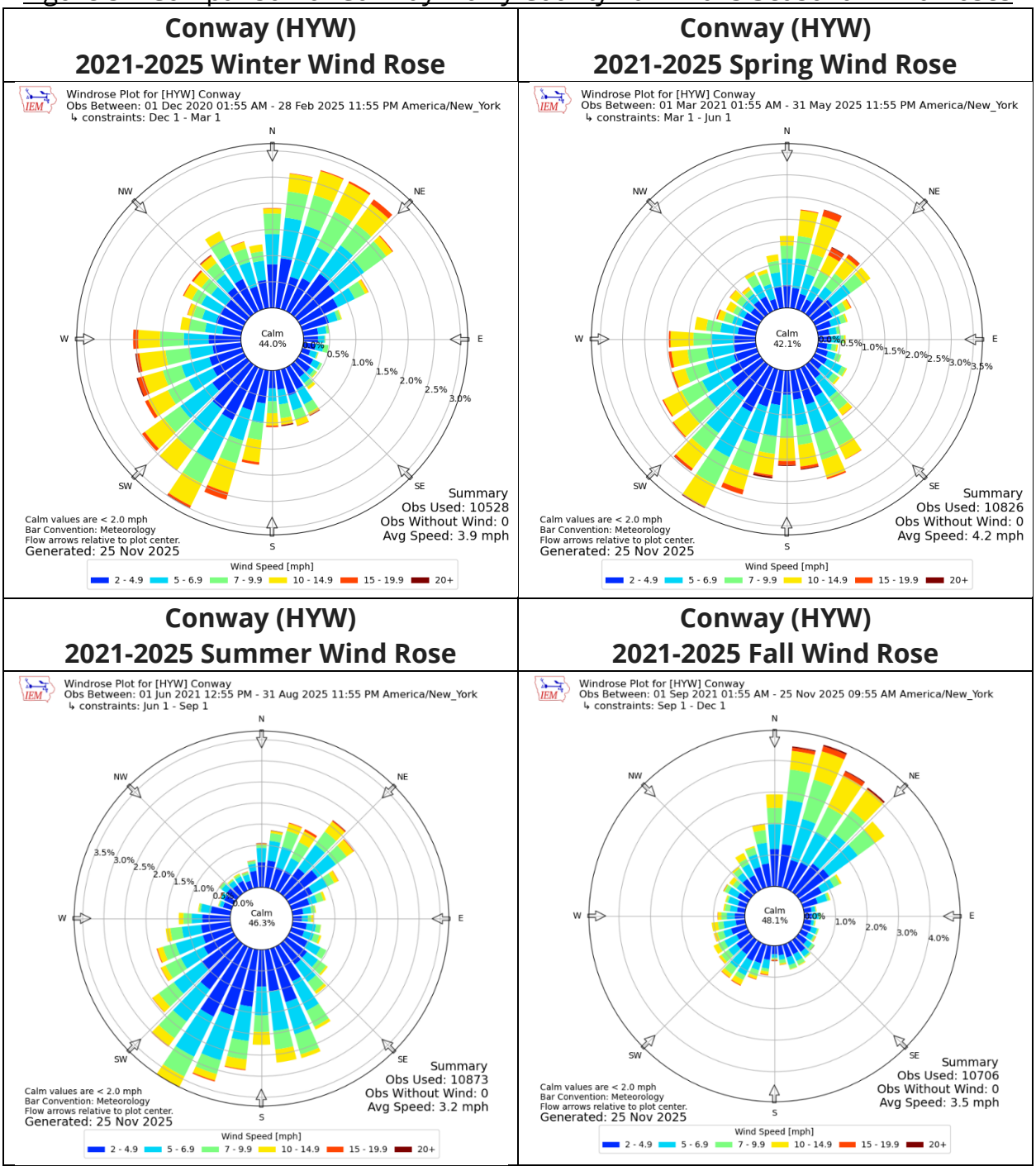
The sea breeze is evident by the south-southeasterly dominant wind directions during this period in Figure 4 below.

Figure 4 – Conway-Horry County 2021-2025 O_3 Season, Peak Production Hours Wind Rose



In the Conway-Horry County wind roses by season (as shown in Figure 5 below), it is noted that winds from the southwest and south-southwest direction are dominant in the summer months, and winds from the northeast and north-northeast directions are dominant in the fall months. Winter and spring contain a mix of winds from the northeast and southwest quadrants, but wind directions are slightly more dominant from the southwest during winter and spring.

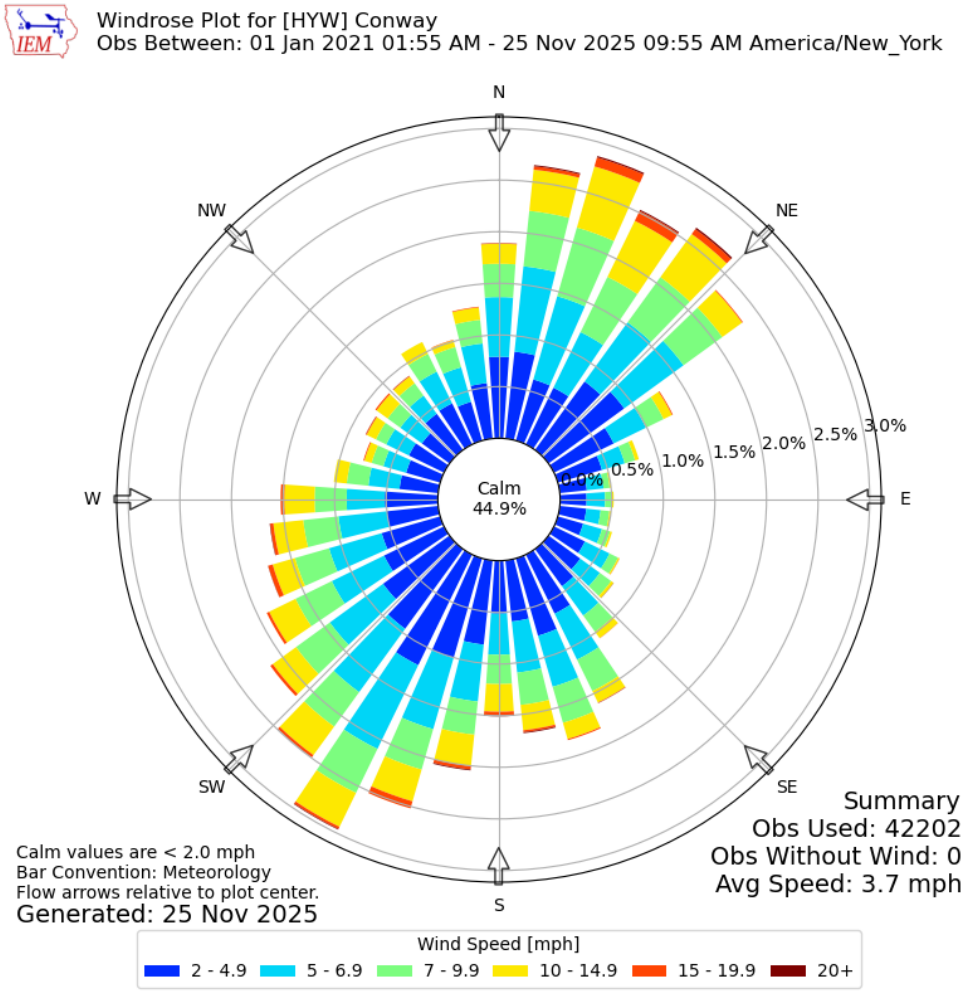
Figure 5 – Comparison of Conway-Horry County 2021-2025 Seasonal Wind Roses



The 2021-2025 annual wind rose from the Conway-Horry County Airport (HYW) weather station was examined. Figure 6 shows the annual wind rose. The most dominant wind direction throughout the year is from the south-southwest direction, with a secondary dominant wind direction coming from the north-northeast direction. The Conway-Horry County weather station is about 25 kilometers from the

coast.

Figure 6 – Conway-Horry County 2021-2025 Wind Rose



Topography and Land Use

Horry County is in the northeast corner of South Carolina, bordered to the north by North Carolina, to the east by the Atlantic Ocean, and to the west by Dillon, Marion and Georgetown Counties. It is the largest county by land area in the state, totaling 1,255 square miles. Horry County is in the low-lying Atlantic Coastal Plain, with over 30 miles of beachfront coastline. Horry County is located within the Pee Dee River Basin, which includes the Lumber, Little Pee Dee, Great Pee Dee, and Waccamaw Rivers, as well as the Intracoastal Waterway. Elevation remains fairly constant across the county, ranging from sea level to 124 feet.

The dominant land uses in Horry County are woody wetlands (42.28% of total land cover), cultivated crops (17.21% of total land cover), and evergreen forest (12.30% of

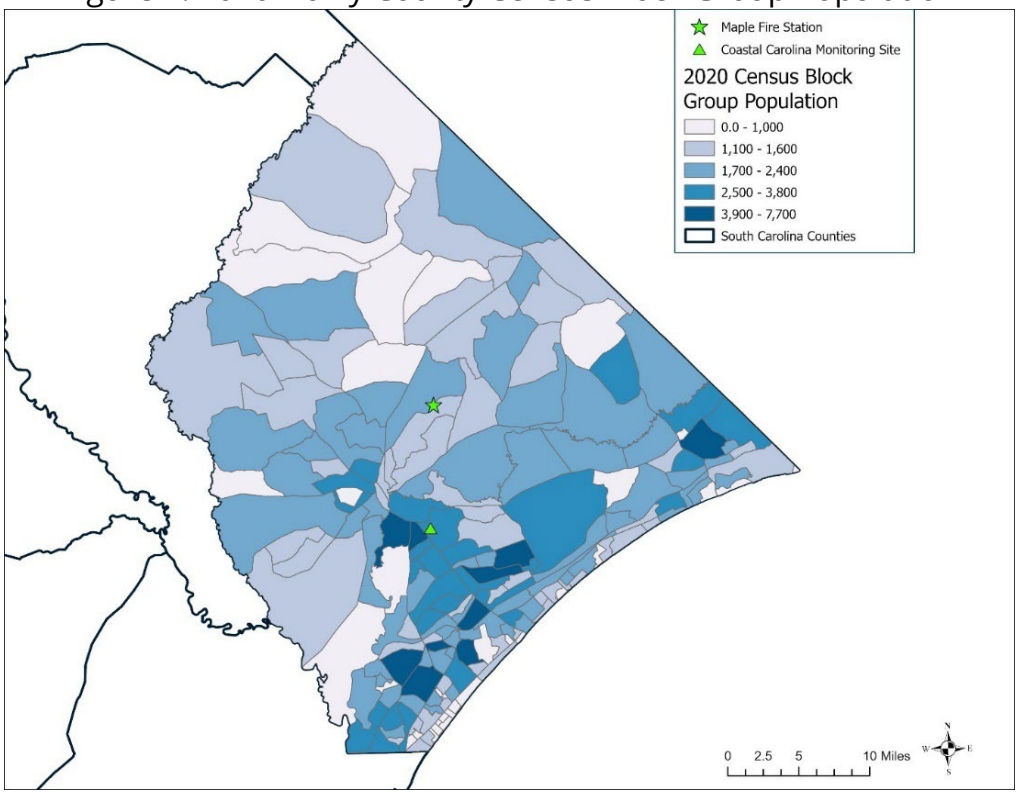
total land cover).[6] The airshed over such wetland and rural areas is typically less polluted and distinct from an airshed that resides in the vicinity of heavily populated and industrialized areas. There are few developed land use areas in the northern part of the county. The most developed areas are concentrated near U.S. Highway 501, which runs southeast through the towns of Galivants Ferry and Aynor toward Myrtle Beach and the areas along the Atlantic coast. Approximately 21% of the total land cover in the county is considered to be various stages of "developed" according to the 2024 National Land Cover Database.[6]

Population

Horry County has had considerable growth in the last fifteen years. According to the latest US Census Bureau data, the area grew 30.4 percent from 2010 through 2020, and has grown 17.8 percent from 2020 to 2024. The 2024 estimated population is 413,391 people. The Figure 7 indicates the heaviest population densities recorded in the 2020 census are located near the beach, and along the Highway 501 corridor up to the city of Conway. The coastal area is not a good choice for an ozone monitor because the daily sea breezes keep this area swept "clean" from pollutants (see discussion in the Meteorology section). The Coastal Carolina Monitoring Site is in a higher density census block near the city of Conway on the Coastal Carolina University Campus, and the proposed Maple Monitoring Site is located north of this site in a medium population density area.

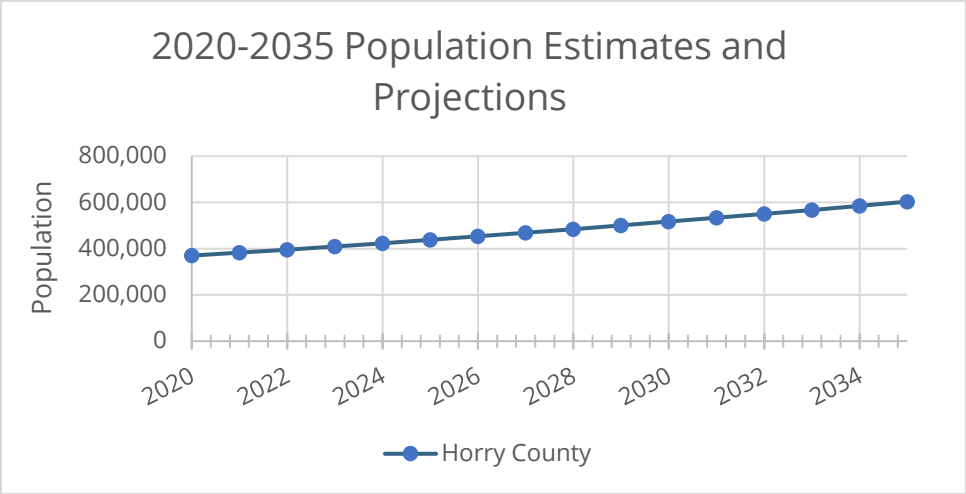
[6] U.S. Geological Survey (USGS), 2024, Annual NLCD Collection 1 Science Products (ver. 1.1, June 2025): U.S. Geological Survey data release, https://doi.org/10.5066/P94UXNTS.

Figure 7. 2020 Horry County Census Block Group Population



The graph in Figure 8 indicates that steady growth is expected in the next ten years.

Figure 8 – Myrtle Beach MSA - 2010-2035 Population Growth Estimate[7]



[7] Horry County Data: South Carolina Revenue and Fiscal Affairs Office-Data Integration and Analysis Division. *South Carolina population estimates from 2010-2019 and population projections from 2020-2035: Single-year age groups*. Prepared in 2025.

Emissions

Ozone is a secondary pollutant which forms through chemical reactions of nitrogen oxides (NO_x), volatile organic compounds (VOC), and sunlight. Common anthropogenic sources of NO_x and VOCs are automobiles and industrial activities. As of 2023, there are three Title V facilities which report emissions of NO_x and VOCs in the Myrtle Beach-Conway-North Myrtle Beach, SC MSA. Figure 9 shows the 2023 Title V VOC emissions in Horry County, and Figure 10 shows the 2023 Title V NO_x emissions in Horry County.

