State of Alabama
Ambient Air Monitoring
2023 Network Plan

July 26, 2023

Alabama Department of Environmental Management

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Definitions and Acronyms

AADT	Annual Average Daily Traffic
AAQM	Ambient Air Quality Monitoring
AAQMP	Ambient Air Quality Monitoring Plan
ADEM	Alabama Department of Environmental Management
ARM	Approved Regional Method
AQS	Air Quality System
avg	average
CASTNET	Clean Air Status and Trends Network
CBSA	Core Based Statistical Area
CFR	*Code of Federal Regulations*
CO	Carbon Monoxide
CSA	Combined Statistical Area
CSN	Chemical Speciation Network
EPA	Environmental Protection Agency
FEM	Federal Equivalent Method
FRM	Federal Reference Method
HDNREM	Huntsville Division of Natural Resources and Environmental Management
hr	hour
hi-vol	high-volume sampler
JCDH	Jefferson County Department of Health
low-vol	low-volume particulate sampler
m3	cubic meter
min	minute
ml	milliliter
MSA	Metropolitan Statistical Area
NAAQS	National Ambient Air Quality Standards
NCore	National Core multipollutant monitoring station
O3	ozone
PAMS	Photochemical Assessment Monitoring Station
Pb	lead
PM	particulate matter
$PM_{2.5}$	particulate matter ≤2.5 micrometers diameter
PM_{10}	particulate matter ≤10 micrometers diameter
ppb	parts per billion
PQAO	primary quality assurance organization
PSD	Prevention of Significant Deterioration
PWEI	Population Weighted Emissions Index
QA	Quality Assurance
QAPP	Quality Assurance Project Plan
QC	Quality Control
SLAMS	State or Local Air Monitoring Station
SO2	Sulfur Dioxide
SPM	Special Purpose Monitor
STN ($PM_{2.5}$)	Speciation Trends Network
tpy	tons per year
TSP	Total Suspended Particulate
URG	URG-3000N PM2.5 Speciation monitoring carbon-specific sampler
° C	degree Celsius
$\mu g/m^3$	micrograms (of pollutant) per cubic meter (of air sampled)
µSA	Micropolitan Statistical Area
≥	greater than or equal to
>	greater than
≤	less than or equal to
<	less than

Introduction

In October 2006, the United States Environmental Protection Agency (EPA) issued final Federal Regulations (40 CFR Part 58) concerning state and local agency ambient air monitoring networks. These regulations require states to submit an annual monitoring network review to EPA. This document provides the framework for the establishment and maintenance of Alabama's air quality surveillance system, lists changes that occurred during 2022/2023, and changes proposed to take place to the current ambient air monitoring network during 2023/2024. Any changes made to the plan after the public comment period will be found in Appendix C.

Public Review and Comment

The annual monitoring network review must be made available for public inspection for thirty (30) days prior to submission to the EPA. For 2023, this document was placed on ADEM's website on 06/01/2023 to begin a 30-day public review period. This document can be accessed at the following link:

http://www.adem.alabama.gov/newsEvents/publicNotices.cnt

Or by contacting:

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Overview of Alabama's Air Monitoring Network

Ambient air monitors in the state of Alabama are operated for a variety of monitoring objectives. These objectives include determining whether areas of the state meet the National Ambient Air Quality Standards (NAAQS), to provide public information such as participation in the EPA's AirNow program, Air Quality Index (AQI) reporting for larger Metropolitan Statistical Areas (MSAs), for use in Air Quality Models, and to provide data to Air Quality Researchers. Entities in Alabama monitor all six (6) criteria pollutants which have NAAQS identified for them: Carbon Monoxide (CO), Lead (Pb), Nitrogen Dioxide (NO_2), Ozone (O_3), particulate matter ($PM_{10,}$ $PM_{2.5}$), and Sulfur Dioxide (SO_2). $PM_{2.5}$ speciated compounds, a non-criteria pollutant, is also monitored for special purposes. In addition, meteorological data may be collected to support air monitoring and aid in analysis of the ambient air monitoring data.

In Alabama, the air quality surveillance system is operated by three separate entities: the Alabama Department of Environmental Management (ADEM), and two local agencies, the Jefferson County Department of Health (JCDH), and the Huntsville Department of Natural Resources and Environmental Management (HDNREM). Each agency is responsible for its own annual network plan. This document reflects only the ADEM air quality surveillance system. An overview of the 2023 ADEM Monitoring Network can be found in Table 1.

The JCDH plan will be available for review on their website by following this link. https://jcdh.org/SitePages/Misc/AirProgReports.aspx

The HDNREM plan will be available for review on their website by following this link. https://www.huntsvilleal.gov/environment/air-quality/

Currently, the Air Quality Index (AQI) is reported for Huntsville, Birmingham, Mobile, Montgomery and Phenix City on the Internet at the sites listed below.

ADEM	http://adem.alabama.gov/programs/air/airquality/ozone/historical.cnt
JCDH	https://jcdh.org/SitePages/Programs-Services/EnvironmentalHealth/Air-RadiationProtectionDivision/AirQualForecast.aspx
HDNREM	https://www.huntsvilleal.gov/environment/air-quality/air-pollution-control-program/air-quality-daily-index-reports/

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Summary of adjustments and proposals for the ADEM AAQMP

Summary of changes in 2022/2023

- **Ashland, AQS ID 01-027-0001**, $PM_{2.5}$ sampling method was changed by replacing the FRM sampler with an FEM BAM-1022 continuous sampler on 01/01/2023.
- **Chickasaw, AQS ID 01-097-0003**, $PM_{2.5}$ sampling method was changed by replacing both the primary FRM manual monitor and the non-FEM BAM 1020 with an FEM BAM-1022 continuous sampler on 01/01/2023. The FEM BAM-1022 $PM_{2.5}$ SLAMS continuous sampler has been designated as the primary monitor at the site. Although two monitors were shut-down, no change in the number of pollutants monitored occurred as a result of this change of equipment.
- **Crossville, AQS ID 01-049-1003**, $PM_{2.5}$ sampling method was changed by replacing the FRM sampler with an FEM BAM-1022 continuous sampler on 01/01/2023.
- **Decatur, AQS ID 01-103-0011**, $PM_{2.5}$ sampling method was changed by replacing both the API T-640 special purpose monitor and the FRM manual monitor with an FEM BAM-1022 continuous sampler on 01/01/2023. Although two monitors were shut-down, no change in the number of pollutants monitored occurred as result of this change of equipment.
- **Duncanville Middle School, AQS ID 01-125-0011**, $PM_{2.5}$ sampling method was moved from VA, Tuscaloosa, AQS ID 01-125-0004, and an FEM BAM-1022 continuous sampler was started at this site on 01/01/2023.
- **Fairhope, AQS ID 01-0003-0010**, $PM_{2.5}$ sampling method was changed by replacing the FRM manual monitor with a FEM BAM-1022 continuous sampler on 01/01/2023.
- **MOM, AQS ID 01-101-1002**, both the primary FRM manual monitor and the non-FEM BAM 1020 were replaced with an FEM BAM-1022 $PM_{2.5}$ continuous sampler on 01/01/2023. Although two monitors were shut-down, no change in the number of pollutants monitored occurred as result of this change of equipment. The continuous FEM BAM-1022 $PM_{2.5}$ SLAMS monitor has been designated as the primary monitor and an FRM manual monitor will continue to operate as the collocated monitor to meet regulatory collocation requirements for this method.
- **Phenix City – South Girard School, AQS ID 01-113-0003**, the FEM BAM-1022 continuous sampler was replaced with an FRM sampler on 03/01/2023.
- **Troy Lead, AQS ID 01-109-0003**, high volume TSP samplers were replaced with updated versions of the same type of equipment on 09/01/2022.
- **VA, Tuscaloosa, AQS ID 01-125-0004**, this site is closed as of 1/1/2023. The collocated $PM_{2.5}$ monitor was approved for shut down and the primary $PM_{2.5}$ monitor moved to Duncanville (01-125-0011**)** on 01/01/2023 to increase efficiency and utilize the new shelter.
- **Mobile PM10 Seals Park**, **AQS 01-097-8001**, ADEM has been working with the EPA and the City of Mobile to develop PM10 monitoring in response to citizen concerns of fugitive dust near the downtown area. Data collected will be suitable for NAAQS comparability and adhere to proper siting and monitoring guidelines as found in 40 CFR 58, Appendices A, C, D and E, as appropriate. Site construction is complete and monitoring is expected to start by July 1, 2023.

Summary of proposed changes for 2023/2024

- **Gadsden C College, AQS ID 01-055-0010** A new air monitoring shelter will be installed on the campus of Gadsden Community College in order to move Ozone monitoring from Southside, AQS ID 01-055-0011. Consolidating Ozone monitoring with $PM_{2.5}$ monitoring at this site will improve efficiency and will not reduce the number of pollutants monitored in this MSA. Justification was provided in an addendum to the 2022 network plan.
- **Southside, AQS ID 01-055-0011,** ADEM will shut down this site at the end of ozone season 2023 and move 2024 ozone monitoring in the MSA to Gadsden C College, AQS ID 01-055-0010. Although one site will be shut-down, no change in the number of pollutants monitored in this MSA will occur as a result of this consolidation of monitoring.
- **Ward, Sumter Co., AQS ID 01-119-0003**, ADEM experienced a change in staffing, which delayed the startup of monitoring NO_2 at Ward, Sumter Co. (AQS ID 01-119-0003). Sampling should begin after delivery of the new, larger shelter, scheduled for late summer. The monitor will be designated as a Special Purpose Monitor (SPM) during its 2-year evaluation period.

Table 1 2023 ADEM Ambient Air Monitoring Network

ADEM Site Common Name	AQS ID	Ozone	PM2.5 Local	PM 2.5 Local Collocated	PM2.5 Speciation	PM2.5 Continuous	PM10 Lo-Vol	PM10 Lo-Vol Collocated	PM10 Continuous	Lead TSP	Lead TSP Collocated	NO2	SO2
Fairhope	**01-003-0010**	X				X[4]							
Ashland	**01-027-0001**					X[4]							
Crossville	**01-049-1003**					X[4]							
Wetumpka Westside Technology	**01-051-0004**	X											
Gadsden C College	**01-055-0010**					X							
Southside	**01-055-0011**	X[1]											
Chickasaw	**01-097-0003**	X				X[4]							X
Bay Road	**01-097-2005**	X											
Seals Park[3]	**01-097-8001**						X		X				
MOMS, ADEM	**01-101-1002**	X		X		X[4]	X	X					
Decatur	**01-103-0011**	X				X[4]							
Troy Lead	**01-109-0003**									X	X		
Phenix City - South Girard School	**01-113-0003**	X	X	X	X								
Helena	**01-117-0004**	X											
Lhoist, Montevallo Plant (DRR)	**01-117-9001**												X
Ward, Sumter Co.	**01-119-0003**	X				X						X[2]	X
Duncanville Middle School[5]	**01-125-0011**	X				X							

[1] Site will be shut down at end of 2023 Ozone season.

[2] Ward is scheduled to begin NO_2 sampling.

[3] Seals Park is scheduled to begin sampling before 07/01/2023.

[4] Sampling method changed.

[5] Moved PM Sampling from Tuscaloosa, VA to this site.

Network Plan Description

As per 40 CFR Part 58.10, an annual monitoring network plan which provides for the establishment and maintenance of an air quality surveillance system consisting of the air quality monitors in the state is required to be submitted by all states to the EPA.

Specifically §58.10 (a) requires for each existing and proposed monitoring site:

1. A statement of purpose for each monitor.
2. Evidence that siting and operation of each monitor meets the requirements of Appendices A, C, D, and E of 40 CFR Part 58, where applicable.
3. §58.10 (b) requires the plan contain the following information for each existing and proposed site:
    a. The Air Quality System (AQS) site identification number.
    b. The location, including street address and geographical coordinates.
    c. The sampling and analysis method(s) for each measured parameter.
    d. The operating schedules for each monitor.
    e. Any proposals to remove or move a monitoring station within a period of 18 months following plan submittal.
    f. The monitoring objective and spatial scale of representativeness for each monitor.
    g. The identification of any sites that are suitable and sites that are not suitable for comparison against the annual $PM_{2.5}$ NAAQS as described in §58.30.
    h. The Metropolitan Statistical Area (MSA), Core Based Statistical Area (CBSA), Combined Statistical Area (CSA) or other area represented by the monitor.
    i. The designation of any Pb monitors as either source-oriented or non-source-oriented according to 40 CFR part 58 Appendix D.
    j. Any source-oriented monitors for which a waiver has been requested or granted by the EPA Regional Administrator as allowed for under paragraph 4.5(a)(ii) of 40 CFR part 58 Appendix D.
    k. Any source-oriented or non-source-oriented site for which a waiver has been requested or granted by the EPA Regional Administrator for the use of Pb-PM_{10} monitoring in lieu of Pb-TSP monitoring as allowed for under paragraph 2.10 of Appendix C to 40 CFR part 58.
    l. The identification of required NO_2 monitors as near-road, area-wide, or vulnerable and susceptible population monitors in accordance with Appendix D, section 4.3 of this part.
    m. The identification of any $PM_{2.5}$ or FEMs used in the monitoring agency's network where the data are not of sufficient quality such that data are not to be compared to the NAAQS. For required SLAMS where the agency identifies that the $PM_{2.5}$ Class III FEM does not produce data of sufficient quality for comparison to the NAAQS, the monitoring agency must ensure that an operating FRM or filter-based FEM meeting the sample frequency requirements described in § 58.12 or other Class III $PM_{2.5}$ FEM or ARM with data of sufficient quality is operating and reporting data to meet the network design criteria described in Appendix D to this part.

Monitoring Requirements

Appendix A of 40 CFR Part 58 outlines the Quality Assurance Requirements for SLAMS, SPMs, and PSD Air Monitoring. It details calibration and auditing procedures used to collect valid air quality data, the minimum number of collocated monitoring sites, calculations used for data quality assessments, and reporting requirements. All sites operated by ADEM follow the requirements set forth in Appendix A.

Appendix C of 40 CFR Part 58 specifies the criteria pollutant monitoring methods which must be used in SLAMS and NCore stations. All criteria pollutant monitoring operated by ADEM follow the methods specified in Appendix C.

Appendix D of 40 CFR Part 58 specifies network design criteria for ambient air quality monitoring. The overall design criteria, the minimum number of sites for each parameter, the type of sites, the spatial scale of the sites, and the monitoring objectives of the sites are detailed. In designing the air monitoring network for ADEM, the requirements of Appendix D were followed. The specifics for each pollutant network are in their individual chapters.

Appendix E of 40 CFR Part 58 specifies probe material, placement of the monitoring probe and spacing from obstructions. All monitors operated by ADEM were evaluated against Appendix E criteria.

Population and CBSA

Alabama has a 2022 population estimate of 5,074,279. Alabama's Metropolitan and Micropolitan Core Based Statistical Areas with corresponding classifications as Metropolitan or Micropolitan, county names included in that area, the 2020 population base and the 2022 population estimates are listed in Table 2. Alabama's network is represented in Figure 1.

Minimum monitoring requirements vary for each pollutant and can be based on a combination of factors such as population, the level of monitored pollutants, and Core Based Statistical Area boundaries as defined in the latest U.S. Census information. The term "Core Based Statistical Area" (CBSA) is a collective term for both Metropolitan Statistical Areas (MSA) and Micropolitan Statistical Areas (μSA).

Table 2 Alabama CBSAs

Alabama Core Based Statistical Area	Counties in CBSA	2020 Population Base	2022 Population Estimate	Statistical Area
Anniston-Oxford	Calhoun	116,441	115,788	Metropolitan
Auburn-Opelika	Lee	174,241	180,773	Metropolitan
Birmingham-Hoover	Bibb, Blount, Chilton, Jefferson, Shelby, St. Clair,	1,115,289	1,116,857	Metropolitan
Columbus, GA-AL	Russell County in AL and Chattahoochee, Harris, Marion, Muscogee, Stewart and Talbot Counties in GA	328,883	324,110	Metropolitan
Daphne-Fairhope-Foley	Baldwin	231,767	246,435	Metropolitan
Decatur	Lawrence, Morgan	156,494	157,425	Metropolitan
Dothan	Geneva, Henry, Houston	151,007	152,517	Metropolitan
Florence-Muscle Shoals	Colbert, Lauderdale	150,791	153,911	Metropolitan
Gadsden	Etowah	103,436	103,088	Metropolitan
Huntsville	Limestone, Madison	491,723	514,465	Metropolitan
Mobile	Mobile, Washington	430,197	426,533	Metropolitan
Montgomery	Autauga, Elmore, Lowndes, Montgomery	386,047	385,460	Metropolitan
Tuscaloosa	Hale, Pickens, Tuscaloosa, Greene	268,674	277,494	Metropolitan
Albertville	Marshall	97,612	99,423	Micropolitan
Alexander City	Tallapoosa, Coosa	51,698	51,143	Micropolitan
Atmore	Escambia	36,757	36,666	Micropolitan
Cullman	Cullman	87,866	90,665	Micropolitan
Enterprise	Coffee	53,465	54,805	Micropolitan
Eufaula, AL-GA Micro Area	Barbour County in AL and Quitman Counties in GA	27,458	26,955	Micropolitan
Fort Payne	DeKalb	71,608	71,998	Micropolitan
Jasper, AL Micro Area	Walker	65,342	64,339	Micropolitan
LaGrange, GA-AL Micro Area	Chambers County in AL and Troup County in GA	104,198	104,279	Micropolitan
Ozark	Dale	49,326	49,544	Micropolitan
Scottsboro	Jackson	52,579	52,891	Micropolitan
Selma	Dallas	38,462	36,767	Micropolitan
Talladega-Sylacauga	Talladega	82,149	80,704	Micropolitan
Troy	Pike	33,009	33,014	Micropolitan

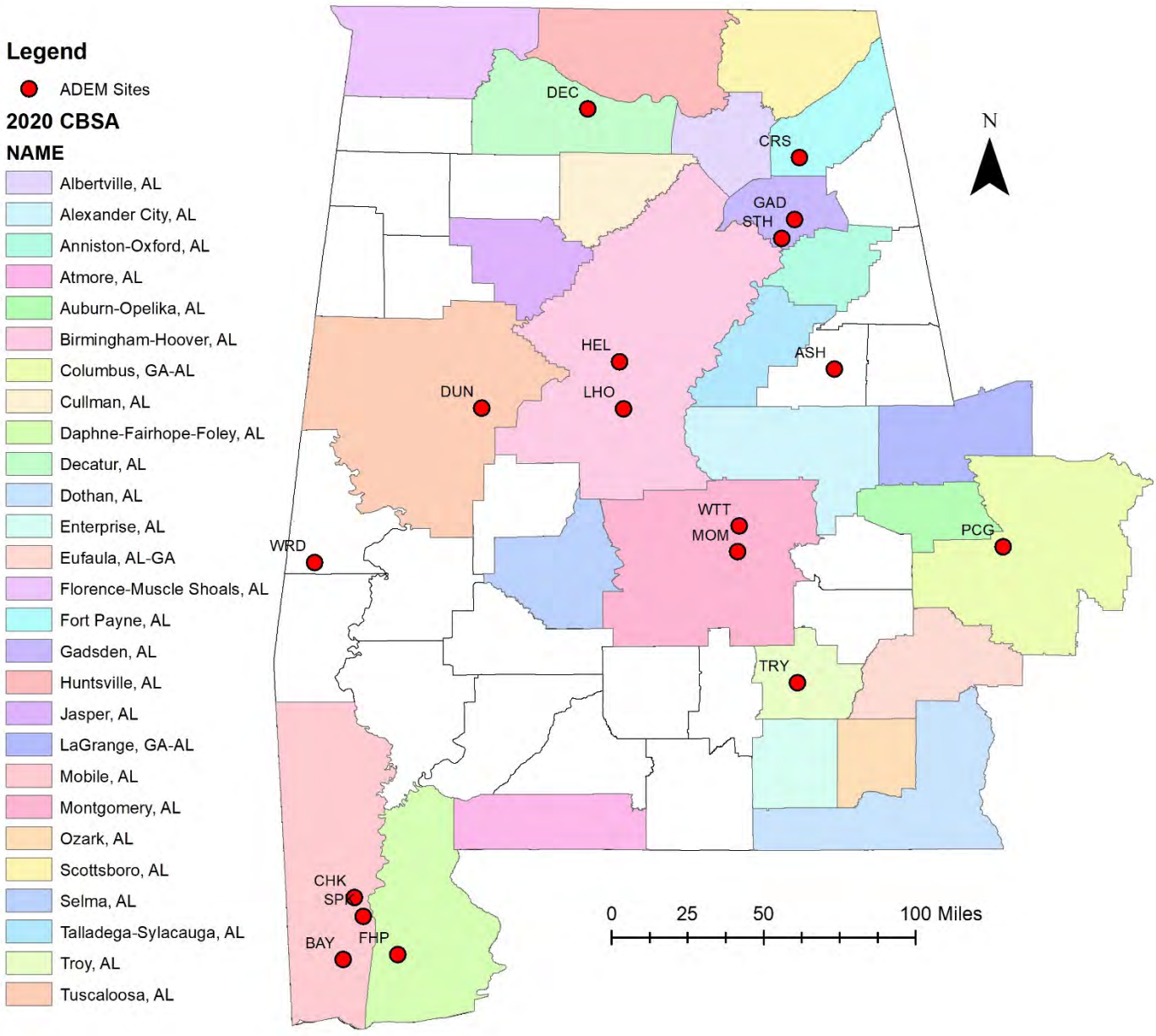


Figure 1 Alabama MSAs and ADEM Monitoring Sites

Types of Monitoring Stations

CASTNET – *Clean Air Status and Trends Network*: is a national air quality monitoring network designed to provide data to assess trends in air quality, atmospheric deposition, and ecological effects due to changes in air pollutant emissions. CASTNET provides long-term monitoring of air quality in rural areas to determine trends in regional atmospheric nitrogen, sulfur, and ozone concentrations and deposition fluxes of sulfur and nitrogen pollutants in order to evaluate the effectiveness of national and regional air pollution control programs. EPA-sponsored CASTNET ozone monitors are Part 58 compliant, therefore the data can be used for regulatory purposes. CASTNET Ozone data is now reported to AQS. There is one CASTNET site in Alabama, **Sand Mountain (SND152), AQS ID 01-049-9991**, in DeKalb County, operated by the EPA.

NCore – *National Core multi-pollutant monitoring station*: Sites that measure multiple pollutants at trace levels in order to provide support to integrated air quality management data needs. Each state is required to operate at least one NCore site. There is one NCore site in Alabama, **North Birmingham, AQS ID 01-073-0023**, located in Jefferson County and operated by JCDH. Refer to the JCDH Ambient Air Network Plan for details.

PAMS – *Photochemical Assessment Monitoring Station*: PAMS are established to obtain more comprehensive data in areas with high levels of ozone pollution by also monitoring oxides of Nitrogen (NOx) and volatile organic compounds (VOCs). PAMS monitoring requirements were revised in the 2016 ozone NAAQS rule and a PAMS site is required in Jefferson County. Refer to the JCDH Ambient Air Network Plan for details.

SLAMS - *State or Local Ambient Monitoring Station*: SLAMS make up ambient air quality monitoring sites that are primarily needed for NAAQS comparisons. ADEM SLAMS monitors are described in detail in the section labeled ADEM's Pollutant Network Tables.

SPM – *Special Purpose Monitor:* **Ward, Sumter Co., AQS ID 01-119-0003**, will begin its 24 month evaluation period for NO_2 with a Teledyne N500, CAPS NOx Analyzer this year. **Seals Park, AQS ID 01-097-8001**, will have two special purpose monitors and will begin sampling for PM_{10} with an FRM local sampler and an FEM E-BAM continuous sampler for the purpose of calculating a valid design value for PM_{10} in the MSA.

SO2 DRR - *SO2 Data Requirements Rule*: DRR became effective September 21, 2015. Per 40 CFR Part 51, states are required to report all sources that generate >2,000 tpy SO2, not dependent upon population density. Each source in this category must characterize air quality through air quality modeling or ambient air monitoring. The annual progress report for sources that utilized modeling can be found in Appendix B. The source that chooses monitoring must operate a site equivalent with the SLAMS requirements of 40 CFR Part 58. Alabama has one DRR SO2 monitoring site, **Lhoist, Montevallo Plant, AQS ID 01-117-9001**, operated by a Lhoist contractor within the ADEM PQAO. The Lhoist-Montevallo facility was designated attainment/unclassifiable on March 26, 2021 under Round IV of the SO2 DRR, based on 2017-2019 monitoring data.

STN – *$PM_{2.5}$ Speciation Trends Network*: A $PM_{2.5}$ speciation station designated to be part of the speciation trends network. This network provides chemical species data of fine particulates. There is one STN site in Alabama, **North Birmingham, AQS ID 01-073-0023**, located in Jefferson County and operated by JCDH. Refer to the JCDH Ambient Air Network Plan for details.

Supplemental Speciation – A monitoring site that is not dedicated as an STN site in the Chemical Speciation Network, but has monitors used to gain supplemental data for that network. ADEM provides supplemental speciation data from **Phenix City-South Girard School, AQS ID 01-113-0003.**

ADEM's Monitoring Networks by Pollutant

Carbon Monoxide (CO) Network

On August 12, 2011, the EPA issued a final rule that retained the existing NAAQS for Carbon Monoxide (CO) and made changes to the ambient air monitoring requirements. The EPA revised the minimum requirements for CO monitoring by requiring CO monitors to be collocated with one required near-road NO_2 monitor in CBSAs having a population of 1,000,000 or more persons. ADEM does not operate a near-road monitoring site or CO monitor. For more information regarding CO monitoring in Alabama refer to the JCDH Ambient Air Network Plan for details.

Lead (Pb) Network

In 2008, the EPA revised the NAAQS for lead (Pb). The Pb standard was lowered from 1.5 ug/m^3 for a quarterly average to 0.15 ug/m^3 based on the highest rolling 3-month average over a 3-year period. The EPA set minimum monitoring requirements for source and population oriented monitoring. Source oriented monitoring is required near sources that have Pb emissions ≥1 ton per year. Population oriented monitoring is required for CBSAs >500,000. In December 2010, the EPA revised the Pb rule to require source-oriented monitors for sources greater than ½ ton per year (tpy) and stated that population oriented monitors would be located at NCore sites. In March 2016, the EPA removed the requirement for Pb monitoring at NCore sites that were not located near a Pb emissions source.

After the initial 2010 ruling, two sources were identified that exceeded the 0.5 tpy threshold: Sanders Lead Company and the Anniston Army Depot. Since then, updated emissions inventories have reduced that to one identified source, Sanders Lead Company, Inc., located in Troy, Pike County, a Micropolitan statistical area, which emits greater than ½ ton of Pb per year. **Troy Lead, AQS ID 01-109-0003,** operated by ADEM, has been monitoring for Pb near that source since 1979. To meet QA requirements, collocated lead monitoring is also occurring at this site. ADEM will install a sample saver on Troy#1 to ensure filter exposure time on the monitor is limited to the 24-hr sampling period.

Nitrogen Dioxide (NO_2) Network

On January 22, 2010, the EPA finalized the monitoring rules for Nitrogen Dioxide (NO_2). The rules require the placement of NO_2 monitors near a major road in each CBSA with a population ≥500,000 people and a second monitor is required near another major road in areas with either a CBSA population ≥2.5 million people, or one or more road segments with an annual average daily traffic (AADT) count ≥250,000 vehicles. For near road NO_2 monitoring, Birmingham-Hoover is the only MSA in Alabama with a population greater than 500,000. However, the population is less than 2.5 million and there are no road segments with AADT greater than 250,000 vehicles. The rules also require an NO_2 monitor to be placed in any urban area with a population greater than or equal to 1 million people to assess community-wide concentrations. Birmingham-Hoover is the only MSA in Alabama with a population greater than 1 million. Refer to the JCDH Ambient Air Network Plan for details. ADEM also plans to begin monitoring NO_2 at **Ward, Sumter Co., AQS ID 01-119-0003,** for the purpose of collecting background data. ADEM requests an exclusion flag be placed on the data and the monitor be designated SPM while undergoing its evaluation period.

Ozone (O_3) Network

Effective December 28, 2015, the level of the NAAQS for ozone was changed from 0.075 to 0.070 ppm. To attain this standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.070 ppm. Minimum monitoring requirements for ozone are based on population and whether the design value is <85% of the NAAQS, or ≥85% of the NAAQS (See Table 3). Since

the NAAQS for ozone is 0.070 parts per million of ozone, then 85% of the NAAQS truncated is **0.059** ppm. ADEM's Ozone Monitoring Sites and Design Values using 2020-2022 data are described in Table 4.

Table 3 SLAMS Minimum Ozone Monitoring Site Requirements

SLAMS MINIMUM OZONE MONITORING REQUIREMENTS		
MSA population[1, 2]	Most recent 3-year design value concentrations ≥85% of any O3 NAAQS[3]	Most recent 3-year design value concentrations <85% of any O3 NAAQS[3,4]
>10 million	4	2
4–10 million	3	1
350,000–<4 million	2	1
50,000–<350,000[5]	1	0

1 Minimum monitoring requirements apply to the Metropolitan statistical area (MSA).
2 Population based on latest available census figures.
3 The ozone (O3) National Ambient Air Quality Standards (NAAQS) levels and forms are defined in 40 CFR part 50.
4 These minimum monitoring requirements apply in the absence of a design value.
5 Metropolitan statistical areas (MSA) must contain an urbanized area of 50,000 or more population.

Table 4 ADEM Ozone Monitoring Sites and Design Values

Site Name	AQS ID	2020-2022 Design Values	MSA	MSA MAX DV[2]	2022 Population Base
Helena[1]	01-117-0004	0.061	Birmingham-Hoover	0.063	1,116,857
Phenix City - South Girard School[1]	01-113-0003	0.057	Columbus, GA-AL	0.057	324,110
Columbus-Airport GA	13-215-0008	0.057			
Fairhope	01-003-0010	0.058	Daphne-Fairhope-Foley	0.058	246,435
Decatur	01-103-0011	0.060	Decatur	0.060	157,425
Southside	01-055-0011	0.057	Gadsden	0.057	103,088
Chickasaw	01-097-0003	0.057	Mobile	0.057	426,533
Bay Road[4]	01-097-2005	0.054			
Wetumpka Westside Technology	01-051-0004	0.053	Montgomery	0.058	385,460
MOMS, ADEM	01-101-1002	0.058			
Duncanville Middle School[3]	01-125-0011	0.055	Tuscaloosa	0.055	277,494
Ward, Sumter Co.	01-119-0003	0.053	not in MSA	N/A	NA
DV ≥ 85% of the NAAQS					
[1] Only site within MSA operated by ADEM					
[2] MSA MAX DV may be obtained from monitors not operated by ADEM					
[3]Data continued from Duncanville, Tuscaloosa 01-125-0010					
[4]Invalid design value due to invalid data completeness.					

Ozone Monitoring Requirements for Alabama MSAs

Birmingham-Hoover MSA

Using the Birmingham-Hoover MSA 2022 population estimate and the design value from Table 4, two Ozone monitors are required in this MSA. ADEM operates **Helena, AQS ID 01-117-0004**, in Shelby County. Other ozone sites in this MSA are located within the jurisdiction of the JCDH. For more information regarding ozone monitoring in Jefferson County refer to the JCDH ambient air network plan. No changes to ADEM's site are planned.

Columbus, GA-AL MSA

Using the Columbus GA-AL MSA 2022 population estimate and the design value from Table 4, zero Ozone monitors are required for this MSA. ADEM operates one ozone monitor at **Phenix City-South Girard School, AQS ID 01-113-0003**, in Russell County, Alabama. For more information regarding other ozone monitoring in this MSA, refer to the State of Georgia's ambient air network plan. No changes are planned.

