

2025 Ambient Air Monitoring Network Plan- MODIFIED

Shelby County Health Department Air Pollution Control Program Including the Metropolitan Statistical Area (Memphis, TN-MS-AR)



March 10, 2026

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I. Introduction to the 2025 Ambient Air Monitoring Plan

Shelby County Health Department

Pollution Control Section

Air Monitoring Branch

The Shelby County Health Department (SCHD) Air Monitoring Branch (AMB) is required to evaluate the ambient air monitoring network each year in accordance with the requirements specified in 40 CFR Part 58, Subpart B § 58.10. An overview of the geography, general climate, wind direction and population trends are included to provide background information that will assist in understanding the current air monitoring network and reasons for placement of the existing monitoring sites.

The principal areas in Shelby County with air monitoring sites are depicted showing the location for each of the monitoring sites. The sites are identified by a site number, site name, site address, an air quality site identification number and the types of pollutants monitored at each location. Tables containing relevant information are also included. A Network Review that requests for changes or provides updates is included along with the Memorandum of Agreement between Crittenden County, AR and Desoto County, MS.

This Network Plan submitted by Shelby County will be incorporated with the other local programs from the State of Tennessee and included in the 2025 Annual Network Plan provided by the State of Tennessee Department of Environment and Conservation Division of Air Pollution Control and submitted to the Region 4 offices of the Environmental Protection Agency by July 1 of each calendar year.

II. Shelby County's Interpretation of Ambient Air Monitors Needed to Meet the 40CFR, Part 58 Requirements

Census Area Identification and Population Data			14129 Lead		42101 CO		42401 SO ₂		42602 NO ₂		44201 Ozone			81102 PM ₁₀		88101 PM _{2.5}				88502 PM _{2.5} Specia- tion		88101 PM _{2.5} Contin- uous	
CBSA Code	Census 2010 /Est. 2019	CBSA Title (MS Areas)	Operating	Required	Operating	Required	Operating	Required	Operating	Required	Operating	2022-2024 8 Hr. DV	Required	Operating	Required	Operating	2022 -2024 Annual DV µg/m ³	2022 -2024 24 Hr. DV µg/m ³	Required	Operating	Required	Operating	Required
32820	1316100/1346045	Memphis, TN-MS-AR	0	0	2 ²	1	1 ²	1	2 ^{1,2}	2	3	0.073 Shelby Farms NCore	2	1 ^{1,3}	2 - 4	3 ^{1,3}	8.9	20	2	1	1	1 ³	1 - 2

¹The Shelby County Health Department and the states of Arkansas and Mississippi have implemented a joint MOA that provides for meeting the MSA monitoring requirements for the combined MSA area. See pages 52-55.

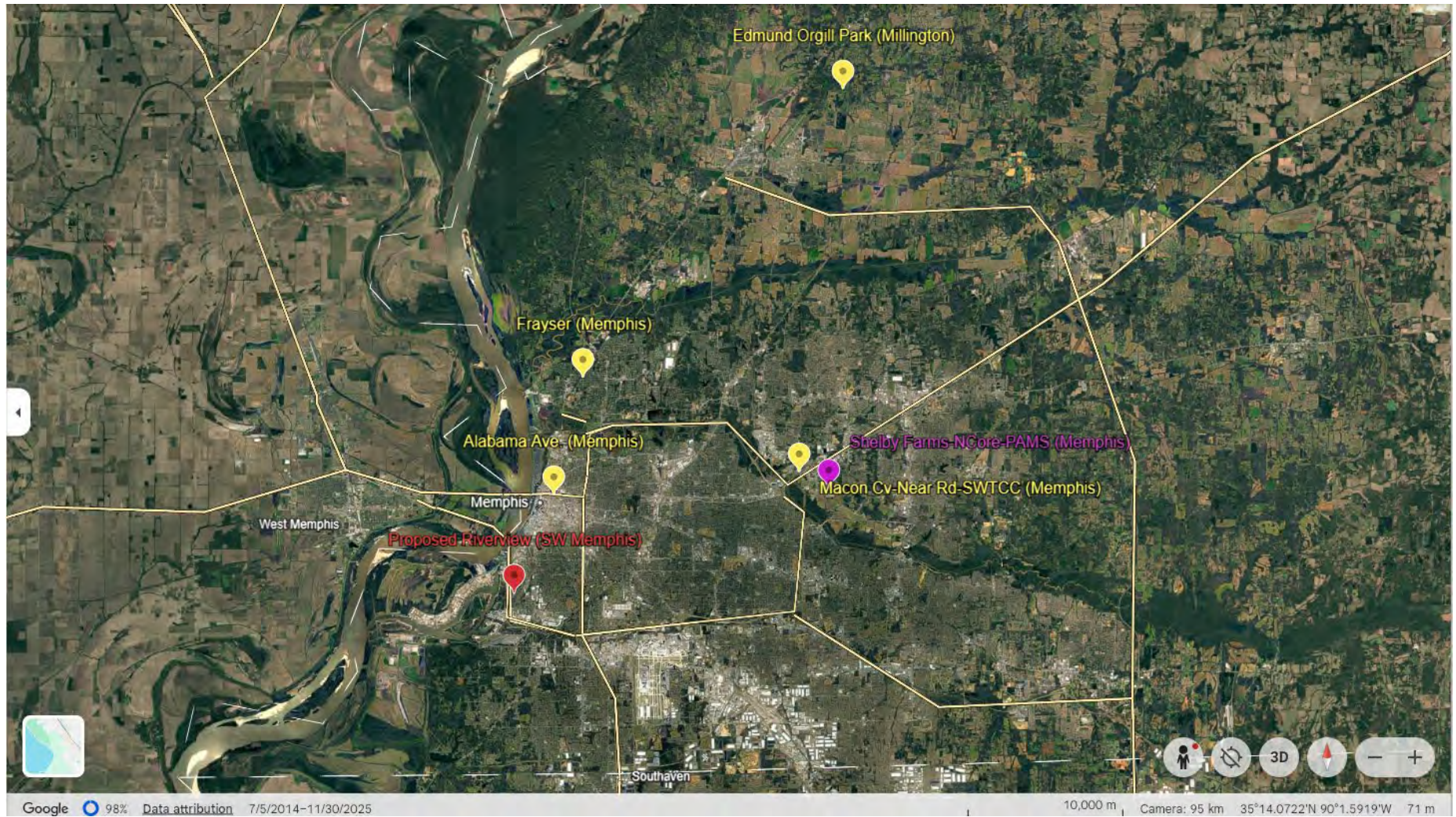
² Includes trace level analyzer at Shelby Farms NCore Air Monitoring Station

³ These numbers are subject to change later in the year as monitors are added and/or replaced. See changes/future plans later in the document.

Discussions of any proposals to re-locate monitors in the next 18 months and suitability of PM_{2.5} sites for use in comparisons to the annual PM_{2.5} standard:

- Two Teledyne API T640x PM_{2.5} particulate monitors will be replacing and/or added later in the 2025-2026 season.

III. Map of Shelby County Site Locations



IV. Shelby County Air Monitoring Sites

(Background, Discussion, Site Evaluation Form and Site Pictures)

- A. Frayser
- B. Alabama
- C. Shelby Farms NCore
- D. Southwest Tennessee Community College Near Road
- E. Edmund Orgill Park

All SCHD AMB sites meet the siting criteria as found in 40 CFR Part 58, Appendix E for probe and monitoring path for particulate matter (PM₁₀ and PM_{2.5}), ozone (O₃), carbon monoxide (CO), nitrogen oxides (NO/NO₂/NO_y), and sulfur dioxide (SO₂). These sites will be reevaluated annually for compliance with this criterion. These sites are part of the SCHD ambient air monitoring network and operated to ensure continued compliance to 40 CFR Part 58, Appendix D network design requirements. These sites are summarized in Section II. Current site evaluations with site pictures and distance measurements are provided in Section IV.

A. Frayser, Shelby County, TN



Reporting Org. Name	Memphis/Shelby County Health Dept.
PQAO	673
Address	1330 Frayser Blvd.
AQS ID	47-157-0021
County Name	Shelby
CBSA	32820
Latitude	35.217501
Longitude	-90.019707
Parameter Code	44201
Parameter Name	Ozone
Monitor Type	SLAMS
POC	1
Interval	1
Year	2025
Collection Frequency	Hourly
Method	087
FRM/FEM Monitoring Instrument	Teledyne Advanced Pollution Instrumentation, Inc. Model T400
Analysis	Ultraviolet Absorption
Ref. Method ID	EQOA-0992-087
Monitor Objective Type	Population Exposure
Dominant Source	Area
Measurement Scale	Neighborhood
Land Use Type	Residential
Location Setting	Suburban
Date Site Established	19720901

Site Background and Discussion

This site is located on Frayser Blvd. in Shelby County, Tennessee and currently supports monitoring for ozone. This site was originally established in 1972 and is expected to operate during CY's 2025 and 2026.

This site is located downwind of the Metro-Memphis area in a heavily populated area. There are railroad tracks and an overpass that are approximately 250 meters west of the site.

Site Evaluation Field Form

SITE NAME: FRAYSER

AQS Site ID: 47-157-0021 Location: 1330 Frayser Blvd. Date: 05/06/25 Evaluator: MJ

Site Coordinates: LATITUDE 35.217501 LONGITUDE -90.019707

Monitoring Scale: Neighborhood

Pollutant	Sampler/Probe Inlet Height (IH in m)	Inlet Location	Horizontal Distance (m)	Vertical Distance (m)	Pass/Fail
O ₃	4.3 m	Roof			Pass

Object	Object Height (OH)	Object Distance (OD)	2(OH-IH)	Obstruction?
Tree east of site	23.7 m	26.5 m	38.8 m	Yes
Tree north of site	23.5 m	22.1 m	38.4 m	Yes

Dripline should be >20 m from the dripline of tree(s) and must be 10 m from the dripline when the tree(s) act as an obstruction. For Horizontal and Vertical Distances: Separation Distance = (1 meter for O₃, CO, SO₂, NO₂) and (2 meters for PM, Pb) When probe is located on a rooftop, this separation distance is in reference to walls, parapets, or penthouses located on roof.

Are all probes at least 1 meter apart? N/A

Are all collocated low volume samplers between 1 to 4 meters apart? N/A

Are all collocated high volume samplers between 2 to 4 meters apart? N/A

Are all probes located in an area that is paved or has vegetative ground cover? Yes

Are all rooftop samplers located at least 2 meters away from any structure? Yes

Is there unrestricted air flow 270 degrees around the probe or sampler? Yes

Comments: Although both trees are closer than 2(OH-IH), they are greater than 20m away.

What is the distance of monitor site to the nearest road? 20 meters (Frayser Blvd.)

