ARKANSAS AMBIENT AIR MONITORING NETWORK

Annual Network Plan for 2026–2027

State of Arkansas
Arkansas Department of Energy and Environment
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Division of Environmental Quality
Office of Air Quality
[MM/DD/YYYY]

PUBLIC REVIEW DRAFT

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I. Introduction

The Arkansas Department of Energy and Environment, Division of Environmental Quality (DEQ), operates a network of air quality monitors to support state implementation plans, national air quality assessments, and policy decisions with respect to pollutants for which the United States Environmental Protection Agency (EPA) has set national ambient air quality standards[1] (NAAQS) under the Federal Clean Air Act. These pollutants include ozone, sulfur dioxide (SO_2), particulate matter ($PM_{2.5}$ and PM_{10}), nitrogen dioxide (NO_2), carbon monoxide (CO), and lead (Pb). DEQ is required to submit an annual air monitoring network plan to EPA's Region 6 office in Dallas, Texas (EPA Region 6). Specifically, 40 CFR Part 58, Subpart B §58.10(a)(1) requires that:

> *…the State, or where applicable local, agency shall adopt and submit to the Regional Administrator an annual monitoring network plan which shall provide for the establishment and maintenance of an air quality surveillance system that consists of a network of SLAMS monitoring stations including FRM, FEM, and ARM monitors that are part of SLAMS, NCore stations, STN stations, State speciation stations, SPM stations, and/or, in serious, severe and extreme ozone nonattainment areas, PAMS stations, and SPM monitoring stations…*

DEQ has prepared this Ambient Air Monitoring Network Annual Network Plan for 2026–2027 (Network Plan) for submission to EPA. DEQ is making this Network Plan available for public inspection for 30 days prior to submission to EPA Region 6.

The Network Plan provides the framework for the establishment and maintenance of the statewide air quality surveillance (AQS) system. The Network Plan represents DEQ's commitment to protect the health of Arkansas citizens through ambient air monitoring using the latest and best technology that is available and to communicate the data collected to the public as quickly and accurately as possible. This Network Plan includes information related to proposed changes of location for two monitoring sites, Marion (AQS ID 05-035-0005) and Eagle (AQS ID 05-113-0003), in Appendix B.

II. The Arkansas Ambient Air Monitoring Network

DEQ operates numerous air monitors at various monitoring sites throughout the State of Arkansas as shown in Figure 1 and listed in Table 1. Each site has a unique AQS identification number. All monitors listed in Table 1 belong to the State and Local Air Monitoring System (SLAMS). DEQ places monitors according to federal requirements based on several factors including pollutant concentrations, population density in metropolitan statistical areas (MSAs) and core-based statistical areas (CBSAs), location of sources with significant emissions, and other factors. In addition, DEQ has reviewed its SLAMS network to determine whether the monitors adequately capture air quality conditions across the state. Based on DEQ's assessment, the SLAMS network meets all federal requirements.

[1] https://www.epa.gov/criteria-air-pollutants/naaqs-table

Figure 1. Map of Arkansas Ambient Air Monitoring Network

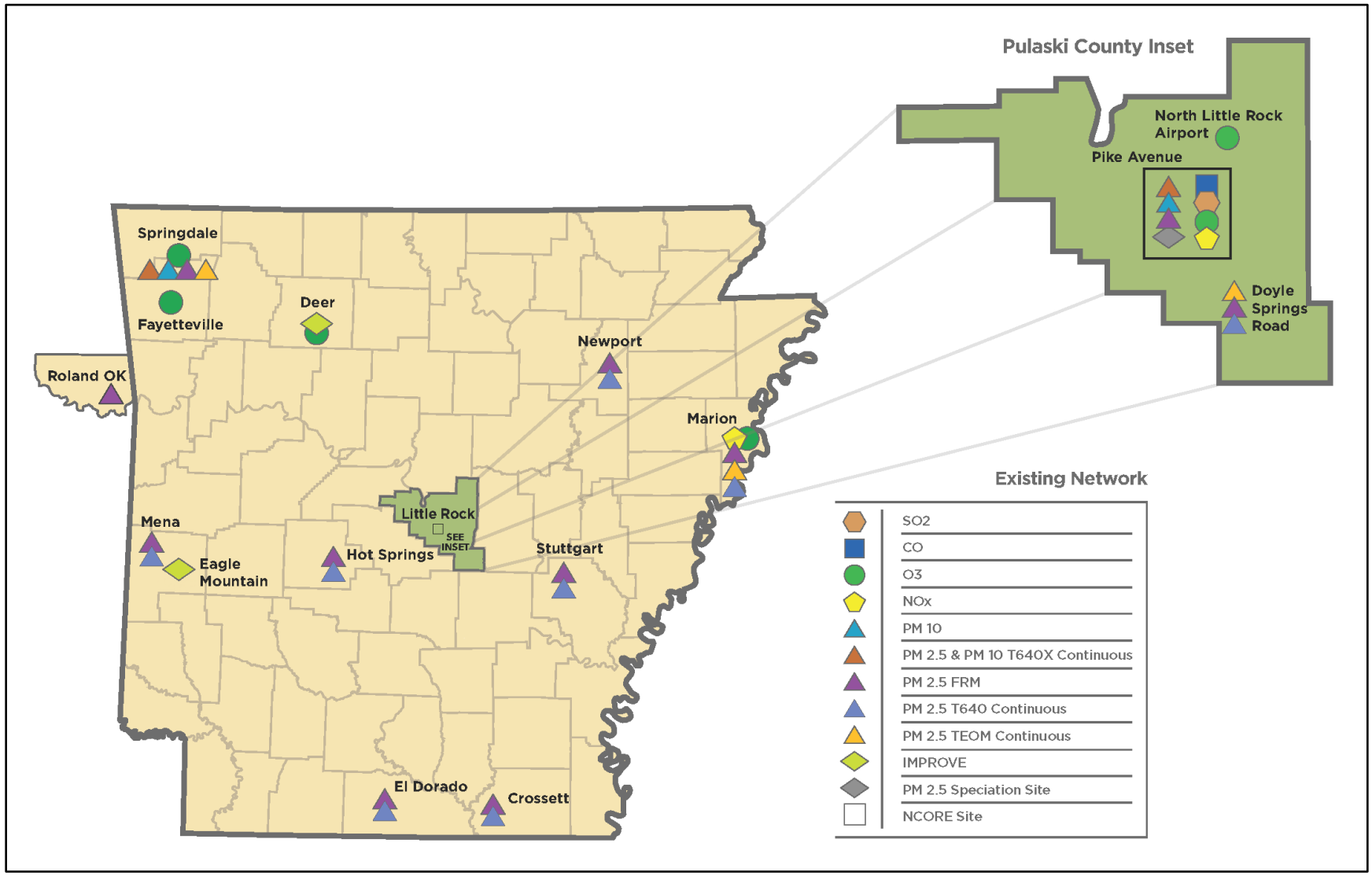


Table 1. DEQ Operated State and Local Air Monitoring System (SLAMS) Monitor Locations*

AQS ID #	Site Name	Address/Location	Latitude, Longitude	Pollutants Measured	MSA
05-001-0011	Stuttgart	1703 N. Beurkle	34.518433, -91.558808	$PM_{2.5}$	Not in an MSA
05-003-0005	Crossett	201 Unity Rd.	33.139317, -91.939095	$PM_{2.5}$	Not in an MSA
05-035-0005	Marion[2]	Polk & Colonial Dr.	35.197178, -90.193047	$PM_{2.5}$ Ozone NO_2	Memphis
05-051-0003	Hot Springs	300 Werner	34.469316, -93.063723	$PM_{2.5}$	Hot Springs
05-067-0001	Newport	7648 Victory Blvd.	35.637160, -91.188779	$PM_{2.5}$	Not in an MSA
05-101-0002	Deer	Hwy. 16	35.832600, -93.208000	Ozone	Not in an MSA
05-113-0002	Mena	Hornbeck Rd.	34.583574, -94.226052	$PM_{2.5}$	Not in an MSA
05-119-0007	PARR (NCore)	Pike Ave. at River Rd.	34.756000, -92.281100	$PM_{2.5}$ PM_{10} Ozone NO_x NO_y Speciation Trace SO_2 Trace CO	Little Rock
05-119-1002	NLRAP	Remount Rd.	34.835600, -92.260400	Ozone	Little Rock
05-119-1008	DSR	Doyle Springs Rd.	34.681200, -92.328500	$PM_{2.5}$	Little Rock
05-139-0006	El Dorado	Union Memorial Hospital	33.220428, -92.672068	$PM_{2.5}$	Not in an MSA
05-143-0005	Springdale	600 S. Old Missouri Rd.	36.179698, -94.116627	$PM_{2.5}$ PM_{10} Ozone	Fayetteville
05-143-0006	Fayetteville	429 Ernest Lancaster Dr.	36.011670, -94.167492	Ozone	Fayetteville
40-135-9021	Roland, OK	207 Cherokee Blvd.	35.408140, -94.524413	$PM_{2.5}$	Fort Smith

*The Eagle Mountain ozone monitor site (AQS ID 05-113-0003; 34.454428, -94.143317) operated by DEQ ceased operation in 2025, with its last sample date being 9/30/2025. See Appendix B for further details concerning the decommissioning and relocation of the site.

[2] Site is still operating but it is anticipated that it will be moved to 400 Marion Lake Road (35.219810, -90.188939), likely sometime in September 2026. See Appendix B for further details concerning the relocation of the site.

DEQ maintains its ambient air monitoring network in accordance with the quality assurance requirements of 40 CFR Part 58[3], App. A, designs its network in accordance with App. D, and locates its sites to meet all requirements of App. A, D, and E. The operation of each monitor meets the requirements of 40 CFR Part 58 Appendices B and C, where applicable. DEQ operates and maintains the monitors, as well as enters data from these monitoring sites into EPA's national AQS database. This data is available to the public within ninety days following the end of each calendar quarter. DEQ had previously placed T640s that were discretionarily collocated with other PM monitors and have more recently been removed at the conclusion of the quality test. These collocated T640s were removed from: Stuttgart (05-001-0011), Crossett (05-003-0005), Marion (05-035-0005), Hot Springs (05-051-0003), Newport (05-067-0001), Mena (05-113-0002), DSR (05-119-1008), El Dorado (05-139-0006), and Springdale (05-143-0005). Table 2 details the methods, operating schedule, and objectives of each SLAMS monitor.

Table 2. DEQ Operated State and Local Air Monitoring System (SLAMS) Methods and Operation*

AQS ID # (Site Name)	Pollutants Measured	Method Code	Sampling Method	Operating Schedule	Monitoring Objective	Spatial Scale	NAAQS Comparable
05-001-0011 (Stuttgart)	$PM_{2.5}$	143	R&P 2000 FRM	Daily 1 in 3	Population Exposure	Neighborhood	Yes
05-003-0005 (Crossett)	$PM_{2.5}$	143	R&P 2000 FRM	Daily 1 in 3	Population Exposure	Neighborhood	Yes
05-035-0005 (Marion)	$PM_{2.5}$	143	R&P 2000 FRM	Daily 1 in 3	Population Exposure	Neighborhood	Yes
	$PM_{2.5}$	701	R&P TEOM	Continuous	Population Exposure	Neighborhood	No
	Ozone	19	UV Photometric	Continuous	Population Exposure	Neighborhood	Yes
	NO_2	35	Chemiluminescence	Continuous	Population Exposure	Neighborhood	Yes
05-051-0003 (Hot Springs)	$PM_{2.5}$	143	R&P 2000 FRM	Daily 1 in 3	Population Exposure	Neighborhood	Yes
05-067-0001 (Newport)	$PM_{2.5}$	143	R&P 2000 FRM	Daily 1 in 3	Population Exposure	Neighborhood	Yes
05-101-0002 (Deer)	Ozone	19	UV Photometric	Continuous	Background	Neighborhood	Yes
05-113-0002 (Mena)	$PM_{2.5}$	143	R&P 2000 FRM	Daily 1 in 3	Regional Background	Neighborhood	Yes
05-119-0007 (PARR)	$PM_{2.5}$	145	R & P 2025 FRM	Daily 1 in 1	Population Exposure	Neighborhood	Yes
	$PM_{2.5}$	738	Teledyne T640X	Continuous	Population Exposure	Neighborhood	Yes
	PM_{10}	127	Gravimetric	Daily 1 in 3	Population Exposure	Neighborhood	Yes
	PM_{10}	239	Teledyne T640X	Continuous	Population Exposure	Neighborhood	Yes

[3] https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-58?toc=1

AQS ID # (Site Name)	Pollutants Measured	Method Code	Sampling Method	Operating Schedule	Monitoring Objective	Spatial Scale	NAAQS Comparable
	$PM_{10-2.5}$	176	Gravimetric/FRM	Daily 1 in 3	Population Exposure	Neighborhood	Yes
	$PM_{10-2.5}$	240	Teledyne T640X	Continuous	Population Exposure	Neighborhood	Yes
	Ozone	19	UV Photometric	Continuous	Population Exposure	Neighborhood	Yes
	NO_x	74	Chemiluminescence	Continuous	Susceptible and Vulnerable Population Exposure	Neighborhood	Yes
	NO_y	574	Chemiluminescence	Continuous	Population Exposure	Neighborhood	No
	Speciation	810	Low Volume	Daily 1 in 3	Population Exposure	Neighborhood	No
	Trace SO_2	560	Infrared	Continuous	Population Exposure	Neighborhood	Yes
	Trace CO	554	Infrared	Continuous	Population Exposure	Neighborhood	Yes
05-119-1002 (NLRAP)	Ozone	19	UV Photometric	Continuous	Population Exposure	Neighborhood	Yes
05-119-1008 (DSR)	$PM_{2.5}$	143	R&P 2000 FRM	Daily 1 in 3	Population Exposure	Neighborhood	Yes
	$PM_{2.5}$	701	R&P TEOM	Continuous	Population Exposure	Neighborhood	No
05-139-0006 (El Dorado)	$PM_{2.5}$	143	R&P 2000 FRM	Daily 1 in 3	Population Exposure	Neighborhood	Yes
05-143-0005 (Springdale)	$PM_{2.5}$	145	R&P 2025 FRM	Daily 1 in 3	Population Exposure	Neighborhood	Yes
	$PM_{2.5}$	701	R&P TEOM	Continuous	Population Exposure	Neighborhood	No
	PM_{10}	127	Gravimetric	Daily 1 in 6	Population Exposure	Neighborhood	Yes
	Ozone	19	UV Photometric	Continuous	Population Exposure	Neighborhood	Yes
05-143-0006 (Fayetteville)	Ozone	19	UV Photometric	Continuous	Population Exposure	Neighborhood	Yes
40-135-9021 (Roland, OK)	$PM_{2.5}$	145	R&P 2025 FRM	Daily 1 in 3	Population Exposure	Neighborhood	Yes

*The Eagle Mountain ozone monitor (AQS ID 05-113-0003; 34.454428, -94.143317) operated by DEQ ceased operation in 2025, with its last sample date being 9/30/2025. See Appendix B for further details concerning the decommissioning and relocation of the site.