Figure 9- 2023 Title V VOC Emissions

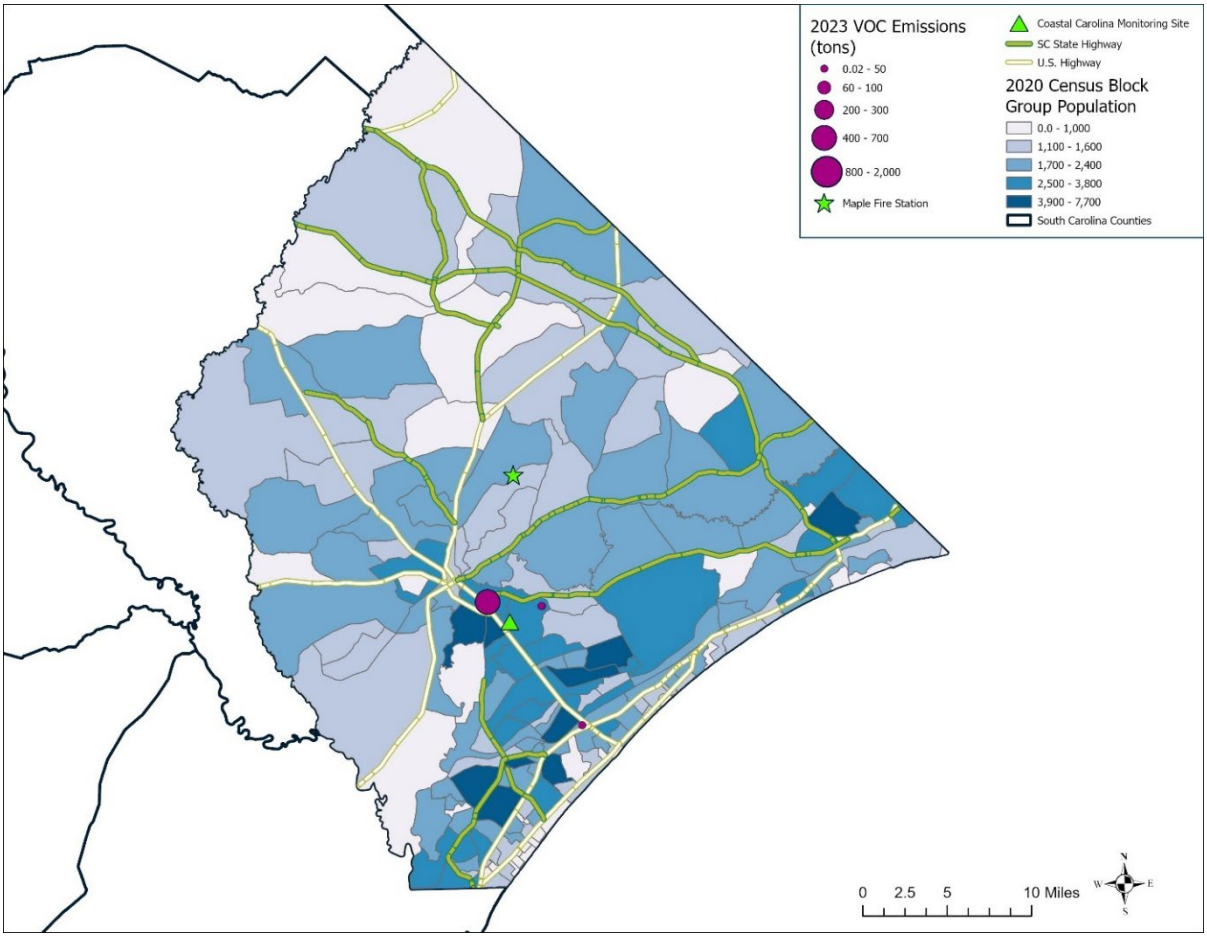
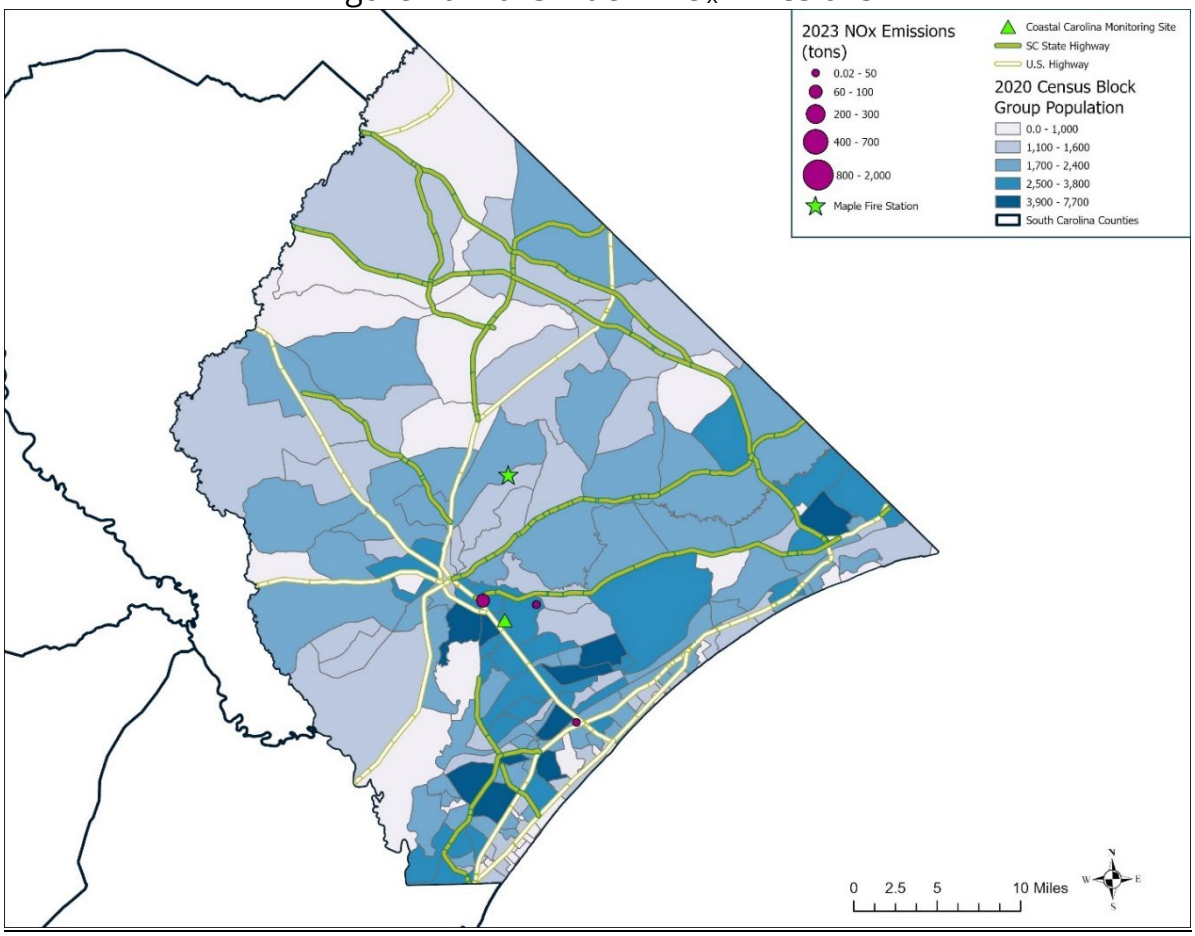


Figure 10- 2023 Title V NO_x Emissions

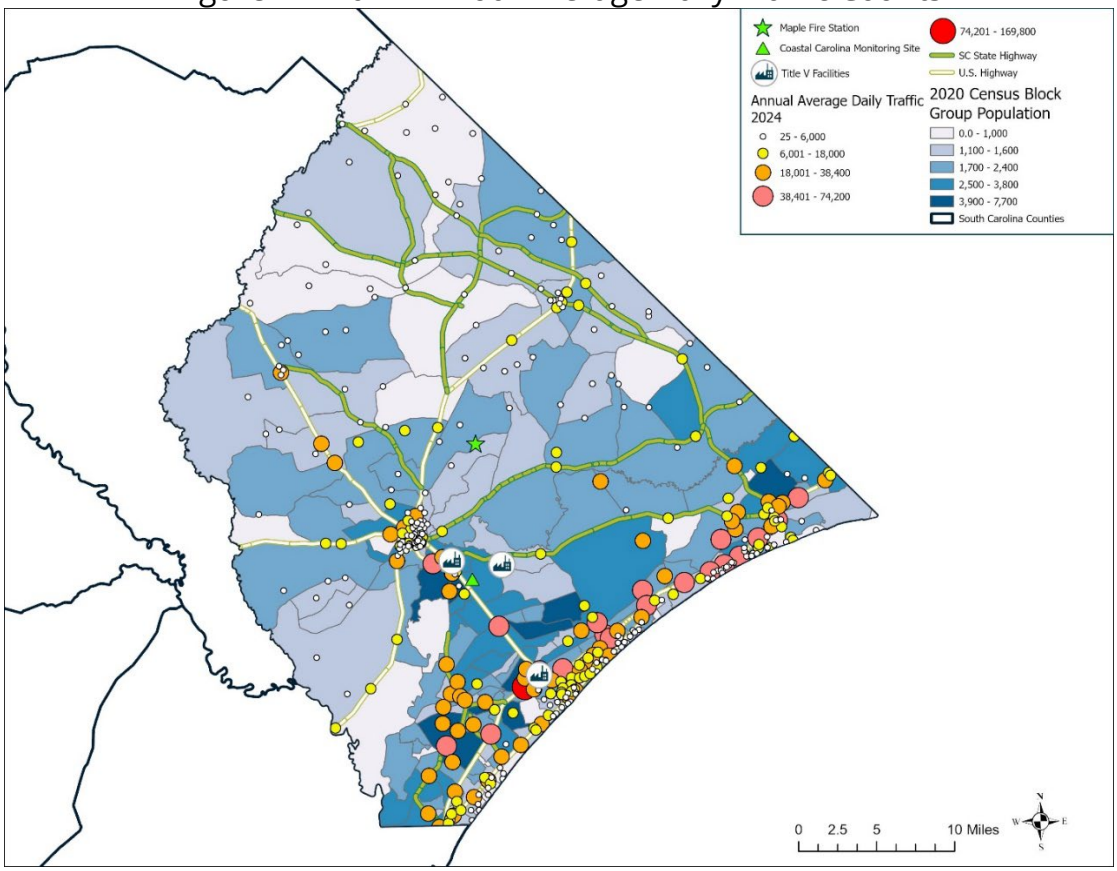


The majority of these emissions come from facilities in the Conway area, under 8 miles south-southwest of the proposed Maple monitoring site, while some additional emissions come from the south-southeast of Maple, between 8 and 15 miles away. During ozone season, the predominant wind direction comes from the south-southwest (Figure 2), and during the afternoon production hours of ozone season, the predominant wind direction comes from the south-southeast (Figure 4). According to the Guidelines on Ozone Monitoring Site Selection, maximum ozone concentrations typically occur 4 to 6 hours after maximum emissions under the condition of light winds (around 2 miles per hour), meaning that the Maple Fire Station is located ideally to detect maximum ozone concentrations 8-12 miles downwind of the stationary NO_x and VOC emissions sources in the MSA.

Traffic counts were also examined to determine the impact of mobile sources of NO_x and VOCs on the formation of ozone. Figure 11 shows the 2024 Annual Average Daily Traffic (AADT). Traffic counts are highest along the coast and along US Hwy 501. While traffic counts are highest along the coast, sea breezes sweep most of these emissions

inland while the coastal airmass gets replaced with cleaner air from offshore. Locating an ozone monitor at the Maple Fire Station will allow for detection of ozone formed downwind of mobile source emissions from the highest trafficked areas.

Figure 11- 2024 Annual Average Daily Traffic Counts



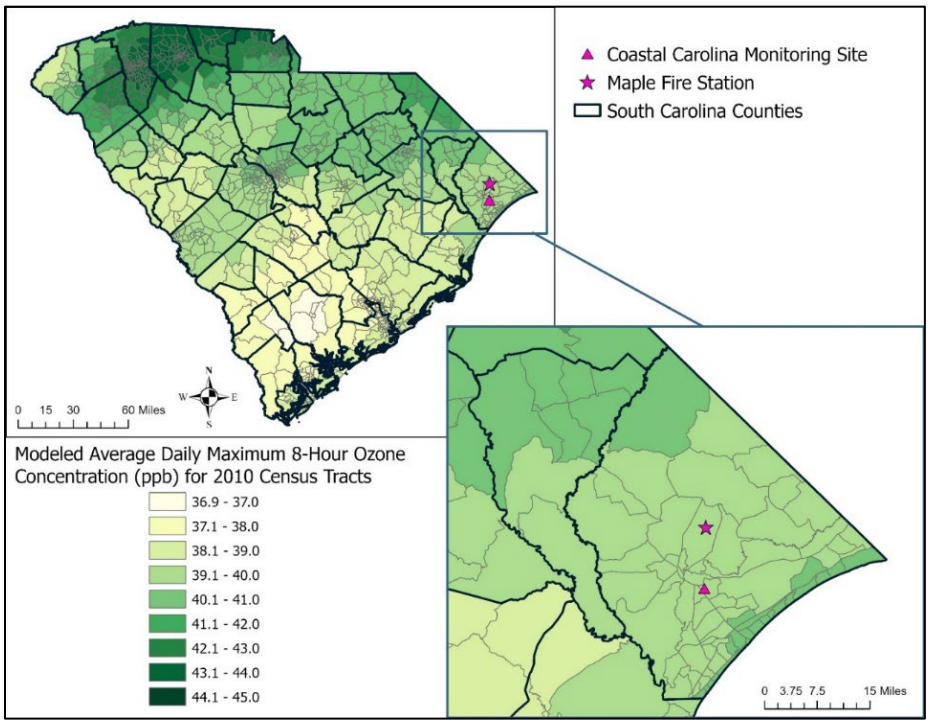
Air Quality Model Data

The Community Multiscale Air Quality Model (CMAQ) models air quality data across the United States. EPA generates Fused Air Quality Surfaces Using Downscaling (FAQSD) to "fuse daily ozone (8-hr max) and fine particulate air (24-hr average) monitoring data from the National Air Monitoring Stations/State and Local Air Monitoring Stations (NAMS/SLAMS) with 12 km gridded output from the Models-3/Community Multiscale Air Quality (CMAQ) model."[8] These downscaled files allow for modeled air quality data to be viewed at the census tract level.

[8] EPA Fused Air Quality Surface Using Downscaling Files. https://www.epa.gov/hesc/rsig-related-downloadable-data-files.Files used in graphics are 2022 8-Hour Ozone Outputs to 2010 Census Tracts.

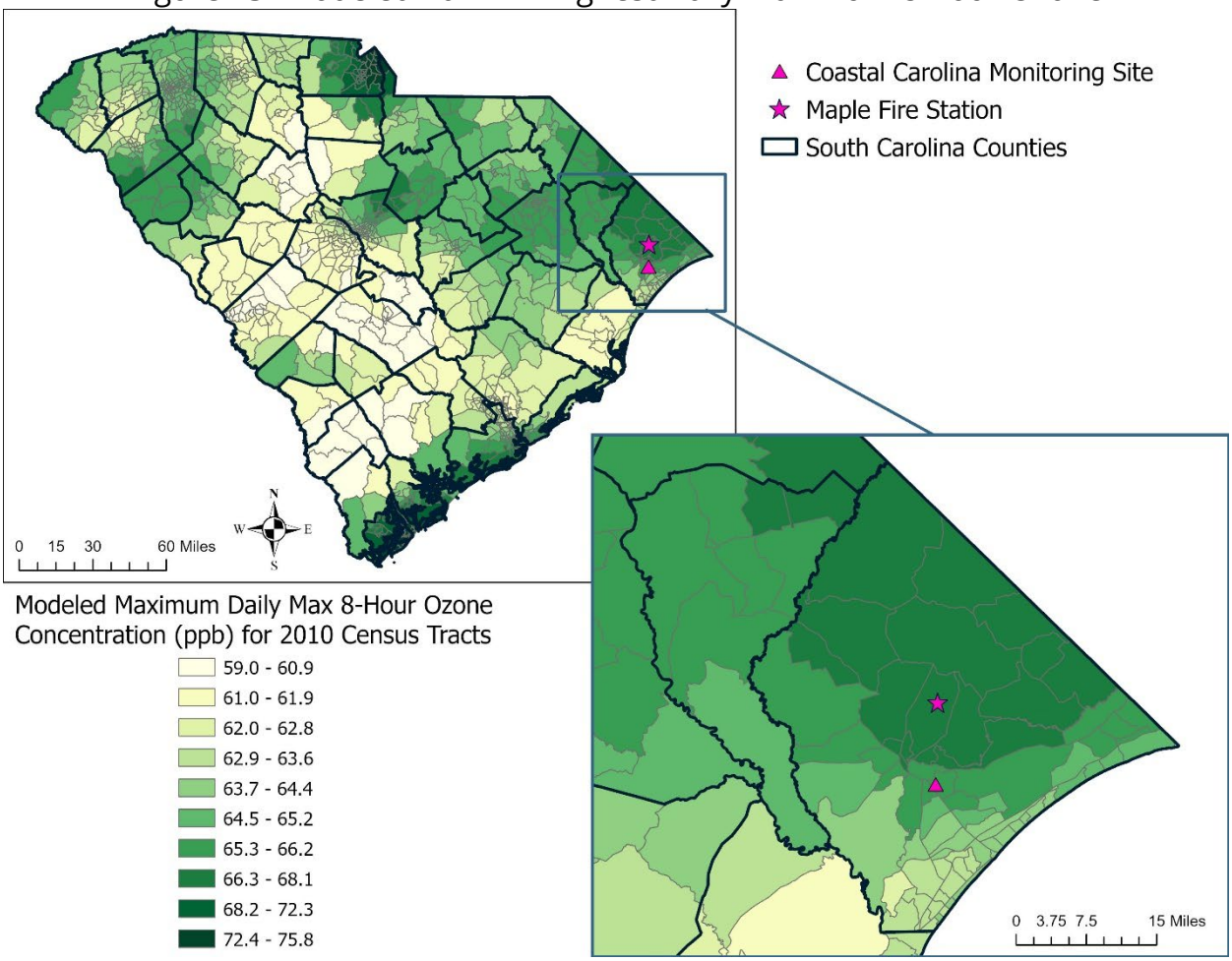
The Department used the 2022 8-Hour Ozone Outputs to 2010 Census Tracts FAQSD file to evaluate modeled ozone concentrations across the Myrtle Beach-Conway-North Myrtle Beach, SC MSA. 2022 model outputs were the most recent outputs available at the time of analysis. The model generates a maximum 8-hour ozone concentration for each day in 2022 for each census tract in the U.S. First, the Department averaged these modeled daily ozone concentrations for each day during ozone season (March 1 to October 31) to create one average ozone season daily maximum 8-hour concentration for each census tract in the MSA (Figure 12). The range of averages in the MSA is very small, between 39.42 ppb and 40.21 ppb. The highest ozone season averages are found along the coast and in the northernmost portion of Horry County, however these differ from the Maple census tract by only 0.3 ppb.