Daphne-Fairhope-Foley MSA

Using the Daphne-Fairhope-Foley MSA 2022 population estimate and the design value from Table 4, zero Ozone monitors are required for this MSA. There is currently one Ozone site, **Fairhope, AQS ID 01-003-0010** in Baldwin County, Alabama. No changes are planned.

Decatur MSA

Using the Decatur MSA 2022 population estimate and the design value from Table 4, one Ozone monitor is required for this MSA. There is currently one Ozone site, **Decatur, AQS ID 01-103-0011**, in Morgan County, Alabama. No changes are planned.

Gadsden MSA

Using the Gadsden MSA 2022 population estimate and the design value from Table 4, zero Ozone monitors are required for this MSA. There is currently one Ozone site, **Southside, AQS ID 01-055-0011**, in Etowah County, Alabama. ADEM will close this site at the end of the 2023 ozone season and move 2024 ozone monitoring to **Gadsden Community College, AQS ID 01-055-0010** to consolidate monitoring in the MSA.

Huntsville MSA

ADEM does not operate any ozone monitors in this MSA. For information regarding ozone monitoring in Huntsville refer to the HDNREM ambient air network plan.

Mobile MSA

Using the Mobile MSA 2022 population estimate and the design value from Table 4, one Ozone monitor is required for this MSA. There are currently two Ozone sites, **Chickasaw, AQS ID 01-097-0003, and Bay Road, 01-097-2005**, both in Mobile County, Alabama. No changes are planned.

Montgomery MSA

Using the Montgomery MSA 2022 population estimate and the design value from Table 4, one Ozone monitor is required for this MSA. There are currently two Ozone sites, **MOMS, ADEM, AQS ID 01-101-1002**, in Montgomery County, Alabama, and **Wetumpka Westside Technology Park, AQS ID 01-051-0004** in Elmore County, Alabama. No changes are planned.

Tuscaloosa MSA

Using the Tuscaloosa MSA 2022 population estimate and design value from Table 4, zero Ozone monitors are required for this MSA. There is currently one Ozone site, **Duncanville Middle School, AQS ID 01-125-0011** in Tuscaloosa County, Alabama. No changes are planned.

Anniston-Oxford and Auburn-Opelika MSAs

The MSAs of Auburn-Opelika and Anniston-Oxford were evaluated by ADEM during the 5-year assessment. It was determined that due to the close proximity of ozone monitors in the neighboring MSAs, additional ozone monitors would not be needed. Since these areas do not have design values, no ozone monitors are required by Appendix D of 40 CFR Part 58.

Sites not located in an MSA

Ward, Sumter Co., AQS ID 01-119-0003, represents rural, background ozone values for the state. The historical design values for this monitor have been less than 85% of the NAAQS. No changes are planned for ozone monitoring at this site.

$PM_{2.5}$ Network

Minimum monitoring requirements for $PM_{2.5}$ are based on population and whether the design value is <85% of the NAAQS, or ≥85% of the NAAQS (See Table 5). Additionally, a regional background site and a regional transport site are required.

Also, CBSAs with populations greater than one million but less than four million were required to operate a $PM_{2.5}$ monitor at its NO_2 near road site by January 1, 2017. ADEM does not operate an NO_2 near road site. More information regarding this requirement in Alabama can be found in the JCDH ambient air network plan.

$PM_{2.5}$ design values in Table 6 are based on 2019-2022 data. Design values must be less than **29.75** ug/m^3 (85% of the NAAQS) to meet the 24-hour standard of 35 ug/m^3 and less than **10.2** ug/m^3 (85% of the NAAQS) to meet the annual standard of 12 ug/m^3 (effective March 18, 2013).

Table 5 $PM_{2.5}$ Minimum Monitoring Site Requirements

$PM_{2.5}$ MINIMUM MONITORING REQUIREMENTS		
MSA population [1,2]	Most recent 3-year design value ≥85% of any $PM_{2.5}$ NAAQS[3]	Most recent 3-year design value<85% of any $PM_{2.5}$ NAAQS[3,4]
>1,000,000	3	2
500,000–1,000,000	2	1
50,000–<500,000 [5]	1	0

1 Minimum monitoring requirements apply to the Metropolitan statistical area (MSA).
2 Population based on latest available census figures.
3 The PM2.5 National Ambient Air Quality Standards (NAAQS) levels and forms are defined in 40 CFR part 50.
4 These minimum monitoring requirements apply in the absence of a design value.
5 Metropolitan statistical areas (MSA) must contain an urbanized area of 50,000 or more population.

Section 4.7.2 of Appendix D of 40 CFR Part 58 requires a collocated continuous $PM_{2.5}$ monitor in each MSA that is required to have a FRM monitor. The number of collocated continuous monitors required for an MSA will be equal to at least half of the required FRM monitors for that MSA. This is not required if the continuous monitor is a FEM that is labeled as the primary and comparable to the NAAQS. The state is also required to operate $PM_{2.5}$ speciation monitors to characterize the constituents of $PM_{2.5}$. The number of speciation monitors is determined by the EPA Region IV.

Currently, there are no MSA's in Alabama that meet the population and design value criteria to require $PM_{2.5}$ FRM monitoring. Continuous $PM_{2.5}$ monitors satisfy the reporting requirement to AirNow. Every Alabama MSA with the exception of Birmingham-Hoover has a population less than 500,000 and design values <85% of the NAAQS for either the 24-hour or annual standard.

ADEM's $PM_{2.5}$ Network is described in Table 6.

Table 6 ADEM $PM_{2.5}$ Monitoring Sites and Design Values

Site Name	AQS Site ID	PM2.5 24 hr DV 2020-2022	PM2.5 Annual DV 2020-2022	MSA	24hr MSA MAX DV[2]	Annual MSA MAX DV[2]	2022 Population Base
Phenix City - South Girard School[1]	01-113-0003	24	9.1	Columbus, GA-AL[2]	26	9.1	324,110
Fairhope	01-003-0010	15	7.5	Daphne-Fairhope-Foley	15	7.5	246,435
Decatur	01-103-0011	16	7.4	Decatur	16	7.4	157,425
Gadsden C College	01-055-0010	20	8.2	Gadsden	20	8.2	103,088
Chickasaw	01-097-0003	16	7.9	Mobile	16	7.9	426,533
MOMS, ADEM	01-101-1002	16	7.9	Montgomery	16	7.9	385,460
VA, Tuscaloosa[3]	01-125-0004	18	7.6		18	7.6	
Duncanville Middle School	01-125-0011	*	*	Tuscaloosa	*	*	277,494
Ashland (Background/Regional Transport)	01-027-0001	15	6.8	Not in MSA	NA	NA	NA
Crossville (Background)	01-049-1003	16	7.2	Not in MSA	NA	NA	NA
Ward (Background)	01-119-0003	*	*	Not in MSA	NA	NA	NA
DV ≥ 85% of the NAAQS							

*Not enough data to calculate a valid design value.

[1] Only site within MSA operated by ADEM. MSA MAX DV may be obtained from monitors not operated by ADEM.

2 One Georgia monitor is lacking enough valid data to meet completeness requirements to calculate design value.

[3] Site closed 12/31/2022 and PM sampling was moved to Duncanville Middle School, AQS 01-125-0011, in this MSA.

$PM_{2.5}$ Monitoring Requirements for Alabama MSAs

Birmingham-Hoover MSA

ADEM does not operate $PM_{2.5}$ monitors in the Birmingham-Hoover MSA. For more information regarding $PM_{2.5}$ monitoring in this MSA refer to the JCDH ambient air network plan.

Columbus, GA-AL MSA

Using the Columbus, GA-AL MSA 2022 population base and the design value from Table 6, zero FRM monitors are required. ADEM operates one FRM monitor on a 1 in 3 day frequency, one collocated FRM monitor on a 1 in 6 day frequency for quality assurance, and one speciation monitor at **Phenix City – South Girard School, AQS ID 01-113-0003**. The FEM BAM-1022 continuous monitor was replaced by an FRM monitor. No further changes are planned. For more information regarding other $PM_{2.5}$ monitoring in this MSA refer to the State of Georgia's ambient air network plan.

Daphne-Fairhope-Foley MSA

Using the Daphne-Fairhope-Foley MSA 2022 population base and the design value from Table 6, zero FRM monitors are required. There is currently one FEM BAM-1022 $PM_{2.5}$ continuous monitor located at **Fairhope, AQS ID 01-003-0010**. No changes are planned.

Decatur MSA

Using the Decatur MSA 2022 population base and the design value from Table 6, zero FRM monitors are required. There is currently one FEM BAM-1022 PM2.5 continuous monitor located at **Decatur, AQS ID 01-103-0011**. The API T-640 and the FRM monitor were shut down at the beginning of the year. The T640 continuous monitor completed its 2-year evaluation period on August 1, 2022, but was removed for quality assurance reasons. No further evaluation period is required, making the collocated FRM sampler unnecessary. No further changes are planned.

Gadsden MSA

Using the Gadsden MSA 2022 population base and the design value from Table 6, zero FRM monitors are required. There is currently one FEM BAM-1022 PM2.5 continuous monitor at **Gadsden Community College, AQS ID 01-055-0010**. No changes are planned.

Huntsville MSA

ADEM does not operate $PM_{2.5}$ monitors in the Huntsville MSA. For information regarding $PM_{2.5}$ monitoring in this MSA refer to the HDNREM ambient air network plan.

Mobile MSA

Using the Mobile MSA 2022 population base and the design value from Table 6, zero FRM monitors are required. There is currently one FEM BAM-1022 continuous monitor located at **Chickasaw, AQS ID 01-097-0003**. No changes are planned.

Montgomery MSA

Using the Montgomery MSA 2022 population base and the design value from Table 6, zero FRM monitors are required. There is currently one FEM BAM-1022 continuous monitor and one collocated FRM monitor on a 1 in 6 day frequency for quality assurance located at **MOMS, ADEM, AQS ID 01-101-1002**. No changes are planned.

Tuscaloosa MSA

Using the Tuscaloosa MSA 2022 population base and the design value from Table 6, zero FRM monitors are required. $PM_{2.5}$ sampling in this MSA moved from VA, Tuscaloosa, AQS ID 01-125-0004 to Duncanville Middle School, AQS ID 01-125-0011. There is currently one FEM BAM-1022 continuous monitor located at **Duncanville Middle School, AQS ID 01-125-0011**. No further changes are planned.

Anniston-Oxford and Auburn-Opelika MSAs

The MSAs of Anniston-Oxford and Auburn-Opelika were evaluated to determine the need for monitors during the 5-yr network review. It was determined that due to the close proximity of $PM_{2.5}$ monitors in neighboring MSAs, additional monitors would not be needed. $PM_{2.5}$ monitoring in the adjacent MSAs continues to provide adequate coverage. Since these areas do not have design values, no FRM monitors are required by Appendix D of 40 CFR Part 58.

$PM_{2.5}$ Monitors not located in MSAs

Ashland, AQS ID 01-027-0001, serves as a regional transport site in between the large MSAs of Birmingham-Hoover, Alabama and Atlanta-Sandy Springs-Roswell, Georgia using one continuous FEM BAM-1022 $PM_{2.5}$ monitor. No changes are planned.

Crossville, **AQS ID 01-049-1003**, represents rural, background $PM_{2.5}$ values for the northeast part of the state using one continuous FEM BAM-1022 $PM_{2.5}$ monitor. No changes are planned.

Ward, Sumter Co., AQS ID 01-119-0003, represents rural, background $PM_{2.5}$ values for the state using one continuous FEM BAM-1022 $PM_{2.5}$ monitor. No changes are planned.

PM_{10} Network

PM_{10} has been a criteria pollutant since 1987. Since that time there has been widespread monitoring of the PM_{10} levels in Alabama. In 2006, the EPA modified the NAAQS for PM_{10} to revoke the annual standard. Currently, there is a daily standard of 150 ug/m3 based on 3 years of data.

The Montgomery MSA has a population between 250,000 and 500,000 and PM_{10} concentrations are less than 80% of the NAAQS daily standard. According to Table D-4 of Appendix D to Part 58, 0 to 1 PM_{10} monitors are required.

Montgomery MSA

ADEM operates two low-volume PM_{10} monitors on a 1 in 6 day schedule at **MOMS, ADEM, AQS ID 01-101-1002**, one being the collocated quality assurance monitor. No changes are planned.

Mobile MSA

ADEM set up a new PM_{10} site at James Seals Park & Community Center, 540 Texas Street, Mobile. This site will be operational by 7/1/2023. The new site will have two Special Purpose Monitors, a FRM 2025i monitor run on a 1 in 6 day schedule and an EBAM continuous monitor. A third monitor will be set up to collect filters for particle analysis.

Sulfur Dioxide (SO_2) Network

Effective August 23, 2010, the EPA strengthened the primary NAAQS for SO_2. The EPA established a new 1-hour standard at 75 ppb, based on the 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations. According to the EPA, for a short-term 1-hour SO_2 standard, it is more technically appropriate, efficient, and effective to use modeling as the principal means of assessing compliance for medium to larger sources, and to rely more on monitoring for groups of smaller sources and sources not as conducive to modeling. Such an approach is consistent with the EPA's historical approach and longstanding guidance for SO_2. The EPA is setting specific minimum requirements that inform states on where they are required to place SO_2 monitors. The final monitoring regulations require monitors to be placed in Core Based Statistical Areas (CBSAs) based on a Population Weighted Emissions Index (PWEI) for the area. The final rule requires:

- 3 monitors in CBSAs with PWEI values ≥1,000,000 or more;
- 2 monitors in CBSAs with PWEI values <1,000,000 but >100,000; and
- 1 monitor in CBSAs with PWEI values >5,000.

According to the latest PWEI calculations listed in Table 7 only the Birmingham-Hoover MSA requires SO_2 monitoring**.** ADEM operates two SO_2 monitors: **Chickasaw, AQS ID 01-097-0003**, for the Mobile MSA and **Ward, Sumter Co., AQS ID 01-119-0003**, not located in an MSA, for background purposes. For more information regarding SO_2 monitoring in the Birmingham-Hoover MSA refer to the JCDH ambient air monitoring network plan.

Effective September 21, 2015, the SO_2 Data Requirements Rule (DRR) per 40 CFR Part 51, requires states to report all sources that generate >2,000 tpy SO_2, not dependent upon population density. Each source in this category must characterize air quality through air quality modeling or ambient air monitoring. Sources that model must provide an annual report located in Appendix D) Each source that chooses monitoring must operate their site equivalent with the SLAMS requirements of 40 CFR Part 58. Lhoist North America of Alabama, LLC – Montevallo Plant, located within the Birmingham-Hoover MSA, has monitored SO_2 in accordance with the DRR since January 1, 2017. The site is **Lhoist, Montevallo Plant, AQS ID 01-117-9001**, and operates within ADEM's PQAO.

Table 7 SO_2 Minimum Monitoring Site Requirements

SO2 Population Weighted Emissions Index (PWEI) Calculations using 2020 Census Base and 2017 National Emissions Inventory (NEI) v2				
CBSA Name	**2020 NEI SO2 (tpy)**	**Population Est (2022)**	**PWEI in Million persons-tpy**	**Required Monitors**
Birmingham-Hoover	12,680	1,116,857	14,162	1
Mobile	4,233	426,533	1,806	0
Columbus, GA-AL	2,480	324,110	804	0
Montgomery	1,402	385,460	540	0
Tuscaloosa	696	277,494	193	0
Huntsville	256	514,465	132	0
Decatur	398	157,425	63	0
Daphne-Fairhope-Foley	233	246,435	57	0
Dothan	303	152,517	46	0
Auburn-Opelika	217	180,773	39	0
Scottsboro	733	52,891	39	0
Florence-Muscle Shoals	181	153,911	28	0
LaGrange, GA-AL	242	104,279	25	0
Anniston-Oxford	197	115,788	23	0
Troy	501	33,014	17	0
Talladega-Sylacauga	184	80,704	15	0
Albertville	122	99,423	12	0
Cullman	81	90,665	7	0
Selma	192	36,767	7	0
Enterprise	118	54,805	6	0
Gadsden	52	103,088	5	0
Ozark	94	49,544	5	0

Quality Assurance

The ADEM has an EPA-approved Quality Assurance Program Plan (QAPP) and Quality Management Plan (QMP) that details the activities used to control and document the quality of the data collected. ADEM is an independent Primary Quality Assurance Organization (PQAO) as defined by 40 CFR Part 58. Part of the EPA-required quality control program for particulate monitoring is the use of collocated particulate monitors. 40 CFR Part 58, Appendix A requires a percentage of manual particulate monitors to be collocated with FRM monitors so that quality statistics can be calculated. ADEM includes monitors for this purpose.

ADEM AAQMP Pollutant Network Tables

A description of ADEM's ambient air monitoring network, followed by detailed site evaluations, will be presented in this section.

Included will be:

- Site Common Name
- County/CBSA
- AQS ID
- Address
- Latitude and Longitude
- Monitoring Objective/Scale
- Beginning and Ending Sampling Date
- Method, Method Code and Operating Schedule
- Comparability to the NAAQS

Ozone

Site Common Name	County/CBSA	AQS ID	Address	Latitude	Longitude	Monitoring Objective / Scale	Date Began	Date Ended	Method, Method Code and Schedule	NAAQS
Fairhope	Baldwin/Daphne-Fairhope-Foley MSA	01-003-0010	Fairhope High School, Fairhope	30.497478	-87.880258	Population Exposure/ Neighborhood	3/1/2000	active	U, 087, C	Y
Wetumpka Westside Technology Park	Elmore/Montgomery MSA	01-051-0004	3148 Elmore Road, Wetumpka	32.53568	-86.255193	Highest Concentration/ Urban	3/1/2018	active	U, 087, C	Y
Gadsden C College[1]	Etowah/Gadsden MSA	01-055-0010	1001 Wallace Drive, Gadsden	33.991494	-85.992647	Population Exposure/ Urban	3/1/2024	active	U, 087, C	Y
Southside	Etowah/Gadsden MSA	01-055-0011	1450 Parker Anderson Lane, Southside	33.904039	-86.053867	Highest Concentration/ Neighborhood	4/26/2002	10/31/2022	U, 087, C	Y
Chickasaw	Mobile/Mobile MSA	01-097-0003	Iroquois and Azalea Chickasaw	30.770181	-88.087761	Population Exposure/ Neighborhood	3/2/1982	active	U, 087, C	Y
Bay Road	Mobile/Mobile MSA	01-097-2005	Bay Road, Mobile	30.474305	-88.141022	Population Exposure and Highest Concentration/	3/1/1999	active	U, 087, C	Y
MOMS, ADEM	Montgomery/ Montgomery MSA	01-101-1002	1350 Coliseum Blvd, Montgomery	32.412811	-86.263394	Population Exposure/ Neighborhood	6/2/1993	active	U, 087, C	Y
Decatur	Morgan/Decatur MSA	01-103-0011	Wallace Development Center, Decatur	34.530717	-86.967536	Population Exposure/ Urban	4/1/2000	active	U, 087, C	Y
Phenix City - South Girard	Russell/Columbus GA-AL MSA	01-113-0003	510 6th Place South, Phenix City	32.437028	-84.999653	Highest Concentration/ Urban	3/1/2018	active	U, 087, C	Y
Helena	Shelby/Birmingham-Hoover MSA	01-117-0004	Bearden Farm. Helena	33.317142	-86.825754	Population Exposure/ Urban	1/1/1983	active	U, 087, C	Y
Ward, Sumter Co.	Sumter/no MSA	01-119-0003	NNE of Ward Post Office	32.362606	-88.277992	General/Background/ Regional	3/1/2013	active	U, 087, C	Y
Duncanville Middle	Tuscaloosa/Tuscaloosa MSA	01-125-0011	11205 Eagle Pkwy, Duncanville	33.095379	-87.481501	Population Exposure/ Urban	3/1/2022	active	U, 087, C	Y

U = UV Photometric Ozone Analyzer; C = Continuous

[1]Scheduled to start 3/1/2024 [2]Continued from Duncanville, Tuscaloosa 01-125-0010

PM2.5

AQS ID	Site Common Name	County/CBSA	Address	Latitude	Longitude	Monitoring Objective/Scale	Date Began	Date Ended	Method, Method Code and Schedule	NAAQS
01-003-0010	Fairhope	Baldwin/Daphne-Fairhope-Foley MSA	Fairhope High School, Fairhope	30.497478	-87.880258	Population Exposure/ Neighborhood	1/1/2000	12/22/2022	L, 145, 3	Y
							1/1/2023	active	B, 209, C	Y
01-027-0001	Ashland	Clay/no MSA	Ashland Airport, Ashland	33.284928	-85.803608	Regional Transport/ Regional	1/1/1999	12/28/2022	L, 145, 3	Y
							1/1/2023	active	B, 209, C	Y
01-049-1003	Crossville	DeKalb/no MSA	13112 Hwy 68, Crossville	34.288567	-85.969858	General/Background/ Neighborhood	1/1/1999	12/31/2022	L, 145, 3	Y
							1/1/2023	active	B, 209, C	Y
01-055-0010	Gadsden C College	Etowah/ Gadsden MSA	1001 Wallace Drive, Gadsden	33.991494	-85.992647	Population Exposure/ Urban	1/1/2000	12/7/2021	L, 145, 3	Y
							12/7/2021	active	B, 209, C	Y
01-097-0003	Chickasaw	Mobile/Mobile MSA	Iroquois and Azalea, Chickasaw	30.770181	-88.087761	Population Exposure/ Regional	7/19/2002	12/31/2022	L, 145, 3	Y
							1/1/2011	12/31/2022	B, 731, C	N
							1/1/2023	active	B, 209, C	Y
01-101-0002	MOMS, ADEM[1]	Montgomery/ Montgomery MSA	1350 Coliseum Blvd, Montgomery	32.412811	-86.263394	Population Exposure/ Neighborhood	1/16/2009	2/14/2023	L, 145, 3	Y
							4/1/2009	12/31/2022	B, 731, C	N
							2/14/2023	active	B, 209, C	Y
							1/16/2009	active	L, 145, 6	Y
01-103-0011	Decatur[1]	Morgan/Decatur MSA	Wallace Ctr.Hwy 31, Decatur	34.530717	-86.967536	Population Exposure/ Middle	8/7/2001	12/31/2022	L, 145, 3	Y
							8/1/2020	1/31/2023	T, 236, C	N
							2/1/2023	active	B, 209, C	Y
01-113-0003	Phenix City - S. Girard School[1]	Russell/Columbus GA-AL MSA	510 6th Place South, Phenix City	32.437028	-84.999653	Highest Concentration/ Urban	9/18/2017	2/28/2023	B, 209, C	Y
							2/17/2023	active	L, 145, 3	Y
							1/18/2017	active	L, 145, 6	Y
01-119-0003	Ward, Sumter Co.	Sumter/no MSA	NNE of Ward Post Office, Ward	32.362606	-88.277992	General/Background/ Regional	1/1/2021	active	B, 209, C	Y
01-125-0004	VA, Tuscaloosa[1]	Tuscaloosa/ Tuscaloosa MSA	3701 Loop Road East, Tuscaloosa	33.189931	-87.484189	Population Exposure/ Neighborhood	10/1/2002	12/28/2022	L, 145, 3	Y
							1/1/2021	12/7/2022	L, 145, 6	Y
01-125-0011	Duncanville Middle School[2]	Tuscaloosa/ Tuscaloosa MSA	11205 Eagle Pkwy, Duncanville	33.095379	-87.481501	Population Exposure/ Urban	1/1/2023	active	B, 209, C	Y

B = Beta Attenuation Monitor; L = Low Volume Sequential Sampler; T = T640; 3 = 24 hours every 3rd day; 6 = 24 hours every 6th day; C = Continuous

[1]Site closed and PM monitoring moved to Duncanville Middle School 01-125-0011. [2]New parameter at site.

PM10

Site Common Name	County / CBSA	AQS ID	Address	Latitude	Longitude	Monitoring Objective / Scale	Date Began	Date Ended	Method, Method Code and Schedule	NAAQS
MOMS, ADEM	Montgomery / Montgomery MSA	01-101-1002	1350 Coliseum Blvd, Montgomery	32.412811	-86.263394	Population Exposure/ Neighborhood	9/16/1993	active	L, 127, 6	Y
						Quality Assurance/ Neighborhood	1/1/2013	active	L, 127, 6	Y
Seals Park	Mobile/Mobile MSA	01-097-8001	540 Texas St, Mobile, AL 36603	30.679499	-88.04658	Population Exposure/ Neighborhood	Est. 7/1/2023	active	L, 127, 6	Y
							Est. 7/1/2023	active	B, 226, C	Y
L = Low Volume Sequential Sampler; B = Beta Attenuation Monitor; 6 = 24 hours every 6th day; C= continuous										

SO_2

Site Common Name	County / CBSA	AQS ID	Address	Latitude	Longitude	Monitoring Objective / Scale	Date Began	Date Ended	Method, Method Code and Schedule	NAAQS
Chickasaw	Mobile / Mobile MSA	01-097-0003	Iroquois And Azalea, Chickasaw	30.76972	-88.0875	Population Exposure / Neighborhood	1/1/2013	active	P, 100, C	Y
Lhoist	Shelby / Birmingham-Hoover MSA	01-117-9001	7444 St. Hwy 25, Calera	33.0928	-86.8072	High Concentration – SO2 DRR / Middle	1/1/2017	active	P, 100, C	Y
Ward	Sumter / no MSA	01-119-0003	NNE of Ward Post Office, Ward	32.362606	-88.277992	General/Background / Regional	1/1/2018	active	P, 100, C	Y
P = Pulsed Fluorescent C = Continuous										

Lead

Site Common Name	County/CBSA	AQS ID	Address	Latitude	Longitude	Monitoring Objective / Scale	Date Began	Date Ended	Method, Method Code and Schedule	NAAQS
			Henderson Road,			Highest Concentration /	1/1/1979	active	Hi-Vol 813, 6	Y
Troy Lead	Pike/Troy µSA	01-109-0003	Troy	31.790479	-85.978974	Neighborhood	1/1/1979	active	Hi-Vol 813, 6	Y
Hi-Vol = Hi-Volume Total Suspended Particulate G = Lead Analysis by Graphite Furnace 6 = 24 hours every 6th day										

NO2

Site Common Name	County / CBSA	AQS ID	Address	Latitude	Longitude	Monitoring Objective / Scale	Proposed Beginning Date	Date Ended	Method, Method Code and Schedule	NAAQS
			NNE of Ward Post			General/Background /				
Ward	Sumter / no MSA	01-119-0003	Office, Ward	32.362606	-88.277992	Regional	TBD		CAP, 212, C	N
CAP = Cavity Attenuated Phase Shift C = Continuous										

Appendix A

Site Assessments with EJ Screening

All of ADEM's sites were evaluated for compliance and were found to meet the requirements of 40 CFR 58, Appendices A, C, D and E, as appropriate. Additionally, all sites were screened for environmental justice metrics using EPA's EJ Screen: Environmental Justice Screening and Mapping Tool. EJ Screening Standard Reports were obtained by dropping a pin at each longitude and latitude and are attached to each site evaluation.

The following issues were observed during site evaluations and any corrective actions noted.

Table 8 Issues observed during site assessments

Site	Issue	Correction
Troy AQS ID 01-109-0003	Tree dripline was 10.6m from the air inlet.	A large tree will need to be delimbed or removed soon.

ASHLAND — AQS ID 01-027-0001

Ashland Airport, Ashland, Clay County — **33.284928, -85.803608**

MSA: N/A 227.01 m to Airport Road — Property Type: Residential (private)

NORTH

SOUTH

EAST

WEST

Parameter	Monitoring Objective/ Scale	Schedule	Start Date**	AQS Method Code	Probe/Rain Shield Material	Probe Inlet Height from ground	Distance from probe to supporting structure	Distance from probe to nearest tree dripline	Height of nearest tree/ Direction from probe to tree
BAM-1022*	Regional Transport/ Regional	Continuous	01-01-2023	209	Inlet Head	2.0 m	N/A	33.5 m	11.2 m Southeast

*This monitor is operating at time of evaluation. Method changes at this site are documented in the PM2.5 Pollutant Network Table.
** This site has been monitoring PM2.5 since 01/01/1999.
This site meets all requirements of 40 CFR Part 58. Evaluation Date: 03/10/2023

EJScreen Report (Version 2.11)

1 mile Ring Centered at 33.284925,-85.803609, ALABAMA, EPA Region 4

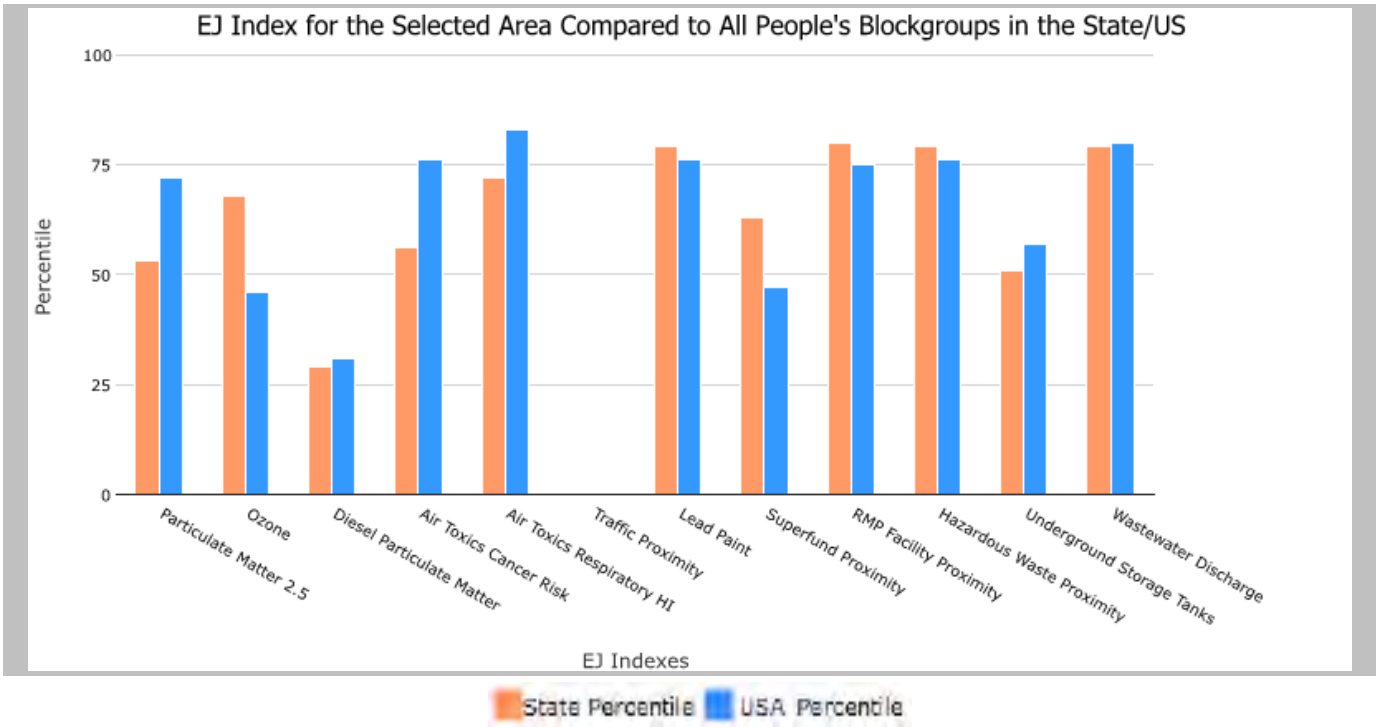
Approximate Population: 224

Input Area (sq. miles): 3.14

ASHLAND AQS ID 01-027-0011

Selected Variables	State Percentile	USA Percentile
Environmental Justice Indexes		
Particulate Matter 2.5 EJ index	53	72
Ozone EJ index	68	46
Diesel Particulate Matter EJ index*	29	31
Air Toxics Cancer Risk EJ index*	56	76
Air Toxics Respiratory HI EJ index*	72	83
Traffic Proximity EJ index	N/A	N/A
Lead Paint EJ index	79	76
Superfund Proximity EJ index	63	47
RMP Facility Proximity EJ index	80	75
Hazardous Waste Proximity EJ index	79	76
Underground Storage Tanks EJ index	51	57
Wastewater Discharge EJ index	79	80

EJ Indexes - The EJ indexes help users screen for potential EJ concerns. To do this, the EJ index combines data on low income and people of color populations with a single environmental indicator.



