

**State of Mississippi  
Air Quality Data Summary  
for  
Calendar Year 2024**



**Mississippi Department of  
Environmental Quality**

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## 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 2024 and compares these levels to the NAAQS. The results indicate that Mississippi is currently designated as in attainment for all criteria pollutants under existing EPA designations.

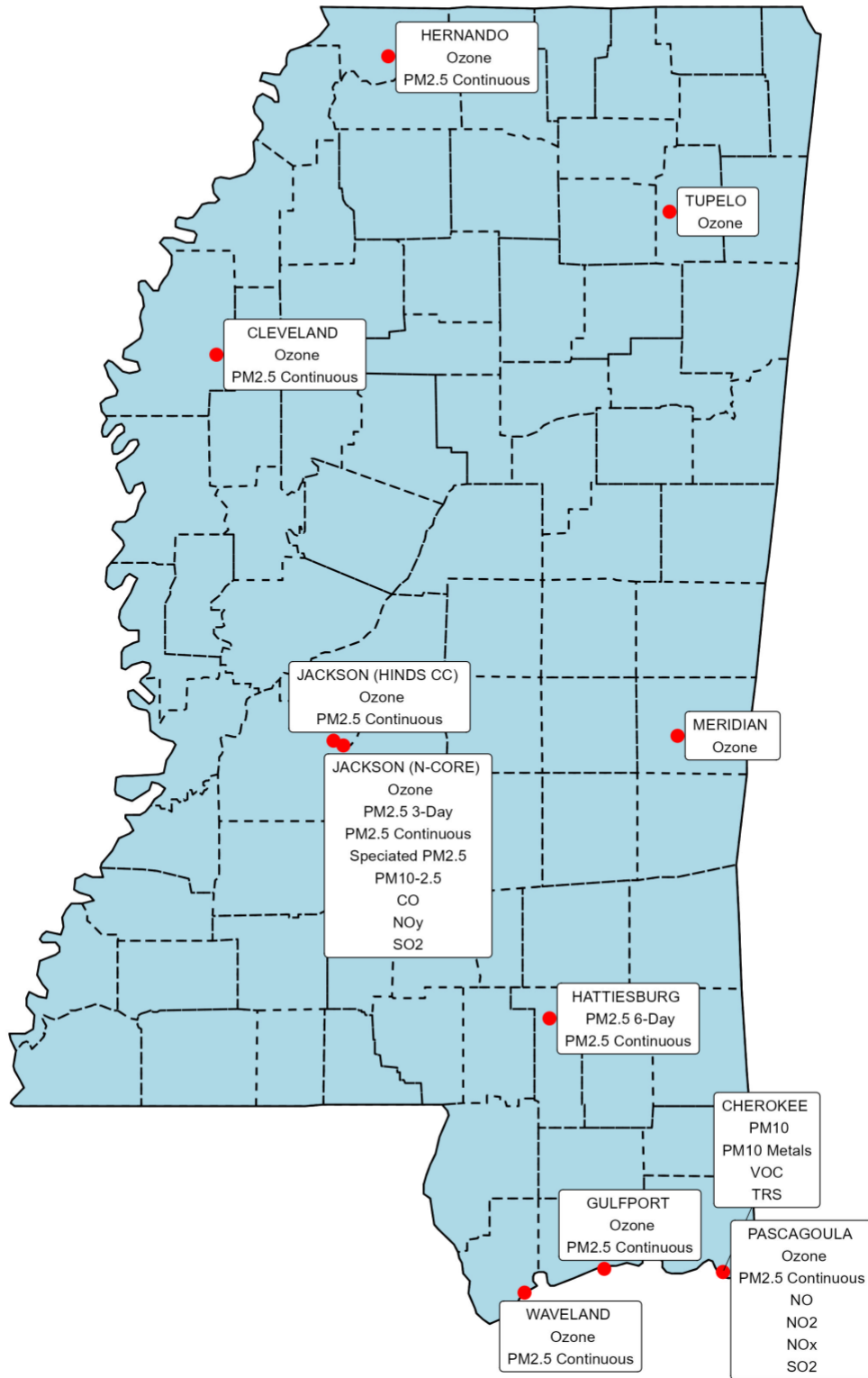
However, recent monitoring data from 2024 shows that DeSoto County has recorded ozone levels slightly above the standard (71 ppb compared to the 70 ppb standard). In response, MDEQ is actively participating in the EPA’s Ozone Advance Program with the Memphis MSA to implement measures aimed at reducing ozone values below the 70 ppb threshold.

On May 6, 2024, the Environmental Protection Agency (EPA) revised the national ambient air quality standards (NAAQS) for particulate matter (PM), lowering the primary annual PM<sub>2.5</sub> standard from 12.0 µg/m<sup>3</sup> to 9.0 µg/m<sup>3</sup>, while maintaining existing primary 24-hour PM<sub>2.5</sub> and PM<sub>10</sub> standards, as well as secondary PM<sub>2.5</sub> and PM<sub>10</sub> standards, <https://www.epa.gov/pm-pollution/final-reconsideration-national-ambient-air-quality-standards-particulate-matter-pm>. With this revision, latest monitoring data indicates that two sites in Mississippi (Hattiesburg and DeSoto County) have recorded values above the new 9.0 µg/m<sup>3</sup> standard. MDEQ is pursuing exceptional events demonstrations for both locations to exclude data influenced by prescribed fire, wildfire, and Canadian fire events that anomalously affected PM<sub>2.5</sub> concentrations. These exceptional events, if approved by EPA, would likely bring the annual design values below the revised standard. It should be noted that EPA will not make formal designations for the 2024 PM<sub>2.5</sub> standard until February 2026.

On December 10, 2024, the EPA revised the secondary National Ambient Air Quality Standard (NAAQS) for sulfur dioxide (SO<sub>2</sub>). The previous secondary standard of 0.5 ppm (3-hour average, not to be exceeded more than once per year) has been replaced with a new annual standard of 10 ppb (annual mean, averaged over 3 years). This revision follows a scientific review of ecological effects caused by oxides of sulfur and aligns with recommendations from the Clean Air Scientific Advisory Committee. The EPA anticipates that additional emissions reductions beyond those already required for the 2010 primary SO<sub>2</sub> standard will not be needed to meet this revised secondary standard. The revision initiates implementation activities including permitting guidance and area designation processes. The new standard will take effect 30 days after publication in the Federal Register.

For questions regarding this 2024 Air Quality NAAQS Summary for the State of Mississippi or to request additional information about air quality monitoring in Mississippi, please contact Rodney Cuevas at [RCuevas@mdeq.ms.gov](mailto:RCuevas@mdeq.ms.gov). The Mississippi Department of Environmental Quality is committed to protecting the state's air quality and providing transparent information to the public about compliance with national air quality standards.

# 2024 MDEQ Air Monitoring Network





# Monitoring Network Information

## Air Quality Monitoring Sites

County	City	Monitoring Site ID	Pollutants Monitored	Latitude	Longitude
Bolivar	Cleveland	28-011-0002	Ozone, PM2.5 Continuous	33° 45' 03"	-90° 44' 03"
DeSoto	Hernando	28-033-0002	Ozone, PM2.5 Continuous	34° 49' 14"	-89° 59' 16"
Forrest	Hattiesburg	28-035-0004	PM2.5 6-Day, PM2.5 Continuous	31° 19' 23"	-89° 17' 15"
Hancock	Waveland	28-045-0003	Ozone, PM2.5 Continuous	30° 18' 3"	-89° 23' 45"
Harrison	Gulfport	28-047-0008	Ozone, PM2.5 Continuous	30° 23' 24"	-89° 02' 59"
Hinds	Jackson (Hinds CC)	28-049-0021	Ozone, PM2.5 Continuous	32° 20' 48"	-90° 13' 32"
Hinds	Jackson (N-CORE)	28-049-0020	Ozone, PM2.5 3-Day, PM2.5 Continuous, Speciated PM2.5, PM10-2.5, CO, NOy, SO2	32° 19' 45"	-90° 10' 58"
Jackson	Pascagoula	28-059-0006	Ozone, PM2.5 Continuous, NO, NO2, NOx, SO2	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"
Jackson	Cherokee	28-059-0007	PM10, PM10 Metals, VOC, TRS	30° 22' 42"	-88° 32' 03"

# 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	9.0 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	1 year	10 ppb	annual mean, averaged over 3 years

(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.