What are the distances of the closest traffic counters to the monitor site? 0.8 km (Frayser Blvd) & 1.9 km (U.S. Hwy 51)

What are the AADT counts? 6,520 (Frayser Blvd-2024) & 30,970 (U.S. Hwy 51-2024)

Frayser (North)



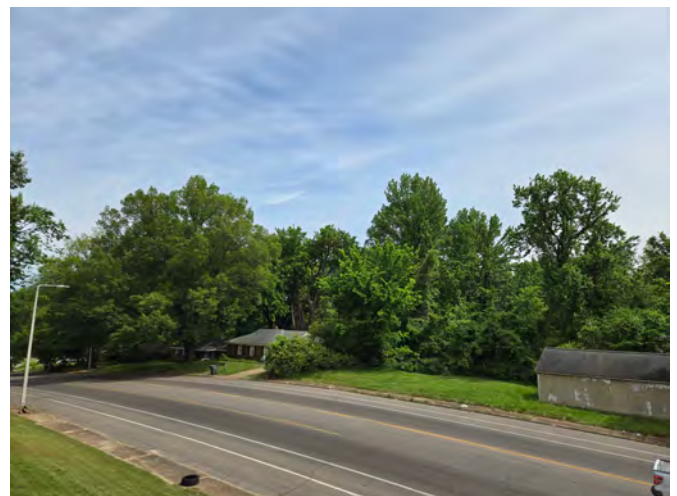
Frayser (Northeast)



Frayser (East)



Frayser (Southeast)



Frayser (South)



Frayser (Southwest)



Frayser (West)



Frayser (Northwest)



B. Alabama Ave., Shelby County, TN



Reporting Org. Name	Memphis/Shelby County Health Dept.		
PQAO	673		
Address	416 Alabama Ave.		
AQS ID	47-157-0024		
County Name	Shelby		
CBSA	32820		
Latitude	35.151194		
Longitude	-90.041559		
Parameter Code	88101	88101	81102
Parameter Name	PM 2.5	PM 2.5	PM 10
Monitor Type	SLAMS	SLAMS	SLAMS
POC	1	2	1
Interval	7	7	1
Year	2025	2025	2025
Collection Frequency	1 in 3	1 in 12	Hourly
Method	145	145	079
FRM/FEM Monitoring Instrument	Thermo 2025I PM 2.5 Sequential Sampler	Thermo 2025 PM 2.5 Sequential Sampler	Thermo Scientific TEOM 1405 Ambient Particulate Monitor
Analysis	Gravimetric	Gravimetric	Gravimetric
Ref. Method ID	RFPS-0498-118	RFPS-0498-118	EQPM-1090-079
Monitor Objective Type	Population Exposure	Population Exposure	Population Exposure
Dominant Source	Area	Area	Area
Measurement Scale	Neighborhood	Neighborhood	Neighborhood
Land Use Type	Residential	Residential	Residential
Location Setting	Suburban	Suburban	Suburban
Date Site Established	20170101	20210101	20160403

Site Evaluation Field Form

SITE NAME: ALABAMA

AQS Site ID: 47-157-0024 Location: 416 Alabama Ave.

Date: 05/08/25

Evaluator: MJ

Site Coordinates: LATITUDE 35.151194

LONGITUDE: -90.041559

Monitoring Scale: Neighborhood

Pollutant	Sampler/Probe Inlet Height (IH in m)	Inlet Location	Horizontal Distance (m)	Vertical Distance (m)	Pass/Fail
PM _{2.5} (POC 1)	2.1 m	Slab Behind Building	3.3 m		Pass
PM _{2.5} (POC 2)	2.1 m	Slab Behind Building	3.3 m		Pass
PM ₁₀ (TEOM) (continuous)	4.7 m	Roof			Pass

Object	Object Height (OH)	Object Distance (OD)	2(OH-IH)	Obstruction?
Site Building	3.1 m	5.8 m	2.0 m	No
Treeline (NW)	5.2 m	11.6 m	6.2 m	No
Tree (NE)	9.5 m	16.9 m	14.8 m	No
Tree (E)	4.8 m	11.3 m	5.4 m	No

Dripline should be >20 m from the dripline of tree(s) and must be 10 m from the dripline when the tree(s) act as an obstruction.

For Horizontal and Vertical Distances: Separation Distance = (1 meter for O₃, CO, SO₂, NO₂) and (2 meters for PM, Pb)

When probe is located on a rooftop, this separation distance is in reference to walls, parapets, or penthouses located on roof.

Are all probes at least 1 meter apart? Yes

Are all collocated low volume samplers between 1 to 4 meters apart? Yes

Are all collocated high volume samplers between 2 to 4 meters apart? N/A

Are all probes located in an area that is paved or has vegetative ground cover? Yes

Are all rooftop samplers located at least 2 meters away from any structure? Yes

Is there unrestricted air flow 270 degrees around the probe or sampler? Yes

What is the distance of the monitor site to the nearest road? 34 meters (N. Danny Thomas Blvd.)

What is the distance of the closest traffic counter to the monitoring site? 60 meters (Interstate 40)

What is the AADT count? 60,504 (Interstate 40-2024)

Site Pictures for Alabama

Alabama (North)



Alabama (Northeast)



Alabama (East)



Alabama (Southeast)



Site Pictures for Alabama

Alabama (South)



Alabama (Southwest)



Alabama (West)



Alabama (Northwest)



Site Background and Discussion

The Alabama Ave. site is located in Shelby County, Tennessee and currently supports monitoring for PM_{2.5}, PM₁₀ (TEOM) and the Radnet program. A collocated PM_{2.5} sampler was added to the site at the beginning of 2021 to meet collocation requirements for PM_{2.5} FRM sampling. This site is approximately 25 meters south of Interstate 40 and 50 meters north of apartment complexes. The site will continue to operate in CY's 2025 and 2026, but there are expected changes to occur later in the year. See Section A.

**C. Shelby Farms NCore,
Shelby County, TN**



Reporting Org. Name		Memphis/Shelby County Health Dept.	
PQAO		673	
Address		6388 Haley Rd.	
AQS ID		47-157-0075	
County Name		Shelby	
CBSA		32820	
Latitude		35.151699	
Longitude		-89.850249	
Parameter Code	42101	42401	42600
Parameter Name	CO (trace)	SO ₂ (trace)	NO _y
Monitor Type	NCore (SLAMS)	NCore (SLAMS)	NCore (SLAMS)
POC	1	1	1
Interval	1	1	1
Year	2025	2025	2025
Collection Frequency	Hourly	Hourly	Hourly
Method	593	600	699
FRM/FEM Monitoring Instrument	Teledyne Advanced Pollution Instrumentation, Inc. Model T300U	Teledyne Advanced Pollution Instrumentation, Inc. Model T100U	Teledyne Advanced Pollution Instrumentation, Inc. Models T200U/T200EU/
Analysis	Gas Filter Correlation	Ultraviolet Fluorescence	Chemiluminescence
Ref. Method ID	RFCA-1093-093	EQSA-0495-100	RFNA-1194-699
Monitor Objective Type	Population Exposure	Population Exposure	Population Exposure
Dominant Source	Area	Area	Area
Measurement Scale	Neighborhood and Urban Scale	Neighborhood and Urban Scale	Neighborhood and Urban Scale
Land Use Type	Industrial	Industrial	Industrial
Location Setting	Urban	Urban	Urban
Date Site Established	20110401	20110621	20110617

**C. Shelby Farms NCore,
Shelby County, TN**



Reporting Org. Name		Memphis/Shelby County Health Dept.	
PQAO		673	
Address		6388 Haley Rd.	
AQS ID		47-157-0075	
County Name		Shelby	
CBSA		32820	
Latitude		35.151699	
Longitude		-89.850249	
Parameter Code	44201	61103	61104
Parameter Name	O ₃	Wind Speed-Resultant	Wind Direction - Resultant
Monitor Type	NCore (SLAMS)	NCore (SLAMS)	NCore (SLAMS)
POC	1	1	1
Interval	1	1	1
Year	2025	2025	2025
Collection Frequency	Hourly	Hourly	Hourly
Method	087	065	065
FRM/FEM Monitoring Instrument	Teledyne Advanced Pollution Instrumentation, Inc. Model T400	RM Young Model 05305	RM Young Model 05305
Analysis	Ultraviolet Absorption	miles per hour	Degrees compass
Ref. Method ID	EQOA-0992-087	N/A	N/A
Monitor Objective Type	Population Exposure	Population Exposure	Population Exposure
Dominant Source	Area	Area	Area
Measurement Scale	Neighborhood and Urban Scale	Neighborhood and Urban Scale	Neighborhood and Urban Scale
Land Use Type	Industrial	Industrial	Industrial
Location Setting	Urban	Urban	Urban
Date Site Established	20110311	20120701	20120701

**C. Shelby Farms NCore,
Shelby County, TN**



Reporting Org. Name		Memphis/Shelby County Health Dept.	
PQAO		673	
Address		6388 Haley Rd.	
AQS ID		47-157-0075	
County Name		Shelby	
CBSA		32820	
Latitude		35.151699	
Longitude		-89.850249	
Parameter Code	62101	62201	64101
Parameter Name	Outdoor Temperature	Relative Humidity	Barometric Pressure
Monitor Type	NCore (SLAMS)	NCore (SLAMS)	NCore (SLAMS)
POC	1	1	1
Interval	1	1	1
Year	2025	2025	2025
Collection Frequency	Hourly	Hourly	Hourly
Method	060	060	014
FRM/FEM Monitoring Instrument	RM Young 41382VC	RM Young 41382VC	Barometric Sensor
Analysis	Degrees-Fahrenheit	Percent-Relative Humidity	Millibars
Ref. Method ID	N/A	N/A	N/A
Monitor Objective Type	Population Exposure	Population Exposure	Population Exposure
Dominant Source	Area	Area	Area
Measurement Scale	Neighborhood and Urban Scale	Neighborhood and Urban Scale	Neighborhood and Urban Scale
Land Use Type	Industrial	Industrial	Industrial
Location Setting	Urban	Urban	Urban
Date Site Established	20120701	20120701	20120701

**C. Shelby Farms NCore,
Shelby County, TN**



Reporting Org. Name		Memphis/Shelby County Health Dept.	
PQAO		673	
Address		6388 Haley Rd.	
AQS ID		47-157-0075	
County Name		Shelby	
CBSA		32820	
Latitude		35.151699	
Longitude		-89.850249	
Parameter Code	81102 (STP)	85101 (LC)	88101
Parameter Name	PM ₁₀	PM ₁₀	PM _{2.5}
Monitor Type	NCore (SLAMS)	NCore (SLAMS)	NCore (SLAMS)
POC	3	4	3
Interval	1	1	1
Year	2025	2025	2025
Collection Frequency	Hourly	Hourly	Hourly
Method	639	639	638
FRM/FEM Monitoring Instrument	Teledyne Model T640 PM Mass Monitor with 640x option-firmware update	Teledyne Model T640 PM Mass Monitor with 640x option-firmware update	Teledyne Model T640 PM Mass Monitor with 640x option-firmware update
Analysis	Light Scattering	Light Scattering	Light Scattering
Ref. Method ID	EQPM-0516-239	EQPM-0516-239	EQPM-0516-238
Monitor Objective Type	Population Exposure	Population Exposure	Population Exposure
Dominant Source	Area	Area	Area
Measurement Scale	Neighborhood and Urban Scale	Neighborhood and Urban Scale	Neighborhood and Urban Scale
Land Use Type	Industrial	Industrial	Industrial
Location Setting	Urban	Urban	Urban
Date Site Established	20210101	20210101	20210101