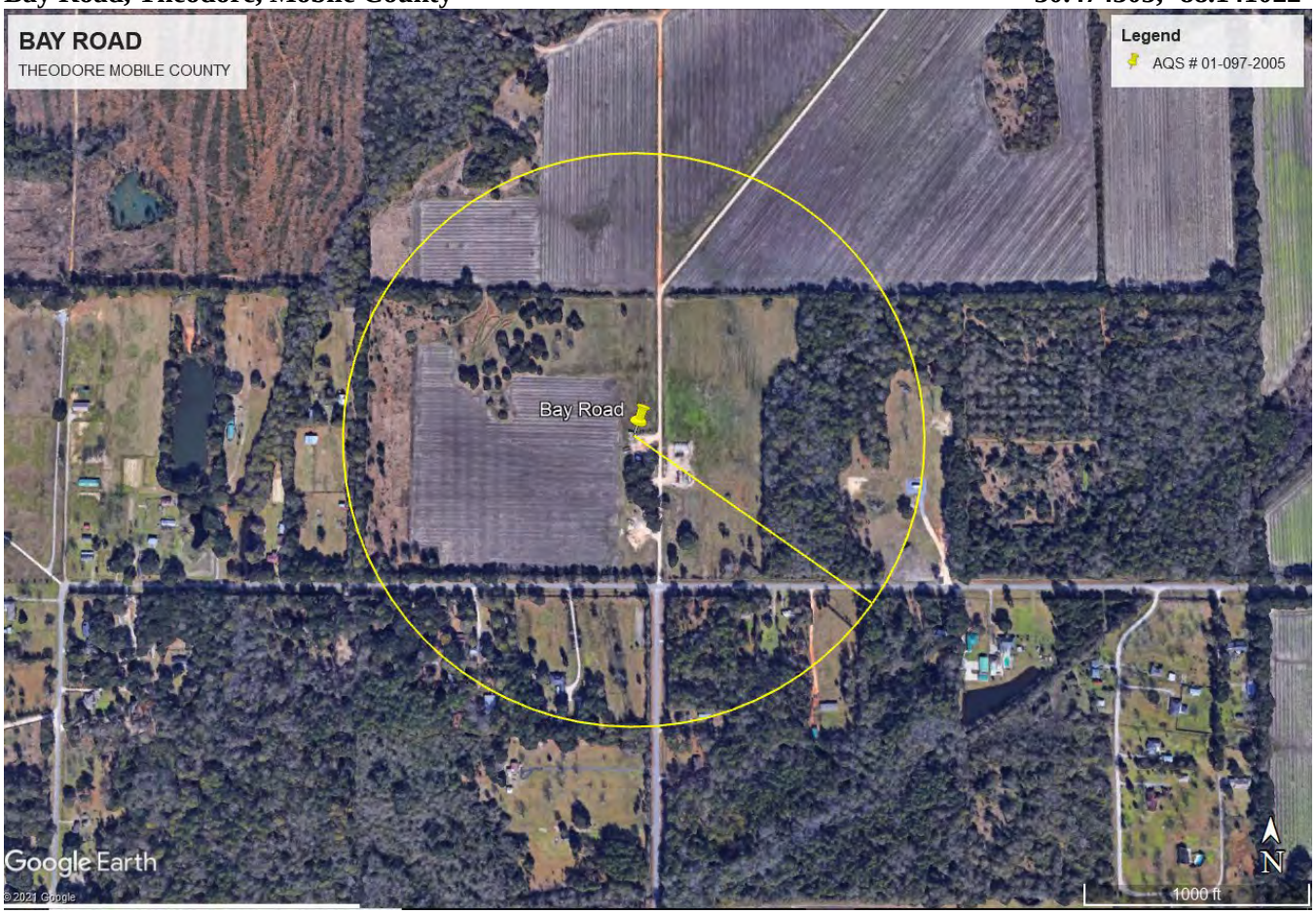
*Diesel particular matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPA's Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. Cancer risks and hazard indices from the Air Toxics Data Update are reported to one significant figure and any additional significant figures here are due to rounding. More information on the Air Toxics Data Update can be found at: https://www.epa.gov/haps/air-toxics-data-update.

BAY ROAD

AQS ID 01-097-2005

Bay Road, Theodore, Mobile County

30.474305, -88.141022



MSA: Mobile 68.5 m to Bay Road

Property Type: Agricultural (county)

NORTH

SOUTH

EAST

WEST

Parameter	Monitoring Objective/ Scale	Schedule	Start Date	AQS Method Code	Probe/Rain Shield Material	Probe Inlet Height from ground	Distance from probe to supporting structure	Distance from probe to nearest tree dripline	Height of nearest tree/ Direction from probe to tree
Ozone	Population Exposure and Highest Concentration/ Urban	Continuous	03/01/1999	087	Teflon	4.4m	1.2m	34.4 m	13.8 m South

This site meets all requirements of 40 CFR Part 58.

Evaluation Date: 03/30/2023

EJScreen Report (Version 2.11)

1 mile Ring Centered at 30.474304,-88.141020, ALABAMA, EPA Region 4

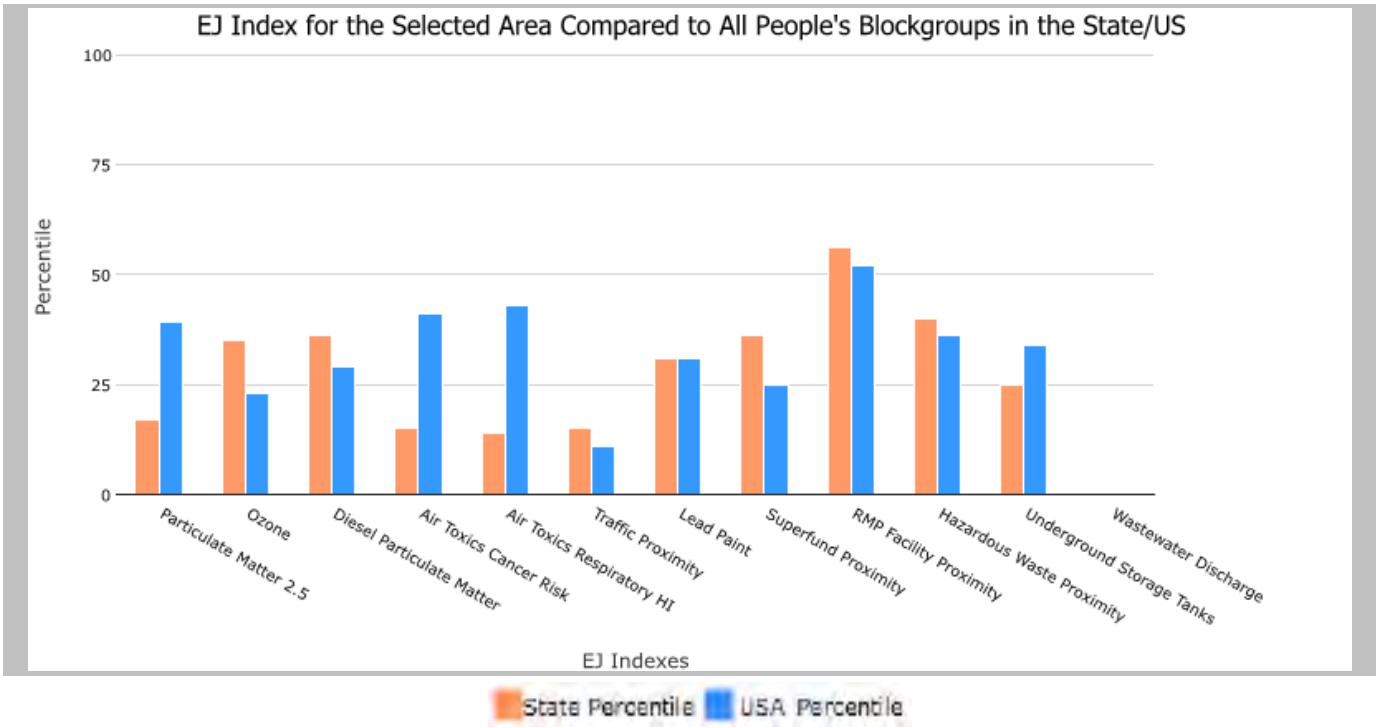
Approximate Population: 375

Input Area (sq. miles): 3.14

BAY ROAD AQS ID 01-097-2005

Selected Variables	State Percentile	USA Percentile
Environmental Justice Indexes		
Particulate Matter 2.5 EJ index	17	39
Ozone EJ index	35	23
Diesel Particulate Matter EJ index*	36	29
Air Toxics Cancer Risk EJ index*	15	41
Air Toxics Respiratory HI EJ index*	14	43
Traffic Proximity EJ index	15	11
Lead Paint EJ index	31	31
Superfund Proximity EJ index	36	25
RMP Facility Proximity EJ index	56	52
Hazardous Waste Proximity EJ index	40	36
Underground Storage Tanks EJ index	25	34
Wastewater Discharge EJ index	0	0

EJ Indexes - The EJ indexes help users screen for potential EJ concerns. To do this, the EJ index combines data on low income and people of color populations with a single environmental indicator.



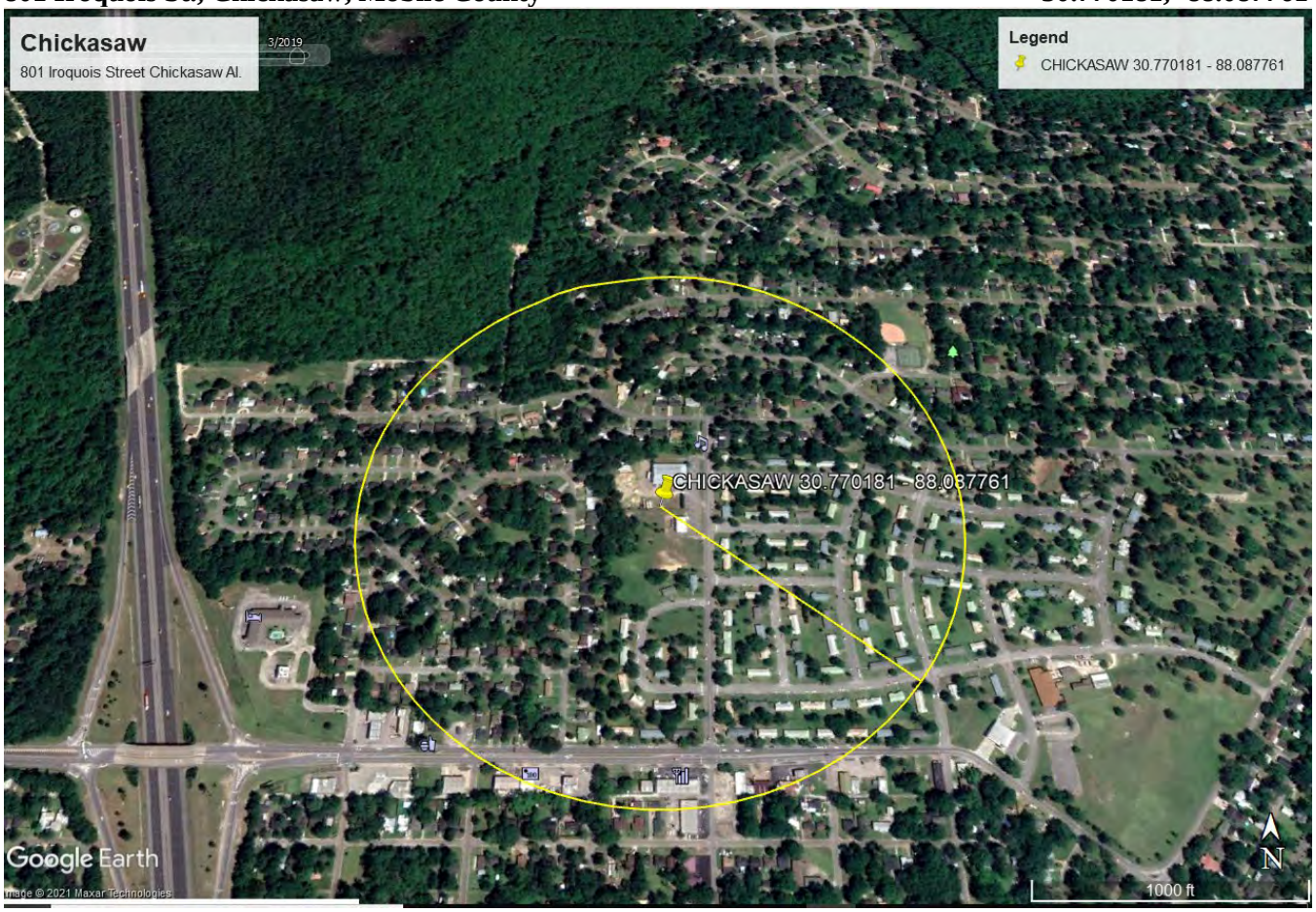
*Diesel particular matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPA's Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. Cancer risks and hazard indices from the Air Toxics Data Update are reported to one significant figure and any additional significant figures here are due to rounding. More information on the Air Toxics Data Update can be found at: https://www.epa.gov/haps/air-toxics-data-update.

CHICKASAW

AQS ID 01-097-0003

801 Iroquois St., Chickasaw, Mobile County

30.770181, -88.087761



MSA: Mobile 58.9 m from Iroquois St

Property Type: Commercial (city)

NORTH

SOUTH

EAST

WEST

Parameter	Monitoring Objective/ Scale	Schedule	Start Date**	AQS Method Code	Probe/Rain Shield Material	Probe Inlet Height from ground	Distance from probe to supporting structure	Distance from probe to nearest tree dripline	Height of nearest tree/ Direction from probe to tree
Ozone	Population Exposure/ Neighborhood	Continuous	03/02/1982	087	Teflon/ Teflon	4.3m	1.2 m	12.8 m	4.2 m Southwest
SO2			01/01/2013	100	Teflon/ Teflon	4.8m	1.7 m	15.2 m	
BAM-1022*	Population Exposure/ Regional		01/01/2023	209	Inlet Head	2.0 m	2.1 m	7.9 m	

*This monitor is operating at time of evaluation. Method changes at this site are documented in the PM2.5 Pollutant Network Table.

** This site has been monitoring PM2.5 since 01/01/2015.

This site meets all requirements of 40 CFR Part 58.

Evaluation Date: 02/23/2023

EJScreen Report (Version 2.11)

1 mile Ring Centered at 30.770183,-88.087772, ALABAMA, EPA Region 4

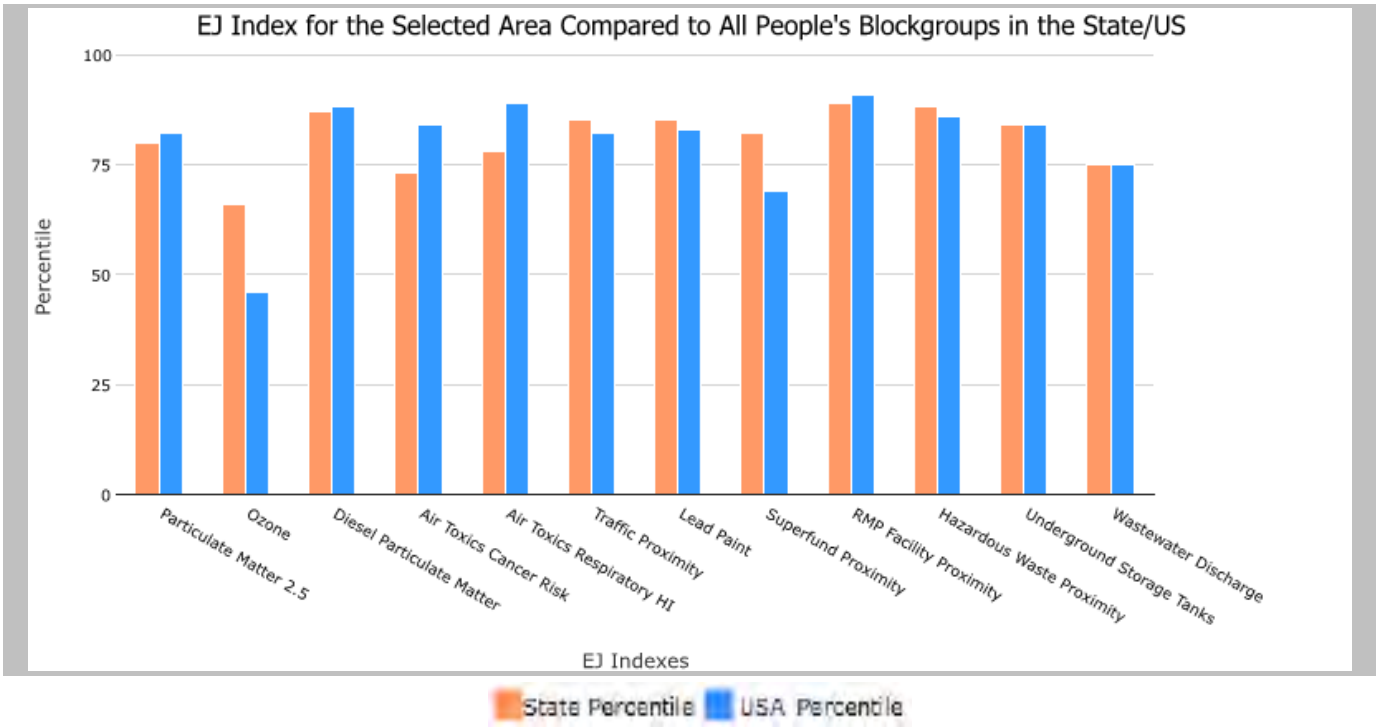
Approximate Population: 5,605

Input Area (sq. miles): 3.14

CHICKASAW AQS ID 01-097-0003

Selected Variables	State Percentile	USA Percentile
Environmental Justice Indexes		
Particulate Matter 2.5 EJ index	80	82
Ozone EJ index	66	46
Diesel Particulate Matter EJ index*	87	88
Air Toxics Cancer Risk EJ index*	73	84
Air Toxics Respiratory HI EJ index*	78	89
Traffic Proximity EJ index	85	82
Lead Paint EJ index	85	83
Superfund Proximity EJ index	82	69
RMP Facility Proximity EJ index	89	91
Hazardous Waste Proximity EJ index	88	86
Underground Storage Tanks EJ index	84	84
Wastewater Discharge EJ index	75	75

EJ Indexes - The EJ indexes help users screen for potential EJ concerns. To do this, the EJ index combines data on low income and people of color populations with a single environmental indicator.



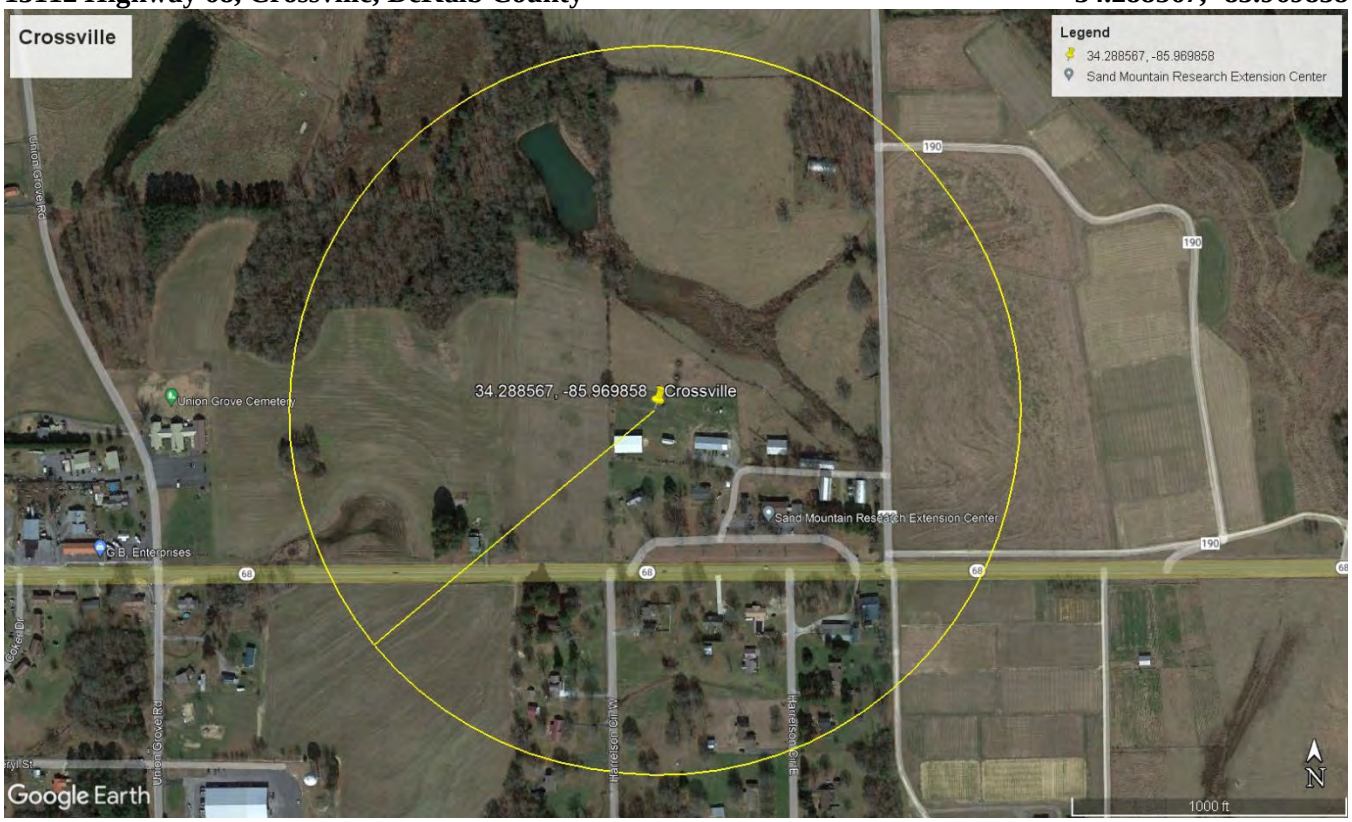
*Diesel particular matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPA's Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. Cancer risks and hazard indices from the Air Toxics Data Update are reported to one significant figure and any additional significant figures here are due to rounding. More information on the Air Toxics Data Update can be found at: https://www.epa.gov/haps/air-toxics-data-update.

CROSSVILLE

AQS ID 01-049-1003

13112 Highway 68, Crossville, DeKalb County

34.288567, -85.969858



µSA: Fort Payne 172.2 m from Hwy 68

Property Type: Agricultural

NORTH

SOUTH

EAST

WEST

Parameter	Monitoring Objective/ Scale	Schedule	Start Date**	AQS Method Code	Probe/Rain Shield Material	Probe Inlet Height from ground	Distance from probe to supporting structure	Distance from probe to nearest tree dripline	Height of nearest tree/ Direction from probe to tree
BAM-1022*	General Background/ Neighborhood	Continuous	01/01/2023	209	Inlet Head	2.0 m	N/A	23.5 m	9.8 m East

*This monitor is operating at time of evaluation. Method changes at this site are documented in the PM2.5 Pollutant Network Table.
**This site has been monitoring PM2.5 since 10/01/2002.
This site meets all requirements of 40 CFR Part 58.

Evaluation Date: 03/01/2023

EJScreen Report (Version 2.11)

1 mile Ring Centered at 34.288550,-85.969847, ALABAMA, EPA Region 4

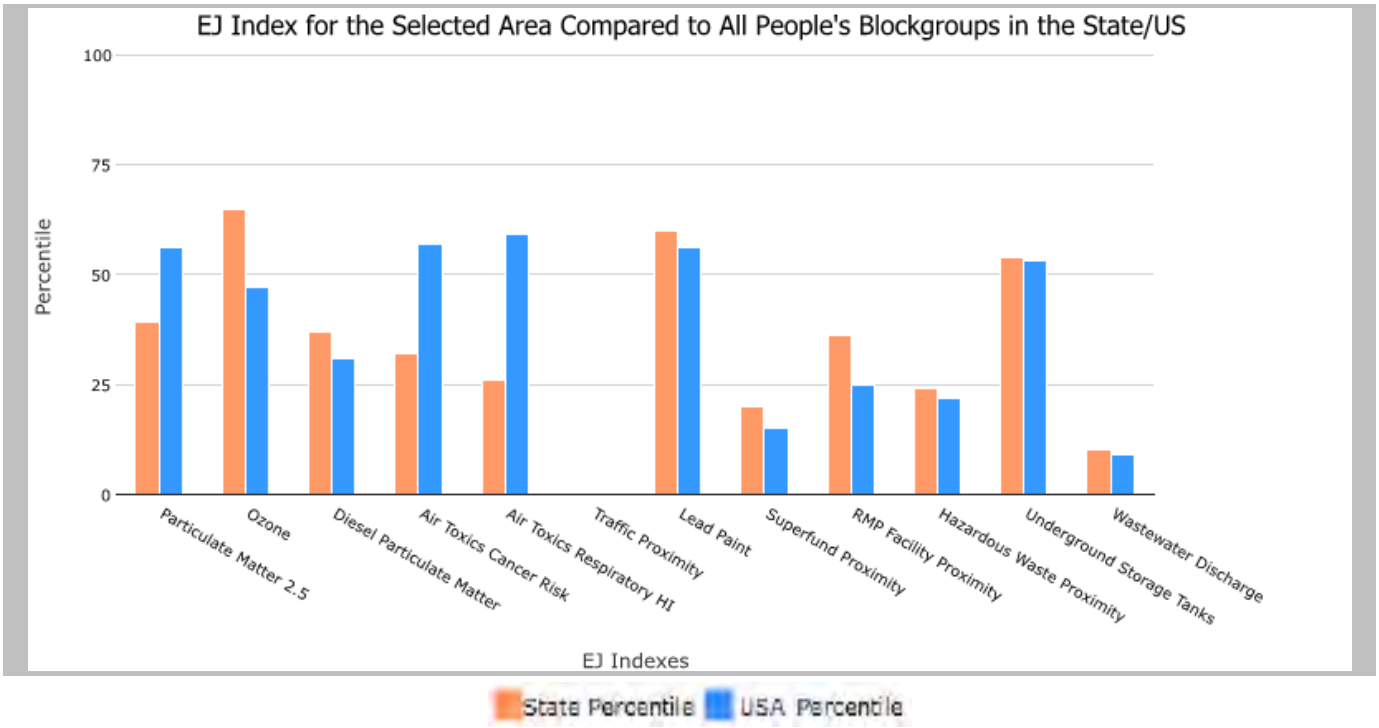
Approximate Population: 325

Input Area (sq. miles): 3.14

CROSSVILLE AQS ID 01-049-1003

Selected Variables	State Percentile	USA Percentile
Environmental Justice Indexes		
Particulate Matter 2.5 EJ index	39	56
Ozone EJ index	65	47
Diesel Particulate Matter EJ index*	37	31
Air Toxics Cancer Risk EJ index*	32	57
Air Toxics Respiratory HI EJ index*	26	59
Traffic Proximity EJ index	0	0
Lead Paint EJ index	60	56
Superfund Proximity EJ index	20	15
RMP Facility Proximity EJ index	36	25
Hazardous Waste Proximity EJ index	24	22
Underground Storage Tanks EJ index	54	53
Wastewater Discharge EJ index	10	9

EJ Indexes - The EJ indexes help users screen for potential EJ concerns. To do this, the EJ index combines data on low income and people of color populations with a single environmental indicator.



*Diesel particular matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPA's Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. Cancer risks and hazard indices from the Air Toxics Data Update are reported to one significant figure and any additional significant figures here are due to rounding. More information on the Air Toxics Data Update can be found at: https://www.epa.gov/haps/air-toxics-data-update.

DECATUR — AQS ID 01-103-0011

JH Crow Drive, Decatur, Morgan County — **34.530717, -86.967536**

MSA: Decatur 507.37 m to Hwy 31 — Property Type: Commercial

NORTH

SOUTH

EAST

WEST

Parameter	Monitoring Objective/ Scale	Schedule	Start Date**	AQS Method Code	Probe/Rain Shield Material	Probe Inlet Height from ground	Distance from probe to supporting structure	Distance from probe to nearest tree dripline	Height of nearest tree/ Direction from probe to tree
Ozone	Population Exposure/Urban	Continuous	04/01/2000	047	Teflon/ Teflon	4.3 m	1.7 m	21.7 m	14.4 m Southwest
BAM-1022*	Population Exposure/Middle	Continuous	02/01/2023	209	Inlet Head	4.6 m	2.1 m	25.0 m	

*This monitor is operating at time of evaluation. Method changes at this site are documented in the PM2.5 Pollutant Network Table.

** This site has been monitoring PM2.5 since 01/01/1999.

This site meets all requirements of 40 CFR Part 58. Evaluation Date: 01/23/2023

EJScreen Report (Version 2.11)

1 mile Ring Centered at 34.530702,-86.967466, ALABAMA, EPA Region 4

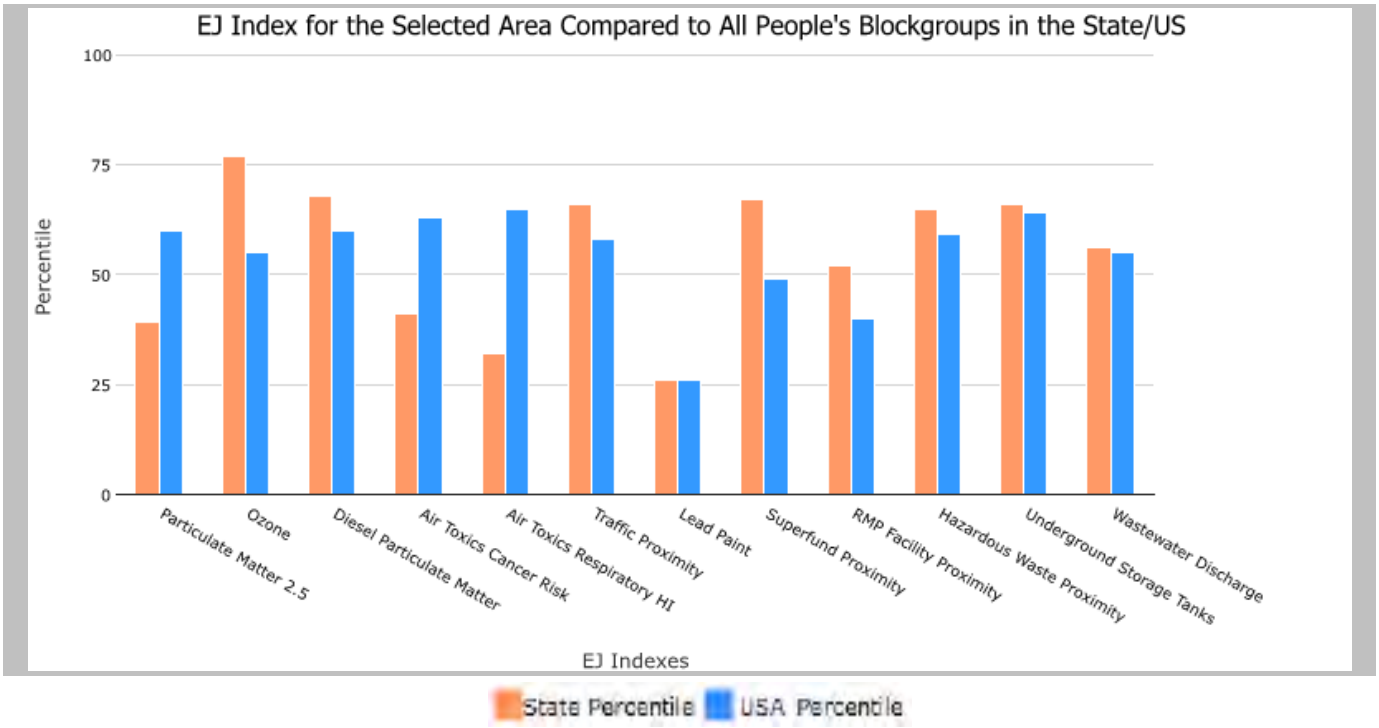
Approximate Population: 323

Input Area (sq. miles): 3.14

DECATUR AQS ID 01-103-0011

Selected Variables	State Percentile	USA Percentile
Environmental Justice Indexes		
Particulate Matter 2.5 EJ index	39	60
Ozone EJ index	77	55
Diesel Particulate Matter EJ index*	68	60
Air Toxics Cancer Risk EJ index*	41	63
Air Toxics Respiratory HI EJ index*	32	65
Traffic Proximity EJ index	66	58
Lead Paint EJ index	26	26
Superfund Proximity EJ index	67	49
RMP Facility Proximity EJ index	52	40
Hazardous Waste Proximity EJ index	65	59
Underground Storage Tanks EJ index	66	64
Wastewater Discharge EJ index	56	55

EJ Indexes - The EJ indexes help users screen for potential EJ concerns. To do this, the EJ index combines data on low income and people of color populations with a single environmental indicator.



