

**State of Mississippi  
Air Quality Data Summary**

for

**Calendar Year 2022**



**Mississippi Department of  
Environmental Quality**

# **Table of Contents**

<a href="#"><u>Introduction.....</u></a>	<a href="#"><u>3</u></a>
<a href="#"><u>MDEQ Air Monitoring Network Information.....</u></a>	<a href="#"><u>4-5</u></a>
<a href="#"><u>NAAQS Table.....</u></a>	<a href="#"><u>6-7</u></a>
<a href="#"><u>Ground-Level Ozone.....</u></a>	<a href="#"><u>8-9</u></a>
<a href="#"><u>Particulate Matter.....</u></a>	<a href="#"><u>10</u></a>
<a href="#"><u>PM2.5.....</u></a>	<a href="#"><u>11-12</u></a>
<a href="#"><u>PM10.....</u></a>	<a href="#"><u>13</u></a>
<a href="#"><u>Carbon Monoxide.....</u></a>	<a href="#"><u>14-15</u></a>
<a href="#"><u>Nitrogen Dioxide.....</u></a>	<a href="#"><u>16-17</u></a>
<a href="#"><u>Sulfur Dioxide.....</u></a>	<a href="#"><u>18-19</u></a>
<a href="#"><u>Appendix 1 – 10 Year Data Trends by County.....</u></a>	<a href="#"><u>20-72</u></a>
<a href="#"><u>Appendix 2 – Data Completeness by Pollutant.....</u></a>	<a href="#"><u>73-80</u></a>

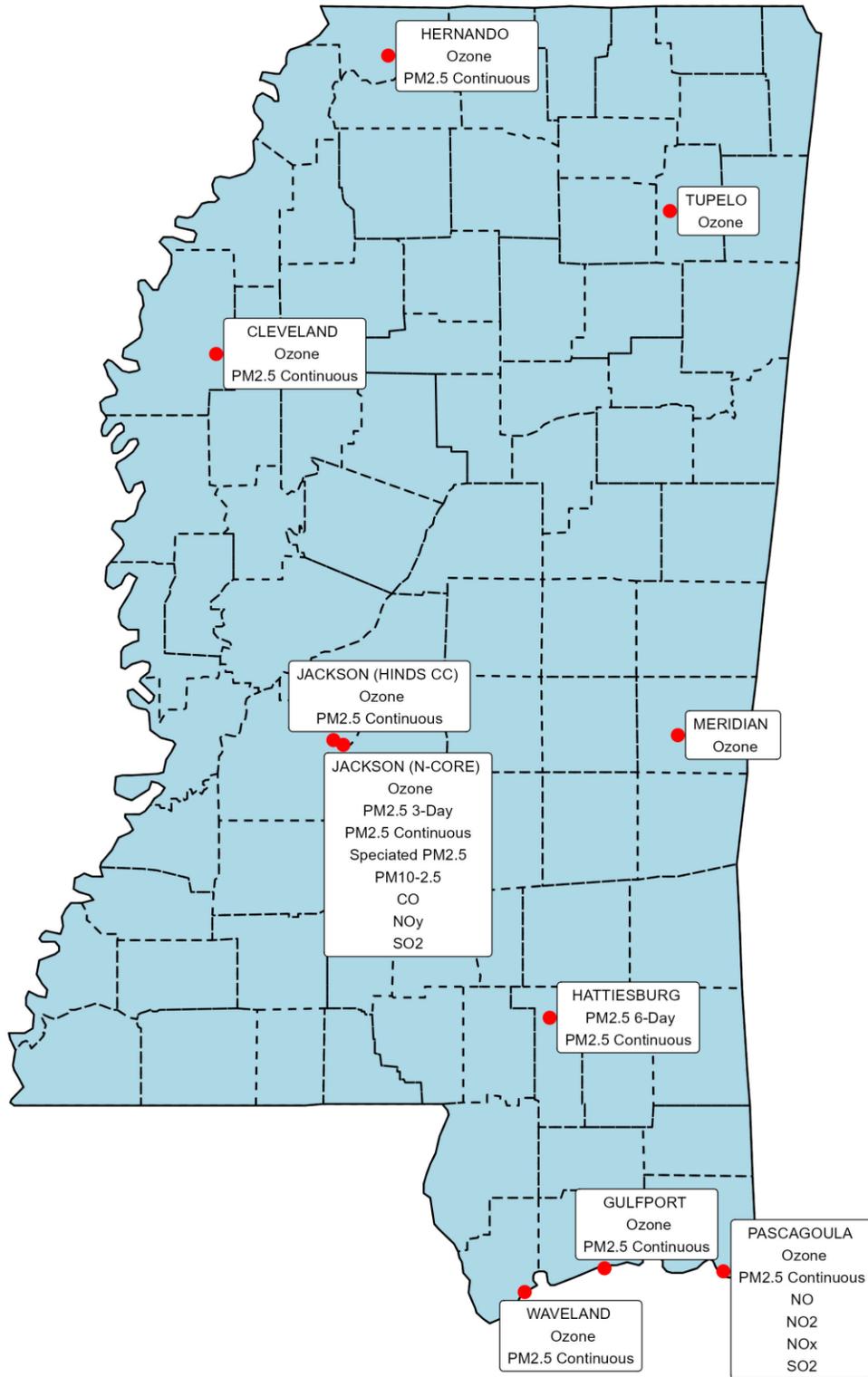
## **Introduction**

Under the Clean Air Act, the U.S. Environmental Protection Agency (EPA) establishes primary air quality standards to protect public health, including the health of “sensitive populations such as people with asthma, children, and older adults”. EPA also sets secondary standards to protect public welfare. This includes protecting ecosystems, including plants and animals, from harm, as well as protecting against decreased visibility and damage to crops, vegetation, and buildings.

EPA has set national ambient air quality standards (NAAQS) for six principal air pollutants (also called criteria pollutants): Ground-Level Ozone (O<sub>3</sub>), Particulate Matter (PM), Nitrogen Dioxide (NO<sub>2</sub>), Sulfur Dioxide (SO<sub>2</sub>), Carbon Monoxide (CO), and Lead (Pb). The Mississippi Department of Environmental Quality (MDEQ) monitors all of these pollutants with the exception of lead. MDEQ ceased lead monitoring on June 30, 2016.

This report shows the monitored levels of criteria pollutants at sites in Mississippi during calendar year 2022 and compares these levels to the NAAQS to demonstrate whether the state is meeting the standards. The results show that Mississippi is in compliance with all current NAAQS.

# 2022 MDEQ Air Monitoring Network



## Monitoring Network Information

County	City	Monitoring Site ID	Pollutants Monitored	Latitude			Longitude		
				Deg.	Min.	Sec.	Deg.	Min.	Sec.
Bolivar	Cleveland	28-011-0002	Ozone, PM <sub>2.5</sub> Continuous	33	45	03	-90	44	03
DeSoto	Hernando	28-033-0002	Ozone, PM <sub>2.5</sub> Continuous	34	49	14	-89	59	16
Forrest	Hattiesburg	28-035-0004	PM <sub>2.5</sub> 6-Day, PM <sub>2.5</sub> Continuous	31	19	23	-89	17	15
Hancock	Waveland	28-045-0003	Ozone, PM <sub>2.5</sub> Continuous	30	18	3	-89	23	45
Harrison	Gulfport	28-047-0008	Ozone, PM <sub>2.5</sub> Continuous	30	23	24	-89	02	59
Hinds	Jackson (Hinds CC)	28-049-0021	Ozone, PM <sub>2.5</sub> Continuous	32	20	48	-90	13	32
Hinds	Jackson (N-CORE)	28-049-0020	Ozone, PM <sub>2.5</sub> 3-Day, PM <sub>2.5</sub> Continuous, Speciated PM <sub>2.5</sub> , PM <sub>10-2.5</sub> , CO, NO <sub>y</sub> , SO <sub>2</sub>	32	19	45	-90	10	58
Jackson	Pascagoula	28-059-0006	Ozone, PM <sub>2.5</sub> Continuous, NO, NO <sub>2</sub> , NO <sub>x</sub> , SO <sub>2</sub>	30	22	42	-88	32	03
Lauderdale	Meridian	28-075-0003	Ozone	32	21	52	-88	43	53
Lee	Tupelo	28-081-0005	Ozone	34	15	54	-88	45	58

# NAAQS Table

Pollutant [links to historical tables of NAAQS reviews]		Primary/ Secondary	Averaging Time	Level	Form
<a href="#">Carbon Monoxide (CO)</a>		primary	8 hours	9 ppm	Not to be exceeded more than once per year
			1 hour	35 ppm	
<a href="#">Lead (Pb)</a>		primary and secondary	Rolling 3-month average	0.15 µg/m <sup>3</sup> <sup>(1)</sup>	Not to be exceeded
<a href="#">Nitrogen Dioxide (NO<sub>2</sub>)</a>		primary	1 hour	100 ppb	98th percentile of 1-hour daily maximum concentrations, averaged over 3 years
		primary and secondary	1 year	53 ppb <sup>(2)</sup>	Annual Mean
<a href="#">Ozone (O<sub>3</sub>)</a>		primary and secondary	8 hours	0.070 ppm <sup>(3)</sup>	Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years
<a href="#">Particle Pollution (PM)</a>	PM <sub>2.5</sub>	primary	1 year	12.0 µg/m <sup>3</sup>	annual mean, averaged over 3 years
		secondary	1 year	15.0 µg/m <sup>3</sup>	annual mean, averaged over 3 years
		primary and secondary	24 hours	35 µg/m <sup>3</sup>	98th percentile, averaged over 3 years
	PM <sub>10</sub>	primary and secondary	24 hours	150 µg/m <sup>3</sup>	Not to be exceeded more than once per year on average over 3 years
<a href="#">Sulfur Dioxide (SO<sub>2</sub>)</a>		primary	1 hour	75 ppb <sup>(4)</sup>	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
		secondary	3 hours	0.5 ppm	Not to be exceeded more than once per year

(1) In areas designated nonattainment for the Pb standards prior to the promulgation of the current (2008) standards, and for which implementation plans to attain or maintain the current (2008) standards have not been submitted and approved, the previous standards (1.5 µg/m<sup>3</sup> as a calendar quarter average) also remain in effect.

(2) The level of the annual NO<sub>2</sub> standard is 0.053 ppm. It is shown here in terms of ppb for the purposes of clearer comparison to the 1-hour standard level.

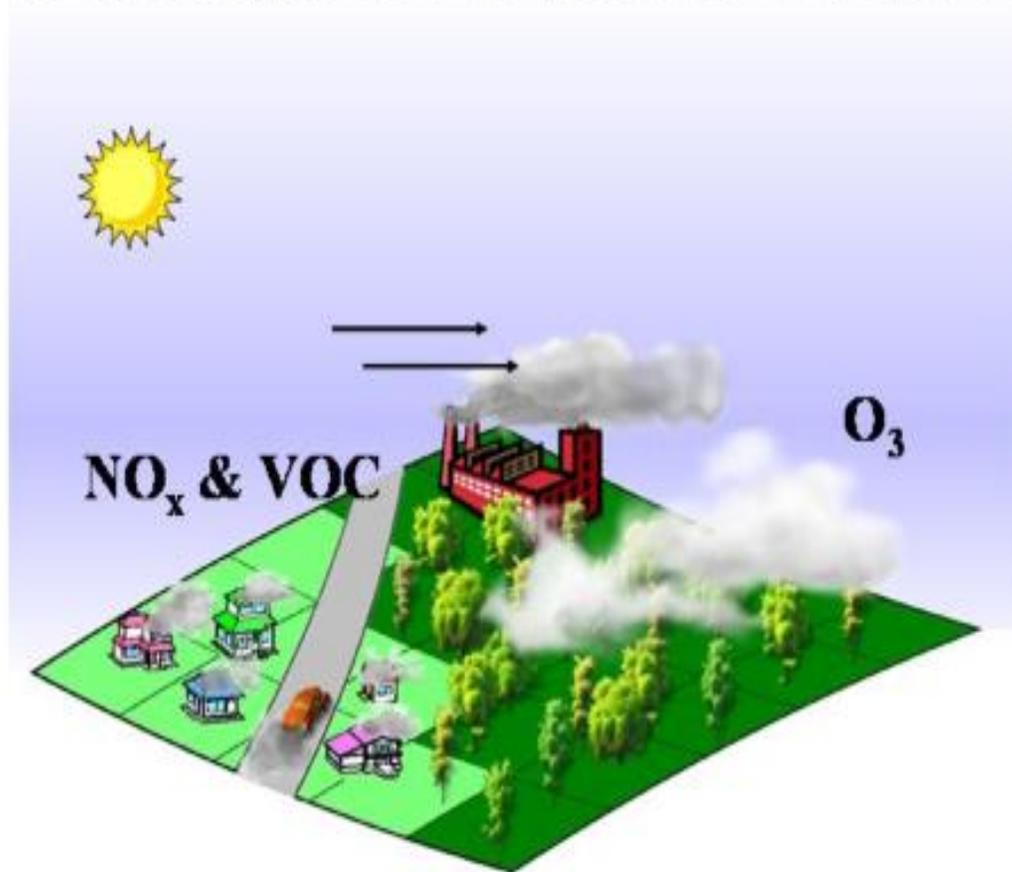
(3) Final rule signed October 1, 2015, and effective December 28, 2015. The previous (2008) O<sub>3</sub> standards are not revoked and remain in effect for designated areas. Additionally, some areas may have certain continuing implementation obligations under the prior revoked 1-hour (1979) and 8-hour (1997) O<sub>3</sub> standards.

(4) The previous SO<sub>2</sub> standards (0.14 ppm 24-hour and 0.03 ppm annual) will additionally remain in effect in certain areas: (1) any area for which it is not yet 1 year since the effective date of designation under the current (2010) standards, and (2) any area for which an implementation plan providing for attainment of the current (2010) standard has not been submitted and approved and which is designated nonattainment under the previous SO<sub>2</sub> standards or is not meeting the requirements of a SIP call under the previous SO<sub>2</sub> standards (40 CFR 50.4(3)). A SIP call is an EPA action requiring a state to resubmit all or part of its State Implementation Plan to demonstrate attainment of the required NAAQS.

## Ground-Level Ozone (O<sub>3</sub>)

Ozone is a gas composed of three atoms of oxygen. Ozone occurs both in the Earth's upper atmosphere and at ground level. Ozone can be good or bad, depending on where it is found. It occurs naturally in the stratosphere approximately 6 to 30 miles above the Earth's surface where it forms a protective layer that shields us from the sun's harmful ultraviolet rays. In the Earth's lower atmosphere, near ground level, ozone occurs naturally in lower amounts. Additional ground-level ozone is formed when nitrogen oxides (NO<sub>x</sub>) and volatile organic compounds (VOCs) emitted by cars, power plants, industrial boilers, refineries, chemical plants, and various other sources react chemically in the presence of sunlight. Because this reaction takes time to occur, ozone is usually formed downwind of emission sources.

### Ozone is Usually Formed Downwind of Emission Sources



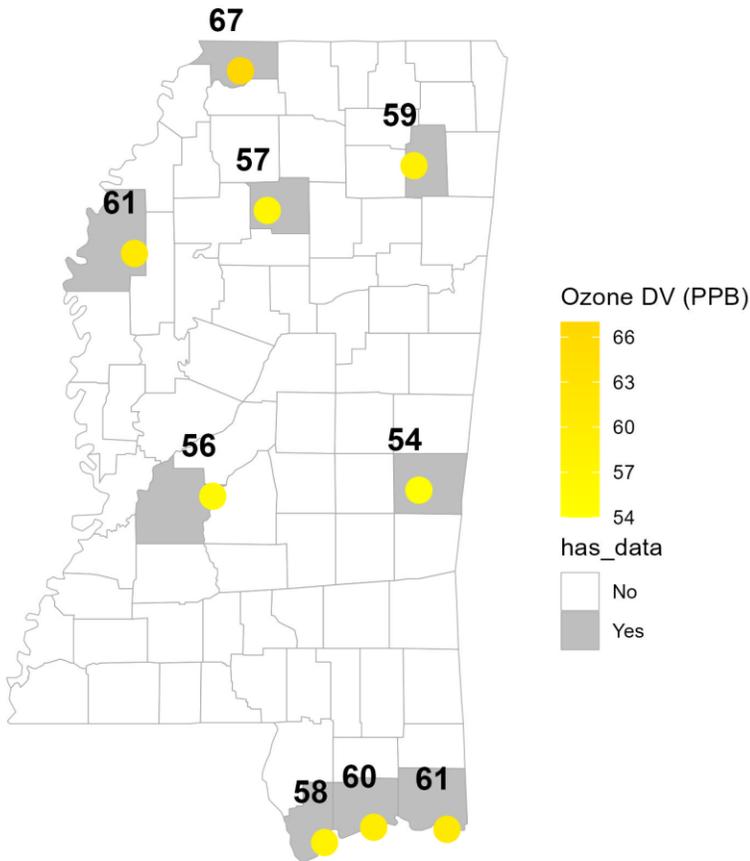
# Ozone Standard

There is one primary and secondary ozone standard – the 8-hour average. MDEQ monitors ozone continuously from March 1<sup>st</sup> through October 31<sup>st</sup> each year at the monitoring sites listed below. Ozone is monitored year around at our N-CORE site located in Jackson.

## Primary and Secondary 8-Hour Standard- 70 ppb

The 8-hour standard is met when the 3-year average of the annual fourth highest daily maximum 8-hour average concentration (also known as the design value) is less than or equal to 0.070 parts per million (ppm) or 70 parts per billion (ppb).

Ozone 2022 Design Value

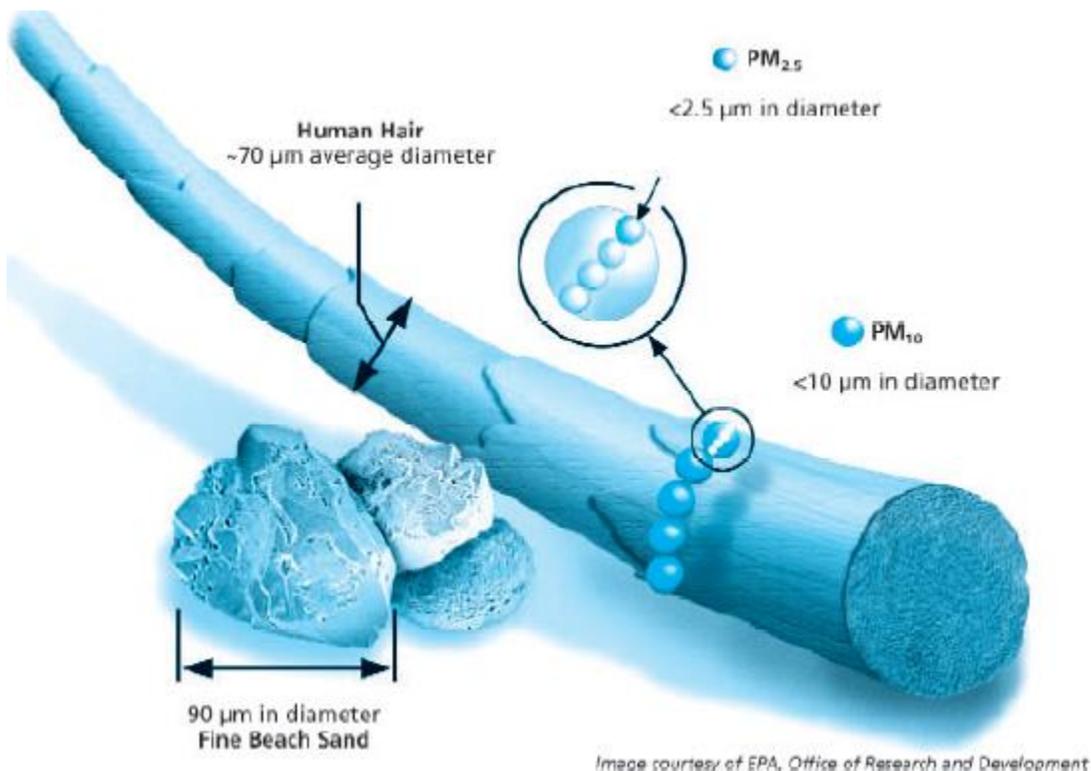


Ozone Site	County	Year	2022 DV
Cleveland Delta State	Bolivar	2022	61
Hernando	DeSoto	2022	67
Waveland	Hancock	2022	58
Gulfport Youth Court	Harrison	2022	60
Hinds CC	Hinds	2022	55
Jackson NCORE	Hinds	2022	56
Pascagoula	Jackson	2022	61
Meridian	Lauderdale	2022	54
TUPELO AIRPORT NEAR OLD NWS OFFICE	Lee	2022	59
Coffeeville	Yalobusha	2022	57

# Particulate Matter

In general, particulate matter consists of a mixture of larger materials, called “coarse particles”, and smaller particles, called “fine particles”. Coarse particles have diameters ranging from 2.5 micrometers ( $\mu\text{m}$ ) to more than 40  $\mu\text{m}$ , while fine particles, also known as  $\text{PM}_{2.5}$ , include particles with diameters equal to or smaller than 2.5  $\mu\text{m}$ . MDEQ also monitors  $\text{PM}_{10}$ , which refers to particles less than or equal to 10  $\mu\text{m}$  in diameter.

These tiny particles come in many shapes and sizes and can be made up of hundreds of different chemicals. Some particles are emitted directly from a source, while others form in complicated chemical reactions in the atmosphere.



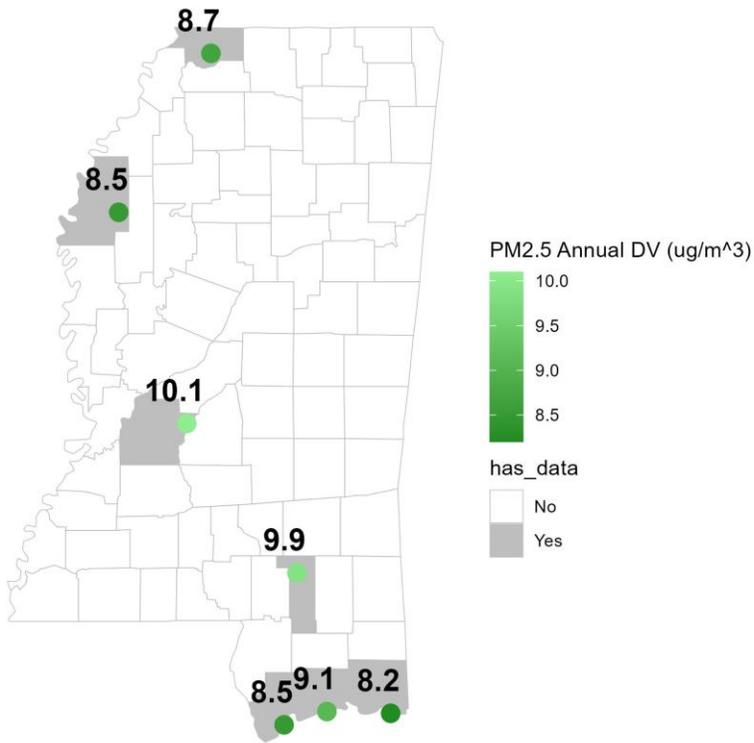
## PM<sub>2.5</sub> Standards

There are two primary and secondary PM<sub>2.5</sub> standards – (1) the Annual Average and (2) the 24-Hour Average. MDEQ monitors PM<sub>2.5</sub> continuously at the monitoring sites listed below.

### Primary and Secondary Annual Standard – 12.0 µg/m<sup>3</sup> and 15.0 µg/m<sup>3</sup>, respectively

The annual average primary standard is met when the three-year average of the annual averages does not exceed 12.0 micrograms per cubic meter (µg/m<sup>3</sup>). The annual average secondary standard is met when the three-year average of the annual averages does not exceed 15.0 micrograms per cubic meter (µg/m<sup>3</sup>).

PM<sub>2.5</sub> Annual 2022 Design Value

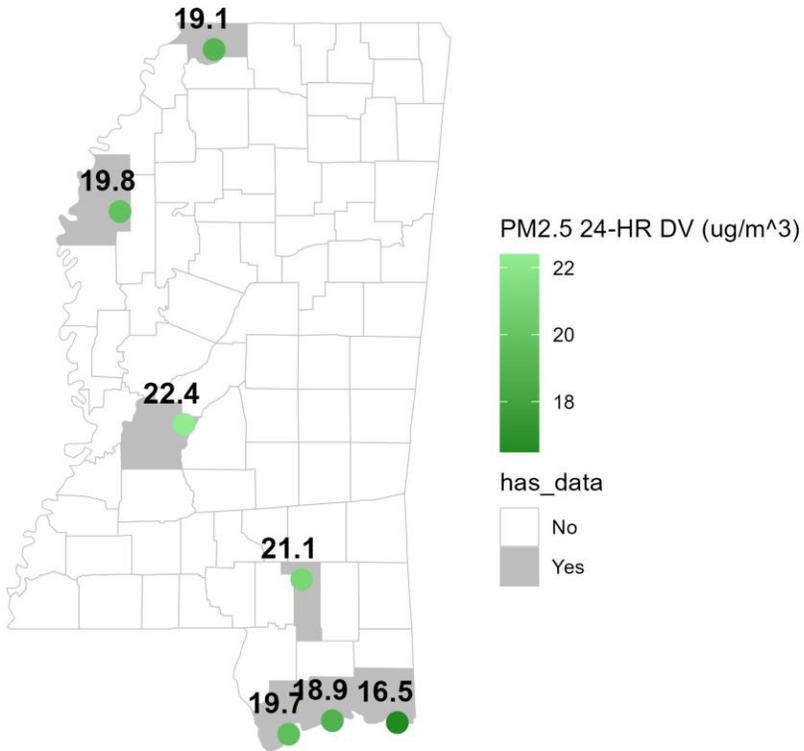


PM Site	County	Year	PM <sub>2.5</sub> 2022 Annual DV
Cleveland Delta State	Bolivar	2022	8.5
Hernando	DeSoto	2022	8.7
Hattiesburg	Forrest	2022	9.9
Waveland	Hancock	2022	8.5
Gulfport Youth Court	Harrison	2022	9.1
Hinds CC	Hinds	2022	9.8
Jackson NCORE	Hinds	2022	10.1
Pascagoula	Jackson	2022	8.2

## Primary and Secondary 24-Hour Standard – 35 $\mu\text{g}/\text{m}^3$

The 24-hour average standard is met when the three-year average of the annual 98<sup>th</sup> percentiles of the 24-hour averages does not exceed 35 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ).

PM2.5 24HR 2022 Design Value



PM Site	County	Year	PM2.5 24HR 2022 Design Value
Cleveland Delta State	Bolivar	2022	19.8
Hernando	DeSoto	2022	19.1
Hattiesburg	Forrest	2022	21.1
Waveland	Hancock	2022	19.7
Gulfport Youth Court	Harrison	2022	18.9
Hinds CC	Hinds	2022	22.4
Jackson NCORE	Hinds	2022	21.7
Pascagoula	Jackson	2022	16.5

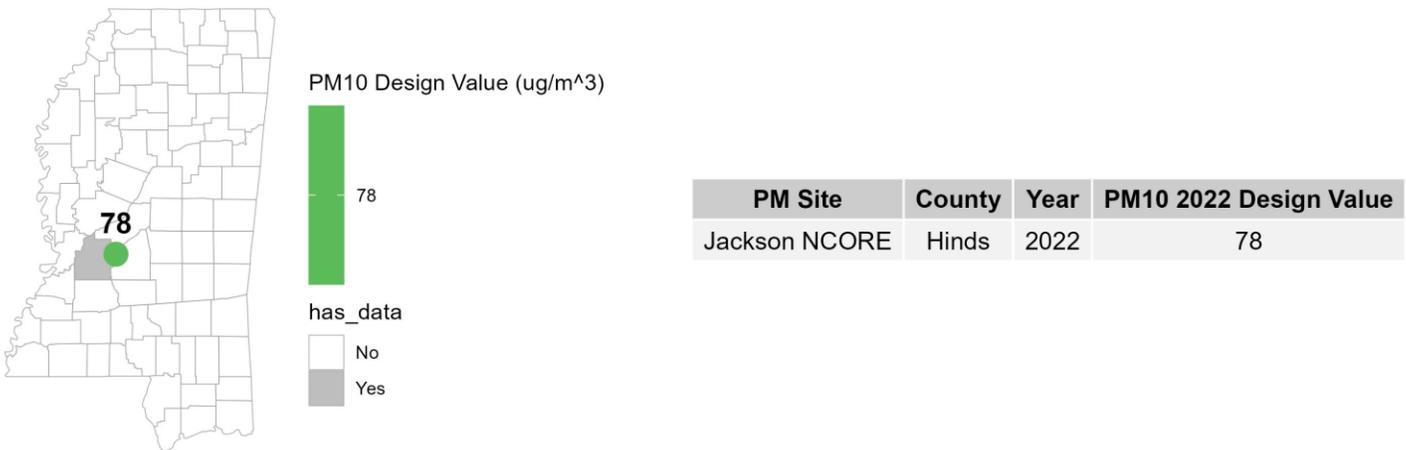
## PM<sub>10</sub> Standards

There is one primary and secondary PM<sub>10</sub> standard - the 24-Hour Average. MDEQ monitors PM<sub>10</sub> continuously at the N-CORE site located in Jackson.

### Primary and Secondary 24-Hour Standard – 150 µg/ m<sup>3</sup>

The 24-hour average primary and secondary standard is met when the annual second max does not exceed 150 micrograms per cubic meter (µg/m<sup>3</sup>) over an average of three years.

PM10 2022 Design Value



# **Carbon Monoxide**

Carbon monoxide (CO) is a colorless, odorless gas that is formed when carbon in fuel is not burned completely. It is a component of motor vehicle exhaust, which contributes about 56% of all CO emissions nationwide. Other non-road engines and vehicles (such as construction equipment and boats) contribute about 22% of all CO emissions nationwide. Other sources of CO emissions include industrial processes, residential wood burning, and natural sources such as forest fires.

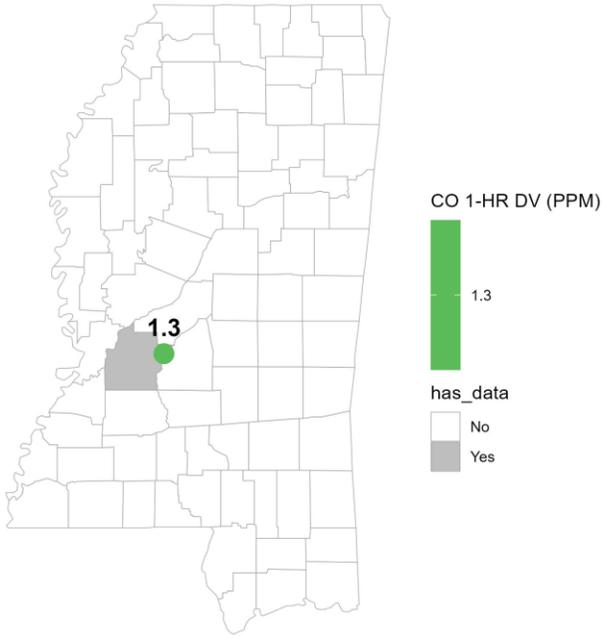
## **Carbon Monoxide Standards**

There are two primary CO standards - (1) the 8-Hour Average and (2) the 1-Hour Standard. There are no secondary CO standards. MDEQ monitors CO continuously at the at the N-CORE site located in Jackson.

### **Primary 8-Hour and 1-Hour Standard – 9 ppm and 35 ppm, respectively**

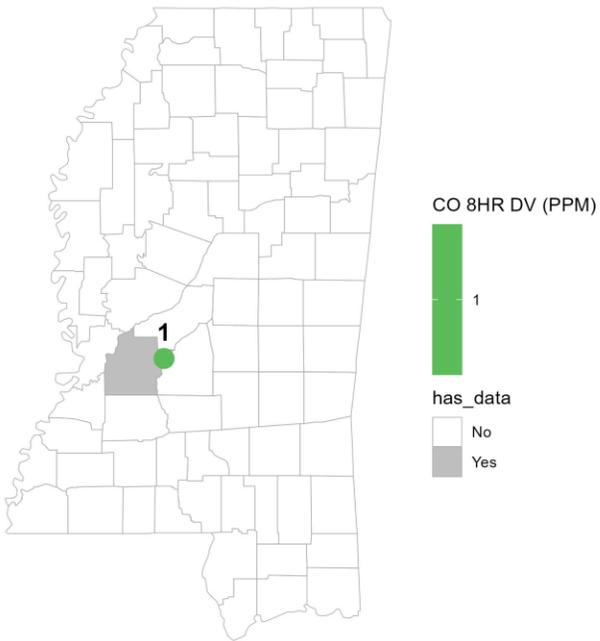
The 8-hour average standard is met if the 8-hour average of 9 parts per million (ppm) is not exceeded more than once per year. The 1-hour average standard is met if the 1-hour average of 35 parts per million (ppm) is not exceeded more than once per year.

### CO 1-HR 2022 Design Value



CO Site	County	Year	CO 1-HR 2022 Design Value
Jackson NCORE	Hinds	2022	1.3

### CO 8-HR 2022 Design Value



CO Site	County	Year	CO 8-HR 2022 Design Value
Jackson NCORE	Hinds	2022	1

# Nitrogen Dioxide

Nitrogen dioxide (NO<sub>2</sub>) can often be seen as a reddish-brown layer. Nitrogen dioxide forms when fuel is burned at high temperatures, as in a combustion process. The primary manmade sources of nitrogen dioxide are motor vehicles, electric utilities, and other industrial, commercial, and residential sources that burn fuels. It can also be formed naturally.