A. Ozone Monitoring Network

Table D-2 of 40 CFR Part 58 Appendix D specifies the number of SLAMS ozone monitors required based on MSA population and the previous year's design value (DV) for the area. Table 3 lists population statistics for MSAs located in Arkansas. Table 4 lists the most recent ozone DVs and sampling schedule for the DEQ operated monitors. DVs as a percent of an ozone NAAQS that are greater than or equal to 85% are indicated by bold font in Table 4. Table 5 lists the populations of the MSAs, the most recent DVs for MSAs, minimum number of monitors required in each MSA based on population, and the number of existing monitors in a MSA. Appendix B details proposed plans to relocate the currently inactive Eagle Mountain ozone site and to relocate the Marion ozone site.

Table 3. U.S. Census Population Statistics for Metropolitan Statistical Areas (MSA) in Arkansas

MSA	2020 Census[4]	2024 Estimates[1]
Fayetteville-Springdale-Rogers, AR-MO	546,725	605,615
Fort Smith, AR-OK	244,308	232,848
Hot Springs, AR	100,173	99,902
Jonesboro, AR	134,207	138,152
Little Rock-North Little Rock-Conway, AR	748,038	769,258
Memphis, TN-MS-AR	1,337,770	1,139,345
Texarkana, TX-AR	147,524	145,576

Table 4. Arkansas Ozone State and Local Air Monitoring System (SLAMS) Monitors Schedule and 2022–2024 Ozone Design Values (DV)*

AQS ID # (Site Name)	Sampling Schedule	2022-2024 8-Hour Ozone (ppm)[5]				
		2022	2023	2024	DV	DV % of NAAQS
05-035-0005 (Marion)	Continuous	0.071	0.074	0.072	0.072	**102.9%**
05-101-0002 (Deer)	Continuous	0.064	0.065	0.060	0.063	**90.0%**
05-119-0007 (PARR)	Continuous	0.064	0.063	0.059	0.062	**88.6%**
05-119-1002 (NLRAP)	Continuous	0.062	0.070	0.062	0.064	**91.4%**
05-143-0005 (Springdale)	Continuous	0.067	0.072	0.062	0.068	**97.1%**
05-143-0006 (Fayetteville)	Continuous	0.067	0.068	0.062	0.065	**92.9%**

*The Eagle Mountain ozone monitor operated by DEQ was shut down in 2025, with its last sample date being 9/30/2025. See Appendix B for further details concerning the decommissioning and relocation of the site.

[4] https://www.census.gov/data/tables/time-series/demo/popest/2020s-total-metro-and-micro-statistical-areas.html#v2024

[5] https://www.epa.gov/outdoor-air-quality-data/about-air-data-reports

Table 5. Arkansas Metropolitan Statistical Area (MSA) Populations, Ozone Design Value Percentages, Ozone Monitors Required, and Number of Existing Ozone Monitors

MSA	2024 Population Estimates	2024 DV % of NAAQS	Required Monitors	Existing Monitors
Fayetteville-Springdale-Rogers, AR-MO	605,615	97.1%	2	2
Fort Smith, AR-OK	232,848	N/A	0	0
Hot Springs, AR	99,902	N/A	0	0
Jonesboro, AR	138,152	N/A	0	0
Little Rock-North Little Rock-Conway, AR	769,258	91.4%	2	2
Memphis, TN-MS-AR	769,258	104.2%*	2	5
Texarkana, TX-AR	145,576	N/A	0	0

*Among the five Memphis, TN-MS-AR ozone monitors, the Shelby County, TN NCore Site (AQS ID 47-157-0075) is the controlling monitor for the MSA with a 2024 Annual Design Value of 104.2% of the NAAQS. The Crittenden County, AR Marion site (AQS ID 05-035-0005) had a 2024 Annual Design Value of 102.9% of the Annual NAAQS.

Arkansas' network, in cooperation with Tennessee and Mississippi for the Memphis MSA, meets or exceeds the minimum SLAMS ozone requirement for each MSA. The Little Rock MSA meets the required number, and the Memphis MSA exceeds the minimum number of SLAMS monitors with five monitors. DEQ operates one of the five SLAMS ozone monitors in the Memphis MSA, with the other four operated by either Shelby County Health Department (SCHD) or Mississippi Department of Environmental Quality (MDEQ). The Fayetteville MSA has two monitors, meeting the requirement for the MSA. A monitor in Roland, OK operated by the Cherokee Nation satisfies ozone monitoring requirements for the Fort Smith MSA. There are two additional SLAMS ozone monitors in the rural areas of Deer and Eagle Mountain, which are used to enhance EPA's AIRNOW ozone mapping program and to determine background and transport ozone. Due to accessibility and safety issues at Eagle Mountain, as further detailed in Appendix B, the Eagle Mountain site was decommissioned on September 30, 2025, with proposed plans to relocate the site to a more suitable location in 2026.

In addition to the SLAMS network, EPA operates the Caddo Valley (AQS ID 05-019-9991) ozone monitor as part of the Clean Air Status and Trends Network (CASTNET). This ozone monitor is compliant with the regulatory requirements in 40 CFR Parts 50, 53, and 58. Therefore, this site is also used to determine if an area meets or exceeds the NAAQS. The 2022–2024 ozone DV for this site is 0.061 ppm with the NAAQS being 0.070 ppm.

B. Particulate Matter Monitoring Network

1. Fine Particulate Matter ($PM_{2.5}$) Network

Table D-5 of 40 CFR Part 58 Appendix D specifies the number of SLAMS $PM_{2.5}$ monitors required based on MSA population and the most recent DV. Table 6 lists the most recent area DV and sampling schedule for DEQ operated monitors. Table 7 lists populations the MSAs, and the most recent DV percentage of the NAAQS, the minimum number of monitors required, and the number of existing monitors in a MSA. In this Network Plan, DEQ is proposing to make changes to the $PM_{2.5}$ network as described in Appendix B, to relocate the Marion site (AQS ID 05-035-0005) and

relocate monitoring equipment to a nearby site under the existing AQS ID. No changes to the sampling schedule are included in this Network Plan.

Table 6. Arkansas $PM_{2.5}$ State and Local Air Monitoring System (SLAMS) Monitor Schedule and 2022–2024 $PM_{2.5}$ Design Value (DV)

AQS ID # (Site Name)	Sampling Schedule	2022–2024 24-Hour $PM_{2.5}$ ($\mu g/m^3$)					2022–2024 Annual $PM_{2.5}$ ($\mu g/m^3$)					Collocated with TEOM[6]
		2022	2023	2024	DV	DV of % NAAQS	2022	2023	2024	DV	DV % of NAAQS	
05-001-0011 (Stuttgart)	1:3	16.8	20.4	24.6	21	60.0%	7.77	8.64	8.77	8.4	**93.3%**	No
05-003-0005 (Crossett)	1:3	17	19.9	20.9	19	54.3%	7.82	8.58	8.41	8.3	**92.2%**	No
05-035-0005 (Marion)	1:3	18.3	19.1	17.2	18	51.4%	7.75	8.78	7.93	8.2	**91.1%**	Yes
05-051-0003 (Hot Springs)	1:3	19.6	17.3	17.1	18[7]	51.4%	8.22	8.97	9.19	8.8[7]	**97.0%**	No
05-067-0001 (Newport)	1:3	23.4	19.8	19.1	21	60.0%	7.96	8.96	7.73	8.2	**91.1%**	No
05-113-0002 (Mena)	1:3	20.7	18.2	18.7	19	54.3%	7.89	8.73	8.76	8.5	**94.4%**	No
05-119-0007 (PARR)[8]	1:1	19.7	22.5	23.1	22	62.9%	8.81	9.00	10.11	9.8	**108%**	No
05-119-1008 (DSR)	1:3	26.1	21.4	25.7	24	68.6%	9.55	10.80	10.51	10.3	**114.4%**	Yes
05-143-0005 (Springdale)	1:3	19.8	18.7	19.2	19	54.3%	7.30	7.65	8.44	7.8	**86.7%**	Yes
05-139-0006 (El Dorado)[9]	1:3	23.5	19.7	22.2	22	62.9%	9.12	9.00	9.47	9.4	**104%**	No
40-135-9021 (Roland, OK)	1:3	22.4	19.5	17.2	20	57.1%	7.54	8.42	8.39	8.1	**90.0%**	No

[6] A Tapered Element Oscillating Microbalance (TEOM) sampler is an instrument for continuous measurement of particulate matter in near real time.
[7] EPA indicates that this monitor has an 'Invalid' 2022 Q1, 2023 Q2, and 2024 Q1 sampling completeness for the 2022–2024 24-hour and annual Design Values (https://www.epa.gov/air-trends/air-quality-design-values#report)
[8] Values for this site adjusted to account for exceptional events demonstrations submitted to EPA for 2022-2023 data years. EPA concurred with the demonstrations as presented on May 26, 2026.
[9] Values for this site adjusted to account for exceptional events demonstrations submitted to EPA for 2022-2023 data years. EPA concurred with the demonstrations as presented on May 26, 2026.

Table 7. Arkansas Metropolitan Statistical Area (MSA) Populations, Annual $PM_{2.5}$ Design Value percentages, $PM_{2.5}$ Monitors Required, and number of existing $PM_{2.5}$ Monitors

MSA	2024 Population Estimates	2024 Annual DV % of NAAQS	Required Monitors	Existing Monitors
Fayetteville-Springdale-Rogers, AR-MO	605,615	86.7%	2	1
Fort Smith, AR-OK	232,848	90.0%	1	1
Hot Springs, AR	99,902	97.0%	1	1
Jonesboro, AR	138,152	N/A	0	0
Little Rock-North Little Rock-Conway, AR	769,258	114.4%	2	2
Memphis, TN-MS-AR	1,339,345	101.1%*	3	5
Texarkana, TX-AR	145,576	111.1%†	1	1

*Among the five Memphis, TN-MS-AR $PM_{2.5}$ monitors, the Desoto County, MS Hernando Site (AQS ID 280330002) is the highest reading monitor with a 2024 Annual Design Value of 101.1% of the NAAQS and the Crittenden County, AR Marion site (AQS ID 050350005) has a 2024 Annual Design Value of 91.1% of the Annual NAAQS

†Design Value at Bowie County, TX monitor site (AQS ID 480371031)

DEQ operates two monitors that report NAAQS-comparable data and one quality assurance (QA) monitor in the Little Rock MSA. There are two additional monitors in the Little Rock MSA that report data that is not NAAQS-comparable. There are five monitors in the Memphis MSA, exceeding the requirement for the MSA. In addition to one DEQ-operated monitor, there are three SLAMS monitors operated by either SCHD or MDEQ in the Memphis MSA. SCHD operates a $PM_{2.5}$ monitor at site 47-157-0100 that meets the near-road monitoring requirement for the Memphis MSA (See MOA in Appendix C). The Fort Smith MSA and Fayetteville MSA each have one monitor. For the Fayetteville MSA, DEQ is staying abreast of EPA's "Reconsideration of the National Ambient Air Quality Standards for Particulate Matter"[10] and pending court or future agency action that could result in a change to the Annual $PM_{2.5}$ NAAQS and thus the percentage of the NAAQS calculations.

DEQ also operates five additional $PM_{2.5}$ monitors. For Hot Springs (05-051-0003), the site includes two FRM (POC 1 & POC4) monitors operating on a combined 1:3 (each on an alternating every third day 1:6) and one QC monitor (POC 2) operating on a 1:12. For PARR (05-119-0007), the site includes one FRM (POC 1) monitor operating on a 1:1 and one QC monitor (POC 2) operating 1:12. Also at PARR (05-119-0007) is a collocated T640x FEM continuous monitor. In addition, the following sites are co-located with a TEOM continuous monitor: Marion (05-035-0005), DSR (05-119-1008), and Springdale (05-143-0005).

Table 8 lists the monitoring sites used for daily Air Quality Index (AQI) reporting. The monitors at these locations, which include Springdale and PARR, also report hourly data to the AIRNOW web page to be used for real-time public-facing air quality particulate mapping.

Table 8. Continuous $PM_{2.5}$ Air Quality Index (AQI) Monitoring Site Information

AQS ID #	Site Name	Sampling Frequency
05-143-0005	Springdale	Hourly
05-119-0007	PARR	Hourly

[10] 89 FR 16202; March 6, 2024

2. Coarse Particulate Matter (PM_{10}) Network

Table D-4 of 40 CFR Part 58 Appendix D specifies the number of SLAMS PM_{10} monitors required based on MSA population and the recent concentrations for the area. Table 9 lists the most recent three-year average and sampling schedule for DEQ operated monitors. DEQ's monitors fall within the low-concentration category (ambient concentrations less than 80% of the PM_{10} NAAQS) based on recent three-year averages as a percentage of the NAAQS. Table 10 lists population sizes, the minimum number of monitors required, and the number of existing monitors in each MSA. DEQ is not proposing any changes to the PM_{10} network, including the sampling schedule, in this Network Plan.