*Diesel particular matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPA's Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. Cancer risks and hazard indices from the Air Toxics Data Update are reported to one significant figure and any additional significant figures here are due to rounding. More information on the Air Toxics Data Update can be found at: https://www.epa.gov/haps/air-toxics-data-update.

DUNCANVILLE MIDDLE SCHOOL — AQS ID 01-125-0011

Duncanville, Tuscaloosa County — **33.095379, -87.481507**

MSA: Tuscaloosa — Property Type: Commercial

NORTH

SOUTH

EAST

WEST

Parameter	Monitoring Objective/ Scale	Schedule	Start Date	AQS Method Code	Probe/Rain Shield Material	Probe Inlet Height from ground	Distance from probe to supporting structure	Distance from probe to nearest tree dripline	Height of nearest tree/ Direction from probe to tree
Ozone	Population Exposure	Continuous	03/02/2022	087	Teflon	4.4 m	1.6m	28.3 m	7.6 m NW
BAM-1022			01/01/2023	209	Inlet	4.7 m	2.0 m	30.9 m	

This site meets all requirements of 40 CFR Part 58. — Evaluation Date: 03/01/2023

EJScreen Report (Version 2.11)

1 mile Ring Centered at 33.095378,-87.481502, ALABAMA, EPA Region 4

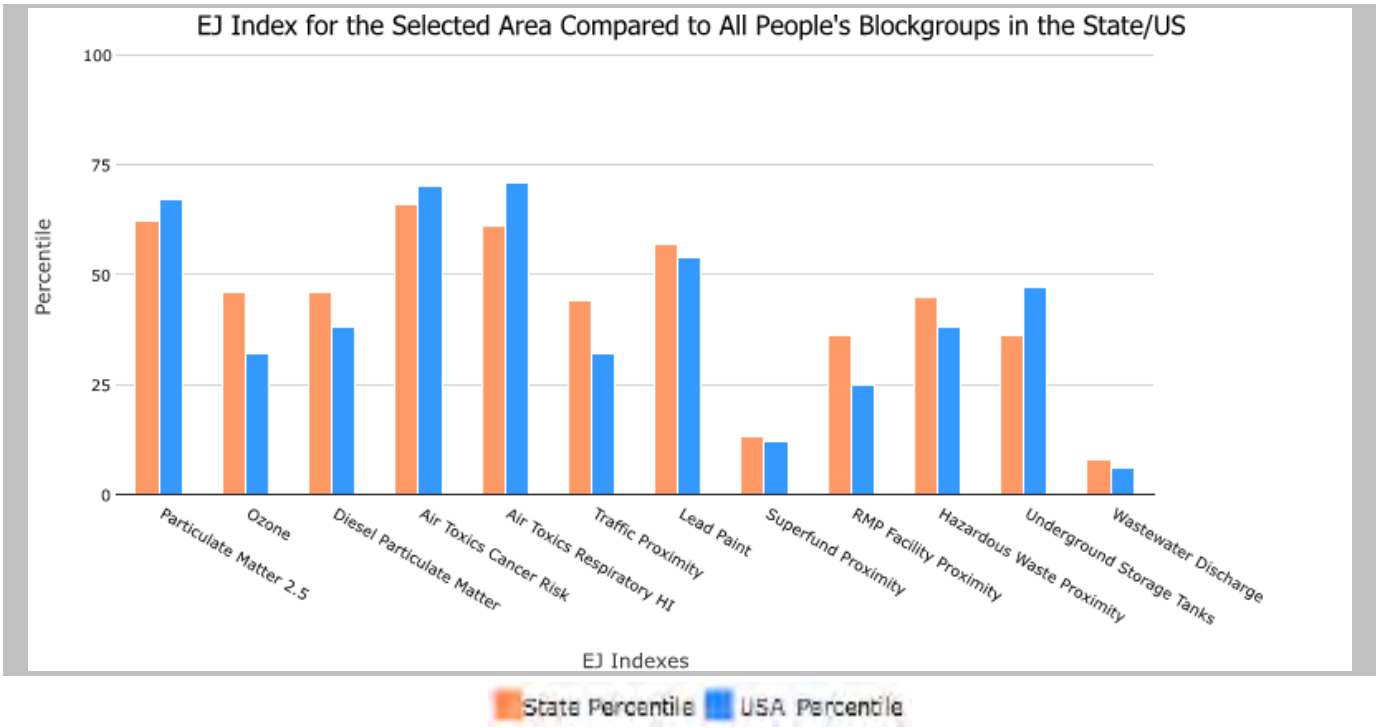
Approximate Population: 208

Input Area (sq. miles): 3.14

Duncanville Middle School

Selected Variables	State Percentile	USA Percentile
Environmental Justice Indexes		
Particulate Matter 2.5 EJ index	62	67
Ozone EJ index	46	32
Diesel Particulate Matter EJ index*	46	38
Air Toxics Cancer Risk EJ index*	66	70
Air Toxics Respiratory HI EJ index*	61	71
Traffic Proximity EJ index	44	32
Lead Paint EJ index	57	54
Superfund Proximity EJ index	13	12
RMP Facility Proximity EJ index	36	25
Hazardous Waste Proximity EJ index	45	38
Underground Storage Tanks EJ index	36	47
Wastewater Discharge EJ index	8	6

EJ Indexes - The EJ indexes help users screen for potential EJ concerns. To do this, the EJ index combines data on low income and people of color populations with a single environmental indicator.



*Diesel particular matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPA's Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. Cancer risks and hazard indices from the Air Toxics Data Update are reported to one significant figure and any additional significant figures here are due to rounding. More information on the Air Toxics Data Update can be found at: https://www.epa.gov/haps/air-toxics-data-update.

FAIRHOPE

AQS ID 01-003-0010

1 Pirate Drive, Fairhope, Baldwin County

30.497478, -87.880258

MSA: Daphne-Fairhope-Foley 549.7 m from Pirate Drive Property Type: Commercial (county)

NORTH

SOUTH

EAST

WEST

Parameter	Monitoring Objective/ Scale	Schedule	Start Date**	AQS Method Code	Probe/Rain Shield Material	Probe Inlet Height from ground	Distance from probe to supporting structure	Distance from probe to nearest tree dripline	Height of nearest tree/ Direction from probe to tree
Ozone	Population Exposure/ Neighborhood	Continuous	03/01/2000	087	Teflon	4.4 m	1.8 m	21.9 m	7.2 m Northeast
Bam-1022*			01/01/2023	209	Inlet Head	2.0 m	N/A	21.3 m	

*This monitor is operating at time of evaluation. Method changes at this site are documented in the PM2.5 Pollutant Network Table

**This site has been monitoring for PM2.5 since 01/01/2000.

This site meets all requirements of 40 CFR Part 58. Evaluation Date: 02/23/2023

EJScreen Report (Version 2.11)

1 mile Ring Centered at 30.497490,-87.880301, ALABAMA, EPA Region 4

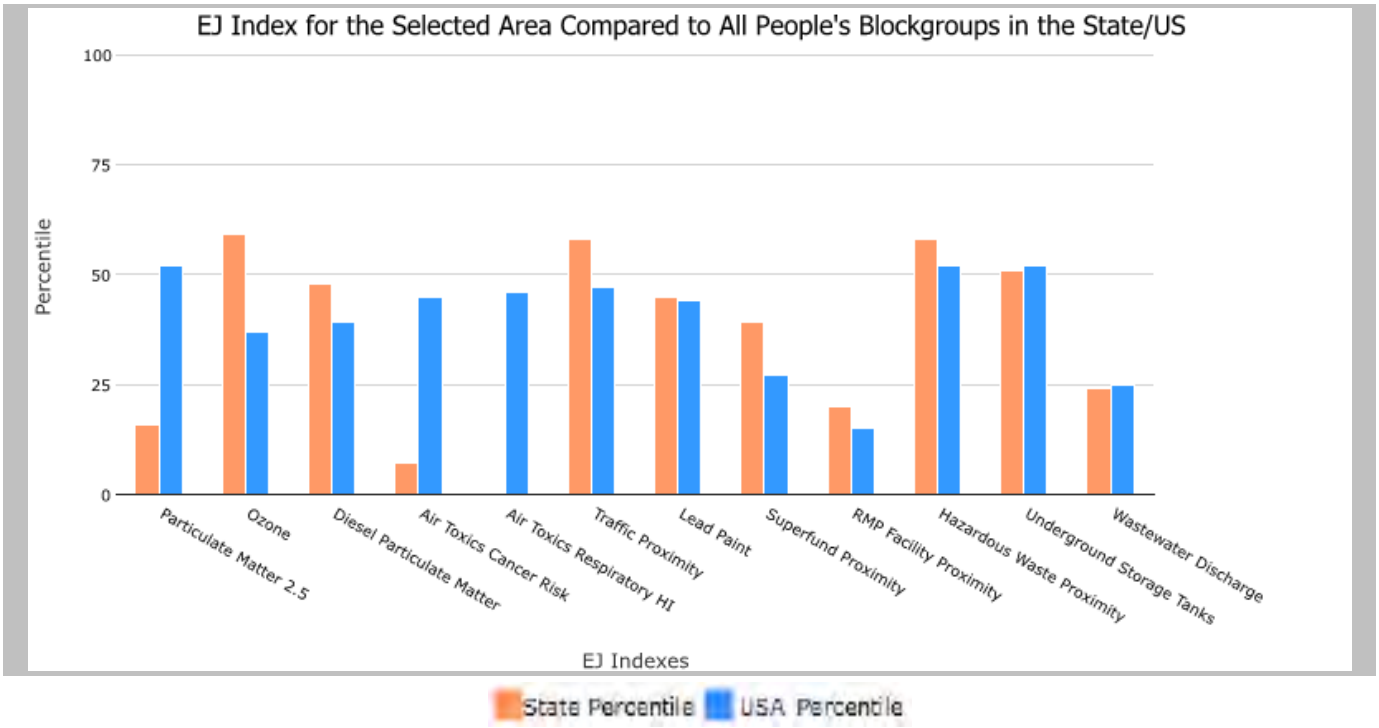
Approximate Population: 2,848

Input Area (sq. miles): 3.14

FAIRHOPE AQS ID 01-003-0010

Selected Variables	State Percentile	USA Percentile
Environmental Justice Indexes		
Particulate Matter 2.5 EJ index	16	52
Ozone EJ index	59	37
Diesel Particulate Matter EJ index*	48	39
Air Toxics Cancer Risk EJ index*	7	45
Air Toxics Respiratory HI EJ index*	0	46
Traffic Proximity EJ index	58	47
Lead Paint EJ index	45	44
Superfund Proximity EJ index	39	27
RMP Facility Proximity EJ index	20	15
Hazardous Waste Proximity EJ index	58	52
Underground Storage Tanks EJ index	51	52
Wastewater Discharge EJ index	24	25

EJ Indexes - The EJ indexes help users screen for potential EJ concerns. To do this, the EJ index combines data on low income and people of color populations with a single environmental indicator.



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GADSDEN C COLLEGE AQS ID 01-055-0011

1001 George Wallace Drive, Gadsden, Etowah County **33.991494, -85.992647**

MSA: Gadsden 411.4 m from George Wallace Dr. Property Type: Commercial

NORTH

SOUTH

EAST

WEST

Parameter	Monitoring Objective/ Scale	Schedule	Start Date	AQS Method Code	Probe/Rain Shield Material	Probe Inlet Height from ground	Distance from probe to supporting structure	Distance from probe to nearest tree dripline	Height of nearest tree/ Direction from probe to tree
BAM-1022	Population Exposure/ Urban	Continuous	10-01-2002	209	Inlet Head	2.1 m	N/A	12.2 m	8.6 m North

This site meets all requirements of 40 CFR Part 58. Evaluation Date: 02/13/2023

EJScreen Report (Version 2.11)

1 mile Ring Centered at 33.991465,-85.992647, ALABAMA, EPA Region 4

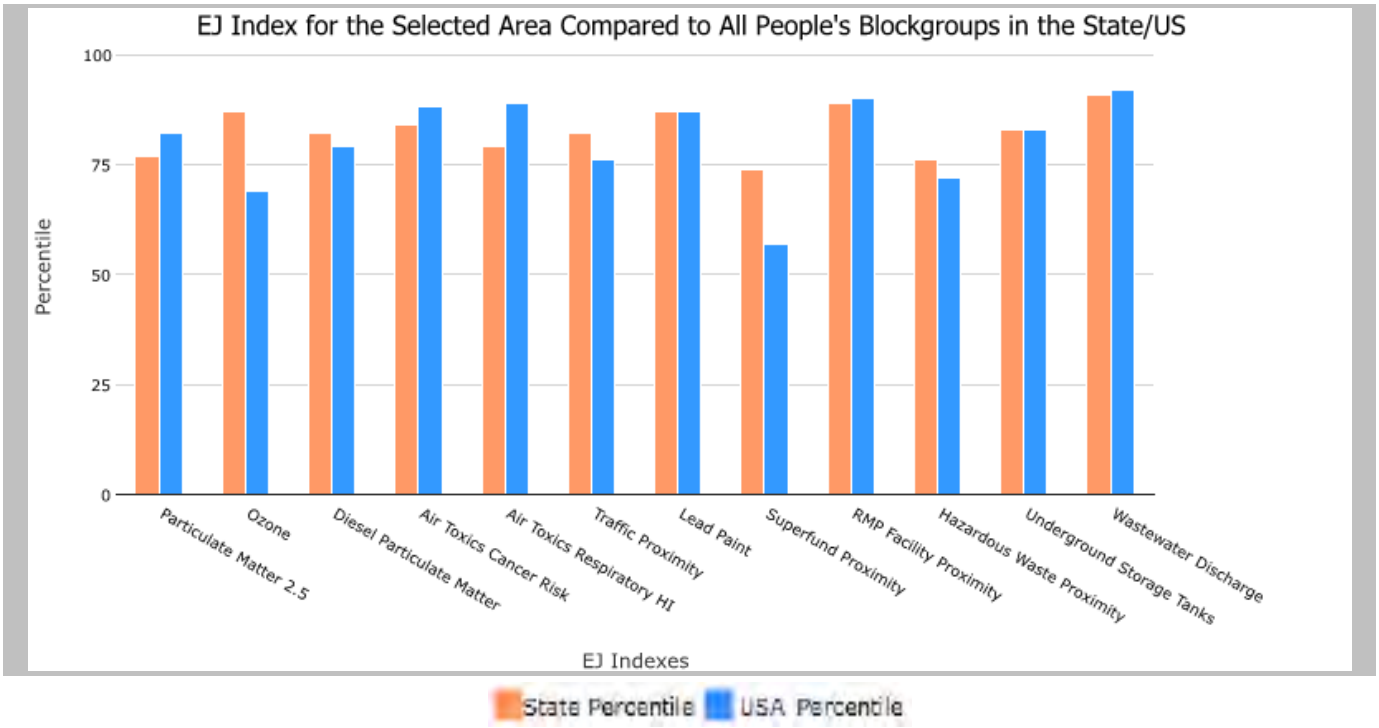
Approximate Population: 3,592

Input Area (sq. miles): 3.14

GADSDEN C COLLEGE AQS ID 01-055-0010

Selected Variables	State Percentile	USA Percentile
Environmental Justice Indexes		
Particulate Matter 2.5 EJ index	77	82
Ozone EJ index	87	69
Diesel Particulate Matter EJ index*	82	79
Air Toxics Cancer Risk EJ index*	84	88
Air Toxics Respiratory HI EJ index*	79	89
Traffic Proximity EJ index	82	76
Lead Paint EJ index	87	87
Superfund Proximity EJ index	74	57
RMP Facility Proximity EJ index	89	90
Hazardous Waste Proximity EJ index	76	72
Underground Storage Tanks EJ index	83	83
Wastewater Discharge EJ index	91	92

EJ Indexes - The EJ indexes help users screen for potential EJ concerns. To do this, the EJ index combines data on low income and people of color populations with a single environmental indicator.



*Diesel particular matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPA's Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. Cancer risks and hazard indices from the Air Toxics Data Update are reported to one significant figure and any additional significant figures here are due to rounding. More information on the Air Toxics Data Update can be found at: https://www.epa.gov/haps/air-toxics-data-update.

HELENA

AQS ID 01-117-0004

237 Limestone Drive, Helena, Shelby County **33.317142, -86.825754**

MSA: Birmingham-Hoover 33.5m to Limestone Drive Property Type: Agricultural (private)

NORTH

SOUTH

EAST

WEST

Parameter	Monitoring Objective/ Scale	Schedule	Start Date	AQS Method Code	Probe/Rain Shield Material	Probe Inlet Height from ground	Distance from probe to supporting structure	Distance from probe to nearest tree dripline	Height of nearest tree/ Direction from probe to tree
Ozone	Population Exposure/ Urban	Continuous	01/01/1983	087	Teflon/ Teflon	4.4 m	1.6 m	15.5 m	13 m North

This site meets all requirements of 40 CFR Part 58. Evaluation Date: 03/01/2023

EJScreen Report (Version 2.11)

1 mile Ring Centered at 33.317140,-86.825754, ALABAMA, EPA Region 4

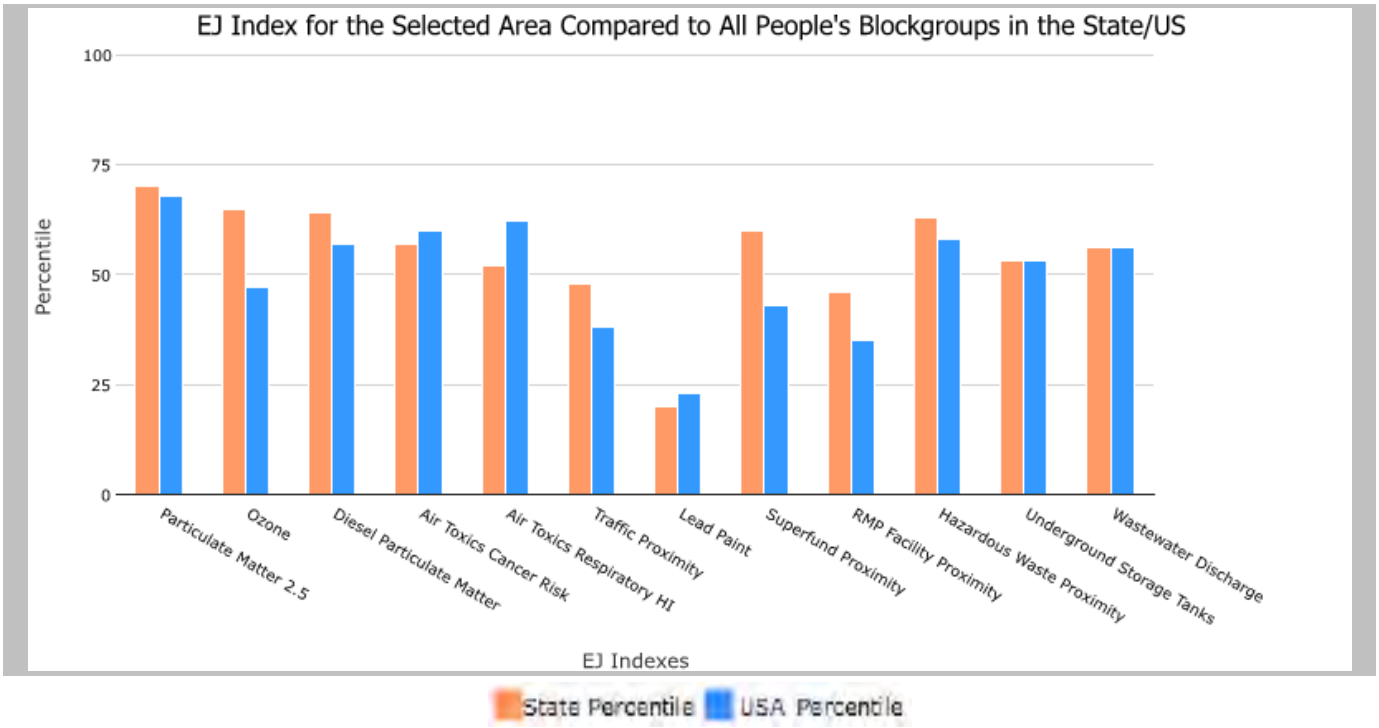
Approximate Population: 3,097

Input Area (sq. miles): 3.14

HELENA AQS ID 01-117-0004

Selected Variables	State Percentile	USA Percentile
Environmental Justice Indexes		
Particulate Matter 2.5 EJ index	70	68
Ozone EJ index	65	47
Diesel Particulate Matter EJ index*	64	57
Air Toxics Cancer Risk EJ index*	57	60
Air Toxics Respiratory HI EJ index*	52	62
Traffic Proximity EJ index	48	38
Lead Paint EJ index	20	23
Superfund Proximity EJ index	60	43
RMP Facility Proximity EJ index	46	35
Hazardous Waste Proximity EJ index	63	58
Underground Storage Tanks EJ index	53	53
Wastewater Discharge EJ index	56	56

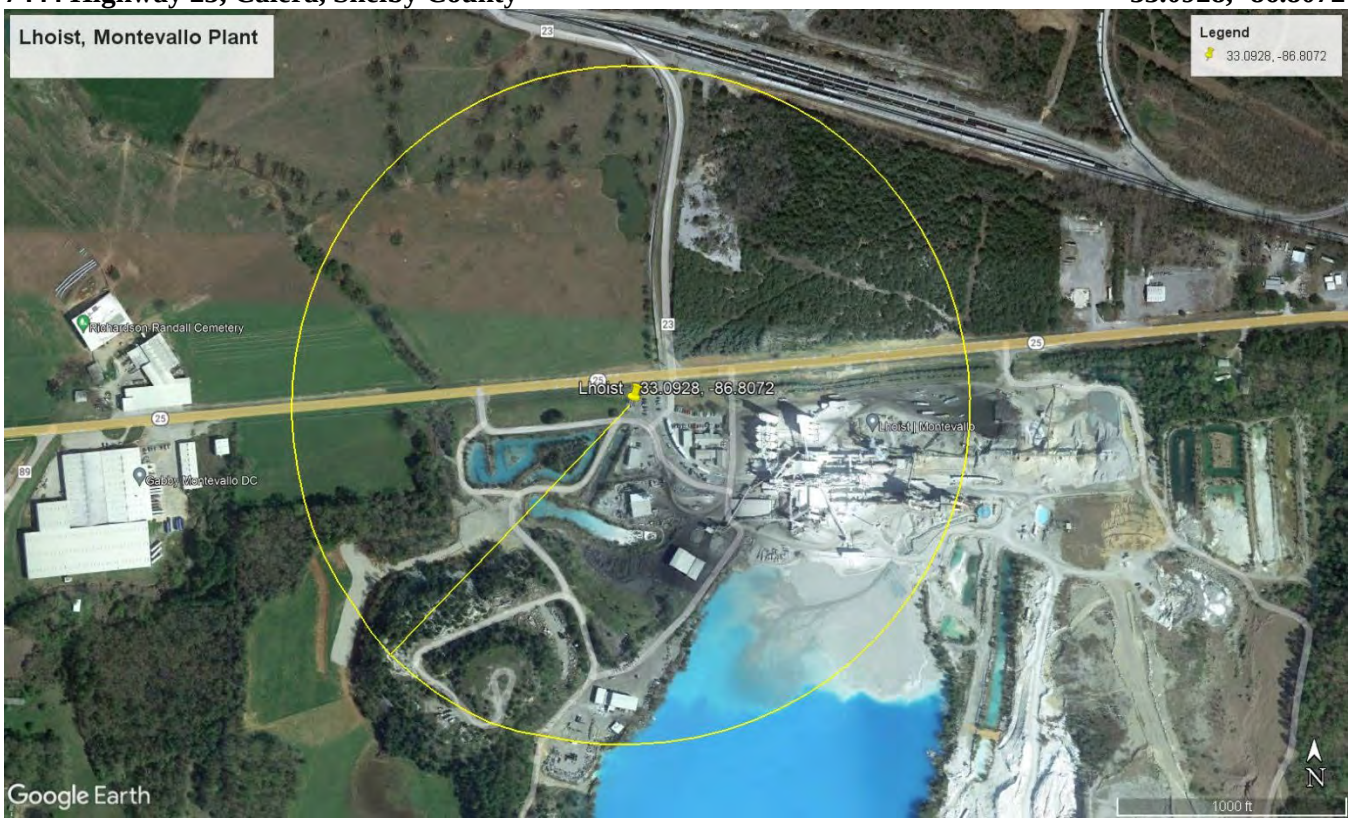
EJ Indexes - The EJ indexes help users screen for potential EJ concerns. To do this, the EJ index combines data on low income and people of color populations with a single environmental indicator.



*Diesel particular matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPA's Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. Cancer risks and hazard indices from the Air Toxics Data Update are reported to one significant figure and any additional significant figures here are due to rounding. More information on the Air Toxics Data Update can be found at: https://www.epa.gov/haps/air-toxics-data-update.

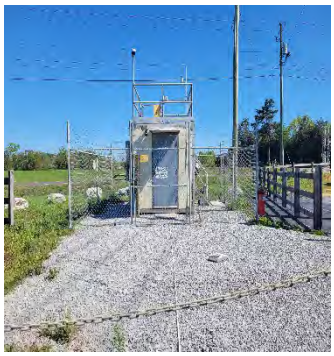
LHOIST, MONTEVALLO PLANT — AQS ID 01-017-9001

7444 Highway 25, Calera, Shelby County — **33.0928, -86.8072**



MSA: Birmingham-Hoover 22 m from Hwy 25 — Property Type: Industrial (private)

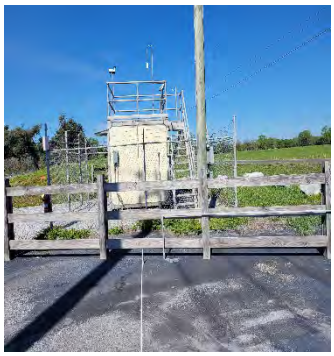
NORTH



SOUTH

EAST

WEST



Parameter	Monitoring Objective/ Scale	Schedule	Start Date	AQS Method Code	Probe/Rain Shield Material	Probe Inlet Height from ground	Distance from probe to supporting structure	Distance from probe to nearest tree dripline	Height of nearest tree/ Direction from probe to tree
SO2	Highest Concentration/ Middle	Continuous	01/01/2017	100	Teflon	3.9 m	1.5 m	17.7 m	4.0 m Southwest

This site meets all requirements of 40 CFR Part 58. — Evaluation Date: 04/11/2023

EJScreen Report (Version 2.11)

1 mile Ring Centered at 33.092865,-86.807216, ALABAMA, EPA Region 4

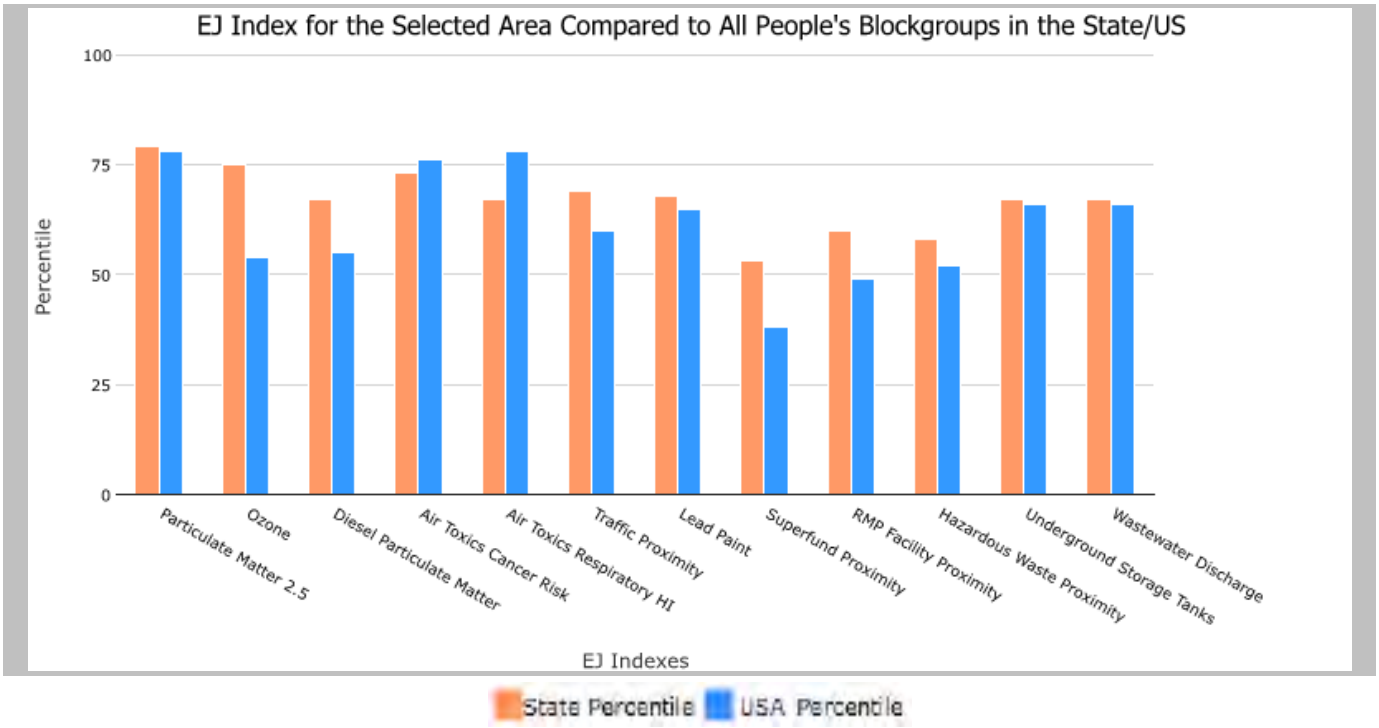
Approximate Population: 226

Input Area (sq. miles): 3.14

LHOIST AQS ID 01-017-9001

Selected Variables	State Percentile	USA Percentile
Environmental Justice Indexes		
Particulate Matter 2.5 EJ index	79	78
Ozone EJ index	75	54
Diesel Particulate Matter EJ index*	67	55
Air Toxics Cancer Risk EJ index*	73	76
Air Toxics Respiratory HI EJ index*	67	78
Traffic Proximity EJ index	69	60
Lead Paint EJ index	68	65
Superfund Proximity EJ index	53	38
RMP Facility Proximity EJ index	60	49
Hazardous Waste Proximity EJ index	58	52
Underground Storage Tanks EJ index	67	66
Wastewater Discharge EJ index	67	66

EJ Indexes - The EJ indexes help users screen for potential EJ concerns. To do this, the EJ index combines data on low income and people of color populations with a single environmental indicator.