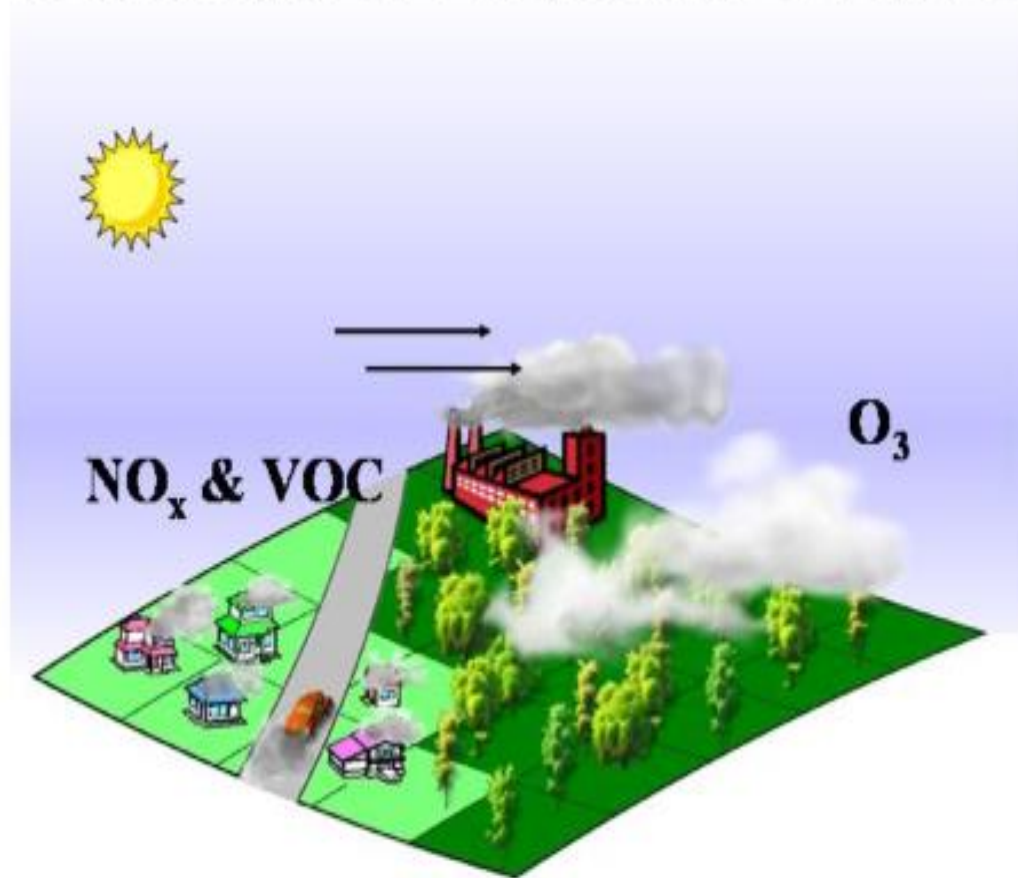
(3) Final rule signed October 1, 2015, and effective December 28, 2015. The previous (2008) O<sub>3</sub> standards are not revoked and remain in effect for designated areas. Additionally, some areas may have certain continuing implementation obligations under the prior revoked 1-hour (1979) and 8-hour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

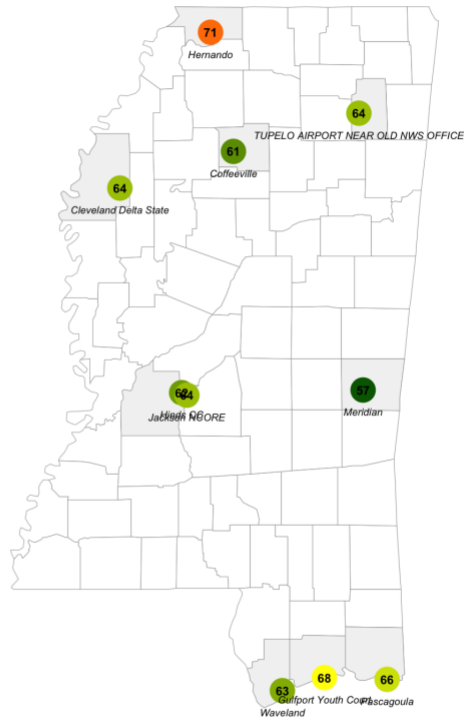
There is one primary and secondary ozone standard – the 8-hour average. MDEQ monitors ozone continuously from March 1<sup>st</sup> through October 31<sup>st</sup> each year at the monitoring sites listed below. Ozone is monitored year around at our N-CORE site located in Jackson.

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

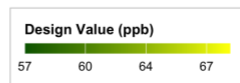
The 8-hour standard is met when the 3-year average of the annual fourth highest daily maximum 8-hour average concentration (also known as the design value) is less than or equal to 0.070 parts per million (ppm) or 70 parts per billion (ppb).

### Mississippi Ozone Monitoring Network (2024)

**Mississippi Ozone Design Values (2024)**  
8-hour average concentration (parts per billion) • EPA Standard: 70 ppb



Site	County	Design Value (ppb)
Cleveland Delta State	Bolivar	64
Hernando	DeSoto	71
Waveland	Hancock	63
Gulfport Youth Court	Harrison	68
Hinds CC	Hinds	62
Jackson N-CORE	Hinds	64
Pascagoula	Jackson	66
Meridian	Lauderdale	57
TUPELO AIRPORT NEAR OLD NWS OFFICE	Lee	64
Coffeeville	Yalobusha	61

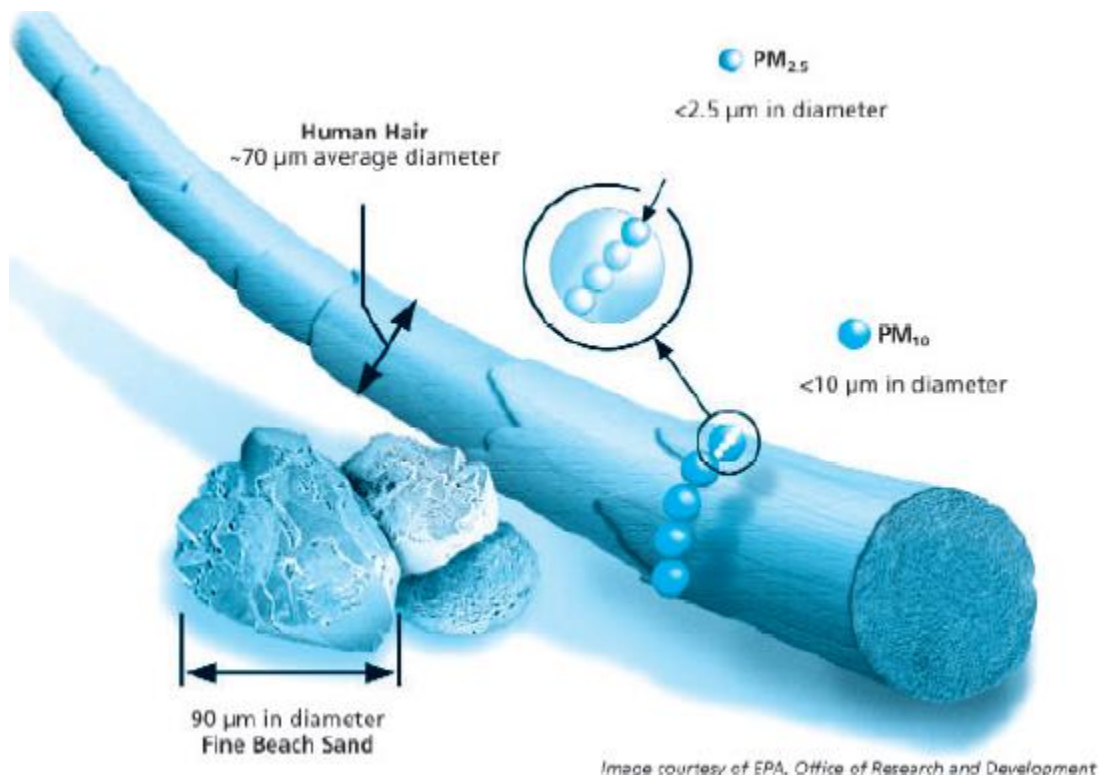


Data source: EPA Air Quality System (AQS)

# 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.

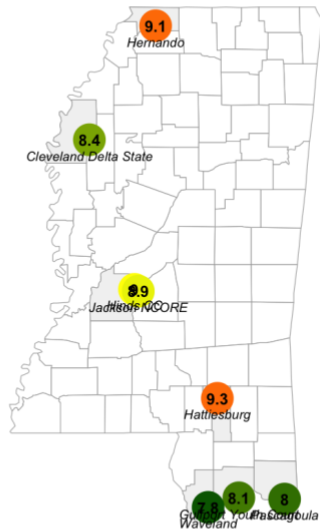
### Primary and Secondary Annual Standard – 9.0 µg/m<sup>3</sup> and 15.0 µg/m<sup>3</sup>, respectively

The annual average primary standard is met when the three-year average of the annual averages does not exceed 9.0 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>).

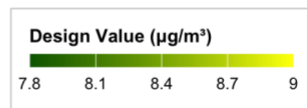
#### Mississippi PM<sub>2.5</sub> Monitoring Network (2024)

##### Mississippi PM<sub>2.5</sub> Design Values (2024)

Annual average concentration (µg/m<sup>3</sup>) • NAAQS Standard: 9.0 µg/m<sup>3</sup>



Site	County	Design Value (µg/m <sup>3</sup> )
Cleveland Delta State	Bolivar	8.4
Hernando	DeSoto	9.1
Hattiesburg	Forrest	9.3
Waveland	Hancock	7.8
Gulfport Youth Court	Harrison	8.1
Hinds CC	Hinds	9.0
Jackson NCORE	Hinds	8.9
Pascagoula	Jackson	8.0



Data source: EPA Air Quality System (AQS)

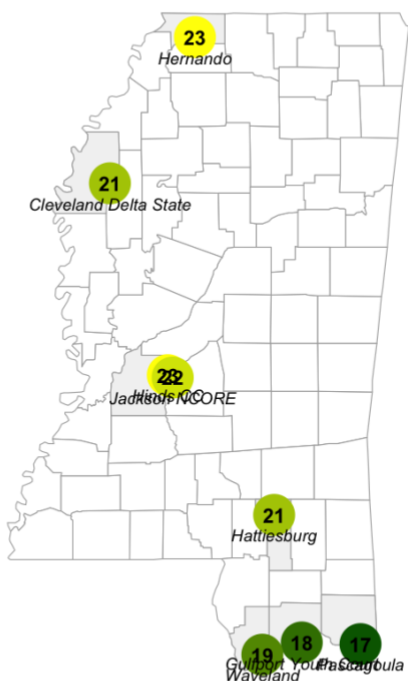
## Primary and Secondary 24-Hour Standard – 35 $\mu\text{g}/\text{m}^3$

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 ( $\mu\text{g}/\text{m}^3$ ).