**C. Shelby Farms NCore,
Shelby County, TN**



Reporting Org. Name		Memphis/Shelby County Health Dept.	
PQAO		673	
Address		6388 Haley Rd.	
AQS ID		47-157-0075	
County Name		Shelby	
CBSA		32820	
Latitude		35.151699	
Longitude		-89.850249	
Parameter Code	86101	88101	88502
Parameter Name	PM _{10-2.5} (coarse)	PM _{2.5}	PM _{2.5} Speciation
Monitor Type	NCore (SLAMS)	NCore (SLAMS)	NCore (SLAMS)
POC	3	2	6
Interval	1	7	7
Year	2025	2025	2025
Collection Frequency	Hourly	1 in 3	1 in 3
Method	640	145	N/A
FRM/FEM Monitoring Instrument	Teledyne Model T640 PM Mass Monitor with 640x option-firmware update	Thermo Partisol Plus 2025i PM 2.5 Sequential Sampler	Met One SuperSASS 810/ URG 3000N
Analysis	Light Scattering	Gravimetric	Speciation Analysis
Ref. Method ID	EQPM-0516-240	RFPS-0498-118	N/A
Monitor Objective Type	Population Exposure	Population Exposure	Population Exposure
Dominant Source	Area	Area	Area
Measurement Scale	Neighborhood and Urban Scale	Neighborhood and Urban Scale	Neighborhood and Urban Scale
Land Use Type	Industrial	Industrial	Industrial
Location Setting	Urban	Urban	Urban
Date Site Established	20210101	20160101	20110208

Site Evaluation Field Form

SITE NAME: SHELBY FARMS NCore

AQS Site ID: 47-157-0075 Location: 6388 Haley Rd. Date: 05/07/25 Evaluator: MJ

Site Coordinates: LATITUDE 35.151699 LONGITUDE -89.850249

Monitoring Scale: Neighborhood and Urban Scale

Pollutant	Sampler/Probe Inlet Height (IH in m)	Inlet Location	Horizontal Distance (m)	Vertical Distance (m)	Pass/ Fail
PM _{2.5} FRM (collocated)	4.1 m	On scaffolding	1.9 m		Pass
PM _{2.5} , PM ₁₀ , PM _{10-2.5} (T640x)	4.1 m	Roof	1.9 m		Pass
CO	3.7 m	Side of shelter	1.1 m		Pass
NO _y , NO	8.6 m	Met tower			Pass
O ₃	3.6 m	Side of shelter	1.4 m		Pass
SO ₂	3.5 m	Side of shelter	1.1 m		Pass

Object	Object Height (OH)	Object Distance (OD)	2(OH-IH)	Obstruction?
PAMS Shelter (N)	3.3 m	13.2 m	2.6 m	No
Tree (N)	25.6 m	78.5 m	44.2m	No
Tree (E)	22.3 m	72.9 m	37.6 m	No

Dripline should be >20 m from the dripline of tree(s) and must be 10 m from the dripline when the tree(s) act as an obstruction. For Horizontal and Vertical Distances: Separation Distance = (1 meter for O₃, CO, SO₂, NO₂) and (2 meters for PM, Pb) When probe is located on a rooftop, this separation distance is in reference to walls, parapets, or penthouses located on roof.

Are all probes at least 1 meter apart? Yes

Are all collocated low volume samplers between 1 to 4 meters apart? Yes

Are all collocated high volume samplers between 2 to 4 meters apart? N/A

Are all probes located in an area that is paved or has vegetative ground cover? Yes

Are all rooftop samplers located at least 2 meters away from any structure? Yes

Is there unrestricted air flow 270 degrees around the probe or sampler? Yes

What is the distance of the monitor site to the nearest road? 140 meters (Haley Rd)

What are the distances of the closest traffic counters to the monitor site? 352 meters (Mullins Station Rd.) & 2.4 kilometers (Interstate 240)

What are the AADT counts? 6,032 (Mullins Station Rd.-2024) & 175,769 (Interstate 240-2024)

Site Pictures for Shelby Farms NCore

Shelby Farms NCore (North)



Shelby Farms NCore (Northeast)



Shelby Farms NCore (East)



Shelby Farms NCore (Southeast)



Site Pictures for Shelby Farms NCore

Shelby Farms NCore (South)



Shelby Farms NCore (Southwest)



Shelby Farms NCore (West)



Shelby Farms NCore (Northwest)



Site Background and Discussion for Shelby Farms NCore

The Shelby Farms NCore site is located in Shelby County Tennessee and currently supports monitoring for carbon monoxide (trace), ozone, total reactive nitrogen (trace), sulfur dioxide (trace), particulate matter (PM_{2.5}; PM_{10-2.5} and PM₁₀), and meteorological data (ambient temperature, barometric pressure, relative humidity, wind direction and wind speed).

This site was established in 2011 and will continue to operate in CY's 2025 and 2026.

The placement of the NCore site is east of the urban core and provides the best location for measuring transport and secondary pollutant formation from that area. The site is located downwind of most of the industrialized areas and major transportation arteries.

The ozone monitor at the Shelby Farms-NCore site possesses the highest design value concentration among the 5 area ozone monitor sites (73 parts per billion 2022-2024).

The SCHD AMB began PAMS monitoring on June 1, 2021. The updated regulations in 40 CFR Part 58 Appendix D Section 5.0 promulgated in October 2015 prescribed the updates to the required PAMS monitoring. This was associated with the revision to the 8-hour ozone NAAQS. These revised regulations standardized the operation of the PAMS network at approximately 43 geographically separated PAMS required sites and required the measurement of a common list of pollutants and meteorological parameters. The updated regulations required PAMS monitoring at each NCore site within a CBSA having a population of 1,000,000 persons or more. To meet the requirements in the regulations promulgated in October 2015, all PAMS Required Sites were to be operational and reporting quality assured and validated data for the required parameters to the EPA's Air Quality System by June 1, 2019. Due to a number of issues related to the startup of PAMS, the new start date was postponed to June 1, 2021. The SCHD Air Monitoring Branch is currently collecting pollutant data as listed in the tables above. In addition to the previous parameters mentioned, the following descriptions and tables listed on the following pages on the following pages describe the pollutants that are measured at the NCore station to meet PAMS requirements as well as other parameters such as solar radiation, UV radiation and precipitation.

- The priority speciated VOCs (classified as olefin, aromatic, paraffin, halogenated, monoterpene olefin, alkyne, or alcohol) as well as the total non-methane organic carbon (TNMOC) are analyzed using the airmoVOC C6-C12 with the Lead Technical Specialist, airmoCAL, airmoVOC C2-C6, and Hydroxychrom – hydrogen generator manufactured by Chromatotec and provided by Consolidated Analytical Systems (CAS). Hourly averaged concentration of each priority speciated VOC are collected and reported. Samples are collected from June 1 through August 31. The inlet height is 4.1 m from the ground. The sample tubing is made of stainless steel and is attached to the side of the building. The stainless steel tubing is inside of conduit that is bent and 1 meter away from the side of the building. The instrument normally begins operation by June 1 and operates through the PAMS season (August 31). The gas chromatograph (GC) instrument operated normally during the 2024 PAMS season, but will not be operational during the 2025 season due to budget constraints. It is a Shelby County Health Department goal to acquire funding for the GC to be operational in the 2026 PAMS season.

**C. Shelby Farms PAMS,
Shelby County, TN**



Reporting Org. Name	Memphis/Shelby County Health Dept.	
PQAO	673	
Address	6388 Haley Rd.	
AQS ID	47-157-0075	
County Name	Shelby	
CBSA	32820	
Latitude	35.1518599	
Longitude	-89.8503803	
Parameter Code	42602	61301
Parameter Name	NO ₂	Mixing Height
Monitor Type	NCore (PAMS)	NCore (PAMS)
POC	1	1
Interval	1	1
Year	2025	2025
Collection Frequency	Hourly	Hourly
Method	212	128
FRM/FEM Monitoring Instrument	Teledyne Advanced Pollution Instrumentation T500U Nitrogen Dioxide Analyzer	Vaisala CL-51
Analysis	Chemiluminescence	Pulsed Diode LIDAR
Ref. Method ID	EQNA-0514-212	N/A
Monitor Objective Type	Population Exposure	Population Exposure
Dominant Source	Area	Area
Measurement Scale	Neighborhood and Urban Scale	Neighborhood and Urban Scale
Land Use Type	Industrial	Industrial
Location Setting	Urban	Urban
Date Site Established	20210601	20210601

C. Shelby Farms PAMS
Shelby County, TN



Reporting Org. Name		Memphis/Shelby County Health Dept.	
PQAO		673	
Address		6388 Haley Rd.	
AQS ID		47-157-0075	
County Name		Shelby	
CBSA		32820	
Latitude		35.1518599	
Longitude		-89.8503803	
Parameter Code	Mult.Parameters-see pg 30	43500	63301
Parameter Name	Multiple VOC Chemicals	Carbonyls	Solar Radiation
Monitor Type	NCore (PAMS)	NCore (PAMS)	NCore (PAMS)
POC	1	1	1
Interval	1	7	1
Year	2025	2025	2025
Collection Frequency	Hourly	1 in 3	Hourly
Method	N/A	N/A	011
FRM/FEM Monitoring Instrument	Chromatotec GC866 auto GC Analyzer	ATEC 8000 Cartridge Sampler	Eppley Precision Spectral Pyranometer (PSP)
Analysis	Gas Chromatography	Liquid Chromatography	Photovoltaic
Ref. Method ID	N/A	N/A	N/A
Monitor Objective Type	Population Exposure	Population Exposure	Population Exposure
Dominant Source	Area	Area	Area
Measurement Scale	Neighborhood and Urban Scale	Neighborhood and Urban Scale	Neighborhood and Urban Scale
Land Use Type	Industrial	Industrial	Industrial
Location Setting	Urban	Urban	Urban
Date Site Established	20210601	20210601	20210601