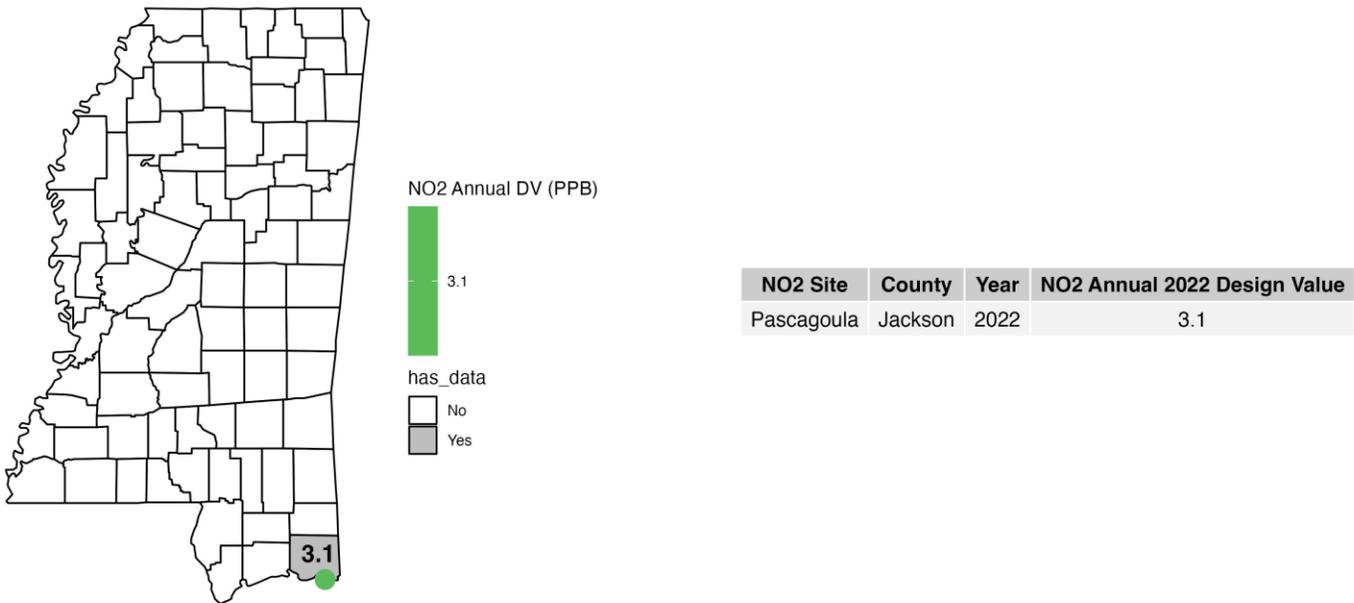
## Nitrogen Dioxide Standards

There are two NO<sub>2</sub> standards - (1) the Primary and Secondary Annual Average and (2) the Primary 1-Hour Average. MDEQ monitors nitrogen dioxide continuously at the monitoring site in Pascagoula.

### Primary and Secondary Annual Standard – 53 ppb

The annual average NO<sub>2</sub> standard is met when the annual average does not exceed 53 parts per billion (ppb).

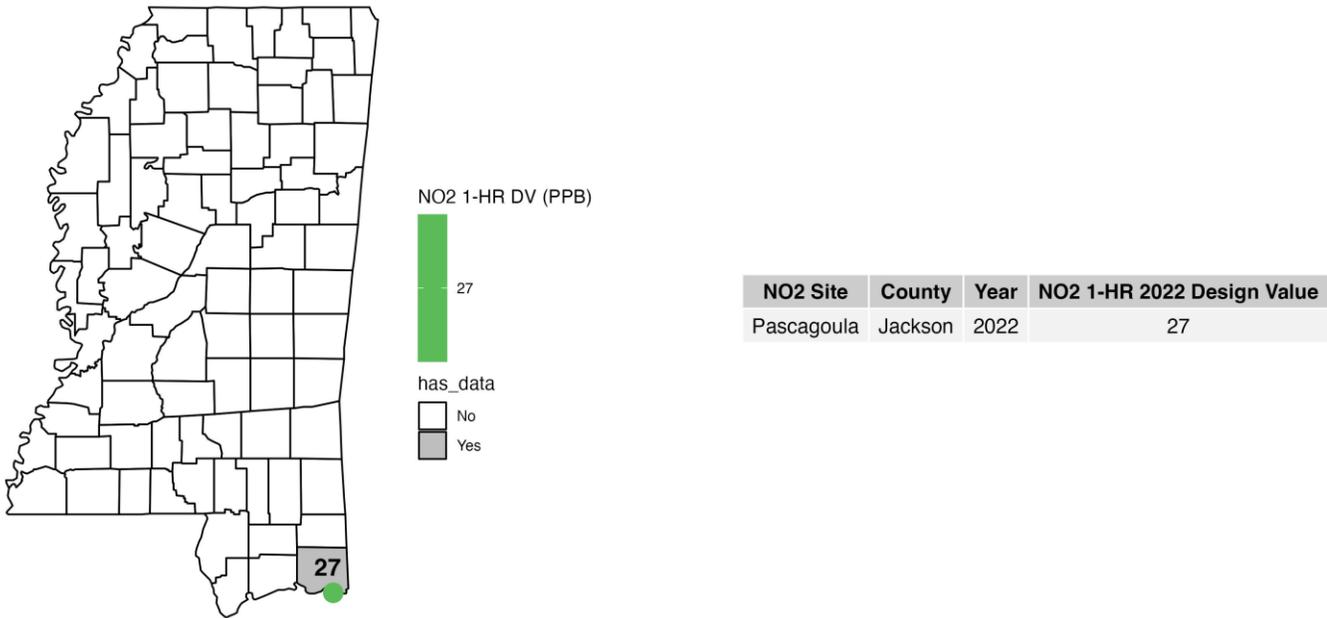
NO2 2022 Annual Design Value



## Primary 1-Hour Standard – 100 ppb

The 1-hour average NO<sub>2</sub> standard is met when the three-year average of the annual 98<sup>th</sup> percentiles of the 24-hour averages does not exceed 100 parts per billion (ppb).

NO2 1-HR 2022 Design Value



# Sulfur Dioxide

Sulfur dioxide (SO<sub>2</sub>) belongs to the family of sulfur oxide gases (SO<sub>x</sub>). These gases dissolve easily in water. Sulfur is prevalent in all raw materials, including crude oil, coal, and ore that contain common metals like aluminum, copper, zinc, lead, and iron. SO<sub>x</sub> gases are formed when fuel containing sulfur, such as coal and oil is burned, and when gasoline is extracted from oil and metals are extracted from the ore. SO<sub>2</sub> dissolves in water vapor to form acid and interacts with other gases and particles in the air to form sulfates and other products that can be harmful to people and their environment.

Over 49% of SO<sub>2</sub> released to the air comes from electric utilities, especially those that burn coal. Other sources of SO<sub>2</sub> are industrial facilities that derive their products from raw materials like metallic ore, coal, and crude oil, or that burn coal or oil to produce process heat. Examples are petroleum refineries, cement manufacturing, and metal processing facilities.

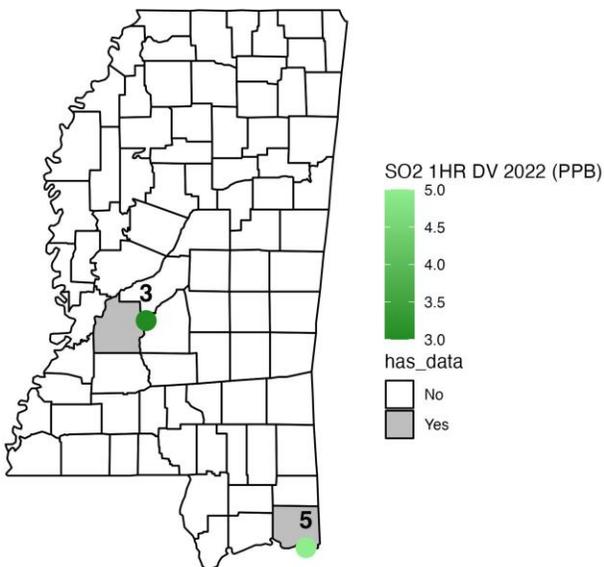
## Sulfur Dioxide Standards

There are two SO<sub>2</sub> standards – (1) the Primary 1-Hour average and (2) the Secondary 3-hour average. MDEQ monitors SO<sub>2</sub> continuously at the monitoring sites listed below.

### Primary 1-Hour Standard – 75 ppb

The 1-hour average SO<sub>2</sub> standard is met when the three-year average of the annual 99<sup>th</sup> percentiles of the 1-hour averages does not exceed 75 parts per billion (ppb).

SO2 1-HR 2022 Design Value

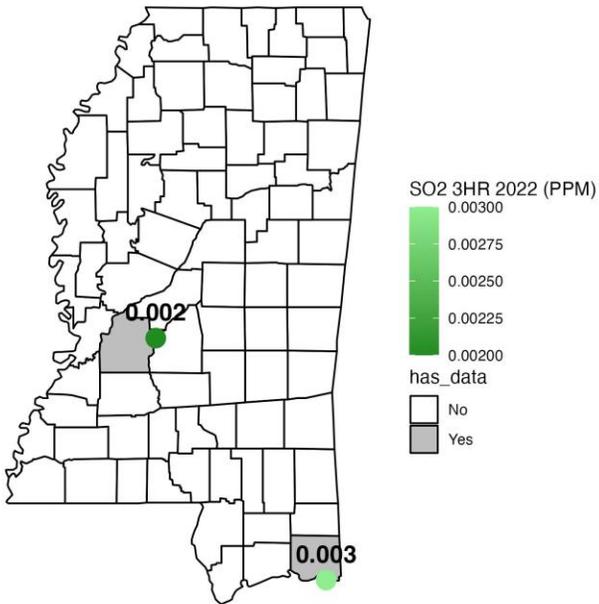


SO2 Site	County	Year	SO2 1-HR 2022 Design Value
Jackson NCORE	Hinds	2022	3
Pascagoula	Jackson	2022	5

## Secondary 3-Hour Standard – 0.5 ppm

The secondary 3-hour average SO<sub>2</sub> standard is met when the maximum 3-hour average concentration of 0.5 parts per million (ppm) is not exceeded more than once per calendar year.

SO2 3-HR 2022 Design Value

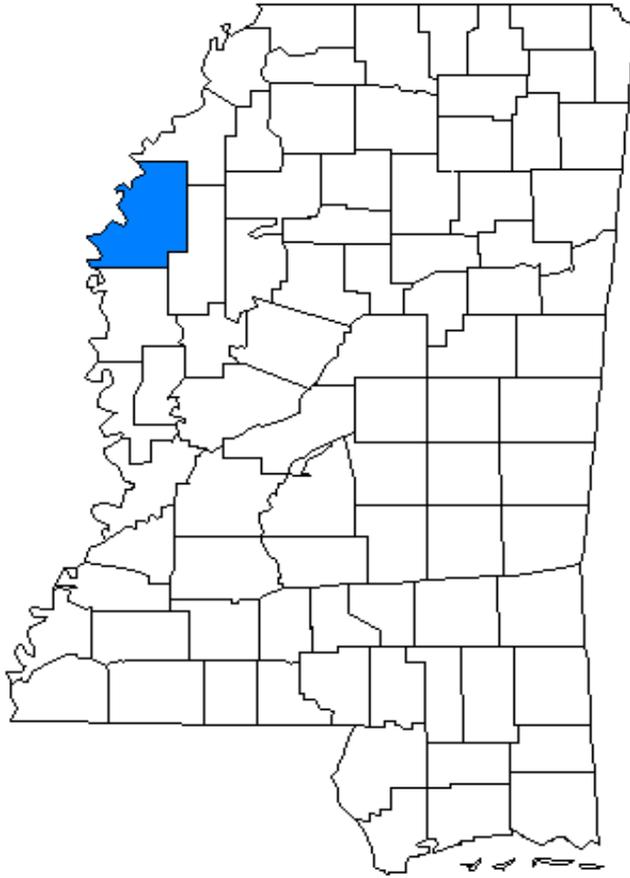


SO2 Site	County	Year	SO2 3-HR 2022 Design Value
Jackson NCORE	Hinds	2022	0.002
Pascagoula	Jackson	2022	0.003

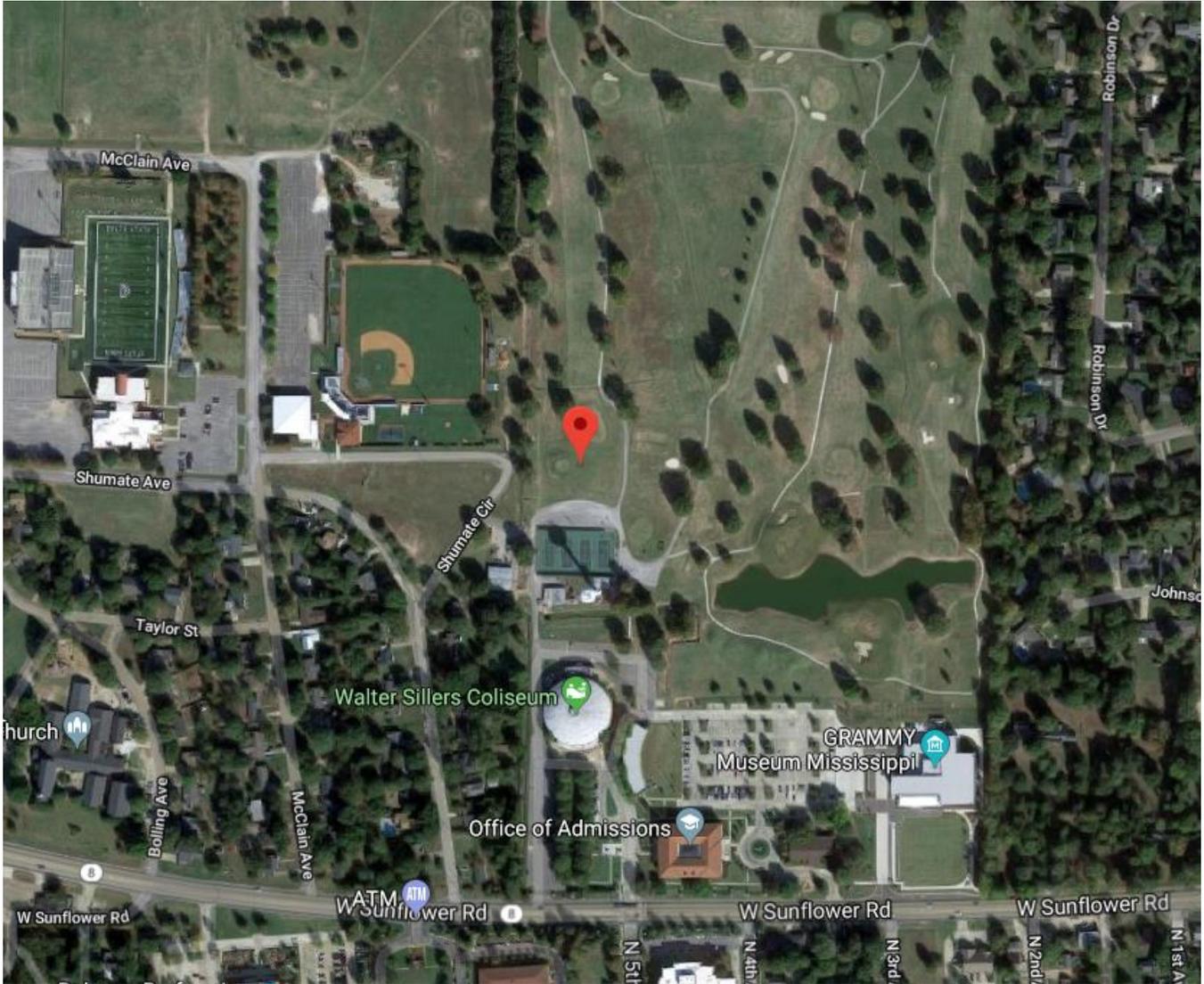
# Appendix 1

## 10-Year Data Trends By County

# Bolivar County

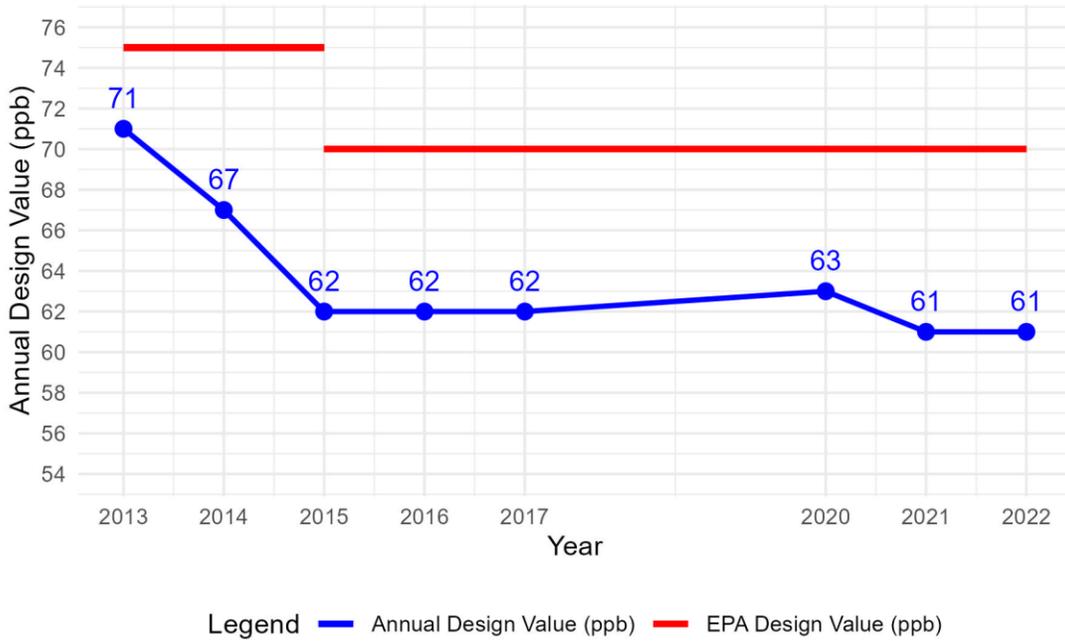


**Bolivar County**  
**Monitoring Site No. 28-011-0002**  
**Location**

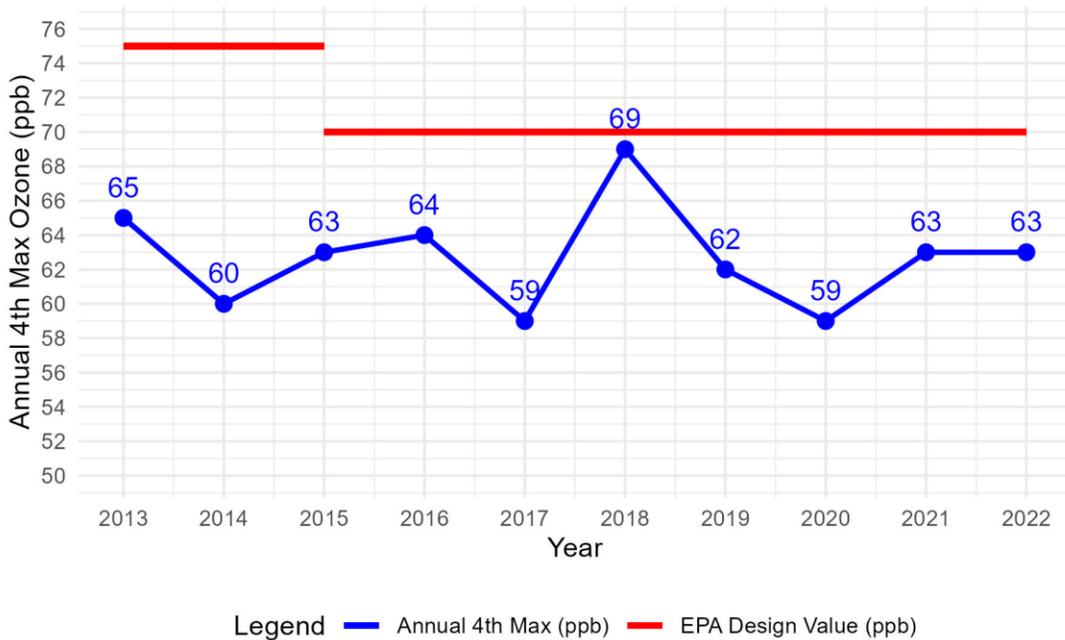


# Bolivar County 8-Hour Ozone Standard

Bolivar County - Cleveland Site Annual Ozone Design Values



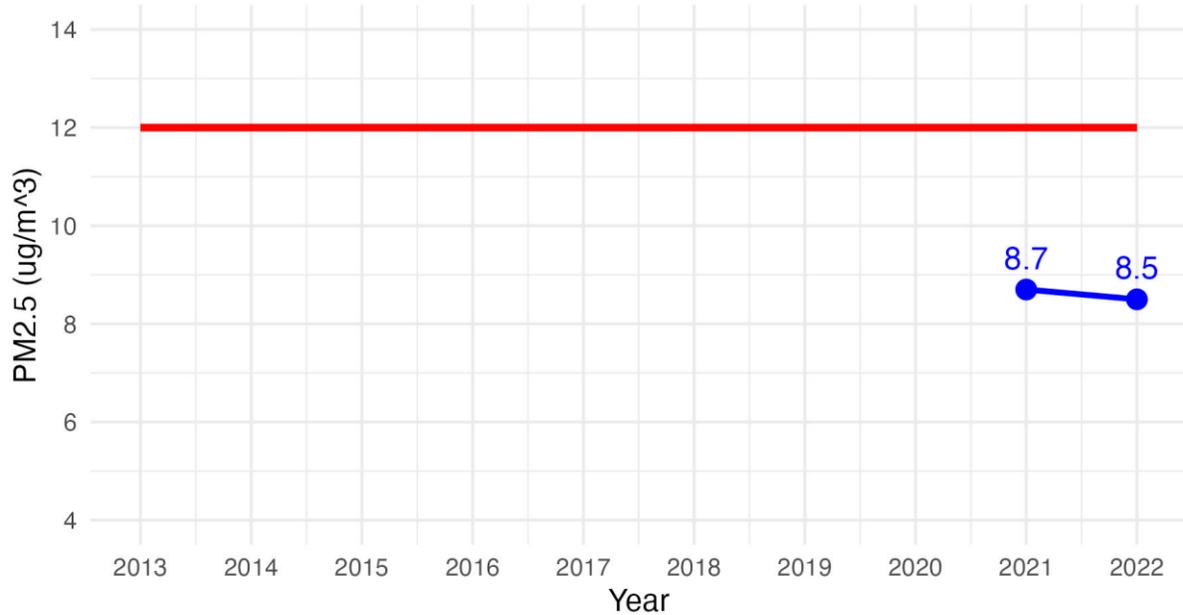
Bolivar County - Cleveland Annual 4th Max Ozone



**\*With EPA approval, the 213 N. Bayou Ave. monitoring site in Cleveland, MS (Monitoring Site ID 28-011-0001) was shut down in January 2018 and relocated to Highway 8 West on the Delta State University campus, also in Cleveland, MS, in February 2018. This new site (Monitoring Site ID 28-011-0002) is located at latitude 33.750833 and longitude -90.734167.**

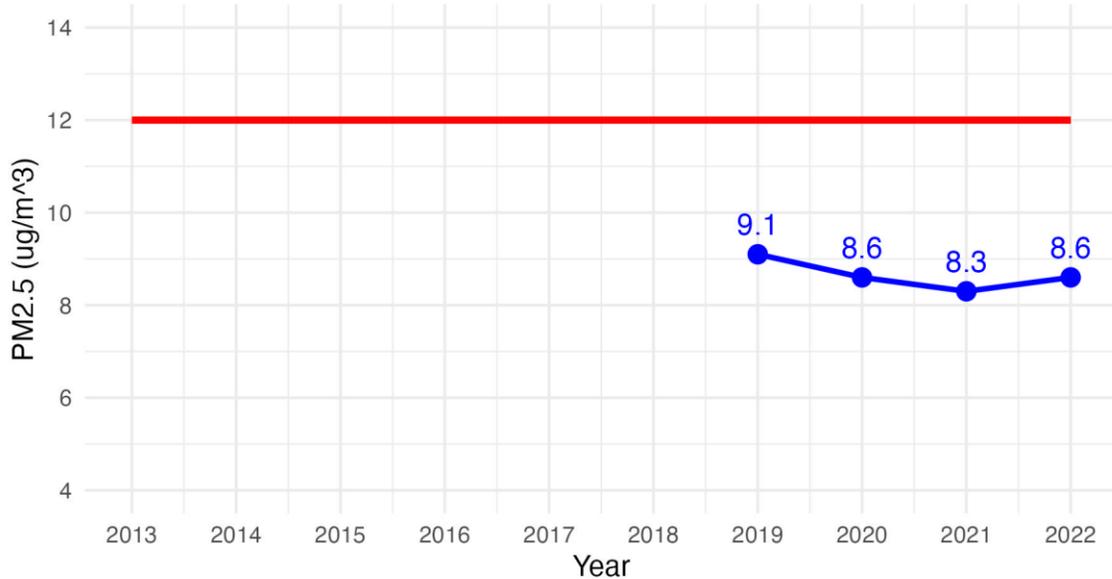
# Bolivar County Annual PM<sub>2.5</sub> Standard

## Bolivar County - Cleveland Delta State - Annual Design Value



Legend ● Annual Design Value ( $\mu\text{g}/\text{m}^3$ ) ● EPA Design Value ( $\mu\text{g}/\text{m}^3$ )

## Bolivar County - Cleveland Delta State - Annual Mean



Legend ● Annual Mean ( $\mu\text{g}/\text{m}^3$ ) ● EPA Design Value ( $\mu\text{g}/\text{m}^3$ )

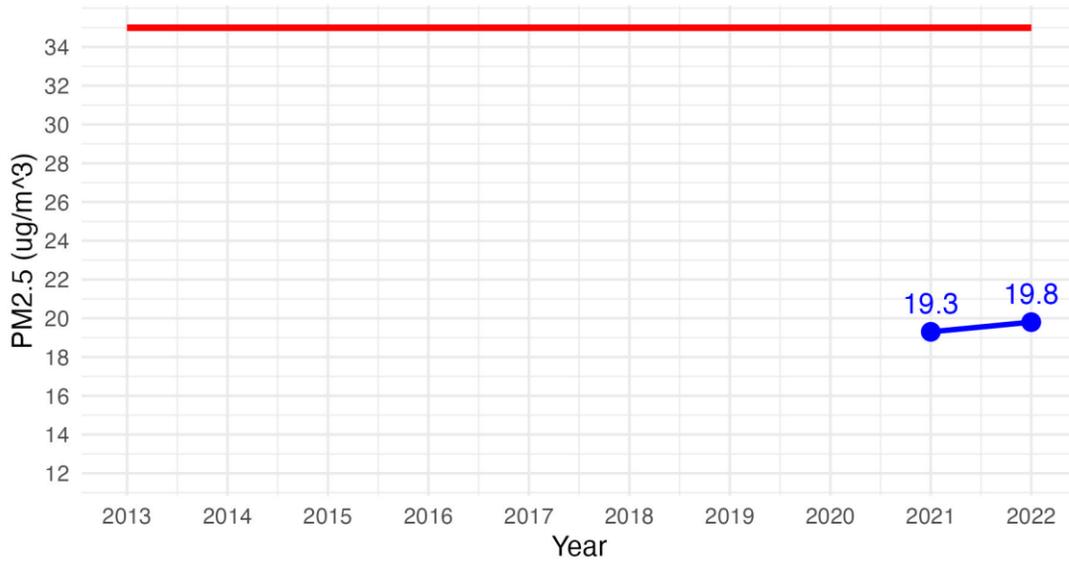
**\*Beginning January 2019, MDEQ incorporated Federally Equivalent Method instruments for measuring PM<sub>2.5</sub> on a continuous basis to determine NAAQS compliance at the Cleveland air monitoring site.**

# Bolivar County

## PM<sub>2.5</sub>

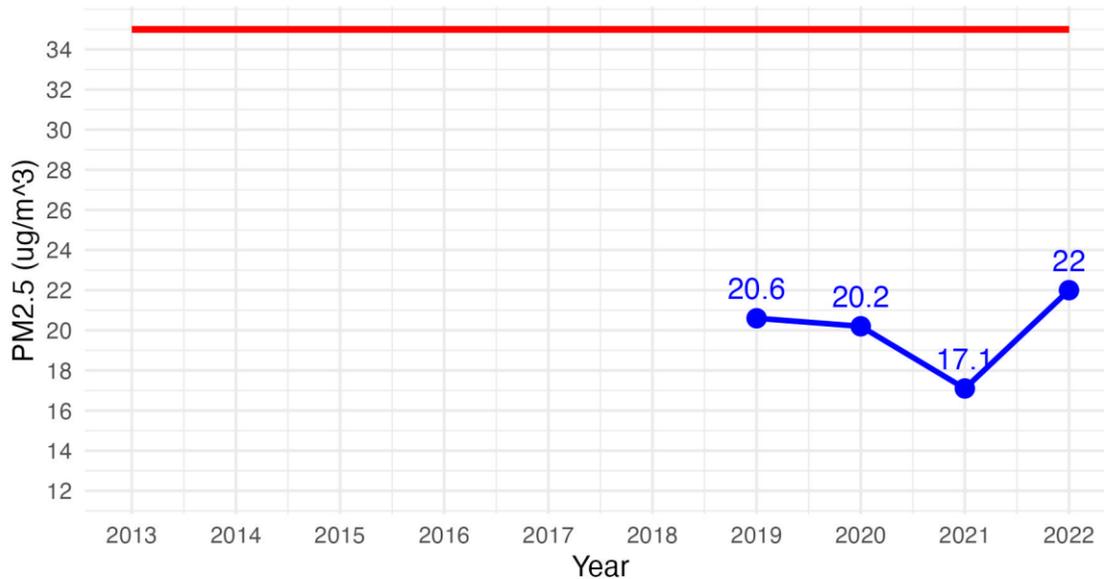
### 24-Hour Averages

Bolivar County - Cleveland Delta State 98th Percentile Design Value



Legend ● 98th Percentile DV (ug/m<sup>3</sup>) ● EPA Design Value (ug/m<sup>3</sup>)

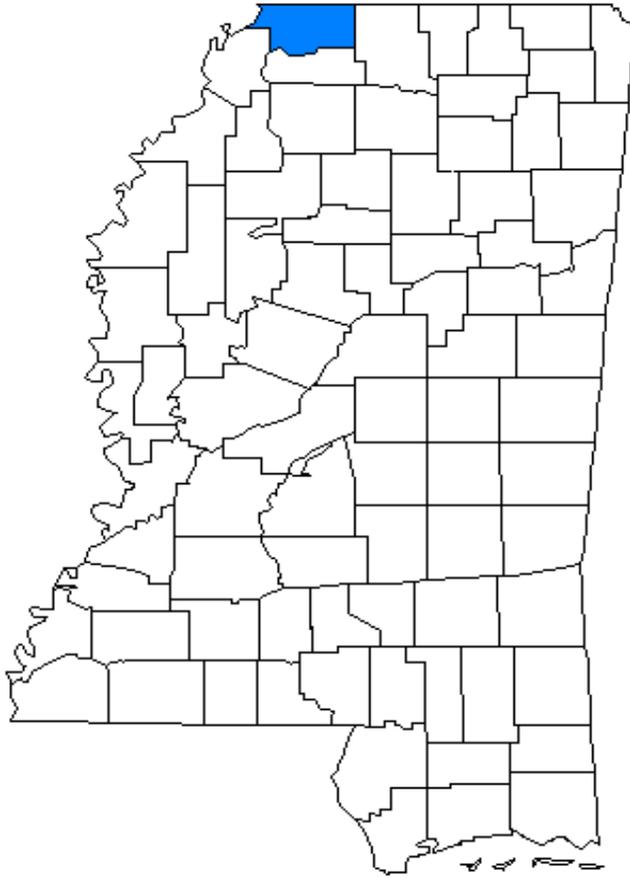
Bolivar County - Cleveland Delta State Annual 98th Percentile