Table 9. Arkansas PM_{10} State and Local Air Monitoring System (SLAMS) Monitors Schedule and 2022–2024 PM_{10} Annual Maximum, Number of Annual Exceedances, and Three-Year Average

AQS ID #	Sampling Schedule	2022–2024 24-Hour PM_{10} ($\mu g/m^3$)				
		2022 Annual Maximum (Exceedances)	2023Annual Maximum (Exceedances)	2024 Annual Maximum (Exceedances)	3-Yr Avg.	3-Yr Avg. % of NAAQS
05-119-0007 (PARR)	1:3	35 (0)	39 (0)	87 (0)	54	36.0
05-143-0005(Springdale)	1:6	47 (0)	37 (0)	33 (0)	39	26.0

Table 10. Arkansas Metropolitan Statistical Area (MSA) Populations and Minimum PM_{10} Monitors Required in State and Local Air Monitoring System (SLAMS) Network

MSA	2024 Population Estimates	Required Monitors[11]	Existing Monitors
Fayetteville-Springdale-Rogers, AR-MO	605,615	1–2	1
Fort Smith, AR-OK	232,848	0	0
Hot Springs, AR	99,902	0	0
Jonesboro, AR	138,152	0	0
Little Rock-North Little Rock-Conway, AR	769,258	1–2	1
Memphis, TN-MS-AR	1,339,345	2–4	2
Texarkana, TX-AR	145,576	0	0

Arkansas' network meets the minimum SLAMS PM_{10} requirement for each MSA. DEQ operates two PM_{10} monitoring sites, one in the Little Rock MSA and one in the Fayetteville MSA. The PARR site (05-119-0007) also has a collocated PM_{10} monitor operating on a 1:12 sampling schedule. SCHD operates two PM_{10} sites in the Memphis MSA.

[11] 40 CFR 58 Appendix D.4.d. provides that "a range of monitoring stations is specified in Table D-4 because sources of pollutants and local control efforts can vary from one part of the country to another and therefore, some flexibility is allowed in selecting the actual number of stations in any one locale."

3. $PM_{10-2.5}$ Particle Mass

DEQ performs $PM_{10-2.5}$ monitoring at PARR (05-119-0007) as part of an NCore monitoring site in accordance with 40 CFR Part 58 Appendix D § 3. The monitor is also operating on a 1:12 sampling schedule and the QC sampler runs on a 1:12 schedule, as required. DEQ is not proposing any changes for this monitor.

4. $PM_{2.5}$ Speciation

$PM_{2.5}$ speciation sampling occurs at the PARR (05-119-0007) NCore monitoring site in accordance with 40 CFR Part 58 Appendix D § 3. DEQ is not proposing any changes for this monitor.

C. Sulfur Dioxide (SO_2) Monitoring Network

The number of SLAMS SO_2 monitors required for Arkansas CBSAs is determined using a Population Weighted Emissions Index (PWEI). PWEI values are calculated by multiplying the CBSA population by the total SO_2 emitted within the CBSA using data available from the most recent National Emissions Inventory (NEI), which is 2020. Table 11 lists the PWEI and number of monitors required in each Arkansas CBSA in accordance with 40 CFR Part 58 Appendix D §4.4.2. DEQ is not proposing any SO_2 network changes in this Network Plan.

Table 11. Arkansas Core-based Statistical Areas (CBSAs) Populations and Minimum SO_2 Monitors Required in State and Local Air Monitoring System (SLAMS) Network

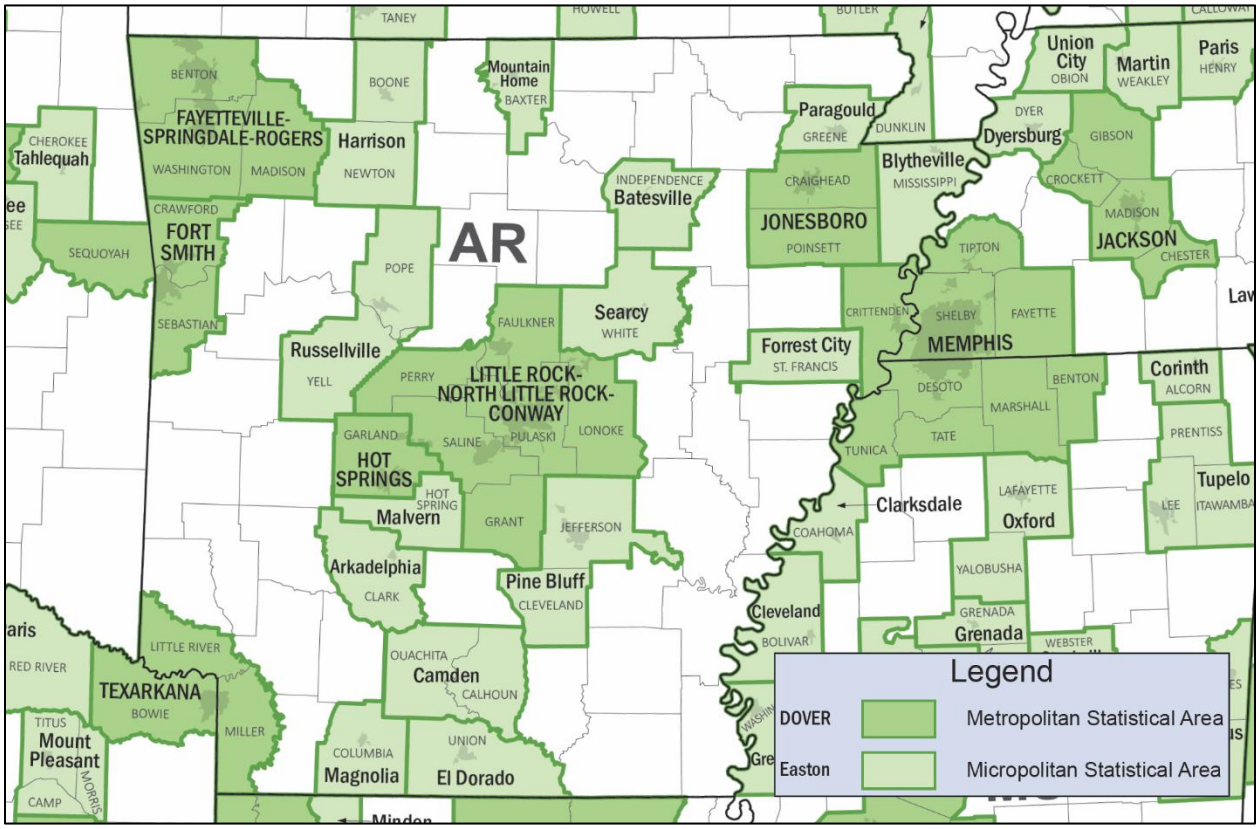
CBSA	2024 Population Estimate	2020 SO_2 Emissions (tpy)	PWEI	Required Monitors[12]	Existing Monitors
Metropolitan Statistical Areas					
Fayetteville-Springdale-Rogers, AR-MO	605,615	1006	609	0	0
Fort Smith, AR-OK	232,848	1097	255	0	0
Hot Springs, AR	99,902	77	8	0	0
Jonesboro, AR	138,152	195	27	0	0
Little Rock-North Little Rock-Conway, AR	769,258	579	445	0	0
Memphis, TN-MS-AR	1,339,345	968	1296	0	0
Texarkana, TX-AR	145,576	1173	171	0	0
Micropolitan Statistical Areas					
Arkadelphia, AR	20,920	100	2	0	0
Batesville, AR	38,345	10559	405	0	0
Blytheville, AR	38,095	3150	120	0	0
Camden, AR	26,374	183	5	0	0
El Dorado, AR	37,008	639	24	0	0
Forrest City, AR	21,822	21	0	0	0
Harrison, AR	45,662	223	10	0	0
Magnolia, AR	22,024	1766	39	0	0

[12] PWEI $\geq 10^6$: Three monitors required
$10^6 >$ PWEI $\geq 10^5$: Two monitors required
$10^5 >$ PWEI ≥ 5000: One monitor required

Malvern, AR	33,313	143	5	0	0
Mountain Home, AR	43,007	61	3	0	0
Paragould, AR	46,928	44	2	0	0
Pine Bluff, AR	71,039	11,355	807	0	0
Russellville, AR	84,963	275	23	0	0
Searcy, AR	79,091	106	8	0	0

Arkansas' network meets or exceeds the minimum SLAMS SO_2 requirement for each CBSA. SCHD operates an SO_2 monitor in the Memphis CBSA. DEQ operates one trace SO_2 monitor at PARR (05-119-0007) as part of an NCore monitoring site in accordance with 40 CFR Part 58 Appendix D § 3.

Figure 2. Metropolitan and Micropolitan Statistical Areas of Arkansas (as of July 2023[13])



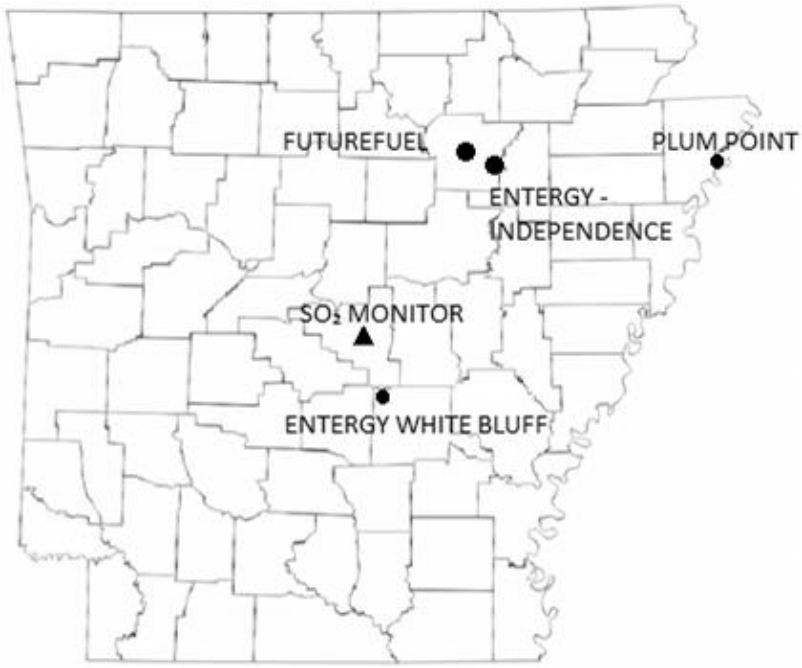
In addition to the population-based monitoring location, DEQ also used modeling data to characterize air quality in counties with facilities that emit greater than 2000 tons per year (tpy) SO_2, in accordance with the SO_2 Data Requirements Rule at 40 CFR Part 51 Subpart BB. Table 12 lists facilities emitting greater than or equal to 2000 tpy SO_2 in Arkansas. Figure 3 provides the location of these facilities relative to the trace SO_2 monitor located at PARR (05-119-0007).

Table 12. Facilities Emitting Greater Than or Equal to 2000 tpy SO_2

[13] https://www.census.gov/geographies/reference-maps/2023/geo/cbsa.html

FIPS Code[14]	County	Facility Name	2024 SO_2 Emissions (tpy)[15]	Latitude	Longitude
0506900110	Jefferson	Entergy Arkansas, Inc. – White Bluff	5514.70	34.4231	-92.1398
0506300042	Independence	Entergy Arkansas, Inc. – Independence	13653.10	35.6775	-91.4118
0509300461	Mississippi	Plum Point	2305.15	35.6581	-89.9422
0506300036	Independence	FutureFuel	2150.01	35.7181	-91.5242

Figure 3. Relative Location of Facilities Emitting Greater than or Equal to 2000 tpy SO_2



For each facility listed in Table 12 and depicted in Figure 3, modeling was performed, as described below, to determine attainment with the 1-hour SO_2 NAAQS.

On January 24, 2017, based on modeling for Plum Point Energy Station, DEQ sent EPA a Designation Recommendations letter that included Unclassifiable/Attainment for Mississippi County, which EPA confirmed in their September 27, 2017, Intended Designations letter to DEQ.

On September 11, 2015, DEQ submitted modeling to EPA demonstrating attainment with the 1-hour SO_2 NAAQS and a recommendation of "Attainment/Unclassifiable" for Independence County, AR. In October 2015 Sierra Club provided EPA with modeling that contradicted DEQ's modeling and on June 30, 2016, EPA designated Independence County as "unclassifiable" based on "insufficient information". On April 20, 2018, DEQ submitted to EPA a refined modeling simulation and an "Unclassifiable" to "Attainment/ Unclassifiable" re-designation request for

[14] Facility-specific Federal Information Processing Standards (FIPS) Code
[15] Emissions data source: 2024 Arkansas Department of Energy and Environment, State and Local Emissions Inventory System (SLEIS)

Independence County. On April 12, 2019, EPA reclassified Independence County to "Attainment/Unclassifiable" for the 2010 SO_2 NAAQS.

On September 11, 2015, DEQ submitted to the EPA an actual emissions SO_2 air dispersion modeling analysis for the Entergy Arkansas, White Bluff Steam Electric Station (White Bluff Station) located in Jefferson County, AR and recommended a designation of "Attainment/Unclassifiable". On July 12, 2016 (FR Vol. 81, No. 133, 45039), EPA concurred with the DEQ recommendation and designated Jefferson County, AR as having a designation of "Attainment/Unclassifiable". In addition, a copy of the Entergy Arkansas, White Bluff Station Ongoing Data Requirements (40 CFR § 51.1205) Annual Emissions Update Information is attached as Appendix A.

D. Nitrogen Dioxide (NO_2) Monitoring Network

40 CFR Part 58 Appendix D § 4.3 requires SLAMS networks to meet requirements for near-road NO_2 monitoring, area-wide NO_2 monitoring, and any additional monitoring required by the EPA Regional Administrator. Each CBSA with a population of one million or more people must have a microscale near-road NO_2 monitoring station. Each CBSA with a population of one million or more people must have an area-wide NO_2 monitor. In addition, Regional Administrators may require NO_2 monitors above and beyond minimum network requirements.

DEQ operates NO_2 monitors at two sites in Arkansas: PARR (05-119-007) and Marion (05-035-0005). The Marion monitor (05-035-0005) serves as an area-wide NO_2 monitor for the Memphis CBSA, which is the only CBSA with more than a million people that includes Arkansas. SCHD operates a near-road NO_2 monitor, Southwest Tennessee Community College (47-157-0100), in the Memphis CBSA required under 40 CFR Part 58, Appendix D § 4.3.2. The PARR site serves as one of the minimum of forty additional NO_2 monitoring stations nationwide required by Regional Administrators under 40 CFR Part 58, Appendix D § 4.3.4.

DEQ performs NO/NO_2 monitoring at PARR (05-119-0007) as part of an NCore monitoring site in accordance with 40 CFR Part 58 Appendix D § 3. These measurements produce conservative estimates for NO_2 consistent with the requirements of 40 CFR Part 58, Appendix D § 4.3.6. DEQ is not proposing any changes for the NO_2 monitoring network.