Figure 12- Average Modeled Daily Maximum 8-Hour Ozone Concentration During Ozone Season, 2022



Then, the Department found the 1st highest modeled daily maximum 8-hour ozone concentration in each census tract for the year. Figure 13 shows these maximum ozone concentrations. The MSA had 2022 highest modeled ozone concentrations that ranged from 62.63 ppb to 67.40 ppb. The highest maximum concentrations were in the central and northern portions of Horry County. The Maple census tract had a 2022 1st highest modeled value of 66.71 ppb.

Figure 13- Modeled 2022 1st Highest Daily Maximum 8-hour Ozone



Since the ozone NAAQS standard is based on the annual 4th highest daily maximum 8-hour ozone concentration, and the Maple Monitoring site will have an objective of Maximum Concentration, the 1st highest modeled data was deemed more appropriate for showcasing adequate site location possibilities. The 2022 1st highs show that the Maple Fire Station is in an ideal location for recording maximum ozone concentrations in the MSA.

Conclusion

Meteorology, topography and land use, population and population density, growth patterns, emissions from Title V facilities and traffic, and downscaled model data were examined to determine the best placement for the MSA's second required ozone monitor. Land use, population densities, and growth patterns show that the Conway or Myrtle Beach areas were the best selections. When the meteorology is examined, the coastal areas were deemed less appropriate because of the highly

dispersive wind speeds along the immediate coast. The Maple Fire Station is at an inland location which would be sheltered from winds that may hinder ozone formation. Additionally, the largest NO_x and VOC emitting facilities are located in the Conway area. The Maple Fire Station is downwind of these facilities during ozone season. Maple Fire Station is also downwind of the highest trafficked areas in the MSA during the afternoon hours in ozone season, which are the most conducive to formation. As a result, the Maple Street Fire Station location should best capture an area of maximum ozone concentrations within the MSA.

Proposed Maple Air Monitoring Site Specifications

The Department requests concurrence to establish the Maple Monitoring Site (45-051-0009). The Maple Monitoring Site is located on the grounds of Horry County Fire Rescue Station 21 (Maple Fire Station) off of Highway 65 in Conway, SC., approximately 8.6 miles from the Coastal Carolina Monitoring Site. The site will monitor for ozone with an objective of maximum concentration at the urban scale in the Myrtle Beach-Conway-North Myrtle Beach, SC MSA. The designation of the monitor will be SLAMS, This monitor will meet all siting requirements of 40 CFR Part 58 Appendices A, C, D, and E.

Figure 14- Aerial Map of the Maple Monitoring Site (45-051-0009)



Details of the Maple Monitoring Site (45-051-0009) are given in Table 1 below.

Table 1-Maple Monitoring Site Details

Name	Maple
Site ID	45-051-0009
Address	5443 Hwy 65, Conway, SC 29526
County	Horry
Name of MSA	Myrtle Beach-Conway-North Myrtle Beach, SC MSA
Name of CSA	Myrtle Beach-Conway, SC CSA
Approximate Coordinates	33.925, -78.987
Distance to Nearest Active Ozone Monitor	8.6 miles
Parameter	Ozone
Scale	Urban
Objective	Maximum Concentration
Designation	SLAMS
Probe Height	~4.0 meters (to be determined)
Analysis and Method Code	Ultraviolet Absorption (087)
Sampling Frequency	Continuous
Distance to Road	~55 meters
Distance to Dripline	~80 meters
Distance to Nearest Obstruction	~80 meters away, ~27 meters tall

The following photos show the proposed Maple Monitoring Site, as well as any potential obstructions.

Table 2- Maple Site Photos

Overall Site Picture


Facing North



Facing East



Facing South



Facing West



Potential obstructions at the site include a line of pine trees to the west of the site. With a probe height of approximately 4 meters, the fire station building near the site will not be an obstruction. The row of pine trees is approximately 84 meters away, with the tallest tree measuring approximately 26 meters tall.

Table 3- Measurements of Possible Obstructions
(all measurements in meters)

Possible Obstruction	**Obstacle Compass Direction**	**Obstacle Distance (OD)**	**Obstacle Height (OH)**	**Probe Inlet Height (IH)**	**[2*(OH-IH)]**	**Is OD ≥ [2*(OH-IH)] true?**
Pine Tree	315°	84.3	26.3	~4 (TBD)	44.6	Yes
Fire Station Building	150°	22.1	5.6	~4 (TBD)	3.2	Yes

T.K. Gregg Monitoring Site New Ozone Monitor

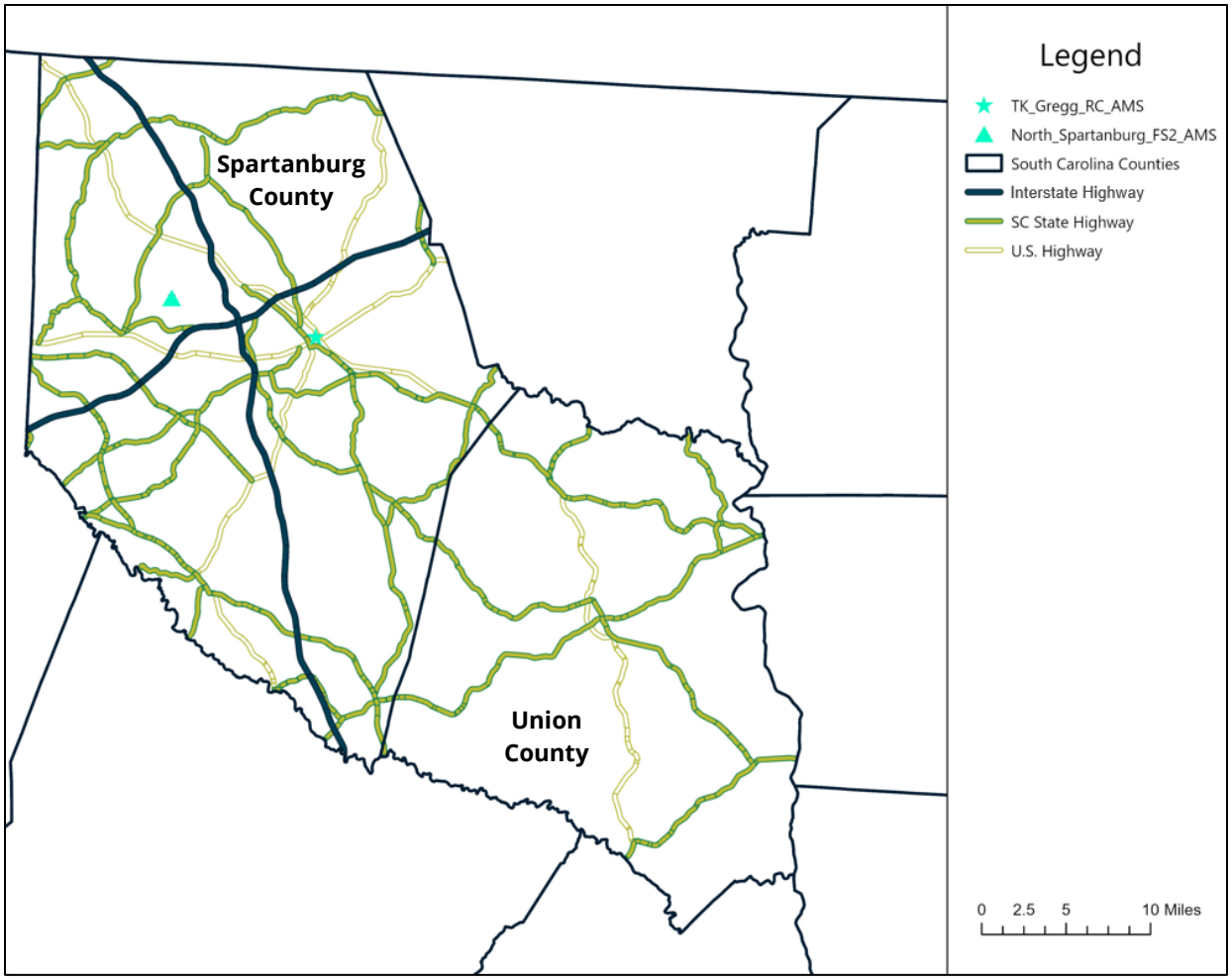
History of the Ozone Monitoring Network in the Spartanburg, SC MSA

The Spartanburg, SC MSA is in the northwestern portion of the state and currently consists of Spartanburg County and Union County. The Spartanburg Standard Metropolitan Statistical Area (SMSA) was founded in 1971 and consisted of only Spartanburg County but was quickly merged with the Greenville area to create the Greenville-Spartanburg, SC SMSA in 1973. In 1992, the area was renamed the Greenville-Spartanburg-Anderson, SC MSA, and in 2003 Spartanburg County was split from Greenville metropolitan area to create a standalone MSA named the Spartanburg, SC MSA.

At the time of the creation of the Spartanburg, SC MSA, an ozone monitor was already operating in Spartanburg County at the North Spartanburg Fire Station #2 Monitoring Site (45-083-0009); this monitor is still active. There was an additional ozone monitor (Delta, 45-087-0001) located in Union County from 1983 until 2007, however during its operation Union County was not a part of the Spartanburg, SC MSA. Union County was added to the Spartanburg, SC MSA in 2013, then removed from the MSA in September of 2018. In July 2023, the Office of Budget and Management added Union County back into the MSA, increasing the population of the MSA from 345,948 in 2022 to 383,437 in 2023 and triggering requirements for a second ozone monitor.

The Department has been working to find a suitable location for the second required ozone monitor within the Spartanburg, SC MSA. To determine an acceptable location, topography and land use, meteorology, population and population density, emissions from Title V facilities, traffic, and modeled ozone concentrations were considered. As a result of these analyses, the Department proposes the establishment of the required second ozone monitor at the T.K. Gregg Recreation Center Monitoring Site (45-083-0011). The locations of the current and proposed ozone monitors in the Spartanburg, SC MSA are shown in Figure 1. The T.K. Gregg Monitoring Site (45-083-0011) is approximately 8.9 miles from the North Spartanburg Fire Station #2 (45-083-0009) ozone monitor.

Figure 1. Spartanburg, SC MSA Ozone Monitors; Active and Proposed



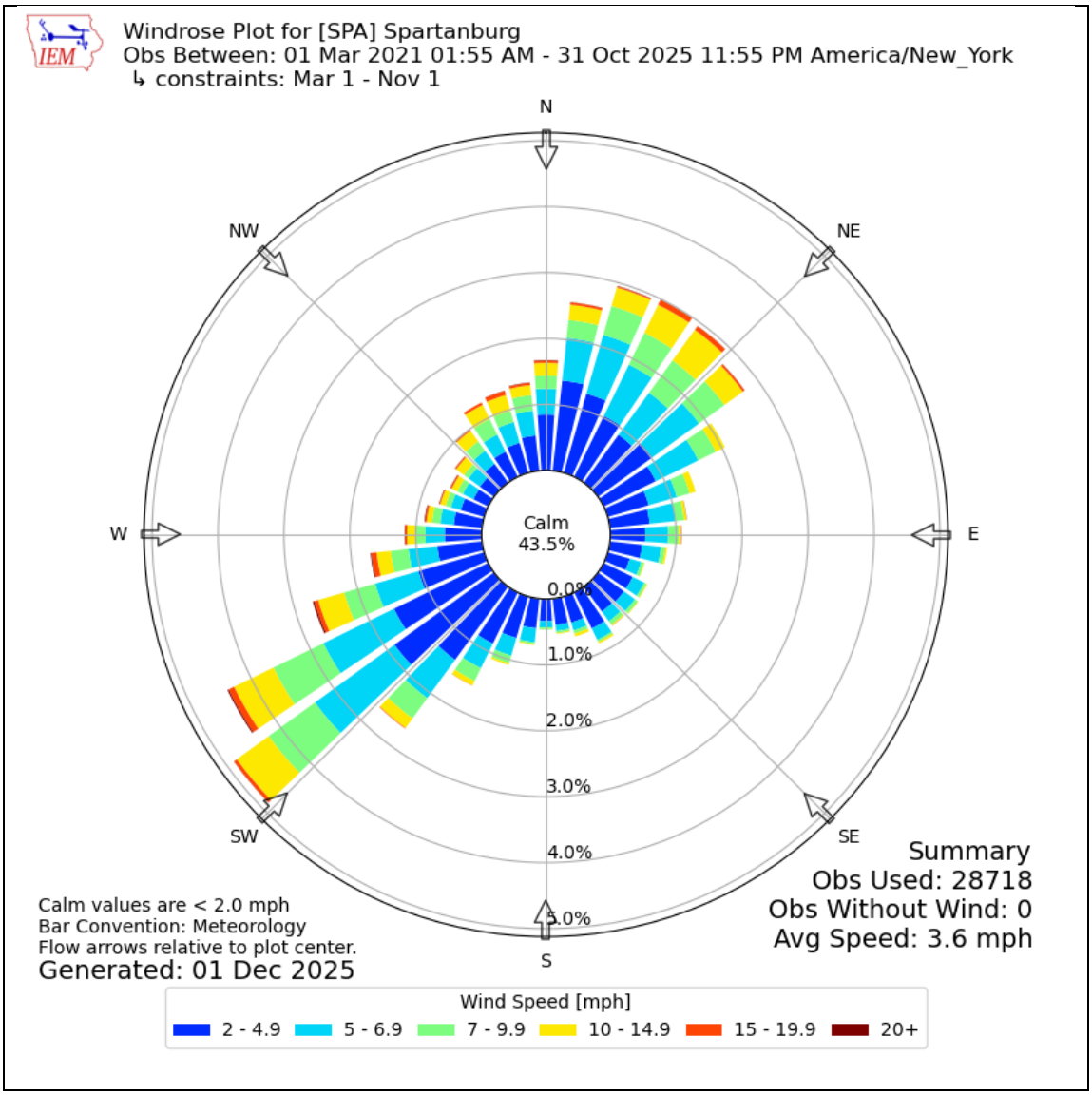
Meteorology

A meteorological analysis for the Spartanburg area in Spartanburg County, South Carolina was conducted to show how that area is a representative location for the new ozone monitor. Temperature, precipitation, wind speed, and direction from the Spartanburg Downtown Memorial Airport (SPA) station was examined.

Mean monthly average temperatures ranged from lows in the 40s in January to highs around 80 in July. Daily precipitation totals can vary significantly over short time frames in the spring/summer months due to the convective nature of rainfall. The months with the most precipitation occur during December/January in the winter, March/April in the spring, and June/August in the summer (averaging 4-5 inches per month); and the least precipitation occur during the remaining months (averaging 3-4 inches per month).

The 2021-2025 ozone season wind rose (Figure 5) from the Spartanburg Downtown Memorial Airport (SPA) weather station was examined. The most dominant wind direction throughout the season is from the southwest direction, with a secondary dominant wind direction coming from the north-northeast direction.