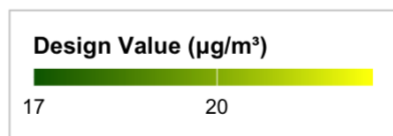
### Mississippi PM2.5 24-hr Monitoring Network (2024)

#### Mississippi PM2.5 24-hr Design Values (2024)

98th Percentile concentration ( $\mu\text{g}/\text{m}^3$ ) • NAAQS Standard: 35  $\mu\text{g}/\text{m}^3$



Site	County	Design Value ( $\mu\text{g}/\text{m}^3$ )
Cleveland Delta State	Bolivar	21
Hernando	DeSoto	23
Hattiesburg	Forrest	21
Waveland	Hancock	19
Gulfport Youth Court	Harrison	18
Hinds CC	Hinds	23
Jackson N CORE	Hinds	22
Pascagoula	Jackson	17



Data source: EPA Air Quality System (AQS)



# PM<sub>10</sub> Standards

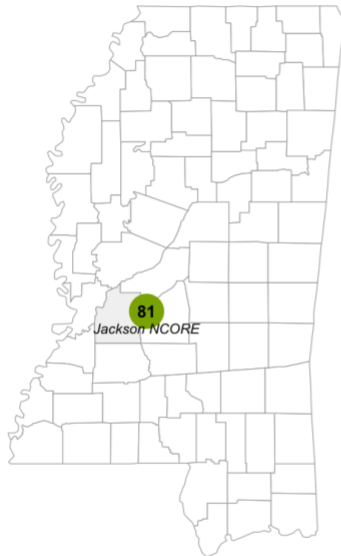
There is one primary and secondary PM<sub>10</sub> standard - the 24-Hour Average. MDEQ monitors PM<sub>10</sub> continuously at the N-CORE site located in Jackson.

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

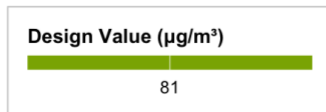
The 24-hour average primary and secondary standard is met when the annual second max does not exceed 150 micrograms per cubic meter (µg/m<sup>3</sup>) over an average of three years.

### Mississippi PM<sub>10</sub> Monitoring Network (2024)

**Mississippi PM<sub>10</sub> Design Values (2024)**  
Second Maximum concentration (µg/m<sup>3</sup>) • NAAQS Standard: 150 µg/m<sup>3</sup>



Site	County	Design Value (µg/m <sup>3</sup> )
Jackson N-CORE	Hinds	81



Data source: EPA Air Quality System (AQS)

# **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.

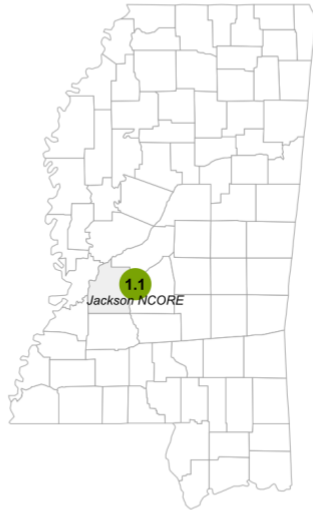
### **Primary 8-Hour and 1-Hour Standard – 9 ppm and 35 ppm, respectively**

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.

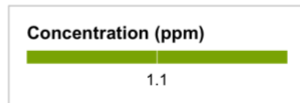
## Mississippi 1-Hour CO Monitoring Network (2024)

### Mississippi 1-Hour CO Values (2024)

Second Maximum concentration (ppm) • NAAQS Standard: 35 ppm



Site	County	Value (ppm)
Jackson NCORE	Hinds	1.1



Data source: EPA Air Quality System (AQS)

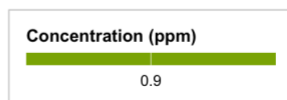
## Mississippi 8-Hour CO Monitoring Network (2024)

### Mississippi 8-Hour CO Values (2024)

Second Maximum concentration (ppm) • NAAQS Standard: 9 ppm



Site	County	Value (ppm)
Jackson NCORE	Hinds	0.9



Data source: EPA Air Quality System (AQS)

# 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

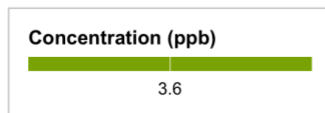
The annual average NO<sub>2</sub> standard is met when the annual average does not exceed 53 parts per billion (ppb).

#### Mississippi Annual NO<sub>2</sub> Monitoring Network (2024)

**Mississippi Annual NO<sub>2</sub> Values (2024)**  
Annual Mean concentration (ppb) • NAAQS Standard: 53 ppb



Site	County	Annual Mean (ppb)
Pascagoula	Jackson	3.6



Data source: EPA Air Quality System (AQS)

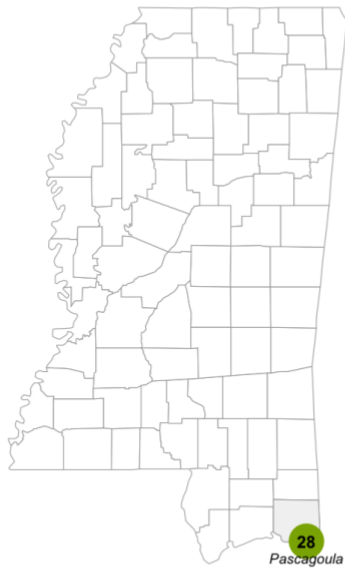
## Primary 1-Hour Standard – 100 ppb

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).

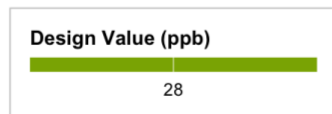
### Mississippi 1-Hour NO<sub>2</sub> Design Value Network (2024)

#### Mississippi 1-Hour NO<sub>2</sub> Design Values (2024)

98th Percentile Design Value (ppb) • NAAQS Standard: 100 ppb



Site	County	Design Value (ppb)
Pascagoula	Jackson	28



Data source: EPA Air Quality System (AQS)

# 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

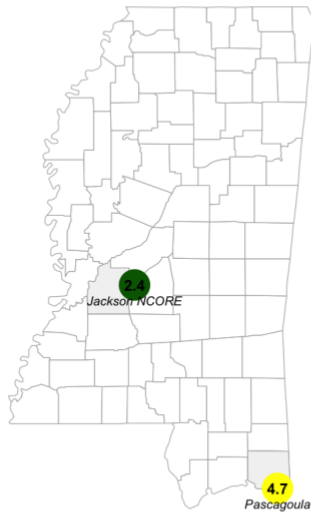
There are two SO<sub>2</sub> standards – (1) the Primary 1-Hour average and (2) the Secondary 3-hour average. MDEQ monitors SO<sub>2</sub> continuously at the monitoring sites listed below.

### Primary 1-Hour Standard – 75 ppb

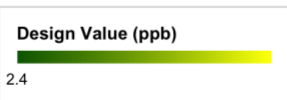
The 1-hour average SO<sub>2</sub> standard is met when the three-year average of the annual 99<sup>th</sup> percentiles of the 1-hour averages does not exceed 75 parts per billion (ppb).

#### Mississippi 1-Hour SO<sub>2</sub> Design Value Network (2024)

**Mississippi 1-Hour SO<sub>2</sub> Design Values (2024)**  
99th Percentile Design Value (ppb) • NAAQS Standard: 75 ppb



Site	County	Design Value (ppb)
Jackson NCORE	Hinds	2.4
Pascagoula	Jackson	4.7



Data source: EPA Air Quality System (AQS)

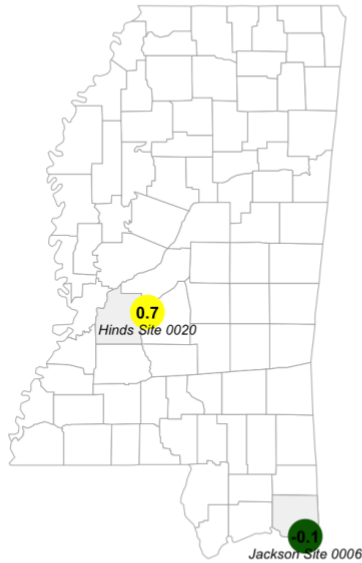
## Secondary Annual Standard – 10 ppb

The secondary annual SO<sub>2</sub> standard is met when the 3-year average of the annual mean concentration does not exceed 10 parts per billion (ppb). This standard, established in December 2024, replaced the previous secondary 3-hour standard of 0.5 ppm and is designed to protect against ecological effects caused by oxides of sulfur.

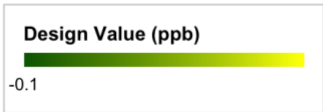
### Mississippi Annual SO<sub>2</sub> Design Value Network (2024)

#### Mississippi Annual SO<sub>2</sub> Design Values (2024)

Annual Mean Design Value (ppb) • Secondary NAAQS Standard: 10 ppb



Site	County	Design Value (ppb)
Hinds Site 0020	Hinds	0.7
Jackson Site 0006	Jackson	-0.1



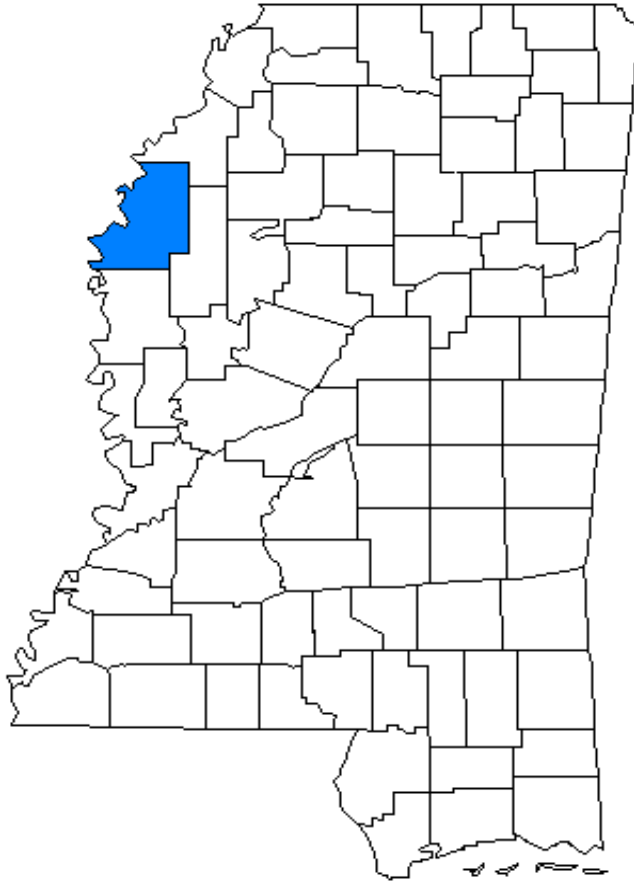
Data source: EPA Air Quality System (AQS)