E. Carbon Monoxide (CO) Monitoring Network

40 CFR Part 58 Appendix D § 4.2 requires a minimum of one CO monitor co-located with a near-road NO_2 monitor in CBSAs have a population of one million or more people. The Regional Administrator may require additional monitoring.

SCHD operates a CO monitor collocated with the near-road NO_2 monitor (47-157-0100) in the Memphis CBSA, which is the only CBSA with more than a million people that includes Arkansas. This monitor satisfies the minimum required CO monitors.

DEQ operates a Trace CO monitor at PARR (05-119-0007) as part of an NCore monitoring site in accordance with 40 CFR Part 58 Appendix D § 3. DEQ is not proposing any changes for the CO monitoring network.

F. Lead (Pb) Network/Lead Waivers

40 CFR Part 58 Appendix D § 4.5[16] requires source-oriented monitoring near lead (Pb) sources that are expected to or have been shown to contribute to a maximum lead concentration in ambient air in excess of 50% of the NAAQS. Specifically, there must be a source-oriented SLAMS site located to measure the maximum Pb concentration in ambient air resulting from each non-airport Pb source that emits 0.5 tpy or more and from each airport that emits 1.0 tpy based on the most recent NEI or other scientifically justifiable methods and data. EPA may waive source-oriented monitoring requirements if the State can demonstrate that the source will not contribute to a maximum Pb concentration in ambient air in excess of 50% of the NAAQS. These waivers must be renewed once every five years in accordance with 40 CFR Part 58.10(d)[17].

DEQ does not operate any source-oriented monitors for Pb but ensures that all sources emitting above the thresholds in 40 CFR Part 58 Appendix D § 4.5 are identified by requiring each facility with Pb permit limits greater than or equal to 0.5 tpy Pb to submit actual annual Pb emissions for the facility. There are two sources in Arkansas with a Pb waiver based on their actual lead emissions: Entergy Arkansas, LLC, Independence and Entergy Arkansas, LLC, White Bluff. See Sections F.1. and F.2. below for additional details regarding these two facilities. There are five additional facilities for which EPA previously issued Pb waivers. These waivers have not been renewed because recent annual Pb emissions have not exceeded the thresholds listed in 40 CFR Part 58 Appendix D § 4.5.

Table 13. Current Source-Oriented Lead Waiver Status by Facility

EIS #	Facility Name	2008 Modeled Emissions (tpy)	Annual Facility-level Lead Emissions (tpy)							Most Recent Approval
			2018 State EI	2019 State EI	2020 NEI	2021 State EI	2022 State EI	2023 NEI[18]	2024 State EI	
1083411	Entergy Independence	1.42	1.22	0.74	0.39	0.53	0.59	0.61	0.69	Approved April 29, 2021*
893911	Entergy White Bluff	1.43	1.06	0.93	0.53	0.89	0.68	0.44	0.28	Approved April 29, 2021*

*Renewal submitted to EPA on August 7, 2025

DEQ previously operated a Pb sampler at PARR (05-119-0007) as part of an NCore monitoring site. However, DEQ discontinued Pb monitoring after meeting the three-year data collection requirements and obtaining EPA approval in 2016 consistent with revised network design criteria for non-source-oriented lead monitoring (81 FR 17247).

1. Entergy Independence

EPA approved the first lead waiver for Entergy Independence on January 20, 2011. This approval was based on AERMOD modeling results that indicated that Independence's 2008 emissions of 1.42 tpy would result in a maximum three-month average concentration level of 0.03 micrograms

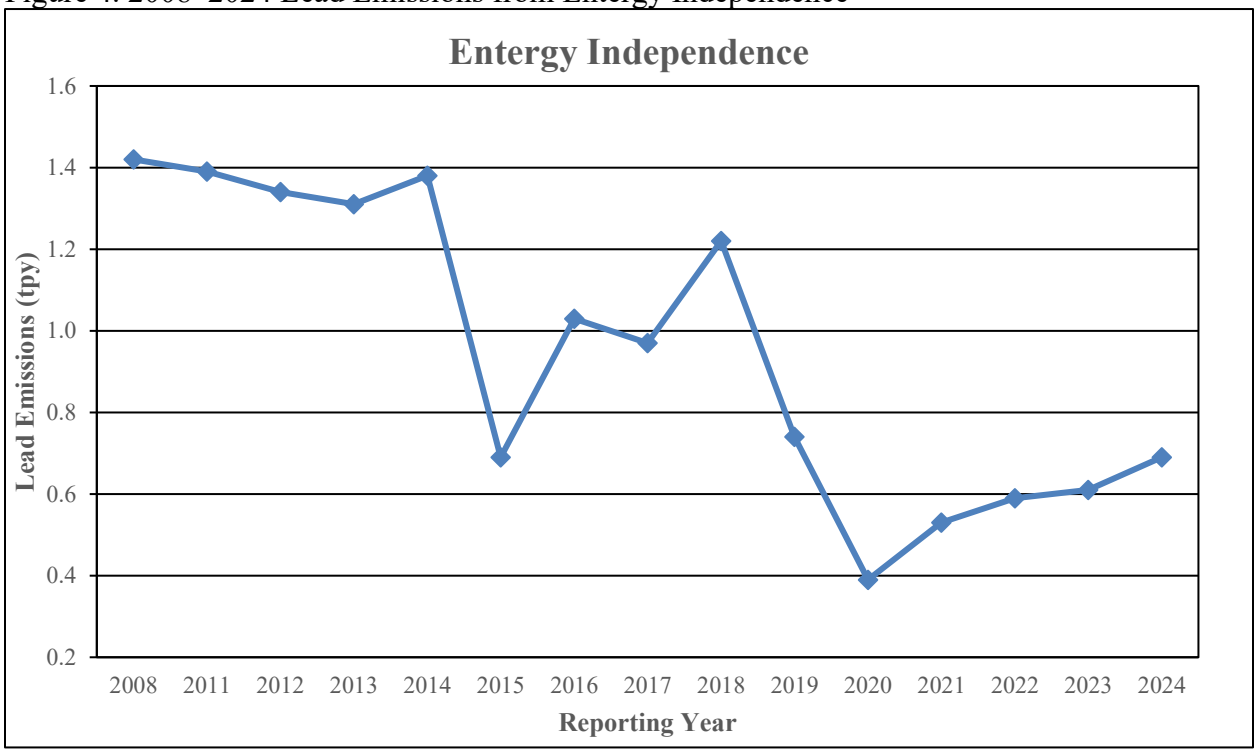
[16] https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-58/appendix-Appendix%20D%20to%20Part%2058

[17] https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-58/subpart-B/section-58.10

[18] Data submitted by facilities to Arkansas' SLEIS Emissions Inventory Program and the finalized data not yet released publicly by EPA.

per cubic meter (µg/m^3), which is 20% of the Pb 0.15 µg/m^3 NAAQS. Pb emissions from Independence have decreased since the 2008 emissions used in the modeling (Figure 4). Therefore, DEQ requested renewal of the waiver in 2015, in 2020, and in 2025 as part of DEQ's Five-year Network Assessment submitted to EPA. EPA granted the 2015 renewal request in a letter dated November 16, 2015, and again on April 29, 2021. On August 7, 2025, DEQ submitted the Five-year Network Assessments that included a lead waiver renewal, with a supporting analysis, for Entergy Independence to renew the waiver.

Figure 4. 2008–2024 Lead Emissions from Entergy Independence [19]

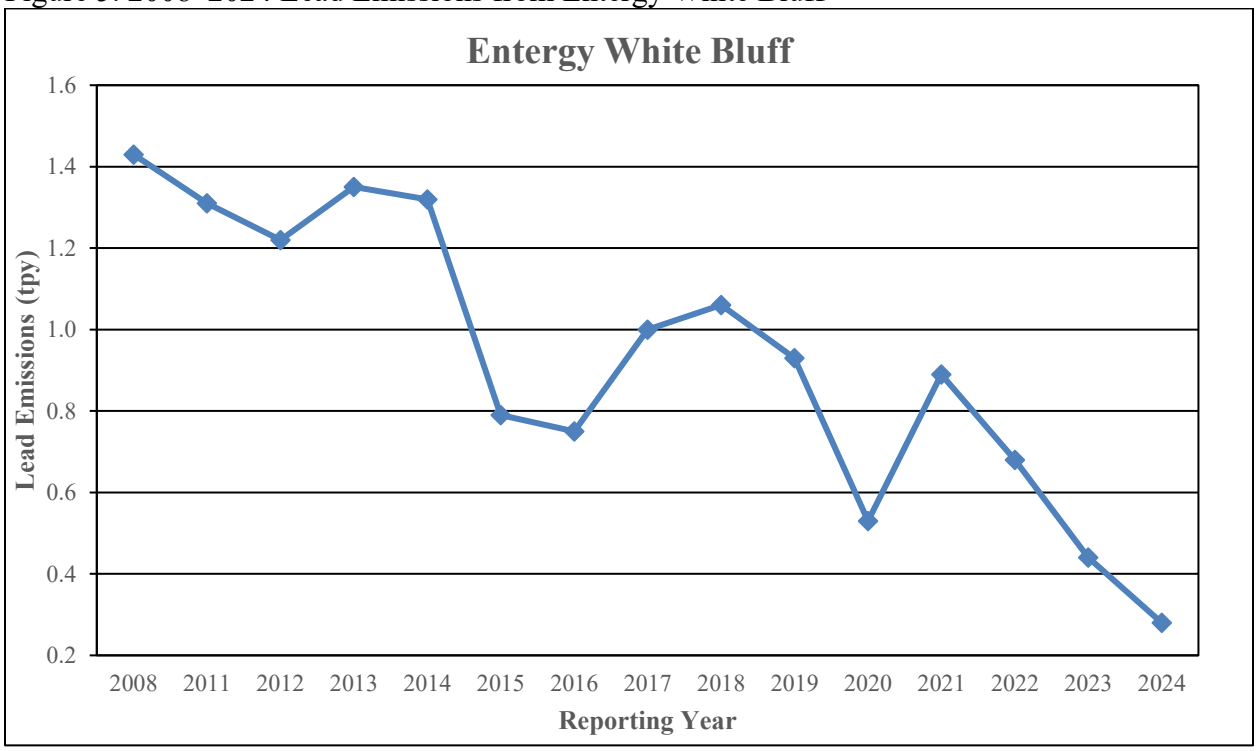


[19] Data Sources: NEI (2008, 2011, 2014, 2017, 2020, 2023) and State EI (2012, 2013, 2015, 2016, 2018, 2019, 2021, 2022, 2024).

2. Entergy White Bluff

EPA approved the first lead waiver for Entergy White Bluff on January 20, 2011. This approval was based on AERMOD modeling results that indicated that White Bluff's 2008 emissions of 1.43 tpy would result in a maximum three-month average concentration level of <0.01 µg/m^3. Pb emissions from White Bluff have decreased since the 2008 emissions used in the modeling (Figure 5). Therefore, DEQ requested renewal of the waiver in 2015 and again in 2020 as part of Five-year Network Assessment that DEQ submitted to EPA. EPA granted the 2015 renewal request in a letter dated November 16, 2015, and again on April 29, 2021. On August 7, 2025, DEQ submitted the Five-year Network Assessment that included a lead waiver renewal, with a supporting analysis, for Entergy White Bluff to renew the waiver.

Figure 5. 2008–2024 Lead Emissions from Entergy White Bluff [20]



[20] Data Source: NEI (2008, 2011, 2014, 2017, 2020, 2023) and State EI (2009, 2010, 2012, 2013, 2015, 2016, 2018, 2019, 2021, 2022, 2024).

III. Contact Information

Inquiries should be sent to the Arkansas Department of Energy and Environment, Office of Air Quality, Policy and Planning Branch at ee.comment@arkansas.gov.

Appendix A. Entergy White Bluff- Ongoing Data Requirement for Annual Updated SO_2 Emissions Information

DIVISION OF
ENVIRONMENTAL QUALITY

Sarah Huckabee Sanders
GOVERNOR
Shane E. Khoury
SECRETARY

[Public Review Draft]

Dr. James McDonald
Director, Air and Radiation Division
United States Environmental Protection Agency, Region 6
1201 Elm Street, Suite 500
Dallas, Texas 75270-2102

Re: 2010 SO_2 NAAQS Ongoing Data Requirements Annual Updated Emissions Information and Further Modeling Recommendation - Entergy Arkansas, LLC White Bluff Steam Electric Station (FIPS: 0506900110)

Dear Dr. McDonald:

For the 2010 one-hour sulfur dioxide (SO_2) Primary National Ambient Air Quality Standard (NAAQS), a comparison, per 40 CFR 51.1205(b)(1), of the annual SO_2 actual emissions included in the August 2015 modeling analysis (2012-2014) for the Entergy Arkansas, LLC, White Bluff Steam Electric Station (hereafter, White Bluff) and the eleven years of data (2015-2025) since this August 2015 modeling analysis indicate that SO_2 emissions at White Bluff for the years following the August 2015 modeling analysis are lower than those included in the 2015 modeling analysis. Therefore, the Arkansas Department of Energy and Environment, Division of Environmental Quality (DEQ), recommends to the U.S. Environmental Protection Agency (EPA) that no additional modeling analysis is necessary and that Jefferson County, AR remains "Attainment/Unclassifiable" for the 2010 SO_2 NAAQS.

As background, on June 3, 2010, the EPA revised the 2010 one-hour SO_2 Primary NAAQS by establishing a new one-hour standard at a level of 75 parts per billion (equivalent to 196.5 $\mu g/m^3$). On August 21, 2015, EPA issued its SO_2 Data Requirements Rule (SO_2 DRR), which required characterization of air quality based on modeling or actual monitoring for categories of sources based on annual SO_2 emission rates. For areas that were characterized using air quality modeling, the *Ongoing Data Requirements* in 40 C.F.R. § 51.1205(b)(1) apply when the modeling was based on actual emissions. In such cases, the air agency will be required to submit an annual report to

EPA providing updated emissions information and recommending to EPA whether further modeling is warranted to assess any expected changes in recent air quality.

On September 11, 2015, DEQ submitted to EPA an SO_2 air dispersion modeling analysis (August 2015 modeling analysis) using actual emissions for White Bluff located in Jefferson County, AR. The August 2015 modeling analysis reported that the maximum model-predicted impact of 162.4 $\mu g/m^3$ was below the 2010 1-hour SO_2 NAAQS of 196.5 $\mu g/m^3$. Therefore, DEQ recommended to EPA a designation of "Attainment/Unclassifiable" (meeting the SO_2 NAAQS requirements) for Jefferson County. On July 12, 2016 (FR Vol. 81, No. 133, 45039), EPA concurred with the DEQ recommendation and published the Final Rule: *Air Quality Designations for the 2010 Sulfur Dioxide (SO_2) Primary National Ambient Air Quality Standard—Round 2*, that designated Jefferson County, AR as having a designation of "Attainment/Unclassifiable".