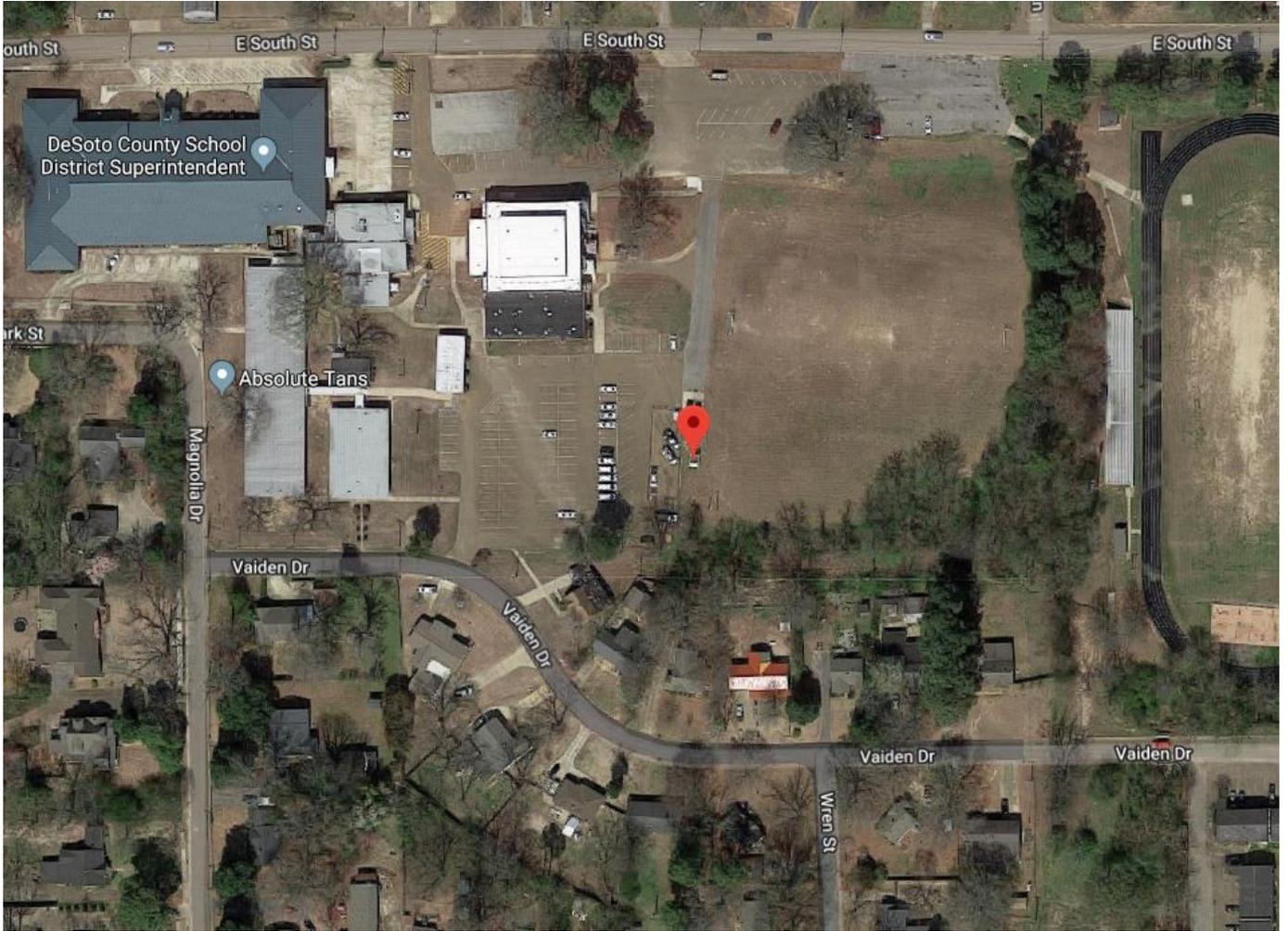
Legend ● Annual 98th Percentile (ug/m<sup>3</sup>) ● EPA Design Value (ug/m<sup>3</sup>)

**\*Beginning January 2019, MDEQ incorporated Federally Equivalent Method instruments for measuring PM<sub>2.5</sub> on a continuous basis to determine NAAQS compliance at the Cleveland air monitoring site.**

# DeSoto County

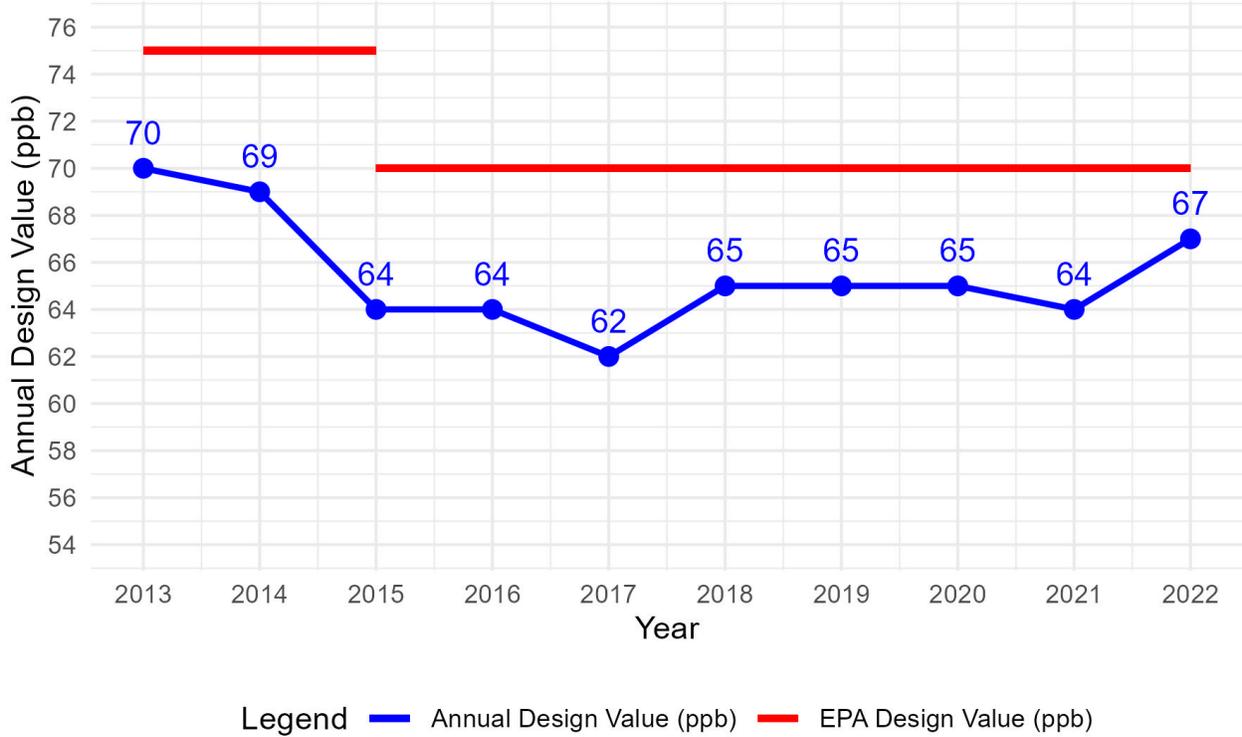


**DeSoto County**  
**Monitoring Site No. 28-033-0002**  
**Location**

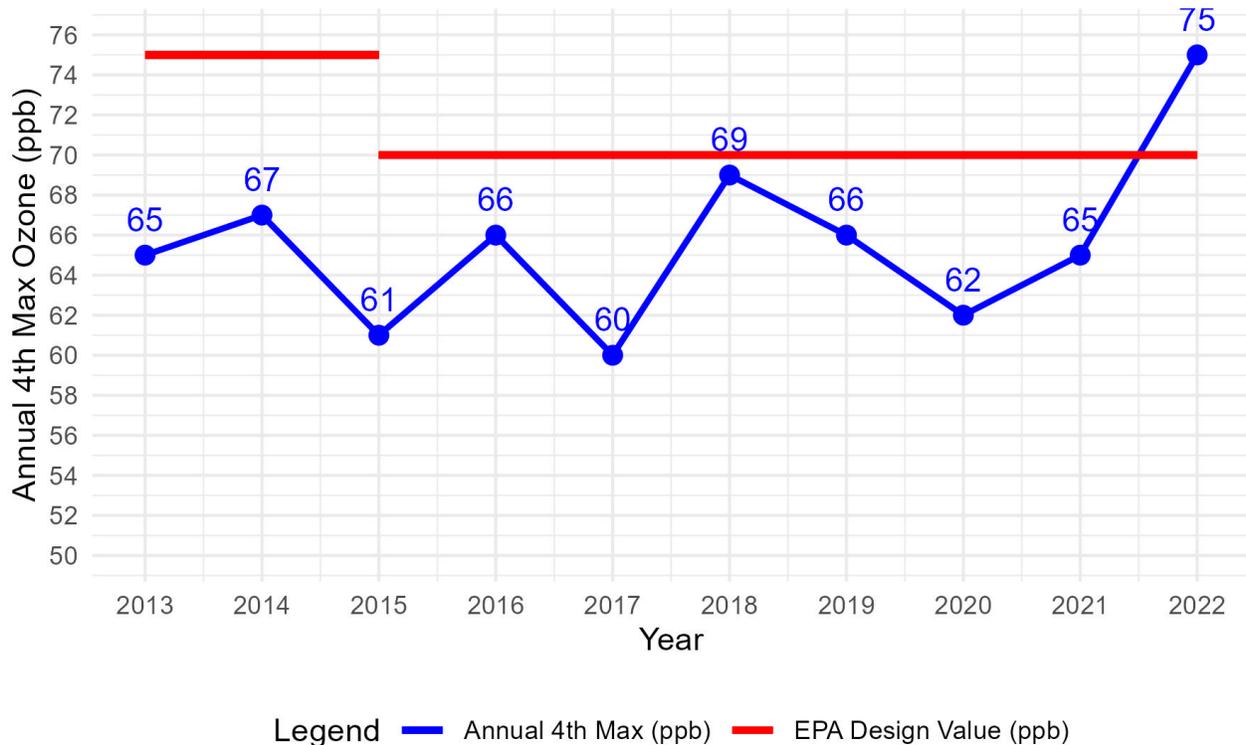


# DeSoto County 8-Hour Ozone

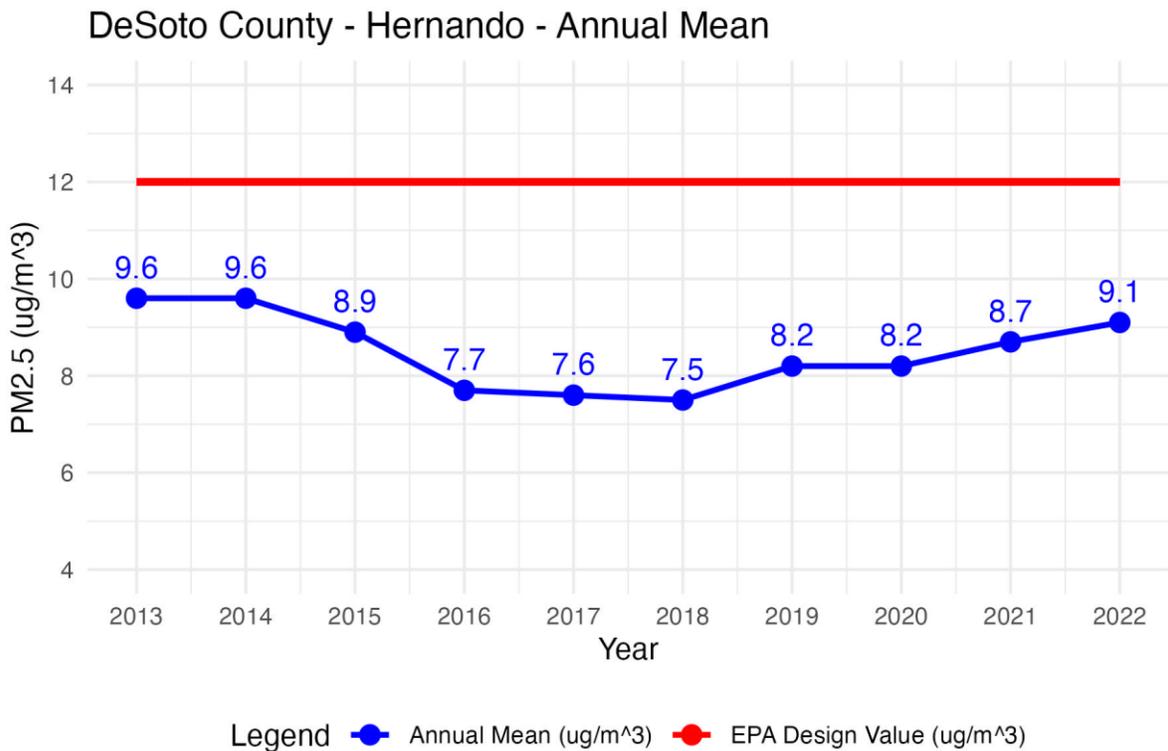
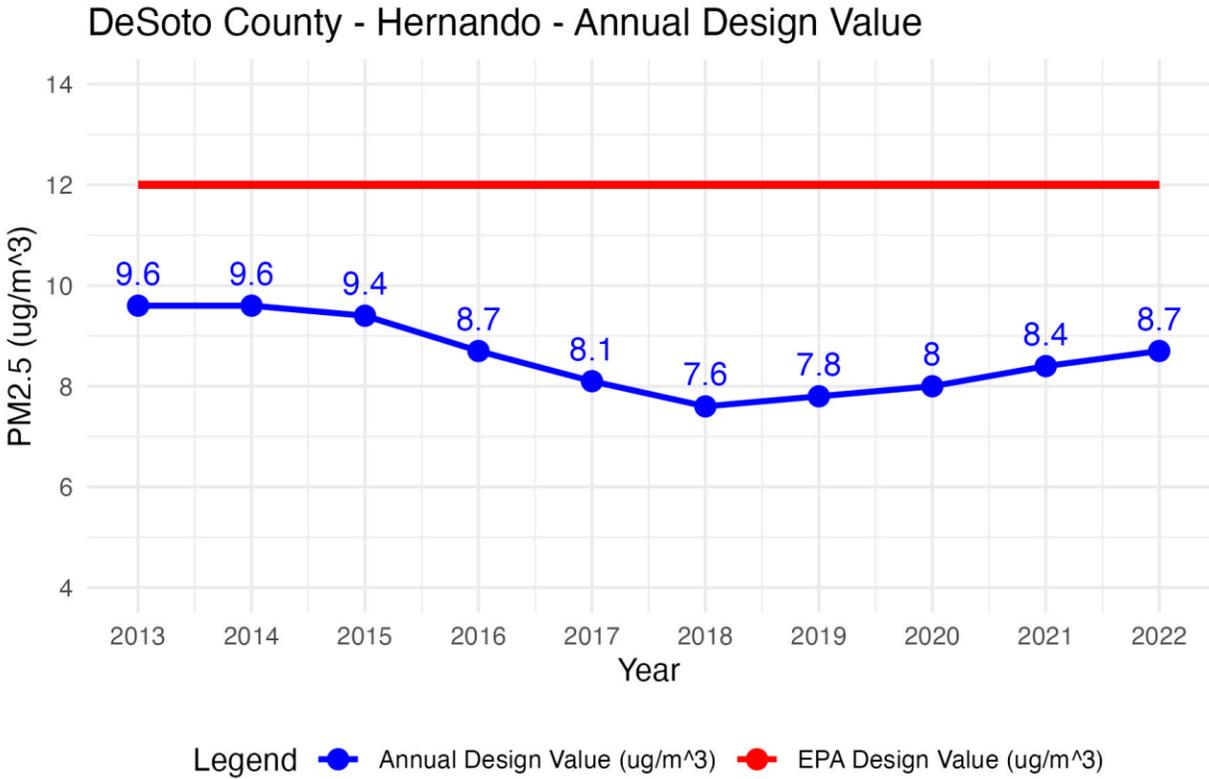
## DeSoto County - Hernando Site Annual Ozone Design Values



## DeSoto County - Hernando Annual 4th Max Ozone

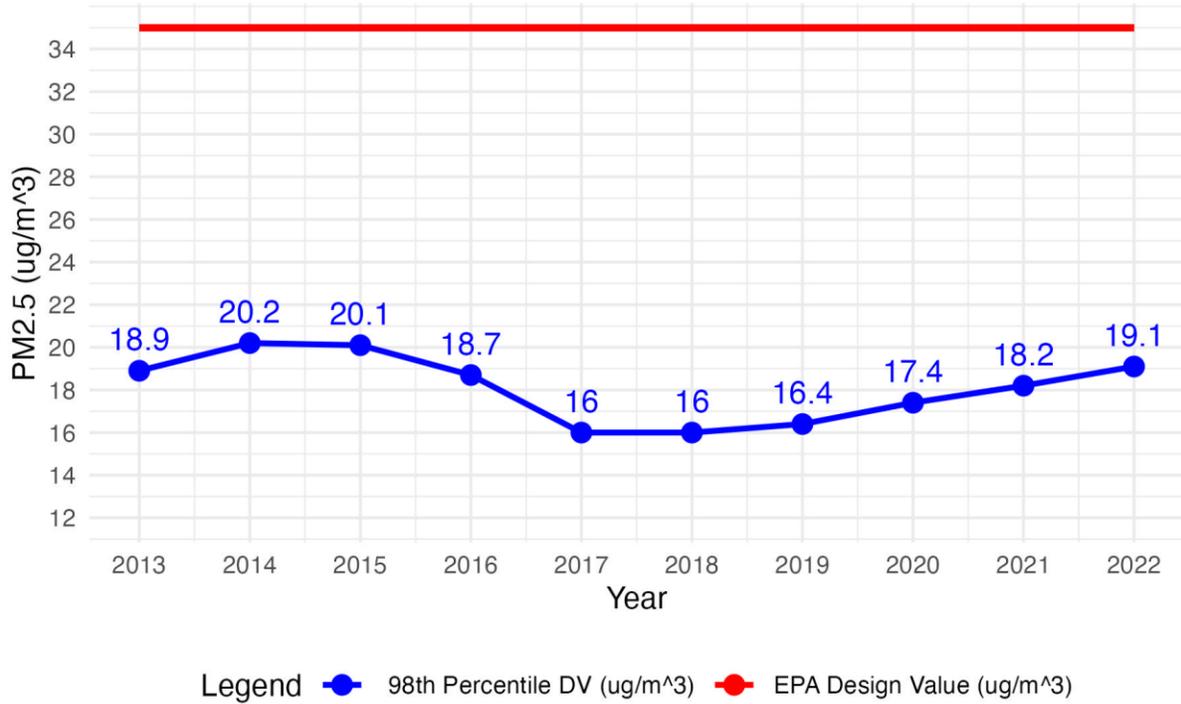


**DeSoto County**  
**PM<sub>2.5</sub>**  
**Annual Mean**

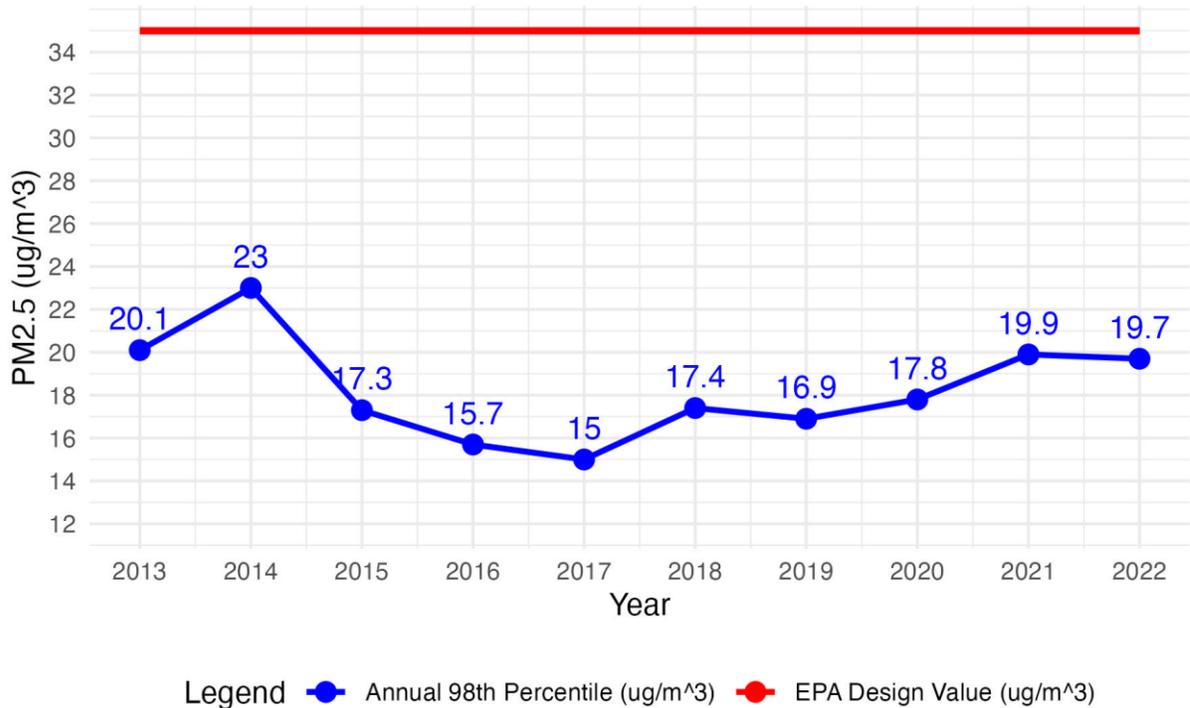


**DeSoto County**  
**PM<sub>2.5</sub>**  
**24-Hour Average**

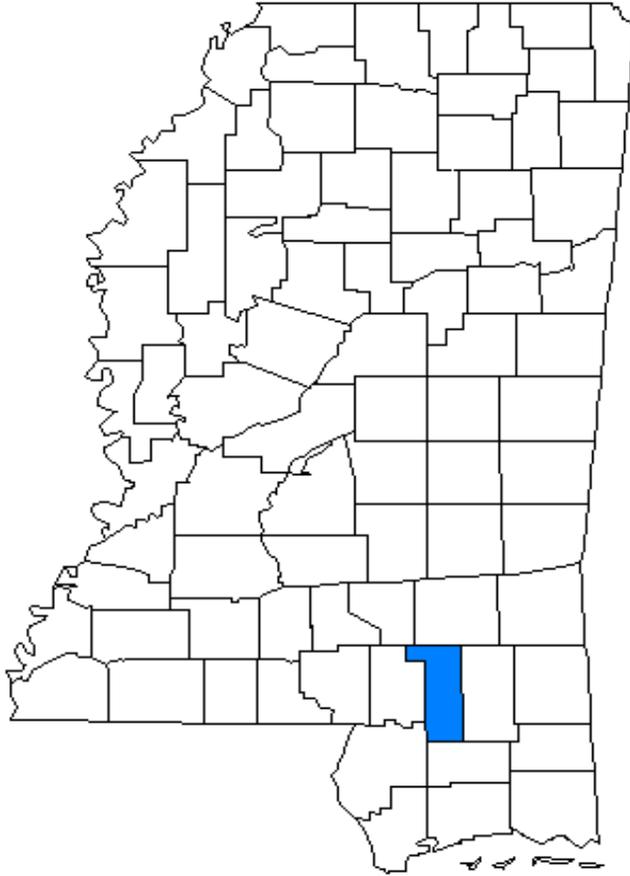
DeSoto County - Hernando 98th Percentile Design Value



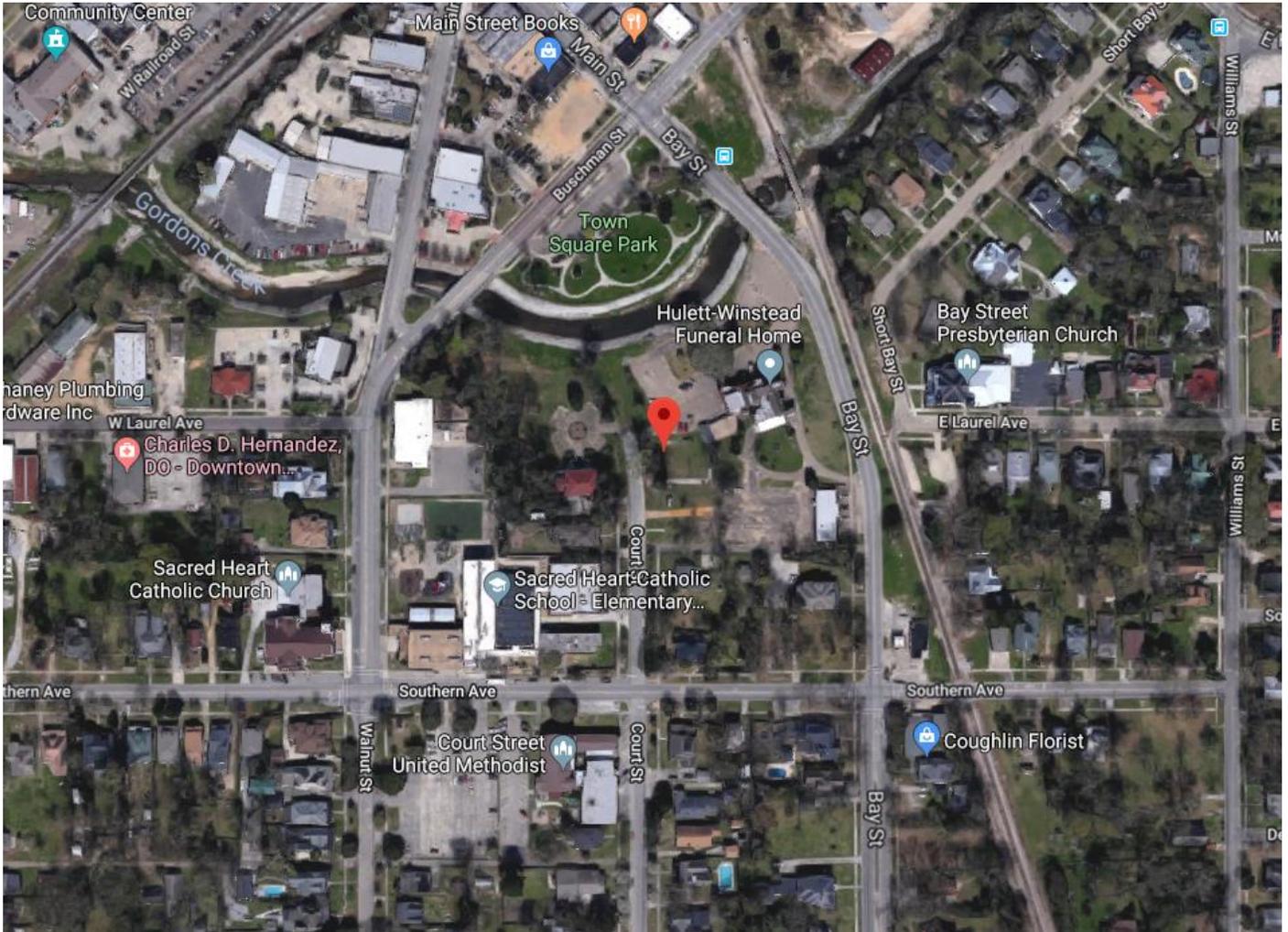
DeSoto County - Hernando Annual 98th Percentile



# Forrest County

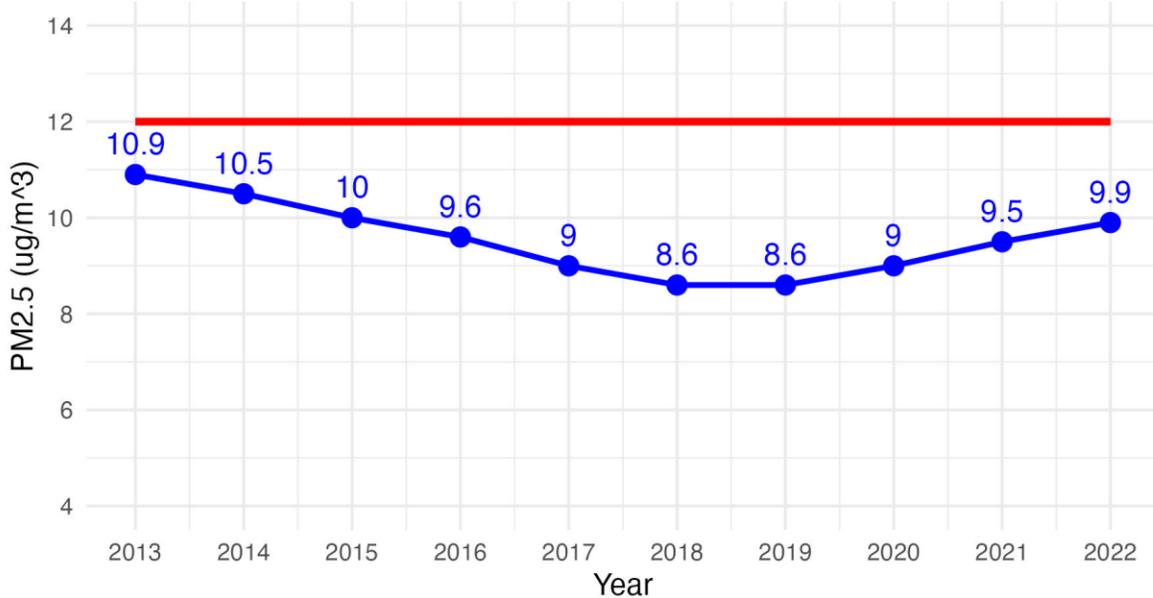


**Forrest County**  
**Monitoring Site No. 28-035-0004**  
**Location**



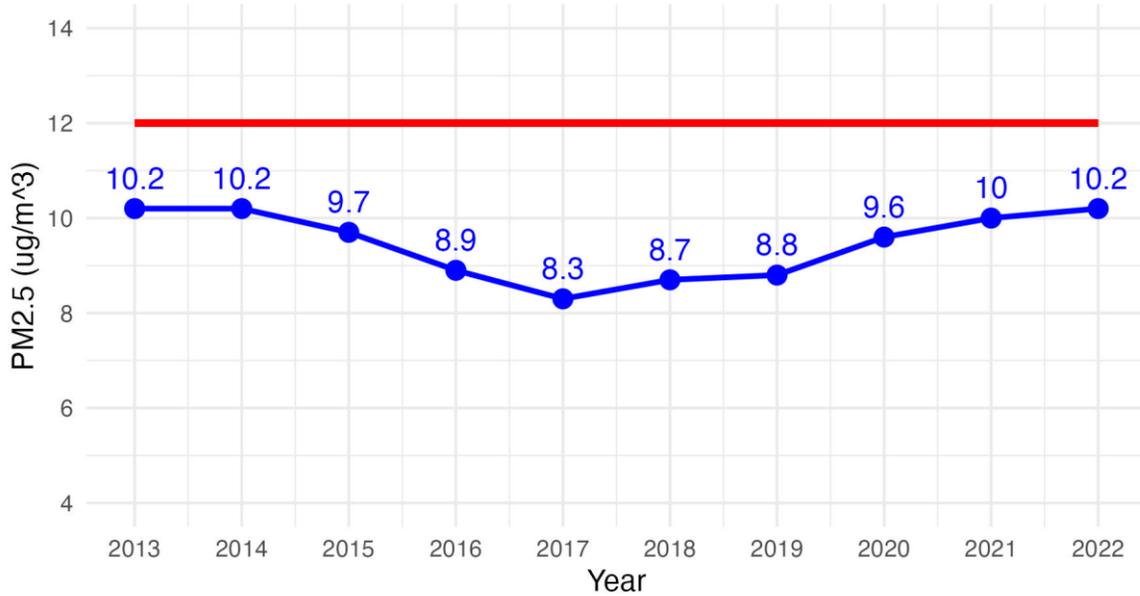
**Forrest County**  
**PM<sub>2.5</sub>**  
**Annual Mean**

Forrest County - Hattiesburg - Annual Design Value



Legend ● Annual Design Value (ug/m<sup>3</sup>) ● EPA Design Value (ug/m<sup>3</sup>)

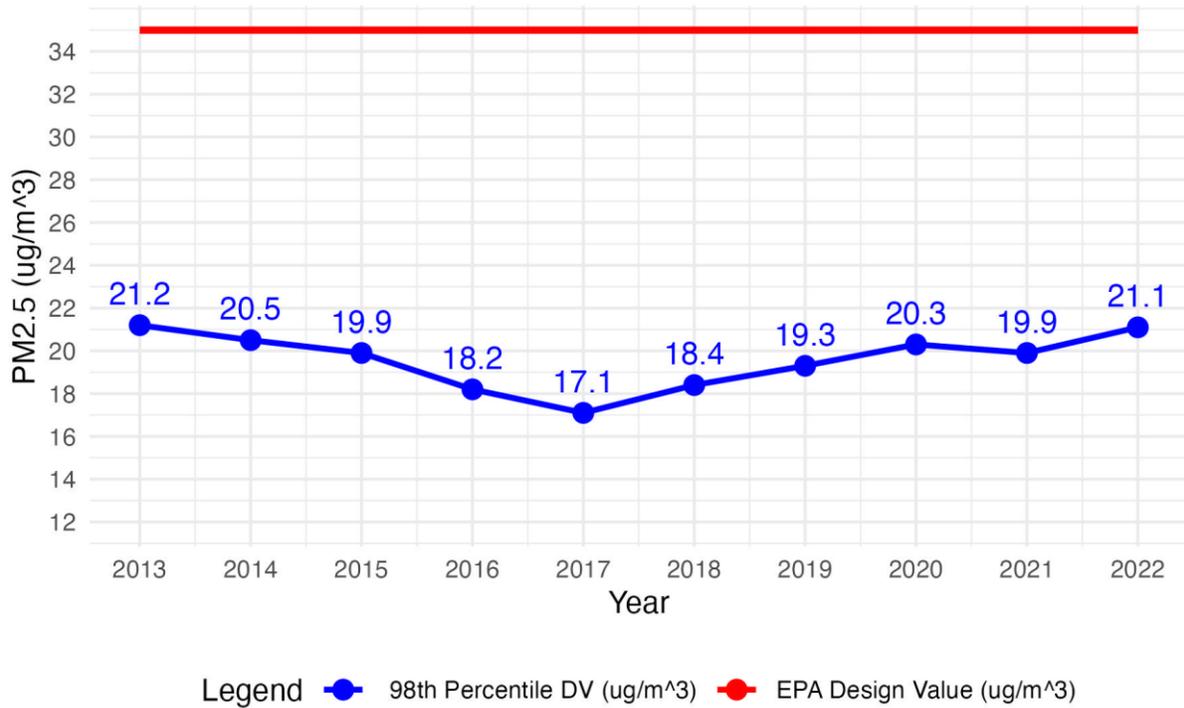
Forrest County - Hattiesburg - Annual Mean