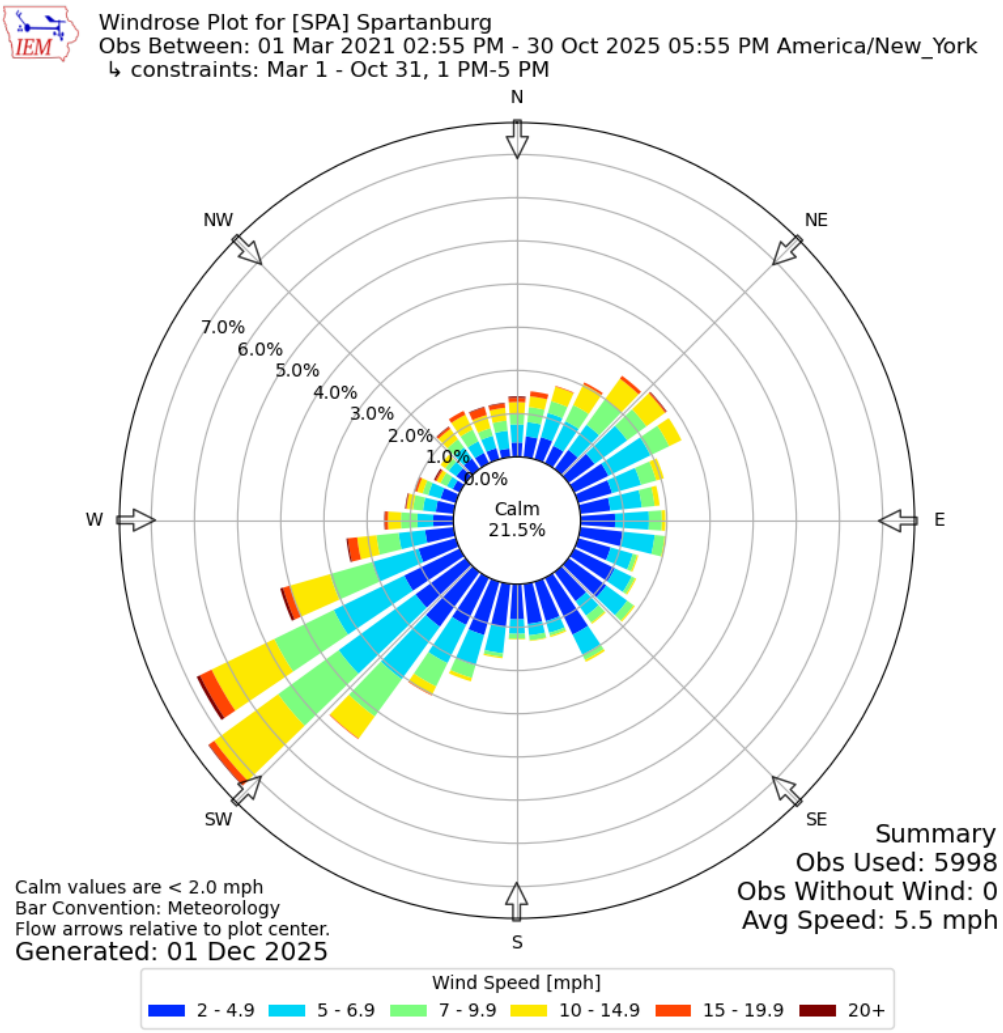
Figure 5 - 2021-2025 Spartanburg County O_3 Season Wind Rose



The Spartanburg County weather station during peak production hours (1 PM through 5 PM) averaged 5.5 mph and contained a significantly lower percentage of calm winds. The difference in average wind speed supports the concept that peak production hours tend to experience more windy conditions and mixing in the afternoon. The Bermuda High is a summertime feature that sets up in the Atlantic

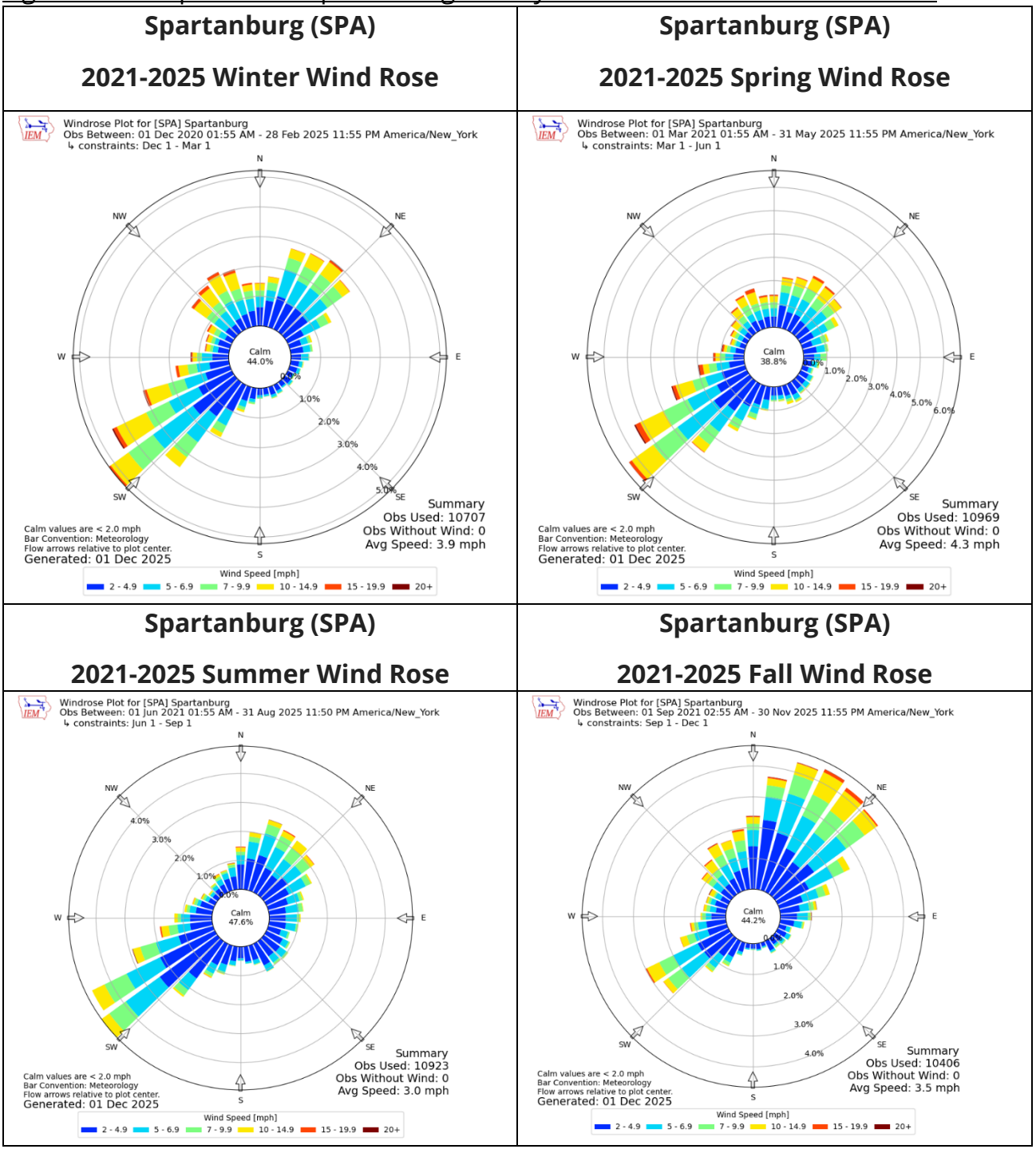
Ocean and oscillates east and west off the southeastern United States coastline. The Bermuda High is evident by the southeasterly dominant wind directions during this period in Figure 6 below.

Figure 6 – Spartanburg County 2021-2025 O_3 Season, Peak Production Hours Wind Roses



In the Spartanburg County wind roses by season (as shown in Figure 6 below), it is noted that winds from the southwest direction are dominant in the winter, spring, and summer months, and winds from the north-northeast directions are dominant in the fall months.

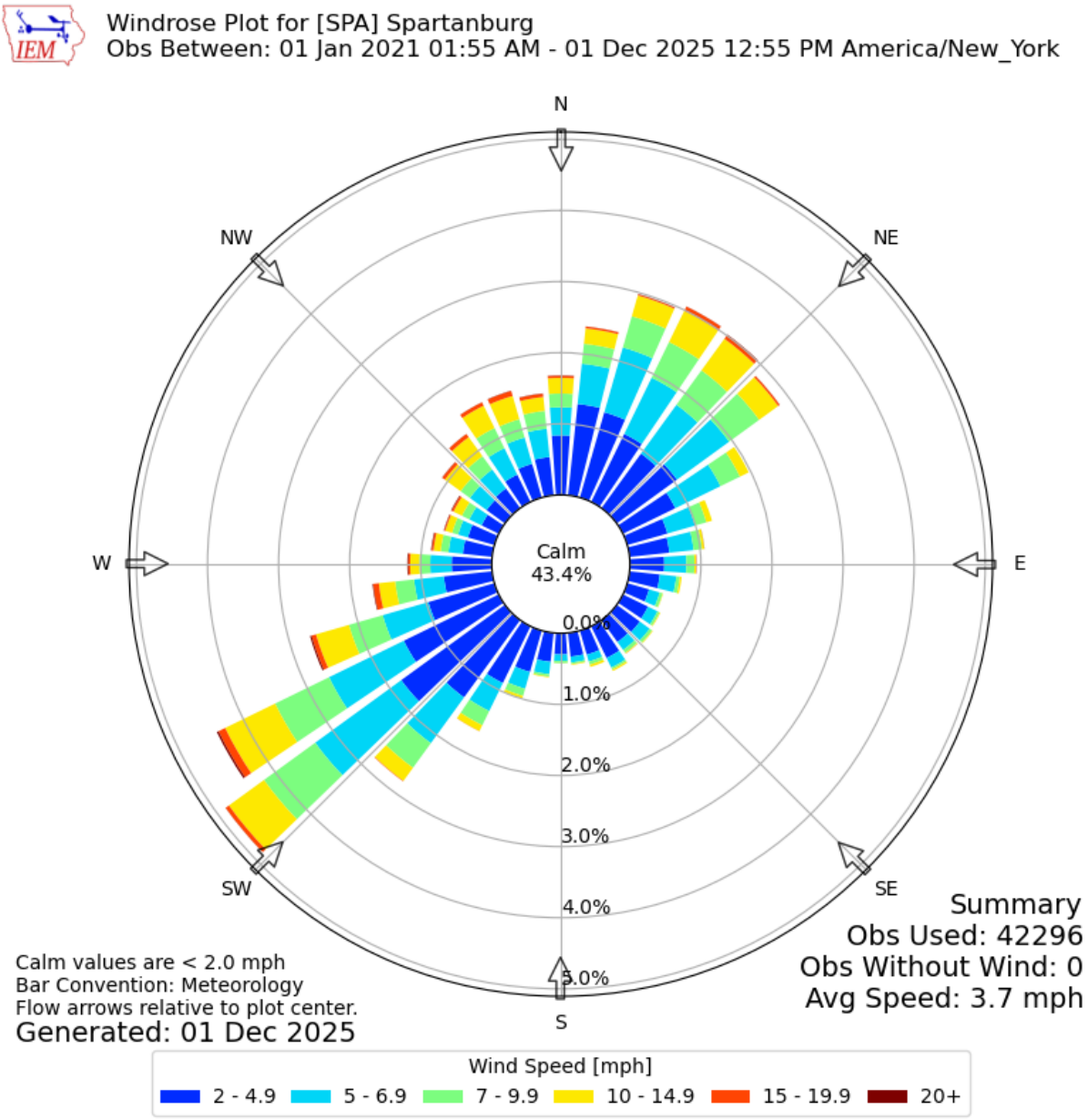
Figure 6 – Comparison of Spartanburg County 2021-2025 Seasonal Wind Roses



The 2021-2025 annual wind rose from the Spartanburg County Airport (SPA) weather station was examined. Figure 7 shows the annual wind rose. The most dominant wind direction throughout the year is from the southwest direction, with a secondary dominant wind direction coming from the north-northeast direction. The

Spartanburg County weather station is about 320 kilometers from the coast and is about 25 kilometers southeast of the Appalachian Mountains foothills.

Figure 7 – Spartanburg County 2021-2025 Wind Rose



Topography and Land Use

The Spartanburg, SC MSA is in the upstate of South Carolina, bordered to the north by North Carolina, to the east by Cherokee County and the South Carolina portion of the Charlotte-Concord-Gastonia, NC-SC, MSA, and to the west and south by the Greenville-Anderson-Greer, SC MSA. The MSA is in the Piedmont region, defined by

hilly landscapes as the terrain transitions from the sandhills to the foothills of the Blue Ridge mountains. Elevation exceeds 1,000 feet in the northwest portion of Spartanburg County, and follows a general slope down towards the southeast, dropping below 250 feet in the southeast portions of Union County. The Spartanburg, SC MSA is located within the Broad River Basin, which is formed by major tributaries of the Pacolet, Tyger, and Enoree Rivers. The Enoree River forms the southern border of both Spartanburg and Union Counties.

Spartanburg County is more urban than Union County and has more developed land area. According to the 2024 National Land Cover Database 29% of the total land area in Spartanburg County is considered developed open space, or developed low, medium, or high intensity area, compared to only 7% of Union County. [6] After any level intensity developed space, the next dominant land uses in Spartanburg County are deciduous forest (24.71% of total land cover) and pasture/hay (22.28% of total land cover).Union County's dominant land uses include evergreen forest (34.48% of total land cover) and deciduous forest (21.25% of total land cover).[9] The airshed over such rural, forested areas is typically less polluted and distinct from an airshed that resides in the vicinity of heavily populated and industrialized areas. The most developed areas are concentrated near the city of Spartanburg and along the I-85 corridor between Spartanburg and Greenville, SC. Land use indicated that higher ozone concentrations may be found in the more developed areas of Spartanburg County compared to Union County.

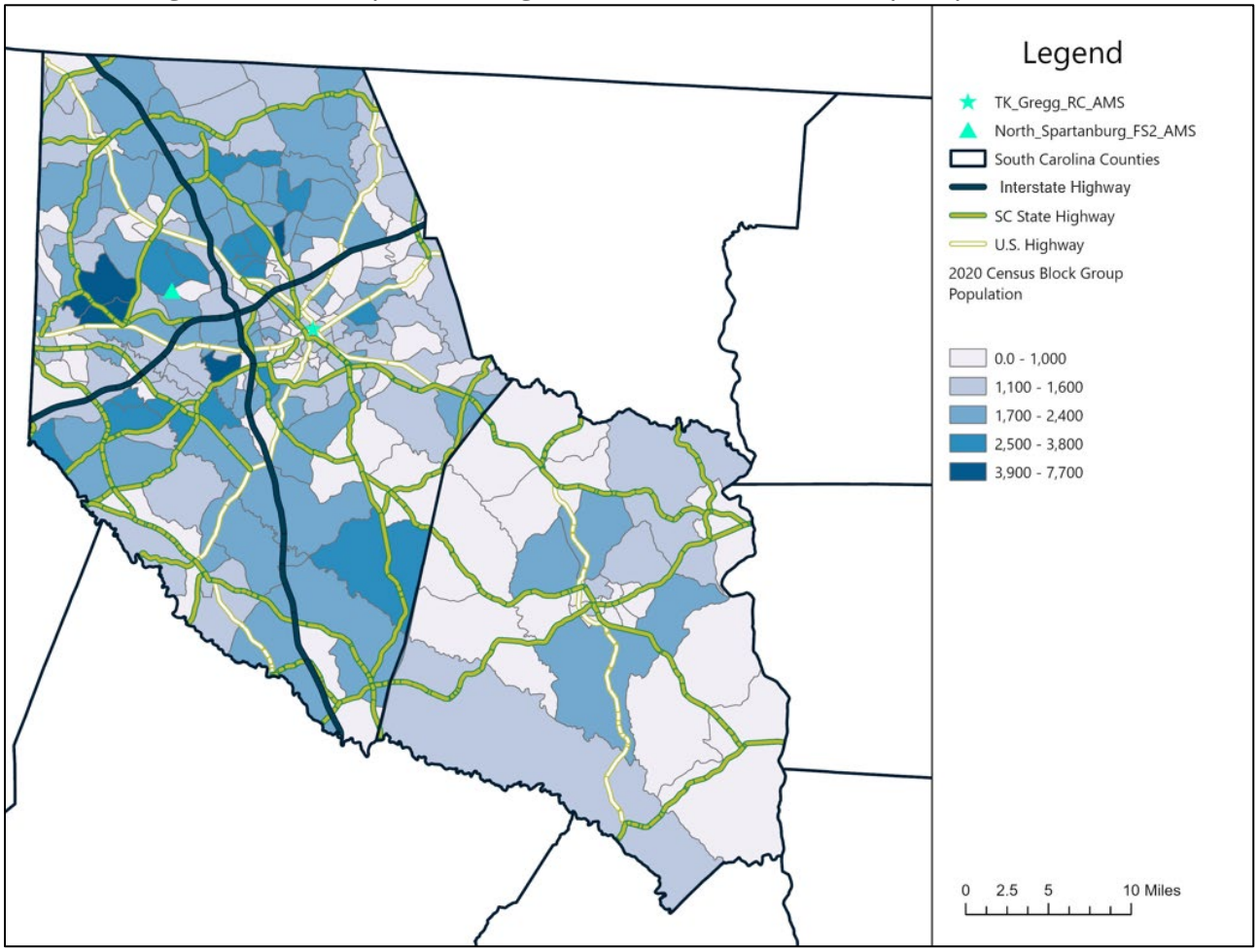
Population

The Spartanburg, SC MSA has had considerable growth in the last fifteen years. Spartanburg County has increased in population, while Union County has decreased. According to the latest US Census Bureau data, the Spartanburg, SC MSA grew 14.74% from 2010 through 2020 and has grown 11.03% percent from 2020 to 2024. The 2024 estimated population is 395,934 people. The Figure 7 indicates the heaviest population densities recorded in the 2020 census are in Spartanburg County, specifically between the downtown Spartanburg area and the western edge of the county. Dense populations also occur throughout the norther portion of Spartanburg County, and to the south along the I-26 corridor. The current North Spartanburg Fire Station Monitoring Site (48-083-0009) ozone monitor is in a higher density area of Spartanburg County located north of I-85 and west of I-26, and the T.K. Gregg Monitoring Site (45-083-0011) is located downtown in the city of Spartanburg in a

[9] U.S. Geological Survey (USGS), 2024, Annual NLCD Collection 1 Science Products (ver. 1.1, June 2025): U.S. Geological Survey data release, https://doi.org/10.5066/P94UXNTS.