For the August 2015 White Bluff 1-hour SO_2 NAAQS modeling analysis, all five sources of SO_2 at White Bluff were included in the modeling analysis (Table 1) and actual emission data for the years 2012–2014 were used. Because actual emissions data were used in the August 2015 modeling analysis, DEQ is subject to the annual follow-up analysis described in 40 C.F.R. §51.1205(b)(1).

Table 1: White Bluff SO_2 Sources

Source Description	Source ID
Unit No. 1 Boiler	SN-01
Unit No. 2 Boiler	SN-02
Auxiliary Boiler	SN-05
Emergency Diesel Generator	SN-21
Emergency Fire Pump Engine	SN-22

The requirements of 40 C.F.R. §51.1205(b)(1) entail DEQ submitting an annual assessment to the EPA by July 1 of each year that provides updated actual emissions and recommends whether further modeling is warranted to assess any expected changes in recent air quality:

> ***§ 51.1205 Ongoing data requirements.***
> *(b) Modeled areas. 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 first report for each such area is due by July 1 of the calendar year after the effective date of the area's initial designation.*

(1) The air agency shall include in such report a recommendation regarding whether additional modeling is needed to characterize air quality in any area to determine whether the area meets or does not meet the 2010 SO_2 NAAQS. The EPA Regional Administrator will consider the emissions report and air agency recommendation, and may require that the air agency conduct updated air quality modeling for the area and submit it to the EPA within 12 months.

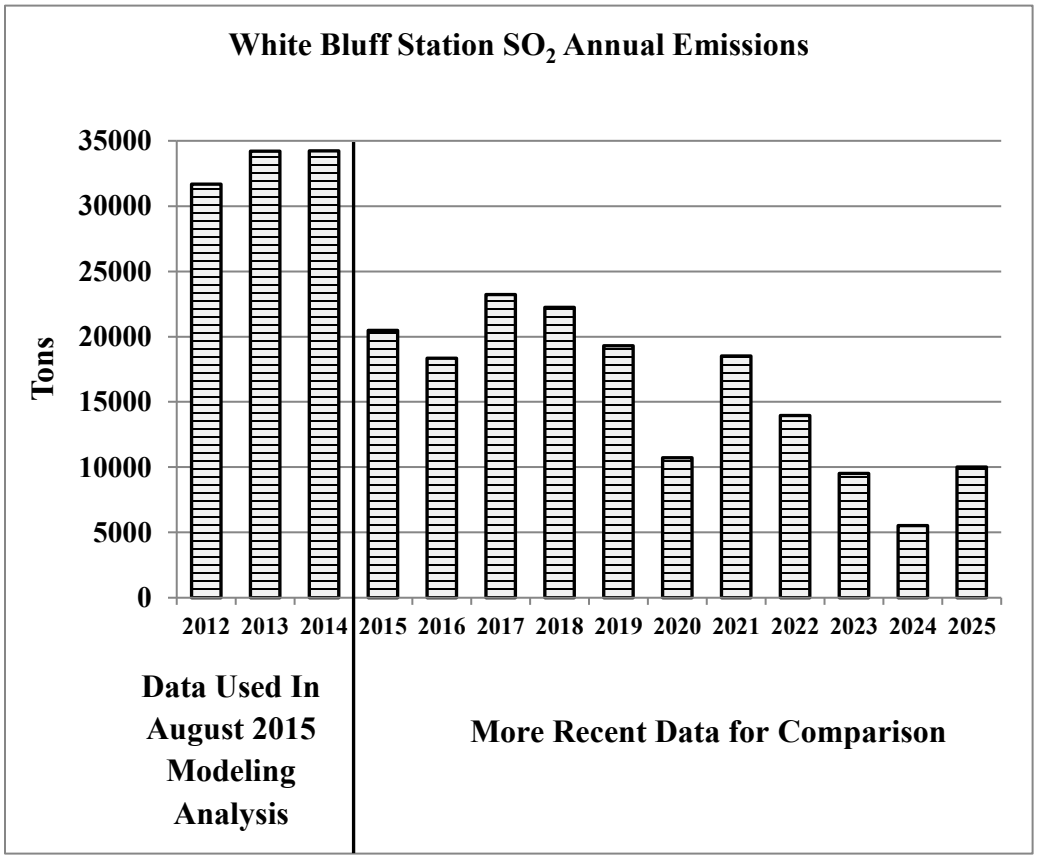
A current assessment of the annual SO_2 actual emissions for the three years (2012-2014) included in the August 2015 modeling analysis and the eleven years subsequent to the August 2015 modeling analysis (2015–2025) indicate that SO_2 emissions at White Bluff for the years following the 2015 modeling analysis are lower than the levels included in the 2015 modeling analysis (Table 2 and Figure 1).

Table 2: White Bluff SO_2 Actual Emissions for the previously modeled years (2012-2014) and the more recent years (2015-2025) as an update.

Annual SO_2 Emissions (tons/year)							
Data Period	**Year**	**Unit No. 1 Boiler[1]**	**Unit No. 2 Boiler[1]**	**Auxiliary Boiler[2]**	**Emergency Diesel Generator[3]**	**Emergency Diesel Fire Pump[3]**	**Total Emissions**
Data used in August 2015 Modeling Analysis	2012	15,231.9	16,455.3	0.030	0.0007	0.0013	31,687.2
	2013	17,227.1	16,969.2	0.001	0.0016	0.0021	34,196.3
	2014	17,503.5	16,719.1	0.003	0.0004	0.0026	34,222.6
Data included in previous Ongoing Data Requirements submittals	2015	10,149.4	10,331.1	0.001	0.0130	0.0039	20,480.5
	2016	7,984.0	10,352.0	0.068	0.0128	0.0025	18,336.1
	2017	14,356.1	8,856.0	0.007	0.0012	0.0030	23,212.1
	2018	9,273.4	12,981.5	0.019	0.0017	0.0030	22,254.9
	2019	10,326.9	8,983.7	0.016	0.0123	0.0033	19,310.7
	2020	6,255.0	4,456.0	0.085	0.0020	0.0027	10,711.1
	2021	8,488.9	10,034.4	0.005	0.0020	0.0033	18,523.3
	2022	7,578.8	6,379.9	0.020	0.0023	0.0040	13,958.7
	2023	3,480.8	6,036.5	0.120	0.0018	0.0083	9,517.4
	2024	1,579.9	3,934.8	0.013	0.0033	0.0163	5,514.7
Most Recent Annual Data Available	**2025**	**2955.3**	**7055.4**	**0.012**	**0.001**	**0.0078**	**10,010.7**

[1]Emissions from EGUs Unit 1 and Unit 2 boilers as measured by facility CEMS and reported to the EPA Clean Air Markets Program Data (CAMPD).
[2]Emissions from aux. boiler calculated based on actual annual fuel usage and measured fuel oil sulfur content.
[3]Emissions from emergency generator and emergency fire pump calculated based on actual annual hours of operation and US EPA AP-42 factors.

Figure 1: White Bluff SO_2 actual annual emissions for the previously modeled years (2012-2014) and the more recent years (2015-2025) as an update.



This 2010 SO_2 NAAQS annual report fulfills the requirement of 40 CFR Part 51, Subpart BB, §51.1205(b)(1) that DEQ submits an emissions update assessment and additional modeling recommendation to the EPA Regional Administrator. If you have any questions regarding this SO_2 emissions update assessment for White Bluff, please contact David Clark of my staff (Policy and Planning, Technical Section Supervisor; 501-682-0070 or David.Clark@Arkansas.gov) or me at 501-682-0927 or Demetria.Kimbrough@Arkansas.gov.

Sincerely,

[Signed after Public Review]

Demetria Kimbrough, MPH
Deputy Director
Office of Air Quality
Division of Environmental Quality
Arkansas Department of Energy & Environment

Appendix B. Proposed Monitor Relocations in the Arkansas Ambient Air Quality Network

A. Summary of Request

In this Appendix, DEQ outlines plans for the relocation of two monitors within the Arkansas Ambient Air Quality Network and seeks EPA concurrence on the state agency's decision. The two monitoring sites are listed in Table B1. DEQ intends for the sampling schedules for all instrumentation at the new sites to remain the same as listed in Table B1.

Table B1: Arkansas Ambient Air Quality Monitoring Sites Proposed for Relocation

AQS ID # (Site Name)	Pollutants Measured	Method Code	Sampling Method	Operating Schedule	Monitoring Objective	Spatial Scale	NAAQS Comparable
05-035-0005 (Marion)	$PM_{2.5}$	143	R&P 2000 FRM	Daily 1 in 3	Population Exposure	Neighborhood	Yes
	$PM_{2.5}$	701	R&P TEOM	Continuous	Population Exposure	Neighborhood	No
	Ozone	19	UV Photometric	Continuous	Population Exposure	Neighborhood	Yes
	NO_2	35	Chemiluminescence	Continuous	Population Exposure	Neighborhood	Yes
05-113-0003 (Eagle)	Ozone	19	UV Photometric	Continuous	Regional Transport	Neighborhood	Yes

B. Marion, AQS ID 05-035-0005

Site difficulties

DEQ is proposing to relocate the Marion monitoring site (AQS ID 05-035-0005, 35.197178, -90.193047) to a location 1.6 miles away to better protect the trailer and monitoring equipment from weather damage. The Marion monitoring site has been subject to frequent flooding over the last several years, resulting in irreparable damage to the trailer and monitoring instruments and equipment housed therein. The site is subject to equipment malfunctions, misreadings, and emergency repairs because of persistent moisture, making resource planning extremely difficult and negatively impacting the efficiency and effectiveness of DEQ's air monitoring and data analysis efforts. Damage to the structure can be seen in Figures B1-B7; there is roof, wall, and floor damage, and the structure itself has sunk over time into a depression in the ground that holds water for days after a rain event.

Figure B1: Current Marion Site, Exterior; Planks DEQ installed for traversing flooding conditions

Figure B2: Current Marion Site, Exterior; Flooded conditions day after rain at entrance to structure

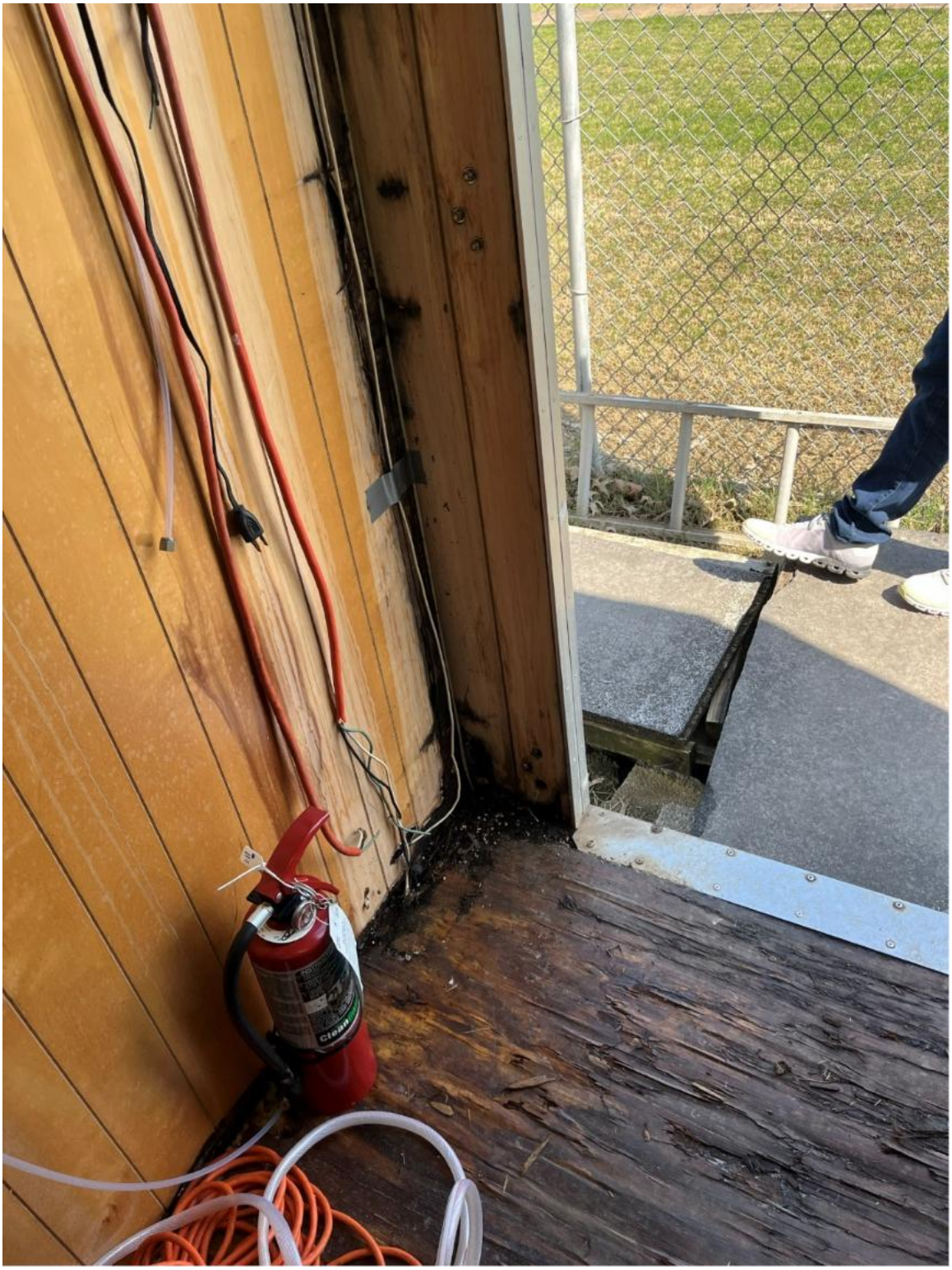
Figure B3: Current Marion Site, Exterior; Flooded conditions day after rain at side of structure

Figure B4: Current Marion Site, Exterior; Muddy conditions week after showing waterlines on structure and erosion damage to supporting feet

Figure B5: Current Marion Site, Interior; Floor and wall damage from flooding conditions

Figure B6: Current Marion Site, Interior; Floor, wall, roof damage from flooding conditions

Figure B7: Current Marion Site, Interior; Floor, wall, doorframe damage from flooding conditions



DEQ proposed solution

The current site is housed on city-managed property in Marion, AR, and DEQ searched for a location under city management that was within two (2) miles of the current site with similar anthropogenic activities, meteorological patterns, and surrounding land use, but with reduced risk of flooding events. DEQ also considered additional elements necessary to preserve the purpose of the site (population exposure) and preservation of data completeness when surveying possible new sites. DEQ contacted the City of Marion to discuss details and requested the City's permission to occupy the new site location. Discussions with the mayor yielded final selection of a site that was within two (2) miles of the current site and located on city-managed property adjacent to local fire station #3. This site was selected as the most suitable, having more regular city maintenance performed than at the current site and being less prone to flooding, and comparable in terms of land use and anthropogenic activities. A comparison of site details is shown in Table B2, demonstrating suitability of the new site to capture data comparable to that at the current site. Figure B8 shows a map with both locations marked for spatial comparison, and Figure B9 shows a comparison of land use in the area.