*Diesel particular matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPA's Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. Cancer risks and hazard indices from the Air Toxics Data Update are reported to one significant figure and any additional significant figures here are due to rounding. More information on the Air Toxics Data Update can be found at: https://www.epa.gov/haps/air-toxics-data-update.

MOBILE PM10 SEALS PARK

AQS ID 01-097-8001

540 Texas St., Mobile, Mobile County

30.679486, -88.046557

MSA: Mobile

Property Type: Recreational city park

NORTH

SOUTH

EAST

WEST

Parameter	Monitoring Objective/ Scale	Schedule	Start Date	AQS Method Code	Probe/Rain Shield Material	Probe Inlet Height from ground	Minimum/ maximum distance from probe to probe	Distance from probe to nearest tree dripline	Height of nearest tree/ Direction from probe to tree
PM10 FRM	Source oriented/ Neighborhood	1/6 days	06/21/2023	81102	PM10 Inlet	2.1m	1.6m – 2.2m	16.0m	20m/West
PM10 FEM		Continuous	06/21/2023	81102					
Mini-Vol		1/6 days	06/21/2023	N/A	Louvered Inlet			14.2m	

This site meets all requirements of 40 CFR Part 58.

Evaluation Date: 06/21/2023

EJScreen Report (Version 2.11)

1 mile Ring Centered at 30.679489,-88.046560, ALABAMA, EPA Region 4

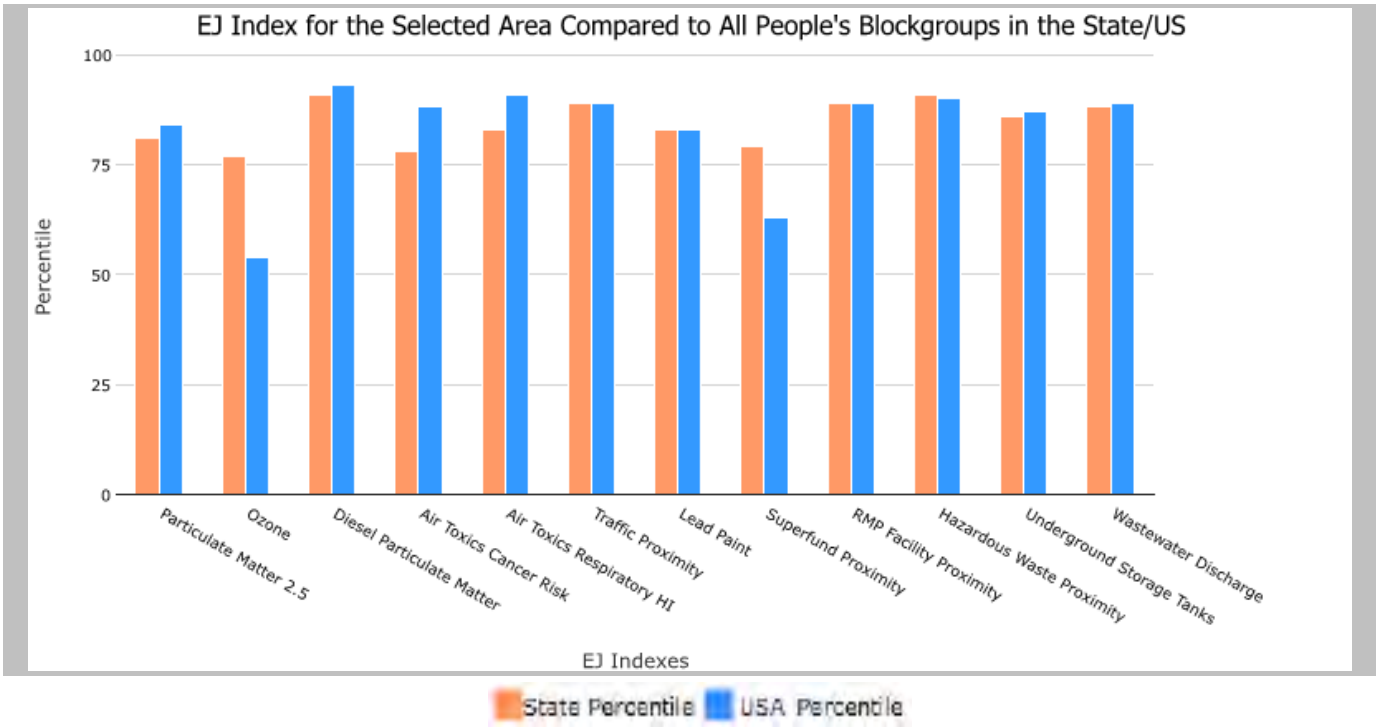
Approximate Population: 8,074

Input Area (sq. miles): 3.14

MOBILE PM10 SEALS PARK AQS ID 01-097-8001

Selected Variables	State Percentile	USA Percentile
Environmental Justice Indexes		
Particulate Matter 2.5 EJ index	81	84
Ozone EJ index	77	54
Diesel Particulate Matter EJ index*	91	93
Air Toxics Cancer Risk EJ index*	78	88
Air Toxics Respiratory HI EJ index*	83	91
Traffic Proximity EJ index	89	89
Lead Paint EJ index	83	83
Superfund Proximity EJ index	79	63
RMP Facility Proximity EJ index	89	89
Hazardous Waste Proximity EJ index	91	90
Underground Storage Tanks EJ index	86	87
Wastewater Discharge EJ index	88	89

EJ Indexes - The EJ indexes help users screen for potential EJ concerns. To do this, the EJ index combines data on low income and people of color populations with a single environmental indicator.



*Diesel particular matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPA's Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. Cancer risks and hazard indices from the Air Toxics Data Update are reported to one significant figure and any additional significant figures here are due to rounding. More information on the Air Toxics Data Update can be found at: https://www.epa.gov/haps/air-toxics-data-update.

MOMS, ADEM

AQS ID 01-101-1002

1350 Coliseum Boulevard, Montgomery, Montgomery County

32.412811, -86.263394

MSA: Montgomery 285.75 m to Coliseum Boulevard Property Type: Commercial (state)

NORTH

SOUTH

EAST

WEST

Parameter	Monitoring Objective/ Scale	Schedule	Start Date**	AQS Method Code	Probe/Rain Shield Material	Probe Inlet Height from ground	Distance from probe to supporting structure	Distance between collocated samplers	Distance from probe to nearest tree dripline	Height of nearest tree/ Direction
Ozone	Population Exposure/ Neighborhood	Continuous	06/02/1993	087	Teflon	4.3 m	1.8 m	N/A	64.0 m	10.2 m West
BAM-1022*			01/01/2023	209	Inlet Head	4.7 m	2.0 m	1.1 m	65.3 m	
PM 2.5 CO		1/6 day	01/16/2009	731		4.6 m	2.1 m	1.1 m	64.4 m	
PM 10			09/16/1993	127		3.2 m	2.1 m	1.3 m	57.0 m	
PM 10 CO			01/01/2013			3.2 m	2.1 m	1.3 m	58.6 m	

*This monitor is operating at time of evaluation. Method changes at this site are documented in the PM2.5 Pollutant Network Table.

** This site has been monitoring PM2.5 since 01/16/2009.

This site meets all requirements of 40 CFR Part 58. Evaluation Date: 03/22/2023

EJScreen Report (Version 2.11)

1 mile Ring Centered at 32.412795,-86.263389, ALABAMA, EPA Region 4

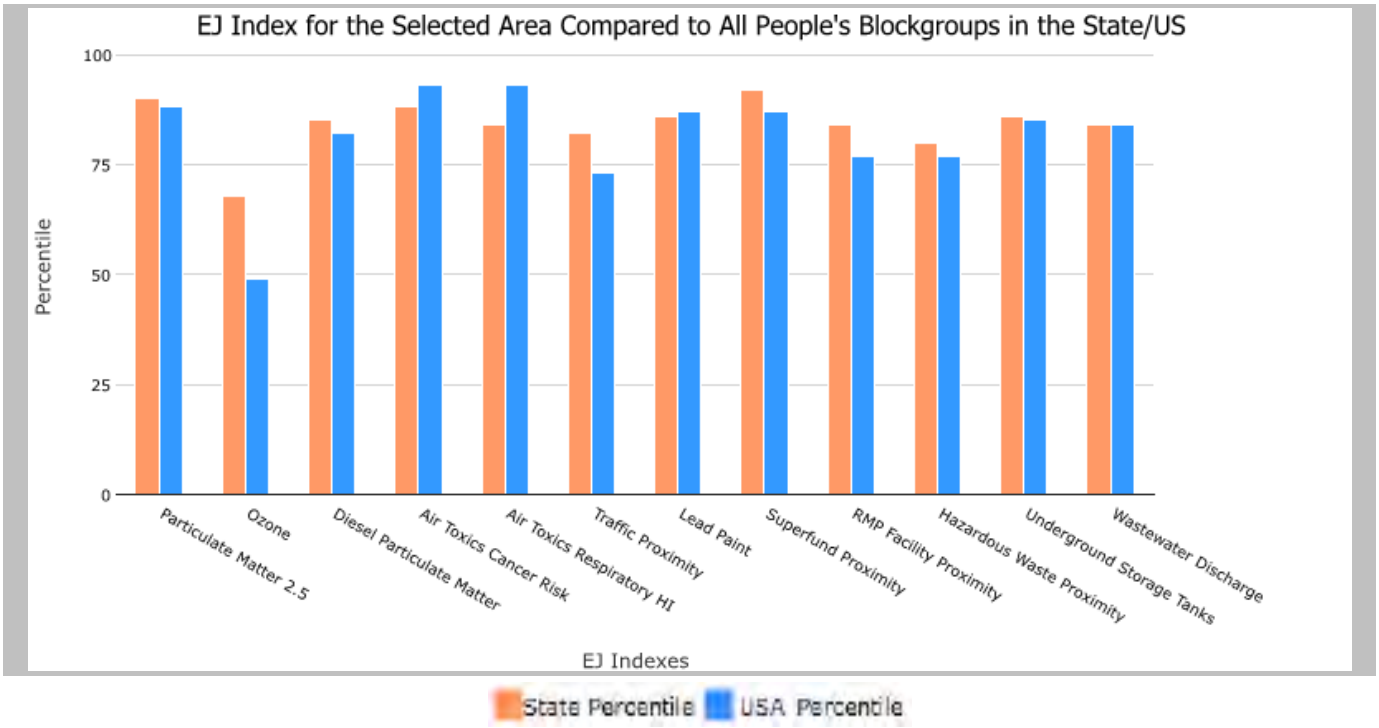
Approximate Population: 4,107

Input Area (sq. miles): 3.14

MOMS, ADEM AQS ID 01-101-1002

Selected Variables	State Percentile	USA Percentile
Environmental Justice Indexes		
Particulate Matter 2.5 EJ index	90	88
Ozone EJ index	68	49
Diesel Particulate Matter EJ index*	85	82
Air Toxics Cancer Risk EJ index*	88	93
Air Toxics Respiratory HI EJ index*	84	93
Traffic Proximity EJ index	82	73
Lead Paint EJ index	86	87
Superfund Proximity EJ index	92	87
RMP Facility Proximity EJ index	84	77
Hazardous Waste Proximity EJ index	80	77
Underground Storage Tanks EJ index	86	85
Wastewater Discharge EJ index	84	84

EJ Indexes - The EJ indexes help users screen for potential EJ concerns. To do this, the EJ index combines data on low income and people of color populations with a single environmental indicator.



*Diesel particular matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPA's Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. Cancer risks and hazard indices from the Air Toxics Data Update are reported to one significant figure and any additional significant figures here are due to rounding. More information on the Air Toxics Data Update can be found at: https://www.epa.gov/haps/air-toxics-data-update.

PHENIX CITY-SOUTH GIRARD SCHOOL AQS ID 01-113-0003

510 6th Place South, Phenix City, Russell County **32.437028, -84.999653**

MSA: Columbus GA-AL 108.24 m to 6th Place South Property Type: Commercial (city)

NORTH

SOUTH

EAST

WEST

Parameter	Monitoring Objective/ Scale	Schedule	Start Date**	AQS Method	Probe/Rain Shield Material	Probe Inlet Height from ground	Distance from probe to supporting structure	Distance between collocated samplers	Distance from probe to nearest tree dripline	Height nearest tree/ Direction
Ozone	Highest Concentration /Urban	Continuous	03/01/2018	087	Teflon	4.5 m	1.8 m	N/A	42+m	9.6 m S
PM2.5*		1/3 day	02/17/2023	145	Inlet	4.7 m	2.1 m	1.3 m		
PM2.5CO		1/6 day	01/18/2017	145	Inlet	4.7 m	2.1 m	1.3 m		
SASS	Population Exposure/No scale	1/6 day	06/12/2017	811	Inlet	4.3 m	1.6 m	N/A		
URG			06/12/2017	812	Inlet	4.7m	2.0 m			

*This monitor is operating at time of evaluation. Method changes at this site are documented in the PM2.5 Pollutant Network Table.

** This site has been monitoring PM2.5 since 01/18/2017.

This site meets all requirements of 40 CFR Part 58. Evaluation Date: 03/08/2023

EJScreen Report (Version 2.11)

1 mile Ring Centered at 32.437044,-84.999514, ALABAMA, EPA Region 4

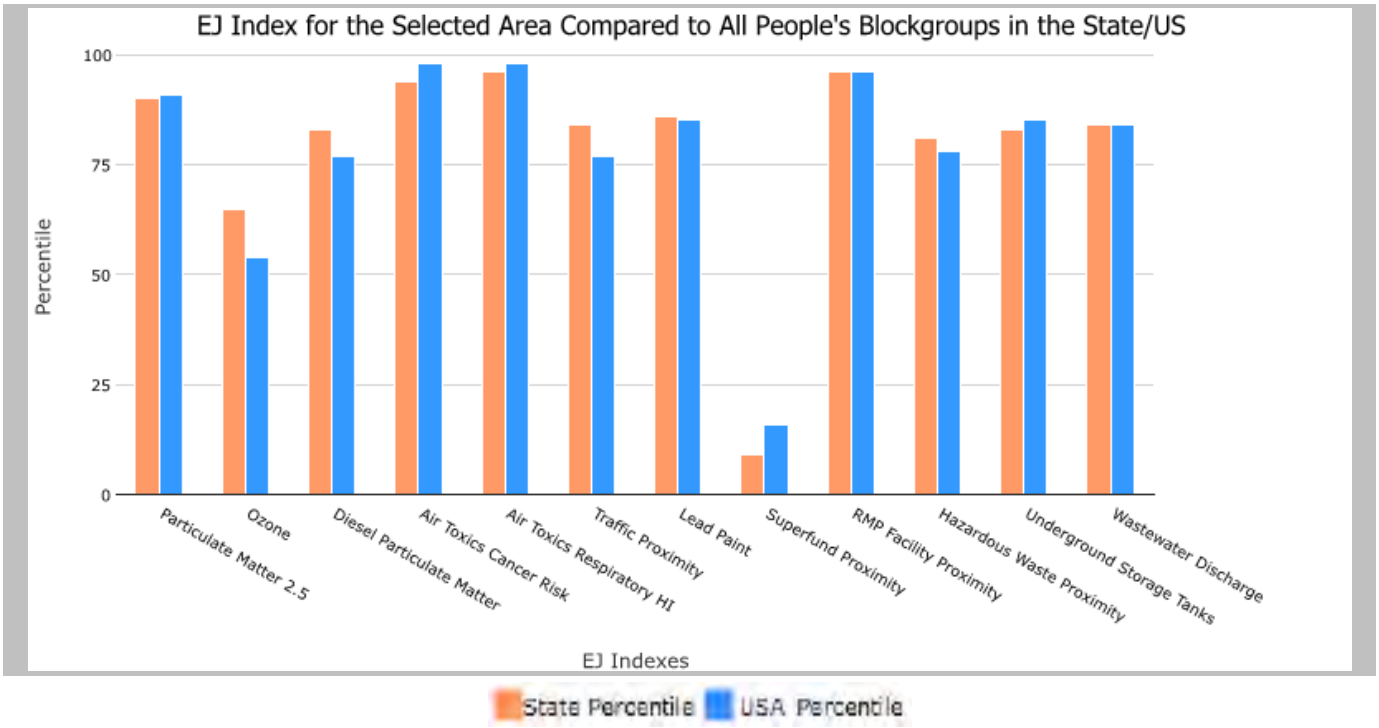
Approximate Population: 2,797

Input Area (sq. miles): 3.14

PHENIX CITY - SOUTH GIRARD SCHOOL AQS ID 01-113-0003

Selected Variables	State Percentile	USA Percentile
Environmental Justice Indexes		
Particulate Matter 2.5 EJ index	90	91
Ozone EJ index	65	54
Diesel Particulate Matter EJ index*	83	77
Air Toxics Cancer Risk EJ index*	94	98
Air Toxics Respiratory HI EJ index*	96	98
Traffic Proximity EJ index	84	77
Lead Paint EJ index	86	85
Superfund Proximity EJ index	9	16
RMP Facility Proximity EJ index	96	96
Hazardous Waste Proximity EJ index	81	78
Underground Storage Tanks EJ index	83	85
Wastewater Discharge EJ index	84	84

EJ Indexes - The EJ indexes help users screen for potential EJ concerns. To do this, the EJ index combines data on low income and people of color populations with a single environmental indicator.



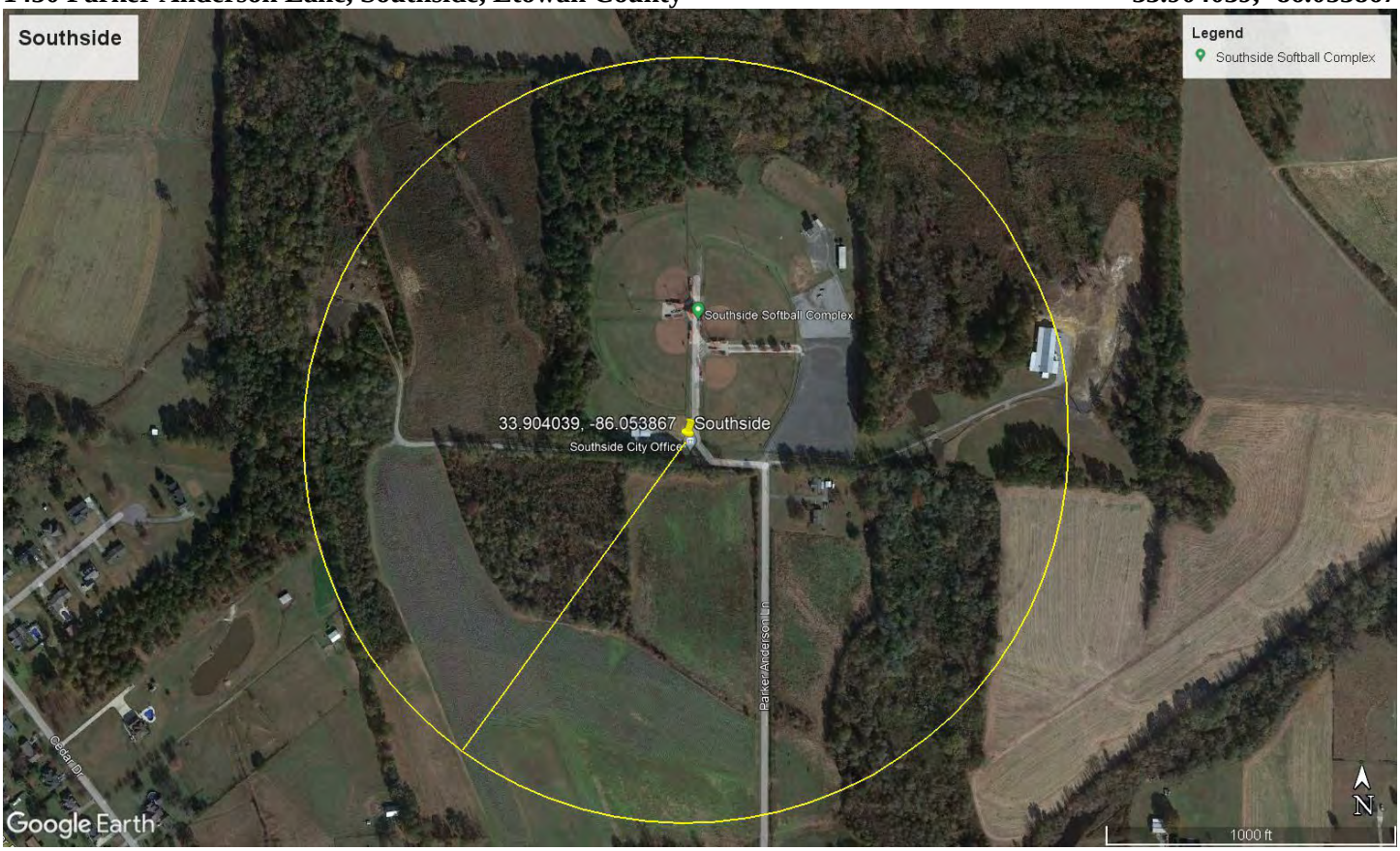
*Diesel particular matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPA's Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. Cancer risks and hazard indices from the Air Toxics Data Update are reported to one significant figure and any additional significant figures here are due to rounding. More information on the Air Toxics Data Update can be found at: https://www.epa.gov/haps/air-toxics-data-update.

SOUTHSIDE

AQS ID 01-055-0011

1450 Parker Anderson Lane, Southside, Etowah County

33.904039, -86.053867



MSA: Gadsden 83.8 m from Parker Anderson Lane

Property Type: Agricultural (city)

NORTH

SOUTH

EAST

WEST

Parameter	Monitoring Objective/ Scale	Schedule	Start Date	AQS Method Code	Probe/Rain Shield Material	Probe Inlet Height from ground	Distance from probe to supporting structure	Distance from probe to nearest tree dripline	Height of nearest tree/ Direction from probe to tree
Ozone	Highest Concentration/ Neighborhood	Continuous	04/26/2002	047	Teflon	4.1 m	1.7 m	11.7 m	17.6 m South

This site meets all requirements of 40 CFR Part 58.

Evaluation Date: 02/13/2023

EJScreen Report (Version 2.11)

1 mile Ring Centered at 33.904010,-86.053851, ALABAMA, EPA Region 4

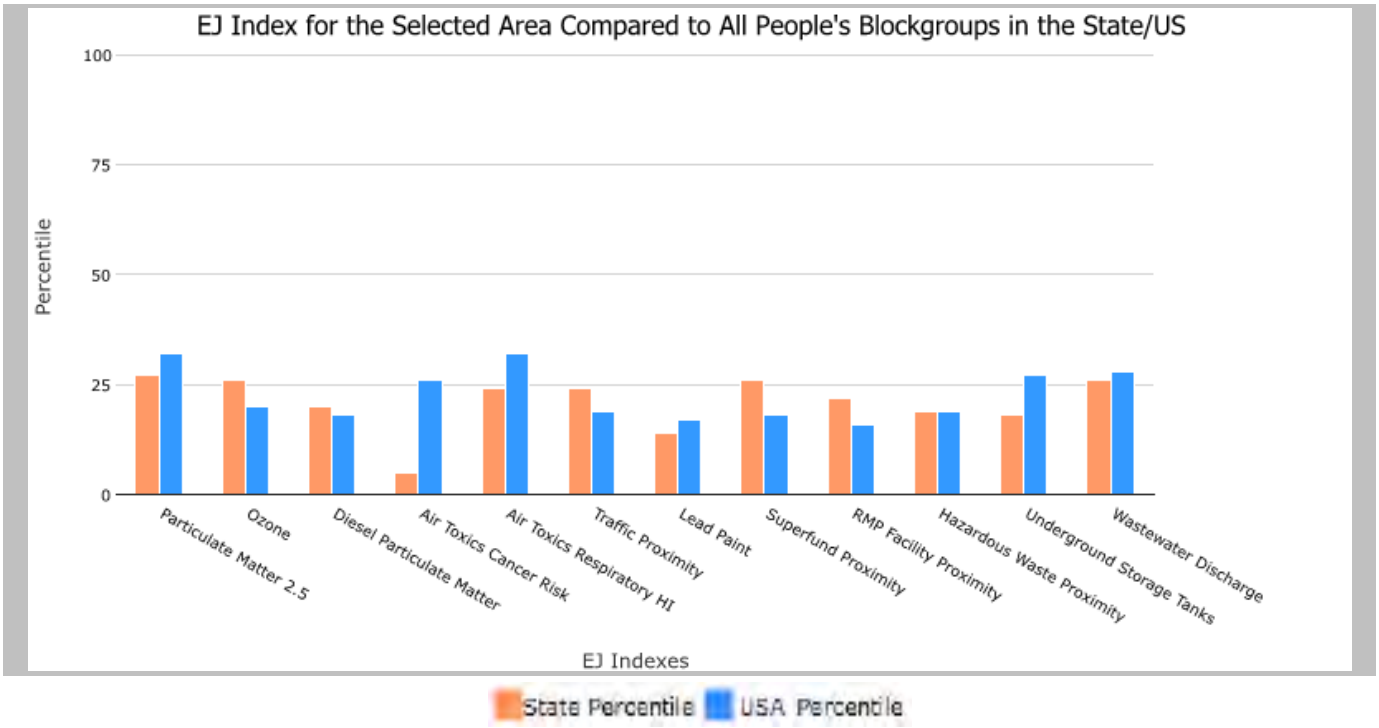
Approximate Population: 1,513

Input Area (sq. miles): 3.14

SOUTHSIDE AQS ID 01-055-0011

Selected Variables	State Percentile	USA Percentile
Environmental Justice Indexes		
Particulate Matter 2.5 EJ index	27	32
Ozone EJ index	26	20
Diesel Particulate Matter EJ index*	20	18
Air Toxics Cancer Risk EJ index*	5	26
Air Toxics Respiratory HI EJ index*	24	32
Traffic Proximity EJ index	24	19
Lead Paint EJ index	14	17
Superfund Proximity EJ index	26	18
RMP Facility Proximity EJ index	22	16
Hazardous Waste Proximity EJ index	19	19
Underground Storage Tanks EJ index	18	27
Wastewater Discharge EJ index	26	28

EJ Indexes - The EJ indexes help users screen for potential EJ concerns. To do this, the EJ index combines data on low income and people of color populations with a single environmental indicator.



*Diesel particular matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPA's Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. Cancer risks and hazard indices from the Air Toxics Data Update are reported to one significant figure and any additional significant figures here are due to rounding. More information on the Air Toxics Data Update can be found at: https://www.epa.gov/haps/air-toxics-data-update.

TROY, LEAD

Henderson Road, Troy, Pike County

AQS ID 01-109-0003

31.790479, -85.978974

µSA: Troy 15.2 m Henderson Road Property Type: Industrial (private)

NORTH

SOUTH

EAST

WEST

Parameter	Monitoring Objective/ Scale	Schedule	Start Date	AQS Method Code	Probe Inlet Height from ground	Distance between collocated samplers	Distance from probe to nearest tree dripline	Height of nearest tree/ Direction from probe to tree
Lead TSP	Highest Concentration/ Neighborhood	Every 6 days	01/01/2009	044	2.1 m	2.0 m	12.4 m	13.8 m North
Lead TSP Co					2.1 m	2.0 m	10.6 m	13.8 m North

This site meets all requirements of 40 CFR Part 58. Evaluation Date: 03/23/2023

EJScreen Report (Version 2.11)

1 mile Ring Centered at 31.790481,-85.978974, ALABAMA, EPA Region 4

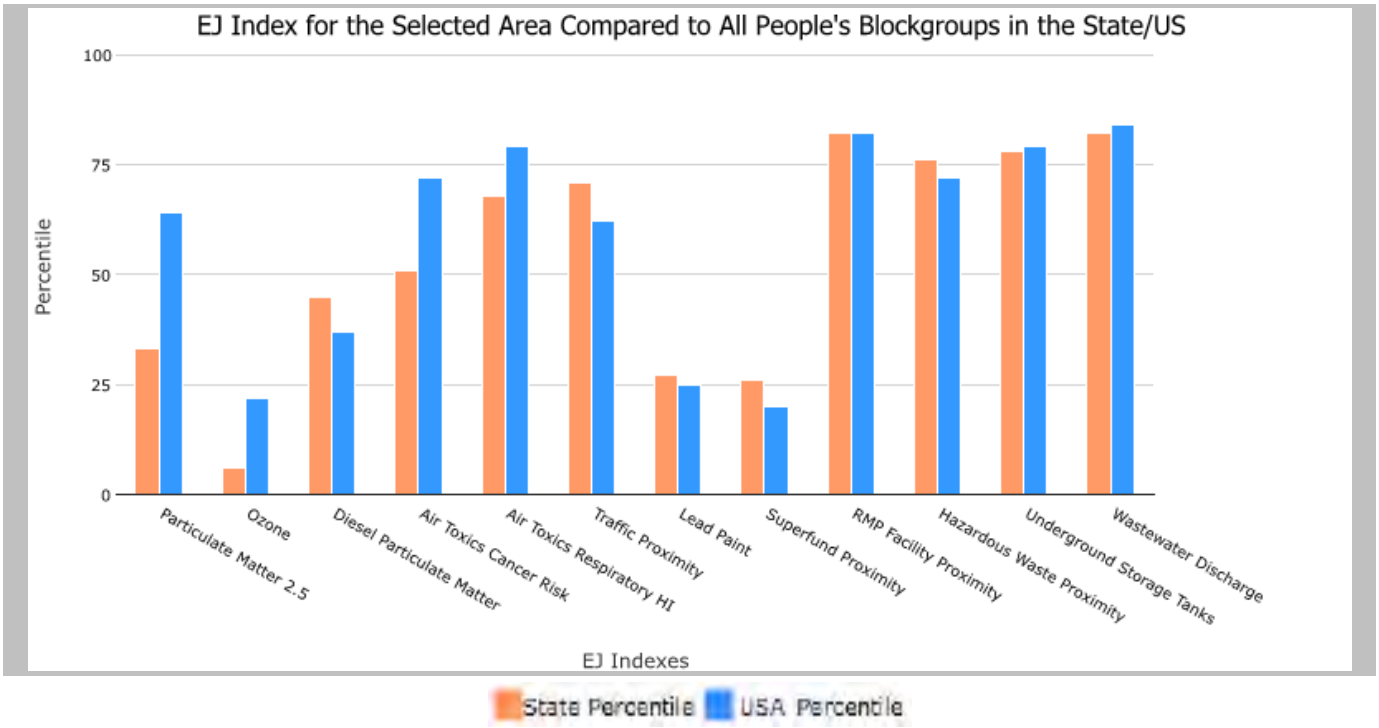
Approximate Population: 2,863

Input Area (sq. miles): 3.14

TROY LEAD AQS ID 01-109-0003

Selected Variables	State Percentile	USA Percentile
Environmental Justice Indexes		
Particulate Matter 2.5 EJ index	33	64
Ozone EJ index	6	22
Diesel Particulate Matter EJ index*	45	37
Air Toxics Cancer Risk EJ index*	51	72
Air Toxics Respiratory HI EJ index*	68	79
Traffic Proximity EJ index	71	62
Lead Paint EJ index	27	25
Superfund Proximity EJ index	26	20
RMP Facility Proximity EJ index	82	82
Hazardous Waste Proximity EJ index	76	72
Underground Storage Tanks EJ index	78	79
Wastewater Discharge EJ index	82	84

EJ Indexes - The EJ indexes help users screen for potential EJ concerns. To do this, the EJ index combines data on low income and people of color populations with a single environmental indicator.