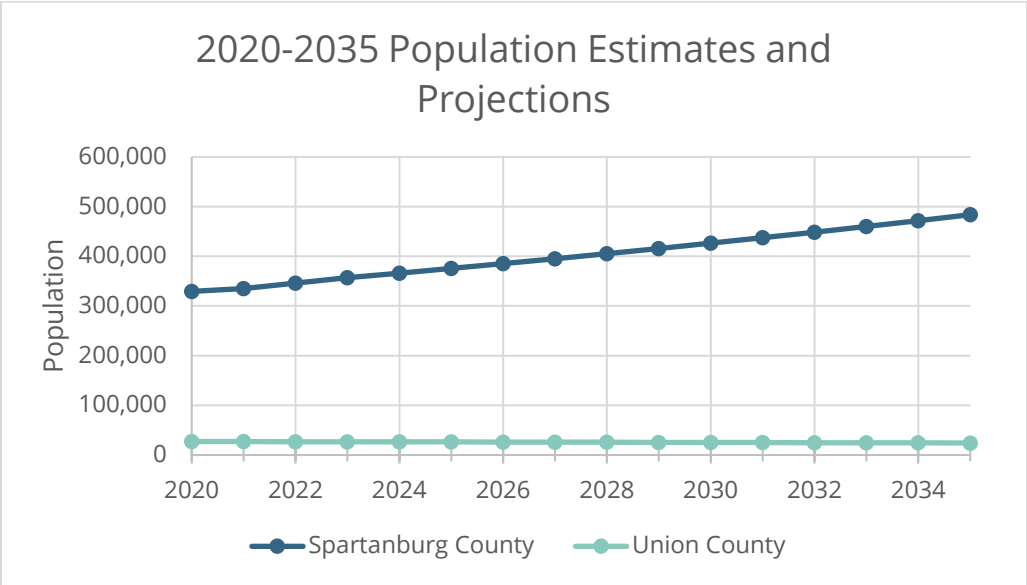
lighter population density area.

Figure 7. 2020 Spartanburg MSA Census Block Group Population



The graph in Figure 8 indicates that steady growth is expected overall in the MSA in the next ten years.

Figure 8 – Spartanburg MSA - 2020-2035 Population Growth Estimate[10]



Emissions

Ozone is a secondary pollutant which forms through chemical reactions of nitrogen oxides (NO_x), volatile organic compounds (VOC), and sunlight. Common anthropogenic sources of NO_x and VOCs are automobiles and industrial activities. There are many Title V facilities which report emissions of NO_x and VOCs in the Spartanburg, SC MSA. Figure 9 shows the 2023 Title V VOC emissions in the MSA, and Figure 10 shows the 2023 Title V NO_x emissions in the MSA.

[10] Spartanburg MSA Population Data: South Carolina Revenue and Fiscal Affairs Office-Data Integration and Analysis Division. *South Carolina Vintage 2023 Population Projections*. Prepared in 2025.

Figure 9- 2023 Title V VOC Emissions

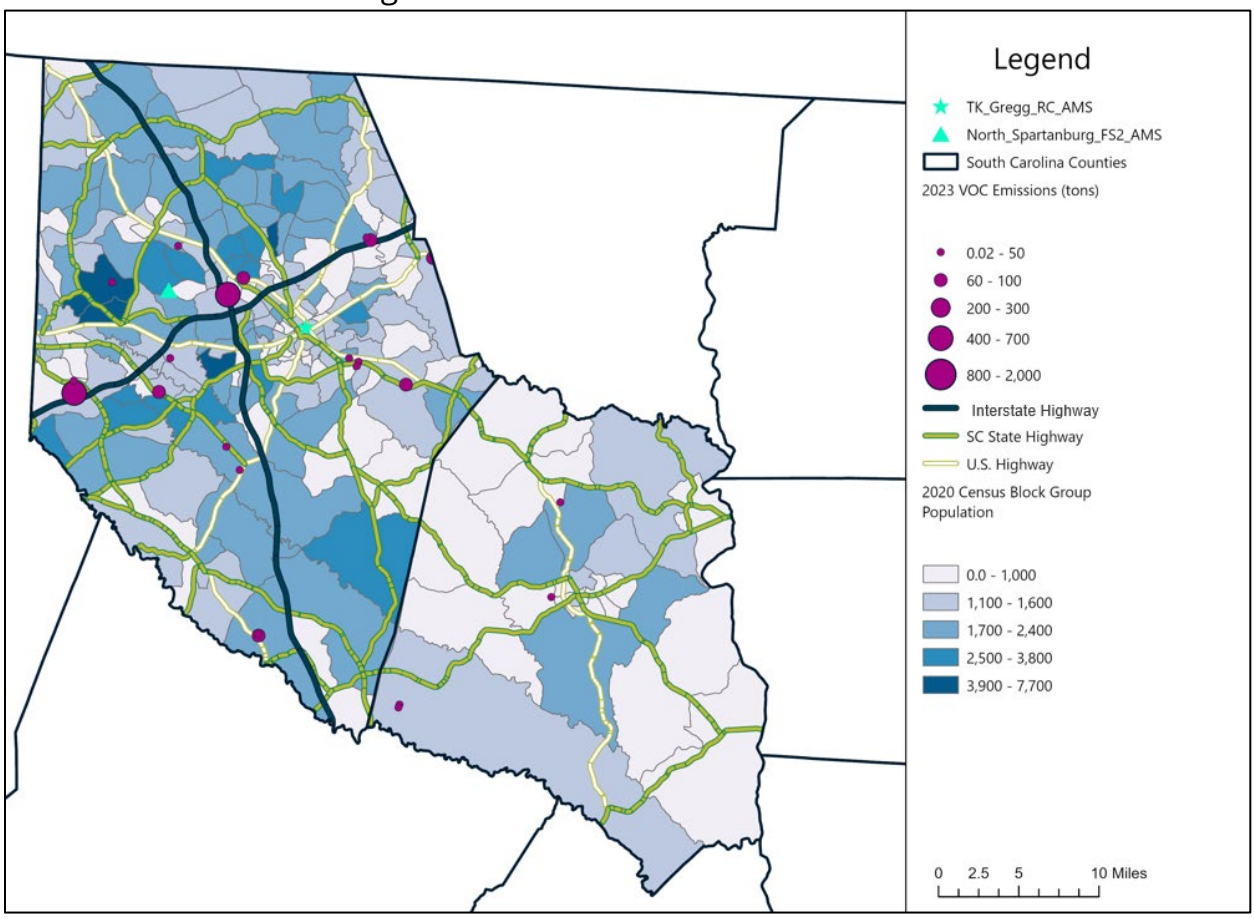
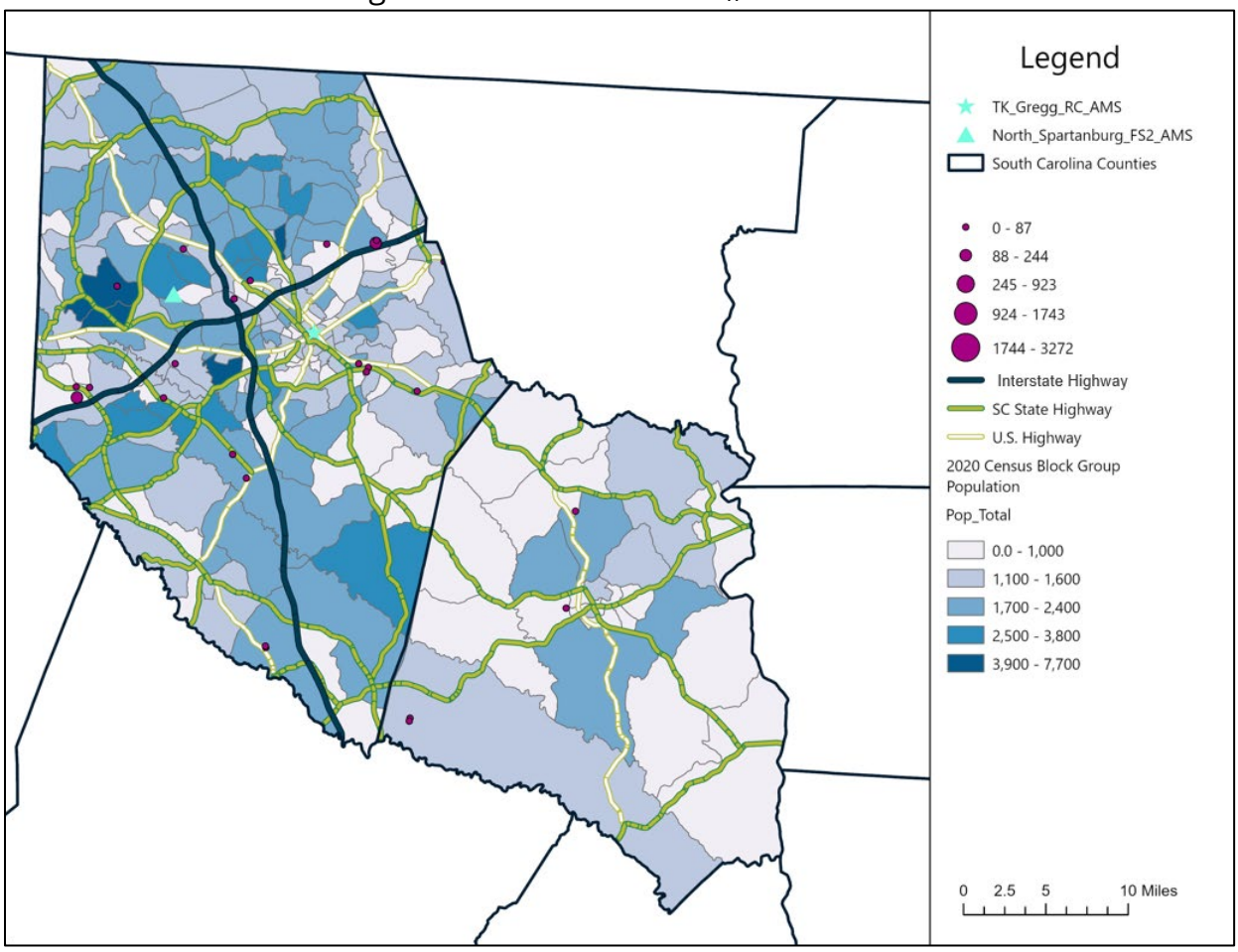


Figure 10- 2023 Title V NO_x Emissions

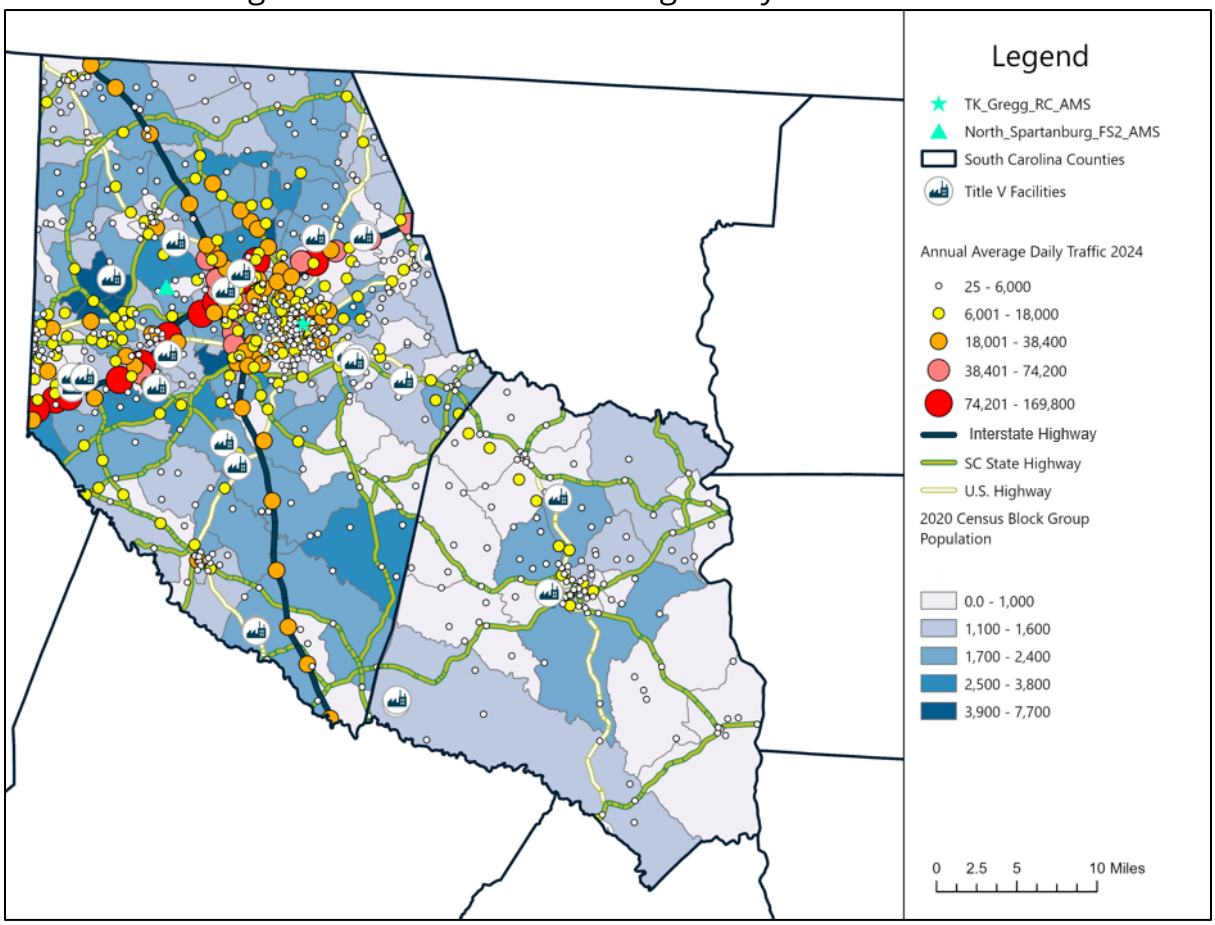


The majority of these emissions come from facilities in Spartanburg County and along I-85. During ozone season, the predominant wind direction comes from the southwest (Figure 2) and the secondary predominant wind direction comes from the north-northeast. During the afternoon production hours of ozone season, the predominant wind comes from the southwest (Figure 4). According to the Guidelines on Ozone Monitoring Site Selection, maximum ozone concentrations typically occur 4 to 6 hours after maximum emissions under the condition of light winds (around 2 miles per hour), meaning that the T.K. Gregg Monitoring Site is located ideally to detect maximum ozone concentrations 8-12 miles downwind of the stationary NO_x and VOC emissions sources in the MSA.

Traffic counts were also examined to determine the impact of mobile sources of NO_x and VOCs on the formation of ozone. Figure 11 shows the 2024 Annual Average Daily Traffic (AADT). Traffic counts are highest along I-85 and I-26 and at their intersection, while downtown Spartanburg shows a high concentration of lower AADT roads.

Locating an ozone monitor at the T.K. Gregg Monitoring Site (45-083-0011) will allow for detection of ozone formed downwind of mobile source emissions from the highest trafficked areas along the western portion of the I-85 corridor. During secondary wind flow patterns, T.K. Gregg will be downwind of high trafficked areas along the eastern portion of I-85.