DEQ has visited the proposed site during heavy rains and observed much better drainage during and after a storm, with less than an inch of standing water immediately afterwards that absorbs into the ground quickly thereafter. Additionally, DEQ had the opportunity to refurbish a spare mobile monitoring station from the agency's fleet of enclosed trailers in late 2025 that is the same as the one currently located at the Marion site. DEQ plans to install a stabilizing gravel pad beneath the trailer prior to anchoring it, to prevent any future settling and sinking of the trailer at the new site. DEQ will also install a 6-ft wood fence with locking gate around the structure.

Because of frequent malfunctions at the current Marion site causing data loss, once the new site is operational, DEQ requests that EPA approve the calculation of combined design values for all pollutant monitors located in Marion using data from the current and the new site once operational, so that data completeness and assessment of NAAQS compliance are not affected by the relocation, per 40 CFR Part 50, Appendix U, paragraph 2(c). DEQ intends for the sampling schedules for all instrumentation at the new site to remain the same. While DEQ would prefer to retain the existing AQS ID assigned to the Marion monitoring station, the agency will defer to EPA on compliance with the CAA in this matter, and adjust internal processes and documentation as required. Proposed operation of the monitor at the new site still meets the requirements of 40 CFR 58 Appendices A, B, C, D and E.

DEQ contends that relocation of this monitoring site is approvable by EPA under 40 CFR 58.14(c)(6) and can be "moved to a nearby location with the same scale of representation if logistical problems beyond the State's control make it impossible to continue operation at its current site."

Table B2: Comparison for Crittenden County Current Site (Water Tower) and Proposed Site (Fire Station #3)

Site Name	County	Address	Coordinates	Elevation	Distance between sites	Site Description	CBSA
Marion (Water Tower)	Crittenden	800 LH Polk Dr Marion, AR	35.197178, -90.193047	66.35 m	1.6 miles	Within a residential subdivision, proportional distance to interstate and rail for both sites	Memphis, TN-MS-AR
Marion (Fire Station #3)		400 Marion Lake Rd Marion, AR	35.2197917, -90.188819	66.69 m			

Figure B8: Marion, Arkansas Current Site (Orange X) and Proposed Relocation Site (Blue check)

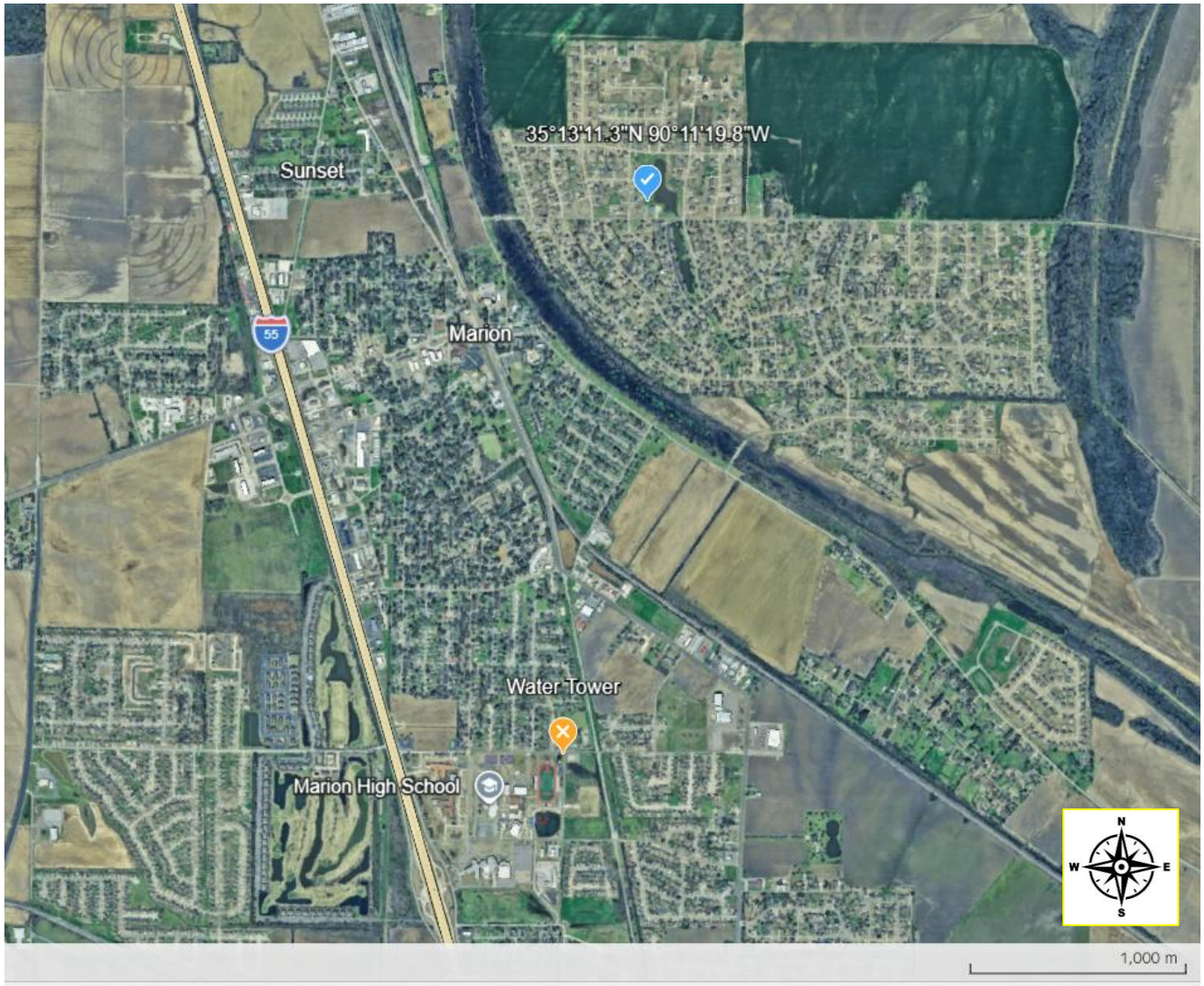


Figure B9: Marion, Arkansas Current Site (Orange X) and Proposed Relocation Site (Blue check), Land-use comparison (West facing)

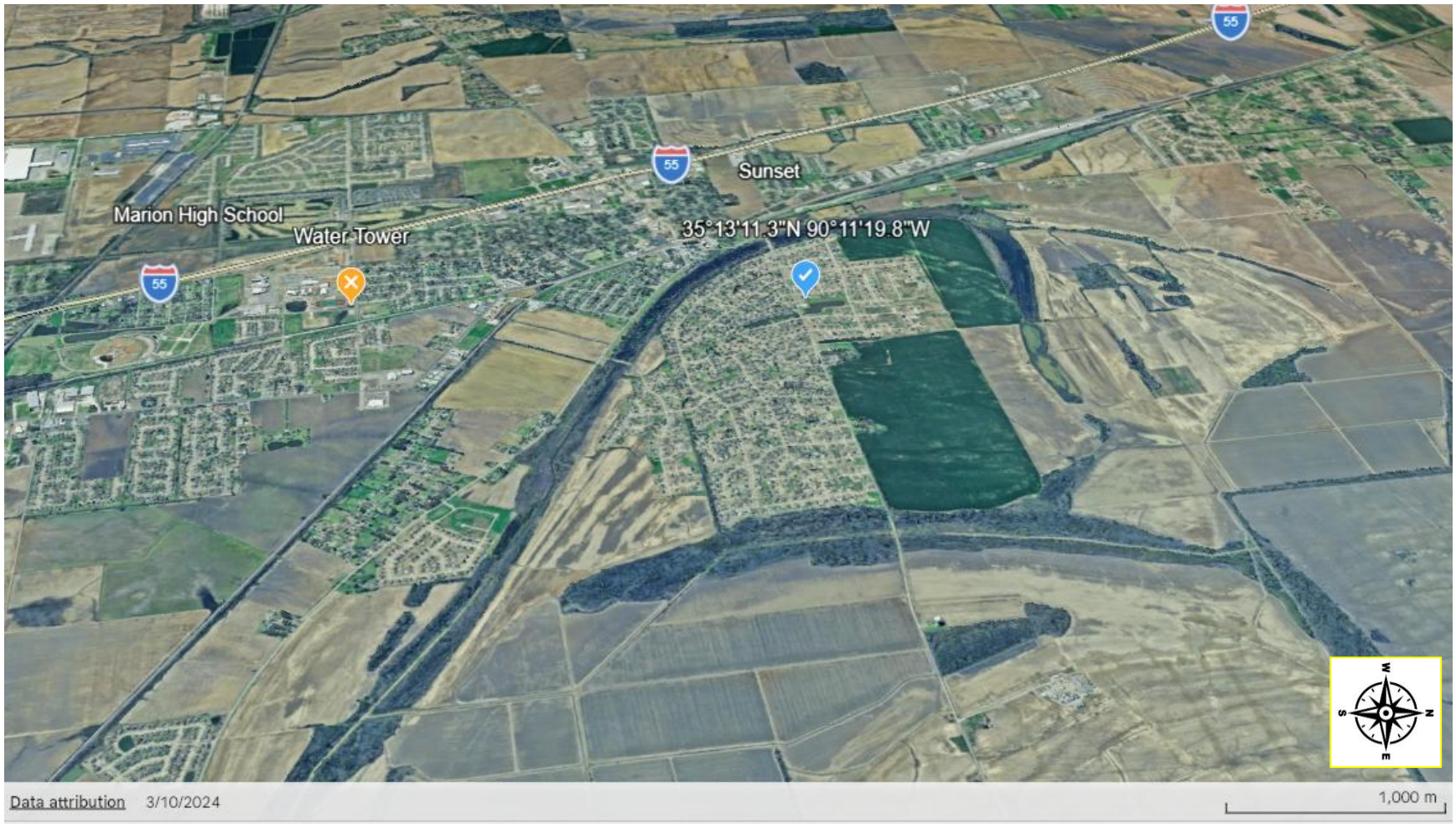


Figure B10: Current site; North facing with shelter location marked on the map

Figure B11: Current site; South facing with shelter location marked on the map

Figure B12: Current site; West facing with shelter location marked on the map

Figure B13: Current site; East facing with shelter location marked on the map

Figure B14: Proposed new site; North facing with intended shelter location marked on the map

Figure B15: Proposed new site; South facing with intended shelter location marked on the map

Figure B16: Proposed new site; West facing with intended shelter location marked on the map

Figure B17: Proposed new site; East facing with intended shelter location marked on the map

C. Eagle (Mena, AR), AQS ID 05-113-0003 (Decommissioned 09-30-2025)

Site difficulties

DEQ is proposing to relocate the rural Eagle Mountain ozone monitoring site (AQS ID 05-113-0003; 34.454428, -94.143317), after concerns for staff safety due to forced decommissioning of this site on September 30, 2025. The site was located atop a remote-access mountain, with a narrow and steep clay and loose rock trail leading to up it. The trail is often washed out after rain and slick for days afterwards, conditions that state-owned vehicles are not equipped to handle reliably. After leaving the main paved road at the base of Eagle Mountain, DEQ staff must traverse a sharply winding 1.73-mile rugged trail that is not regularly maintained (see Figures B18 and B19). ATV activity along the trail further degrades driving conditions and leads to frequent washouts.