# Appendix 1

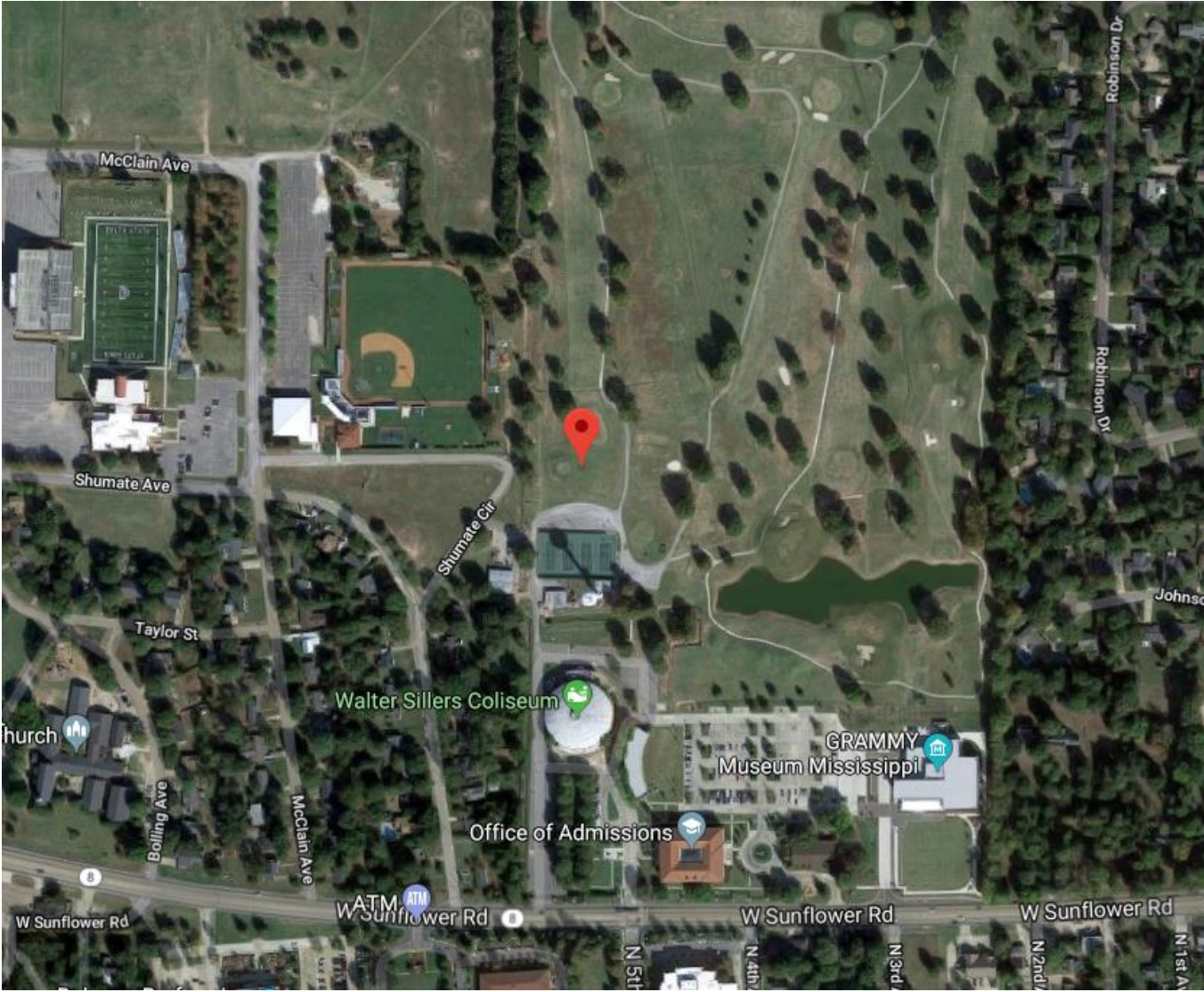
## 10-Year Data Trends By County



# Bolivar County

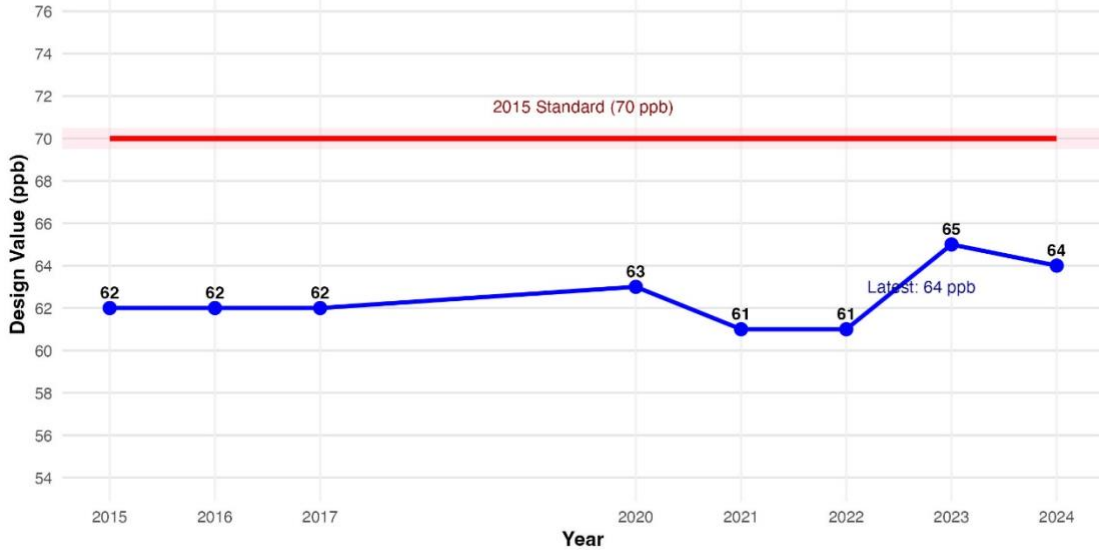


**Bolivar County**  
**Monitoring Site No. 28-011-0002**  
**Location**



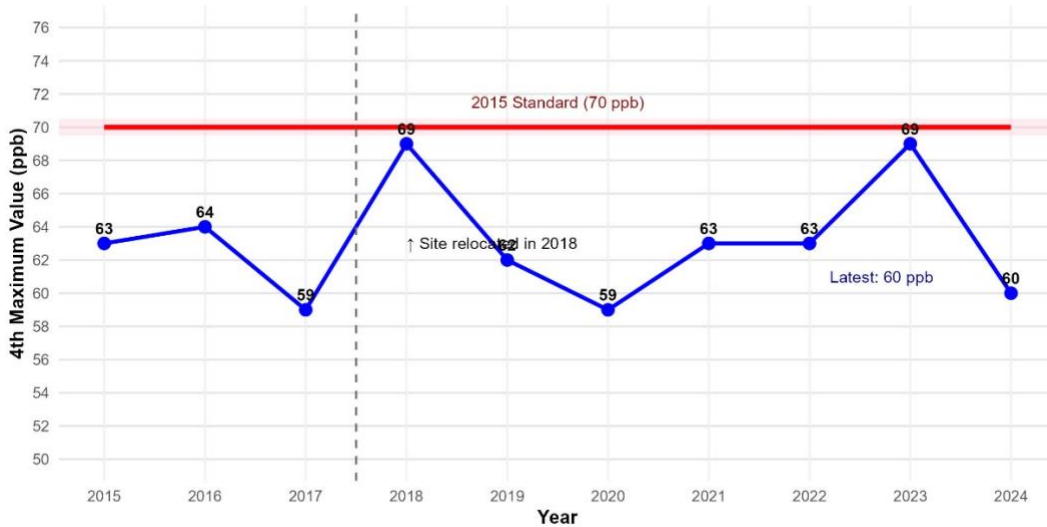
# Bolivar County 8-Hour Ozone Standard

**Bolivar County - Cleveland**  
Annual Ozone Design Values (2015-2024)



Design values are 3-year rolling averages of the annual 4th maximum 8-hour ozone concentration