Figure 11- 2024 Annual Average Daily Traffic Counts



Air Quality Model Data

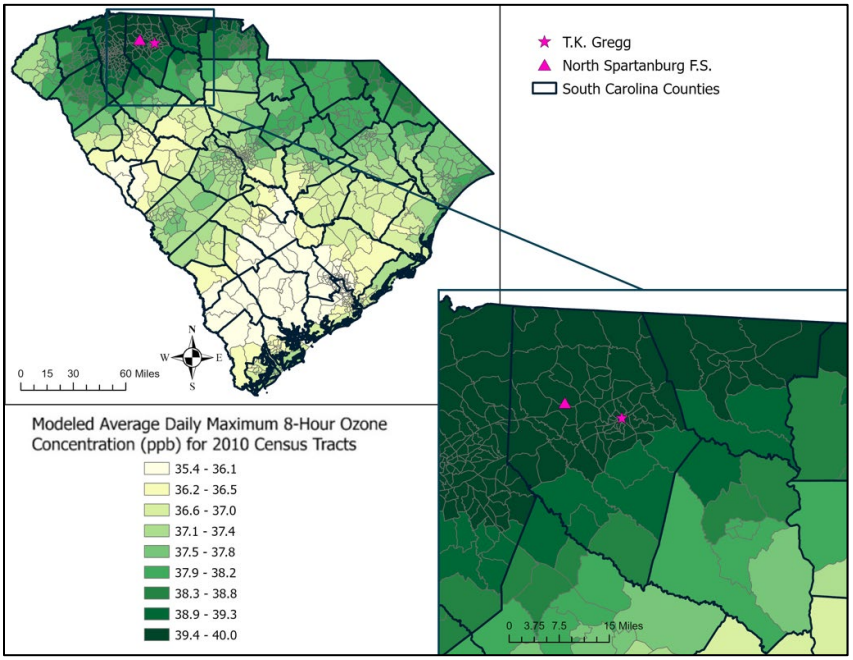
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[11] EPA Fused Air Quality Surface Using Downscaling Files. https://www.epa.gov/hesc/rsig-related-downloadable-data-files.Files used in graphics are 2022 8-Hour Ozone Outputs to 2010 Census Tracts.

for modeled air quality data to be viewed at the census tract level.

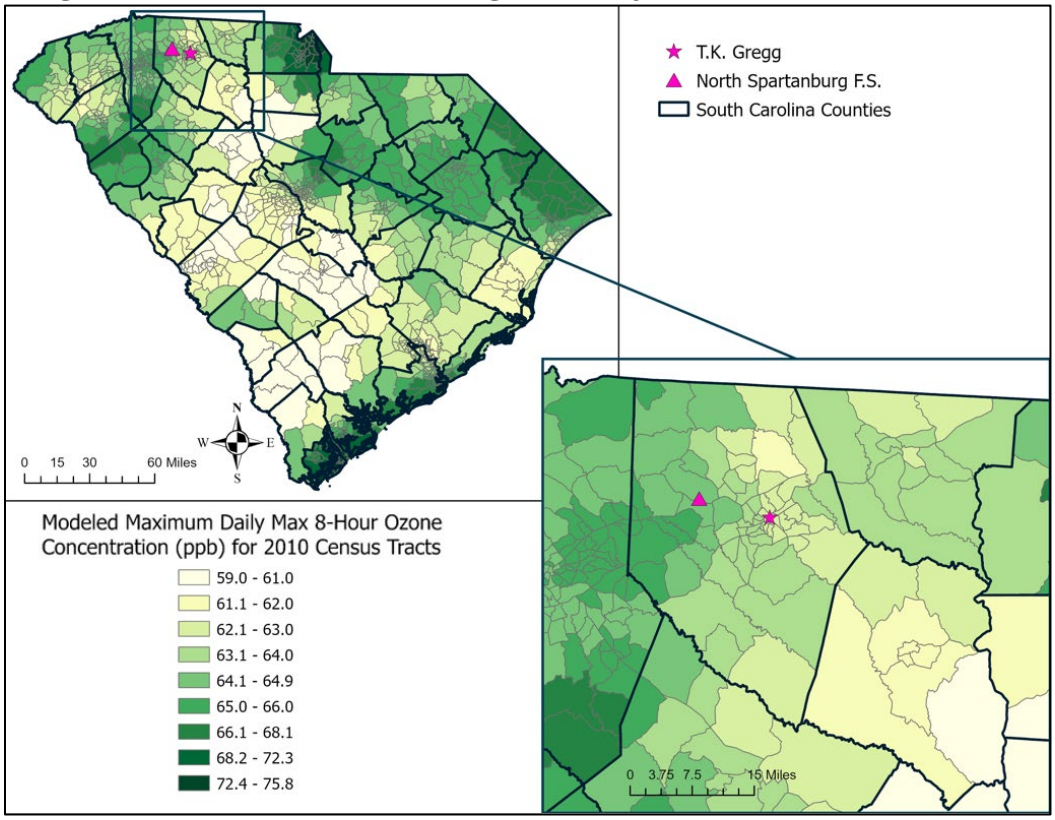
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Figure 12- Average Modeled Daily Maximum 8-Hour Ozone Concentration During Ozone Season, 2022



Then, the Department found the 1st highest modeled daily maximum 8-hour ozone concentration in each census tract for the year. Figure 13 shows these maximum ozone concentrations. The MSA had 2022 highest modeled ozone concentrations that ranged from 60.44 ppb to 65.33 ppb. The highest maximum concentrations were in the central and western portions of Spartanburg County. The T.K. Gregg census tract had a 2022 1st highest modeled value of 62.85 ppb.

Figure 13- Modeled 2022 1st Highest Daily Maximum 8-hour Ozone



The North Spartanburg Fire Station Monitoring Site is located near the highest area of 2022 modeled maximum concentrations in the state. T.K. Gregg, while not located in the pocket of maximum modeled emissions, is situated ideally to pick up ozone formed by both facility and traffic emissions. This is shown in Figure 12, as the average modeled emissions for ozone season were among the highest in the MSA directly surrounding the T.K. Gregg Monitoring Site. On average, T.K. Gregg ozone concentrations should be among the highest in the state during ozone season.

Conclusion

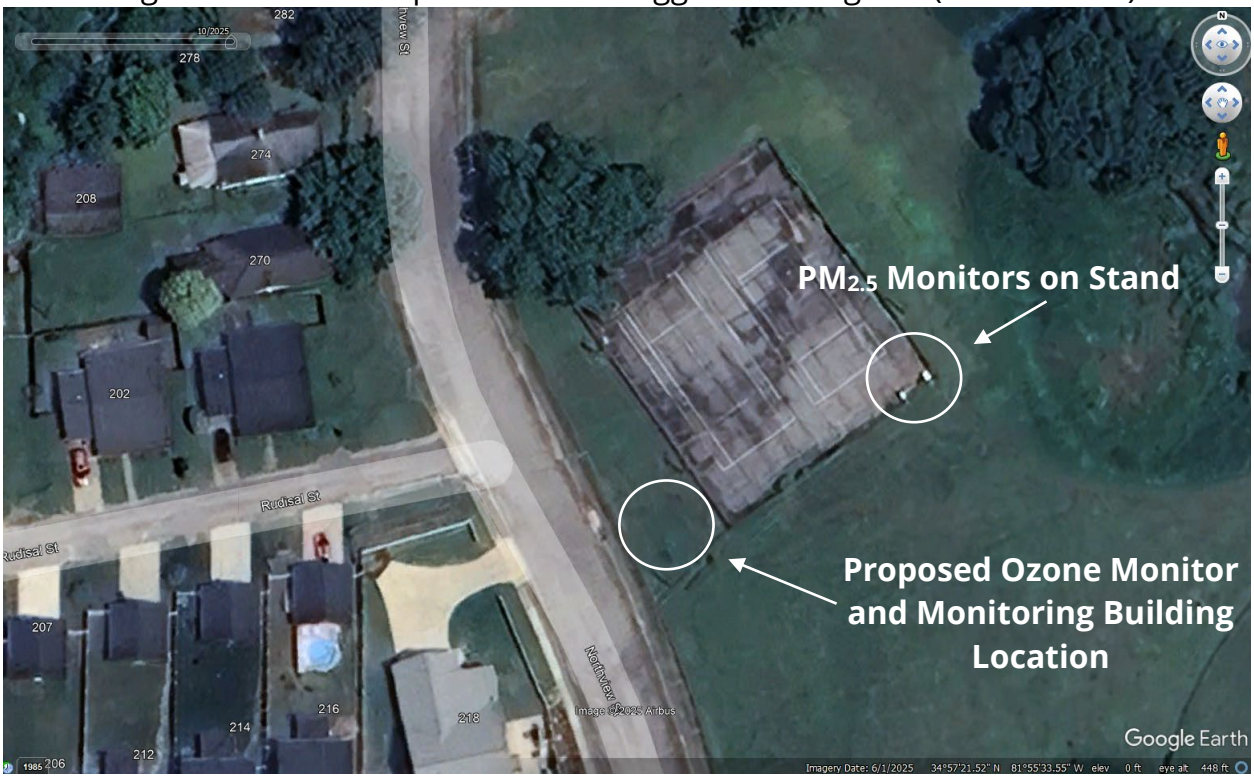
Meteorology, topography and land use, population and population density, growth patterns, emissions from Title V facilities and traffic, and downscaled model data were examined to determine the best placement for the MSA's second required ozone monitor. Land use, population densities, and growth patterns show that Spartanburg County was the best selection. When meteorology and emissions are examined, the I-85 corridor is shown to be ideal placement for picking up NO_x and VOC emissions from Title V facilities and high trafficked areas. Modeled data shows that while the North Spartanburg Fire Station is already located in an area of maximum concentrations in the MSA, on average during ozone season the T.K. Gregg

monitoring site should record some of the highest concentrations in the state. Additionally, the T.K. Gregg Monitoring Site is already established as a $PM_{2.5}$ monitoring site evaluating maximum $PM_{2.5}$ concentration. Placing the second required ozone monitor at an already established site allows the Department to save resources that would otherwise be consumed in establishing and maintaining an additional monitoring site in the area. As a result, the T.K. Gregg Recreation Center location is considered an ideal location to operate the second required ozone monitor with an objective of maximum concentration in the Spartanburg MSA.

Proposed T.K. Gregg Ozone Monitor Specifications

The Department requests concurrence to establish an ozone monitor at the T.K. Gregg Monitoring Site (45-083-0011). The T.K. Gregg Monitoring Site is located on the site of the former T.K. Gregg Recreation Center tennis courts in downtown Spartanburg, SC, approximately 8.9 miles from the North Spartanburg Fire Station #2 (45-083-0009) ozone monitor. The site currently houses one FRM $PM_{2.5}$ monitor and one continuous FEM $PM_{2.5}$ monitor. The new monitor will monitor for ozone with an objective of maximum concentration at the urban scale in the Spartanburg, SC MSA. The designation of the monitor will be SLAMS and this monitor will meet all siting requirements of 40 CFR Part 58 Appendices A, C, D, and E.

Figure 14- Aerial Map of the T.K. Gregg Monitoring Site (45-083-0011)



Details of the T.K. Gregg Monitoring Site (45-083-0011) proposed ozone monitor are given in Table 1 below.

Table 1-T.K. Gregg Ozone Monitor Details

Name	T.K. Gregg Recreation Center
Site ID	45-083-0011
Address	267 Northview St, Spartanburg, SC 29302
County	Spartanburg
Name of MSA	Spartanburg, SC MSA
Name of CSA	Greenville-Spartanburg-Anderson, SC CSA
Approximate Coordinates	+34.955566, -81.924797
Distance to Nearest Active Ozone Monitor	8.9 miles
Parameter	Ozone
Scale	Urban
Objective	Maximum Concentration
Designation	SLAMS
Probe Height	~4.0 meters (to be determined)
Analysis and Method Code	Ultraviolet Absorption (087)
Sampling Frequency	Continuous
Distance to Road	10-12 meters
Distance to Dripline	26.8 meters
Distance to Nearest Obstruction	40.1 meters away, 20.6 meters tall

The T.K. Gregg Monitoring Site (45-083-0011) currently has a stand with two $PM_{2.5}$ monitors placed inside of the fence of a former tennis court. The Department is unable to remove the fence around the courts, nor can technicians drive a car up to the monitoring stand. The Department plans on placing a monitoring shelter on the outside of the fence, which will allow for better maintenance of the ozone monitor. The ozone probe will hang over the short fence facing an empty field at the corner where the short fence and the tall court fence meet. This will allow maximum distance from the roadway and any obstructions. Eventually the Department plans to move the $PM_{2.5}$ monitors into the new shelter. The following photos show the area proposed for the T.K. Gregg Site ozone monitor, as well as any potential obstructions.

Table 2- T.K. Gregg Site Photos

Overall Site Pictures





Facing North



Facing East



Facing South





Facing West



Potential obstructions at the site include one large tree to the north of the site on the far end of the tennis court. With a probe height of approximately 4 meters, the tree near the site will not be an obstruction. The is tree is approximately 40 meters away, measuring 20 meters tall.

Table 3- Measurements of Possible Obstructions

Possible Obstruction	**Obstacle Compass Direction**	**Obstacle Distance (OD)**	**Obstacle Height (OH)**	**Probe Inlet Height (IH)**	**[2*(OH-IH)]**	**Is OD ≥ [2*(OH-IH)] true?**
Tree	330	40.1	20.6	4	32.2	Yes

Appendix J: T640 Comparability Assessments and NAAQS Exclusion Request

Introduction:

Our monitoring program has historically operated $PM_{2.5}$ continuous monitors primarily to support forecasting and reporting of the Air Quality Index (AQI). These monitors supply data every hour to update the AQI on national web sites such as AIRNow (www.airnow.gov). We have been using continuous $PM_{2.5}$ monitors since the early 2000s. Over the last few years, a number of $PM_{2.5}$ continuous monitors have been approved as Federal Equivalent Methods (FEMs). By utilizing an approved FEM, any subsequent data produced from the method may be eligible for comparison to EPA's health based standard known as the NAAQS. The primary advantage of operating a $PM_{2.5}$ continuous FEM is that it can support both the AQI, while also supplying data that are eligible for comparison to the NAAQS. Thus, a network utilizing $PM_{2.5}$ continuous FEMs can minimize the number of filter-based FRMs operated in the network, which are primarily used for comparison to the NAAQS. These filter-based FRMs are resource intensive in that they require field operations as well as pre- and post-sampling laboratory analysis which results in data not being available for approximately 2-4 weeks after sample collection.

The Department began operating Teledyne T640 and T640X FEM monitors in 2020 to collect continuous $PM_{2.5}$ data at multiple sites throughout the state. These monitors showed a significantly higher bias when compared to FRM samplers. On June 13, 2023, Teledyne released a data alignment firmware update that was meant to correct this bias and make the data collected by the T640 and T640X more comparable to the FRM samplers. On September 6, 2023, the Department applied this firmware update to all T640 and T640X monitors operated in the network. All data collected by the T640 and T640X monitors before the firmware update have had a NAAQS Exclusion applied by EPA, and bias corrected data for this period has been uploaded to AQS by EPA. Since the initial firmware update, the Department has placed all data aligned T640 and T640X monitors under a NAAQS Exclusion, except for those operating as primary monitors, in order to evaluate the comparability of the new method code to the FRM samplers. This 23-month evaluation period ended on September 6, 2025. The Department has noticed that some of the T640 and T640X monitors with the approved firmware update continue to show a significantly high bias when compared to FRM samplers. The evaluation of the continuous data is explained further below and includes our recommendations on the use of the data from these methods.

Request for Exclusion of $PM_{2.5}$ Continuous FEM data from Comparison to the NAAQS:

In accordance with the PM NAAQS rule published on January 15th, 2013 (78 FR 3086) and specific to the provisions detailed in §58.10 (b)(13) and §58.11 (e) we are requesting that data from the following monitors be set aside for comparison to the NAAQS. While our agency is working to optimize the monitoring instrumentation we use to meet all of our monitoring objectives, we are not yet at a point where the comparability of the $PM_{2.5}$ continuous FEMs operated in a sub-set of our network compared to collocated FRMs is acceptable such that we are comfortable using the continuous FEM data for comparison to the NAAQS. After assessing the comparability of the $PM_{2.5}$ FEMs to the collocated FRMs for our network, we have determined that multiple sites listed below do not meet the comparability requirements listed in 40 CFR §58.11 (e) and §53 Table C-4. Detailed one-page assessments from which the information described below was obtained are included at the end of this section.