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WARD, SUMTER CO.

NNE of Ward Post Office, Sumter County

AQS ID 01-119-0003

32.362606, -88.277992

MSA: N/A 44.8 m to County Rd. 16 / 10 Property Type: Agricultural (private)

NORTH

SOUTH

EAST

WEST

Parameter	Monitoring Objective/ Scale	Schedule	Start Date	AQS Method Code	Probe/Rain Shield Material	Probe Inlet Height from ground	Distance from probe to supporting structure	Distance from probe to nearest tree dripline	Height of nearest tree/ Direction from probe to tree
BAM-1022	General Background/ Regional	Continuous	01/01/2021	209	Inlet Head	5.0 m	2.0 m	22.2 m	17.4 m Southeast
Ozone			03/01/2013	087	Teflon	3.9 m	1.0 m	23.9 m	
SO2			01/04/2018	100		3.9 m	1.1 m	23.9 m	

This site meets all requirements of 40 CFR Part 58. Evaluation Date: 03-15-2023

EJScreen Report (Version 2.11)

1 mile Ring Centered at 32.362613,-88.277987, ALABAMA, EPA Region 4

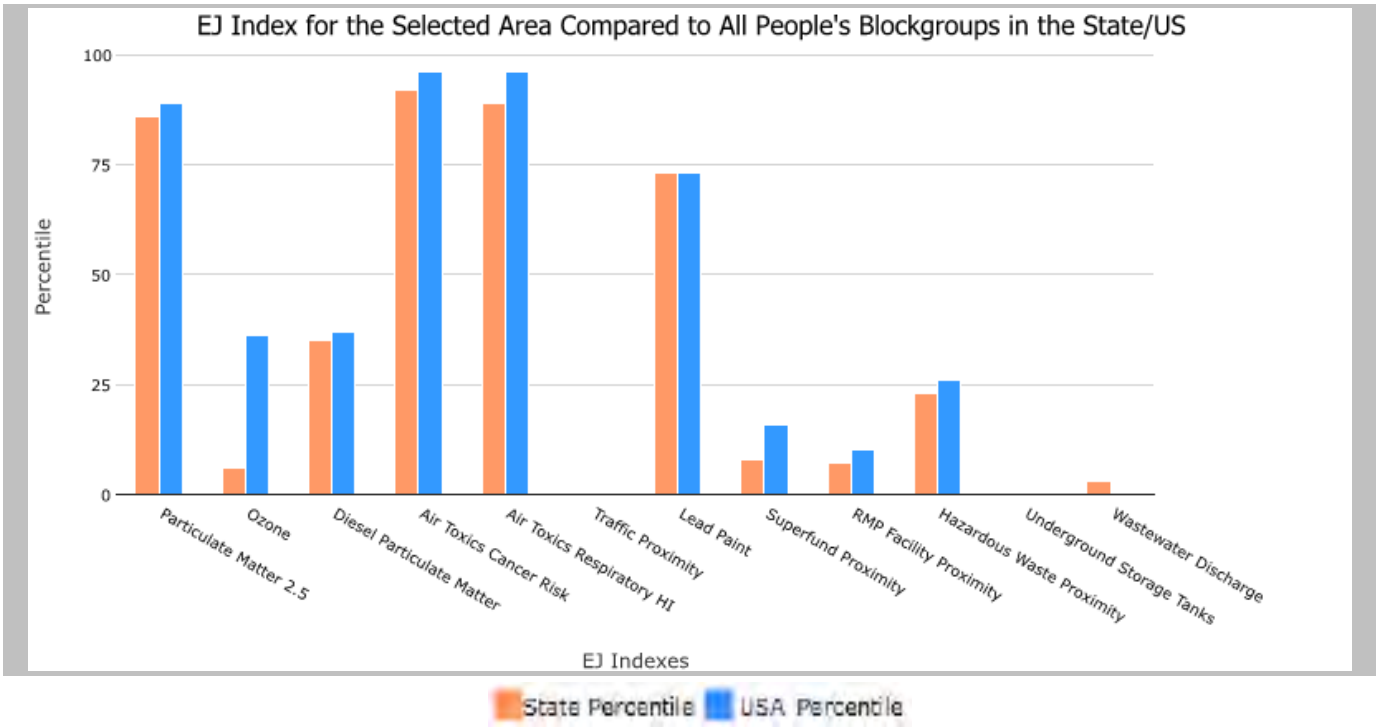
Approximate Population: 21

Input Area (sq. miles): 3.14

WARD, SUMTER CO. AQS ID 01-119-0003

Selected Variables	State Percentile	USA Percentile
Environmental Justice Indexes		
Particulate Matter 2.5 EJ index	86	89
Ozone EJ index	6	36
Diesel Particulate Matter EJ index*	35	37
Air Toxics Cancer Risk EJ index*	92	96
Air Toxics Respiratory HI EJ index*	89	96
Traffic Proximity EJ index	N/A	N/A
Lead Paint EJ index	73	73
Superfund Proximity EJ index	8	16
RMP Facility Proximity EJ index	7	10
Hazardous Waste Proximity EJ index	23	26
Underground Storage Tanks EJ index	0	0
Wastewater Discharge EJ index	3	0

EJ Indexes - The EJ indexes help users screen for potential EJ concerns. To do this, the EJ index combines data on low income and people of color populations with a single environmental indicator.



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WETUMPKA WESTSIDE TECHNOLOGY PARK

AQS ID 01-051-0004

3148 Elmore Road, Wetumpka, Elmore County

32.535680, -86.255193

MSA: Montgomery 56.08 m to Hwy 14

Property Type: Industrial (city)

N0RTH

SOUTH

EAST

WEST

Parameter	Monitoring Objective/ Scale	Schedule	Start Date	AQS Method Code	Probe/Rain Shield Material	Probe Inlet Height from ground	Distance from probe to supporting structure	Distance from probe to nearest tree dripline	Height of nearest tree/ Direction from probe to tree
Ozone	Highest Concentration/ Urban	Continuous	03/20/2018	087	Teflon / Teflon	4.0 m	1.4 m	21.6 m	5.6 m East

This site meets all requirements of 40 CFR Part 58.

Evaluation Date: 03/10/2023

EJScreen Report (Version 2.11)

1 mile Ring Centered at 32.535686,-86.255166, ALABAMA, EPA Region 4

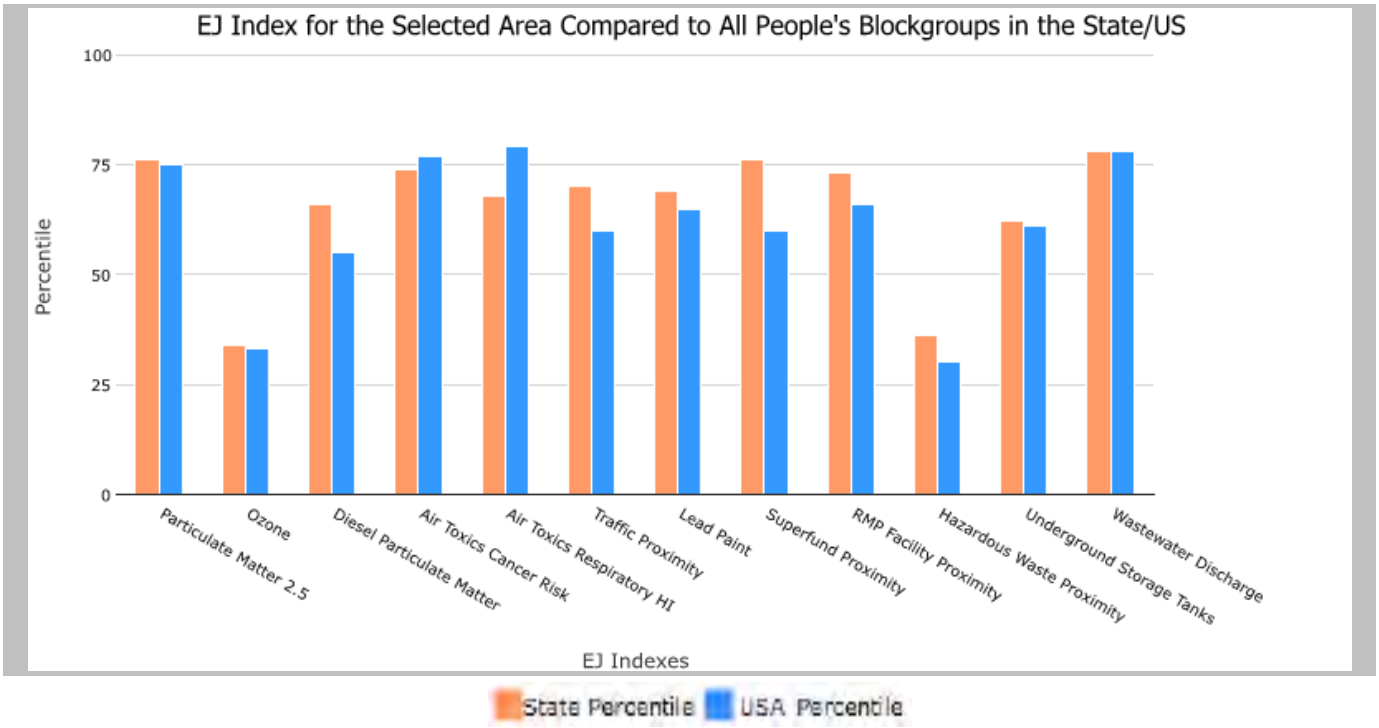
Approximate Population: 132

Input Area (sq. miles): 3.14

WETUMPKA WESTSIDE TECHNOLOGY PARK AQS ID 01-151-0004

Selected Variables	State Percentile	USA Percentile
Environmental Justice Indexes		
Particulate Matter 2.5 EJ index	76	75
Ozone EJ index	34	33
Diesel Particulate Matter EJ index*	66	55
Air Toxics Cancer Risk EJ index*	74	77
Air Toxics Respiratory HI EJ index*	68	79
Traffic Proximity EJ index	70	60
Lead Paint EJ index	69	65
Superfund Proximity EJ index	76	60
RMP Facility Proximity EJ index	73	66
Hazardous Waste Proximity EJ index	36	30
Underground Storage Tanks EJ index	62	61
Wastewater Discharge EJ index	78	78

EJ Indexes - The EJ indexes help users screen for potential EJ concerns. To do this, the EJ index combines data on low income and people of color populations with a single environmental indicator.



*Diesel particular matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPA's Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. Cancer risks and hazard indices from the Air Toxics Data Update are reported to one significant figure and any additional significant figures here are due to rounding. More information on the Air Toxics Data Update can be found at: https://www.epa.gov/haps/air-toxics-data-update.

Appendix B
DRR SO_2 Annual Report

The Alabama Department of Environmental Management (ADEM) submits this annual assessment pursuant to the United States Environmental Protection Agency's (EPA) Data Requirements Rule (DRR) for the 2010 1-hour Sulfur Dioxide (SO_2) Primary National Ambient Air Quality Standard (NAAQS). Specifically, Title 40 of the Code of Federal Regulation (CFR), Part 51.1205(b) states, "For any area where modeling of actual SO_2 emissions serve[s] 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…. that is available for public inspection, 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." This report satisfies this requirement.

Table B-1: Alabama SO_2 DRR Sources

Facility No.	Plant Name
201-0001	International Paper Company- Prattville Mill
414-0001	Alabama Power Company- Plant Gorgas
211-0003	Continental Carbon- Carbon Black plant

Continental Carbon- Carbon Black plant

Per the DRR Rule, any source which models using allowable/potential emissions and shows compliance with the 1-hour SO_2 NAAQS is not subject to the Annual Reporting process. In Alabama, this applies to Continental Carbon- Carbon Black plant (211-0003) in Russell County, Alabama. Further, as of 12/31/22, the Continental Carbon Plant in Phenix City, Alabama, ceased operation. Therefore, Continental Carbon will not be included in this or future reports.

Alabama Power Company- Plant Gorgas

As of April 2019, the Alabama Power Company- Plant Gorgas facility ceased operation. On 1/20/2023, EPA approved ADEM's termination request for Gorgas. As such, Gorgas will not be included in this or future reports.

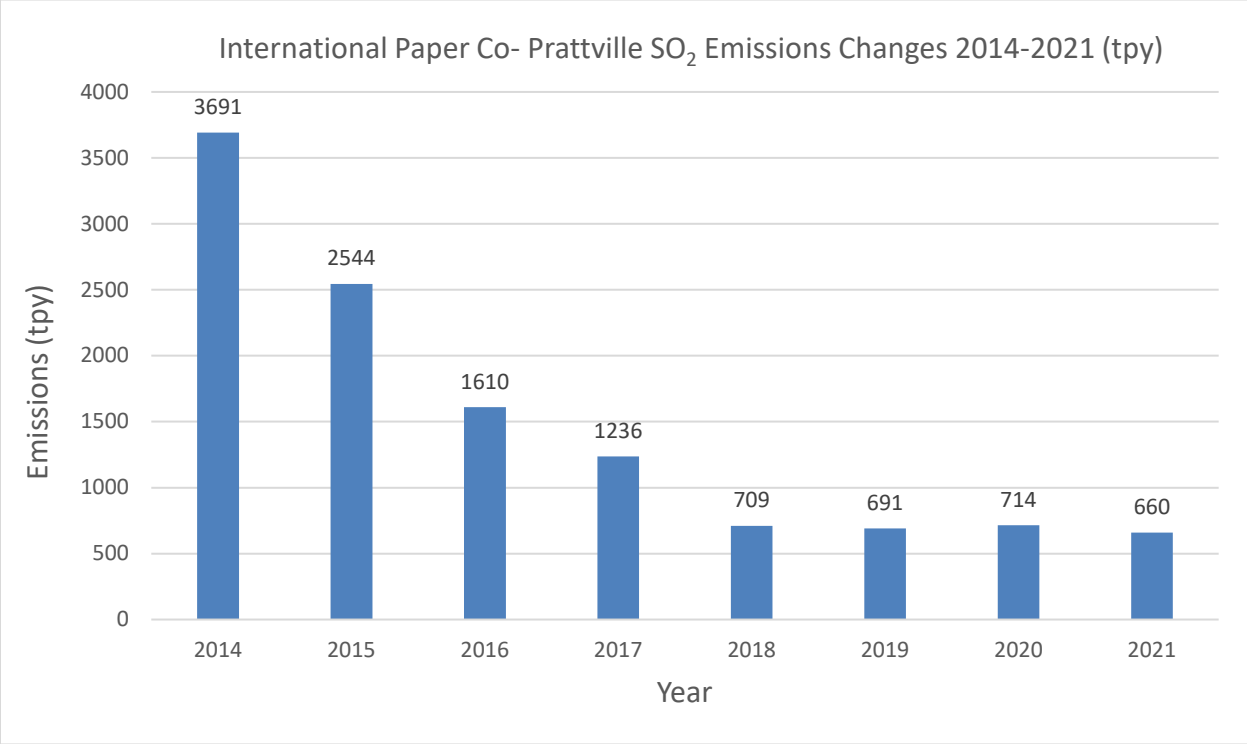
International Paper Company- Prattville Mill

For this review, actual emissions from the last eight Title V reporting periods were compared (2014-2021) to assess possible increases in SO_2 emissions. This data is presented both graphically and in table form below. (Table B-2 and Figure B-1, respectively). Between the base year of 2014 and 2021, the International Paper- Prattville facility showed a continued decrease in SO_2 emissions.

Table B-2: International Paper Co- Prattville Mill SO_2 Emissions (2014-2021)

Facility No.	Plant Name	Year	SO_2 Emissions (tpy)
201-0001	International Paper-Prattville Mill	2014	3691
		2015	2544
		2016	1610
		2017	1236
		2018	709
		2019	691
		2020	714
		2021	660

Figure B-1: International Paper- Prattville Mill SO_2 Emissions 2014- 2021



Based on the analysis of 2021 emissions compared to previous years emissions, which were the basis of the modeled emissions, it is reasonable to conclude that no additional modeling is necessary for International Paper- Prattville. The existing modeling was approved by EPA in its attainment/unclassifiable determination for Autauga County and can still be relied on to demonstrate that the 1-hour SO_2 NAAQS continues to be met in this area.

Appendix C
Comments

The following table contains changes made to the plan after the public comment period.

Page	Change
11	Added language about sample saver to Pb network.
63 & 64	Corrected reference for tables and figures in Appendix B
	Added link to SO2 modeling in Appendix D
49 & 50	Added missing site evaluation for Seals Park (AQS 01-097-8001)

ADEM received three sets of comments on the network plan. The submitted comments and responses are included in this section.

Curvin, Gina

From: Curvin, Gina
Sent: Thursday, June 8, 2023 7:54 AM
To: Gore, Ron; chris-rutherford@sanderslead.com
Subject: RE: Proposed Meeting at ADEM to discuss ambient air study at Sanders Lead Company

Yes we are still working the procurement and intend to install the sample saver device as discussed.

From: Gore, Ron <RWG@adem.alabama.gov>
Sent: Thursday, June 8, 2023 6:07 AM
To: chris-rutherford@sanderslead.com
Cc: Curvin, Gina <GCurvin@adem.alabama.gov>
Subject: RE: Proposed Meeting at ADEM to discuss ambient air study at Sanders Lead Company

Yes, but by copy of this email I am asking Gina to confirm.

From: chris-rutherford@sanderslead.com <chris-rutherford@sanderslead.com>
Sent: Wednesday, June 7, 2023 11:49 AM
To: Gore, Ron <RWG@adem.alabama.gov>
Subject: RE: Proposed Meeting at ADEM to discuss ambient air study at Sanders Lead Company

Good Morning Mr. Ron,

We were reviewing the recently issued 2023 ADEM Ambient Air Quality Plan and noticed that there was no mention of the Sample Saver Devices for the Troy Lead Station. Does ADEM still intend to install these devices on their ambient monitors?

Thank you,

Chris Rutherford, P.G. #73
Manager of Environmental Services
Sanders Lead Company
KW Plastics
P.O. Box 707
Troy, Alabama 36081
Phone: 334-566-1563
Cell: 334-372-2507
chris-rutherford@sanderslead.com

June 30, 2023

Ms. Gina Curvin, Chief
Ambient Air Quality Monitoring Program Manager
Field Operations Division – Montgomery Branch
Alabama Department of Environmental Management
1350 Coliseum Boulevard
Montgomery, Alabama 36110-2059
gcurvin@adem.alabama.gov

RE: Comments on ADEM's State of Alabama Ambient Air Monitoring 2023 Network Plan

Dear Ms. Curvin,

The Mobile Environmental Justice Action Coalition (MEJAC),[1] GASP,[2] and the Southern Environmental Law Center (SELC),[3] (collectively "Commenters") respectfully submit the following comments on the Alabama Department of Environmental Management's (ADEM's) State of Alabama Ambient Air Monitoring 2023 Network Plan (the 2023 Network Plan or Plan).[4] These comments discuss, among other issues, the need for a robust environmental justice analysis in the annual network plan, the need for additional monitoring in the Africatown community, and

[1] The Mobile Environmental Justice Action Coalition was formed in 2013 with the mission to engage and organize with Mobile's most threatened communities in order to defend the inalienable rights to clean air, water, soil, health, and safety and to take direct action when government fails to do so, ensuring community self-determination. *See* https://www.mejacoalition.org/about/.

[2] GASP is a non-profit health advocacy organization fighting for healthy air in Alabama. We strive to reduce air pollution through education and advocacy—because Alabamians deserve clean, healthy air. *See* http://www.gaspgroup.org.

[3] The Southern Environmental Law Center is a non-profit, regional environmental organization dedicated to protecting natural resources, preserving special places, and promoting vibrant communities throughout the Southern. *See* https://www.southernenvironment.org/.

[4] ADEM, State of Alabama Ambient Air Monitoring 2023 Network Plan (May 26, 2023) [hereinafter referred to as "2023 Network Plan"]. We also note that ADEM did not provide for a full 30 days for public comment. ADEM's public notice of availability of the 2023 Monitoring Plan stated: "Beginning June 01, 2023, the plan is available for public inspection electronically via this link [hyperlink removed]. Persons wishing to comment may do so, in writing, to the Department's named contact below within 30 days following the publication date of this notice. All comments must be received in the ADEM Office in Montgomery no later than 5:00 P.M. on the last day of the comment period, June 30, 2023." *See* Public Notice, *available at* https://adem.alabama.gov/newsEvents/notices/jun23/6ambient.html. Providing thirty full days of public comment would create a deadline of July 1, 2023, not June 30.

the need for permanent particulate matter monitoring in downtown Mobile. We look forward to reviewing ADEM's response to our comments.

I. Background

As Commenters have addressed numerous times over the years, ADEM has significantly reduced the number of ambient air monitors in its network over the past two decades.[5] This is despite the fact that Alabama's population has increased over 5% since 2010.[6] While ADEM does not propose a net loss of air monitors this year, we again emphasize that this network needs to expand, not shrink, in order to protect public health and appropriately analyze air quality across the State.

Commenters appreciate that, for the first time ever, ADEM included information from the Environmental Protection Agency's (EPA's) EJScreen tool in an attempt to categorize environmental justice (EJ) impacts and implications of this Network Plan. However, running an EJScreen report does not amount to an actual EJ analysis—this type of box-checking exercise is insufficient and does not demonstrate that ADEM actually analyzed EJ impacts of the network plan. Thus, Commenters ask that ADEM provide a substantive analysis of EJ impacts in the Final 2023 Network Plan.

Based on a substantive EJ analysis, it is clear that the historic Africatown community requires air monitoring and, importantly, community involvement in siting these air monitors. In order to comply with the Clean Air Act and Title VI of the Civil Rights Act of 1964, ADEM must provide air monitoring in Africatown because this community faces a disproportionate amount of air pollution from sources permitted by ADEM. ADEM should modify its Draft Network Plan to include additional monitors to continuously measure ozone, particulate matter, volatile organic compounds, sulfur dioxide, and hazardous air pollutants. As discussed below, we urge ADEM to work closely with EPA and the community in siting these monitors.

Additionally, Commenters recognize that ADEM is finally installing a PM_{10} monitor in downtown Mobile. Commenters have been encouraging ADEM to do this for years and appreciate that this is a step in the right direction. However, as detailed below, we advocate for this monitor to become a permanent monitor and for ADEM to expand the number of pollutants analyzed in Mobile.

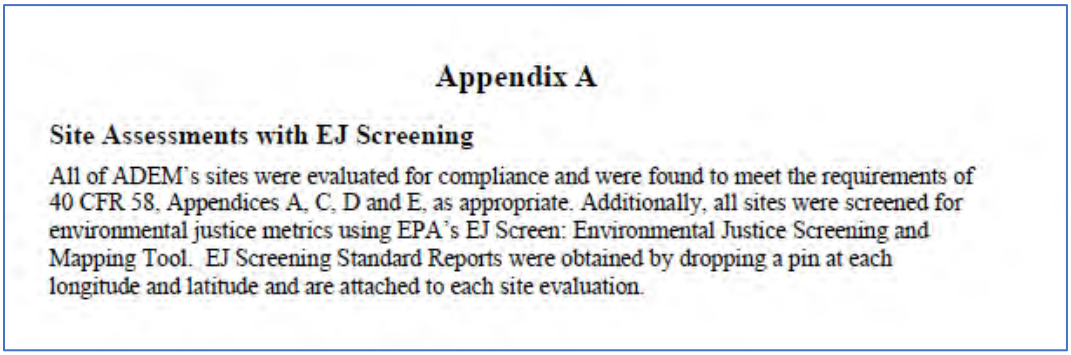
[5] Since 2010, the number of statewide active $PM_{2.5}$ monitoring sites has been cut in half, from 30 monitoring sites in 2010 to only 15 in 2021. ADEM removed PM2.5 monitors from Florence and Dothan in 2011; Pelham in 2015; Childersburg in 2017; Gadsden and Tuscaloosa in 2018; and Dothan and Muscle Shoals in 2019. *See* ADEM, State of Alabama Ambient Air Monitoring Plans for the Years 2012-2020.

[6] U.S. Census Bureau, *Alabama Population Grew 5.1% Since 2010, Surpassing 5 Million* (Aug. 25, 2021), https://www.census.gov/library/stories/state-by-state/alabama-population-change-between-census-decade.html.

II. ADEM should undertake a more sufficient and meaningful consideration of environmental justice impacts in developing the 2023 Network Monitoring Plan.

"Environmental justice" is defined as "the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies."[7] Discrimination by a recipient of federal funds, including ADEM, is prohibited by Title VI of the Civil Rights of 1964. Title VI of the Civil Rights Act of 1964 prohibits the use of federal funds by recipients that discriminate on the basis of race, color or national origin. As a recipient of federal funds for programs delegated to it by the EPA, ADEM has a legal duty to protect civil rights.[8]

In order to fulfill that duty and ensure compliance with its obligations under Title VI, as well as address environmental justice generally as requested in this comment, ADEM must conduct a meaningful analysis of EJ communities in developing its 2023 Network Plan. Instead, ADEM has provided only the following:[9]



Appendix A

Site Assessments with EJ Screening

All of ADEM's sites were evaluated for compliance and were found to meet the requirements of 40 CFR 58, Appendices A, C, D and E, as appropriate. Additionally, all sites were screened for environmental justice metrics using EPA's EJ Screen: Environmental Justice Screening and Mapping Tool. EJ Screening Standard Reports were obtained by dropping a pin at each longitude and latitude and are attached to each site evaluation.

In the rest of Appendix A, ADEM's EJ information consists of providing only the first page of the EJScreen Report for the 1-mile radius around most of the monitoring sites.[10] As an initial matter, ADEM failed to provide *any* EJ information for the new Seals Park PM_{10} monitoring site in downtown Mobile[11]—monitors that we previously urged ADEM to install to order to address the

[7] EPA, *Environmental Justice*, www.epa.gov/environmentaljustice.
[8] *See, e.g., In the Matter of United States Steel Corporation - Granite City Works*, Order on Petition No. V-2011-02 (Dec. 3, 2012), at 6 (noting that "focused attention to the adequacy of monitoring and other compliance assurance provisions is warranted" when the area around a permitted source "is home to a high density of low-income and minority populations and a concentration of industrial activity, and thus raises potential environmental justice concerns."); EPA, *EJ in Air Permitting – Principles for Addressing Environmental Justice Concerns in Air Permitting* (December 2022) ("*EJ in Air Permitting*"), *available at* https://www.epa.gov/system/files/documents/2022-12/Attachment%20, at 4 (noting that "if initial screening indicates that the permitting action will have a disproportionate effect on the basis of race, color, or national origin…then it may be necessary to conduct an analysis of disparate impacts under federal non-discrimination laws, including Title VI").
[9] 2023 Network Plan at 28, Appendix A.
[10] *See generally id.* at 29-63.
[11] *Id.* at 55 (showing only page on Seals Park, which does not include any EJScreen Data).

potential health impacts on and concerns of the surrounding community.[12] ADEM also failed to summarize the findings of or provide any additional analysis of the information provided in the EJScreen Reports, or even to include the pages of EJScreen that provide meaningful demographic information about the community surrounding these monitors. If ADEM had analyzed and attached the full EJScreen report for a 1-mile radius around the new Seals Park monitoring site, it would show that this site is located in an EJ community with an overall EJ demographic index in the 78th percentile in the state, composed of 69% people of color and 48% people with low incomes.[13]

However, even if ADEM had provided complete EJScreen information for each monitoring site in the 2023 Network Plan, it would not amount to a meaningful consideration of the EJ impacts of this Plan or ensure compliance with its obligations under Title VI. Documenting the demographics and proximity of residents to a monitoring site with the use of the EPA's EJScreen in the Plan is insufficient, alone, to ensuring environmental justice and civil rights protections in ADEM's development of the 2023 Network Plan. According to EPA: "EJScreen provides EPA with a nationally consistent dataset and approach for combining and comparing environmental and demographic indicators. It is a useful *first step* in understanding environmental justice concerns that communities face."[14] ADEM's approach of simply attaching EPA EJScreen reports is tantamount to the "checking the box" approach on environmental justice (as well as protection of civil rights) that has already been condemned by the Fourth Circuit Court of Appeals.[15] ADEM must look at the information provided in the EJ Screen reports—as well as EJ information regarding communities throughout the state—and determine whether additional actions are needed in the 2023 Network Plan to address EJ concerns.

We note that other agencies developing air monitoring plans have provided more meaningful consideration of EJ issues in their planning efforts. For example, in developing its 2023 Ambient Air Monitoring Plan, the Georgia Department of Natural Resources assessed the key health and demographic indicators of cancer risk, minority population, low income, high population of children under the age of 5, and high population of adults over the age of 65 and displayed those concentrations in communities throughout the state.[16] It then "zoomed in [on] each of the five largest MSAs in Georgia," noted the location of ambient air monitors within those areas, and analyzed the placement of those monitors against the health and demographic information it had collected to determine whether monitors were sited in areas with populations of concern.[17]

[12] *See* Letter from Christina Andreen Tidwell (SELC) and Haley Lewis (GASP) to Gina Curvin (ADEM), Comments on 21/22 Network Plan (June 15, 2021), at 4-6.
[13] Attachment A, EJScreen Community Report, 1 mile Ring Centered at 30.679487,-88.046558, at 3.
[14] EPA Objection to Suncor Energy, Inc. Plant 2 Title V Operating Permit (March 25, 2022) at PDF 7 (emphasis added), *available at* https://www.epa.gov/system/files/documents/2022-03/epa-suncor-plant-2-title-v-objection-letter-2022-03-25.pdf ("*Suncor Objection*").
[15] *Friends of Buckingham v. State Air Pollution Control Bd.*, 947 F.3d 68, 92 (4th Cir. 2020).
[16] *See generally* Attachment B, Georgia Department of Natural Resources, Environmental Protection Division, 2023 Ambient Air Monitoring Plan, at 22 – 32, *available at* https://airgeorgia.org/docs/2023%20Ambient%20Air%20Monitoring%20Plan.pdf.
[17] *Id.* at 22.

And within Alabama, the Jefferson County Department of Health (JCDH) assessed the potential environmental justice impacts of its 2023 Annual Ambient Air Monitoring Network Plan and found that "all monitors in this Ambient Air Monitoring Network Plan operate and monitor in areas that can be categorized as EJ areas."[18] While JCDH "did not identify any new monitoring needs as it relates to EJ in Jefferson County," it noted that it had approved funding to install low-cost air pollution sensors at schools in the County and was exploring "utilization of portable monitoring equipment" to address air pollution concerns at schools and in EJ areas.[19] While these efforts may not fulfill all goals for considering EJ in the monitoring network review process, such as meaningful involvement of EJ communities themselves in the air monitoring process, the examples noted above go beyond the rudimentary EJ analysis provided by ADEM.

Before finalizing the 2023 Network Plan, ADEM must undertake meaningful consideration of the air monitoring needs of EJ communities, such as assessing whether the Plan contains adequate air monitoring in communities of concern and if not, exploring options for changing the Plan or undertaking additional efforts to provide such monitoring in the near future, as suggested in our additional comments below. ADEM has policies in place and discretion to meaningfully focus attention on the adequacy of monitoring in EJ communities in the state.[20] At a minimum, ADEM should engage its existing Community Engagement program to hold public meetings throughout EJ communities in the state to determine their air pollution concerns and discuss options for monitoring ambient air pollution in EJ communities to address those concerns.