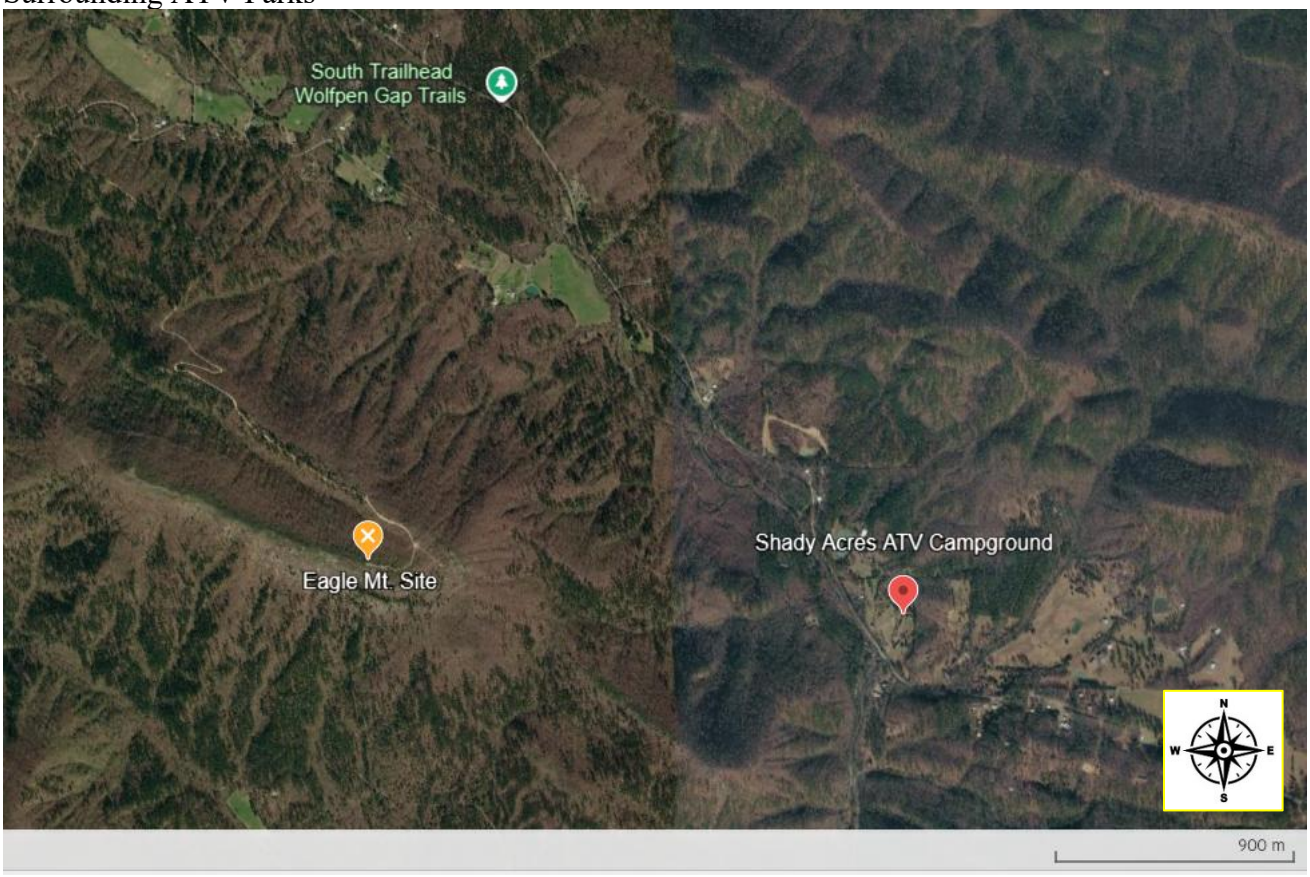
Figure B18: Trail Leading to the Eagle Mountain Monitoring Site

B19: Photo of Trail Conditions Leading to the Decommissioned Eagle Mountain Monitoring Site

Since the location was originally established, there have been two large all-terrain vehicle parks and campgrounds established near the site. One is located just 1 mile north of the site (Wolfpen Gap ATV Campground and associated west, south, and east trails encompass approximately 18 square miles to the north-northeast of the monitoring site, with the south trailhead closest to the

monitoring site), and another park is located east of the site 1.2 miles (Shady Acres). ATV trails wrap around the site up and down the ridge where the monitoring structure sits and ATV recreators frequently idle in immediate proximity of the monitor intake because that building is the only manmade landmark in the area, so recreators use it as an easily recognizable meet-up point. Because the immediate land use surrounding the monitoring site has changed over time to a type of special use area, conditions are no longer ideal for collecting background ambient air comparisons as is intended for this site. The general layout of the area can be seen in Figure B20.

Figure B20: Decommissioned Eagle Mountain Monitoring Site (orange "x") and Proximity of Surrounding ATV Parks



The structure housing monitoring equipment at the decommissioned site has also been vandalized by firearm use, likely due to the remote location having little to no on-site surveillance and frequent ATV activity, making conditions at the site unsafe for both staff and equipment. Photos of the site conditions can be seen in Figures B21 and B22. With the expiration of the location's lease October 1, 2025, DEQ determined the best course of action was to remove monitoring equipment from the site prior to that date and to begin searching for a comparable location for re-siting.

Figure B21: Evidence of Firearm Damage to the Monitoring Shelter

Figure B22: Degrading Foundation of Monitoring Shelter (sheer cliffside)

DEQ proposed solution

DEQ's search for a relocation site began with a two-mile radius of the decommissioned site. Because of the remote nature and elevation of the decommissioned site, no suitable alternative sites were located within that distance. Next, DEQ considered additional elements necessary to preserve the purpose of the site (ozone transport) and searched for a comparable site with similar elevation, position within the regional network such that it would be similar enough to Eagle Mountain to yield meaningful data, and with similar anthropogenic activities and remoteness.

Transmission of monitoring data is a high priority, but it is extremely difficult to ensure communications reliability in remote locations in Arkansas like the sites being considered. Installation of an extra antenna component was required to receive cellular service at the site, which is still sometimes unreliable because of the remote location and surrounding landscape. Because of the difficulty reaching this location and unpredictability of this location's road/trail conditions, emergency servicing events have led to several losses of data, including one gap in data such that the agency was unable to calculate 2023 DV for Ozone for this monitor.

Thus, DEQ began with a search of communications towers in the county (assuming the roads to these would be regularly maintained) that were similar in elevation to Eagle Mountain and engaged several managing entities to discuss feasibility of collocating DEQ ozone monitoring equipment at their respective sites. Private entities were less responsive to the request, but, one communication tower is managed by the Arkansas Department of Emergency Management, located at Rich Mountain near the historic fire tower at Lake Wilhelmena State Park within the Ouachita National Forest (34.674197, -94.328231). The location is comparable to Eagle Mountain but is much more safely and reliably accessible, with regular surveillance by State Park staff, developed roads and maintained rural grounds.

Using tools available in NetAssess2025 v1.1, DEQ compared the two sites for area served; results are shown in Figure B23. DEQ also considered proximity of known sources of ozone precursors (nitrogen oxides and volatile organic compounds) and compared those for both sites, as shown in Figure B24. DEQ concluded that the proposed monitoring site at Rich Mountain will continue to adequately serve the previous area.

Figure B23: Comparison of Area Served for Decommissioned Eagle Site and Proposed Rich Site

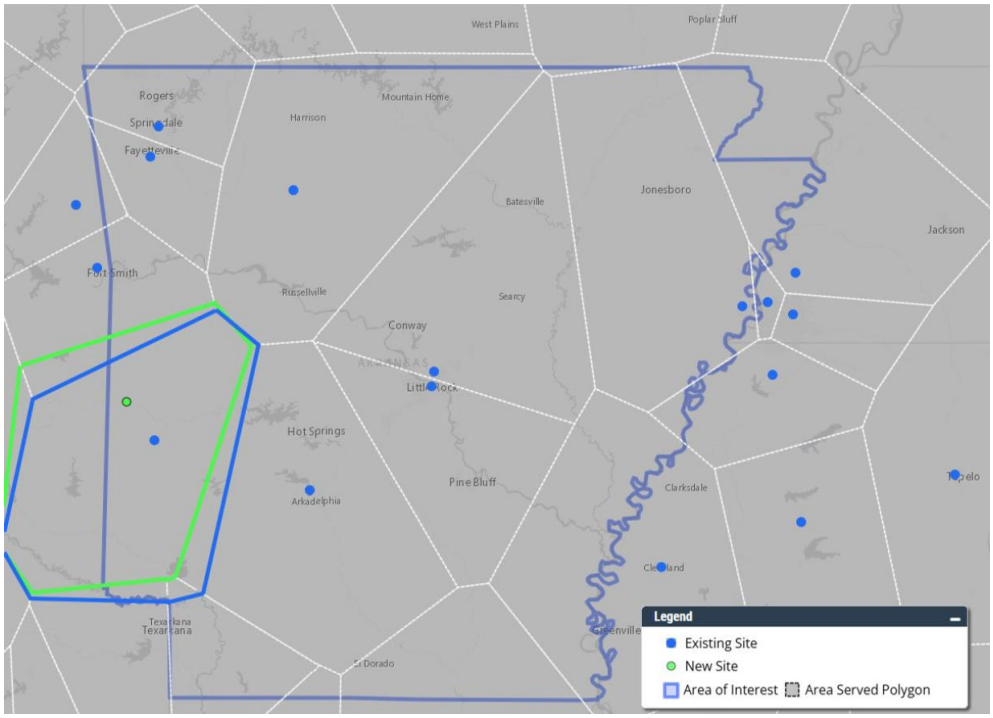
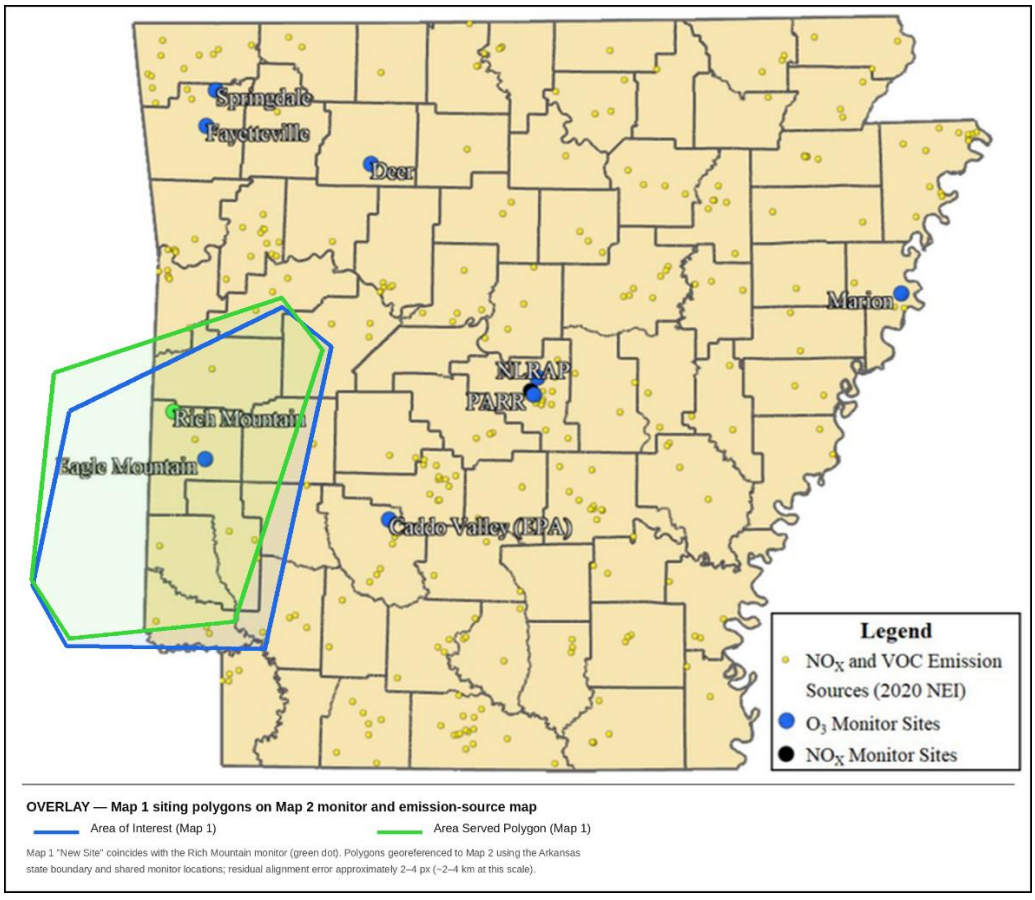


Figure B24: Ozone Precursor Emission Sources (2020 NEI) with Area Served Overlay



DEQ proposes relocating decommissioned Eagle Mountain monitoring equipment to the Rich Mountain site under a newly assigned AQS ID. DEQ is proposing to relocate the site in 2026, after State Park renovations are completed around September 2026. The sampling schedule for the new site would remain the same.

A comparison of site details is shown in Table B3, demonstrating suitability of the new site to capture data comparable to that at the decommissioned site. Figure B25 shows a map with both locations marked for spatial comparison.

Table B3: Comparison for Polk County Decommissioned Site (Eagle Mt.) and Proposed Site (Rich Mt.)

Site Name	County	Address	Coordinates	Elevation	Distance between sites	Site Description	CBSA
Eagle Mt. (Mena)	Polk	Mena, AR	34.454428, -94.143317	677 m	18.5 miles	Remote, high elevation, Regional Transport	Arkadelphia Micropolitan
Rich Mt. (Mena)		Mena, AR	34.674197, -94.328231	817 m			

Figure B25: Eagle Mountain Decommissioned Site (Orange X) and Proposed Rich Mountain Relocation Site (Blue check)

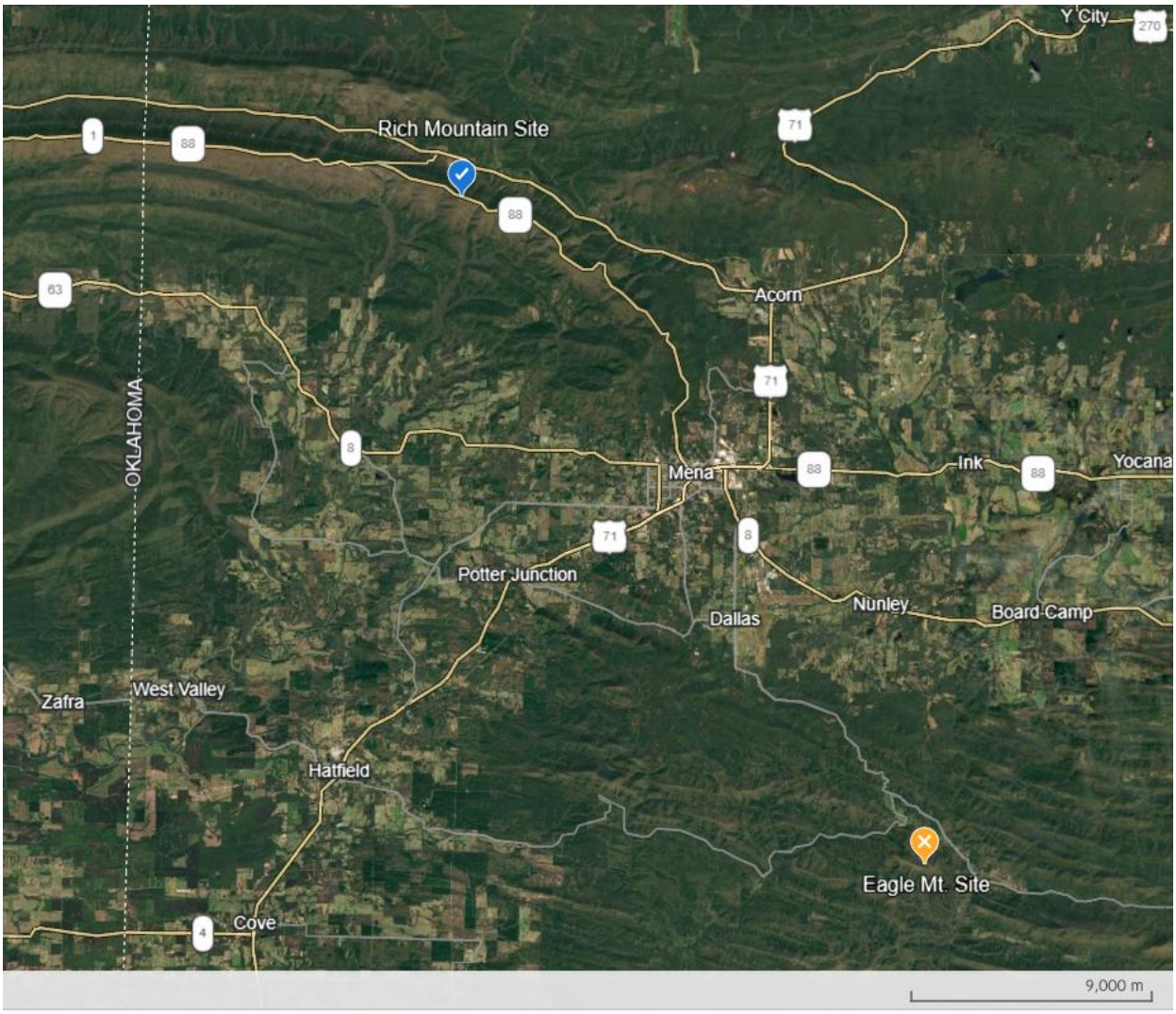


Figure B26: Decommissioned site; North facing with shelter location marked on the map