**C. Shelby Farms PAMS,
Shelby County, TN**



Reporting Org. Name	Memphis/Shelby County Health Dept.	
PQAO	673	
Address	6388 Haley Rd.	
AQS ID	47-157-0075	
County Name	Shelby	
CBSA	32820	
Latitude	35.1518599	
Longitude	-89.8503803	
Parameter Code	63302	65102
Parameter Name	UV Radiation	Rain/melt precipitation
Monitor Type	NCore (PAMS)	NCore (PAMS)
POC	1	1
Interval	1	1
Year	2025	2025
Collection Frequency	Hourly	Hourly
Method	011	014
FRM/FEM Monitoring Instrument	The Epply Laboratory Total Ultraviolet Radiometer	R.M Young Model 52202 Tipping Bucket Rain Gauge 0.1mm
Analysis	Radiospectrometry	Hourly Accumulation
Ref. Method ID	N/A	N/A
Monitor Objective Type	Population Exposure	Population Exposure
Dominant Source	Area	Area
Measurement Scale	Neighborhood and Urban Scale	Neighborhood and Urban Scale
Land Use Type	Industrial	Industrial
Location Setting	Urban	Urban
Date Site Established	20210601	20210601

Priority and Optional PAMS Chemical Parameters

Priority Chemical Parameters (Required)	AQS Parameter Code	Compound Class	Optional Chemical Parameters	AQS Parameter Code	Compound Class
1,2,3-trimethylbenzene	45225	aromatic	1,3,5-trimethylbenzene	45207	aromatic
1,2,4-trimethylbenzene	45208	aromatic	1-pentene	43224	olefin
1-butene	43280	olefin	2,2-dimethylbutane	43244	paraffin
2,2,4-trimethylpentane	43250	paraffin	2,3,4-trimethylpentane	43252	paraffin
^a acetaldehyde	43503	carbonyl	2,3-dimethylbutane	43284	paraffin
benzene	45201	aromatic	2,3-dimethylpentane	43291	paraffin
cis-2-butene	43217	olefin	2,4-dimethylpentane	43247	paraffin
ethane	43202	paraffin	2-methylheptane	43960	paraffin
ethylbenzene	45203	aromatic	2-methylhexane	43263	paraffin
ethylene	43203	olefin	2-methylpentane	43285	paraffin
^a formaldehyde	43502	carbonyl	3-methylheptane	43253	paraffin
isobutane	43214	paraffin	3-methylhexane	43249	paraffin
isopentane	43221	paraffin	3-methylpentane	43230	paraffin
isoprene	43243	olefin	^a acetone	43551	carbonyl
m&p-xylenes	45109	aromatic	acetylene	43206	alkyne
m-ethyltoluene	45212	aromatic	cis-2-pentene	43227	olefin
n-butane	43212	paraffin	cyclohexane	43248	paraffin
n-hexane	43231	paraffin	cyclopentane	43242	paraffin
n-pentane	43220	paraffin	isopropylbenzene	45210	aromatic
o-ethyltoluene	45211	aromatic	m-diethylbenzene	45218	aromatic
o-xylene	45204	aromatic	methylcyclohexane	43261	paraffin
p-ethyltoluene	45213	aromatic	methylcyclopentane	43262	paraffin
propane	43204	paraffin	n-decane	43238	paraffin
propylene	43205	olefin	n-heptane	43232	paraffin
styrene	45220	aromatic	n-nonane	43235	paraffin
toluene	45202	aromatic	n-octane	43233	paraffin
trans-2-butene	43216	olefin	n-propylbenzene	45209	aromatic
total non-methane organic carbon	43102	total VOCs, non-methane	n-undecane	43954	paraffin
			p-diethylbenzene	45219	aromatic
			trans-2-pentene	43226	olefin
			α -pinene	43256	monoterpene olefin
			β -pinene	43257	monoterpene olefin
			1,3 butadiene	43218	olefin
			^a benzaldehyde	45501	carbonyl
			carbon tetrachloride	43804	halogenated
			ethanol	43302	alcohol
			tetrachloroethylene	43817	halogenated

^acarbonyl sampler measurements

Site Evaluation Field Form

SITE NAME: SHELBY FARMS-PAMS

AQS Site ID: 47-157-0075 Location: 6388 Haley Rd.

Date: 05/07/2025

Evaluator: MJ

Ave. Site Coordinates: LATITUDE 35.1518599 LONGITUDE: -89.8503803

Monitoring Scale: Neighborhood

Pollutant	Sampler/Probe Inlet Height (IH in m)	Inlet Location	Horizontal Distance (m)	Vertical Distance (m)	Pass/Fail
PAMS Chemical Parameters (GC)	3.9 m	Back of Shelter	4.0 m		Pass
True NO ₂	3.8 m	Back of Shelter	1.2 m		Pass
Carbonyl	3.8 m	Back of Shelter	1.2 m		Pass

Object	Object Height (OH)	Object Distance (OD)	2(OH-IH)	Obstruction?
Tree (N)	25.6 m	58.1 m	43.6 m	No
Tree (E)	22.3 m	72.9 m	37.0 m	No

Dripline should be >20 m from the dripline of tree(s) and must be 10 m from the dripline when the tree(s) act as an obstruction.
 For Horizontal and Vertical Distances: Separation Distance = (1 meter for O₃, CO, SO₂, NO₂) and (2 meters for PM, Pb)
 When probe is located on a rooftop, this separation distance is in reference to walls, parapets, or penthouses located on roof.

Are all probes at least 1 meter apart? Yes

Are all collocated low volume samplers between 1 to 4 meters apart? N/A

Are all collocated high volume samplers between 2 to 4 meters apart? N/A

Are all probes located in an area that is paved or has vegetative ground cover? Yes

Are all rooftop samplers located at least 2 meters away from any structure? Yes

Is there unrestricted air flow 270 degrees around the probe or sampler? Yes

Note: Shelby Farms-NCORE shelter height is lower than all PAMS inlets. All driplines are >20m away.

What is the distance of the monitor site to the nearest road? 160 meters (Haley Rd.)

What are the distances of the closest traffic counters to the monitor site? 347 meters (Mullins Station Rd.) & 2.5 kilometers (Interstate 240)

What are the AADT counts? 6,032 (Mullins Station Rd.-2024) & 175,769 (Interstate 240-2024)

- Carbonyl sampling is conducted on a frequency of three sequential 8-hour samples on a one-in- three-day sample schedule ($3 \times 30 = \sim 90$ samples) per PAMS sampling season (June 1-August 31). The TO-11A method provided by ATEC is used to collect the samples. Samples were collected for the 2021-2024 PAMS seasons and will be collected for the 2025 PAMS season. The sample inlet probe height is 3.8 meters above ground level.
- The PAMS Shelter shares the same address as the NCore site building, but stands adjacent to the NCore building (less than 8 meters edge to edge, but not inlet to inlet).



Shelby Farms-PAMS (North)



Shelby Farms-PAMS (Northeast)



Shelby Farms-PAMS (East)



Shelby Farms-PAMS (Southeast)



Shelby Farms-PAMS (South)



Shelby Farms-PAMS (Southwest)



Shelby Farms-PAMS (West)



Shelby Farms-PAMS (Northwest)



**D. Macon Cove-SWTCC,
Near Road Monitoring Station, Shelby County, TN**



Reporting Org. Name	Memphis/Shelby County Health Dept.	
PQAO	673	
Address	5767 Macon Cove	
AQS ID	47-157-0100	
County Name	Shelby	
CBSA	32820	
Latitude	35.161264	
Longitude	-89.870646	
Parameter Code	42101	42602
Parameter Name	CO	NO ₂
Monitor Type	Near Road (SLAMS)	Near Road (SLAMS)
POC	1	1
Interval	1	1
Year	2025	2025
Collection Frequency	hourly	hourly
Method	093	099
FRM/FEM Monitoring Instrument	Teledyne Advanced Pollution Instrumentation, Inc. Model T300	Teledyne Advanced Pollution Instrumentation, Inc. Model T200
Analysis	Gas Filter Correlation	Chemiluminescence
Ref. Method ID	RFCA-1093-093	RFNA-1194-099
Monitor Objective Type	Highest Concentration	Highest Concentration
Dominant Source	Mobile	Mobile
Measurement Scale	Neighborhood and Urban Scale	Neighborhood and Urban Scale
Land Use Type	Residential	Residential
Location Setting	Urban	Urban
Date Site Established	20140715	20140701

**D. Southwest Tennessee Community College,
Near Road Monitoring Station, Shelby County, TN**



Reporting Org. Name	Memphis/Shelby County Health Dept.
PQAO	673
Address	5767 Macon Cove
AQS ID	47-157-0100
County Name	Shelby
CBSA	32820
Latitude	35.161264
Longitude	-89.870646
Parameter Code	88101
Parameter Name	PM _{2.5}
Monitor Type	Near Road (SLAMS)
POC	1
Interval	7
Year	2025
Collection Frequency	1 in 3
Method	118
FRM/FEM Monitoring Instrument	Thermo 2025I PM 2.5 Sequential Sampler
Analysis	Gravimetric
Ref. Method ID	RFPS-0498-118
Monitor Objective Type	Highest Concentration
Dominant Source	Mobile
Measurement Scale	Neighborhood and Urban Scale
Land Use Type	Residential
Location Setting	Urban
Date Site Established	20170101

Site Evaluation Field Form

SITE NAME: SOUTHWEST TENNESSEE COMMUNITY COLLEGE (Near Road)

AQS Site ID: 47-157-0100 Location: 5787 Macon Cv. Date: 05/08/25 Evaluator: MJ

Site Coordinates: LATITUDE 35.161264 LONGITUDE: -89.870646

Monitoring Scale: Neighborhood and Urban Scale

Pollutant	Sampler/Probe Inlet Height (IH in m)	Inlet Location	Horizontal Distance (m)	Vertical Distance (m)	Pass/ Fail
CO	4.3 m	roof	1.1 m		Pass
NO ₂	4.3 m	roof	1.1 m		Pass
PM _{2.5}	4.7 m	roof	2.1 m		Pass

Object	Object Height (OH)	Object Distance (OD)	2(OH-IH)	Obstruction?
Tree (S)	20.9 m	12.1 m	33.2	Yes
Treeline (N)	4.8 m	10.1 m	1.6	No

Dripline should be >20 m from the dripline of tree(s) and must be 10 m from the dripline when the tree(s) act as an obstruction. For Horizontal and Vertical Distances: Separation Distance = (1 meter for O₃, CO, SO₂, NO₂) and (2 meters for PM, Pb) When probe is located on a rooftop, this separation distance is in reference to walls, parapets, or penthouses located on roof.

Are all probes at least 1 meter apart? Yes

Are all collocated low volume samplers between 1 to 4 meters apart? Yes

Are all collocated high volume samplers between 2 to 4 meters apart? N/A

Are all probes located in an area that is paved or has vegetative ground cover? Yes

Are all rooftop samplers located at least 2 meters away from any structure? Yes

Is there unrestricted air flow 270 degrees around the probe or sampler? Yes

Comments: The tree to the south of the site is an obstruction, but it is >10 m away, and it is not between the site and Interstate 40. TDOT will be contacted to trim the treeline (N) before 2026.