**Bolivar County - Cleveland**  
Annual 4th Maximum 8-hour Ozone Values (2015-2024)

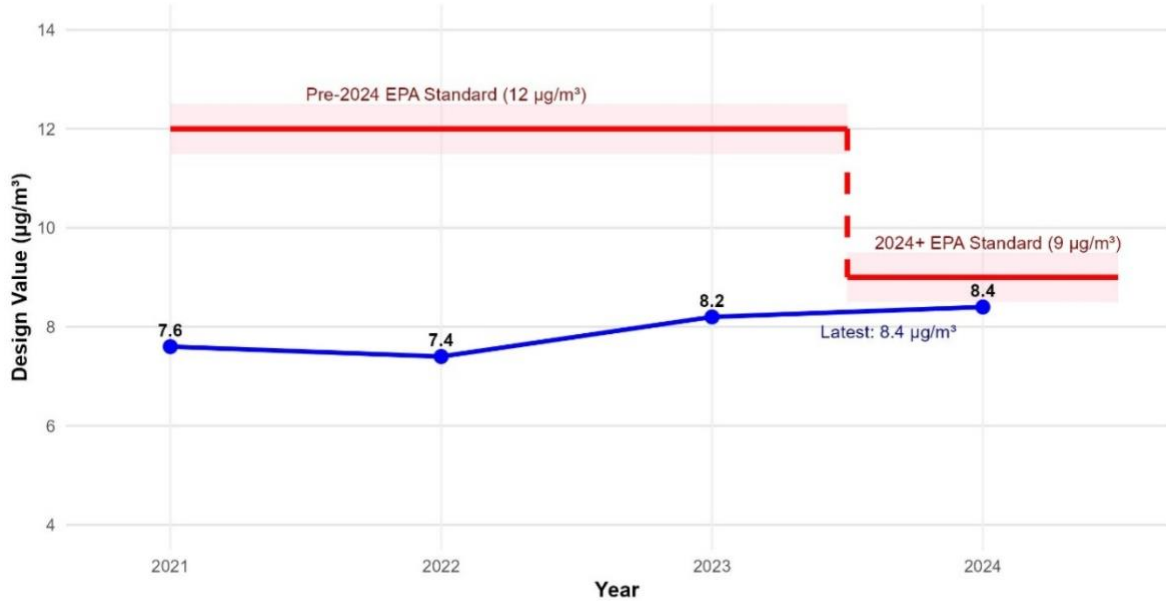


4th highest daily maximum 8-hour ozone concentration at each site  
Site relocated from Cleveland to Cleveland Delta State in 2018

**\*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.**

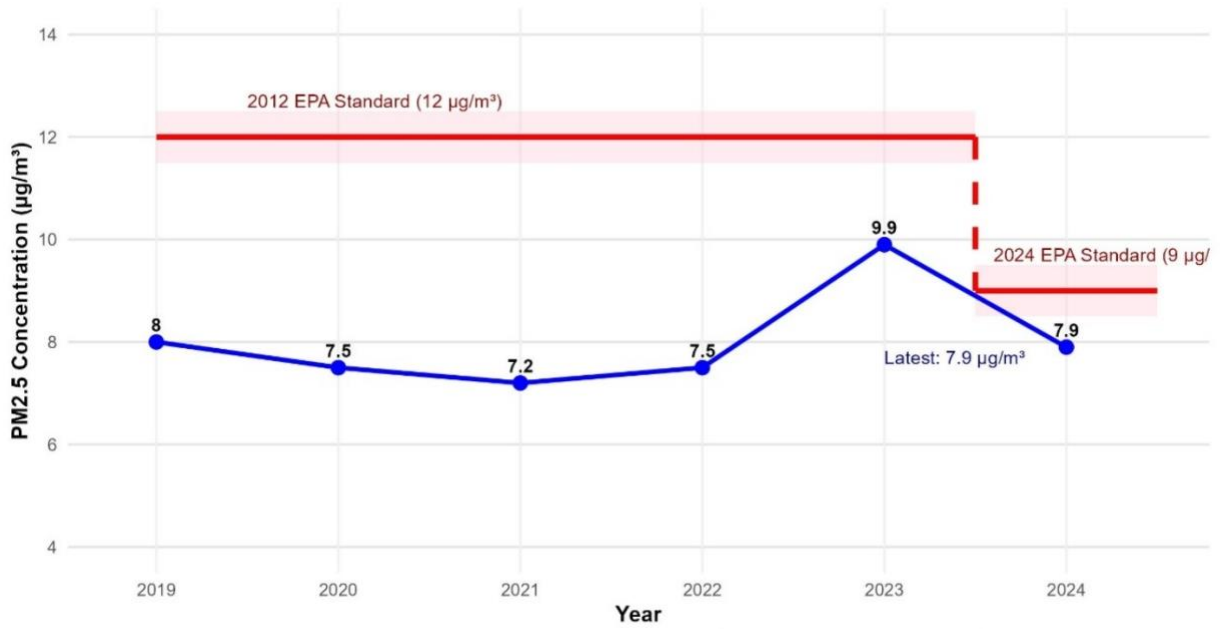
# Bolivar County Annual PM<sub>2.5</sub> Standard

**Bolivar County - Cleveland Delta State**  
PM<sub>2.5</sub> Design Values (2021-2024)



Design values are 3-year rolling averages of the annual PM<sub>2.5</sub> concentration

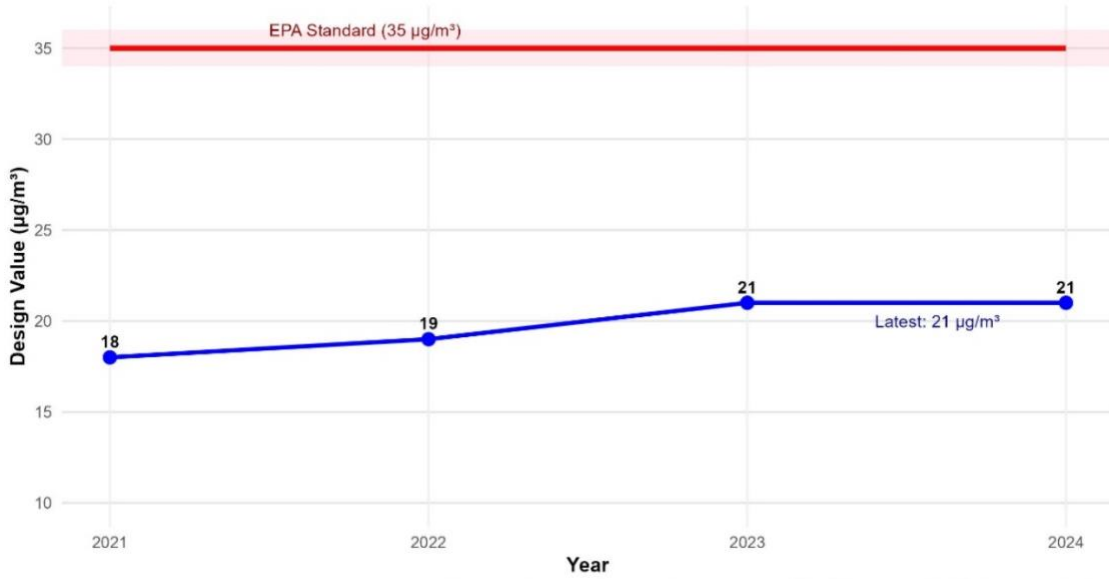
**Bolivar County - Cleveland Delta State**  
Annual PM<sub>2.5</sub> Means (2019-2024)



Annual arithmetic mean of 24-hour PM<sub>2.5</sub> concentrations

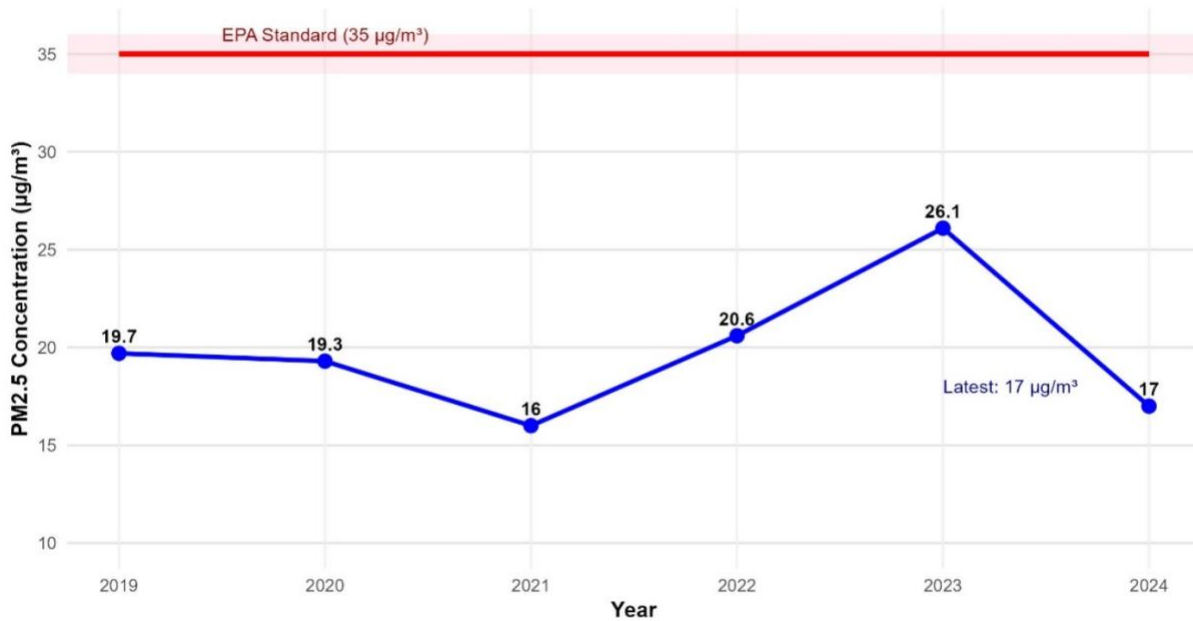
# Bolivar County PM<sub>2.5</sub> 24-Hour Averages