III. ADEM should modify its draft Network Plan to expand monitoring of air pollution in the Africatown community.

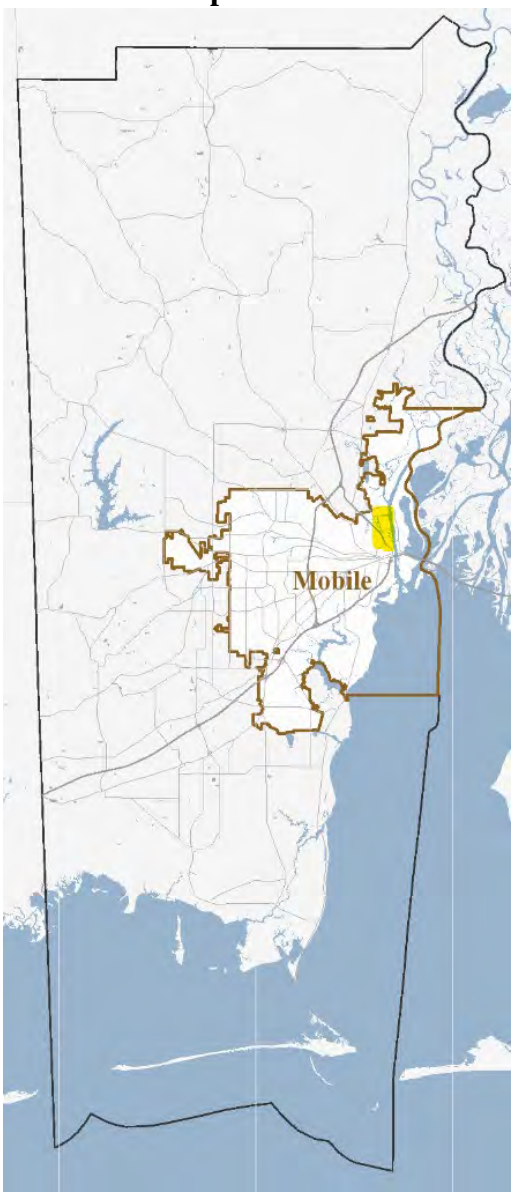
Not all parts of Alabama are equally impacted by air pollution, with communities of color being disproportionately impacted by air pollution. These communities need additional air monitoring to ensure compliance with the Clean Air Act and civil rights protections. Commenters request that ADEM modify its draft Network Plan to include additional monitors to continuously measure ozone, particulate matter (PM), including $PM_{2.5}$, and PM_{10}, volatile organic compounds (VOCs), sulfur dioxide (SO_2), and hazardous air pollutants to be sited in the Africatown environmental justice community in Mobile. There is no question that this community faces disproportionate levels of air pollution and resulting negative health effects.

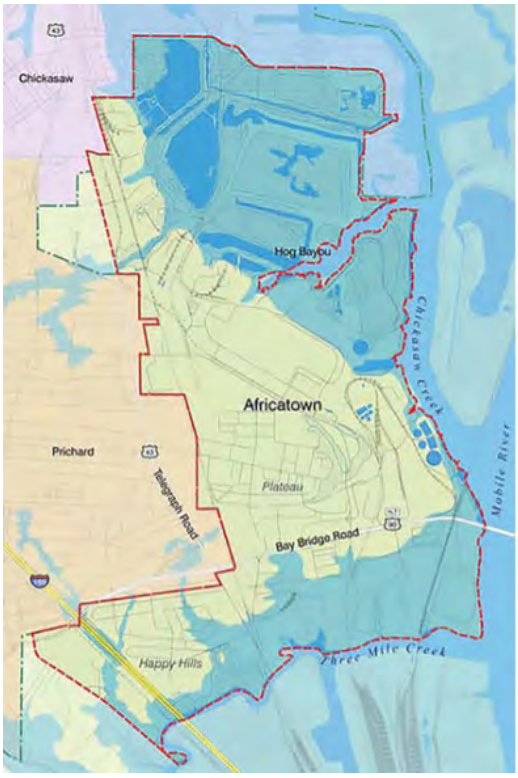
The boundaries of the City of Mobile within Mobile County are shown in the larger map below, with the general location of Africatown identified in yellow and provided in detail in the map to the right. The City of Mobile's Africatown Planning area was established in the 2016 Africatown Neighborhood plan, is codified in the City of Mobile's Code of Ordinances § 64-11-

[18] *See* Attachment C, Jefferson County Department of Health, 2023 Annual Ambient Air Monitoring Network Plan, at 2 *available at* https://www.jcdh.org/SitePages/Misc/PdfViewer?AdminUploadId=3608.
[19] *Id.*
[20] *See generally* ADEM Community Engagement (Aug. 2022), *available at* http://www.adem.alabama.gov/MoreInfo/pubs/ADEMCommunityEngagement.pdf.

1, and includes the Africatown Historic District, as recognized by the National Park Service National Register of Historic Places.[21]

Figures 1 and 2: Maps of Mobile and Africatown





The City of Mobile, Alabama is home to almost 190,000 people, and according to information provided from EPA's EJScreen database has a population that is majority minority,

[21] Build Mobile, Africatown Neighborhood Plan, *available at* https://www.buildmobile.org/uploads/africatownneighborhoodplanfinaldraft.pdf; Nat'l Archives Catalog, National Register of Historic Places Registration Form (Oct. 19, 2012), *available at* https://catalog.archives.gov/id/77837063.

with 57% of residents identifying as people of color and 51% of residents identifying as Black.[22] And those numbers are even higher in the Africatown neighborhood, with EJScreen reporting 63% of the residents identifying as people of color and 58% identifying as Black.[23] Both Mobile as a whole and Africatown specifically are comprised of minority residents at a significantly higher rate than Mobile County as a whole, in which only 43% of residents identify as people of color and 36% identify as Black.[24]

This concentrated racial demographic shift is even more apparent when you look at the communities directly impacted by the sources that decided to locate in the Africatown neighborhood. For example, the EJScreen information provided by ADEM during the recent permitting of five of the more than forty stationary sources in Africatown is summarized below and shows that the percent of community members within 3 miles of each source identifying as people of color is greater than 69% at all sources:

Table 1: Summary of EJScreen Demographic Information for Recently Permitted Sources

Source	EJScreen Radius	Demographic Index – % of Population and State Percentile		People of Color – % of Population and State Percentile	
AL Bulk Terminal[25]	3 Miles	63	85	69	84
AL Shipyard[26]	3 Miles	63	86	74	85
Kimberly-Clark[27]	3 Miles	75	93	87	91
Plains Marketing[28]	3 Miles	75	93	88	91
UOP[29]	3 Miles	74	89	83	86

[22] *See* Attachment D, at 2, EJScreen Report for Mobile, Alabama, and EJScreen ACS Summary Report for the City of Mobile, Alabama, at 6-8.
[23] *See* Attachment D, at 9, EJScreen Report for Africatown, and EJScreen ACS Summary Report for Africatown, at 13-15.
[24] *See* Attachment D, at 16, EJScreen Report for Mobile County, Alabama, and EJScreen ACS Summary Report for Mobile County, Alabama, at 20-22.
[25] ADEM Statement of Basis, AL Bulk Terminal, *available at* https://mosaiceps.epa.gov/sites/default/files/FRU/A973035B_4_00 (09-15-2022).pdf.
[26] ADEM Statement of Basis, AL Shipyard, *available at* https://mosaiceps.epa.gov/sites/default/files/FRU/A976001B_4_00 09-22-2022.pdf.
[27] ADEM Statement of Basis, Kimberly Clark, *available at* https://mosaiceps.epa.gov/sites/default/files/FRU/A972012B_3_00 (9.2022).pdf.
[28] ADEM Statement of Basis, Plains Marketing, *available at* https://mosaiceps.epa.gov/sites/default/files/FRU/A973013B_4_00 (09-15-2022).pdf.
[29] Attachment E, EJScreen Report at 3 Miles around UOP Facility. ADEM did not provide any EJ information with either the draft or final UOP Permit.

It is also important to note the overall demographic index of the communities around these emitting sources, which considers both the low-income and minority make-up of a community.[30] As noted on the EJScreen summary above, the community in which these sources decided to construct and emit air pollutants are in the top 15% of disadvantaged communities in the State.

In addition to monitoring for criteria pollutant emissions in Africatown, we ask that ADEM also set up monitors for hazardous air pollutants (HAPs), consulting with EPA and the community on which HAPs to monitor. In a 2019 EPA study, Alabama ranked fifth out of all the states in most toxic substances released into the air, and Mobile County had the highest amount of reported toxic releases of all the counties in the state.[31] EPA's EJScreen Reports for these communities show that the cumulative health effects of the numerous sources emitting air pollution in and around Africatown lead them to exhibit health impact data among the highest in the state. Based on the EJScreen information provided below, residents of Africatown experience the highest air toxics cancer risk in the Alabama (99th percentile) and the United States (95-100th percentile), as well as extreme high levels of air respiratory hazards.[32]

Table 2: EJScreen Report Excerpt

Africatown

Selected Variables	Value	State Avg.	%ile in State	USA Avg.	%ile in USA
Pollution and Sources					
Particulate Matter 2.5 ($\mu g/m^3$)	9.01	8.92	57	8.67	62
Ozone (ppb)	37.6	39	36	42.5	19
Diesel Particulate Matter* ($\mu g/m^3$)	0.436	0.223	90	0.294	80-90th
Air Toxics Cancer Risk* (lifetime risk per million)	40	35	99	28	95-100th
Air Toxics Respiratory HI*	0.55	0.47	95	0.36	95-100th
Traffic Proximity (daily traffic count/distance to road)	2100	290	97	760	91
Lead Paint (% Pre-1960 Housing)	0.65	0.17	94	0.27	82
Superfund Proximity (site count/km distance)	0.048	0.051	68	0.13	42
RMP Facility Proximity (facility count/km distance)	2.7	0.46	97	0.77	94
Hazardous Waste Proximity (facility count/km distance)	3.5	0.9	96	2.2	81
Underground Storage Tanks (count/km^2)	0.64	1.9	49	3.9	42
Wastewater Discharge (toxicity-weighted concentration/m distance)	1.5	0.36	97	12	94

Moreover, in addition to the emissions from stationary sources, mobile source emissions also impact the community. Because the I-10/AL-90 Hazardous Cargo Bypass bisects the residential neighborhood at grade, vehicle pollution from semi-trucks hauling hazardous materials and petroleum products to the industrial plants and more than nine petroleum and chemical

[30] *See* EJScreen Map Descriptions, a*vailable at* https://www.epa.gov/ejscreen/ejscreen-map-descriptions.
[31] *See* Dennis Pillion, *Alabama Ranks 5th for Industrial Toxic Releases in Air and Water*, AL.COM (Mar. 24, 2019), https://www.al.com/news/2019/03/alabama-ranks-5th-for-industrial-toxic-releases-in-air-and-water.html.
[32] *See* Attachment D, at 9, EJScreen Report for Africatown.

terminal facilities located in and adjacent to the Africatown remain an additional exposure risk.[33] Furthermore, the plethora and increasing number of new heavy duty truck storage, parking, drayage, and port logistics warehouses and facilities in and near Africatown means air pollution in the community continues to worsen from the increased pollution from trucks and fugitive road emissions as goods are transported to-and-from the warehouses associated with the Port of Mobile. Five Class 1 also railroads run through Mobile, with four of those railways and related operations in the City of Mobile's Africatown Planning Area. Together these additional polluting sources create a cumulative burden on the community that magnifies the adverse impacts of the air contaminants identified above.

Commenters have identified more than forty sources that are located in or adjacent to the Africatown community, emitting a variety of pollutants that impact the health of this community's residents and environment. However, the exact nature of air quality in this area is currently unknowable given the overall lack of information about the mix and quantity of criteria and hazardous air pollutants emitted from these sources and the lack of meaningful monitoring in the area. Nevertheless, as discussed above, the cumulative impact of emissions from these sources is tremendous given the number of sources, the types of operations, the myriad of issues with the unenforceability of ADEM's permit provisos,[34] and the failure of ADEM to aggressively enforce its permits and levy penalties that deter future violations. Moreover, the diesel emissions from trucks traveling to and from these sources further exacerbates air quality for the community.[35] The table of those sources provided below is subdivided into seven subsections as follows:

- Section I of the table are the major sources.
- Section II identifies the H.O. Weaver and Sons Inc. asphalt plant, which is a priority source of concern. Emissions from this source continue to adversely impact the surrounding Africatown environmental justice community.[36]
- Section III list sources for which ADEM has issued synthetic minor permits.

[33] Union of Concerned Scientists, *Cars, Trucks, Buses and Air Pollution* (Updated July 19, 2018), https://www.ucsusa.org/resources/cars-trucks-buses-and-air-pollution#:~:text=Cars%2C%20trucks%20and%20buses%20produce,vehicle%20operation%20and%20fuel%20production.&text=Primary%20pollution%20is%20emitted%20directly,between%20pollutants%20in%20the%20atmosphere (last visited June 29, 2023).

[34] Commenters have several actions challenging ADEM's permit issuance pending before EPA, *see e.g.*, MEJAC and GASP Complaint Under Title VI of the Civil Rights Act of 1964, 42 U.S.C. §2000d, 40 C.F.R. Part 7 (May 8, 2023), *available at* https://www.epa.gov/system/files/documents/2023-05/08R-23-R4%20Complaint_Redacted.pdf; *see also* Complete Petition to Object to the Issuance of Five Title V Permits by the Alabama Department of Environmental Management (Jan. 9, 2023), https://www.epa.gov/system/files/documents/2023-01/Alabama%20Facilities%20Petition%20%28GASP%29_1-09-23.pdf.

[35] In recent years the community has seen a tremendous increase in warehouse facilities serving the Mobile Port, increasing truck and diesel emissions.

[36] Attachment F, Letter from Ramsey Sprague, President, Mobile Environmental Justice Action Coalition, and Michael Hansen, Executive Director, GASP, to Ron Gore, ADEM, "ADEM's Proposed Consent Order for Hosea O. Weaver & Sons, Inc., Mobile County, Alabama, for two violations of failure to control particulate emissions from the baghouse stack and one violation of failure to report the test results, Air Permit No. 503-8069-X001," (June 9, 2023);" *see also* Attachment G, ADEM's Response to Comments H. O. Weaver & Sons, Inc. Consent Order, Facility No. 503-8069 (June 27, 2023).

- Section IV contains one source that ADEM determined did not need a permit under the Clean Air Act. However, since ADEM's supporting documentation is not in its eFile system, we cannot evaluate the veracity of ADEM's determination.
- Section V contains twenty-one additional sources that operate in the community, and ADEM's eFile system contains no information about their pollution levels or whether they have been assessed for an air permit.
- Section VI identifies two additional sources that may be closed or may be used by Hosea O. Weaver & Sons Inc. as a satellite location for its operations.
- Section VII lists two sources that are closed, and yet still need to be assessed for air pollutant emissions.
- Finally, Section VIII identifies a total of eight bulk terminal sources that while not "in" the Africatown neighborhood, clearly impact the neighborhood due to proximity.

These tables do not include estimates of pollutants and emissions from these sources, given the lack of information in eFile. In addition, the fact that ADEM's permits primarily allow the sources to use emission factors, which are not based on actual emissions, means that any such numbers, if provided, would not represent the actual emissions that are emitted.

Table 3. Sources Currently Operating in and Adjacent to the Africatown Environmental Justice Community

	Source Name	ADEM Facility Number	Description of Source	Address
	I. Major Sources			
1	**Canfor Corporation**	503-2003[37]	Lumber and milling treatment	1805 Conception Street, Mobile, AL 36610
2	**Kimberly-Clark Corporation[38]**	503-2012[39]	Paper mill and natural gas power plant.	200 Bay Bridge Road, Mobile, AL 36610
3	**Mobile Energy LLC / Hog Bayou Energy Center**	503-8066[40]	Natural gas power plant	1003 Paper Mill Rd, Mobile, AL 36610

[37] Title V permit, http://lf.adem.alabama.gov/WebLink/DocView.aspx?id=104402508&dbid=0&cr=1.
[38] *See* Kimberly Clark Corporation assumed ownership of equipment and property as of May 1, 2019, See Letter from Stephen Earhart, Vice President, DTE Energy Services, Onsite Energy, to Tyler Phillips, ADEM (May 2, 2018), http://lf.adem.alabama.gov/WebLink/DocView.aspx?id=30042545&dbid=0. Operations at the source ended on April 17, 2019, *see* E-mail from Tyler Phillips, Senior Engineering Specialist, ADEM to Scott Klipa, Environmental Supervisor, DTE Energy Resources (May 16, 2019), http://lf.adem.alabama.gov/WebLink/DocView.aspx?id=30042546&dbid=0.
[39] Title V Permit, http://lf.adem.alabama.gov/WebLink/DocView.aspx?id=29966483&dbid=0.
[40] Title V Permit, http://lf.adem.alabama.gov/WebLink/DocView.aspx?id=104896733&dbid=0.

4	**Occidental Chemical Corporation**	503-5003[41]	Petrochemical refinery	1300 Jarvis Dr, Mobile, AL 36611
5	**Plains Marketing, L.P. – Mobile Terminal**	503-3013[42]	Above ground petrochemical storage tank farm – connected to Plains Southcap oil transmission pipeline	1871 Hess Road, Mobile, AL 36610
6	**UOP LLC**	503-8010[43]	Chemical manufacturing	1 Linde Dr, Mobile, AL 36611
	II. Priority Source of Concern			
1	**H.O. Weaver & Sons, Inc.**	503-8069-X001[44]	Asphalt plant, with operations at other locations	1908 Bay Bridge Cutoff Road, Mobile, AL 36610
	III. Sources for Which ADEM Has Determined Are Synthetic Minor and Issued Synthetic Minor Permits			
1	**Berg Spiral Pipe Corp**	503-0099-X001,[45] 503-0099-X002[46]	Pipeline manufacturer	900 Paper Mill Rd, Mobile, AL 36610
2	**Cemex Prichard Cement Terminal**	503-8051[47]	Bulk dry concrete mix distribution terminal	126 Telegraph Rd, Prichard, AL 36610

[41] The permits are not available to the public in ADEM's eFile. According to ADEM's most recent inspection on March 8, 2023, ADEM treats this source a "true minor source" and has three separate permits. Z001 (Materials Handling Systems with one Baghouse (54 TPY)); X002 (Sodium Silicate Furnace with Heat Recovery Unit); Z003 (Glass Dissolvers with Wet Scrubber). Three additional permits were voided on April 6, 2022. There are also numerous unpermitted units. *See*, Memorandum from James Adams to Samantha Sips (Mar. 15, 2023), http://lf.adem.alabama.gov/WebLink/DocView.aspx?id=105105229&dbid=0. Additionally, there is a pending application for a new baghouse sodium silicate plant, which according to eFile ADEM has not acted on. *See* Letter from Andrew Coxe, Plant Manager, OxyChem to James Adams, ADEM (Jan. 1, 2021), http://lf.adem.alabama.gov/WebLink/DocView.aspx?id=104458686&dbid=0.

[42] Title V permit, http://lf.adem.alabama.gov/WebLink/DocView.aspx?id=104928413&dbid=0.

[43] Title V Permit, http://lf.adem.alabama.gov/WebLink/DocView.aspx?id=104455621&dbid=0.

[44] This Source's Permit is not available in ADEM's eFile, however, it was provided to MEJAC via email.

[45] SMOP 503-0099-X001 (Four Shot Blast Booths with Baghouses, Two Blow Out Units with Baghouses and Two Heaters).

[46] *See* 503-0099-X002 (Two FBW OD Paint Booths with Baghouses One ID Paint Booth with Regenerative Thermal Oxidixer (RTO) Control Device (issued Aug. 26, 2008), *see* application, http://lf.adem.alabama.gov/WebLink/DocView.aspx?id=31529591&dbid=0.

[47] Construction permits are not available in ADEM's eFile. *See e.g.*, ADEM Inspection Memorandum (March 21, 2022) (Memorandum explains that the source is permitted under a SMOP with two permits, X003 (90 TPY Cement Railcar and Truck Unloading Process with Silo and Baghouse, and X004 (300 TPY Cement Loading Process with Silo and Baghouse), neither permits are in ADEM's eFile.

3	**Kemira Water Solutions**	503-5007[48]	Chemical manufacturer	1 Cyanamid Road, Mobile, AL 36610
	IV. Sources ADEM Determined Do Not Need An Air Permit			
1	**DPC Enterprises LP**	ADEM Master ID 4051[49]	Hazardous chemical distribution and repackaging of chlorine and sulfur dioxide.[50]	1200 Jarvis Rd, Chickasaw, AL 36611
	V. No Information on Air Permits in ADEM's eFile for These Sources			
1	**ARCO Design/Build - BTS, Inc. (formerly, FSI Railcar Service Center)**		Painting railroad equipment.	1120 Paper Mill Rd, Mobile, AL 36610
2	**B & B Industrial Supply**		Pipe supplier, fittings and valves.[51]	1855 Telegraph Road
3	**Central Machine Works**		Industrial and commercial machinery and equipment	55 Grover Ave, Mobile, AL 36610
4	**Gulf Coast Marine Supply Co.**		Marine and construction tool and equipment warehouse.[52]	501 Stimrad Rd, Mobile, AL 36610
5	**Gulf Winds International**		Diesel truck lay down yard and parking lot.[53]	1308 Woodland Ave, Mobile, AL 36610

[48] *See e.g.*, Permit No. 503-5007-X022 (Emergency Generators and Emergency Fire Pump), http://lf.adem.alabama.gov/WebLink/DocView.aspx?id=104406251&dbid=0; *see also* X001 (Specialty Chemicals Unit), X004 (Pilot Plant), X005 (Two Natural-Gas Fired 20.4 MMBTU/hr Boilers).

[49] ADEM gave the source a non-applicability letter, *see* Telephone Memorandum to File (Nov. 19, 2020), regarding choline release. http://lf.adem.alabama.gov/WebLink/DocView.aspx?id=104441568&dbid=0. Letter from the Company to ADEM regarding the release (Dec. 10, 2020), http://lf.adem.alabama.gov/WebLink/DocView.aspx?id=104441569&dbid=0. The site inspection report indicates the "process is a closed loop system and any residual emissions from the cylinders are routed to the three scrubbers on site. The facility monitors the caustic levels of the scrubbers through a daily titration." Memorandum from Stephanie Childress to Samantha Sims (Feb. 4, 2021), http://lf.adem.alabama.gov/WebLink/DocView.aspx?id=104460918&dbid=0. A search in ADEM's eFile for "Jones Chemical" found no source and no documents. ADEM's non-applicability determination letter is not in ADEM's eFile.

[50] Chlorine and sulfur dioxide, which are shipped to the site by railcars, which are unloaded into containers and then loaded into 150 lb cylinders. *See* ADEM site inspection following chlorine release, (Feb. 4. 2021), http://lf.adem.alabama.gov/WebLink/DocView.aspx?id=104460918&dbid=0.

[51] *See* B&B Industrial Supply, https://bnbsupply.net/ (last visited June 30, 2023).

[52] *See* Gulf Coast Marine Supply, gulfcoastmarine.com (last visited June 30, 2023).

[53] *See* Gulf Winds, https://www.gwii.com/locations/mobile/ (last visited June 30, 2023).

6	**Harcros Chemicals Inc**		Hazardous chemical distribution and repackaging.[54]	1480 Telegraph Road
7	**Jones Welding Company, Inc**	ADEM Master ID 39476	Metal fabrication warehouse.	1926 Telegraph Road
8	**Jordan Pile Driving**		Three Mile Creek-accessible marina and dock, as well as machine and parts yard for a pile driving company that makes foundations for brides, piers, buildings, cofferdams, etc.	Cut-Off Road, Mobile, AL
9	**Metals USA**	ADEM Master ID 19572, 6691	Metal fabrication warehouse.[55]	1251 Woodland Ave., Mobile, AL 36610
10	**Merchants Transfer Company**	ADEM Master ID 42171, 53008, 23497.	Storage and logistics warehouse system.[56]	1201 Papermill Road, 1200 Papermill Road, 701 N Joachim St, Mobile
11	**Miller Transporters Inc**		Diesel truck chemical container cleaning service center, storage facility, and machine shop.[57]	206 Telegraph Rd, Prichard, AL
12	**Mobile Area Water & Sewer System (MAWSS)**		Municipal wastewater sewage treatment facility.[58]	
13	**Mobile Bay Firewood**		Firewood cutting and distribution terminal for kiln-dried firewood.[59]	639 Diaz St, Prichard, AL 36610
14	**Polar Service Center ("Quala")**		Container cleaning for liquid and dry cargo.[60]	66 Telegraph Rd, Mobile, AL 36610
15	**Prichard Water Works and Sewer**		Municipal wastewater sewage treatment facility.[61]	

[54] *See* Harcros, https://www.harcros.com/our-locations/ (last visited June 30, 2023).
[55] *See* Metals USA, https://www.metalsusa.com/index.php/contact-us/ (last visited June 30, 2023).
[56] *See* Merchants Transfer Co., https://merchantstransfer.com/ (last visited June 30, 2023).
[57] *See* Miller Driving, http://www.millerdriving.com/ (last visited June 30, 2023).
[58] *See* Mobile Area Water and Sewer System, https://www.mawss.com/ (last visited June 30, 2023).
[59] *See* Mobile Bay Firewood, https://www.mobilebayfirewood.com/ (last visited June 30, 2023).
[60] The source has another facility in Saraland with a water permit, but no water (or air) permit for the operations in Africatown. (202 Commerce St, Permit No IU414900629, and its most recent filing with ADEM available at, http://lf.adem.alabama.gov/WebLink/DocView.aspx?id=105105305&dbid=0). Company website, https://facilities.quala.us.com/polar-service-center-8b9b4c90960e.
[61] *See* The Water Works Board of the City of Prichard, https://prichardwater.com/ (last visited June 30, 2023).

16	**Shapiro Metals**	ADEM Master ID 12831	Metals recycling including shredding, shearing, and sorting.[62]	2500 Paper Mill Road, Mobile, AL 36610
17	**Snow's Machine and Welding**		Machine and welding shop.[63]	400 Telegraph Road, Prichard, AL 36610
18	**Southern Intermodal Xpress LLC**		Logistics, drayage, trucking.[64]	
19	**Three Mile Dry Dock & Repair LLC**	ADEM Master ID 43012	Three Mile Creek-accessible marina and dock, as well as drydock, repair, and manufacture facility for boats	1946 Telegraph Rd., Mobile, AL 36610
20	**Vulcan Construction Materials Company LP - Bay Bridge Sales Yard**		Aggregate distributor[65]	1944 Bay Bridge Cutoff, Mobile, AL 36610
21	**Young Transport**	USDOT Number 1336653 and MC Number 513270.	Diesel truck machine shop, lay down yard, and parking lot.	1919 Telegraph Road, AL
VI. Sources that may be Closed				
1	**Parker Towing Co Inc**		Landowners near Hosea O Weaver with a Three Mile Creek-accessible marina & dock - MAY BE CLOSED and being used by Hosea O Weaver & Sons Inc as an aggregate pile storage site	1865 Bay Bridge Cutoff Rd., Mobile, AL 36610 (approximate address)
2	**South Alabama Equipment Co LLC**		Landowners near Hosea O Weaver with a Three Mile Creek-accessible marina & dock - MAY BE CLOSED and being used by Hosea O Weaver & Sons Inc as an aggregate pile storage site	

[62] *See* Shapiro Metal Recycling, https://shapirometals.com/metal-recycling-mobile-alabama/#about-shapiro-mobile (last visited June 30, 2023).
[63] *See* Snows Machine & Welding, https://www.snowsmachine.com/ (last visited June 30, 2023).
[64] From the Company's website "In partnership with Merchants Transfer Co. we offer the added value of 2.1 million square feet of warehouse space in Mobile County with easy access to I-65, I-10, I-165 and Highway 43." Southern Intermodal Xpress, https://sixllc.net/services/#warehouse (last visited June 30, 2023).
[65] *See* Vulcan Materials Company, https://www.vulcanmaterials.com/ (last visited June 30, 2023).

	VII. Sources that are Closed			
1	**Cavenham Forest Industries, Inc**		Lumber treatment facility, creosote treatment facility. (closed)	South End Herbert Street, Mobile, Alabama 36652
2	**Hickory Street Landfill**	EPA Facility ID: ALD980842637	Former City of Mobile municipal landfill.[66] (closed)	Jct Hickory & Chinquapin St, Mobile, AL 36603

Bulk Terminal Operations in the Vicinity of the Africatown Neighborhood

In addition to the above sources located in the Africatown Historic Neighborhood, the following bulk terminal operations are adjacent to and in the vicinity of the neighborhood. Emissions from these sources, including trucks, and mobile vessels operating to-and-from the terminal operations also impact the environmental justice community.

(1.) **Hunt Refinery Company - Alabama Bulk Terminal**, Title V Permit No. 503-3035, 195 Cochrane Causeway, Mobile, AL 36602.[67]

(2.) **Vertex Refining Alabama LLC - Blakeley Island Terminal**, Title V Permit No. 503-0009, 1105 Cochrane Causeway, Mobile, AL 36602.[68]

(3.) **BWC Alabama, Inc. – Blakeley**, Facility No. 503-0077, 1437 Cochrane Causeway, Mobile, AL 36603.[69]

(4.) **BWC Alabama, LLC - Mobile**, Facility No. 503-4002, 835 Cochrane Causeway, Mobile, AL 36602.[70]

[66] U.S. Dep't of Health and Human Services, Health Consultation: Hickory Street Landfill Site, Mobile, Mobile County, Alabama (March 9, 2006), *available at* https://www.atsdr.cdc.gov/HAC/pha/HickoryStreetLandfillSite/HickoryStreetLandfillSite030906.pdf.
[67] *See* Letter from Ronald Gore, Chief, Air Division, ADEM to Scott Ehrlich, Director of Regulatory Affairs, Vertex Refining Alabama (Apr. 18, 2022), http://lf.adem.alabama.gov/WebLink/DocView.aspx?id=104787105&dbid=0. The terminal tank operations are connected to its refinery operations, Hunt Refinery, Title V Permit 417-0007, *see* Letter from Ronald Gore, Chief, Air Division, ADEM to Casey Frederick, Hunt Refining Company (Feb. 23, 2021), http://lf.adem.alabama.gov/WebLink/DocView.aspx?id=104481876&dbid=0&cr=1; *see also* release from Hunt pipeline, ADEM Facility ID 44462); *see also* Title V Petition with EPA's Administrator on Jan. 9, 2023 by GASP and MEJAC.
[68] *See* http://lf.adem.alabama.gov/WebLink/DocView.aspx?id=104787105&dbid=0 (connected to its refinery in Saraland via pipeline(s)).
[69] *See* Air Permit Nos. X024-X026, http://lf.adem.alabama.gov/WebLink/DocView.aspx?id=105074147&dbid=0; *see also* Letter from Terry Duplantis, VP of HSEQ, BWC Terminals to Brian Sullins, ADEM (Mar. 3, 2023) http://lf.adem.alabama.gov/WebLink/DocView.aspx?id=105074139&dbid=0 (regarding company transfer).
[70] *See* Facility No. 503-4002, Permit Nos. X002-X117, http://lf.adem.alabama.gov/WebLink/DocView.aspx?id=30017580&dbid=0.

(5.) **BWC Alabama, LLC – Chickasaw,** Facility No. 503-0123 (unpermitted), 500 Viaduct Road, Chickasaw, AL 36611.[71]

(6.) **Apex Oil Company - World Point Terminal** (Center Point Terminal Blakely Island), Facility No. 503-3021, 1257 Cochrane Causeway, Mobile, AL 36610.[72]

(7.) **Center Point Terminal Company, LLC - Chickasaw Terminal**, Facility No. 503-4007, 200 Viaduct Rd., Chickasaw, AL 36611.[73]

(8.) **Radcliff Economy Marine Services**, Facility No. 503-3007, 115 Cochran Causeway, Mobile, AL 36602.[74]

[71] *See* Facility No. 503-0123, http://lf.adem.alabama.gov/WebLink/DocView.aspx?id=105074139&dbid=0 (Chickasaw Terminal - does not have an air permit), historical operational information available at Letter from Andrew Danhof, Manager, Environmental and Regulatory, Zenith Energy to Rachel Kilpatrick, ADEM (Oct. 22, 2020), http://lf.adem.alabama.gov/WebLink/DocView.aspx?id=104424343&dbid=0.