What is the distance of the monitor site to the nearest road? 33 meters (Interstate 40)

What is the distance of the closest traffic counter to the monitor site? 1 kilometer (Interstate 40)

What is the AADT count? 181,281 (Interstate 40-2024)

Site Background and Discussion for Southwest TN Community College Near Road

The SWTCC Near Road site is located in Shelby County Tennessee and currently supports monitoring for carbon monoxide, nitrogen dioxide and particulate matter (PM_{2.5})

This site was established in 2014 and is expected to operate in CY's 2025 and 2026, but there are expected changes later in the year. See Appendix A.

The placement of the Near Road site is along Interstate 40 between Interstate 240/40 and Sycamore View. The exact location is on the south side of Interstate 40 on the northeast corner of Southwest Tennessee Community College's campus parking lot. This site was selected based on the six factors the EPA determined were necessary to capture short-term nitrogen dioxide (NO₂) concentrations near heavily trafficked roads, to assess area-wide (or community-wide) NO₂ concentrations, and to assess NO₂ concentrations for vulnerable and susceptible populations.

Site Pictures for Macon Cove (SWTCC) Near Road

Near Road (North)



Near Road (Northeast)



Near Road (East)



Near Road Southeast)



Site Pictures for Macon Cove (SWTCC) Near Road

Near Road (South)



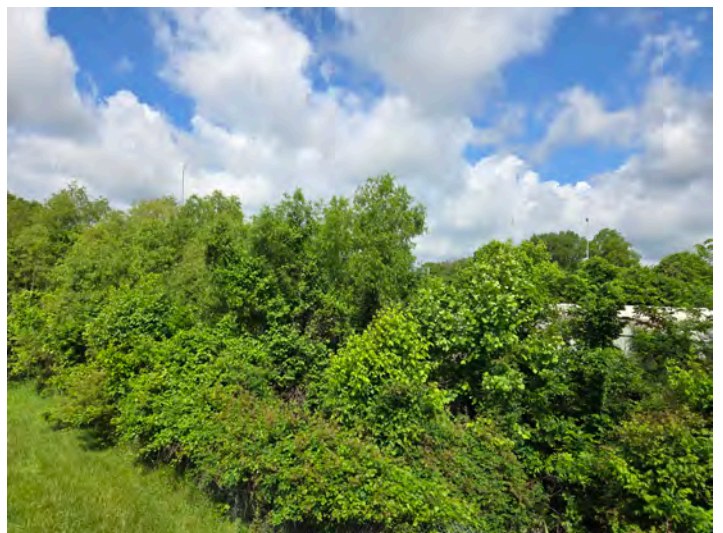
Near Road (Southwest)



Near Road (West)



Near Road (Northwest)



E. Edmund Orgill Park, Shelby County, TN



Reporting Org. Name	Memphis/Shelby County Health Dept.
PQAO	673
Address	6855 Mudville Rd.
AQS ID	47-157-1004
County Name	Shelby
CBSA	32820
Latitude	35.378065
Longitude	-89.834368
Parameter Code	44201
Parameter Name	Ozone
Monitor Type	SLAMS
POC	1
Interval	1
Year	2025
Collection Frequency	Hourly
Method	087
FRM/FEM Monitoring Instrument	Teledyne Advanced Pollution Instrumentation, Inc. Model T400
Analysis	Ultraviolet Absorption
Ref. Method ID	EQOA-0992-087
Monitor Objective Type	Population Exposure
Dominant Source	Area
Measurement Scale	Urban
Land Use Type	Agricultural
Location Setting	Rural
Date Site Established	19800201

Site Background and Discussion

The Edmund Orgill Park site is located in the City of Millington in Shelby County, Tennessee and currently supports monitoring for ozone.

This site was established in 1980 and is expected to operate during CY's 2025 and 2026.

Site Evaluation Field Form

Site Name: Edmund Orgill Park

AQS Site ID: 47-157-1004 **Location:** 6855 Mudville Rd. **Date:** 05/09/25 **Evaluator:** MJ

Site Coordinates: Latitude 35.378065 Longitude -89.834368

Monitoring Scale: Agricultural

Pollutant	Sampler/Probe Inlet Height (IH in m)	Inlet Location	Horizontal Distance (m)	Vertical Distance (m)	Pass/ Fail
O ₃	3.3 m	Back of building			Pass

Object	Object Height (OH)	Object Distance (OD)	2(OH-IH)	Obstruction?
Treeline (N)	12.0 m	28.1 m	17.4	No
Tree (E)	20.2 m	38.6 m	33.8	No
Tree (S)	23.5 m	86.4 m	40.4	No
Tree (W)	11.8 m	17.4 m	17.0	No

Dripline should be >20 m from the dripline of tree(s) and must be 10 m from the dripline when the tree(s) act as an obstruction. For Horizontal and Vertical Distances: Separation Distance = (1 meter for O₃, CO, SO₂, NO₂ and (2 meters for PM, Pb) When probe is located on a rooftop, this separation distance is in reference to walls, parapets, or penthouses located on roof.

Are all probes at least 1 meter apart? Yes

Are all collocated low volume samplers between 1 to 4 meters apart? N/A

Are all collocated high volume samplers between 2 to 4 meters apart? N/A

Are all probes located in an area that is paved or has vegetative ground cover? Yes

Are all rooftop samplers located at least 2 meters away from any structure? Yes

Is there unrestricted air flow 270 degrees around the probe or sampler? Yes

What is the distance of the monitor site to the nearest road? 27 meters (Mudville Rd)

What are the distances of the closest traffic counters to the monitor site? 1.65 kilometers
(Mudville Rd) & 2.4 kilometers (U.S. Hwy 51)

What are the AADT counts? 1,493 (Mudville Rd-2024) & 22,794 (U.S. Hwy 51-2024)

Site Pictures for Edmund Orgill Park

Edmund Orgill Park (North)



Edmund Orgill Park (Northeast)



Edmund Orgill Park (East)



Edmund Orgill Park (Southeast)



Site Pictures for Edmund Orgill Park

Edmund Orgill Park (South)



Edmund Orgill Park (Southwest)



Edmund Orgill Park (West)



Edmund Orgill Park (Northwest)



Shelby County Geography and Climatology

Shelby County Geography

Shelby County, the largest county in area in Tennessee covers an area of 760.55 square miles or 486,752 acres (<https://www.census.gov/quickfacts/fact/table/shelbycountytennessee,US/PST045222>). The 2024 population estimate (July 1, 2024) from the U.S. Census for Shelby County is 910,530 (<https://www.census.gov/quickfacts/fact/table/shelbycountytennessee,US/PST045223>). The estimated population density of Shelby County is 1222.5 people per square mile. The elevation ranges from 185 above mean sea level (MSL) along the islands in the Mississippi River in the southern portion of the county to about 416 feet above MSL in the rolling hills of the southeastern area of Shelby County. Bluffs that are located in the western area of the county near the Mississippi River are derived from the wind-driven buildup of silt, sand, and clay known as loess, and are approximately 250 feet above MSL. The central region of the county is located on an ancient alluvial plain, a mostly flat area consisting of several layers of silt, sand, gravel, and clay, approximately 300-320 feet above MSL. The eastern area of the county consists of gentle, rolling hills, approximately 340-400 feet above MSL. The largest city within Shelby County is Memphis with a population of 618,639 and a population density of 2131.8 per square mile. Other cities and towns within Shelby County include Millington (11,467); Bartlett (56,030); Lakeland (14,147); Arlington (15,305); Collierville (51,317); and Germantown (40,267).

All city populations and population density estimates were official U.S. Census estimates from 2023 and were obtained using the QuickFacts Table from <https://www.census.gov/quickfacts/fact/table/shelbycountytennessee/PST045223>. The 2024 estimates were unavailable at the time of this report.

Shelby County Climatology

Like most of the Southeast U.S. and southern Mid-Atlantic states, Shelby County, TN falls within the humid subtropical climate zone (Cfa on the Köppen Climate Classification). This can be described as hot, humid summers with mild to cool winters. Using the latest 30-year climate data set (1991-2020) obtained by the National Climatic Data Center (**Note:** The new 1991-2020 climate data set showed warming temperatures and more precipitation (more rainfall, but less snowfall) when compared to the 1981-2010 climate data set), the normal conditions are as follows:

Coldest Month: January (avg max temp=50.9 degrees F; avg min temp=33.3 degrees F)

Warmest Month: July (avg max temp=91.9 degrees F; avg min temp=73.6 degrees F)

Yearly Precipitation Normal: 54.94 inches (52.24 inches of rainfall and 2.7 inches of snowfall)

Wettest Months: December and March-May (avg of 5.49, 5.74, 5.87 and 5.27, respectively)

Driest Months: August-September (avg of 3.37 and 3.03 inches, respectively)

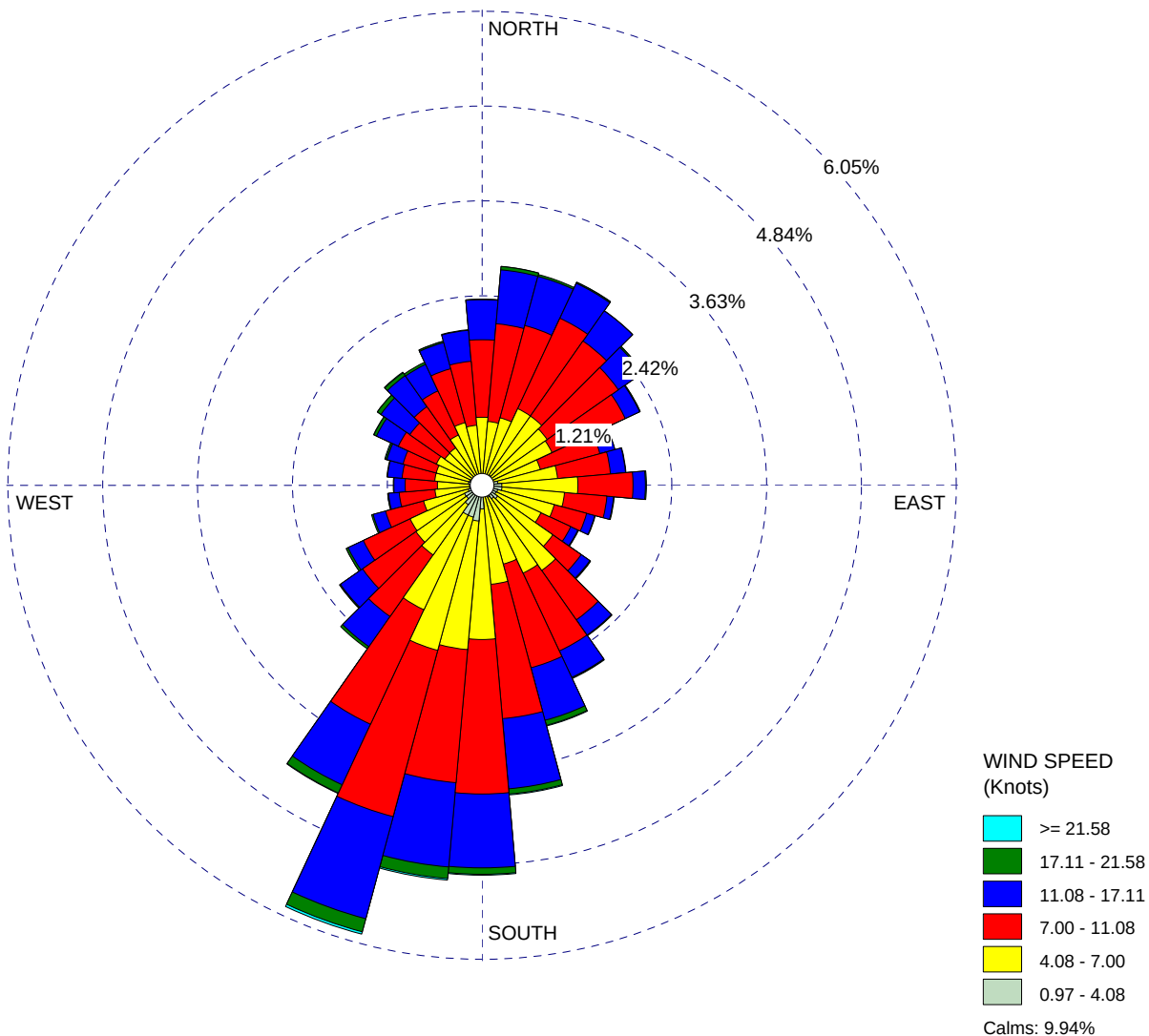
Wind direction is most prevalent from the south to southwest (see wind rose data)