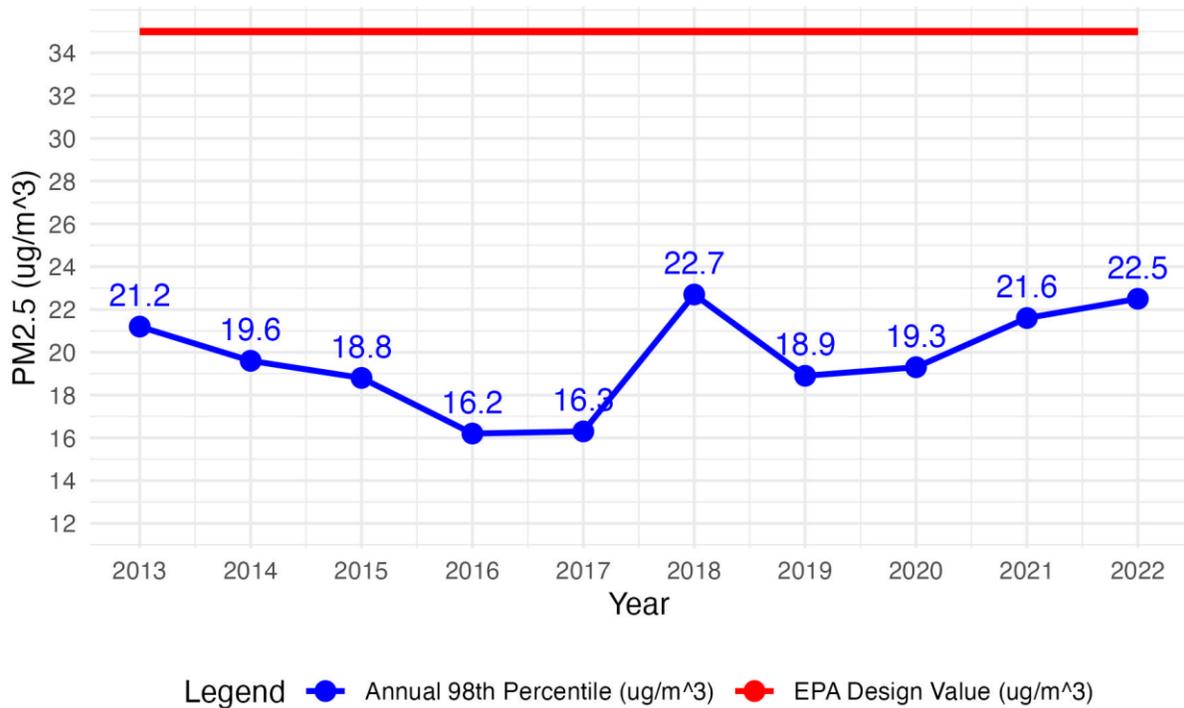
Legend ● Annual Mean (ug/m<sup>3</sup>) ● EPA Design Value (ug/m<sup>3</sup>)

# Forrest County PM<sub>2.5</sub> 24-Hour Average

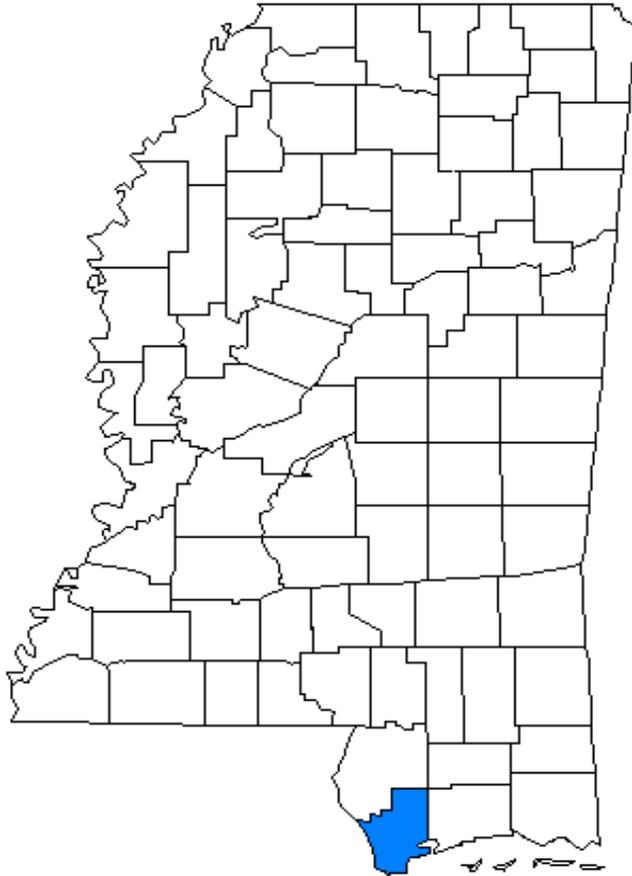
Forrest County - Hattiesburg 98th Percentile Design Value



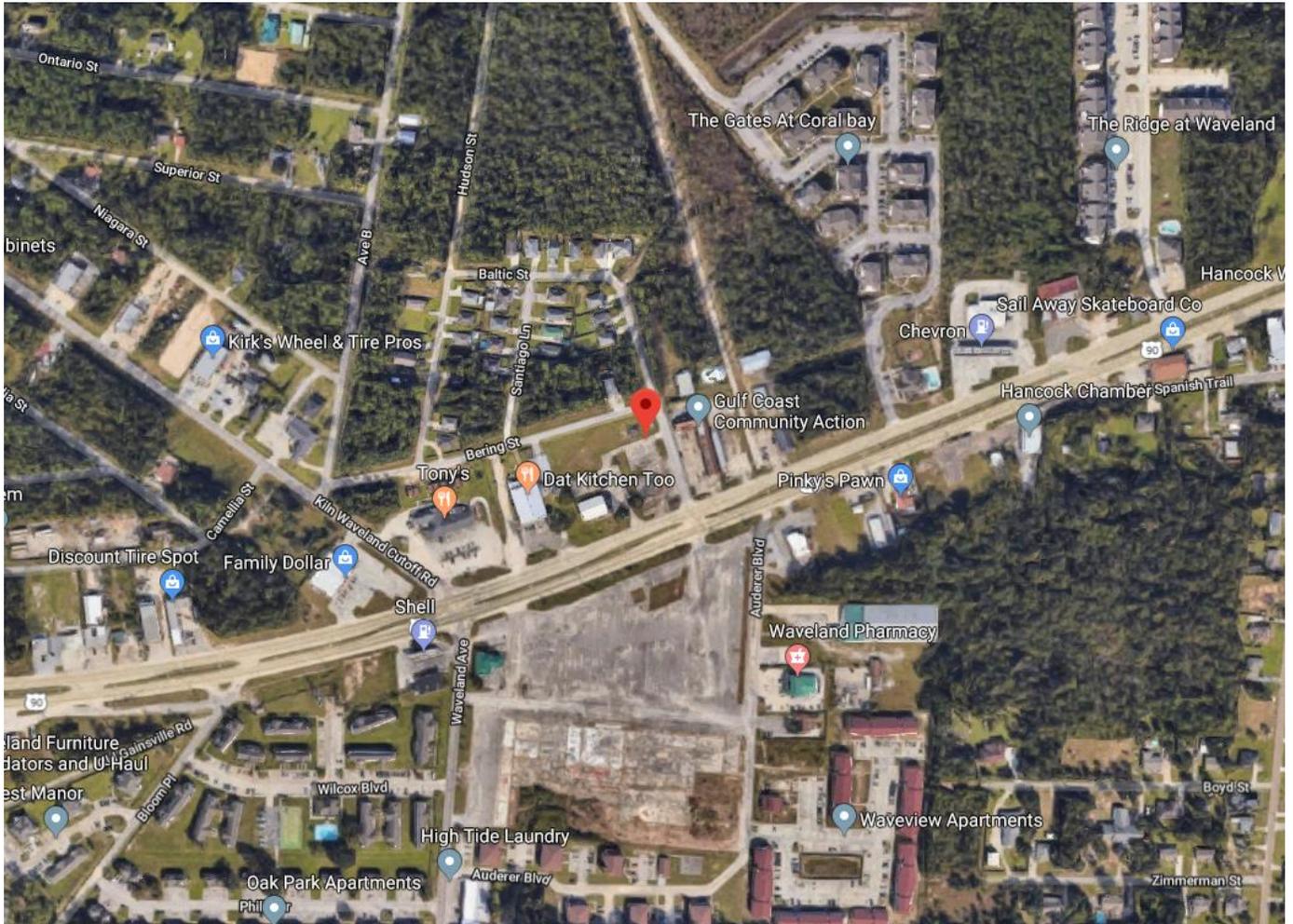
Forrest County - Hattiesburg Annual 98th Percentile



# Hancock County

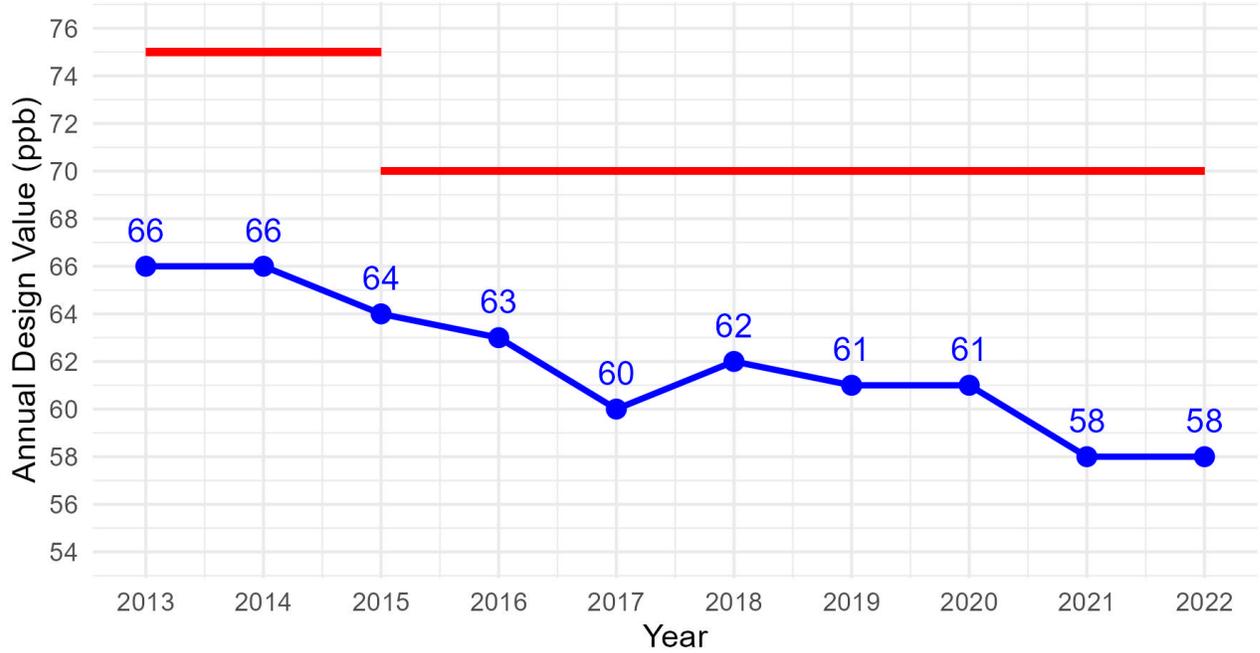


**Hancock County**  
**Monitoring Site No. 28-045-0003**  
**Location**



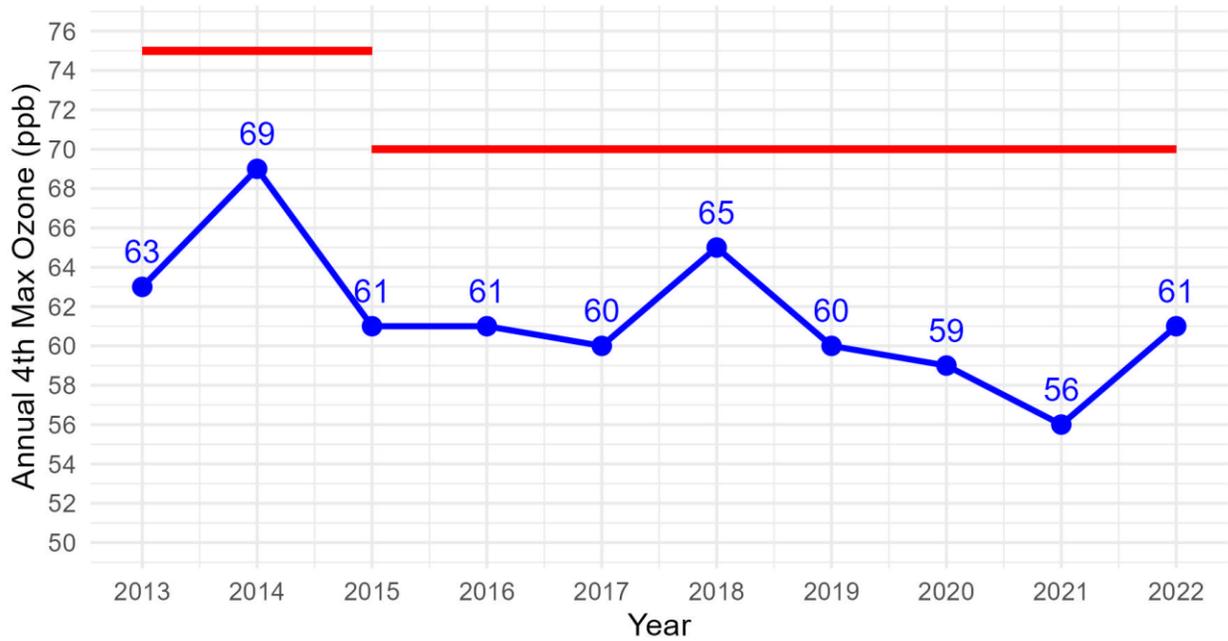
## Hancock County 8-Hour Ozone

### Hancock County - Waveland Site Annual Ozone Design Values



Legend — Annual Design Value (ppb) — EPA Design Value (ppb)

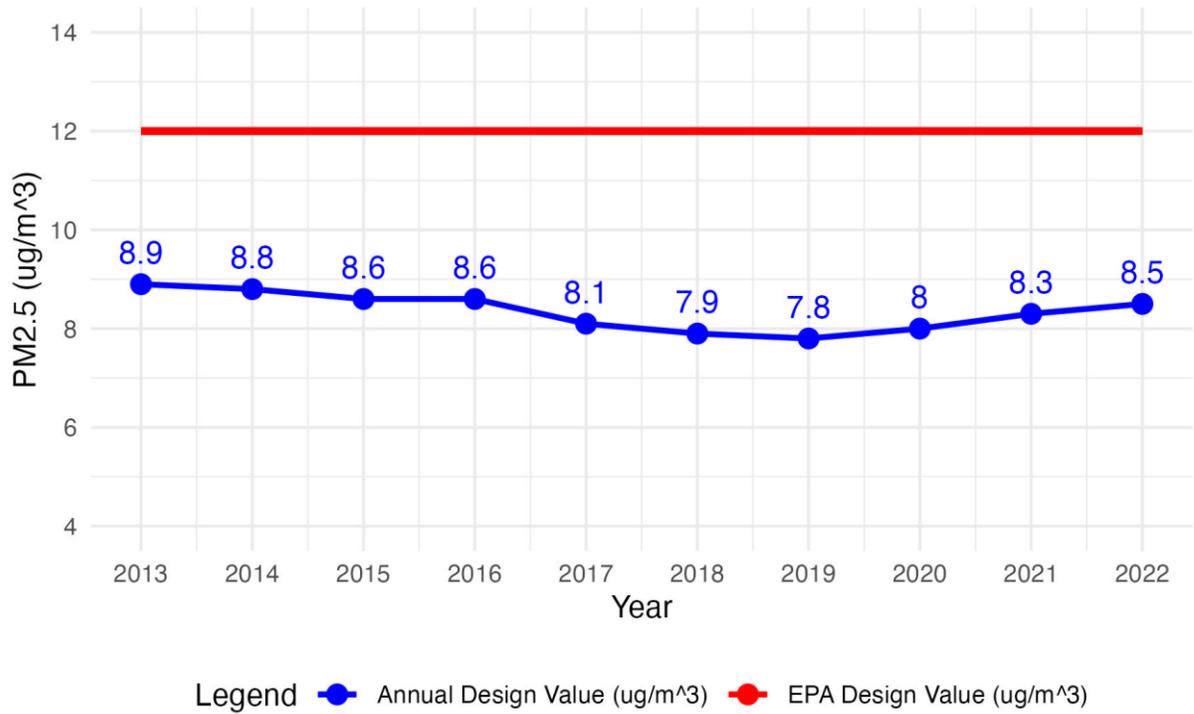
### Hancock County - Waveland Annual 4th Max Ozone



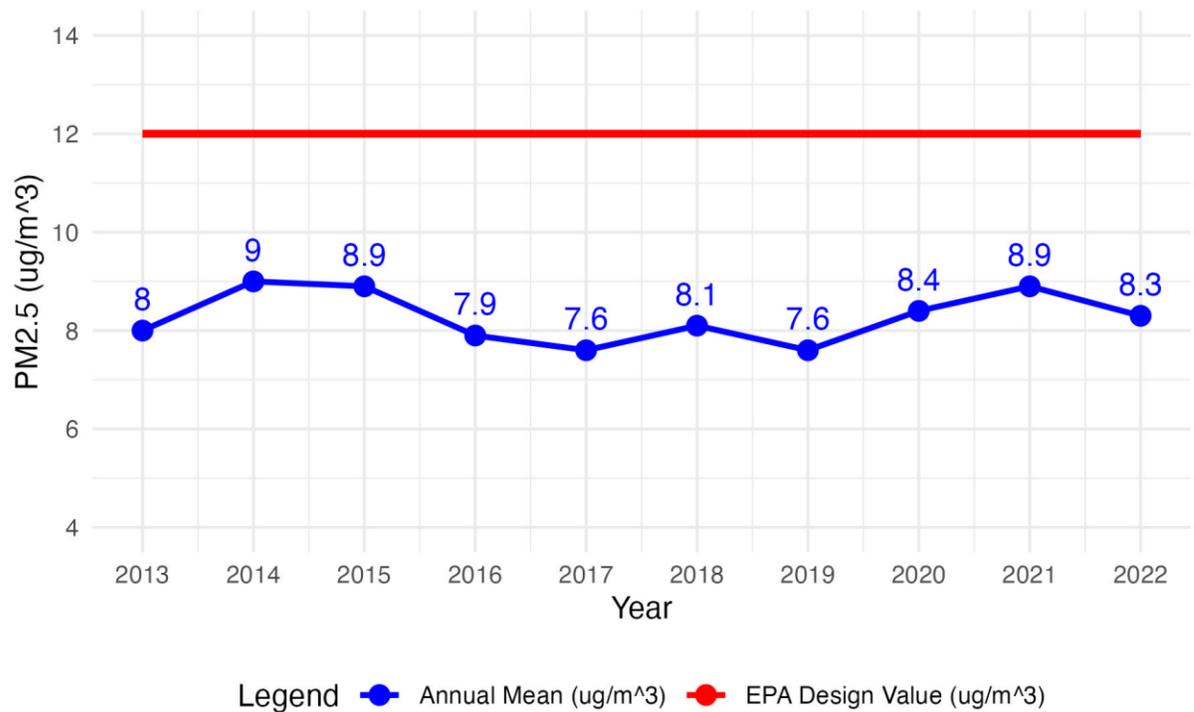
Legend — Annual 4th Max (ppb) — EPA Design Value (ppb)

# Hancock County PM<sub>2.5</sub> Annual Mean

### Hancock County - Waveland - Annual Design Value

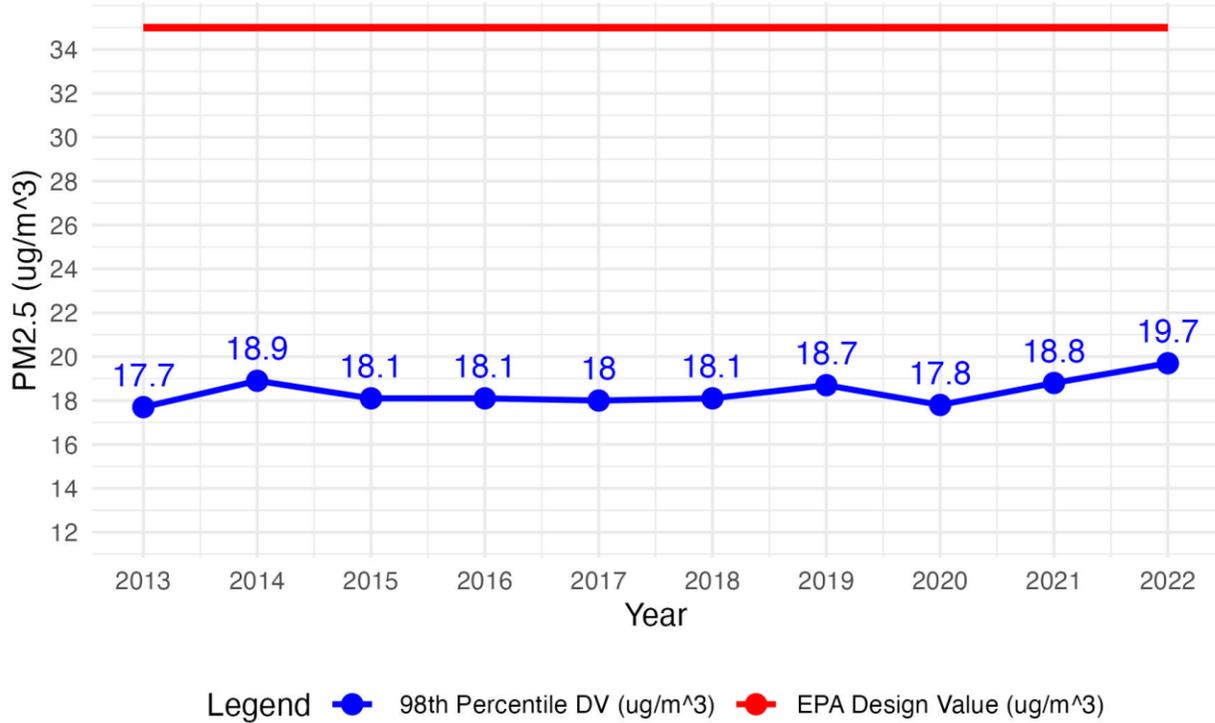


### Hancock County - Waveland - Annual Mean

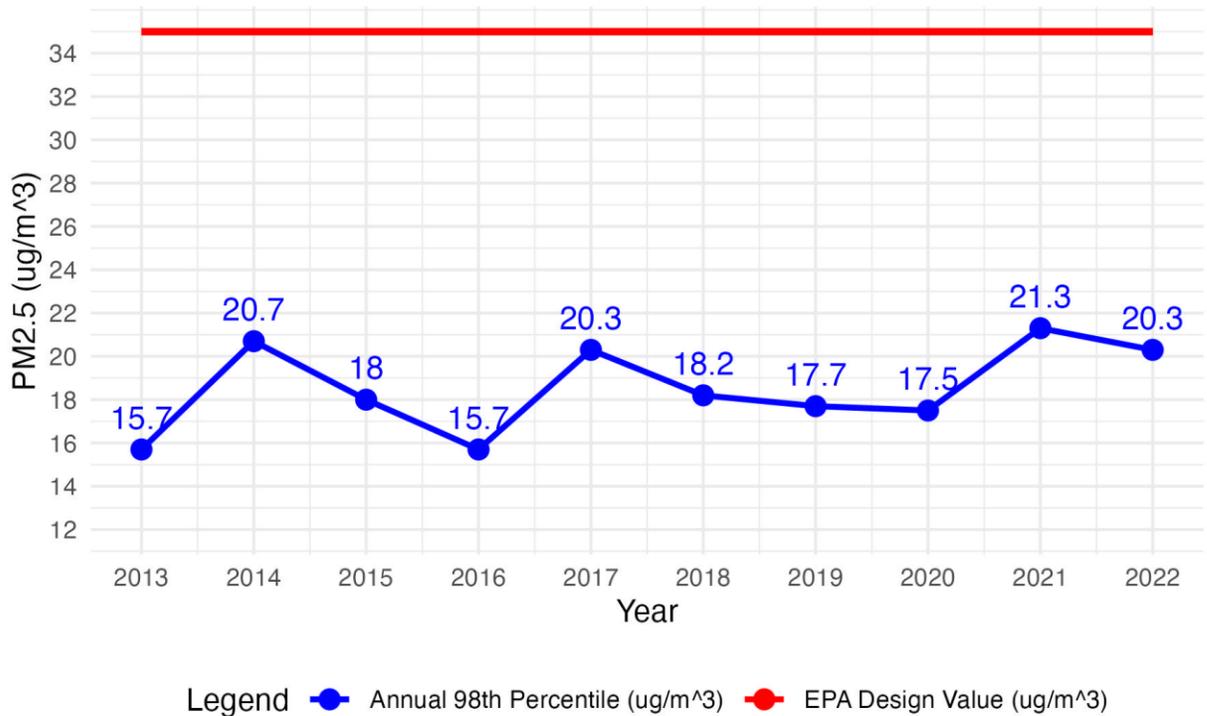


# Hancock County PM<sub>2.5</sub> 24-Hour Average

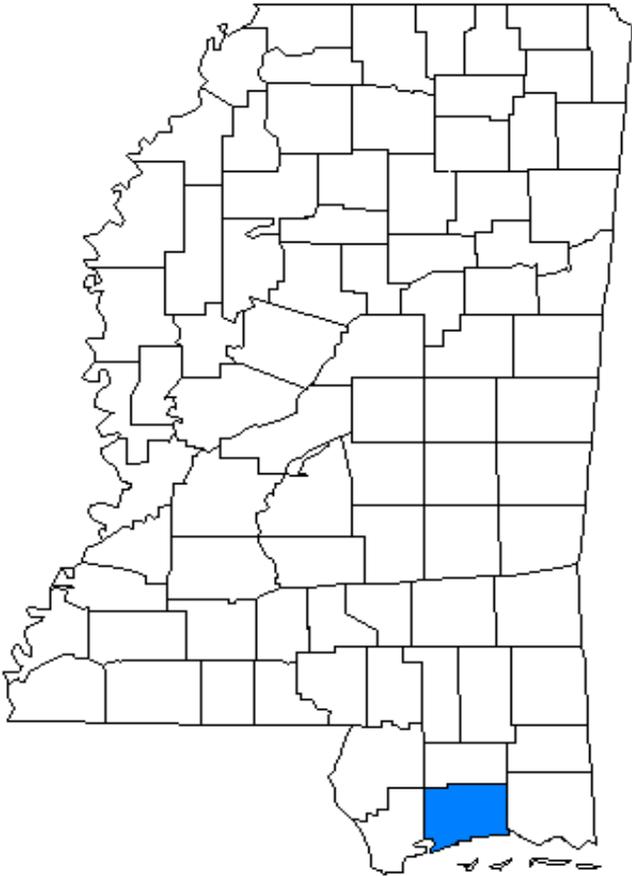
Hancock County - Waveland 98th Percentile Design Value



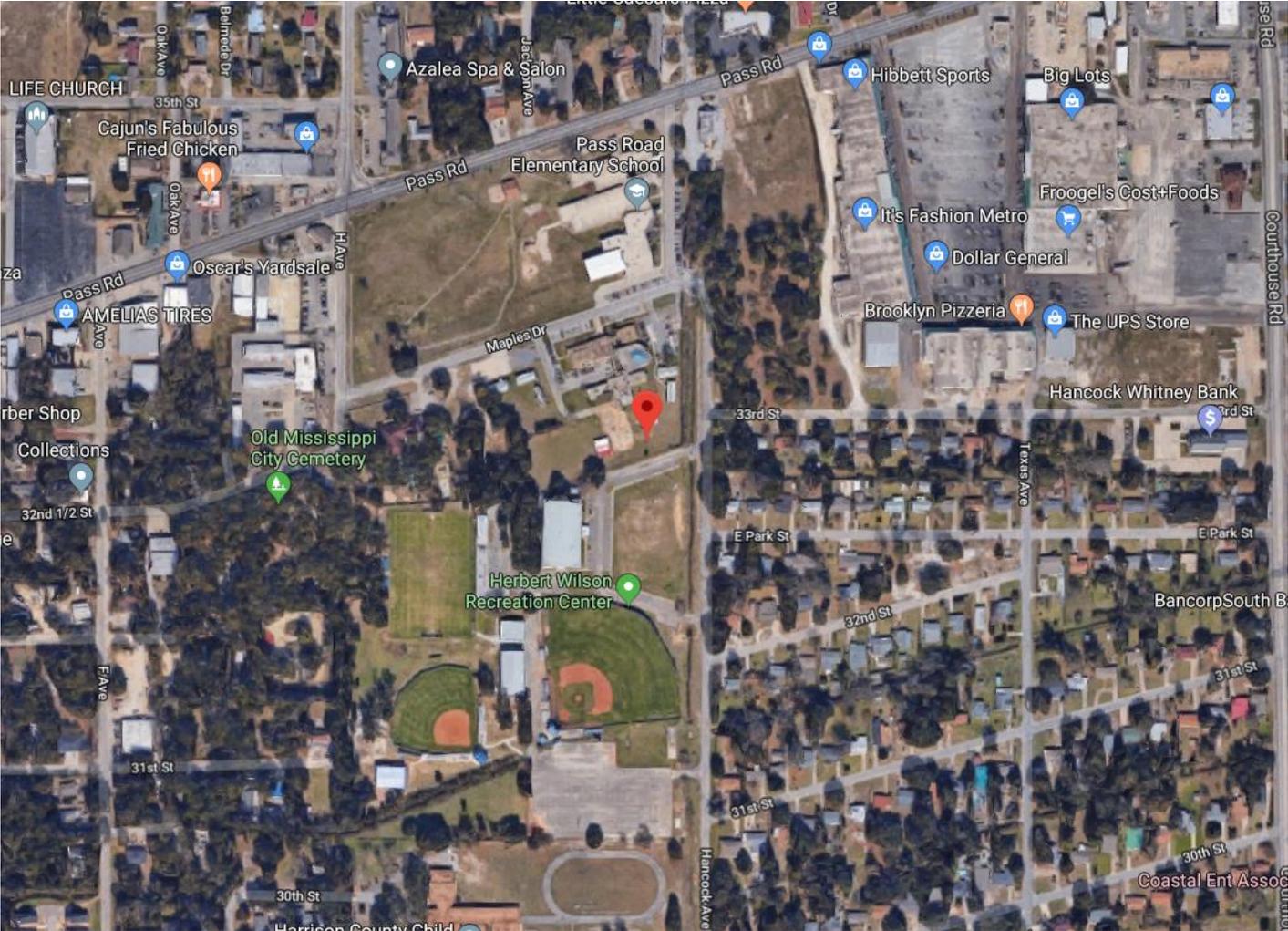
Hancock County - Waveland Annual 98th Percentile