Figure B27: Decommissioned site; South facing with shelter location marked on the map

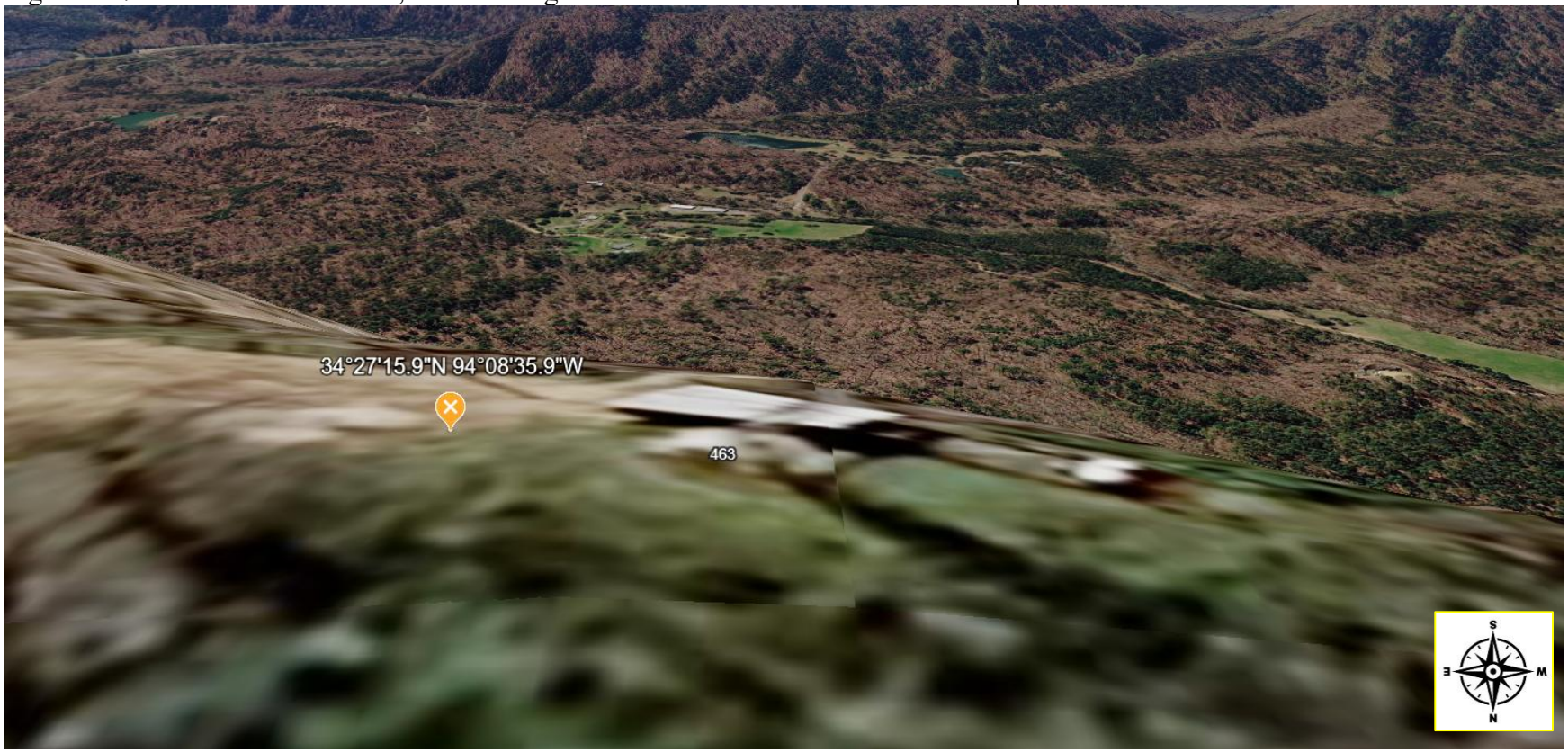


Figure B28: Decommissioned site; West facing with shelter location marked on the map

Figure B29: Decommissioned site; East facing with shelter location marked on the map

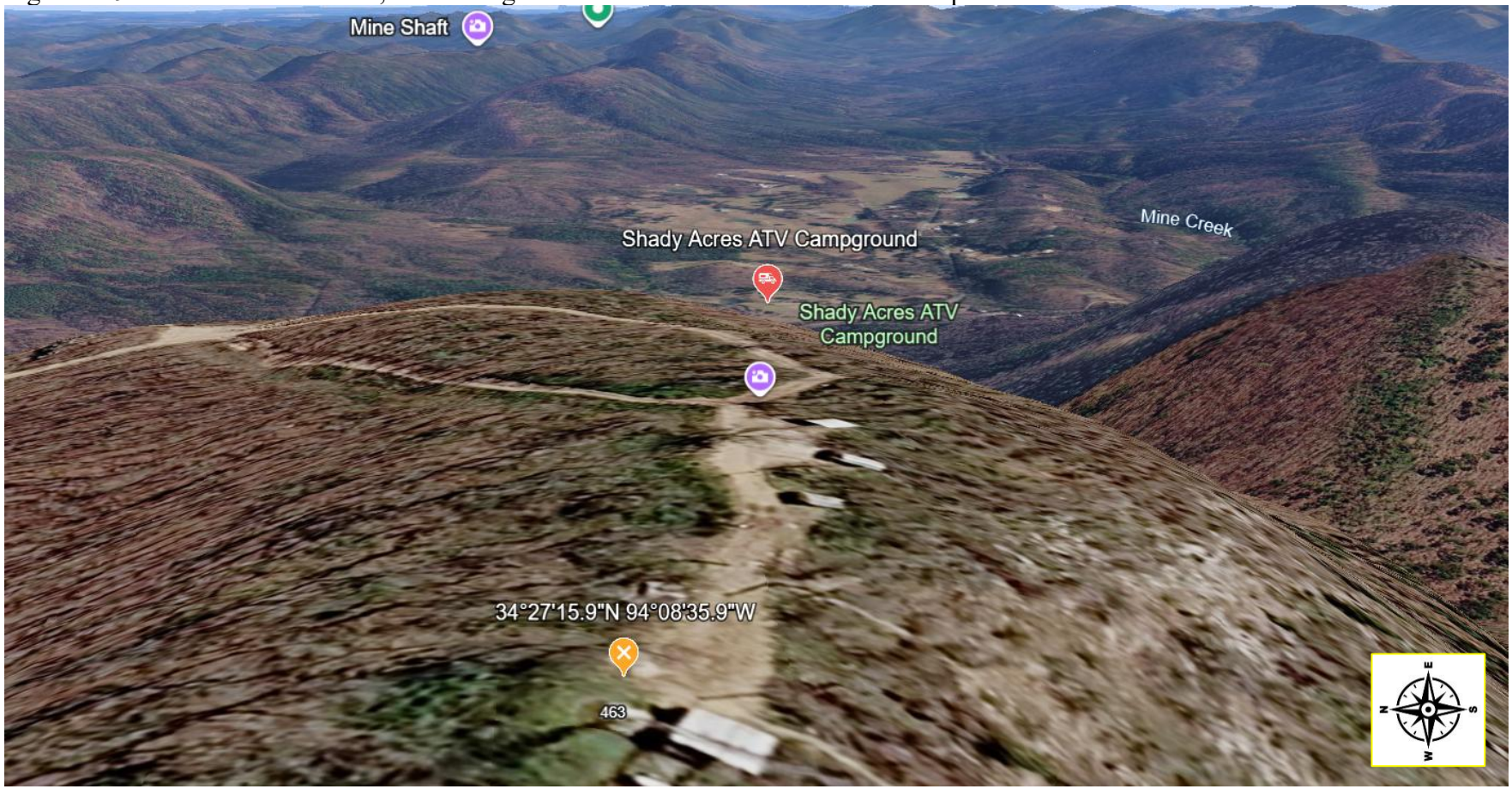


Figure B30: Rich Mountain site; North facing with shelter location marked on the map

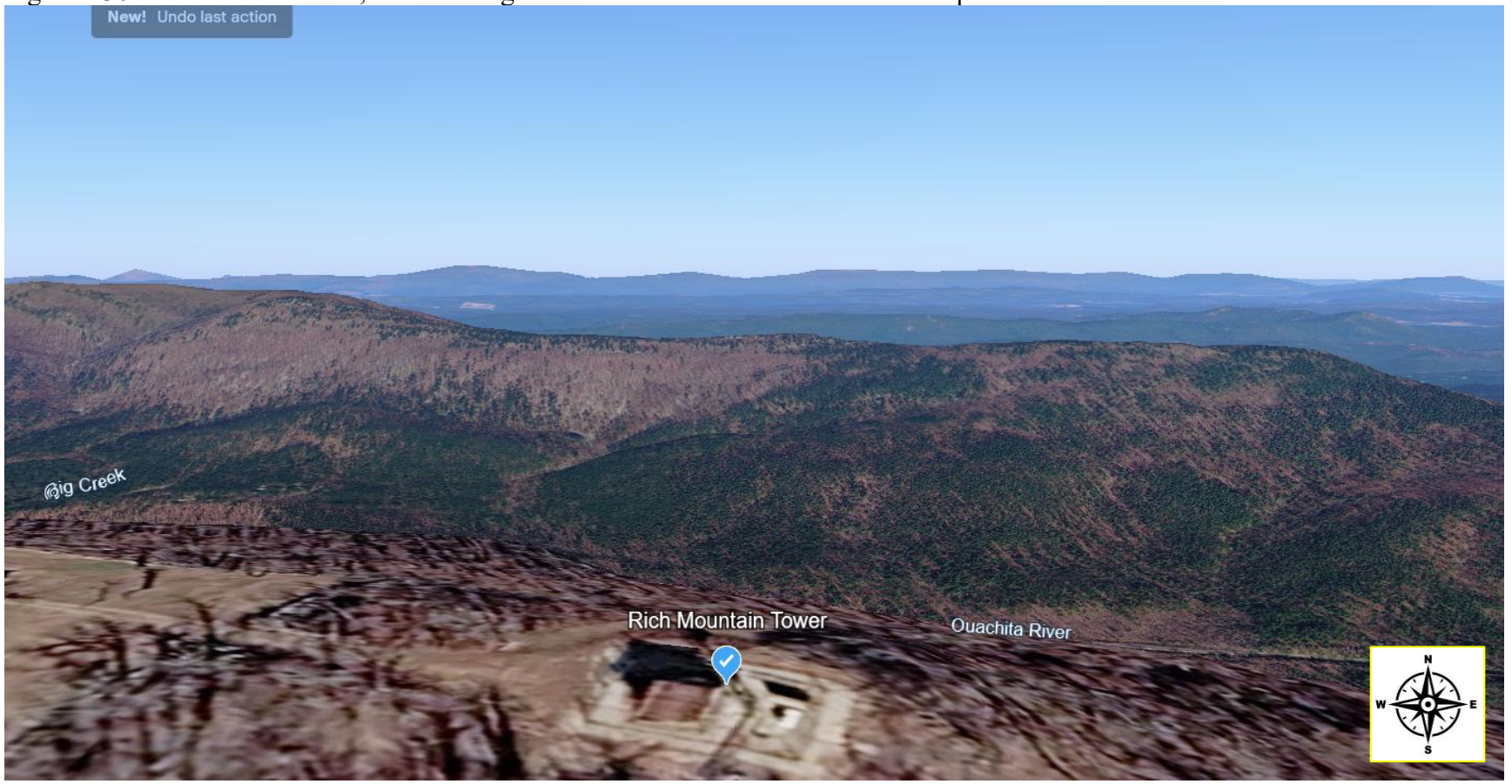


Figure B31: Rich Mountain site; South facing with shelter location marked on the map

Figure B32: Rich Mountain site; West facing with shelter location marked on the map

Figure B33: Rich Mountain site; East facing with shelter location marked on the map

Appendix BC. 2026 Update to May/June 2008 Memorandum of Agreement between SCHD, MDEQ and DEQ concerning air quality monitoring requirements for the Memphis MSA

SHELBY COUNTY HEALTH DEPARTMENT

LEE HARRIS
MAYOR

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

BRUCE RANDOLPH, MD, MPH
INTERIM HEALTH DIRECTOR & HEALTH OFFICER

May 15, 2026

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Demetria Kimbrough, Deputy Director, Office of Air Quality
Division of Environmental Quality
Arkansas Department of Energy and Environment
5301 Northshore Drive
North Little Rock, Arkansas 72118-5317

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.

Pending final EPA approval, the SCHD plans to begin operation of a sixth air monitoring site in southwest Memphis (Riverview). The Riverview site is planned to contain a carbon monoxide monitor as well as an ozone monitor. Our goal is to have the site operational and online collecting data (for submittal to AQS) starting Quarter 3 (July 1st). We also plan to complete changes later in the year at the Alabama Ave. and Near Road sites within the SCHD air monitoring network (see monitoring charts). After consulting with MDEQ and DEQ, we learned that there will be no other changes at this time. With this MOA, all agencies are meeting EPA monitoring requirements.

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

Sincerely,

Kasia S. Alexander

Kasia Smith Alexander
Deputy Director, Shelby County Health Department

Appendix D. Newspaper Public Notice & Proof of Publication