Most frontal activity occurs in the Spring and Autumn. Summer experiences lower humidity at the start of the season with higher humidity levels starting by early to mid-July as the Bermuda High pressure system pulls warm, moist air into the lower Mississippi Valley from the Gulf of Mexico. Localized thunderstorms are common in the afternoon. By September, the humidity begins to lower as the Bermuda high breaks down. Winters are usually mostly mild with periods of very cold air. Severe weather is most common in the Spring, but can occur any time of year.

WIND ROSE PLOT:

Station #13893 - MEMPHIS/INT'L ARPT, TN

DISPLAY:

Wind Speed
Direction (blowing from)

COMMENTS:

Almost all missing data are variable winds-3.75% (1646 obs). Actual missing winds are 0.20% (87 obs). The other percentages are based on total obs (as shown in the box on the right) excluding the combined variable winds and missing observations (1733 obs). Actual percentages are available upon request.

DATA PERIOD:

Start Date: 1/1/2020 - 00:00
End Date: 12/31/2024 - 23:00

COMPANY NAME:

MODELER:

CALM WINDS:

9.94%

AVG. WIND SPEED:

6.89 Knots

TOTAL COUNT:

42107 hrs.

DATE:

5/13/2025

PROJECT NO.:

2020-24-KMEM-WR

VI. Local Programs Submittals of Ambient Monitoring Plan

Memphis Air Monitoring Plan

These documents are provided as submitted by the respective monitoring agency for use by the state in updating the overall ambient monitoring plan document.

- A. Memphis Air Monitoring Plan (with expected changes)
 - 1. PM_{2.5} Collocation at Shelby Farms NCore site
 - 2. PM_{2.5} Collocation at Alabama Ave. site
 - 3. Continuous PM_{2.5} FEM sampling
 - 4. PAMS at Shelby Farms NCore site
 - 5. Monitors/pollutants reporting to the EPA AirNOW Program (Forecasting Program)
 - 6. Future South Memphis Air Monitoring Site
- B. Shelby County Air Pollution Active Sites 2025

A. Memphis Air Monitoring Plan

Shelby County Health Department Air Pollution Control Program

Network Review

2025

An assessment of the Shelby County Health Department's (SCHD) ambient air monitoring network has been conducted. The SCHD Air Monitoring Branch has evaluated each air monitoring site according to the requirements and provisions as required by the Code of Federal Regulations 40, Parts 50, 53, and 58 and have concluded that the number and locations of the monitors in our network comply with the CFR provisions. In some areas of the network, more monitors are operating than required. Therefore, the SCHD is forwarding the enclosed documents with the pertinent air monitoring site information so that the contents may be incorporated into the State of Tennessee's Monitoring Network plan to EPA.

Summary of the SCHD air monitoring network include the following:

1. PM_{2.5} Collocation at the Shelby Farms NCore station

40 CFR 58.12 (d) (2) states that all FRMs at the NCore sites must minimally operate on a 1-in-3 day sampling frequency. This includes the collocated samplers. The SCHD AMB began the operation of a Teledyne T640x FEM sampler on January 1, 2021 at the Shelby Farms NCore station. A Thermo 2025i FRM sampler has operated on a 1-in 3-day sampling schedule on January 1, 2021 to meet collocation requirements. Although the Teledyne T640x continues to report data for PM_{2.5} (88101), PM₁₀ (81102), and PM Coarse (86101), the PM_{2.5} (88101) data has been granted a 2-year NAAQS exclusion (10/26/2023 through 10/25/2025) due to high bias and ratio that were discovered upon using the EPA PM_{2.5} Continuous Monitor Comparability Assessment. Significant bias began after the SCHD installed the Teledyne firmware update to the T640x on 10/25/2023. After many attempts to correct the issue, the instrument (#960) was replaced by a new T640x (#2109) on 12/17/2024. The co-located FRM instrument will be the primary monitor for Shelby Farms for NAAQS inclusion.

2. PM_{2.5} Collocation at the Alabama Ave. station

The SCHD AMB operates 2 FRM PM_{2.5} Thermo 2025i samplers. The POC 1 sampler operates on a 1-in 3- day schedule and the POC 2 sampler operates on a 1- in 12- day schedule to meet collocation requirements. The POC 1 sampler began operating on January 1, 2017. The POC 2 collocated sampler began operating on January 1, 2021 when the collocated FRM sampler at Shelby Farms was replaced with a T640x. Future plans for 2025 include the addition of a T640x monitor and shutdown of the POC-2 PM_{2.5} sampler. See paragraph below.

3. Continuous PM_{2.5} FEM sampling

The SCHD AMB continues to operate 3 FRM samplers in the network. The goal for the 2025-2026 season is to add a Teledyne-API T640x FEM sampler at the Near Road site while keeping the filter-based 2025i as an FRM filter-based co-located PM 2.5 sampler. Also, the 1-in-12 co-located sampler and the FEM PM₁₀ will be replaced with a Teledyne T640x sampler at the Alabama Ave. station. This will leave the FRM PM_{2.5} sampler at NCore running at a 1-in-3 schedule co-located adjacent to the T640x sampler.

4. PAMS at the Shelby Farms NCore site

Based on 40 CFR Part 58, Appendix D, State air monitoring agencies are required to begin making PAMS measurements at their NCore location(s) by June 1, 2019. An extension was granted and was effective on February 7, 2020 delaying the start date for PAMS monitoring to June 1, 2021. The SCHD has been collecting PAMS-related data since June 1, 2021 on a seasonal basis (PAMS season runs from June 1-August 31). The pollutants measured are True NO₂, carbonyl, VOCs, cloud mixing height (using a ceilometer) and the meteorological data ambient temperature, barometric pressure, relative humidity, wind direction, and wind speed which were previously measured at the Shelby Farms NCore station prior to 2021. In addition, SCHD AMB began measuring solar radiation, UV radiation and precipitation prior to the start of the 2022 PAMS season.

5. Monitors/pollutants reporting to the EPA AirNOW Program (Forecasting Program)

The following Shelby County ambient air monitoring sites (with the participating air pollutants) are included in the EPA AirNOW Program and the Shelby County Health Department AirNOW Forecasting Program:

Edmund Orgill Park-Ozone

Frayser-Ozone

Shelby Farms (NCore)-Ozone, PM 2.5 (T640x)

The planned changes to Alabama Ave. and Macon Cove-SWTCC (Near Road) in the 2025-2026 season will allow these sites to be added to the AirNOW/Forecasting Programs for PM 2.5. The SCHD will notify our EPA Region 4 representative and these sites will be updated on the AirNOWTech website to reflect the changes when the instruments have been installed, quality-checked, and determined to be operating properly.

6. Future South Memphis Air Monitoring Site

The Shelby County Health Department (SCHD) received funding from the EPA to add a 6th air monitoring site in Shelby County. South Memphis is the planned location for the site, as the area has lacked air monitors for over a decade. The proposed site will be named Riverview and will contain carbon monoxide and ozone monitors. Details can be found in appendices A and B in this document.

B. 2023 Shelby County Active Sites

Shelby County Health Department Active Sites	Pollutant	Monitor	AQS ID
416 Alabama	PM _{2.5} (1 in 3 day) PM _{2.5} (1 in 12 day) PM ₁₀ continuous	Thermo Environmental 2025 and 2025I Sequential PM 2.5 Thermo TEOM 1405- PM10	47-157-0024
6855 Mudville (Edmund Orgill Park)	O ₃ continuous	Teledyne API T400	47-157-1004
1330 Frayser	O ₃ continuous	Teledyne API T400	47-157-0021
6388 Haley Rd.	CO (trace) continuous SO ₂ (trace) continuous NO _y (trace) continuous O ₃ continuous PM _{2.5} (1 in 3 day) PM _{2.5} , PM ₁₀ , PM ₁₀ -2.5 continuous PM _{2.5} Speciation (1 in 3 day) Carbon (1 in 3 day) Wind Speed Wind Direction Ambient Temperature Relative Humidity Barometric Pressure NO ₂ continuous Carbonyl (1 in 3) autoGC (continuous) Solar Radiation Ultraviolet Radiation Rainfall	Teledyne T300U Teledyne T100U Teledyne T200U Teledyne T400 Thermo 2025i PM 2.5 Teledyne T640x Met One Super SASS URG 3000 RM Young RM Young RM Young RM Young RM Young Climatronics Teledyne API T500U ATEC 8000 Chromatotec (CAS) CG-866 Epply Laboratory RM Young	47-157-0075
5767 Macon Cv.	CO Continuous NO ₂ Continuous PM _{2.5} (1 in 3 day)	Teledyne API T300 Teledyne API T200 Thermo Environmental 2025I Sequential	47-157-0100

VII. Appendix

- A. Proposed Future Riverview Site Statement of Purpose
- B. Proposed Future Riverview Background, Discussion & Site Evaluation Form with Site
- C. Pictures Cover Letter for Memorandum of Agreement for Memphis, TN-MS-AR
- D. Memorandum of Agreement for Memphis, TN-MS-AR

Appendix A: South Memphis-Proposed Riverview Site Statement of Purpose

The Shelby County Air Monitoring Network extends from central-western Shelby County near downtown to the eastern half of the county with two other sites toward the northern portion of Shelby County. Historically, there were several air pollution monitors in the southern and southwestern portion of the county, but there has been a lack of data in the southern part of Shelby County for more than a decade. In addition, the southern portion of Shelby County has several large point and area sources. The absence of pollution data that affects hundreds of thousands of Shelby County residents is extremely concerning to the Shelby County Health Department as well as the citizens of the affected area.