# Harrison County

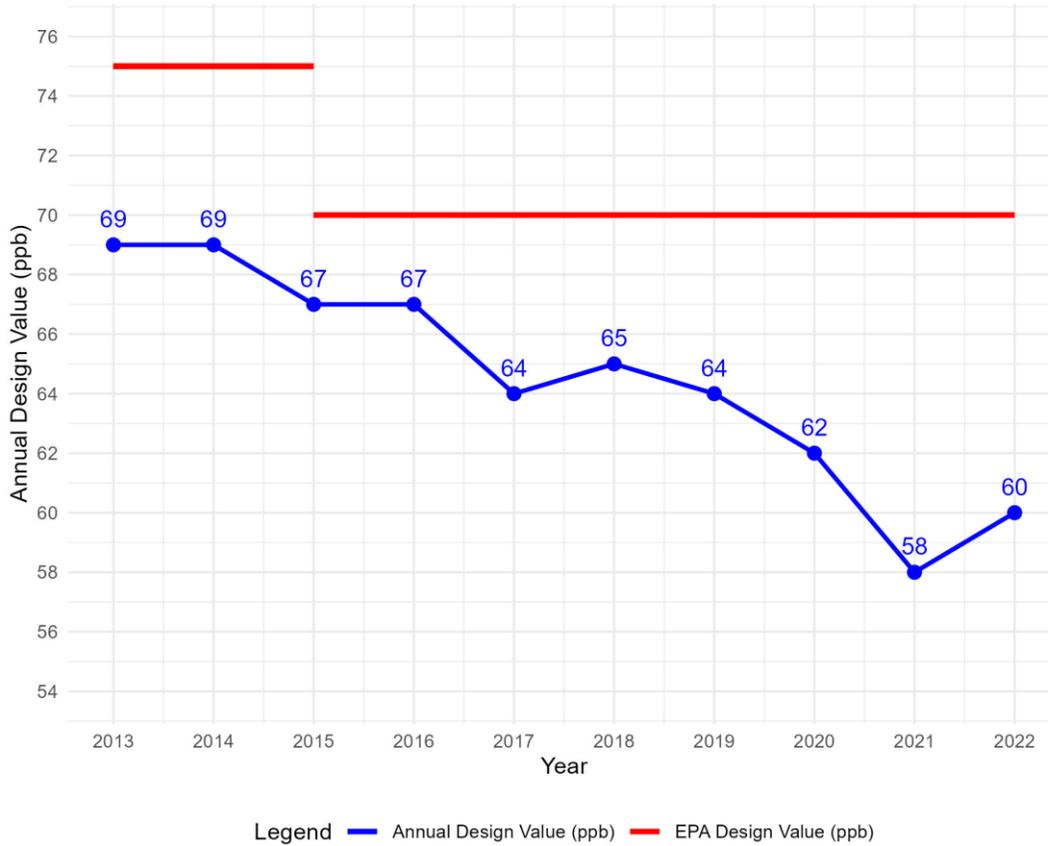


**Harrison County**  
**Monitoring Site No. 28-047-0008**  
**Location**

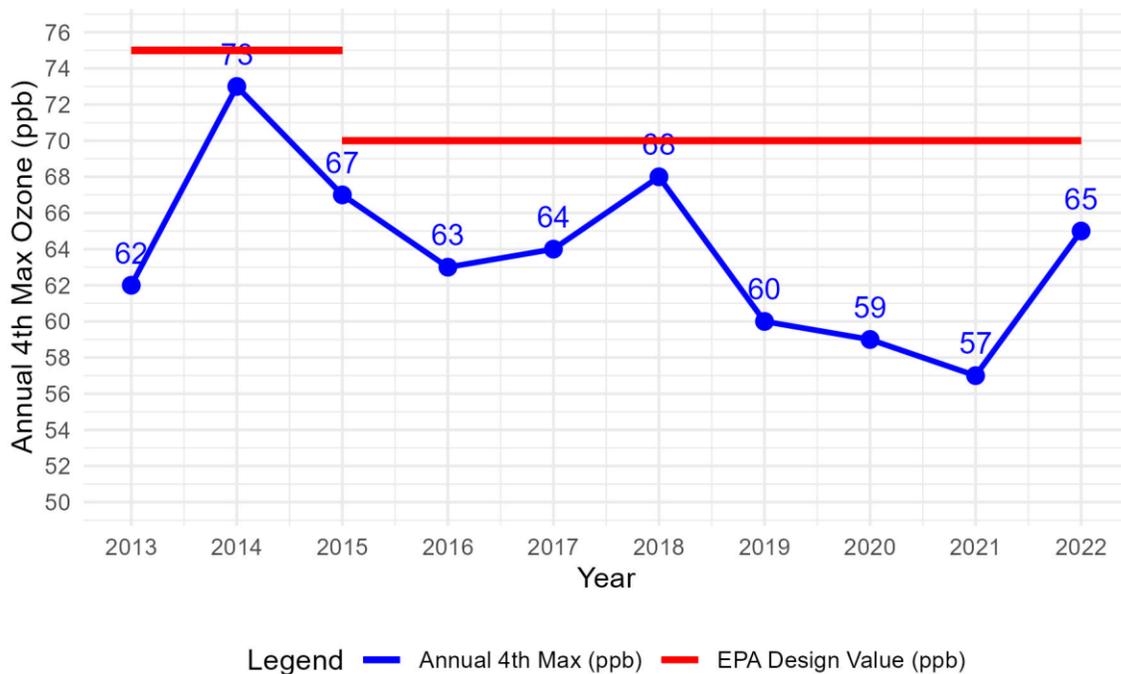


# Harrison County 8-Hour Ozone

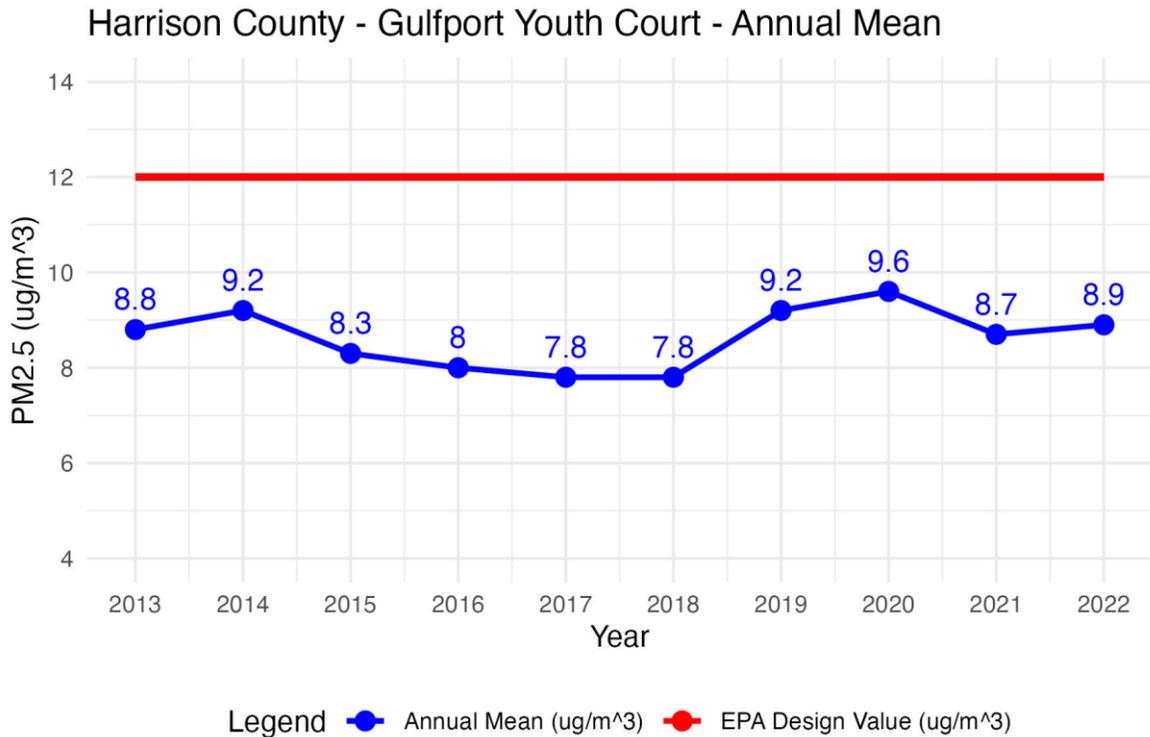
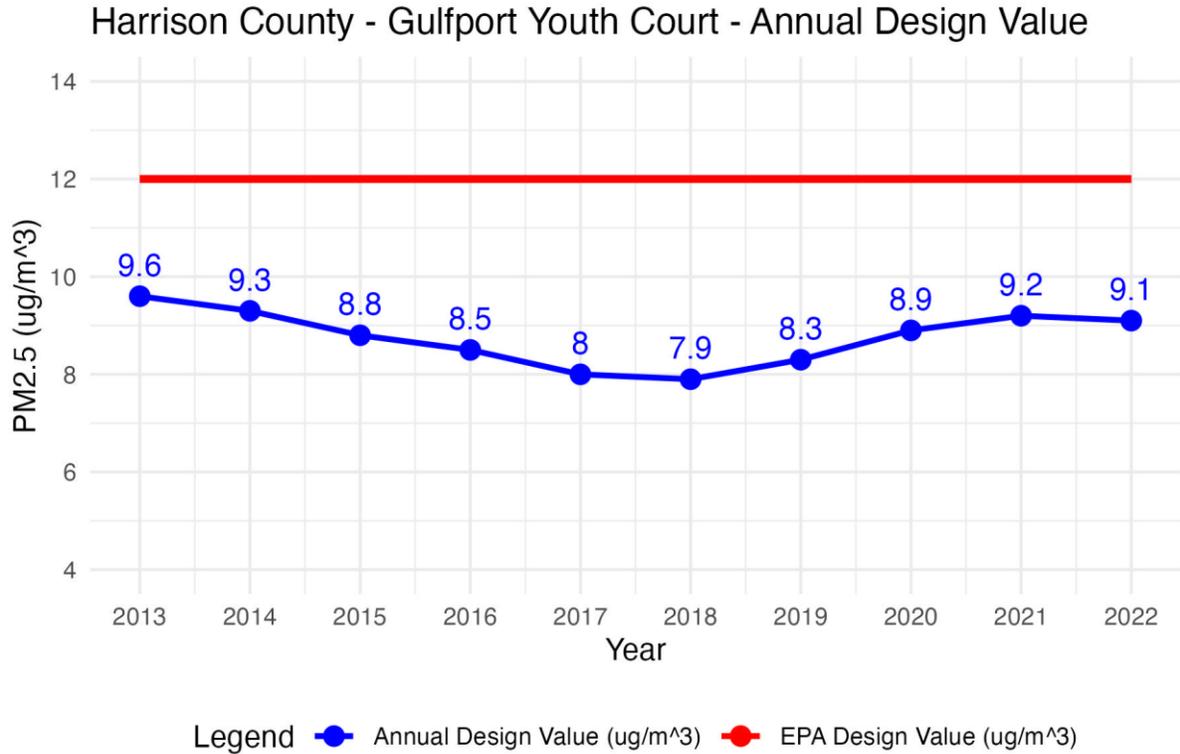
Harrison County - Gulfport Youth Court Site Annual Ozone Design Values



Harrison County - Gulfport Youth Court Annual 4th Max Ozone

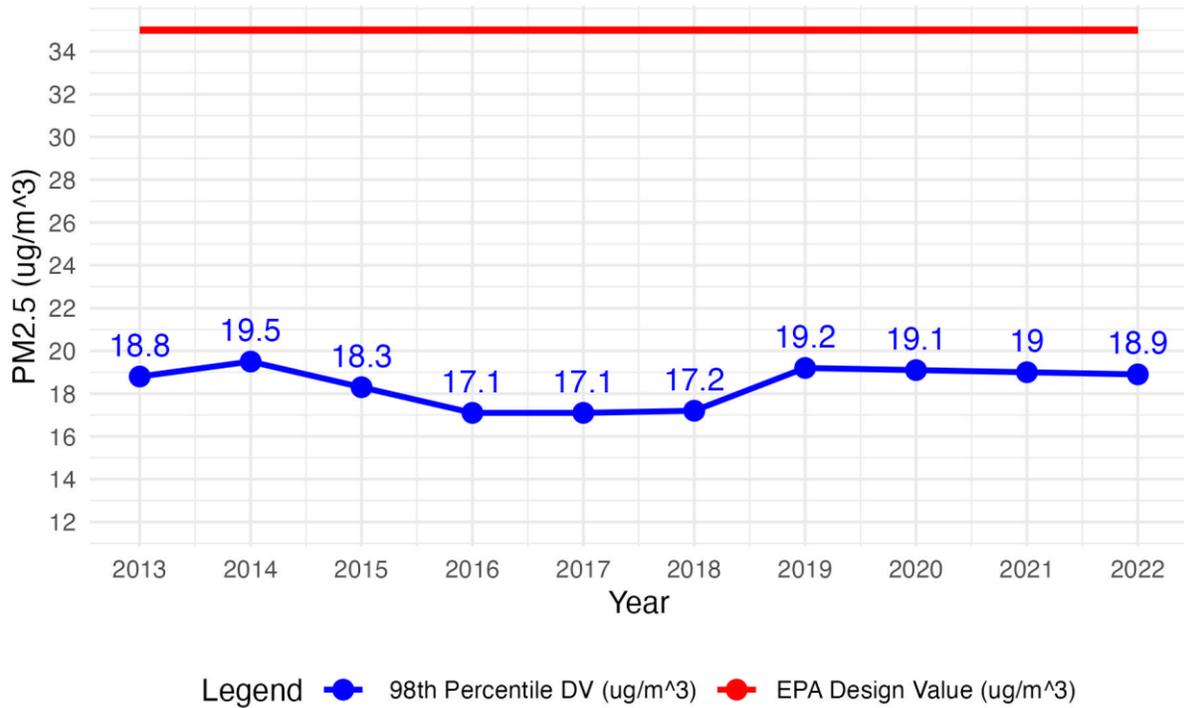


**Harrison County**  
**PM<sub>2.5</sub>**  
**Annual Mean**

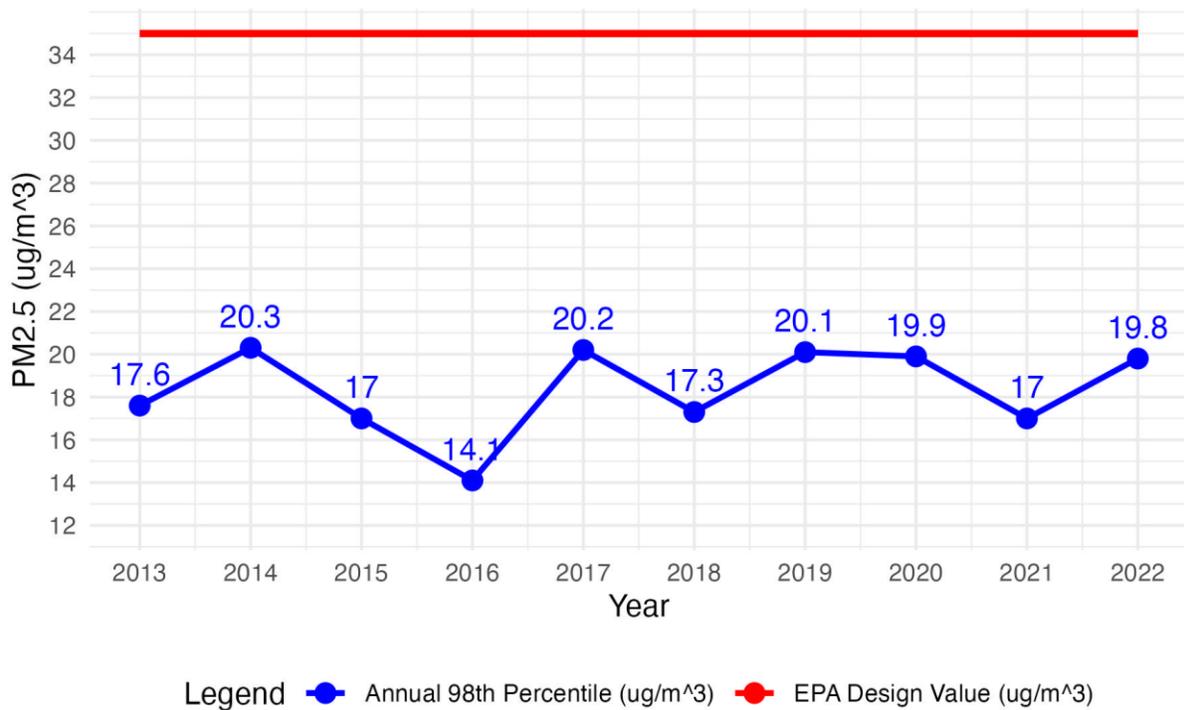


**Harrison County**  
**PM<sub>2.5</sub>**  
**24-Hour Average**

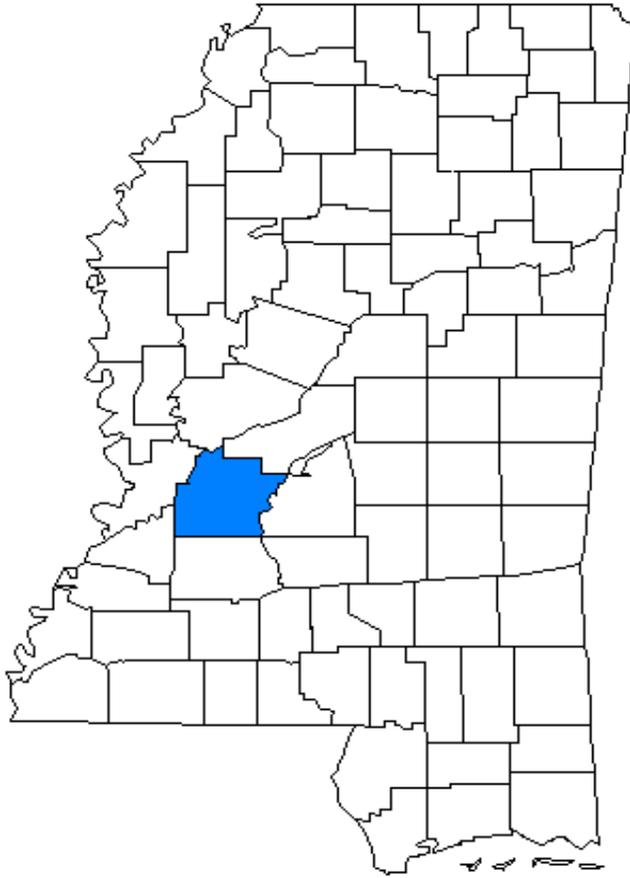
Harrison County - Gulfport Youth Court 98th Percentile Design Value



Harrison County - Gulfport Youth Court Annual 98th Percentile



# Hinds County

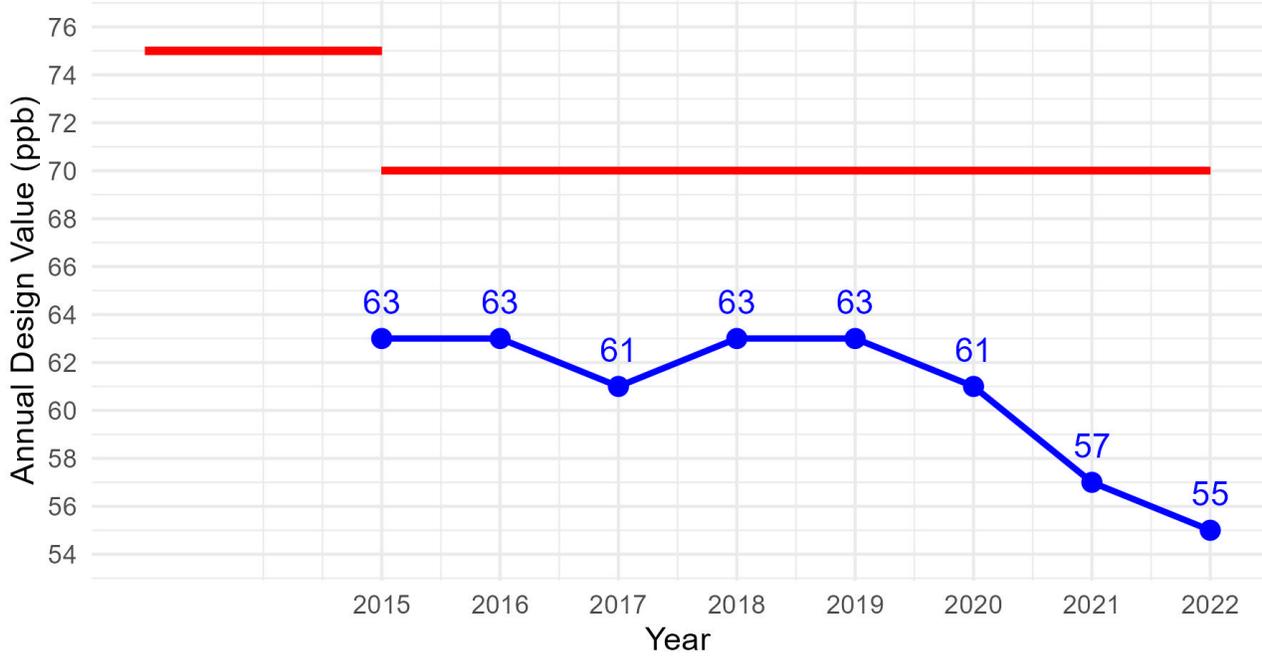


**Hinds County (CC)**  
**Monitoring Site No. 28-049-0021**



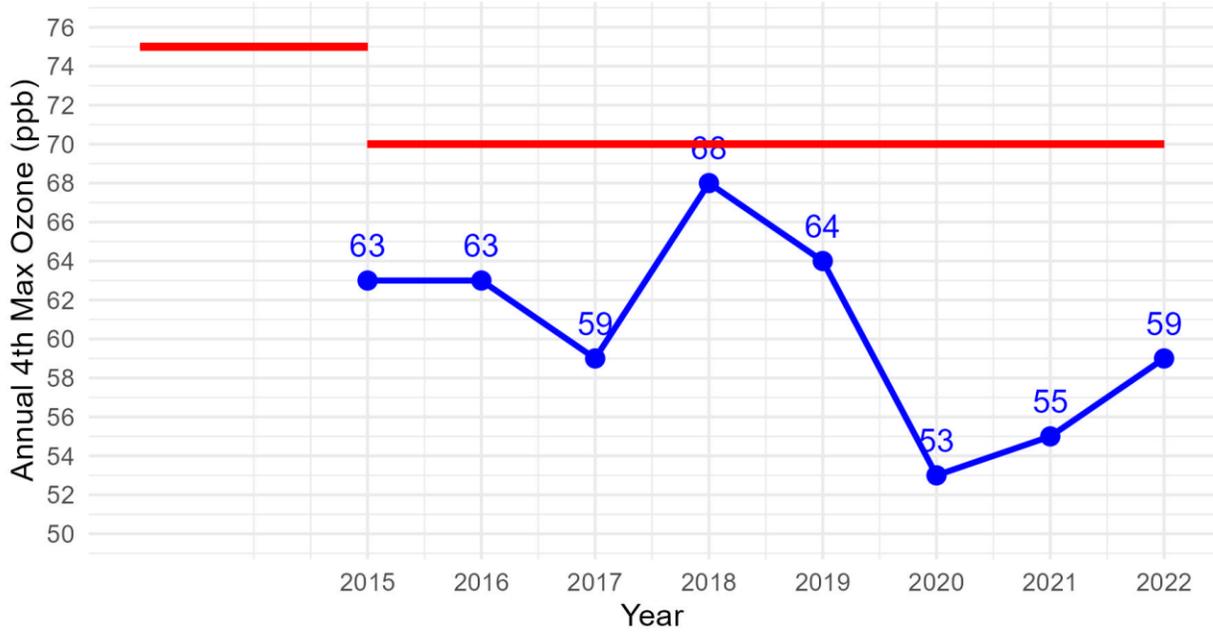
# Hinds County (CC) 8-Hour Ozone

## Hinds County - Hinds CC Site Annual Ozone Design Values



Legend — Annual Design Value (ppb) — EPA Design Value (ppb)

## Hinds County - Hinds CC Annual 4th Max Ozone



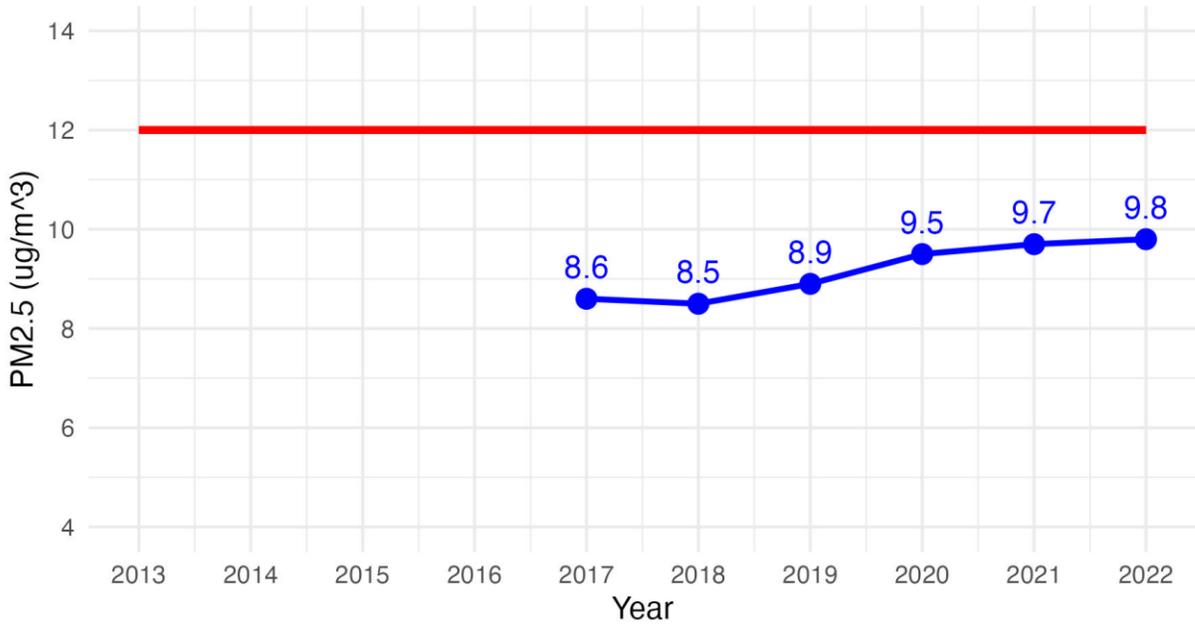
Legend — Annual 4th Max (ppb) — EPA Design Value (ppb)

# Hinds County (CC)

## PM<sub>2.5</sub>

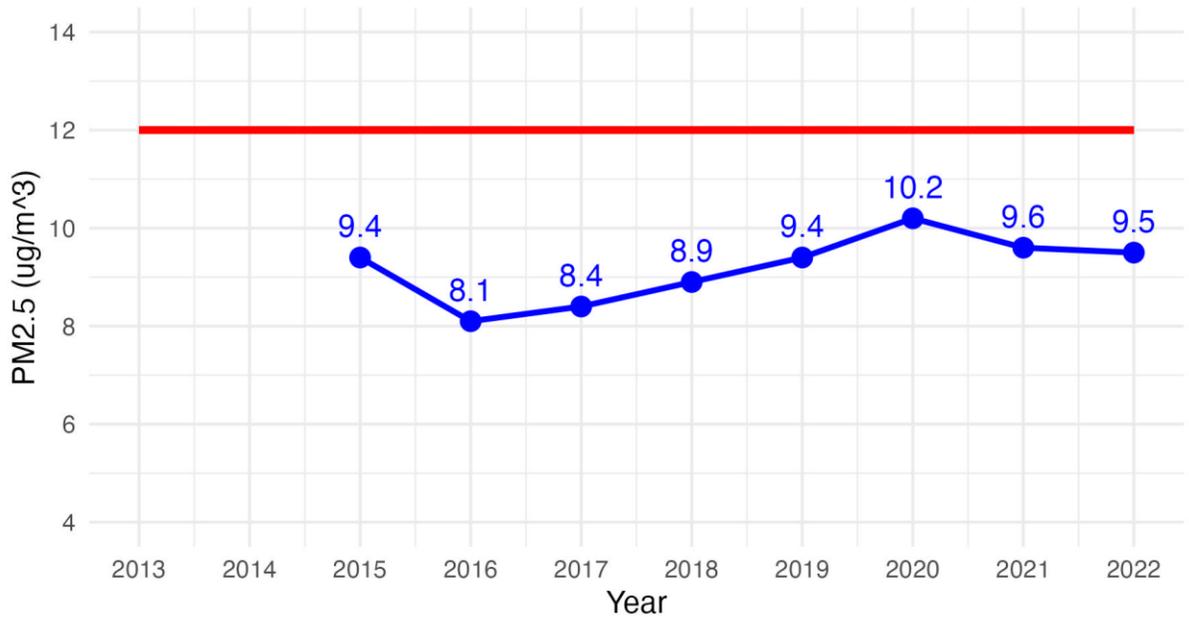
### Annual Mean

Hinds County - Hinds CC - Annual Design Value



Legend ● Annual Design Value (ug/m<sup>3</sup>) ● EPA Design Value (ug/m<sup>3</sup>)

Hinds County - Hinds CC - Annual Mean



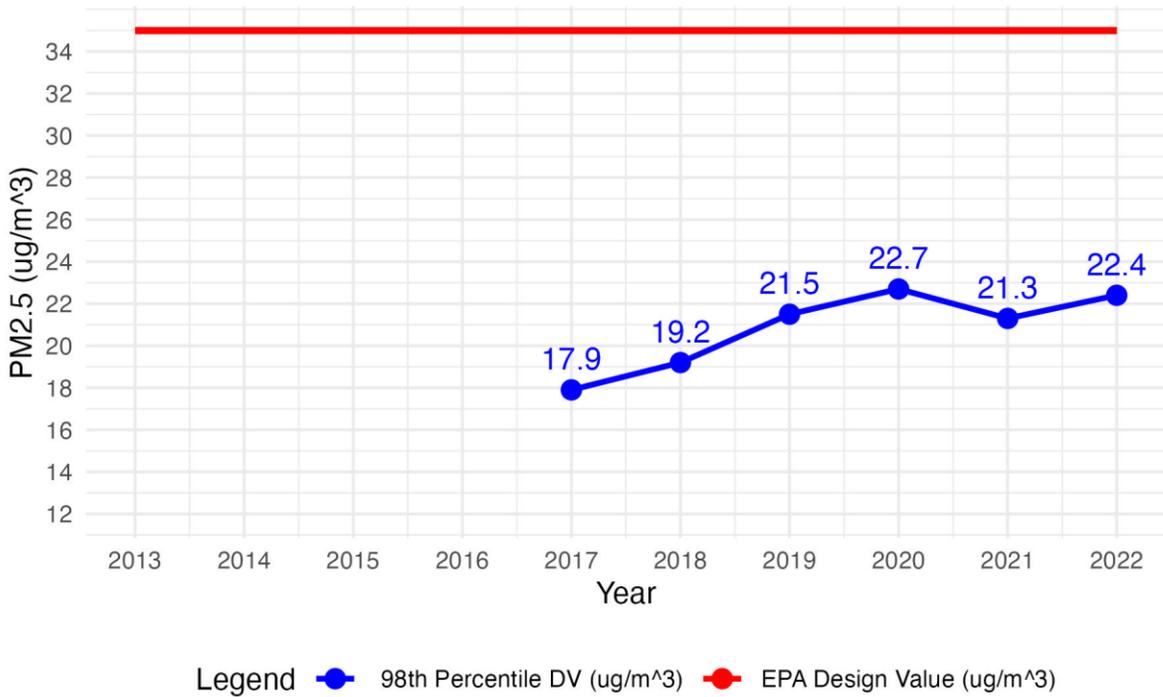
Legend ● Annual Mean (ug/m<sup>3</sup>) ● EPA Design Value (ug/m<sup>3</sup>)