**Bolivar County - Cleveland Delta State**  
PM<sub>2.5</sub> 24-hr Design Values (2021-2024)



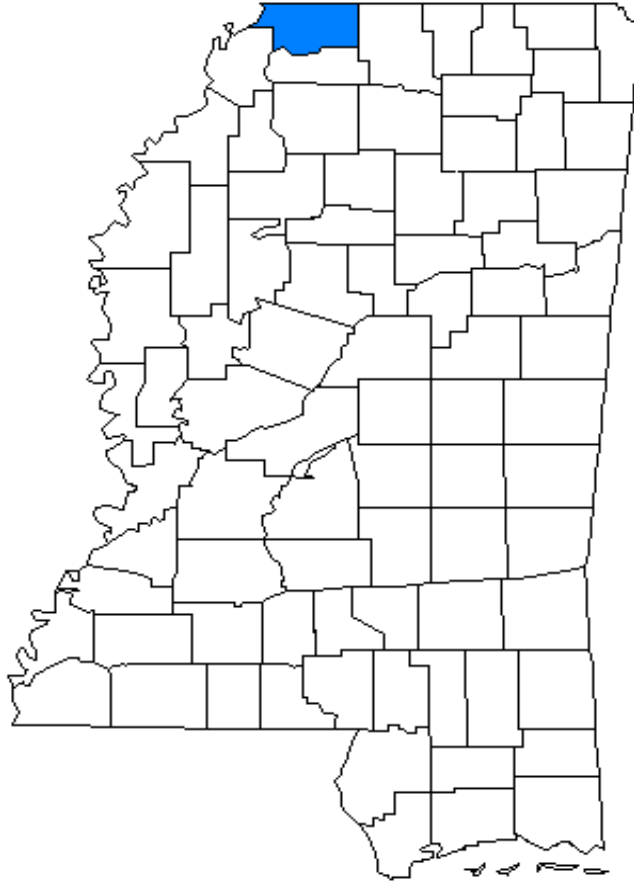
Design values are 3-year rolling averages of the 98th percentile PM<sub>2.5</sub> concentration

**Bolivar County - Cleveland Delta State**  
98th Percentile PM<sub>2.5</sub> Values (2019-2024)



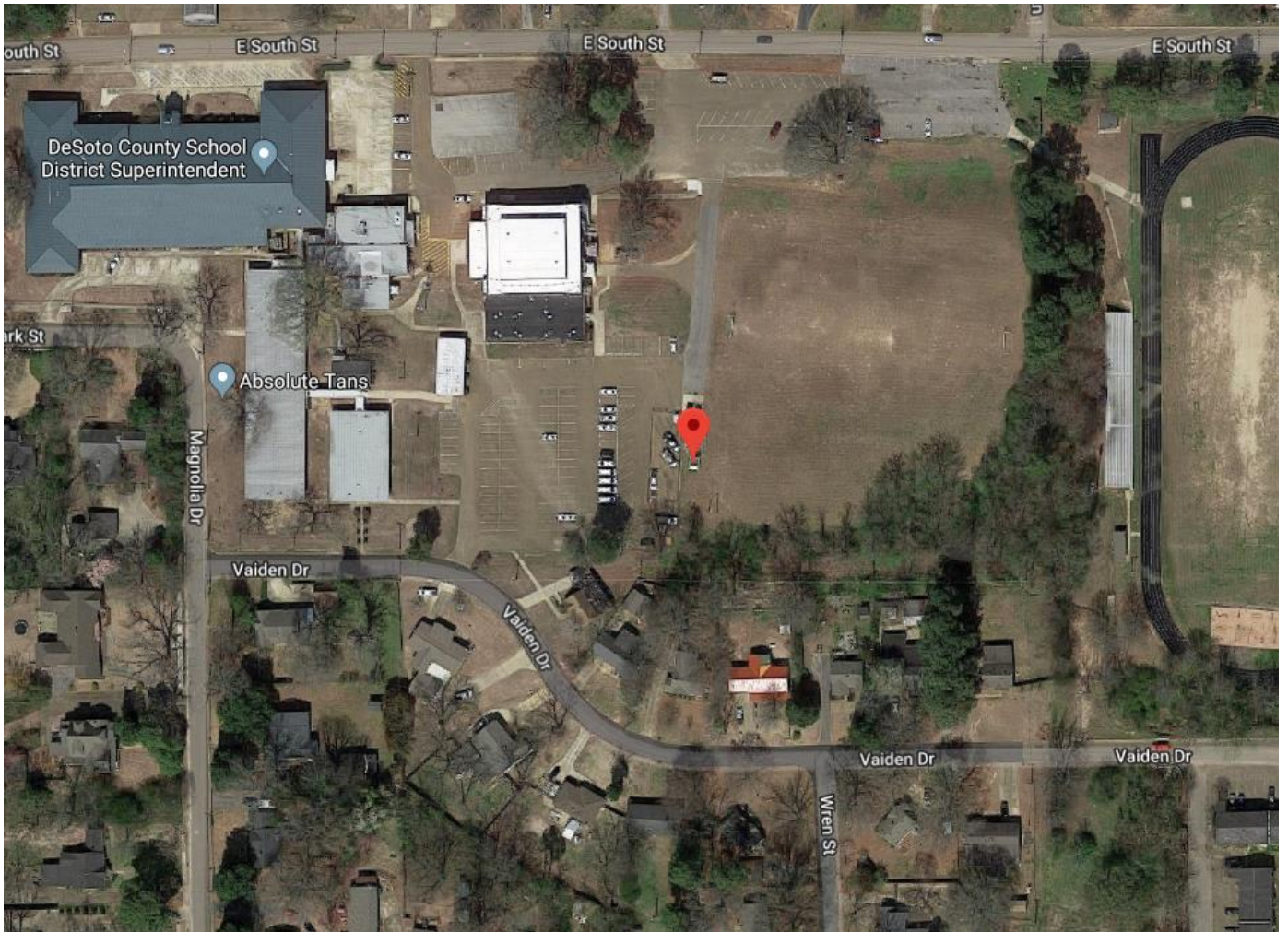
98th percentile of 24-hour PM<sub>2.5</sub> concentrations

# DeSoto County



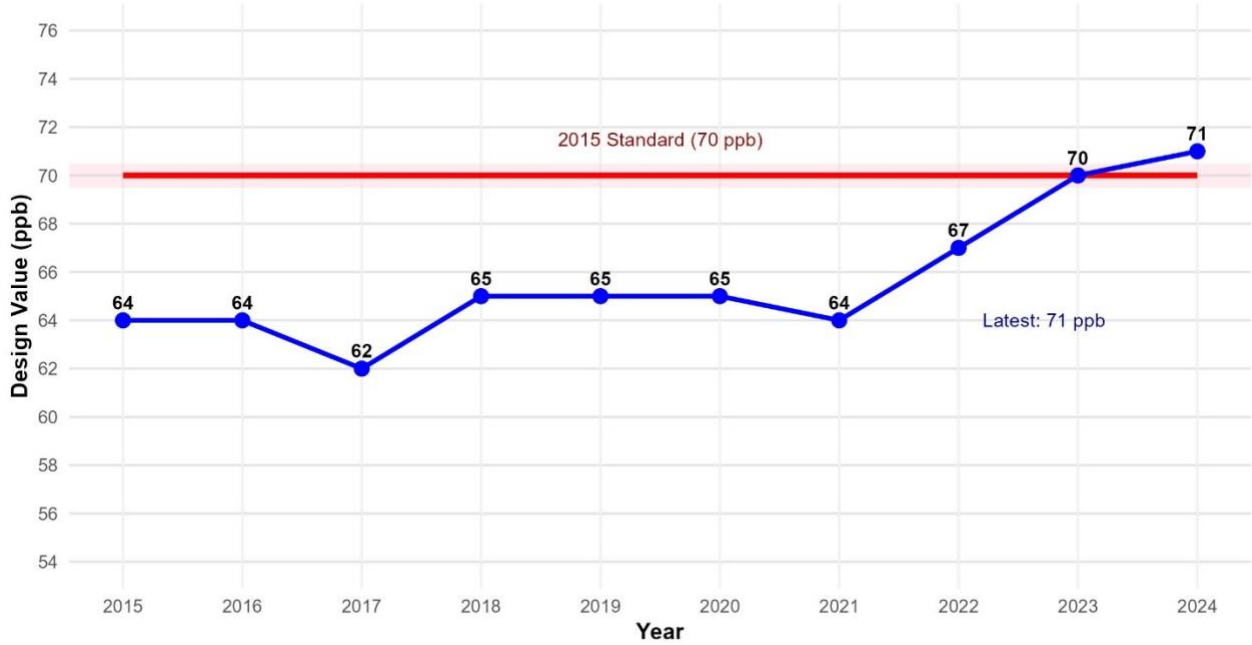


**DeSoto County**  
**Monitoring Site No. 28-033-0002**  
**Location**



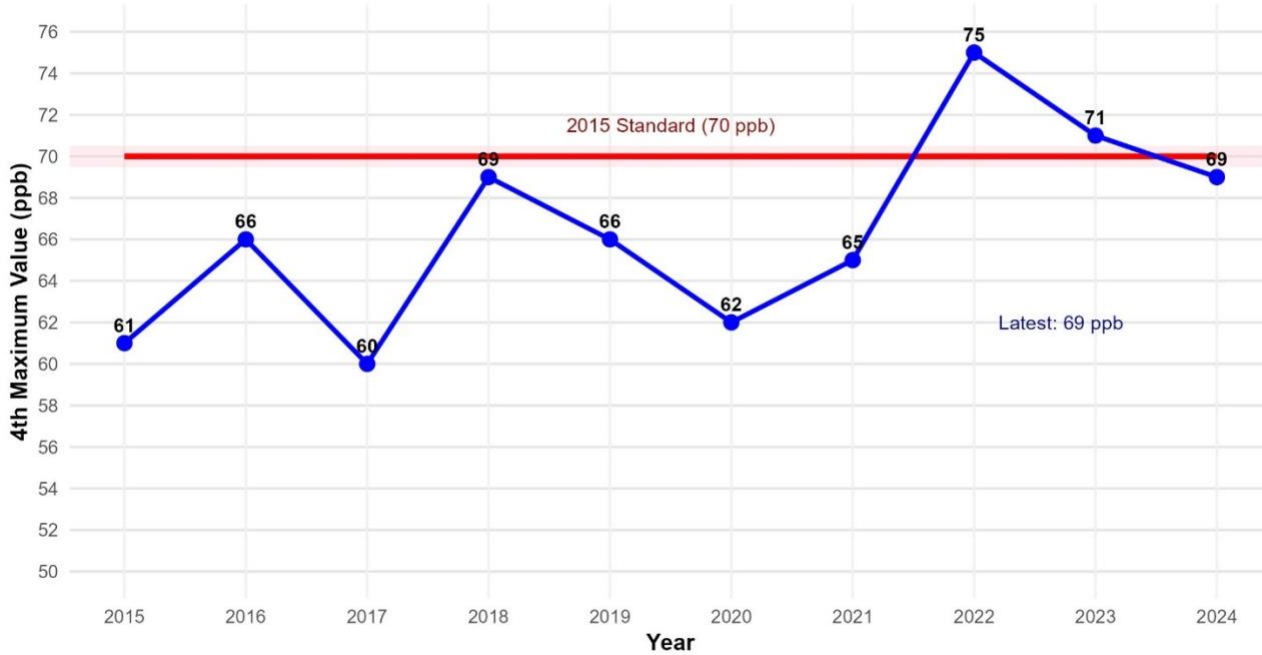
# DeSoto County 8-Hour Ozone

**DeSoto County - Hernando**  
Annual Ozone Design Values (2015-2024)



Design values are 3-year rolling averages of the annual 4th maximum 8-hour ozone concentration