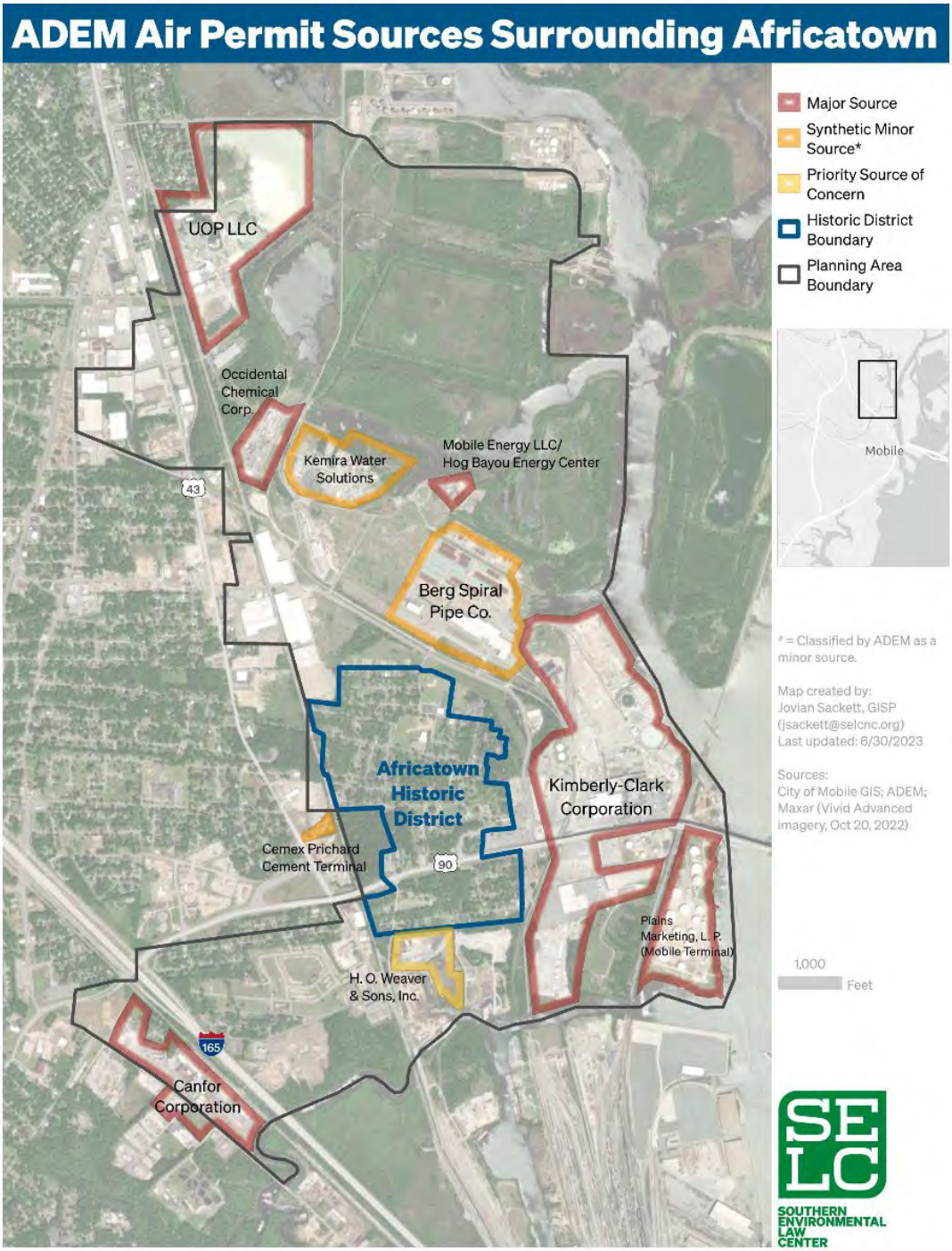
[72] *See* Permit No. 503-3021, including SMOP (95 TPY) for tank truck loading rack, tanks, natural gas boiler with diesel reserve, and five UNPERMITTED storage tanks; *see also*, inspection report for summary, http://lf.adem.alabama.gov/WebLink/DocView.aspx?id=105049113&dbid=0.

[73] *See* Facility No. 503-4007, Permit Nos. X007-X013, SMOP (95 TYP); *see also* Permit X007 (at PDF 2) marine vessel loading operation with vapor destruction unit, Permit X008 for 3 tanks (at PDF 8), Permit X009 (at PDF 13) for marine vessel, truck and rail loading operations (south), Permit X010 (at PDF 17) for bulk storage operations including two tanks (south), Permit X011 (at PDF 22) bulk liquid operations south including six tanks, Permit X012 (at PDF X012) bulk liquid operations south including 10 tanks, http://lf.adem.alabama.gov/WebLink/DocView.aspx?id=29950549&dbid=0.

[74] ADEM characterizes this source as "minor". *See* Facility No. 503-3007 (115 Cochran Causeway, Mobile, AL 36602), permits for main and truck loading, Letter from Ronald Gore, Chief, Air Division, ADEM to Steve Gordon, President, Radcliff/Economy Marine Services (Feb. 2, 2011), http://lf.adem.alabama.gov/WebLink/DocView.aspx?id=29874102&dbid=0; *see also* most recent inspection on March 31, 2023, which includes list of the tanks and storage operations, http://lf.adem.alabama.gov/WebLink/DocView.aspx?id=105077793&dbid=0.

Figure 3 below illustrates just how concentrated these sources are in the Africatown community. This includes six major sources that require Title V permits under the Clean Air Act, three synthetic minor sources, and the H.O. Weaver & Sons, Inc. asphalt plant, a priority source of concern for the Africatown community.

Figure 3: ADEM Air Permit Sources Surrounding Africatown



Beyond ADEM's "affirmative, ongoing obligation" to comply with federal civil rights laws,[75] in developing its network monitoring plan, ADEM must consider "the ability of existing and proposed sites" to characterize exposures for "areas with relatively high populations of susceptible individuals (*e.g.*, children with asthma)[.]"[76] For instance, identifying where susceptible individuals are likely to spend time outdoors is also relevant for siting ozone monitors intended to characterize maximum concentrations.[77] Air monitoring data may also "provide valuable information to be used … to assess cumulative impacts on environmental justice communities."[78]

Furthermore, EPA's ambient air monitoring network guidance identifies "environmental justice" as a key purpose for air monitoring networks, as part of the overall goal of evaluating population exposures to air pollutants.[79] EPA's guidance discusses reviewing and prioritizing different network purposes, with evaluation of population exposure (and specifically, environmental justice) as one such goal among several. EPA's guidance then provides several techniques for air monitoring that would uphold environmental justice objectives, including the population served, population density, population change, and suitability models, discussed further in the guidance.[80]

Overall, federal regulations for ambient air monitoring establish only minimum design criteria for State and Local Area Monitoring Stations ("SLAMS") to monitor for criteria pollutants, allowing room for states to establish enhanced air monitoring, as required.[81] Furthermore, EPA, which reviews state plans, has authority to assess and ensure protections of vulnerable populations through ambient air monitoring network plans. EPA may "apply greater scrutiny to the network assessments for areas where susceptible and vulnerable populations may be disproportionately affected by air pollution and may recommend network design changes and/or disapprove the submitted network assessments, as appropriate, to ensure that representative air quality data is available for use in air quality planning for such areas."[82] Greater scrutiny is needed here for vulnerable populations in Africatown that are disproportionately affected by the sources ADEM has permitted. Indeed, most of the sources we identified do not have air permits, or lack adequate permits for controlling emissions, or the permits fail to meet the Act's legal requirements.

ADEM has an obligation to ensure that it allocates its monitoring resources and requests resources from EPA to monitor the air quality in those communities like Africatown that are

[75] EPA Office of Gen. Counsel, EPA Legal Tools to Advance Environmental Justice, at 161 (May 2022), *available at* https://www.epa.gov/system/files/documents/2022-05/EJ%20Legal%20Tools%20May%202022%20FINAL.pdf ("EPA Legal Tools").
[76] 40 C.F.R. § 58.10(d) (emphasis added). *See also id*. at § 58.10(a)(5); (b)(12).
[77] 40 C.F.R. § 58, Appendix D, section (1.2)(c).
[78] EPA, Legal Tools to Advance Environmental Justice: Cumulative Impacts Addendum, at 9 (Jan. 2023), *available at* https://www.epa.gov/system/files/documents/2022-12/bh508-Cumulative%20Impacts%20Addendum%20Final%202022-11-28.pdf.
[79] *See* EPA, Ambient Air Monitoring Network Assessment Guidance at 2-3 (2007), *available at* https://www3.epa.gov/ttnamti1/files/ambient/pm25/datamang/network-assessment-guidance.pdf.
[80] *Id*. at 2-5, 2-6.
[81] *See* 40 C.F.R. § 58.1; *see also* 40 C.F.R. Part 58 App. D ¶¶ 4.1-4.8.1 (establishing "Pollutant-Specific Design Criteria" for monitoring networks).
[82] EPA, Legal Tools to Advance Environmental Justice, at 19 (May 2022).

disproportionately impacted by impaired air quality. ADEM must ensure it has sufficient data on how the Africatown community is impacted; such information is essential to remedy the environmental justices the community faces.

Currently there are no monitors in Africatown. Air pollution from the sources that decided to locate, construct and emit pollution in the community harms and potentially even kill members of the public.[83] The lack of ambient monitoring information is entirely inadequate for the community impacted by cumulative emissions from perhaps as many as the forty sources identified above, as well as the more than 300 stationary sources in Mobile County as a whole.[84] If ADEM does not have resources in its budget for additional monitors, we ask that it seek additional resources in grant funding from EPA. Additionally, the precise locations for the monitors should be determined in conjunction with the Africatown community.[85]

Finally, ADEM must make the data collected from the Africatown monitors easily available to the community, including placing three large computer monitors for use in indoor public spaces and another for outdoor public space placement in the Africatown community such as the Robert Hope Community Center, Whitley Elementary, the Mobile County Training School, and Kidd Park. Furthermore, the Africatown monitors must be linked with real-time alerts so that when the air quality deteriorates, the community is notified, and they know to stay indoors and take necessary precautions.

[83] *See, e.g., Conservation Law Found. v. Pub. Serv. Co. of N.H.*, No. 11-CV-353-JL, at 3 (D.N.H. Sept. 27, 2012) (finding that "NOx and SO2 emissions have significant adverse effects on public health. These emissions also contribute to the formation of secondary particulate matter that may cause decreased lung function, worsened respiratory infections, heart attacks, and the risk of early death."); *North Carolina v. EPA*, 531 F.3d 896, 903 (D.C. Cir. 2008) ("NOx emissions contribute to the formation of fine particulate matter, also known as PM2.5, as well as ground-level ozone, a primary component of smog."); *Catawba Cnty. v. EPA*, 571 F.3d 20, 26 (D.C. Cir. 2009) ("Elevated levels of fine particulate matter have been linked to "adverse human health consequences such as premature death, lung and cardiovascular disease, and asthma."); *Ass'n of Irritated Residents v. EPA*, 686 F.3d 668, 671 n. 1 (9th Cir. 2012) ("And 'even at very low levels,' inhalation of ozone 'can cause serious health problems by damaging lung tissue and sensitizing lungs to other irritants.'"); *North Carolina v. TVA*, 593 F.Supp.2d 812, 822 (W.D.N.C. 2009) *rev'd on other grounds*, 615 F.3d 291 (4th Cir. 2010) ("Court finds that, at a minimum, there is an increased risk of incidences of premature mortality in the general public associated with PM2.5 exposure, even for levels at or below the NAAQS standard of 15 [u]g/m 3."); *Oh. Power Co. v. EPA*, 729 F.2d 1096, 1098 (6th Cir. 1984) ("[T]here is now no longer any doubt that high levels of pollution sustained for periods of days can kill. Those aged 45 and over with chronic diseases, particularly of the lungs or heart, seem to be predominantly affected. In addition to these acute episodes, pollutants can attain daily levels which have been shown to have serious consequences to city dwellers."); *Sierra Club v. TVA*, 592 F.Supp.2d 1357, 1371 (N.D. Ala. 2009) ("[T]here is no level of primary particulate matter concentration at which it can be determined that no adverse health effects occur."); *Catawba Cnty. v. EPA*, 571 F.3d 20, 26 (D.C. Cir. 2009) ("A 'significant association' links elevated levels of $PM_{2.5}$ with adverse human health consequences such as premature death, lung and cardiovascular disease, and asthma.").

[84] Attachment H, using a query of major source, minor sources, and synthetic minor sources in Mobile County in the FRS database, *available at* https://www.epa.gov/frs/frs-query.

[85] 88 Fed. Reg. 5558, 5676 (Jan. 27, 2023).

IV. ADEM should commit to permanent PM_{10} monitoring in the downtown Mobile area.

Commenters commend ADEM for working with EPA and the City of Mobile to address citizen concerns regarding fugitive dust near the downtown area by deploying PM_{10} monitoring in Seals Park (AQS ID 01-097-8001). The data from monitoring at this site will help ADEM and surrounding community better understand the actual PM_{10} emissions caused by fugitive dust in downtown Mobile. ADEM explains that the Seals Park site "will have two special purpose monitors and will begin sampling for PM_{10} with an FRM local sampler and an FEM E-BAM continuous sampler for the purpose of calculating a valid design value for PM_{10}" in the Mobile area.

However, nowhere in the 2023 Network Plan does ADEM explain what a Special Purpose Monitor (SPM) is or how it is different than other monitors. This lack of information concerns us, especially when ADEM provided more information earlier this year when discussing these new SPMs in its 2022/2023 Addendum to the Network Plan ("2022/2023 Addendum").[86] As stated in the 2022/2023 Addendum, ADEM intends to let these new monitors run for a period of three years to calculate the PM_{10} design value for the area.[87] In response to comments on the 2022/2023 Addendum, ADEM clarified that if the air quality data from the Seals Park monitors "shows that PM_{10} NAAQS compliance is in question, monitoring will continue past three years to pinpoint causes and to determine the effectiveness of possible corrective measures."[88] We are encouraged that there is not a firm three year limit on use of these monitors, but more permanent monitoring of PM_{10} pollution in this area is needed. Given the health impacts of PM_{10} pollution and the longstanding concerns of citizens in the area, ADEM should designate the Seals Park monitors as permanent SLAMS monitors instead of SPMs.

PM_{10} is airborne particulate matter that can be inhaled into the lungs and is a serious health concern. According to the EPA, exposure to PM_{10} pollution can affect a person's lungs and heart, resulting in impacts such as "premature death in people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms," including irritation of the airways, coughing or difficulty breathing.[89] Particles can be carried over long distances by wind and then settle on ground or water.[90] Located in the downtown Mobile area, the Alabama State Docks McDuffie Island Coal Terminal is one of the largest coal terminals in the country,[91] and for over a decade, ADEM has received complaints about the coal

[86] *See* State of Alabama Ambient Air Monitoring 2022/2023 Addendum to the Network Plan (ADEM, Feb. 15, 2023) ("2022/2023 Addendum"), *available at* https://adem.alabama.gov/newsEvents/notices/feb23/pdfs/2022AmbAirPlanAddendum.pdf.
[87] 2022/2023 Addendum at 8.
[88] Attachment I, Letter from Ronald W. Gore, ADEM Air Division Chief, to Sidni Elise Smith and Michael Hansen of GASP (April 4, 2023).
[89] *See* EPA, Health and Environmental Effects of Particulate Matter (PM0, *available at* https://www.epa.gov/pm-pollution/health-and-environmental-effects-particulate-matter-pm.
[90] *Id*.
[91] Alabama State Port Authority, *Port of Mobile*, https://www.alports.com/about/ (last visited June 29, 2023).

dust from these terminals.[92] Even if three years of data at the Seals Park SPMs did not show a violation of the PM_{10} NAAQS during that period, continued monitoring should be in place given citizen concerns about the ambient dust pollution in this area.

Permanent monitors in the area would ensure that pollution will be monitored not only for purposes of determining whether the air quality is violating the PM_{10} NAAQS but also to determine whether there are other pollution data and trends that may need to be addressed. For example, long-term data could reveal seasonal or temporal spikes in pollution levels or high but non-violating values that should be considered in addressing future requests to permit additional sources of PM emissions in the area. Thus, ADEM should redesignate the Seals Park monitors as permanent SLAMS instead of SPMs. [93]

V. ADEM should include a section on public information and outreach in the annual air monitoring plan, including a summary of air quality complaints.

According to EPA's regulations that require preparation of this annual monitoring plan, one objective of the network regulations is to "[p]rovide air pollution data to the general public in a timely manner."[94] One way Alabama's plan could meet this objective is by publishing and engaging with community health concerns. The current plan does not adequately provide air pollution data; rather, it provides cursory detail as to Alabama's monitoring network. It does not include information on community complaints that the agency receives, and how monitoring might help resolve such concerns.

To ensure that the air monitoring network supplies air pollution data and information to concerned citizens, Commenters recommend that each plan: (a) contain a section that summarizes community complaints received by ADEM over the past year relating to issues such as air quality, odors, and nuisance due to fugitive PM emissions; (b) address how monitoring might allow specific air pollutant data to be collected to address the specific community concerns raised by the complaints; (c) prioritize such monitoring efforts, if needed, based on factors such as the nature and severity of the complaints that need to be addressed; (d) propose the appropriate monitoring in the plan; and (e) attach the complaints received by ADEM. This information would enable to public to meaningfully engage and provide comments on the plan, as it would provide a greater understanding of community health concerns across the State.

[92] Letter from Christina Andreen Tidwell (SELC) and Haley Lewis (GASP) to Gina Curvin (ADEM), Comments on ADEM's State of Alabama 2022 Ambient Air Monitoring 2022 Network Plan (June 27, 2022), at 4-5.
[93] ADEM also explains that a "third monitor will be set up [in Seals Park] to collect filters for particle analysis," but the timing of that deployment is unclear. 2023 Network Plan at 23. To the extent ADEM is limiting the timing of PM_{10} monitoring in Seals Park to a short period of time, that period should only begin once all three PM monitors are operational.
[94] 40 C.F.R. Pt. 58, App. D, § 1.1.

VI. ADEM should look into funding opportunities for a mobile ambient air monitoring device for supporting emergency management and monitoring fence line communities.

Commenters urge ADEM to explore funding opportunities to acquire a mobile air monitoring unit. These units, sometimes referred to as Geospatial Measurement of Air Pollution (GMAP) air monitoring vehicles, are "equipped with several air pollutant analyzers and technology that utilizes fast-response instruments and a global positioning system (GPS) to map air pollution around emission sources."[95] These GMAP units can provide real-time mobile air monitoring data, helping identify contributing emission sources and potential violations.[96] For example, Fairbanks, Alaska used a mobile PM monitor to better understand the pollution causing their nonattainment status.[97]

These units have multiple uses that could support ADEM's efforts to monitor air quality. First, these units can be deployed in fenceline communities to provide an accurate picture of air quality in communities where there are no permanent air monitors. This could help ADEM respond to citizen complaints and accurately determine whether there are any potential violations based on such complaints. Additionally, these units can help identify unknown or underestimated emission sources.[98]

These units are also extremely useful in emergency situations. In November 2022, a landfill located in unincorporated St. Clair County caught on fire.[99] The fire continued for months, causing harm to residents and nearby property. In a demonstration of ADEM's incapability to respond to environmental emergencies, ADEM never deployed its own air monitors on the site; rather, citizen groups like GASP deployed air monitors to inform the public about the health and safety risks associated with the fire.[100]

EPA finally took over the response to the fire on January 18, 2023, after months of confusion on the part of state agencies.[101] It was not until this point that citizens had access to air

[95] EPA, *AltEN Facility, Mead, Nebraska – Fact Sheet* (Sept. 2021), https://www.epa.gov/ne/alten-facility-mead-nebraska-fact-sheet-september-2021 (last visited June 29, 2023).
[96] Tricord, *GMAP – Real Time Air Monitoring*, https://tricordconsulting.com/index.php/gmap-mobile-air-monitoring/ (last visited June 29, 2023).
[97] Fairbanks, North Star Borough, Alaska, *Mobile Monitoring (AKA Sniffer Study)*, https://www.fnsb.gov/388/Mobile-Monitoring-AKA-Sniffer-Study (last visited June 29, 2023).
[98] Tricord, *GMAP – Real Time Air Monitoring*, https://tricordconsulting.com/index.php/gmap-mobile-air-monitoring/ (last visited June 29, 2023).
[99] Press Release, ADEM, Information Regarding St. Clair County Fire Near Moody (Dec. 22, 2022), https://adem.alabama.gov/newsEvents/files/22Dec2022StClairCountyFireNearMoody.pdf.
[100] Press Release, GASP, Moody Landfill Fire Pollutes Air, Threatens Public Health (Jan. 4, 2023), https://gaspgroup.org/moody-landfill-fire-pollutes-air-threatens-public-health-blog/.
[101] Ala. Dep't of Env't Mgmt., *Working Group Report* (June 23, 2023), https://moodyfireupdate.com/2023/06/23/working-group-report/; *see also* EPA, *Emergency Action Response Memo* (January 18, 2023), https://response.epa.gov/sites/15907/files/Moody_AM_ERAM%20ver4%20JW%20TS%20SIGN.pdf.

monitoring data provided by a government agency. This illustrates how useful a mobile air monitoring unit would be; had ADEM deployed one of these mobile systems to the Moody landfill fire, citizens and the agency would have been more thoroughly informed about what kinds of pollutants were being emitted from the source, and what kind of dangers the fire ultimately posed.

All in all, the Moody landfill fire highlights the need for ADEM to be prepared for air quality monitoring in emergency situations and demonstrates the usefulness of mobile air monitoring units. The uses for such units clearly are not limited to emergency situations; they are also useful for responding to citizen complaints and creating a clearer picture of air quality in Alabama, especially in fenceline communities that lack permanent air monitoring stations. Thus, Commenters urge ADEM to explore funding opportunities from EPA and elsewhere to support acquiring such a unit.

VII. ADEM must update the Network Plan to include monitoring of SO_2 around Plant Barry.

Commenters have been urging ADEM for years to install an SO_2 monitor near the James M. Barry Electric Generating Plant in Bucks, Alabama.[102] Last year, EPA noted that ADEM's lack of SO_2 monitoring as a deficiency in the 22-23 Network Plan and stated that ADEM should either install an SO_2 SLAMS monitor or include its planned SO_2 modeling as an addendum to the Plan and posted for a 30-day comment period.[103] The 2023 Network Plan does not include an SO_2 SLAMS monitor near Plant Barry, and Commenters are not aware of any additional SO_2 modeling that ADEM has conducted around Plant Barry. Commenters request that ADEM provide such SO_2 modeling or add a SO_2 SLAMS monitor near Plant Barry. Commenters reiterate their concerns expressed over the years that because the nearest SO_2 monitor is located nearly twenty miles away, that there is a significant gap in data regarding the actual emissions from Plant Barry and their impact on communities. Commenters request that ADEM provide them with a thorough update on the status of the Department's SO_2 modeling and monitoring for Plant Barry.

VIII. Conclusion

Commenters ask that ADEM perform a robust environmental justice analysis in its final Network Plan. This analysis should be informed by the concentrated emission sources located in the historic Africatown community—an environmental justice community that lacks any air monitors. ADEM should revise its Network Plan and site monitors in this community, requesting funding from EPA if necessary. ADEM should make the PM_{10} monitor to be sited in Mobile a permanent SLAMS monitor. Additionally, ADEM should take seriously citizen complaints, including them in the annual Network Plan and making adjustments to the Plan as needed based on the complaints. ADEM should also look into funding a mobile air monitoring unit to better respond to citizen needs. Last, Commenters request an update on SO_2 modeling and emissions at

[102] *See, e.g.*, Letter from Christina Andreen Tidwell (SELC) and Haley Lewis (GASP) to Gina Curvin (ADEM), Comments on 21/22 Network Plan (June 15, 2021).
[103] Letter from Caroline Freeman (EPA), to Ron Gore, Air Division Chief (ADEM) (June 6, 2022).

Plant Barry. We look forward to receiving and reviewing the Department's final annual Network Plan and its response to our comments.

Thank you for your consideration of these comments.

Respectfully submitted,

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ramsey@MEJACoalition.org

Michael Hansen
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mhansen@gaspgroup.org

Christina Andreen Tidwell
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July 26, 2023

Emailed to:

Ramsey Sprague President, MEJAC ramsey@MEJACoalition.org

Michael Hansen Executive Director, GASP mhansen@gaspgroup.org

Christina Andreen Tidwell, Ryan S. Anderson, Southern Environmental Law Center ctidwell@selcal.org

Thank you for your interest and participation in the public review of the 2023 Ambient Air Monitoring Plan. We received your comments by email on June 30, 2023. All comments were reviewed in preparation of the final submission of the monitoring plan to EPA. The final plan will be available for review on the Department's website once approved by EPA.

Most of your comments stated that ADEM should increase its activities in air quality monitoring. Many States, including Alabama, and also the US EPA, have been shrinking monitoring networks due mainly to two factors:

1) 50+ years of monitoring data and professional experience in interpreting that data give ADEM insight into what currently unmonitored areas of the State might show violations of air quality standards. At present, ADEM concludes that there are NO such areas. ADEM recognizes that one of its primary responsibilities is to marshal the necessary resources to address a void in monitoring in a specific area if ADEM concludes that additional monitoring is needed.
2) Resources available to ADEM for air monitoring and other efforts are limited. The grant dollars from EPA for air monitoring have been stagnant in nominal dollars for many years and have shrunk greatly in terms of inflated dollars. There is no funding for air monitoring in appropriations from the State.

Regarding the length of time ADEM plans to operate the PM-10 monitor in downtown Mobile, ADEM plans to acquire data for at least three years. If the data shows levels significantly below the air quality standard, ADEM may remove the monitor. If levels are above the standard, ADEM will continue operation of the monitor, determine the cause(s) of the problem, and take appropriate action to correct it.

Regarding the need for SO_2 monitoring near Alabama Power Co.'s Barry Plant, modelling shows that the air quality standard is not endangered. Modelling files are available at the following link:. https://adem.alabama.gov/programs/air/modelingfiles.cnt

Regarding availability of complaint information, access to the complaint database is available to the public at the following link: https://prd.adem.alabama.gov/complaints/

Thank you again for your interest.

Sincerely,

Ronald W. Gore, Chief
Air Division
ADEM

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June 29, 2023

Ms. Gina Curvin
Ambient Air Quality Monitoring Program Manager
Field Operations Division-Montgomery Branch
Alabama Department of Environmental Management
1350 Coliseum Boulevard
Montgomery, Alabama 36110-2059

Dear Ms. Curvin:

The U.S. Environmental Protection Agency appreciates the opportunity to provide comments on the Draft 2023 Alabama Ambient Air Monitoring Network Plan, posted June 1, 2023 on the Alabama Department of Environmental Management (ADEM) website. Please include the following public comment in the final network plan along with any other comments that the ADEM receives, as well as the ADEM's response to each public comment.

EPA Comment:

For the EPA to approve of the state's Network Plan, the ADEM must include the SO_2 air modeling analysis that it performed for the area around Alabama Power Plant Barry. This requirement was laid out in the EPA's response to the 2022 Network Plan dated November 2, 2022. In that letter, the EPA did not approve the ADEM SO_2 network, and required this additional information go through the public comment process and be submitted in the Network Plan or an addendum to the plan.

A public comment that ADEM received on the 2021 Network Plan requested monitoring of SO_2 around Plant Barry to assess compliance with the SO_2 national ambient air quality standards (NAAQS). This comment referenced SO_2 air quality modeling performed around Plant Barry that indicated modeled exceedances of the 1-hour SO_2 NAAQS near the plant and raised environmental justice concerns in the surrounding communities. To adequately characterize the SO_2 concentrations around Plant Barry and make a determination on whether to approve or disapprove the SO_2 monitoring network, the EPA required that in an addendum to the 2021 Network Plan or in the 2022 Network Plan, the ADEM provide either:

1. An SO_2 air quality modeling analysis that demonstrates attainment of the 1-hour SO_2 NAAQS following the procedures outlined in the EPA's *SO_2 NAAQS Designations Modeling Technical Assistance Document*[1] and the EPA's Guideline on Air Quality Models found in 40 CFR Part 51, Appendix W; or,
2. A proposal to install an SO_2 State or Local Air Monitoring Station (SLAMS) in the area of expected maximum 1-hour SO_2 concentration near Plant Barry, that follows the procedures for

[1] SO_2 NAAQS Designations Modeling Technical Assistance Document, August 2016 Draft. U.S. EPA Office of Air and Radiation, Office of Air Quality Planning and Standards, Air Quality Assessment Division. https://www.epa.gov/sites/default/files/2016-06/documents/so2modelingtad.pdf

installing a monitor outlined in the EPA's *Source-Oriented Sulfur Dioxide (SO_2) Monitoring Technical Assistance Document*[1].

The ADEM agreed to conduct an additional modeling analysis to characterize SO_2 concentrations in the area. On April 18, 2022, the ADEM provided updated emissions data from Plant Barry and the nearby Akzo Nobel facility to the EPA. Following review of this information, the EPA requested that the ADEM provide an updated AERMOD modeling analysis using the current emissions data. On June 21, 2022, the ADEM submitted a draft updated modeling analysis. The EPA reviewed the draft modeling and provided comments to the ADEM on July 14, 2022. The EPA received a response to the comments and revised modeling from the ADEM on July 26, 2022. The EPA has reviewed the revised modeling and responses to our comments and has determined that the modeling analysis was performed in a manner consistent with the EPA *SO_2 NAAQS Designations Modeling Technical Assistance Document*[1]. The EPA requires that the ADEM provide the final approved modeling analysis in the 2023 Network Plan so that the EPA can approve the SO_2 monitoring network.

If you have any questions or concerns about these comments, please contact me at (404) 562-9062 or Rinck.Todd@epa.gov, or contact Daniel Garver at (404) 562-9839 or Garver.Daniel@epa.gov.

Sincerely,

Caroline Y. Freeman
Director
Air and Radiation Division

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KAY IVEY
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July 26,2023

Mr. Anthony Toney
Acting Director
Air and Radiation Division
EPA Region 4
61 Forsyth Street, SW
Atlanta, Georgia 30303-8960

Dear Mr. Toney:

We have received your comments on the draft Alabama 2023 Annual Ambient Monitoring Plan. ADEM also received one other set of comments, and these comments and ADEM's response are attached as Appendix C.

EPA comments that ADEM must include the final approved modeling analysis for the area near the Barry Steam Plant in Mobile County in the Alabama 2023 Annual Ambient Monitoring Plan.

As EPA noted, this modeling was originally developed in response to comments received for a previous year's monitoring plan. EPA determined that the modeling analysis was performed in a manner consistent with the EPA SO2 NAAQS Designations Modeling Technical Assistance Document in a November 2, 2022 letter.

As a result of your comment, we are attaching a link to the SO2 modeling analysis as Appendix D in the monitoring plan.

This analysis has also been available since its completion to members of the public upon request.

Thank you for your comments on this matter.

Sincerely,

Ronald W. Gore, Chief

Air Division

ADEM

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Appendix D

SO_2 modeling was originally developed in response to comments received for the 2021 AAAQMP Network Plan. EPA determined that the modeling analysis was performed in a manner consistent with the EPA SO2 NAAQS Designations Modeling Technical Assistance Document in a November 2, 2022 letter.

The modeling is available to public via the following link:

https://adem.alabama.gov/programs/air/modelingfiles.cnt