# Hinds County (CC)

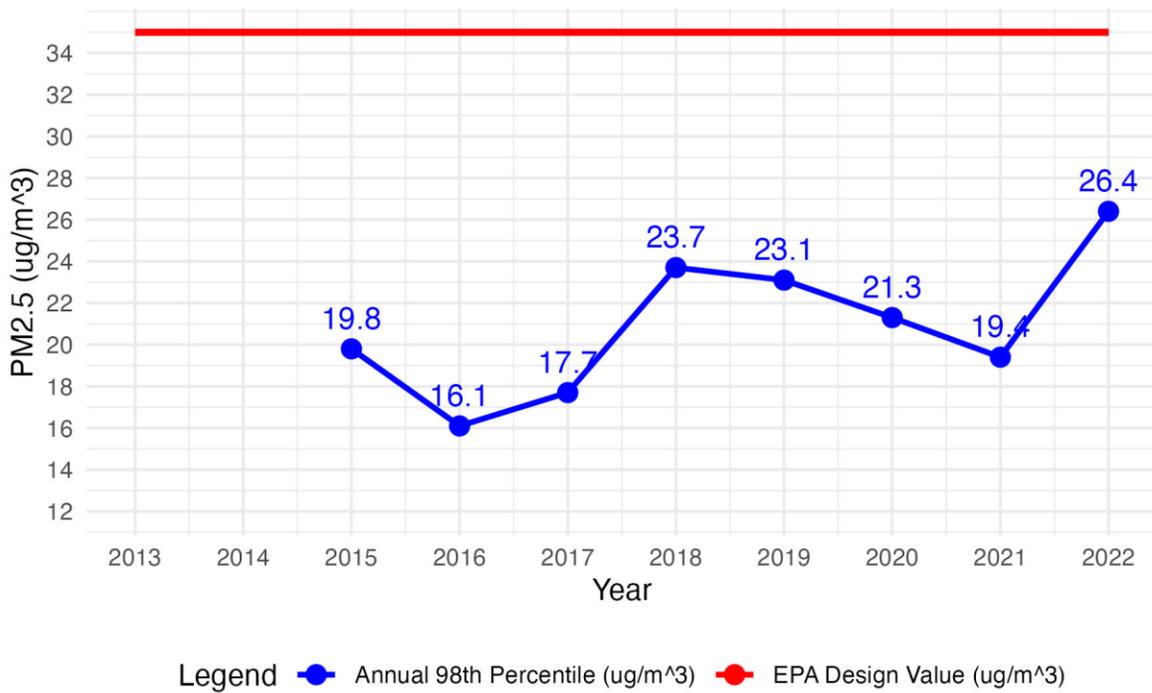
## PM<sub>2.5</sub>

### 24-Hour Average

Hinds County - Hinds CC 98th Percentile Design Value



Hinds County - Hinds CC Annual 98th Percentile

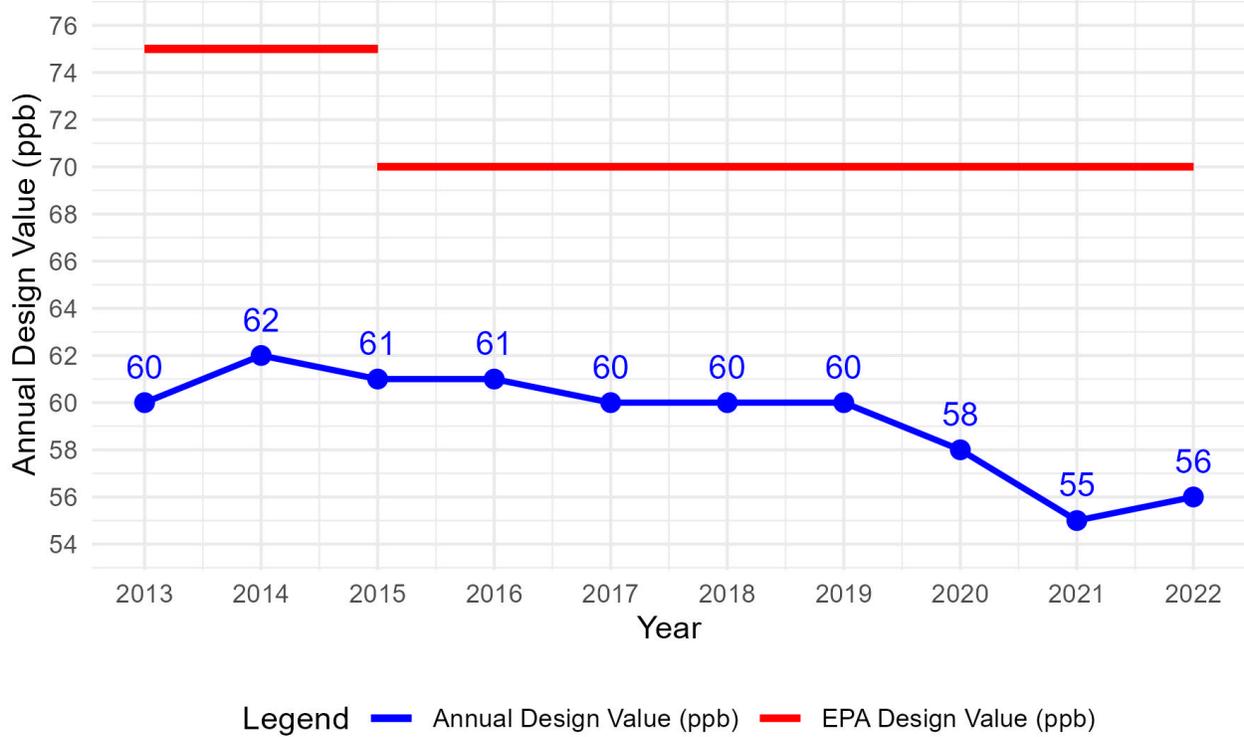


**Hinds County (N-CORE)**  
**Monitoring Site No. 28-049-0020**

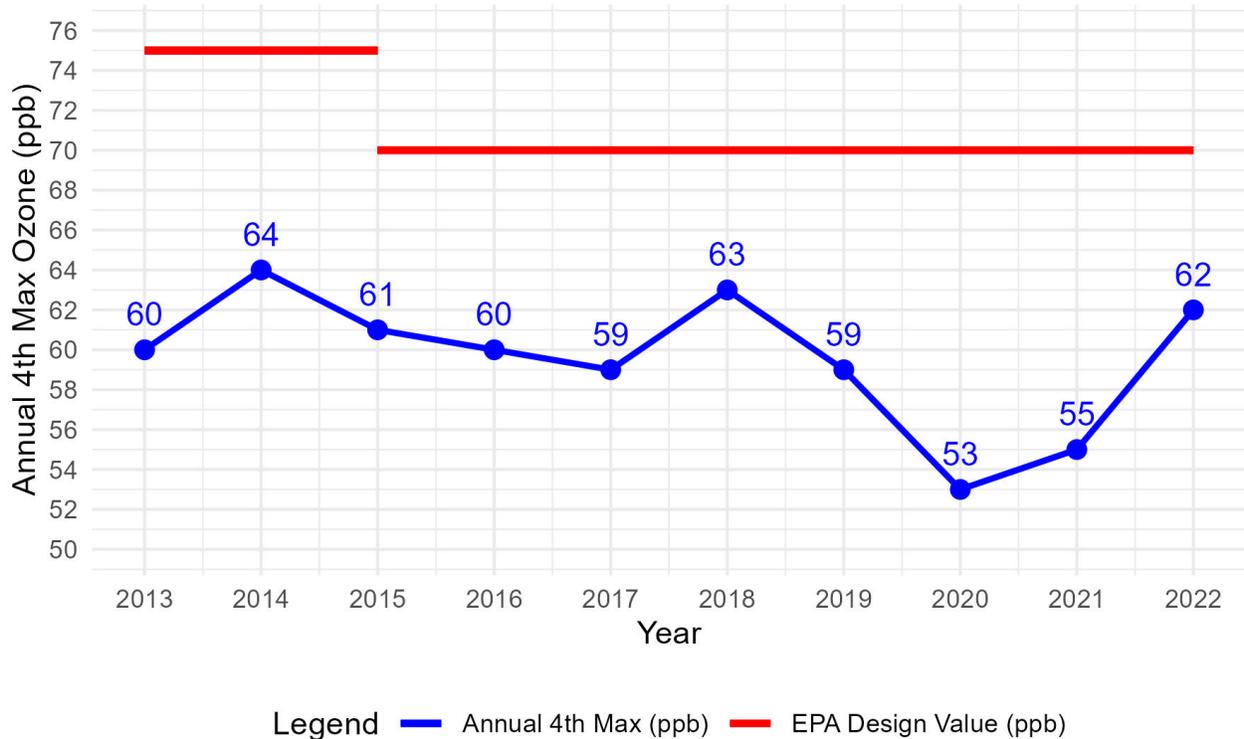


## Hinds County (N-CORE) 8-Hour Ozone

Hinds County - Jackson NCORE Site Annual Ozone Design Values



Hinds County - Jackson NCORE Annual 4th Max Ozone

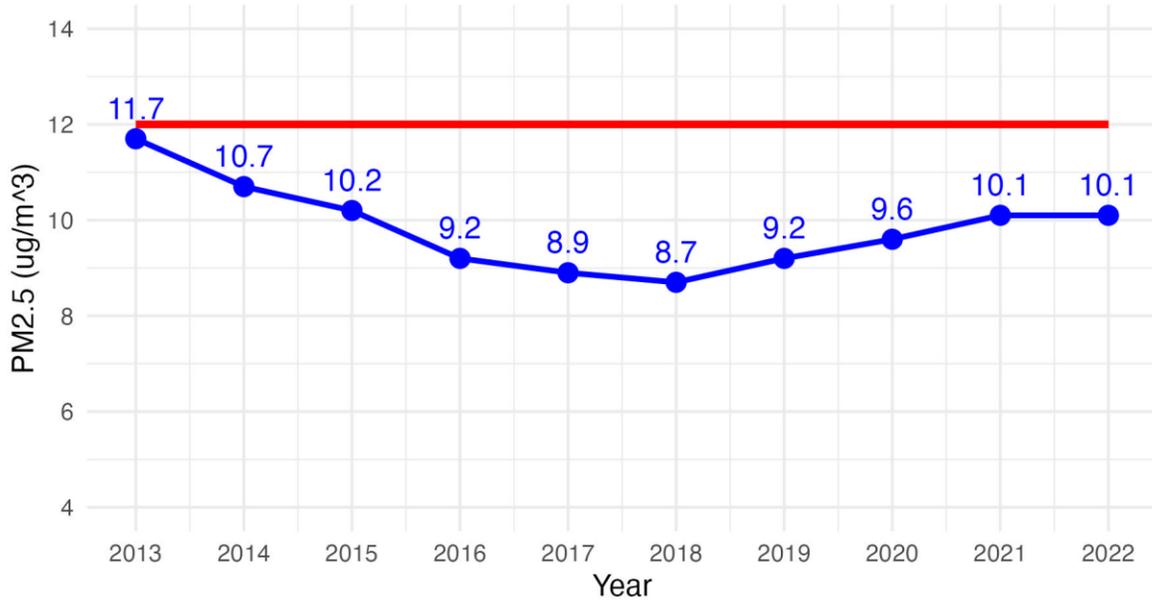


# Hinds County (N-CORE)

## PM<sub>2.5</sub>

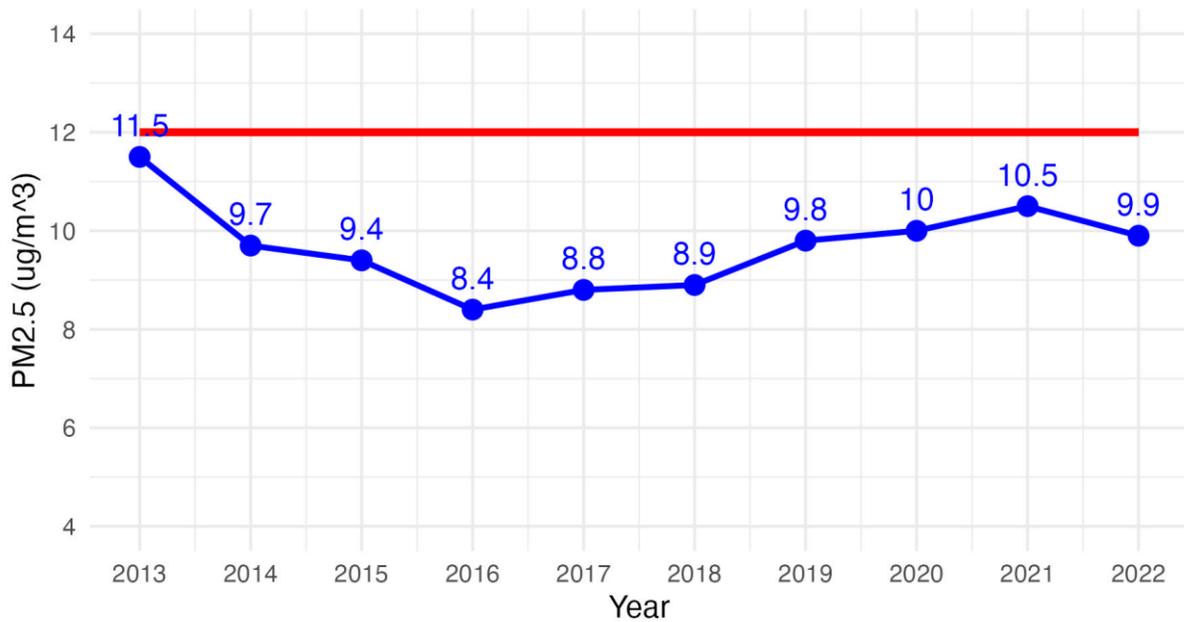
### Annual Mean

Hinds County - Jackson N CORE - Annual Design Value



Legend ● Annual Design Value (ug/m<sup>3</sup>) ● EPA Design Value (ug/m<sup>3</sup>)

Hinds County - Jackson N CORE - Annual Mean



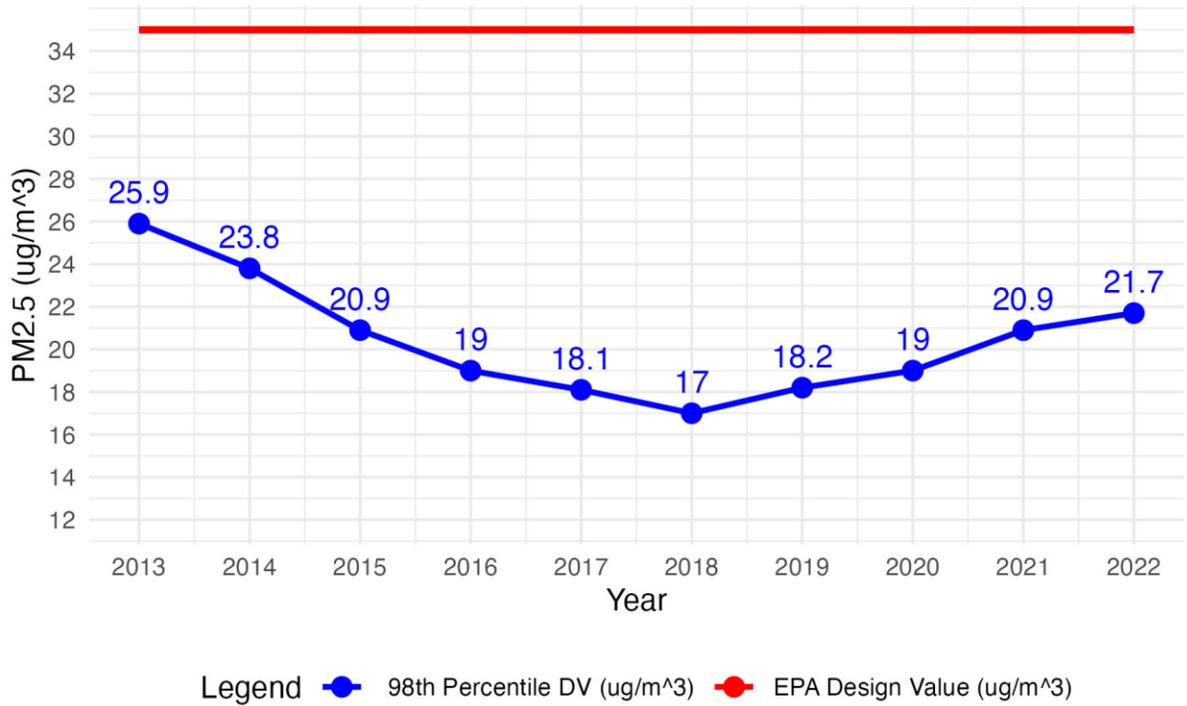
Legend ● Annual Mean (ug/m<sup>3</sup>) ● EPA Design Value (ug/m<sup>3</sup>)

# Hinds County (N-CORE)

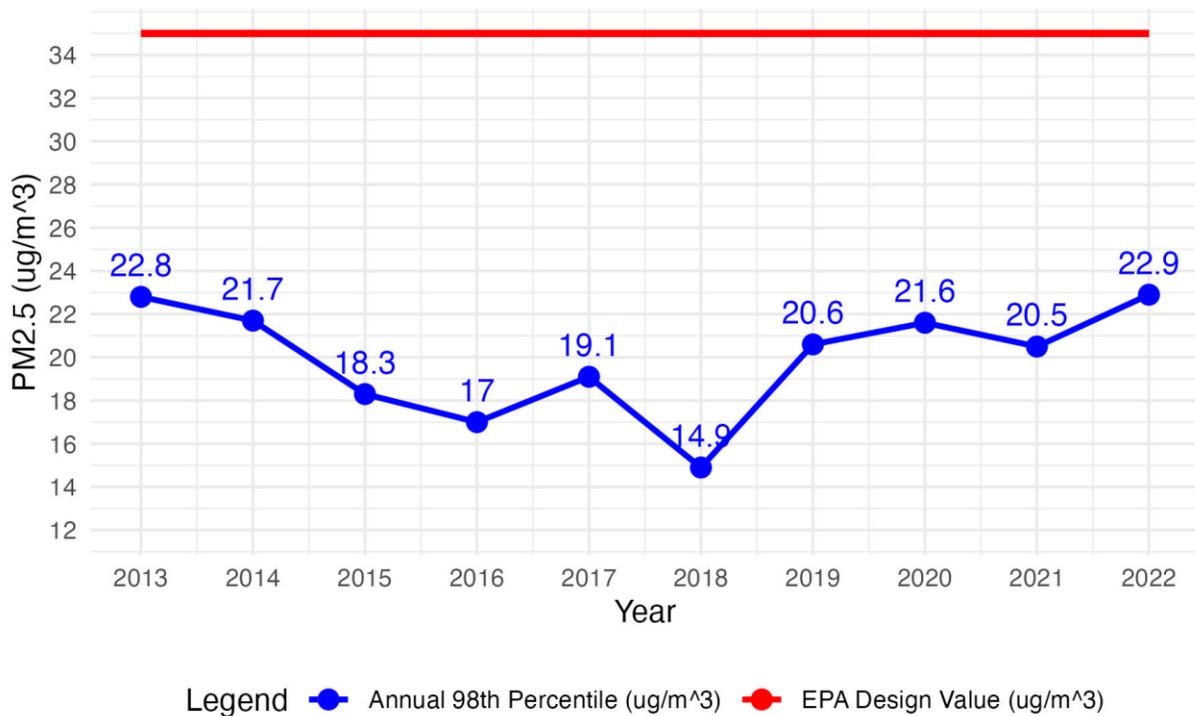
## PM<sub>2.5</sub>

### 24-Hour Average

Hinds County - Jackson N CORE 98th Percentile Design Value

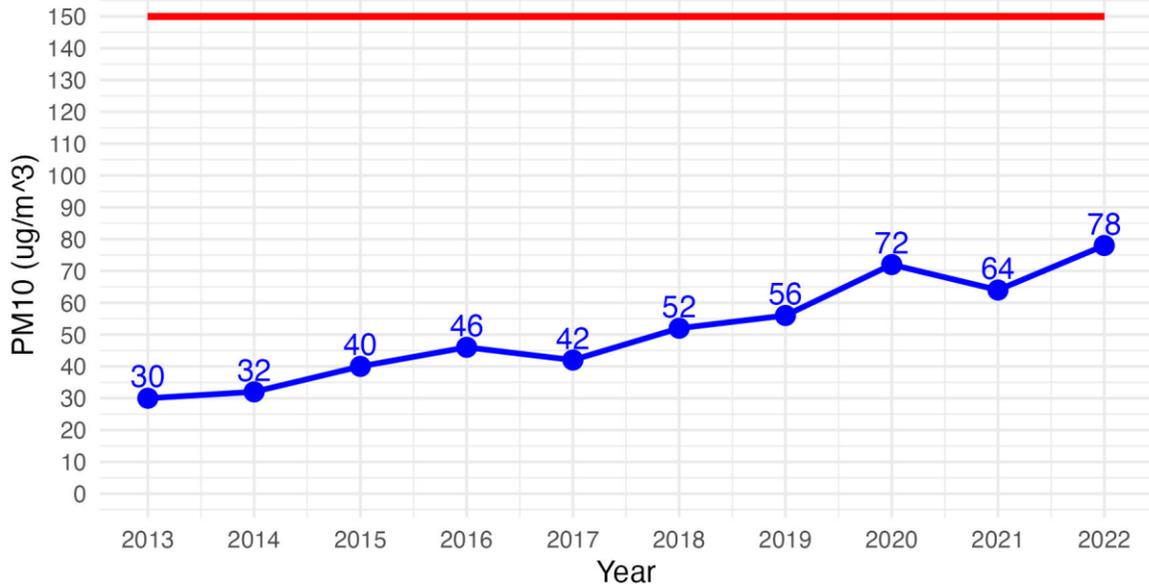


Hinds County - Jackson N CORE Annual 98th Percentile



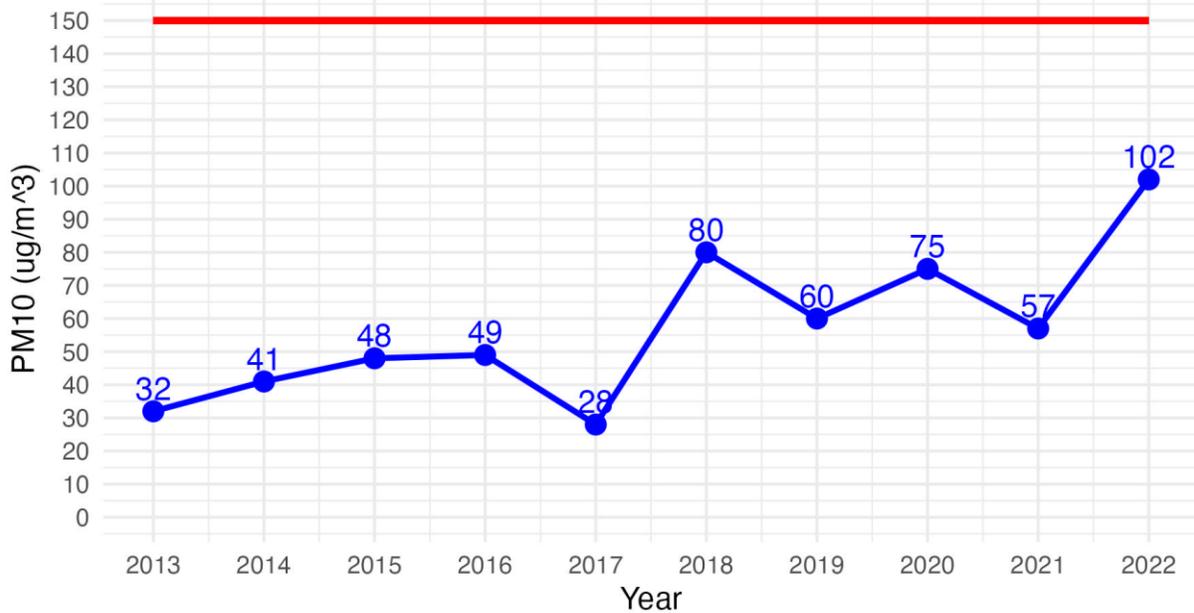
**Hinds County (N-CORE)**  
**PM<sub>10</sub>**  
**3-Year Average of the Annual 2<sup>nd</sup> Max**

Hinds County - Jackson NCORE Annual Design Value



Legend ● Annual Design Value ● EPA Design Value

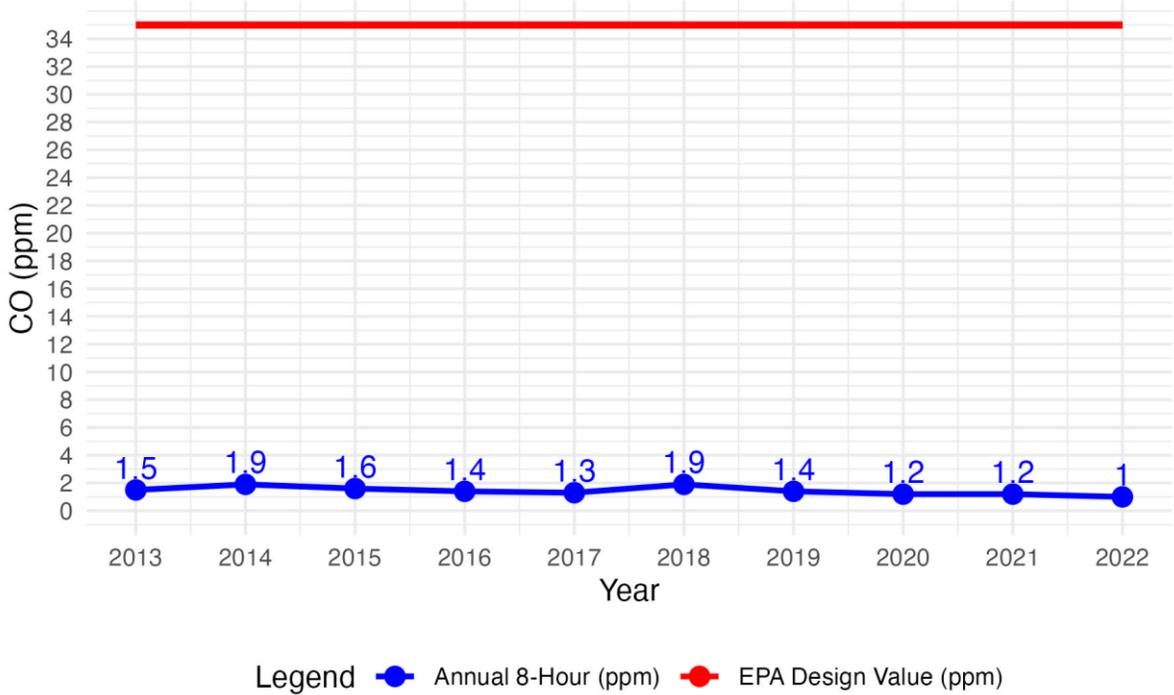
Hinds County - Jackson NCORE Annual Second Max



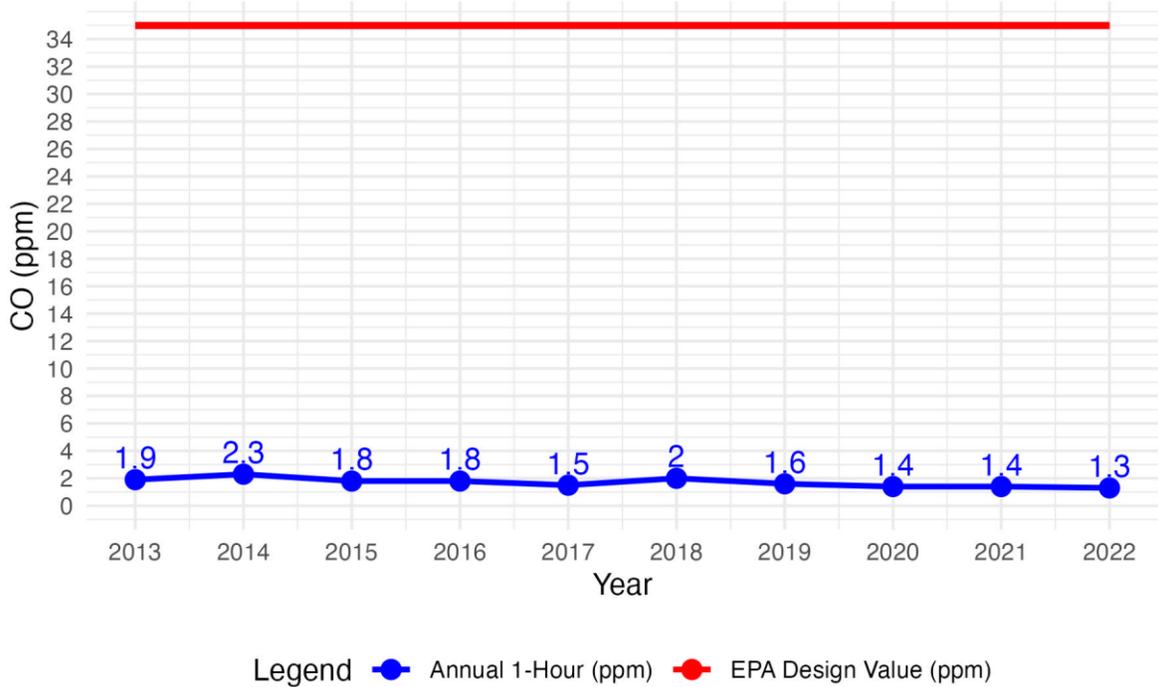
Legend ● Annual Second Max (ug/m<sup>3</sup>) ● EPA Design Value (ug/m<sup>3</sup>)

**Hinds County (N-CORE)**  
**CO**  
**8-Hour and 1- Hour Average**

Hinds County - Jackson NCORE Annual 8-Hour

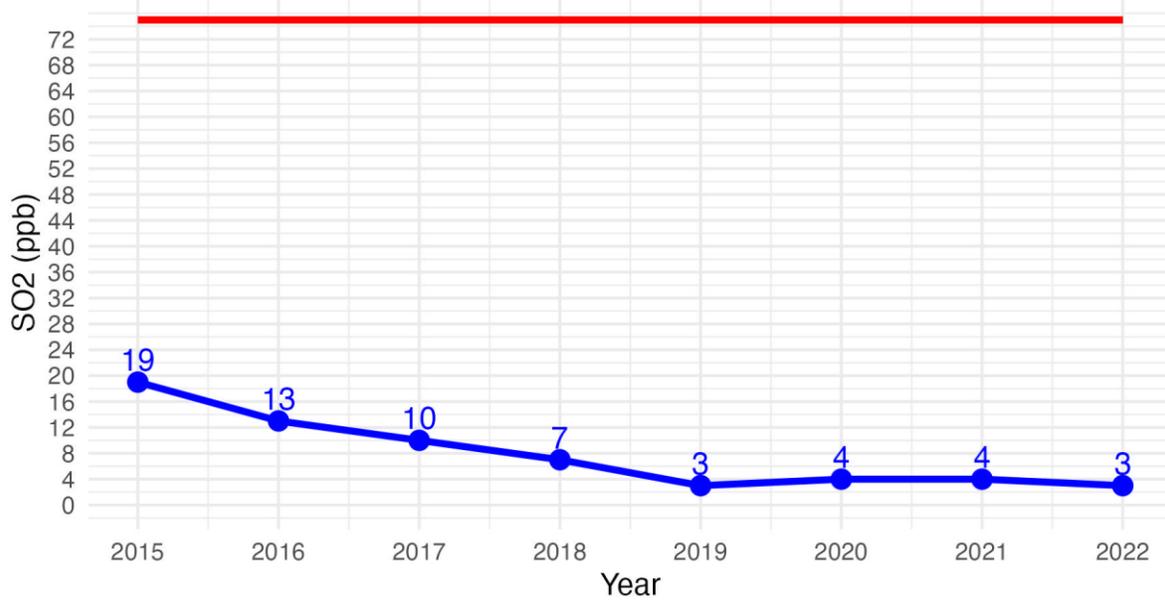


Hinds County - Jackson NCORE Annual 1-Hour



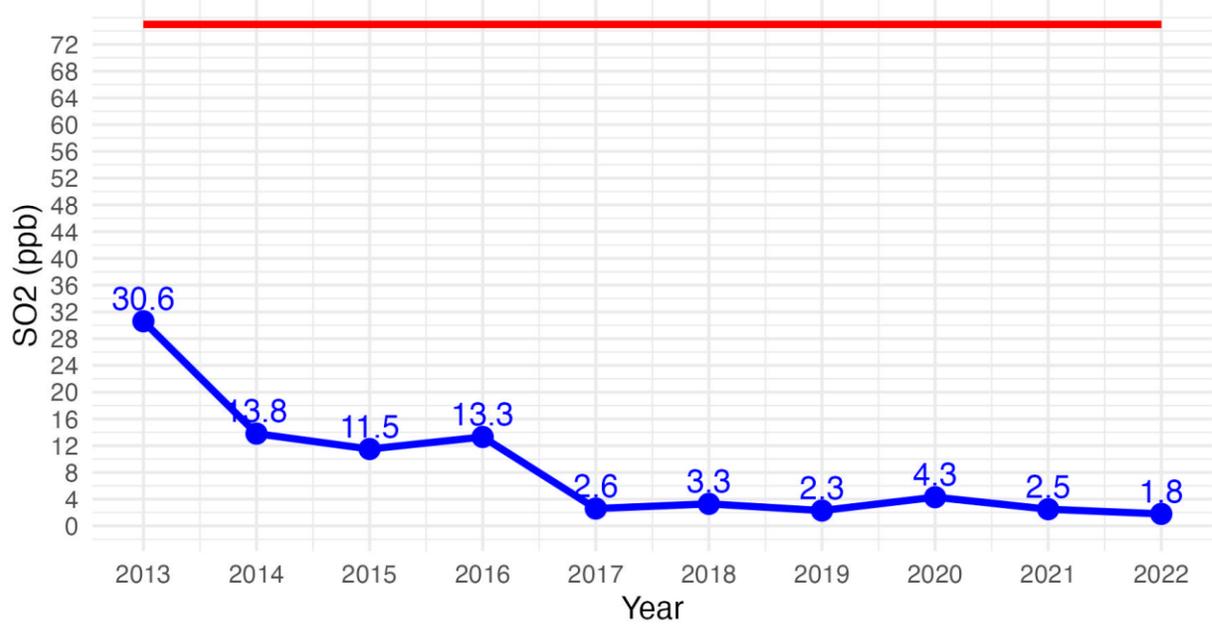
# Hinds County (N-CORE) Sulfur Dioxide 1-Hour Average

Hinds County - Jackson NCORE Annual 1-Hour Design Value



Legend — Annual 1-Hour Design Value (ppb) — EPA Design Value (ppb)

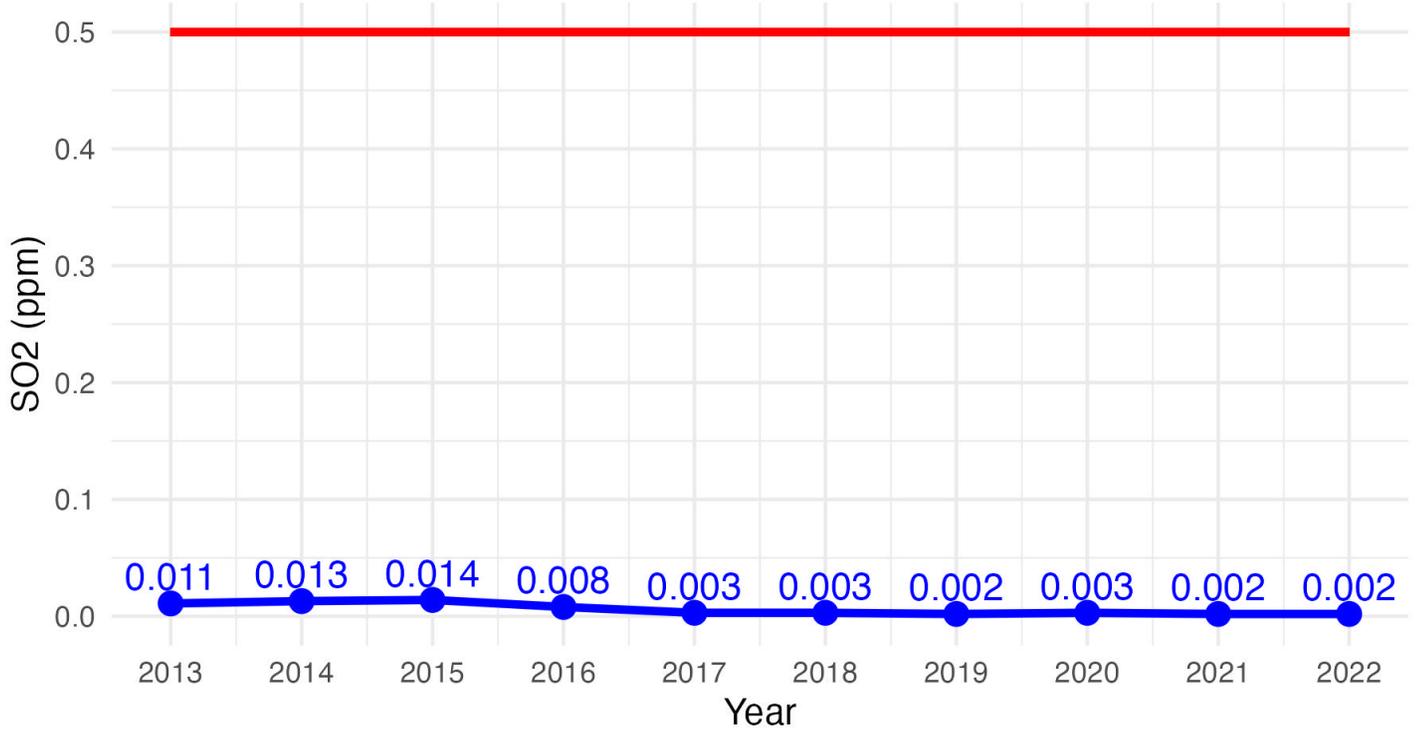
Hinds County - Jackson NCORE Annual 99th Percentile