Table 1–$PM_{2.5}$ Continuous FEM Data Comparability Statistics

Site Name	City	Site ID	Cont POC	Method Description	$PM_{2.5}$ Cont. Begin Date	$PM_{2.5}$ Cont. End Date	Continuous/ FRM Sampler pairs per season	Slope (m)	Intercept (y)	Meets bias require-ment	Correlation (r)
$PM_{2.5}$ continuous FEMs that do not meet bias requirements: *Asterisk (*) indicates that a value does not meet performance criteria specified in table C-4 to subpart C of 40 CFR Part 53.*											
North Charleston	North Charleston, SC	450190020	3	Teledyne T640X at 16.67 LPM w/ Data Alignment Enabled (638)	9/6/23	10/31/25	Winter = 162 Spring = 182 Summer =166 Fall =191 Total = 701	1.14*	-0.57	No	0.96
Chesterfield	Not in a City	450250001	3	Teledyne T640 at 55.0 LPM w/Network Data Alignment Enabled (636)	9/6/23	10/31/25	Winter = 59 Spring = 55 Summer = 64 Fall = 72 Total = 250	1.19*	-0.24*	No	0.92
Williams	Florence, SC	450410003	3	Teledyne T640 at 55.0 LPM w/Network Data Alignment Enabled (636)	9/6/23	10/31/25	Winter = 55 Spring = 56 Summer = 60 Fall = 74 Total = 245	1.26*	-1.12*	No	0.97
Greenville ESC	Greenville, SC	450450015	3	Teledyne T640X at 16.67 LPM w/ Data Alignment Enabled (638)	9/6/23	10/31/25	Winter = 179 Spring = 163 Summer = 198 Fall = 205 Total = 745	1.13*	-0.52	No	0.97

Irmo DJJ	Columbia, SC	450790022	3	Teledyne T640 at 55.0 LPM w/Network Data Alignment Enabled (636)	9/6/23	10/31/25	Winter = 170 Spring = 184 Summer = 187 Fall = 213 Total = 754	1.24*	-0.9*	No	0.95
T.K. Gregg	Spartanburg, SC	450830011	3	Teledyne T640 at 55.0 LPM w/Network Data Alignment Enabled (636)	9/6/23	10/31/25	Winter = 164 Spring = 174 Summer = 198 Fall = 184 Total = 720	1.18*	-0.54	No	0.96
$PM_{2.5}$ continuous FEMs that do meet bias requirements:											
Trenton	Not in a City	450370001	3	Teledyne T640 at 55.0 LPM w/Network Data Alignment Enabled (636)	9/6/23	10/31/25	Winter = 56 Spring = 60 Summer = 64 Fall = 74 Total = 254	1.04	-0.23	Yes	0.95
Parklane	Columbia, SC	450790007	3	Teledyne T640X at 16.67 LPM w/ Data Alignment Enabled (638)	9/6/23	10/31/25	Winter = 59 Spring = 58 Summer = 68 Fall = 68 Total = 253	1.08	-0.4	Yes	0.93
Sites with $PM_{2.5}$ continuous FEMs that are not collocated with FRMs:											
Cape Romain	Not in a City	450190046	3	Teledyne T640 at 55.0 LPM w/Network Data Alignment Enabled (636)	9/6/23	N/A					

Period of Exclusion of Data from the $PM_{2.5}$ Continuous FEMs:

The above table details the period of available data by monitor for which we are basing our recommendation to exclude $PM_{2.5}$ continuous FEM data. Per EPA Regional Office approval, we will load or move as necessary these data to EPA's AQS database in a manner where the data are only used for the appropriate monitoring objective(s) (i.e., use data for both the NAAQS and AQI, just the AQI, or neither the NAAQS or AQI). Additionally, we will continue to load any new data generated for in the same manner or until such time as we request and receive approval from the EPA Regional Office to change the monitoring objectives that the data from the $PM_{2.5}$ continuous FEMs can support.

$PM_{2.5}$ Continuous FEM data for Reporting the AQI:

Based on the comparability assessments, we are requesting that the continuous $PM_{2.5}$ monitors at the following sites are excluded from comparison to the NAAQS and are used for AQI purposes only: North Charleston (45-019-0020), Chesterfield (45-025-0001), Williams (45-041-0003), Greenville ESC (45-045-0015), Irmo DJJ (45-079-0022), T.K. Gregg (45-083-0011). The T640 monitor at Chesterfield has served as the primary monitor at the site since June 30, 2022, in order to meet the primary method code requirements for method code 636. Since it was the primary monitor, it was not allowed to be placed under a NAAQS Exclusion during the firmware update evaluation period. During our evaluation of the continuous $PM_{2.5}$ data, it became clear that the Chesterfield T640 monitor was biased significantly high and therefore does not meet data quality requirements listed in 40 CFR §58.11 (e) and §53 Table C-4. As well as requesting exclusion moving forward, we request that the data produced by the T640 monitor at the Chesterfield Monitoring Site be excluded from comparison to the NAAQS starting on 9/6/2023 to account for data collected after the firmware update that was not previously able to be excluded.

While we are requesting the monitors above not be used for comparison to the NAAQS, we do believe that the data are of sufficient comparability to collocated FRMs that they be used in AQI reporting. Therefore, with EPA Regional Office approval we will report these data on our web site and to AIRNow (www.airnow.gov). Additionally, we intend to store the data in EPA's AQS database that is used for "acceptable AQI" reporting (i.e., parameter code 88502) so that data users will know that these data are appropriate for use in AQI calculations.

Continued Operation of $PM_{2.5}$ Monitors to Support NAAQS and AQI Reporting

While we are requesting that data from the monitors listed above be set aside for

comparison to the NAAQS, we will continue to operate $PM_{2.5}$ FRMs to support the objective of comparison to the NAAQS. We will also operate our $PM_{2.5}$ continuous monitors for use in AQI reporting. Each of these FRM and $PM_{2.5}$ continuous monitors, except for the T640 at Cape Romain, will be operated at the locations previously described in this plan and at the locations that meet the objectives of the Network Design Criteria for Ambient Air Quality Monitoring described in Appendix D to Part 58. The Cape Romain T640 will be removed and replaced with an FRM sampler. This change will eliminate method code collocation requirement for method code 636 and allow the FRM sampler at the Chesterfield Montioring Site to become the primary monitor.

Assessments:

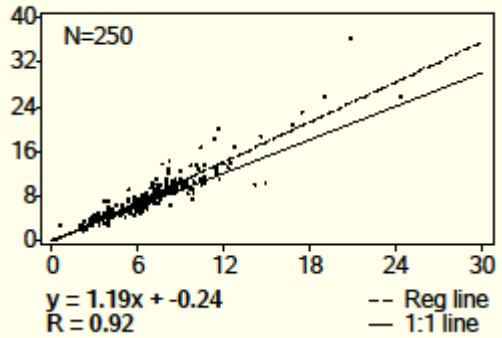
The following one-page assessments are locations where our agency has collocated $PM_{2.5}$ FRM and continuous FEM monitors. Each of these assessments is represented in Table 1 above.

$PM_{2.5}$ Continuous Monitor Comparability Assessment

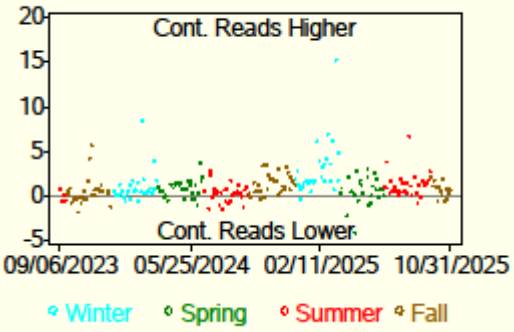
Site 45-025-0001: Not in a City, SC

FRM: R & P Model 2025 PM-2.5 Sequential Air Sampler w/VSCC - Gravimetric (118,145), PM2.5 - Local Conditions (88101), POC=1
Cont: Teledyne T640 at 5.0 LPM w/Network Data Alignment enabled - Broadband spectroscopy (636), PM2.5 - Local Conditions (88101), POC=3

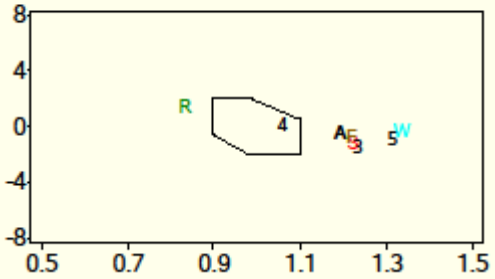
Cont. (y) vs. FRM (x) ($\mu g/m^3$)



Cont. minus FRM ($\mu g/m^3$)

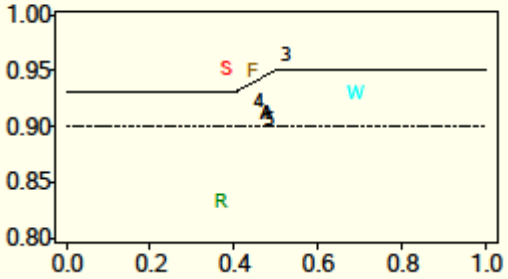


Additive (y) vs. Multiplicative (x) Bias



A=AllData, 3=2023, 4=2024, 5=2025
W=Winter, R=Spring, S=Summer, F=Fall

R (y) vs. FRM CCV (x)



A=AllData, 3=2023, 4=2024, 5=2025
W=Winter, R=Spring, S=Summer, F=Fall

Mean Concentration ($\mu g/m^3$)

Dataset	N	FRM	Cont	Ratio (Cont/FRM)
AllData	**250**	**6.8**	**7.8**	**1.16**
Winter	59	6.2	8.2	1.32
Spring	55	6.9	7.6	1.09
Summer	64	7.5	8.3	1.10
Fall	72	6.5	7.4	1.14
2023	34	6.5	6.9	1.06
2024	118	6.8	7.7	1.13
2025	98	6.8	8.3	1.22

Appendix A Statistics

Dataset	N (all observations)	Bias (all observations)	N (only >= 2 ug/m^3)	Bias (only >= 2 ug/m^3)
AllData	**250**	**13.5**	**246**	**13.4**
Winter	59	26.2	56	26.0
Spring	55	8.8	55	8.8
Summer	64	8.8	64	8.8
Fall	72	11.0	71	11.3
2023	34	4.2	33	4.5
2024	118	11.4	116	11.6
2025	98	19.4	97	18.6

Includes all data
Data Source: EPA AQS Data Mart

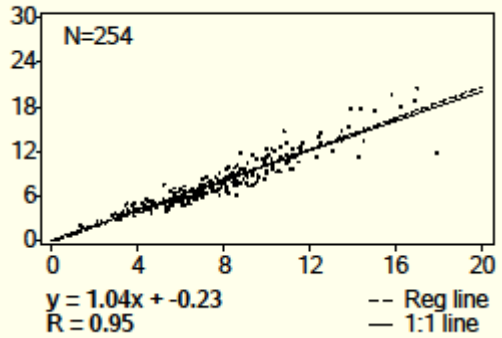
Based on 2024 Appendix A revision
Generated: December 18, 2025

$PM_{2.5}$ Continuous Monitor Comparability Assessment

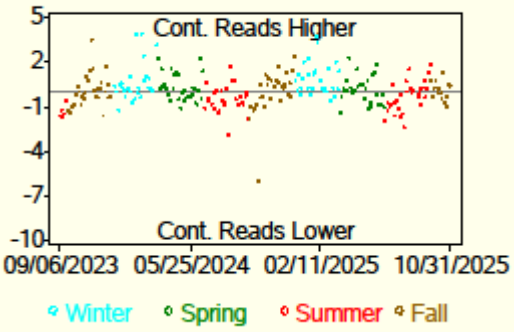
Site 45-037-0001: Not in a City, SC

FRM: R & P Model 2025 PM-2.5 Sequential Air Sampler w/VSCC - Gravimetric (118,145), PM2.5 - Local Conditions (88101), POC=1
Cont: Teledyne T640 at 5.0 LPM w/Network Data Alignment enabled - Broadband spectroscopy (636), PM2.5 - Local Conditions (88101), POC=3

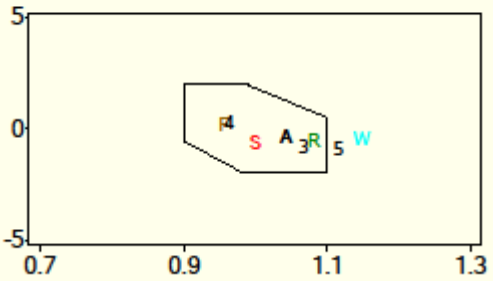
Cont. (y) vs. FRM (x) ($\mu g/m^3$)



Cont. minus FRM ($\mu g/m^3$)

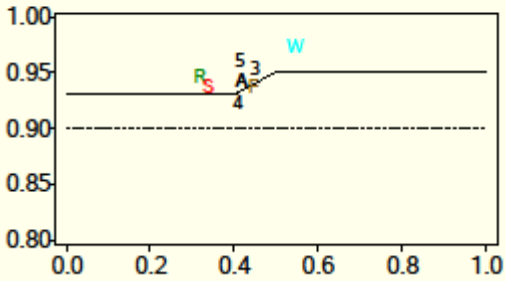


Additive (y) vs. Multiplicative (x) Bias



A=AllData, 3=2023, 4=2024, 5=2025
W=Winter, R=Spring, S=Summer, F=Fall

R (y) vs. FRM CCV (x)



A=AllData, 3=2023, 4=2024, 5=2025
W=Winter, R=Spring, S=Summer, F=Fall

Mean Concentration ($\mu g/m^3$)

Dataset	N	FRM	Cont	Ratio (Cont/FRM)
AllData	**254**	**7.6**	**7.7**	**1.01**
Winter	56	7.3	8.0	1.10
Spring	60	7.7	7.9	1.03
Summer	64	7.8	7.3	0.94
Fall	74	7.5	7.5	1.00
2023	37	7.2	7.0	0.98
2024	117	7.6	7.7	1.01
2025	100	7.7	7.9	1.02

Appendix A Statistics

Dataset	N (all observations)	Bias (all observations)	N (only >= 2 ug/m^3)	Bias (only >= 2 ug/m^3)
AllData	**254**	**1.2**	**250**	**1.0**
Winter	56	8.5	53	8.6
Spring	60	2.5	60	2.5
Summer	64	-5.8	64	-5.8
Fall	74	0.5	73	0.3
2023	37	-2.0	37	-2.0
2024	117	1.6	115	1.6
2025	100	1.9	98	1.5

Includes all data
Data Source: EPA AQS Data Mart

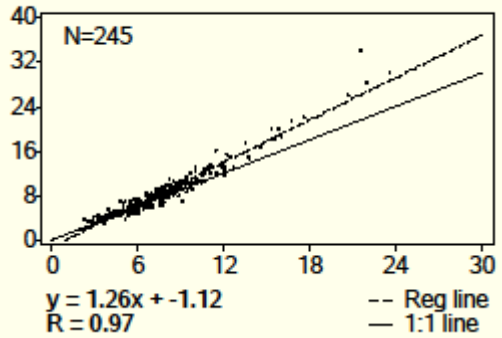
Based on 2024 Appendix A revision
Generated: December 18, 2025

$PM_{2.5}$ Continuous Monitor Comparability Assessment

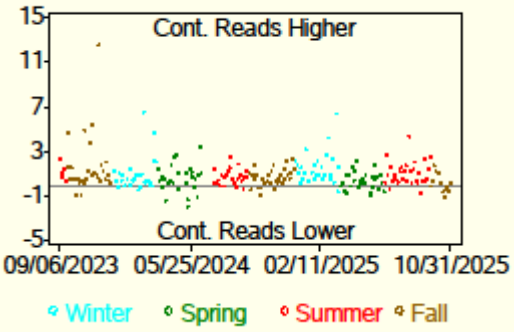
Site 45-041-0003: Florence, SC

FRM: R & P Model 2025 PM-2.5 Sequential Air Sampler w/VSCC - Gravimetric (118,145), PM2.5 - Local Conditions (88101), POC=1
Cont: Teledyne T640 at 5.0 LPM w/Network Data Alignment enabled - Broadband spectroscopy (636), PM2.5 - Local Conditions (88101), POC=3

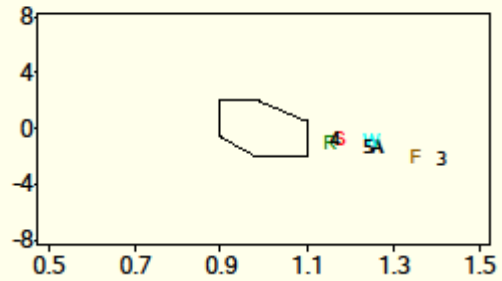
Cont. (y) vs. FRM (x) ($\mu g/m^3$)



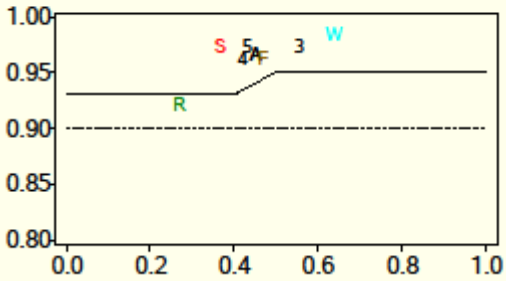
Cont. minus FRM ($\mu g/m^3$)



Additive (y) vs. Multiplicative (x) Bias



R (y) vs. FRM CCV (x)



Mean Concentration ($\mu g/m^3$)

Dataset	N	FRM	Cont	Ratio (Cont/FRM)
AllData	**245**	**7.6**	**8.5**	**1.11**
Winter	55	7.3	8.4	1.16
Spring	56	7.5	7.9	1.06
Summer	60	8.0	8.9	1.11
Fall	74	7.6	8.6	1.12
2023	37	8.2	9.7	1.18
2024	110	7.5	8.2	1.10
2025	98	7.5	8.3	1.11