**DeSoto County - Hernando**  
Annual 4th Maximum 8-hour Ozone Values (2015-2024)

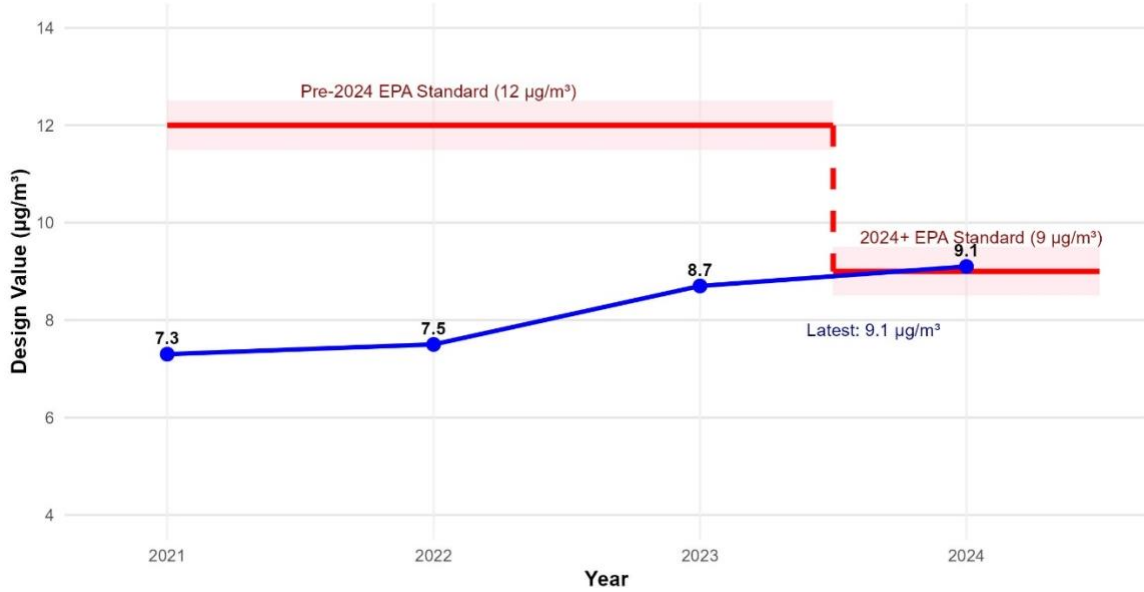


4th highest daily maximum 8-hour ozone concentration at each site



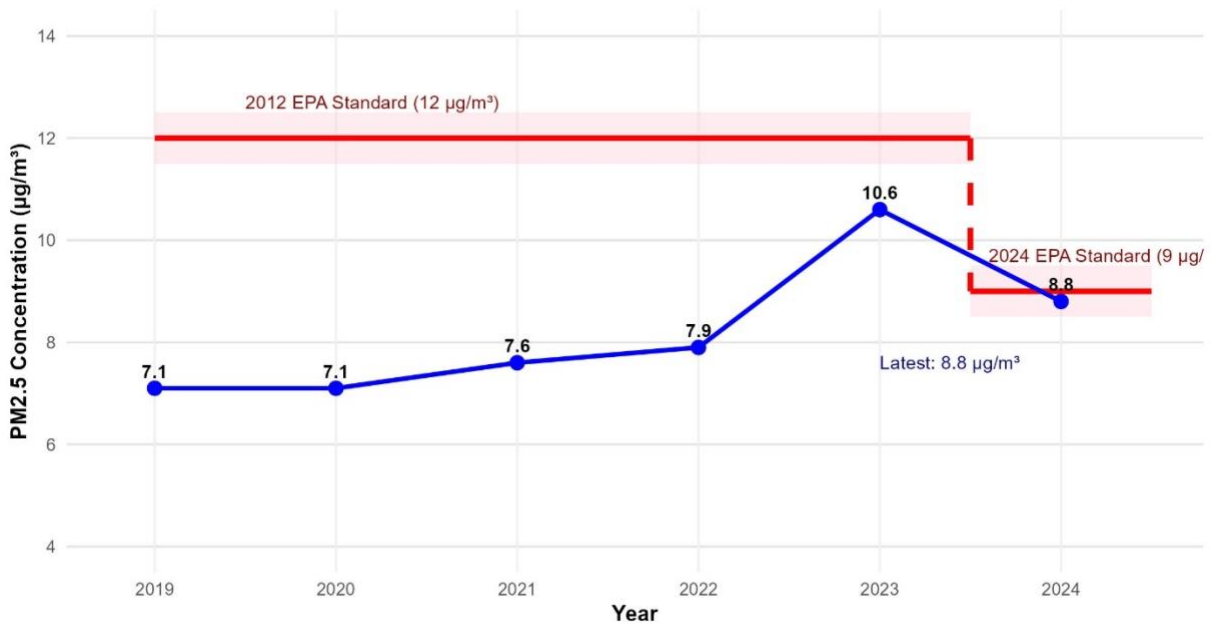
# DeSoto County PM<sub>2.5</sub> Annual Mean

**DeSoto County - Hernando**  
PM<sub>2.5</sub> Design Values (2021-2024)



Design values are 3-year rolling averages of the annual PM<sub>2.5</sub> concentration

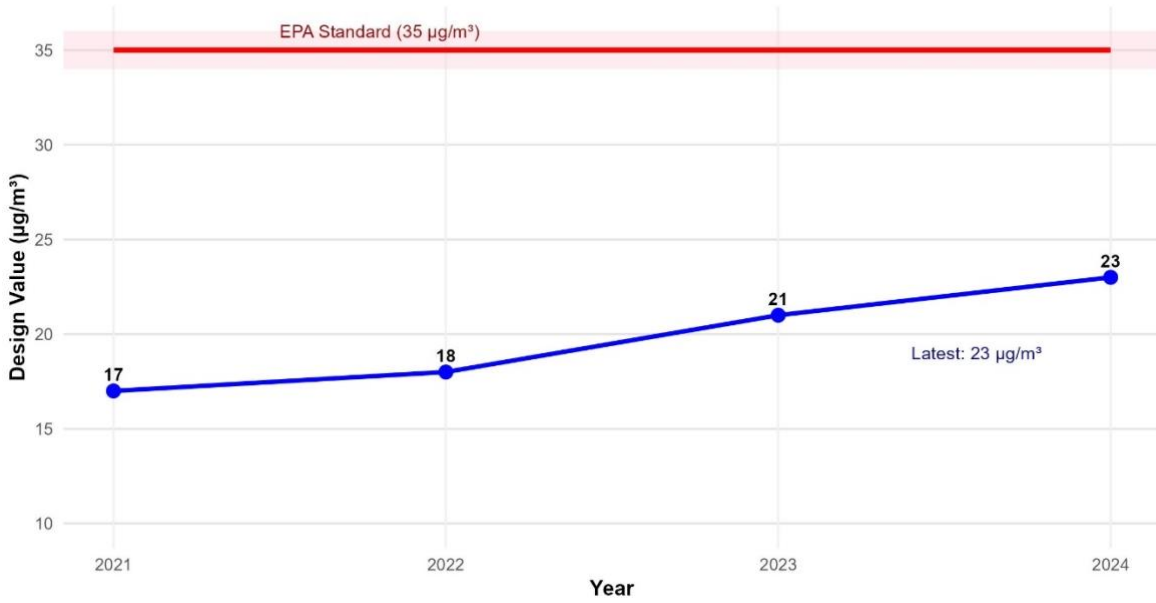
**DeSoto County - Hernando**  
Annual PM<sub>2.5</sub> Means (2019-2024)