Legend — Annual 99th Percentile (ppb) — EPA Design Value (ppb)

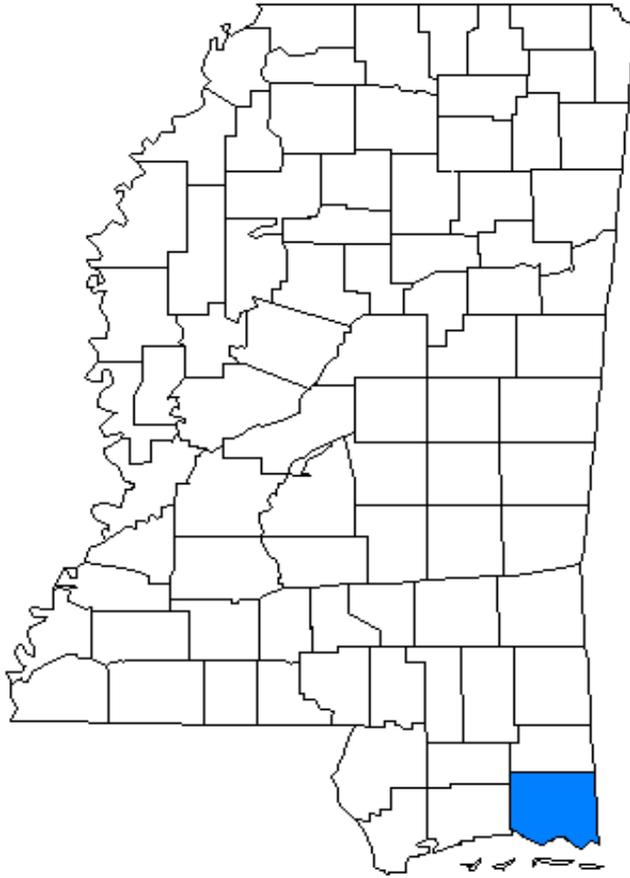
**Hinds County (N-CORE)**  
**Sulfur Dioxide**  
**3-Hour Annual 2<sup>nd</sup> Max**

Hinds County - Jackson NCORE Annual 3-HR Second Max



Legend — 3-HR Second Max (ppm) — EPA Design Value (ppm)

# Jackson County

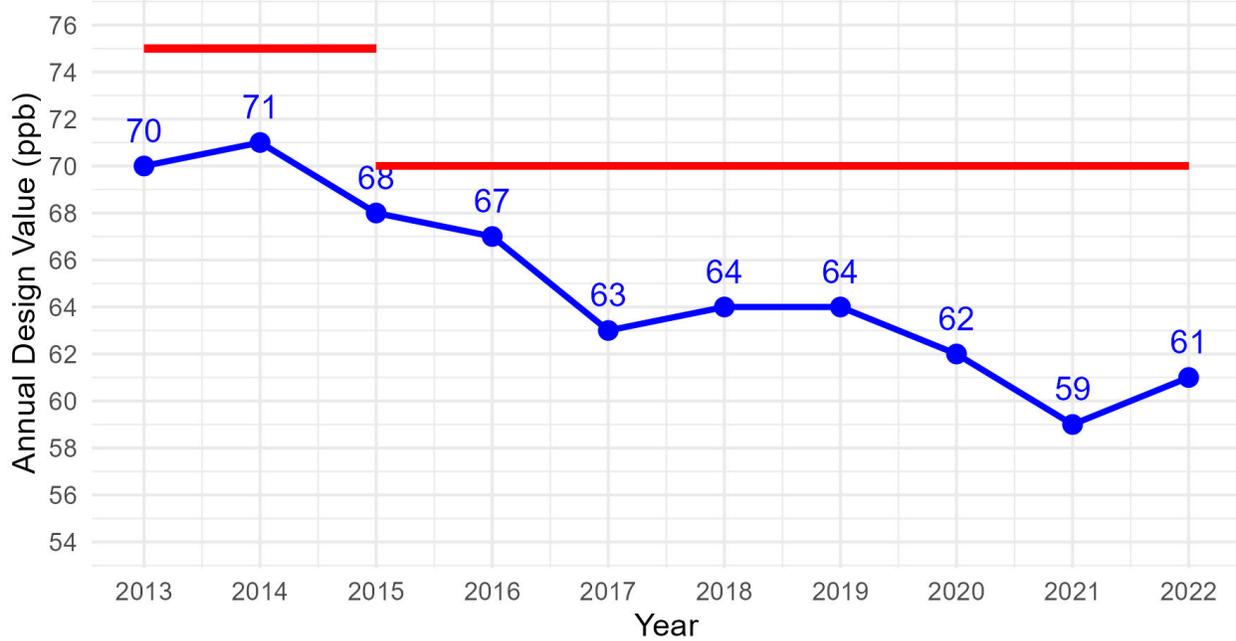


**Jackson County**  
**Monitoring Site No. 28-059-0006**  
**Location**



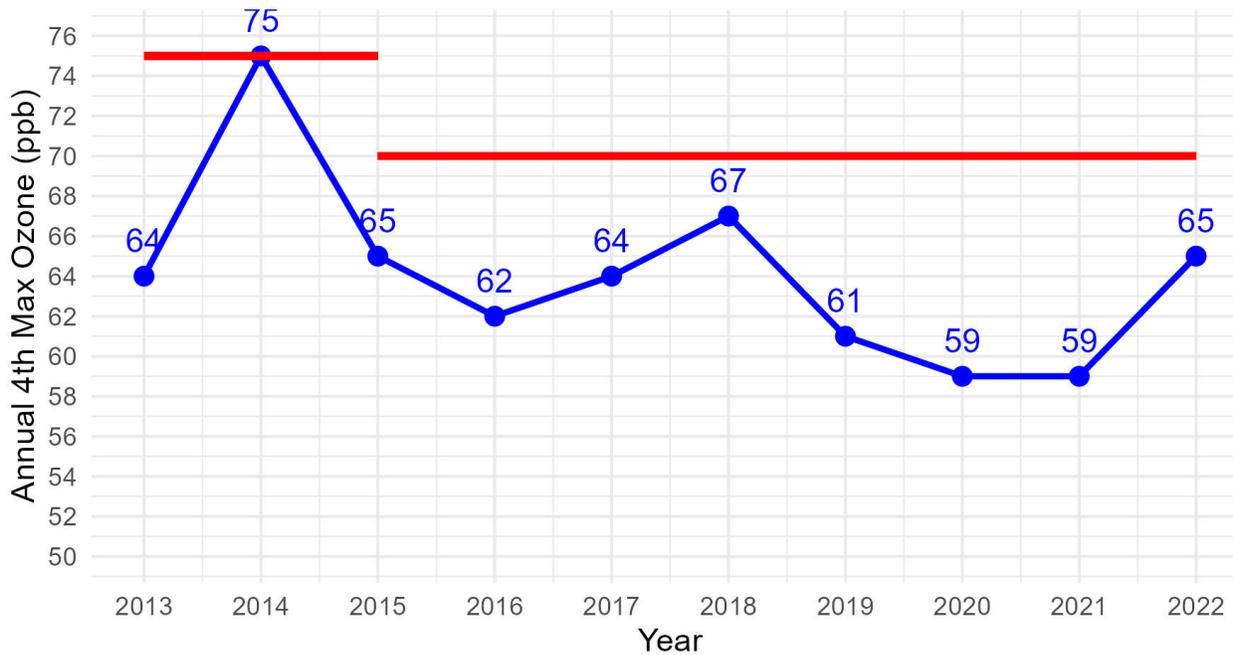
## Jackson County 8-Hour Ozone

Jackson County - Pascagoula Site Annual Ozone Design Values



Legend —●— Annual Design Value (ppb) — EPA Design Value (ppb)

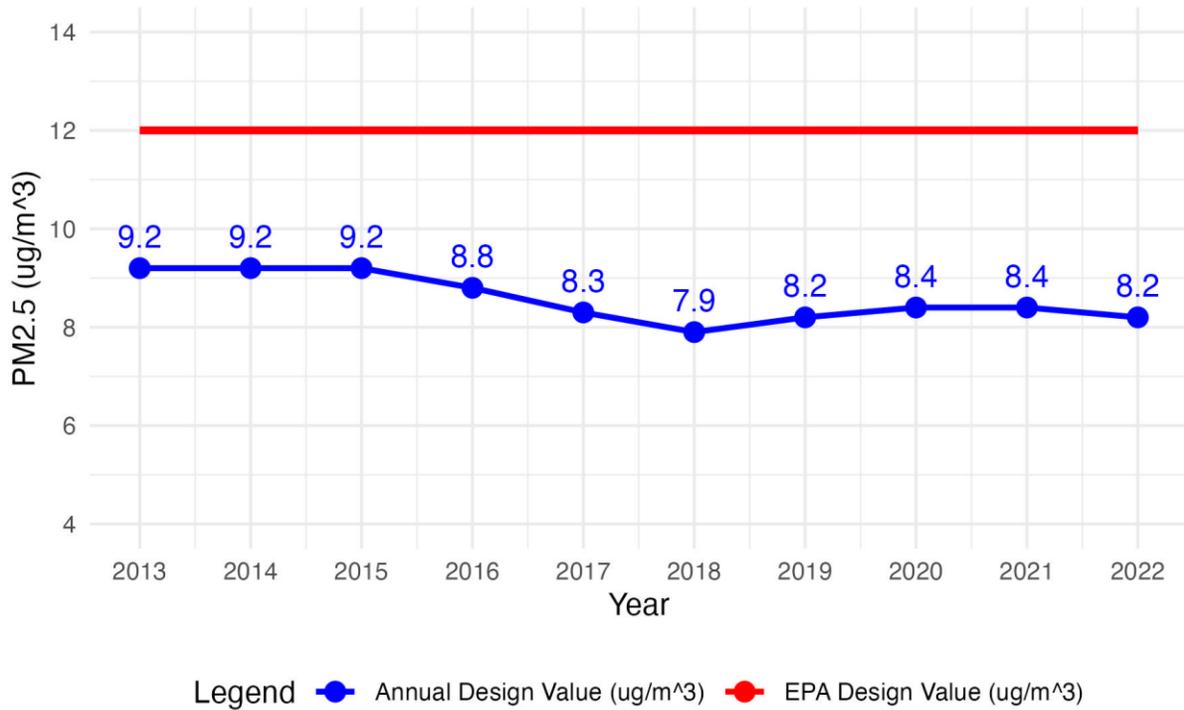
Jackson County - Pascagoula Annual 4th Max Ozone



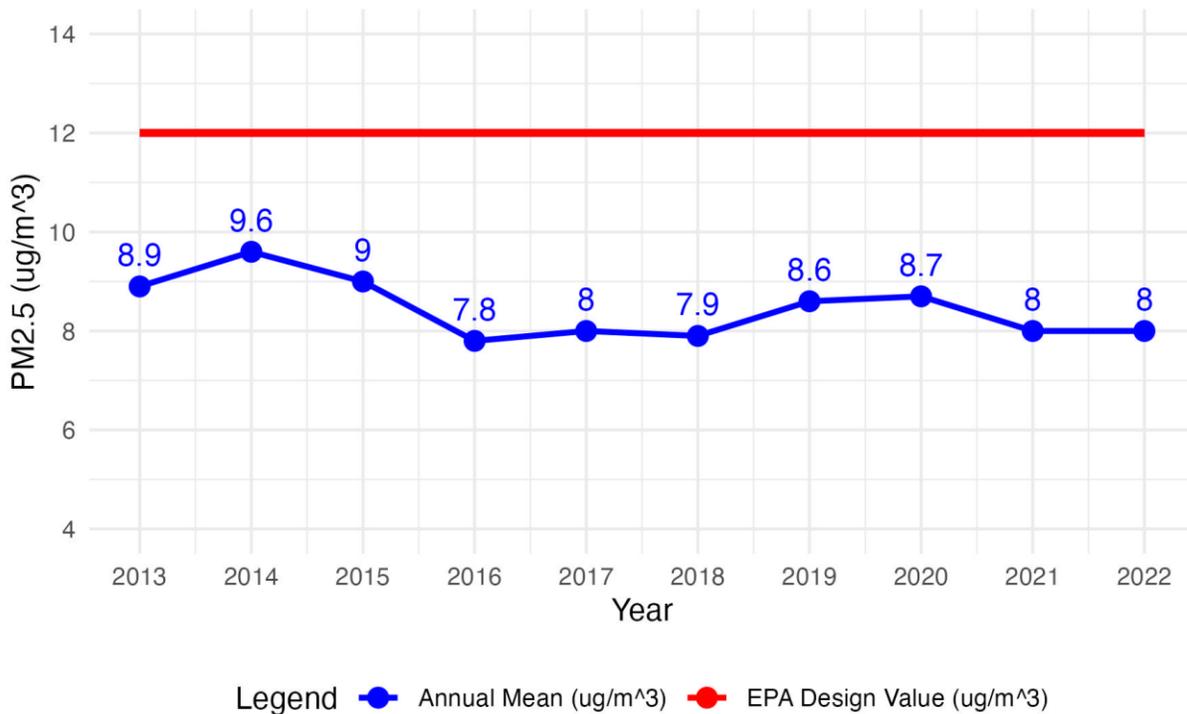
Legend —●— Annual 4th Max (ppb) — EPA Design Value (ppb)

# Jackson County PM<sub>2.5</sub> Annual Mean

### Jackson County - Pascagoula - Annual Design Value

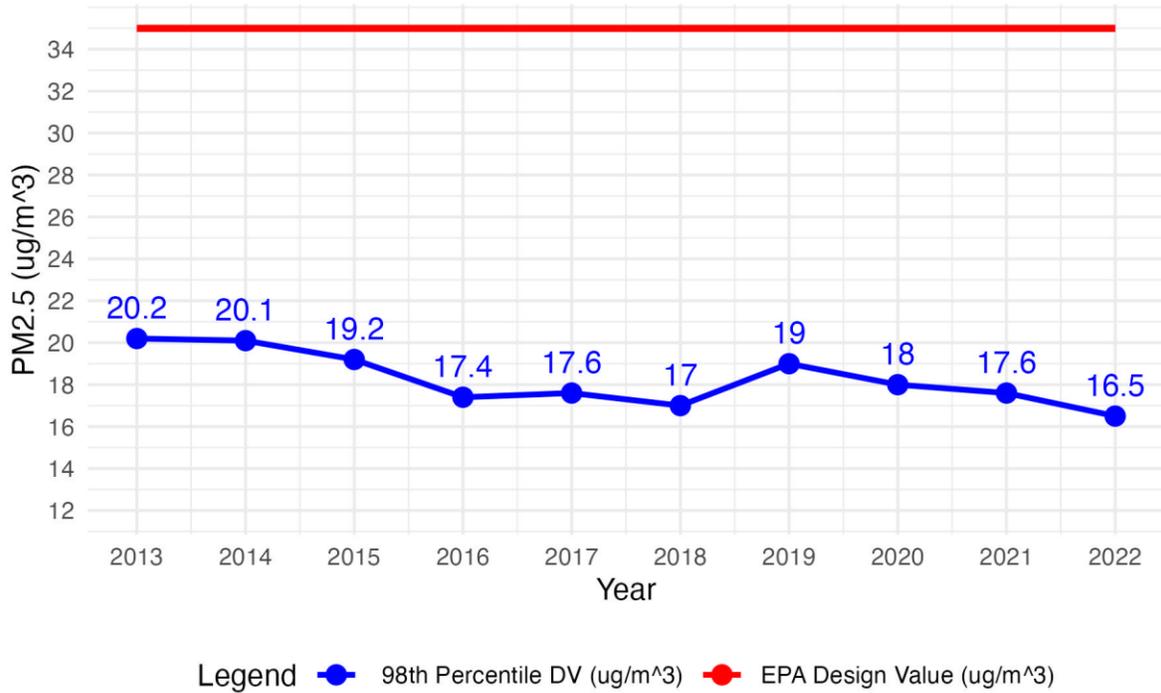


### Jackson County - Pascagoula - Annual Mean

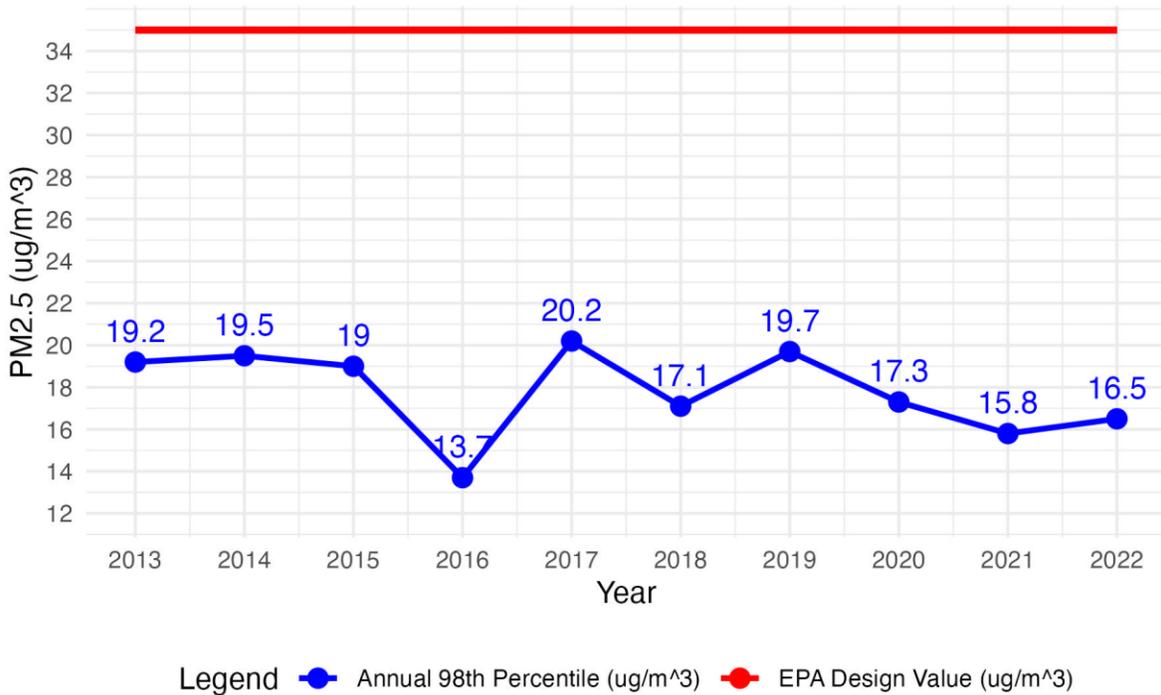


# Jackson County PM<sub>2.5</sub> 24-Hour Average

Jackson County - Pascagoula 98th Percentile Design Value

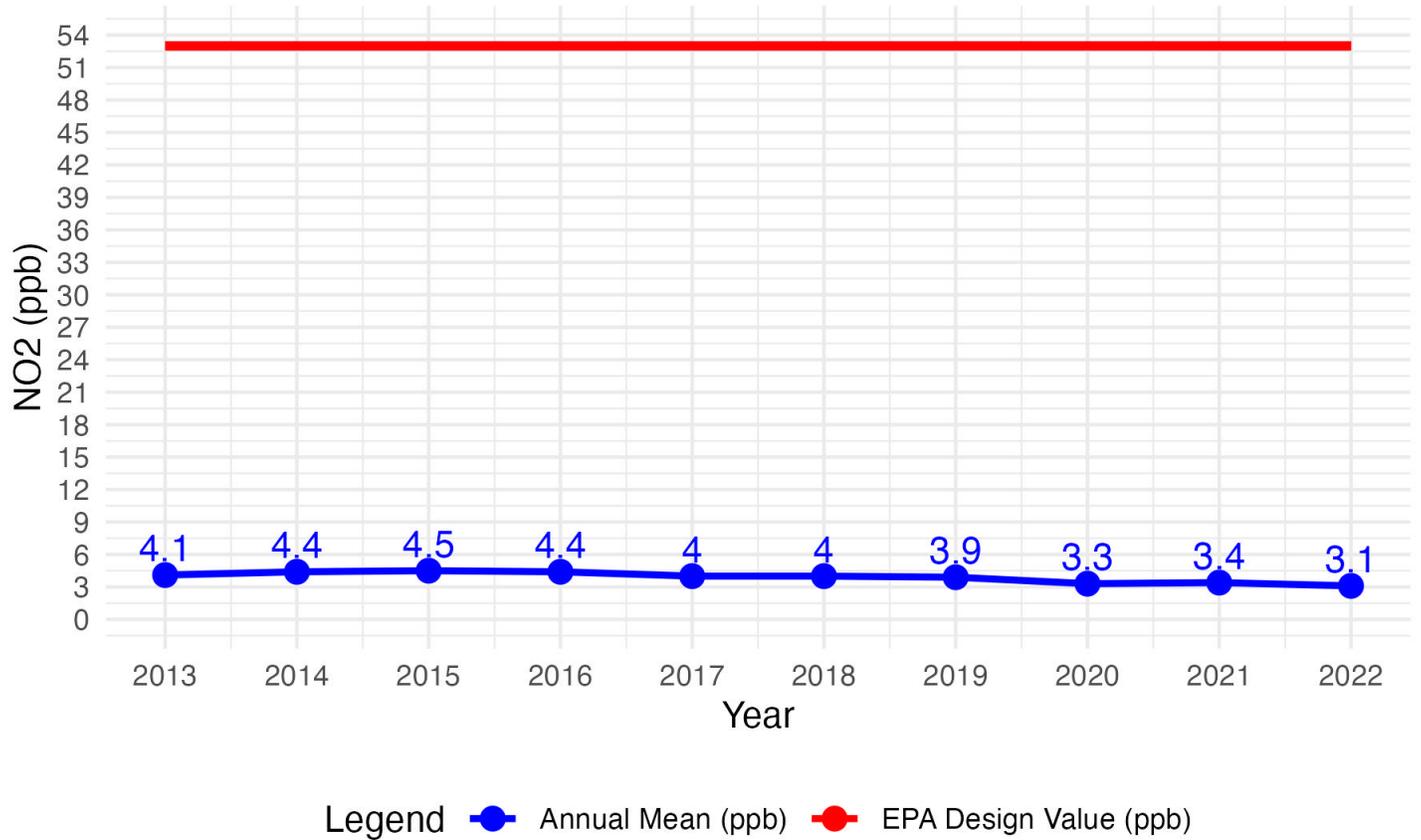


Jackson County - Pascagoula Annual 98th Percentile



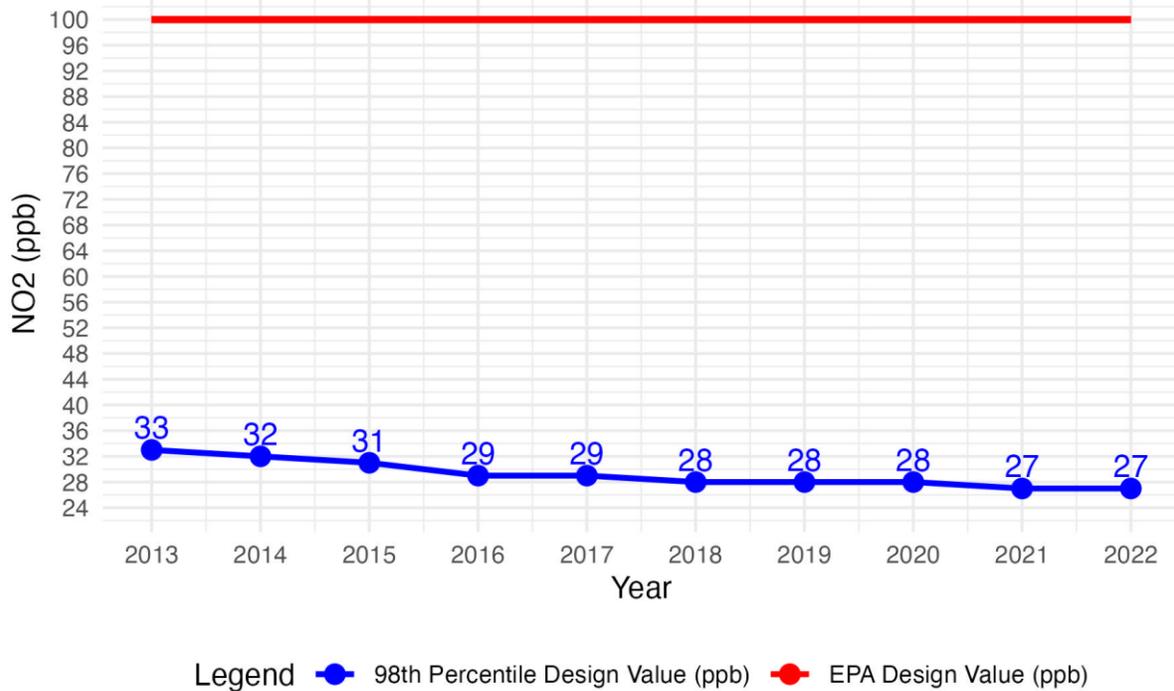
**Jackson County**  
**Nitrogen Dioxide**  
**Annual Mean**

Jackson County - Pascagoula Annual Mean

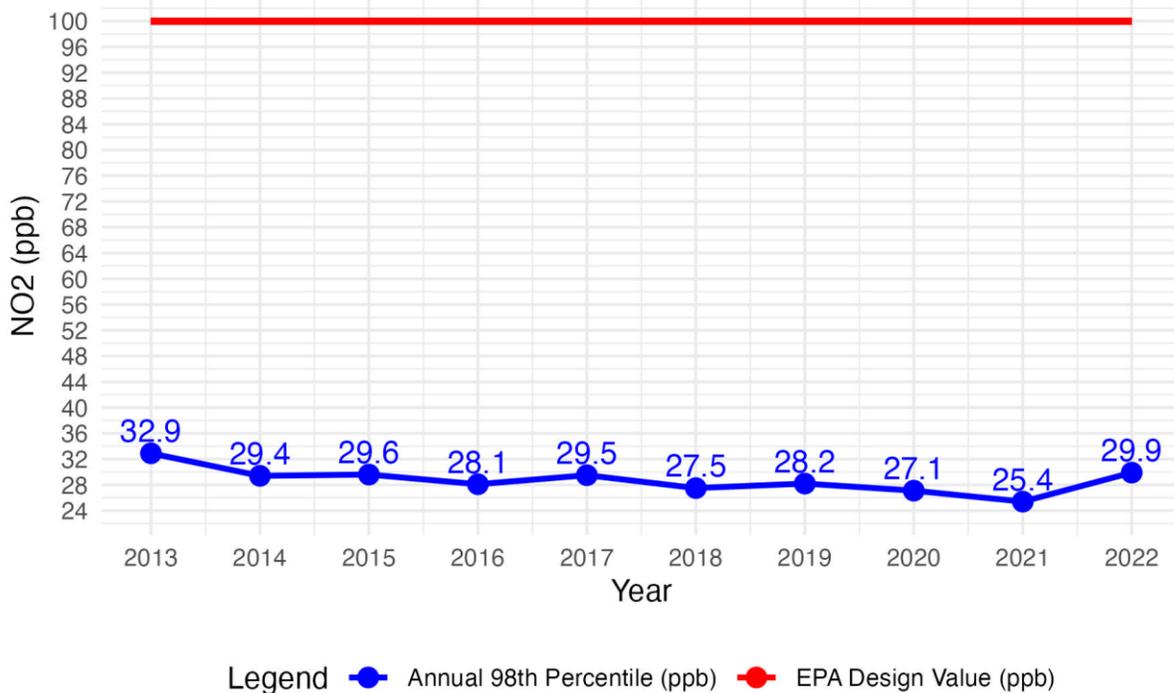


# Jackson County Nitrogen Dioxide 1-Hour Average

Jackson County - Pascagoula 98th Percentile Design Value

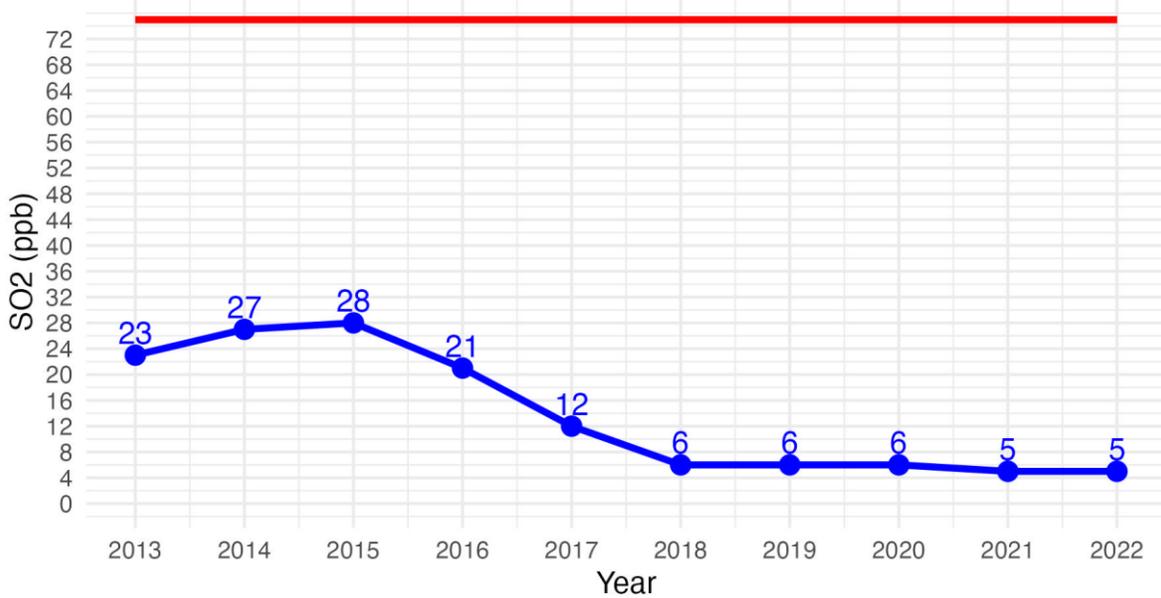


Jackson County - Pascagoula Annual 98th Percentile



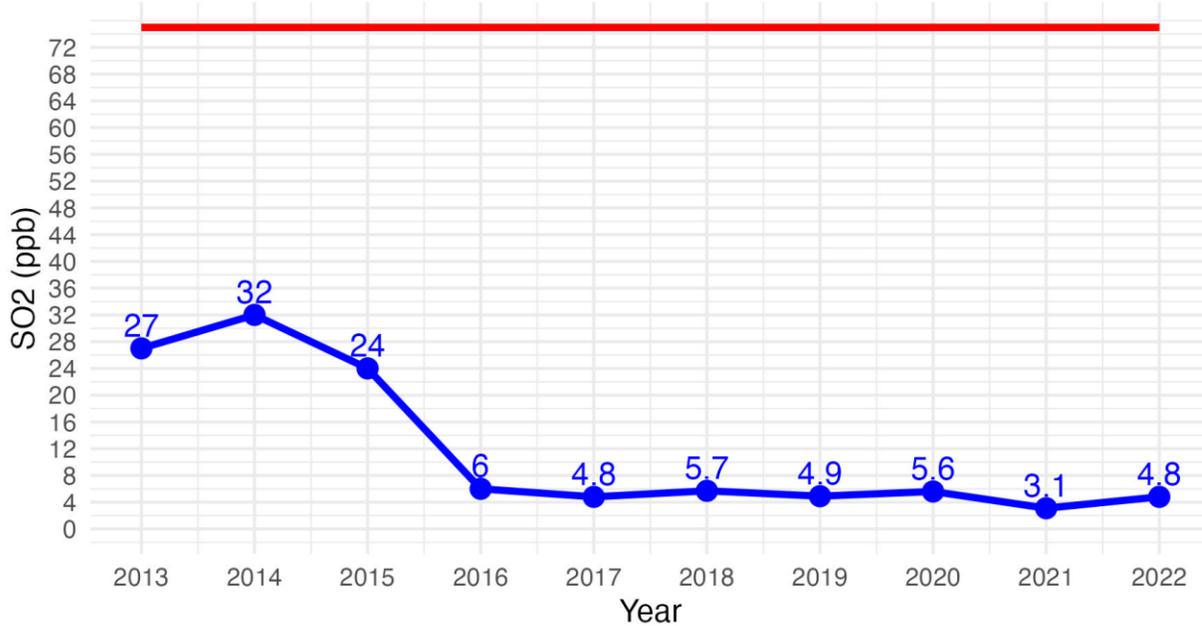
# Jackson County Sulfur Dioxide 1-Hour Average

## Jackson County - Pascagoula Annual 1-Hour Design Value



Legend — Annual 1-Hour Design Value (ppb) — EPA Design Value (ppb)