The Shelby County Health Department is requesting permission from the U.S. Environmental Protection Agency to install a new air monitoring station at 216 Joubert Avenue, Memphis, Tennessee 38109 adjacent to Riverview Park, Riverview Elementary School, and Vision Preparatory Charter School in Southwest Memphis. The site is located on public land owned by Shelby County and the city of Memphis with the shelter located approximately 35 meters west of a former temporary shelter that contained a special purpose monitor that operated on the property from approximately 2007-2010.

This monitoring site will be located approximately .33 miles (525 m) east of Interstate 55, a high-volume interstate highway and approximately 1.6 miles (2.6 km) north-northeast of a large, high-volume rail yard. There are dozens of major and synthetic minor sources within a 3-mile radius of the site including a large refinery (.75 miles or 1.2 km southwest of the air monitoring site). Within a 6-mile (9.66-km) radius, there are many more point and area sources.

With so many point and area sources within a tight radius of the Riverview site, the immediate area surrounding the property is mostly residential. Without any air pollution data, the residents of this neighborhood and many similar adjacent neighborhoods have a desperate need to understand the air quality and the possible underlying health effects.

The Shelby County Health Department proposes installing a shelter housing an ozone monitor and a carbon monoxide monitor at the Riverview site (see Appendix B-page 57 for details). Historically, the Shelby County Health Department placed monitoring sites downwind of many of these industrial and high traffic areas to most efficiently capture the transported pollutants per EPA guidelines. The prevailing winds move mostly from a vector range of south to southwest in the Memphis metropolitan area with the air monitoring sites strategically placed (see image).

However, there are instances where the winds are calm or light and variable when high pressure can create air stagnation. These situations are a focal point of this endeavor. In addition, winds from a vector range of north-northwest to east-southeast move approximately 1/3 of the time for a five-year period (see wind rose 2020-2024), which would allow emissions from other parts of the metro area to reach the Riverview location. The SCHD submits that the siting and operation of the Riverview site meets the requirements of 40 CFR Part 58, Appendices A, C, D, and E.

The Shelby County Health Department is proposing that the Riverview air monitoring site be designated as a population exposure SLAMS monitor intended to characterize pollutant concentrations affecting those in SW Shelby County as stated in 40 CFR Part 58 App D 1.1.1 (b) (c). The data from these monitors will be collected, quality assured, and reported to the AQS database in accordance with 40 CFR Part 58 App A as well as the SCHD QAPP and SOPs. The minimum monitoring requirements under 40 CFR Part 58 App D had already been previously met for all pollutants prior to this network modification proposal (expansion).

The target period for the proposed Riverview air monitoring site to become operational is May-June 2026 depending on instrument installation, network configuration, and quality assurance that the instruments are operating properly and the data is within the acceptable range per 40 CFR Part 58 App A, as well as the SCHD QAPP and SOPs. This network modification will be made available for a 30-day public review and comment in accordance with 40 CFR 58.10 with the goal to publish the public notice in the 2nd or 3rd week of March 2026.

The Shelby County Health Department believes it is crucial to gain a better understanding of the air pollution in southwest Memphis, when stagnant air or other locally transported emissions may be catalysts for the rapid increase of air pollution concentrations over prolonged periods.

Ozone

The Shelby County Health Department operates and maintains 3 of the 5 Memphis metropolitan area ozone monitors. The other monitoring sites are operated and maintained by the Arkansas Department of Energy and Environment- Department of Environmental Quality and the Mississippi Department of Environmental Quality.

Currently, the closest ozone monitor to the new proposed Riverview site is located at the Frayser (47-157-0021) site. Frayser is in the western part of the northern half of Shelby County at approximately 8.9 miles (14.3 km) north-northeast of the proposed Riverview site. The Frayser site is in a residential neighborhood approximately 1.7 miles (2.7 km) north of Interstate 40.

The next closest ozone monitor is the Marion (05-035-0005) site located across the Mississippi River in Marion, Arkansas (Crittenden County) approximately 9.9 (15.9 km) miles northwest of the proposed Riverview site. The Marion site is on the Marion High School property adjacent to a residential neighborhood. It is located approximately 0.4 miles (0.67 km) east of Interstate 55.

The Shelby Farms (47-157-0075) site, which houses NCore and PAMS equipment, is in the central part of the eastern half of Shelby County and approximately 13 miles (21 km) east-northeast of the proposed Riverview site. It is located within a large urban park setting near a prison close to a local road intersection that experiences some morning and afternoon rush hour traffic. It is approximately 1.1 miles (1.8 km) south-southeast of Interstate 40 and 1.4 miles northeast of the Interstate 240 loop.

The Hernando (28-033-0002) ozone monitoring site located in Hernando, Mississippi (DeSoto County) is on the property Hernando High School near the town square. Some local traffic will occur during morning and afternoon rush hour, but as the town is considered small, there would likely be minor effects on the monitor. The Hernando site is approximately 19.6 miles south-southeast (31.5 km) of the proposed Riverview site. It is approximately 0.7 miles (1.1 km) west of Interstate 55. The Hernando ozone site has been the only site south of the Memphis industrial complex and on-road network. The Shelby County Health Department has referred to the Hernando site as an indicator of potential ozone impacts for the south part of Shelby County with the realization that the accuracy would be low due to distance issues.

The Edmund Orgill Park (47-157-1004) monitor in Millington, Tennessee would be the furthest ozone monitor from the proposed Riverview site at 23.6 miles (38 km) north-northeast of the proposed Riverview site. It is located at Edmund Orgill Park, a large town park with a golf course. The adjacent area is mostly rural with some residential areas in the vicinity.

The Memphis area ozone monitoring network was described to illustrate the need for an ozone monitor in the southwest Shelby County. As there are no representative monitoring sites, the network fails to capture the ozone concentration data in a heavily populated area within proximity to major industrial point sources as well as road/highway/rail/marine/air networks with frequent heavy traffic issues. In addition, an ozone monitor in southwest Shelby County would be able to capture ozone concentration during periods when north and/or northeasterly winds were present. Although Shelby Farms can occasionally capture data likely originating from Interstate 40 when northeast winds are present, the proposed Riverview site would have a more accurate representation of the true emissions as it would be downwind of a significant amount of city and county emissions.

Carbon Monoxide

Shelby County has the largest local air monitoring network in Tennessee, but there are gaps that need to be filled. The Shelby County Health Department realized the proximity of the industrial sources and large transportation (road/interstate highway/rail/marine/air sectors) to the proposed Riverview site revealed a critical lack of air pollution data in a densely populated residential area. A carbon monoxide (CO) monitor at the proposed Riverview site may bring a better understanding of how transportation and industrial emissions affect this area.

Currently, there are only two other CO monitors in the Memphis metropolitan area. Both are in the central portion of the eastern half of Shelby County and are near each other.

The Macon Cove-Near Road-SWTCC (47-157-0100) site is the closest site to the proposed Riverview site approximately 12.2 miles (19.6 km) east-northeast of the proposed Riverview site. The Near Road site is located on Macon Cove on the campus of Southwest Tennessee Community College and adjacent to Interstate 40 (approximately 55 feet or 16.7 meters southwest of the highway). This location is also approximately 1 mile (1.6 km) northeast of the junction of Interstate 40 and Interstate 240 in northeast Memphis. Although traffic can be heavy in this area (especially during AM and PM rush hours), there are no major industrial sources in the vicinity.

The Shelby Farms (47-157-0075) site, containing NCore and PAMS equipment, is in the central part of the eastern half of Shelby County and approximately 13 miles (21 km) east-northeast of the proposed Riverview site. It is located within a large urban park setting near a prison and close to a local intersection that experiences some morning and afternoon rush hour traffic. It is approximately 1.1 miles (1.8 km) south-southeast of Interstate 40 and 1.4 miles northeast of the Interstate 240 loop.

As Shelby Farms is an NCore site, all criteria pollutants must be sampled at the site. The Near Road site also requires the sampling of CO at this location capturing highway vehicle emissions. A CO monitor was located at the Alabama Avenue (47-157-0024) site in the western part of Shelby County just north-northeast of downtown Memphis through 2016 but shut down as it did not meet siting requirements of the national Near Road Network that was established by the EPA.

Similar to the Memphis area ozone monitoring network, the Memphis area carbon monoxide network was established to capture carbon monoxide emissions downwind from the point and area sources relying on the prevailing wind vector range of south to southwest. This does not represent densely populated areas such as southwest Memphis that are in proximity to a combination of heavy industry, large rail yards, interstate traffic, and other area sources. It is imperative to understand the air pollution concentrations in this portion of Shelby County where no data exists. The mission of the Shelby County Health Department is to protect the health and well-being of our citizens. This Statement of Purpose demonstrates our efforts to fulfill our mission.

Appendix B: Proposed Riverview Site, Shelby County, TN



Reporting Org. Name	Memphis/Shelby County Health Dept.	
PQAO	0673	
Address	216 Joubert Avenue	
AQS ID	47-157-0010	
County Name	Shelby	
CBSA	32820	
Latitude	35.095556	
Longitude	-90.070278	
Parameter Code	42101	44201
Parameter Name	Carbon Monoxide (CO)	Ozone (O3)
Monitor Type	SLAMS	SLAMS
POC	1	1
Interval	1	1
Year	2026	2026
Collection Frequency	hourly	hourly
Method	093	087
FRM/FEM Monitoring Instrument	Teledyne Advanced Pollution Instrumentation, Inc. Model T300	Teledyne Advanced Pollution Instrumentation, Inc. Model T400
Analysis	Gas Filter Correlation	Ultraviolet Absorption
Ref. Method ID	RFCA-1093-093	EQOA-0992-087
Monitor Objective Type	Population Exposure	Population Exposure
Dominant Source	Area	Area
Measurement Scale	Neighborhood and Urban Scale	Neighborhood and Urban Scale
Land Use Type	Residential	Residential
Location Setting	Urban	Urban
Date Site Established	TBD	TBD

Site Evaluation Field Form

SITE NAME: Riverview

AQS Site ID: 47-157-0010 Location: 216 Joubert Ave. Date: 05/20/25 Evaluator: MJ

Site Coordinates: LATITUDE 35.095556 LONGITUDE -90.070278

Monitoring Scale: Neighborhood and Urban Scale

Pollutant	Sampler/Probe Inlet Height (IH in m)	Inlet Location	Horizontal Distance (m)	Vertical Distance (m)	Pass/Fail
CO	4.0 m (est.)	Roof	1.5 m (est.)		Pass
O ₃	4.0 m (est.)	Roof	1.5 m (est.)		Pass

Object	Object Height (OH)	Object Distance (OD)	2(OH-IH)	Obstruction?
Tree E	19.5 m	34.4 m	31.0 m	No
Tree SE	21.3 m	37.2 m	34.6 m	No

Dripline should be >20 m from the dripline of tree(s) and must be 10 m from the dripline when the tree(s) act as an obstruction. For Horizontal and Vertical Distances: Separation Distance = (1 meter for O₃, CO, SO₂, NO₂) and (2 meters for PM, Pb) When probe is located on a rooftop, this separation distance is in reference to walls, parapets, or penthouses located on roof.