Appendix A Statistics

Dataset	N	Bias (all observations)	N	Bias (only >= 2 ug/m^3)
AllData	**245**	**9.6**	**244**	**9.7**
Winter	55	13.3	55	13.3
Spring	56	5.0	56	5.0
Summer	60	10.1	60	10.1
Fall	74	9.9	73	10.3
2023	37	14.8	37	14.8
2024	110	8.4	110	8.4
2025	98	9.0	97	9.3

Includes all data
Data Source: EPA AQS Data Mart

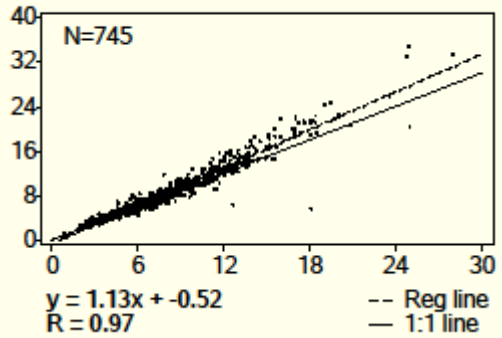
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Generated: December 18, 2025

$PM_{2.5}$ Continuous Monitor Comparability Assessment

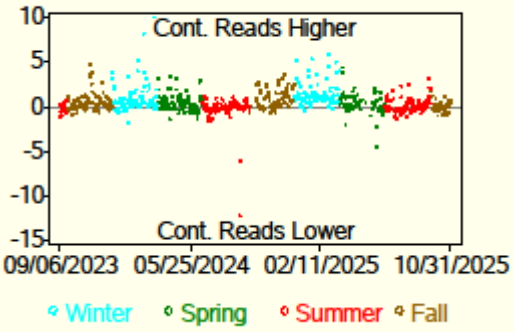
Site 45-045-0015: Greenville, SC

FRM: R & P Model 2025 PM-2.5 Sequential Air Sampler w/VSCC - Gravimetric (118,145), PM2.5 - Local Conditions (88101), POC=1
Cont: Teledyne T640X at 16.67 LPM w/Network Data Alignment enabled - Broadband spectroscopy (638), PM2.5 - Local Conditions (88101), POC

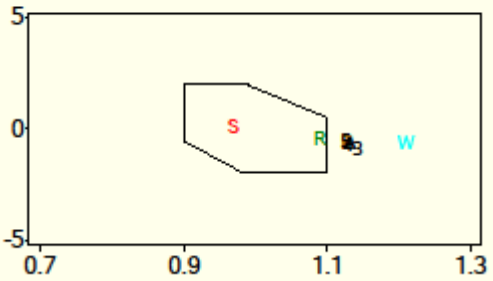
Cont. (y) vs. FRM (x) ($\mu g/m^3$)



Cont. minus FRM ($\mu g/m^3$)

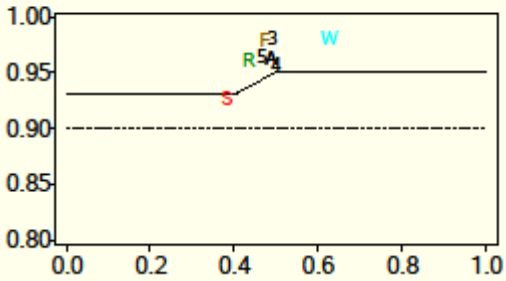


Additive (y) vs. Multiplicative (x) Bias



A=AllData, 3=2023, 4=2024, 5=2025
W=Winter, R=Spring, S=Summer, F=Fall

R (y) vs. FRM CCV (x)



A=AllData, 3=2023, 4=2024, 5=2025
W=Winter, R=Spring, S=Summer, F=Fall

Mean Concentration ($\mu g/m^3$)

Dataset	N	FRM	Cont	Ratio (Cont/FRM)
AllData	**745**	**8.1**	**8.7**	**1.07**
Winter	179	8.2	9.4	1.15
Spring	163	7.8	8.2	1.05
Summer	198	8.1	8.1	1.00
Fall	205	8.3	8.9	1.07
2023	115	8.4	8.9	1.06
2024	347	8.3	8.8	1.06
2025	283	7.9	8.4	1.07

Appendix A Statistics

Dataset	N (all observations)	Bias (all observations)	N (only >= 2 ug/m^3)	Bias (only >= 2 ug/m^3)
AllData	**745**	**5.8**	**738**	**5.8**
Winter	179	13.1	174	13.4
Spring	163	4.3	163	4.3
Summer	198	-0.3	198	-0.3
Fall	205	6.5	203	6.4
2023	115	4.9	113	5.1
2024	347	5.7	343	5.7
2025	283	6.2	282	6.2

Includes all data
Data Source: EPA AQS Data Mart

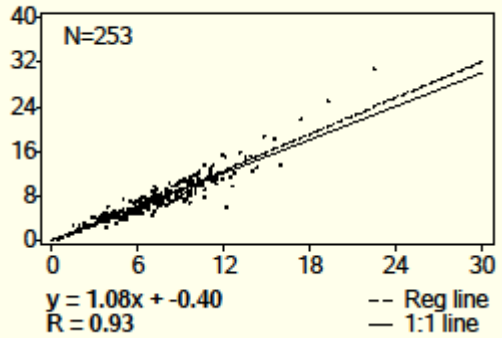
Based on 2024 Appendix A revision
Generated: December 18, 2025

$PM_{2.5}$ Continuous Monitor Comparability Assessment

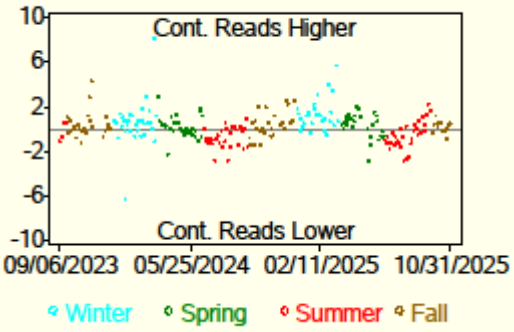
Site 45-079-0007: Dentsville (Dents), SC

FRM: R & P Model 2025 PM-2.5 Sequential Air Sampler w/VSCC - Gravimetric (118,145), PM2.5 - Local Conditions (88101), POC=1,2
Cont: Teledyne T640X at 16.67 LPM w/Network Data Alignment enabled - Broadband spectroscopy (638), PM2.5 - Local Conditions (88101), POC

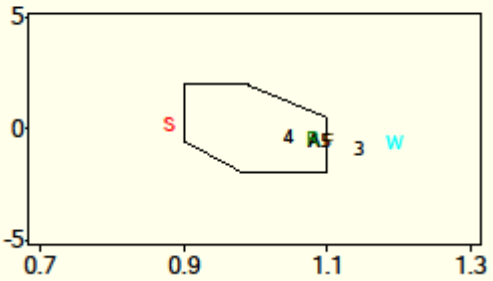
Cont. (y) vs. FRM (x) ($\mu g/m^3$)



Cont. minus FRM ($\mu g/m^3$)

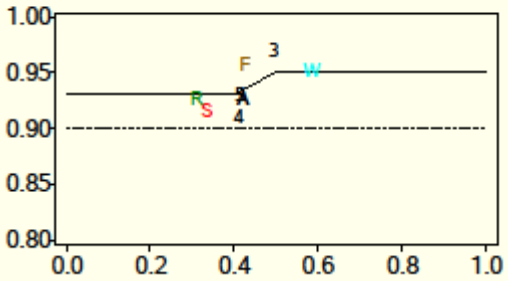


Additive (y) vs. Multiplicative (x) Bias



A=AllData, 3=2023, 4=2024, 5=2025
W=Winter, R=Spring, S=Summer, F=Fall

R (y) vs. FRM CCV (x)



A=AllData, 3=2023, 4=2024, 5=2025
W=Winter, R=Spring, S=Summer, F=Fall

Mean Concentration ($\mu g/m^3$)

Dataset	N	FRM	Cont	Ratio (Cont/FRM)
AllData	**253**	**7.5**	**7.7**	**1.03**
Winter	59	7.3	8.2	1.13
Spring	58	7.5	7.7	1.04
Summer	68	7.9	7.2	0.92
Fall	68	7.2	7.5	1.05
2023	33	7.1	7.4	1.04
2024	122	7.5	7.6	1.01
2025	98	7.5	7.8	1.04

Appendix A Statistics

Dataset	N (all observations)	Bias (all observations)	N (only >= 2 ug/m^3)	Bias (only >= 2 ug/m^3)
AllData	**253**	**2.5**	**249**	**2.3**
Winter	59	11.1	56	10.9
Spring	58	3.2	58	3.2
Summer	68	-7.4	68	-7.4
Fall	68	4.4	67	4.4
2023	33	3.4	32	2.9
2024	122	1.3	121	1.3
2025	98	3.8	96	3.4

Includes all data
Data Source: EPA AQS Data Mart

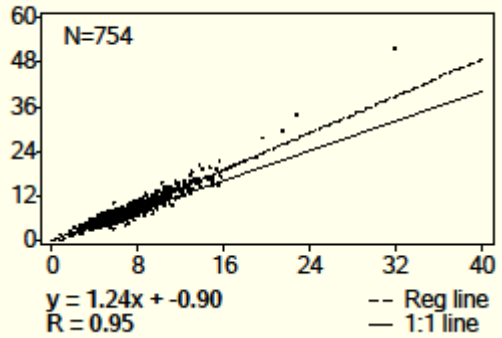
Based on 2024 Appendix A revision
Generated: December 18, 2025

$PM_{2.5}$ Continuous Monitor Comparability Assessment

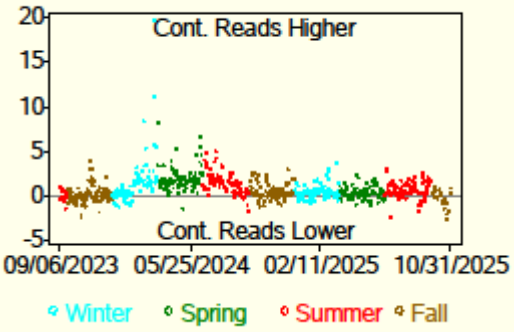
Site 45-079-0022: Columbia, SC

FRM: R & P Model 2025 PM-2.5 Sequential Air Sampler w/VSCC - Gravimetric (145), PM2.5 - Local Conditions (88101), POC=1
Cont: Teledyne T640 at 5.0 LPM w/Network Data Alignment enabled - Broadband spectroscopy (636), PM2.5 - Local Conditions (88101), POC=3

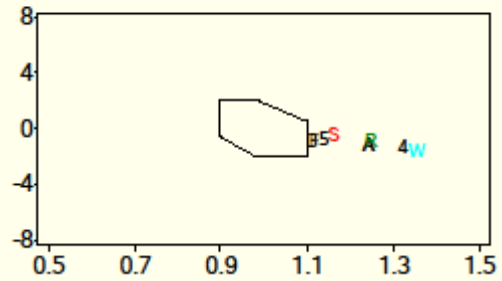
Cont. (y) vs. FRM (x) ($\mu g/m^3$)



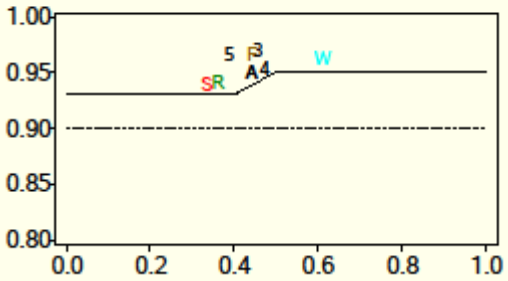
Cont. minus FRM ($\mu g/m^3$)



Additive (y) vs. Multiplicative (x) Bias



R (y) vs. FRM CCV (x)



Mean Concentration ($\mu g/m^3$)

Dataset	N	FRM	Cont	Ratio (Cont/FRM)
AllData	**754**	**7.2**	**8.0**	**1.12**
Winter	170	6.7	7.8	1.15
Spring	184	7.3	8.5	1.16
Summer	187	7.6	8.6	1.13
Fall	213	7.1	7.3	1.03
2023	116	7.0	7.1	1.02
2024	352	7.3	8.6	1.19
2025	286	7.2	7.7	1.07

Appendix A Statistics

Dataset	N (all observations)	Bias (all observations)	N (only >= 2 ug/m^3)	Bias (only >= 2 ug/m^3)
AllData	**754**	**9.8**	**748**	**9.8**
Winter	170	11.8	166	11.9
Spring	184	14.1	184	14.1
Summer	187	12.2	185	12.2
Fall	213	2.5	213	2.5
2023	116	1.0	116	1.0
2024	352	16.0	347	16.2
2025	286	5.7	285	5.7

Includes all data
Data Source: EPA AQS Data Mart

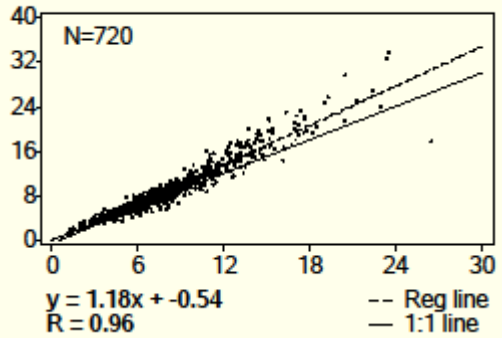
Based on 2024 Appendix A revision
Generated: December 18, 2025

$PM_{2.5}$ Continuous Monitor Comparability Assessment

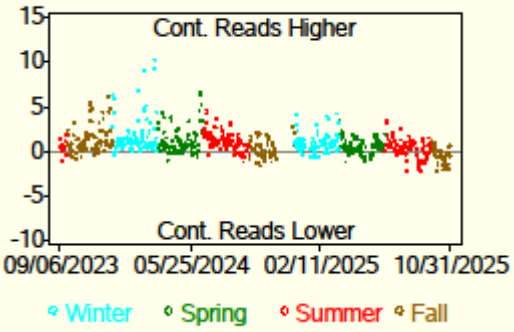
Site 45-083-0011: Spartanburg, SC

FRM: R & P Model 2025 PM-2.5 Sequential Air Sampler w/VSCC - Gravimetric (118,145), PM2.5 - Local Conditions (88101), POC=1,2
Cont: Teledyne T640 at 5.0 LPM w/Network Data Alignment enabled - Broadband spectroscopy (636), PM2.5 - Local Conditions (88101), POC=3

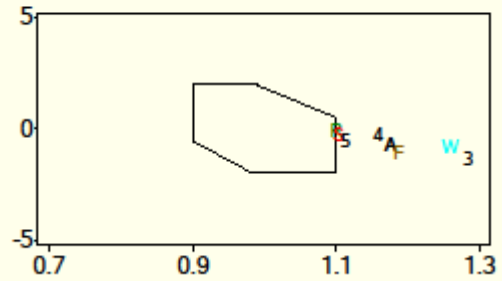
Cont. (y) vs. FRM (x) ($\mu g/m^3$)



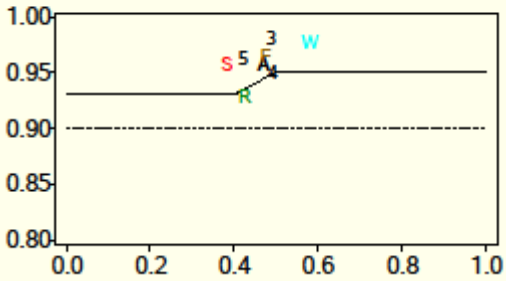
Cont. minus FRM ($\mu g/m^3$)



Additive (y) vs. Multiplicative (x) Bias



R (y) vs. FRM CCV (x)



Mean Concentration ($\mu g/m^3$)

Dataset	N	FRM	Cont	Ratio (Cont/FRM)
AllData	**720**	**8.2**	**9.1**	**1.11**
Winter	164	8.1	9.5	1.18
Spring	174	7.8	8.7	1.11
Summer	198	8.5	9.2	1.08
Fall	184	8.4	9.1	1.08
2023	116	8.7	10.0	1.15
2024	320	8.3	9.4	1.14
2025	284	7.9	8.4	1.06

Appendix A Statistics

Dataset	N (all observations)	Bias	N (only >= 2 ug/m^3)	Bias
AllData	**720**	**9.8**	**710**	**9.9**
Winter	164	15.7	158	16.0
Spring	174	10.2	173	10.2
Summer	198	8.0	198	8.0
Fall	184	6.3	181	6.3
2023	116	12.8	114	13.1
2024	320	12.9	315	12.9
2025	284	5.2	281	5.1

Includes all data
Data Source: EPA AQS Data Mart

Based on 2024 Appendix A revision
Generated: December 18, 2025