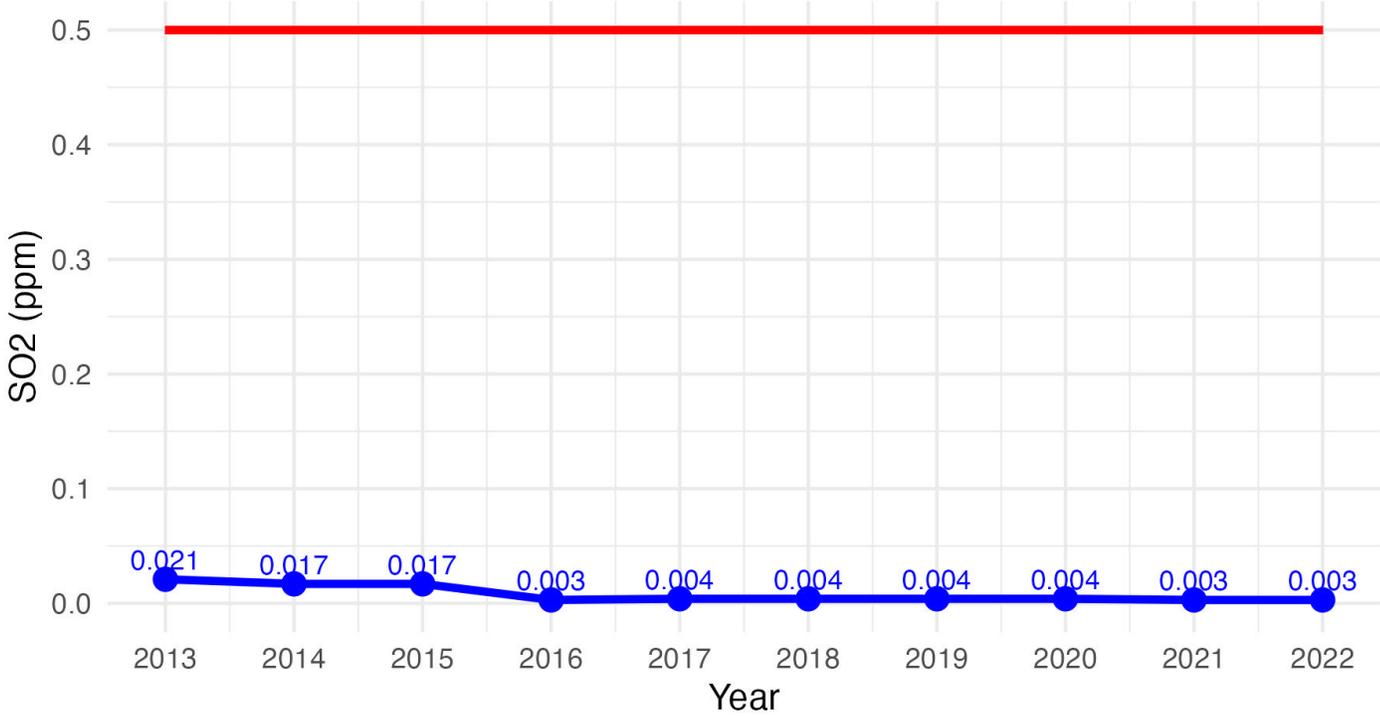
## Jackson County - Pascagoula Annual 99th Percentile



Legend — Annual 99th Percentile (ppb) — EPA Design Value (ppb)

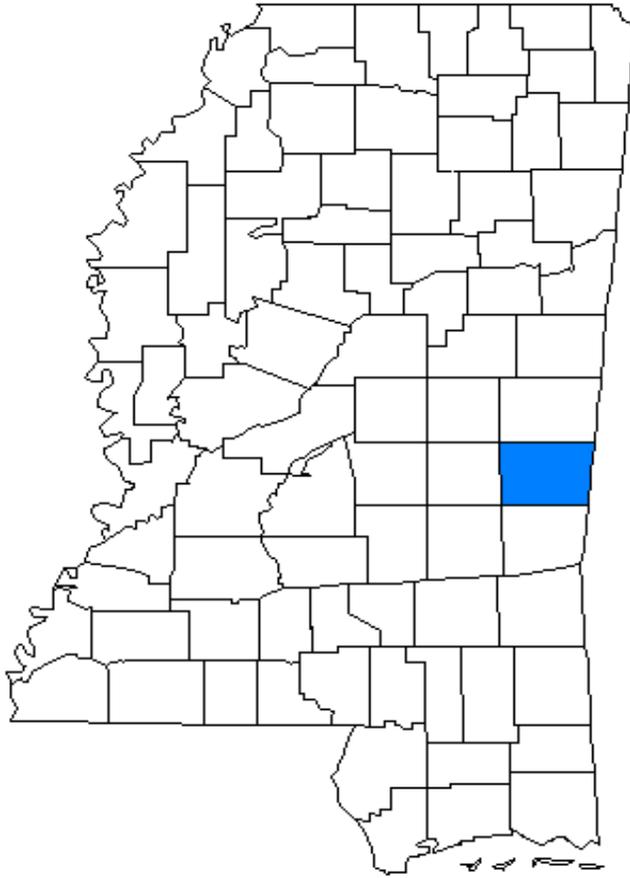
**Jackson County**  
**Sulfur Dioxide**  
**3-Hour Annual 2<sup>nd</sup> Max**

Jackson County - Pascagoula Annual 3-HR Second Max

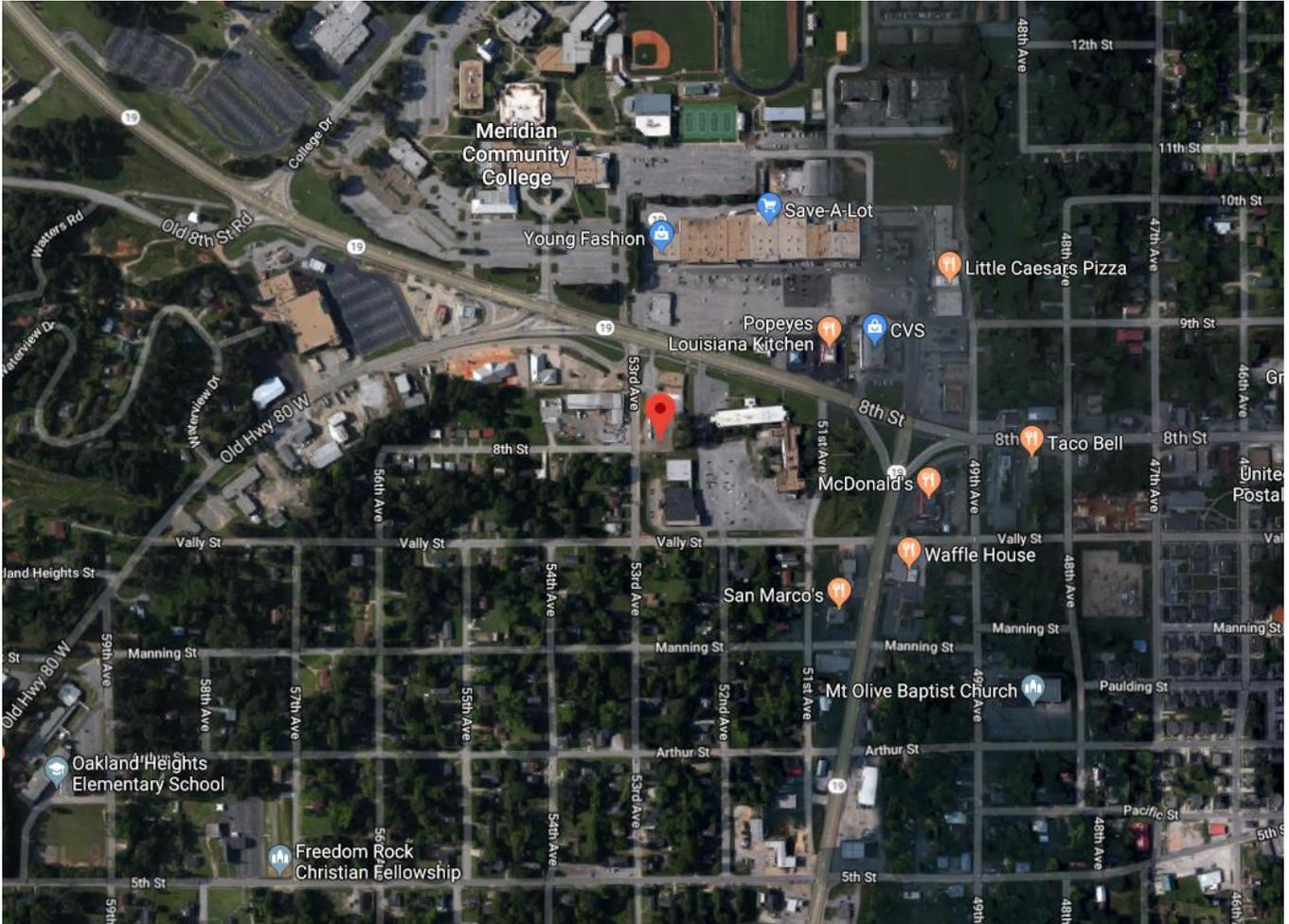


Legend    —●— 3-HR Second Max (ppm)    — EPA Design Value (ppm)

# Lauderdale County

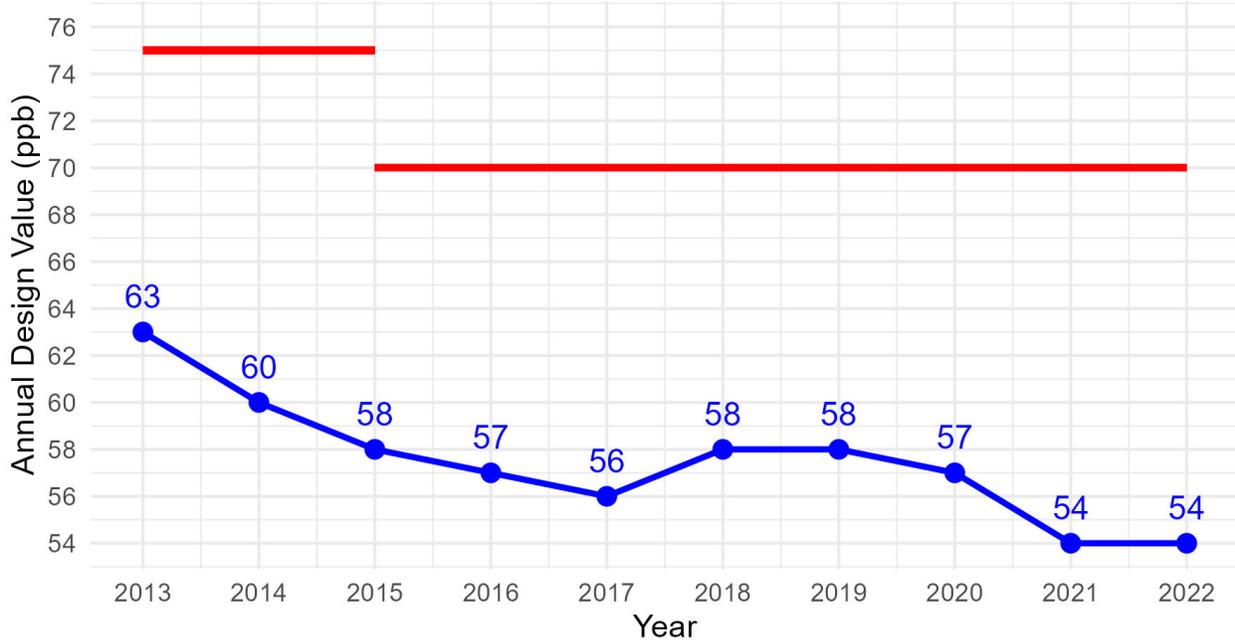


**Lauderdale County**  
**Monitoring Site No. 28-075-0003**  
**Location**



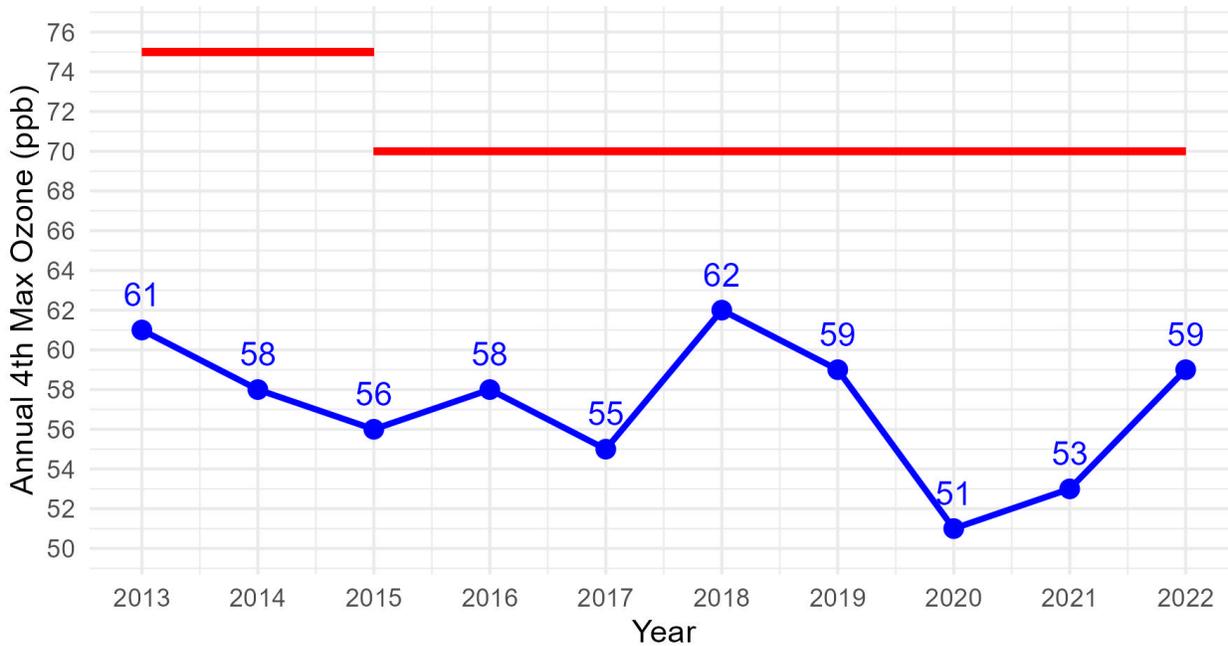
# Lauderdale County 8-Hour Ozone

## Lauderdale County - Meridian Site Annual Ozone Design Values



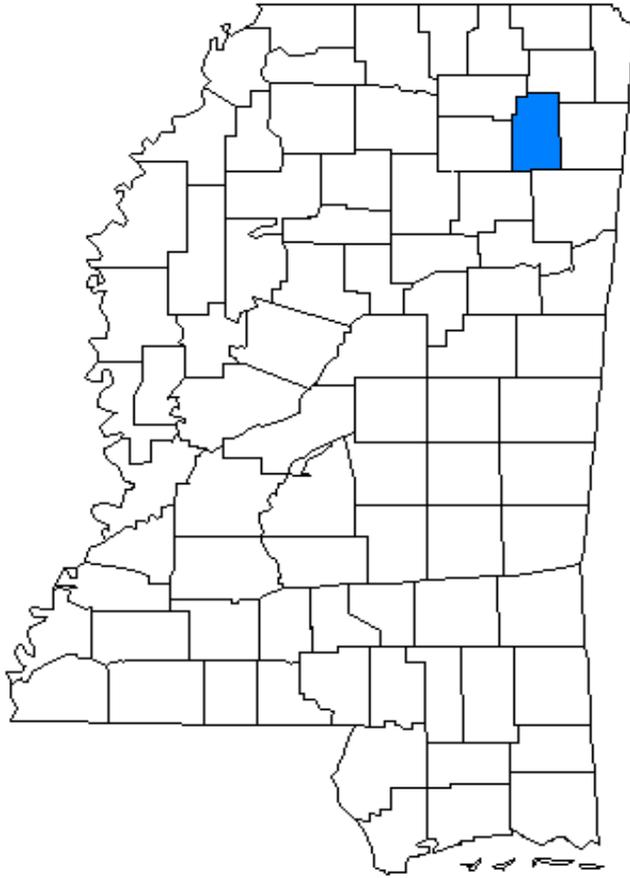
Legend — Annual Design Value (ppb) — EPA Design Value (ppb)

## Lauderdale County - Meridian Annual 4th Max Ozone

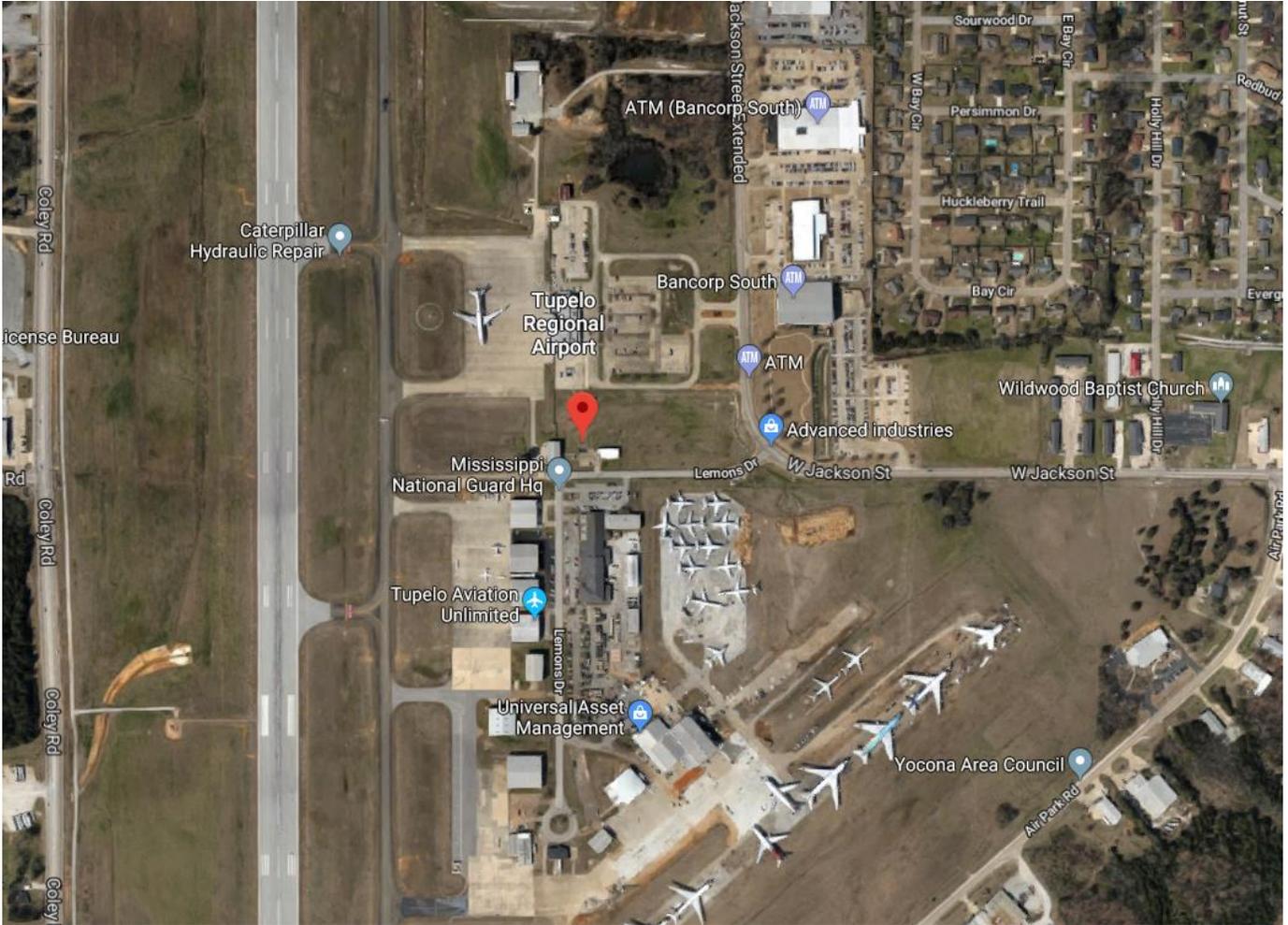


Legend — Annual 4th Max (ppb) — EPA Design Value (ppb)

# Lee County

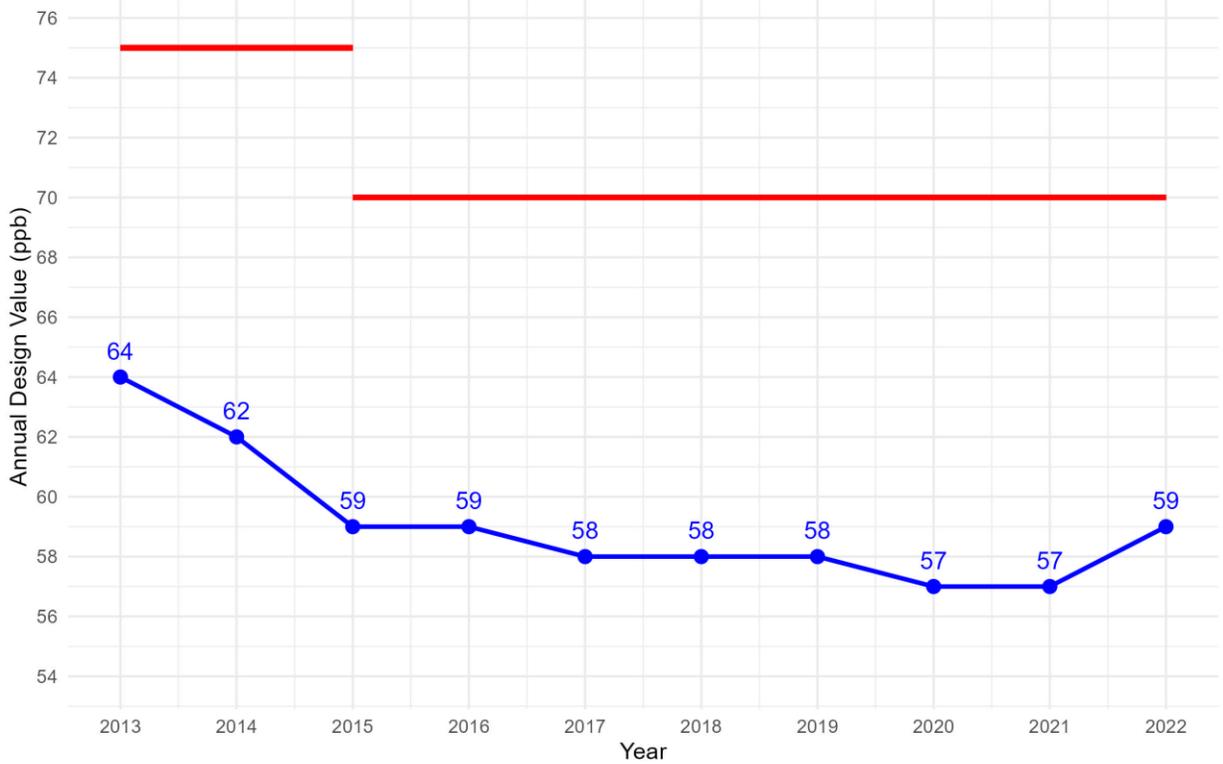


**Lee County**  
**Monitoring Site No. 28-081-0005**  
**Location**



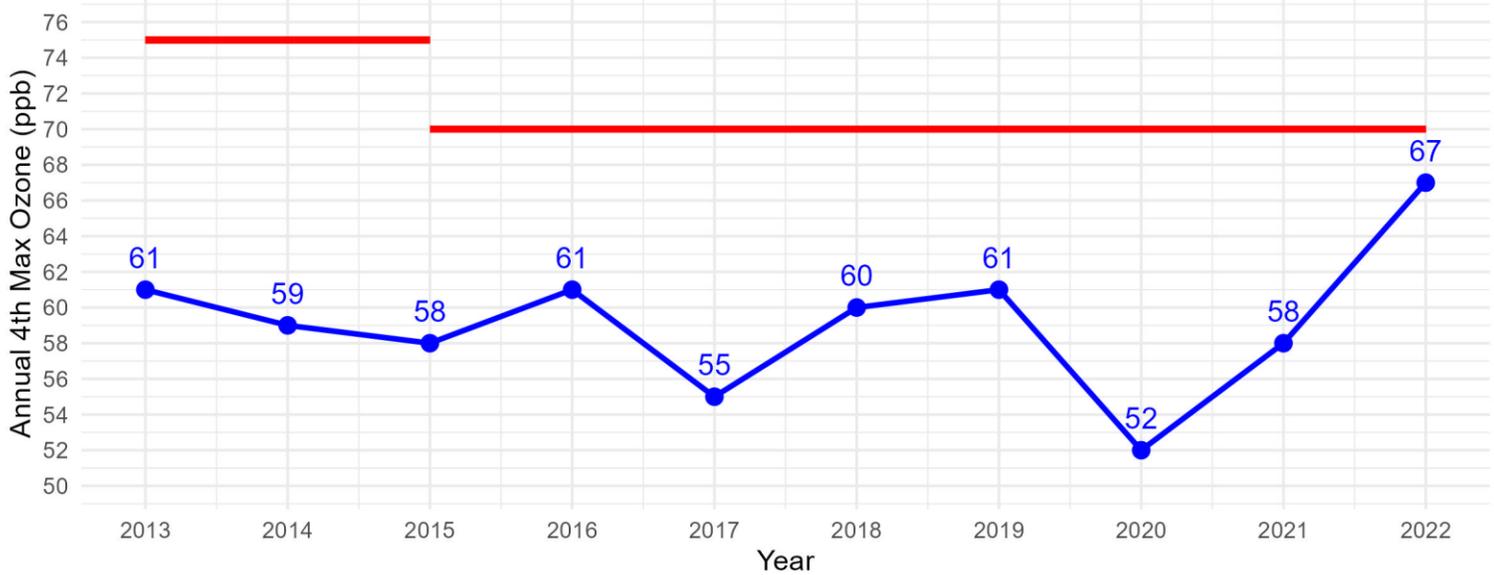
# Lee County 8-Hour Ozone

Lee County - TUPELO AIRPORT NEAR OLD NWS OFFICE Site Annual Ozone Design Value



Legend — Annual Design Value (ppb) — EPA Design Value (ppb)

Lee County - TUPELO AIRPORT NEAR OLD NWS OFFICE Annual 4th Max Ozone



Legend — Annual 4th Max (ppb) — EPA Design Value (ppb)

# Appendix 2

## Data Completeness By Pollutant

# 8-Hour Ozone Data Completeness

## Standards

The standards for 8-hour ozone data completeness are:

- The daily maximum 8-hour average concentrations are available for at least 75%, on average, of the designated sampling days for any one year.
- The daily maximum 8-hour average concentrations are available for at least 90%, on average, of the designated sampling days for a three-year period.

### Annual Data Completeness

### 3-Year Data Completeness

County	Standard	2020	2021	2022
<b>Bolivar</b>	<b>75%</b>	100%	96%	98%
<b>DeSoto</b>	<b>75%</b>	94%	98%	94%
<b>Hancock</b>	<b>75%</b>	93%	98%	99%
<b>Harrison</b>	<b>75%</b>	95%	97%	98%
<b>Hinds CC</b>	<b>75%</b>	97%	94%	99%
<b>Hinds NC</b>	<b>75%</b>	97%	98%	98%
<b>Jackson</b>	<b>75%</b>	96%	96%	99%
<b>Lauderdale</b>	<b>75%</b>	98%	99%	97%
<b>Lee</b>	<b>75%</b>	95%	98%	100%

Standard	2020-2022
<b>90%</b>	98%
<b>90%</b>	96%
<b>90%</b>	97%
<b>90%</b>	97%
<b>90%</b>	97%
<b>90%</b>	98%
<b>90%</b>	97%
<b>90%</b>	98%
<b>90%</b>	98%

**PM<sub>2.5</sub>**  
**Data Completeness**

**Standard**

The standard for PM<sub>2.5</sub> data completeness is:

- A year meets the requirements when at least 75% of the scheduled sampling days for each quarter have valid data.

**2020 Quarterly PM<sub>2.5</sub> Data Completeness**

<b>County</b>	<b>Standard</b>	<b>January - March</b>	<b>April - June</b>	<b>July - September</b>	<b>October - December</b>
<b>DeSoto</b>	<b>75%</b>	100%	100%	100%	97%
<b>Forrest</b>	<b>75%</b>	100%	99%	98%	100%
<b>Grenada</b>	<b>75%</b>	93%	100%	100%	100%
<b>Hancock</b>	<b>75%</b>	100%	100%	90%	92%
<b>Harrison</b>	<b>75%</b>	100%	100%	90%	92%
<b>Hinds CC*</b>	<b>75%</b>	100%	92%	100%	100%
<b>Hinds NC</b>	<b>75%</b>	98%	100%	100%	100%
<b>Jackson</b>	<b>75%</b>	100%	100%	96%	92%

### 2021 Quarterly PM<sub>2.5</sub> Data Completeness

County	Standard	January - March	April - June	July - September	October - December
<b>Bolivar</b>	<b>75%</b>	97%	97%	100%	100%
<b>DeSoto</b>	<b>75%</b>	100%	100%	94%	100%
<b>Forrest</b>	<b>75%</b>	100%	100%	100%	98%
<b>Hancock</b>	<b>75%</b>	100%	100%	94%	100%
<b>Harrison</b>	<b>75%</b>	100%	98%	94%	100%
<b>Hinds CC</b>	<b>75%</b>	100%	100%	92%	100%
<b>Hinds NC</b>	<b>75%</b>	100%	97%	100%	100%
<b>Jackson</b>	<b>75%</b>	100%	100%	94%	99%

### 2022 Quarterly PM<sub>2.5</sub> Data Completeness

County	Standard	January - March	April - June	July - September	October - December
<b>Bolivar</b>	<b>75%</b>	100%	100%	100%	100%
<b>DeSoto</b>	<b>75%</b>	100%	100%	100%	100%
<b>Forrest</b>	<b>75%</b>	100%	100%	100%	100%
<b>Hancock</b>	<b>75%</b>	100%	100%	99%	95%
<b>Harrison</b>	<b>75%</b>	100%	100%	100%	100%
<b>Hinds CC</b>	<b>75%</b>	100%	100%	100%	98%
<b>Hinds NC</b>	<b>75%</b>	100%	100%	99%	100%
<b>Jackson</b>	<b>75%</b>	100%	100%	96%	100%

**PM<sub>10</sub>**  
**Data Completeness**

**Standards**

The standard for PM<sub>10</sub> data completeness is:

- A year meets the requirements when at least 75% of the scheduled sampling days for each quarter have valid data.

**2020 Quarterly PM<sub>10</sub> Data Completeness**

County	Standard	January - March	April - June	July - September	October - December
Hinds NC	75%	98%	100%	100%	100%

**2021 Quarterly PM<sub>10</sub> Data Completeness**

County	Standard	January - March	April - June	July - September	October - December
Hinds NC	75%	100%	97%	100%	100%

**2022 Quarterly PM<sub>10</sub> Data Completeness**

County	Standard	January - March	April - June	July - September	October - December
Hinds NC	75%	100%	100%	99%	100%

# Carbon Monoxide Data Completeness

## Standard

The standard for CO data completeness is:

- An 8-hour average shall be considered valid if at least 75% of the hourly averages for the 8-hour period are available.
- A 1-hour average shall be considered valid if at least 75% of the hourly averages for the 1-hour period are available.

### 2022 Quarterly 8- Hour CO Data Completeness

County	Standard	January - March	April - June	July - September	October - December
Hinds NC	75%	99%	81%	98%	97%

### 2022 Quarterly 1- Hour CO Data Completeness

County	Standard	January - March	April - June	July - September	October - December
Hinds NC	75%	96%	79%	96%	95%

# Nitrogen Dioxide Data Completeness

## Standards

The standards for nitrogen dioxide data completeness are:

- An annual mean must be based upon hourly data that are at least 75% complete for the scheduled sampling days in each year.
- A 1-hour design value is valid if it encompasses three consecutive calendar years of complete data. A year meets data completeness requirements when all 4 quarters are complete. A quarter is complete when at least 75% of the sampling days for each quarter have complete data. A sampling day has complete data if 75% of the hourly concentration values are reported.

### 2022 Annual Mean Nitrogen Dioxide Data Completeness

County	Standard	2021
Jackson	75%	93%

### 2020 Quarterly 1-Hour Nitrogen Dioxide Data Completeness

County	Standard	January - March	April - June	July - September	October - December
Jackson	75%	91%	92%	87%	82%

### 2021 Quarterly 1-Hour Nitrogen Dioxide Data Completeness

County	Standard	January - March	April - June	July - September	October - December
Jackson	75%	94%	93%	86%	90%

### 2022 Quarterly 1-Hour Nitrogen Dioxide Data Completeness

County	Standard	January - March	April - June	July - September	October - December
Jackson	75%	93%	92%	93%	93%

# Sulfur Dioxide Data Completeness

## Standards

The standards for sulfur dioxide data completeness are:

- A 1-hour design value is valid if it encompasses three consecutive calendar years of complete data.
- A year meets data completeness requirements when all 4 quarters are complete. A quarter is complete when at least 75% of the sampling days for each quarter have complete data. A sampling day has complete data if 75% of the hourly concentration values are reported.

### 2020 Quarterly 1-Hour Sulfur Dioxide Data Completeness

County	Standard	January - March	April - June	July - September	October - December
Hinds NC	75%	96%	97%	93%	96%
Jackson	75%	94%	96%	92%	83%

### 2021 Quarterly 1-Hour Sulfur Dioxide Data Completeness

County	Standard	January - March	April - June	July - September	October - December
Hinds NC	75%	97%	85%	88%	95%
Jackson	75%	96%	96%	90%	93%

### 2022 Quarterly 1-Hour Sulfur Dioxide Data Completeness

County	Standard	January - March	April - June	July - September	October - December
Hinds NC	75%	96%	93%	96%	94%
Jackson	75%	96%	96%	96%	89%