Are all probes at least 1 meter apart? N/A

Are all collocated low volume samplers between 1 to 4 meters apart? N/A

Are all collocated high volume samplers between 2 to 4 meters apart? N/A

Are all probes located in an area that is paved or has vegetative ground cover? Yes

Are all rooftop samplers located at least 2 meters away from any structure? Yes

Is there unrestricted air flow 270 degrees around the probe or sampler? Yes

What is the distance of the monitor site to the nearest road? 90 meters (Pretoria Ave)

What are the distances of the closest traffic counters to the monitor site? 324 m (Kansas St) & 563 m (I-55)

What are the AADT counts? 2,116 (Kansas St-2024) & 68,949 (Interstate 55-2024)

Riverview (North)



Riverview (Northeast)



Riverview (East)



Riverview (Southeast)



Riverview (South)



Riverview (Southwest)



Riverview (West)



Riverview (Northwest)



Proposed Future Riverview Background and Discussion

After receiving the concerns of many citizens in early 2024, Shelby County Mayor Lee Harris contacted the Shelby County Health Department (SCHD) requesting that an additional air monitoring site be constructed and placed in South Memphis. The citizens' concerns included the lack of any air pollution data in the southern portion of Shelby County. The Shelby County Health Department applied for the Federal Inflation Reduction Act (IRA) Grant to fund the project. After receiving the IRA grant award (with most of the funds directed toward the Riverview site), the SCHD proposed that the site contain a carbon monoxide monitor and an ozone monitor.

Several locations were discussed, but the most appropriate site was determined to be on a parcel of land at 216 Joubert Ave. adjacent to Riverview Elementary/Middle School and Vision Preparatory Charter School, and Riverview Park in Southwest Memphis (38109 zip code). This location had previously housed a temporary Special Purpose Monitor in the late 2000s that was used in an air toxics study by The University of Memphis. The SCHD requests the original Riverview site AQS ID be used for the future site (47-157-0010). Originally there was concern that nitrogen from the nearby sources from the vector range of south to northwest might titrate ozone at the site. Upon further review and discussion, the idea that there is no true Shelby County representation for ozone data when winds are moving from a vector range of north to east made a strong argument for the Riverview site location regarding both neighborhood and urban scale measurement.

The site is approximately 1/3-mile east of Interstate-55, a high-traffic volume interstate highway. There are many major and minor industrial point sources along with a large, high-volume railyard and the Port of Memphis within a 3-mile radius. Aside from the schools and the park, the monitoring site is also surrounded by a large residential community. These factors made the Riverview site an optimal location to understand the air quality for the citizens in southwest Memphis.

The Shelby County Health Department is proposing that the Riverview air monitoring site be designated as a population exposure SLAMS monitor intended to characterize pollutant concentrations affecting those in SW Shelby County as stated in 40 CFR Part 58 App D 1.1.1 (b) (c). The data from these monitors will be collected, quality assured, and reported to the AQS database in accordance with 40 CFR Part 58 App A as well as the SCHD QAPP and SOPs.

The minimum monitoring requirements under 40 CFR Part 58 App D had already been previously met for all pollutants prior to this network modification proposal (expansion).

This network modification will be made available for a 30-day public review and comment in accordance with 40 CFR 58.10 with the goal to publish the public notice in the 3rd week of March 2026.

Both the carbon monoxide and ozone monitors will run continuously reporting hourly average concentration data. The carbon monoxide monitor will operate year-round, but the ozone monitor will operate during the months of ozone season (March-October).

The target period for the proposed Riverview air monitoring site to become operational is May-June 2026 depending on site completion, instrument installation, network configuration, and quality assurance that the instruments are operating properly with data that is within the acceptable range (per 40 CFR Part 58 App A, as well as the SCHD QAPP and SOPs). The total cost of the site will be determined upon completion.



LEE HARRIS
MAYOR

SHELBY COUNTY HEALTH DEPARTMENT



Public Health
Prevent. Promote. Protect.
Shelby County Health Department

MICHELLE A. TAYLOR, MD DRPH, MPA
HEALTH DIRECTOR & OFFICER

May 12, 2025

Ms. Michelle Walker Owenby, Air Director
Tennessee Department of Environment and Conservation Air Pollution Control Division
Davy Crockett Tower
500 James Robertson Parkway, 7th Floor
Nashville, Tennessee 37243

Mr. Jaricus Whitlock, P.E., Chief, Air Division
Mississippi Department of Environmental Quality
Office of Pollution Control
P.O. Box 2261
Jackson, Mississippi 39225

Demetria Kimbrough, Associate Director, Office of Air Quality
Division of Environmental Quality
Arkansas Department of Energy and Environment
5301 Northshore Drive
North Little Rock, AR 72118

Dear All,

In accordance with the provisions of the Memorandum of Agreement (MOA) signed in May and June of 2008 between the Shelby County Health Department (SCHD), Mississippi Department of Environmental Quality (MDEQ), and the Arkansas Department of Energy and Environment-Division of Environmental Quality (DEQ), this letter serves as a notification that each respective agency in the MOA have been contacted by the SCHD. Although no changes have occurred, there are a few planned changes later in the year (see chart below) within the SCHD and DEQ portions of the network. With this MOA, all agencies are meeting EPA monitoring requirements.

If you have any questions, please call me at (901) 222-9193.

Sincerely,

Kasia Smith Alexander
Bureau Director, Environmental Health and Sustainability Bureau
Shelby County Health Department

Mission

To promote, protect and improve the health of ALL in Shelby County.

814 Jefferson Avenue ♦ Memphis, TN 38105 ♦ 901 222-9000 ♦ www.shelbytnhealth.com

**MEMORANDUM OF AGREEMENT
ON AIR QUALITY MONITORING FOR CRITERIA
POLLUTANTS FOR
THE MEMPHIS, TN- MS- AR
METROPOLITAN STATISTICAL AREA (MSA)**

Participating Agencies:

Shelby County Health Department (SCHD)
Air Pollution Control Program

Mississippi Department of Environmental Quality (MDEQ)
Office of Pollution Control, Air Division

Arkansas Department of Energy and Environment
Division of Environmental Quality (DEQ)

PURPOSE / OBJECTIVE / GOALS

The purpose of this Memorandum of Agreement (MOA) is to inform the entities of the Memphis, Tennessee-Mississippi-Arkansas Metropolitan Statistical Area of monitoring network changes. The MOA between SCHD, MDEQ, and DEQ is to collectively meet United States Environmental Protection Agency (EPA) minimum monitoring requirements for particles of an aerodynamic diameter of 10 micrometers and less ($PM_{2.5}$), and ozone; as well as other criteria pollutants air quality monitoring deemed necessary to meet the needs of the MSA as determined reasonable by all parties. This MOA will formalize and reaffirm the collective agreement in order to provide adequate criteria pollutant monitoring for the Memphis, TN-MS-AR MSA as required by 40 CFR 58 Appendix D, Section 2, (e).

PM_{2.5} MSA monitoring network include:

<u>County</u>	<u>Federal Referenced Method PM_{2.5}</u>	<u>Federal Equivalent Method PM_{2.5}</u>	<u>Continuous PM_{2.5}</u>	<u>Speciation PM_{2.5}</u>	<u>Collocated PM_{2.5}</u>
Shelby County, TN SCHD	4 (includes 2 at Alabama, 1 at NCore, and 1 at the Near Road station*)	3*		1	2
Crittenden County, AR DEQ	1		1**		
DeSoto County, MS MDEQ		1			

*The SCHD plans to replace one FRM PM_{2.5} samplers with a T640x at Alabama Ave, later this year. Plans also include adding a T640x at Near Rd site.

**The DEQ has plans to replace a broken TEOM later this year at the Marion, AR site.

Criteria Air Pollutant MSA monitoring network include:

<u>County</u>	<u>PM₁₀</u>	<u>PM_{10-2.5}</u>	<u>O₃</u>	<u>NO_x/NO_y/NO/NO₂</u>	<u>CO</u>	<u>SO₂</u>
Shelby County, TN SCHD	4 (1TEOM at Alabama Ave., 3-T640x at NCore, Near Rd., & Alabama Ave***.	1	3	3 (includes 1 NO/NO ₂ /NO _x at Near Road Station, 1 NO/NO _y (trace) at NCore/, 1 True NO ₂ (trace) at NCore-PAMS)	2 (includes 1 trace at NCore and 1 at the Near Road Station)	1 (trace at NCore)
Crittenden County, AR DEQ			1	1		
DeSoto County, MS MDEQ			1			

***The SCHD plans to replace the continuous PM₁₀ TEOM with a T640x at Alabama Ave, and add PM₁₀ at the Near Rd, site with a new T640x later this year. After the replacement, there will be three (3) PM₁₀ samplers (all T640x), three (3) FRM PM_{2.5} samplers, and three FEM PM_{2.5} (same T640x) samplers operating in Shelby County.

RESPONSIBILITIES / ACTIONS

Each of the parties to this Agreement is responsible for ensuring that its obligations under the MOA are met. 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 email of any monitoring changes occurring within 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 any occurrences that result in an extended (greater than one quarter) or permanent change in the monitoring network.

LIMITATIONS

- All commitments made in this MOA are subject to the availability of appropriated funds and each agency's budget priorities. Nothing in this MOA obligates SCHD, MDEQ, or DEQ to expend appropriations or to enter into any contract, assistance agreement, interagency agreement or other financial obligation.
- This MOA is neither a fiscal nor a funds obligation document. Any endeavor involving reimbursement or contribution of funds between parties to this agreement will be handled in accordance with applicable laws, regulations, and procedures, and will be subject to separate agreements that will be affected in writing by representatives of the parties.
- This MOA does not create any right or benefit enforceable by law or equity against SCHD, MDEQ, or DEQ, their officers or employees, or any other person. This MOA does not apply to any entity outside SCHD, MDEQ, or DEQ.
- No proprietary information or intellectual property is anticipated to arise out of this MOA.

TERMINATION

This Memorandum of Agreement may be revised upon the mutual consent of SCHD, MDEQ and DEQ. Each party reserves the right to terminate this MOA. A thirty (30) day written notice must be given prior to the date of termination.