Annual arithmetic mean of 24-hour PM<sub>2.5</sub> concentrations

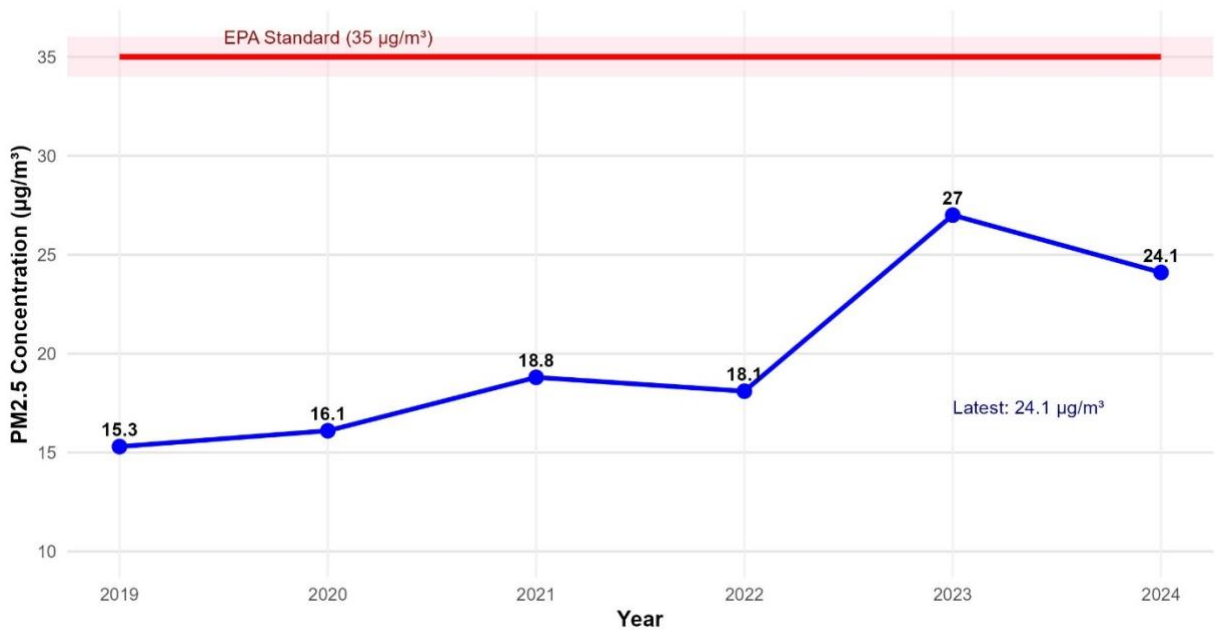
# DeSoto County PM<sub>2.5</sub> 24-Hour Average

**DeSoto County - Hernando**  
PM<sub>2.5</sub> 24-hr Design Values (2021-2024)



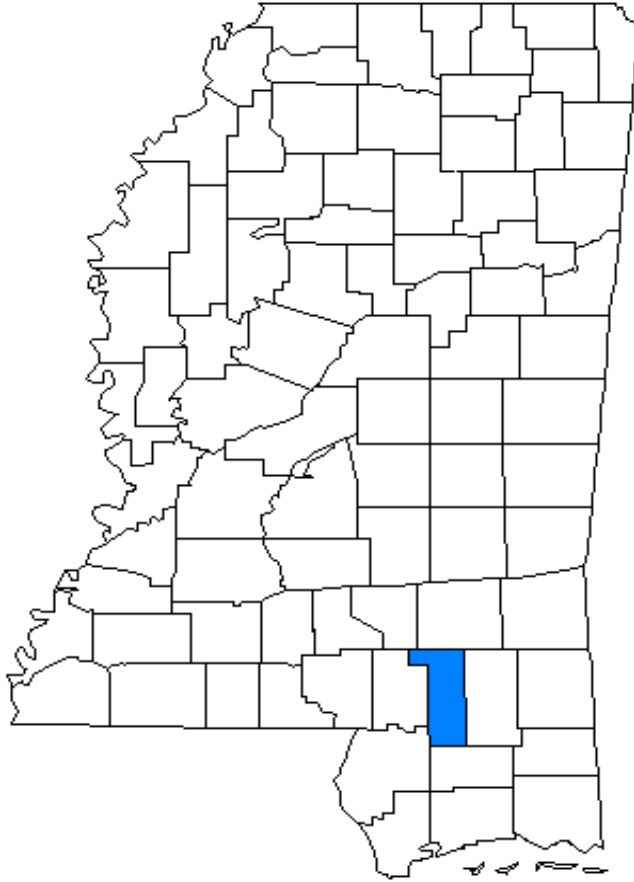
Design values are 3-year rolling averages of the 98th percentile PM<sub>2.5</sub> concentration

**DeSoto County - Hernando**  
98th Percentile PM<sub>2.5</sub> Values (2019-2024)

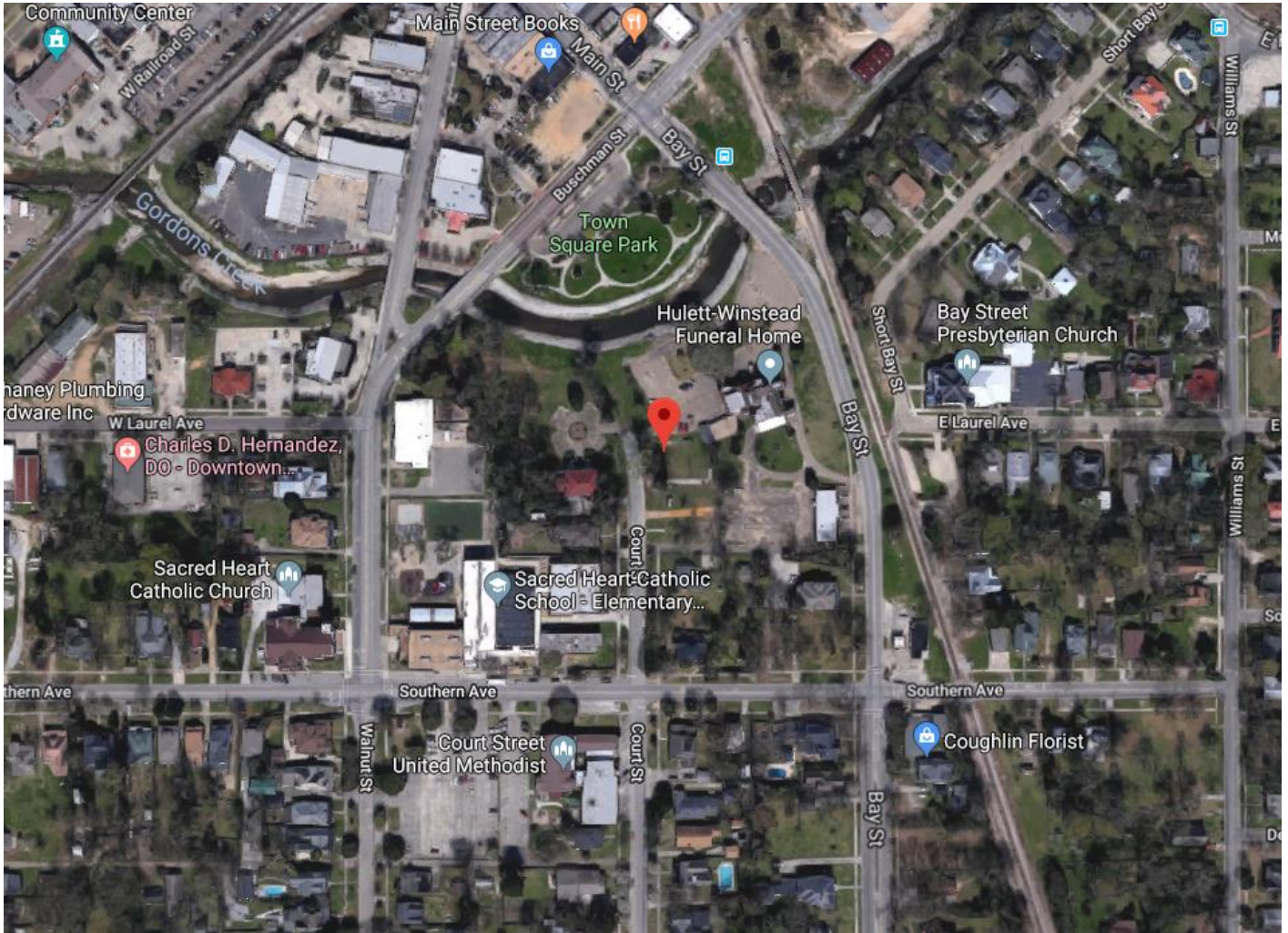


98th percentile of 24-hour PM<sub>2.5</sub> concentrations

# Forrest County

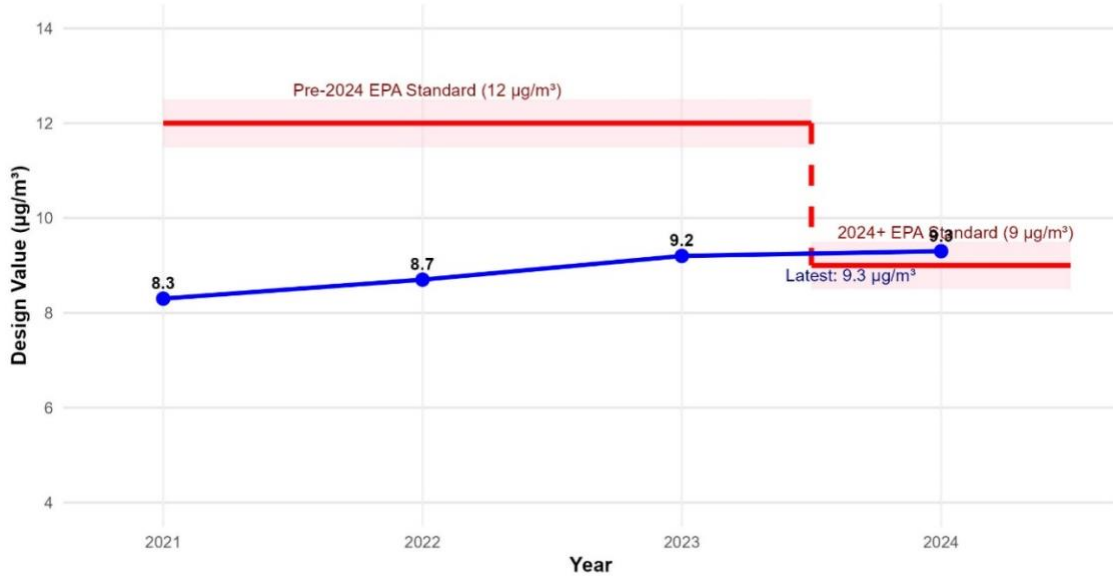


**Forrest County**  
**Monitoring Site No. 28-035-0004**  
**Location**



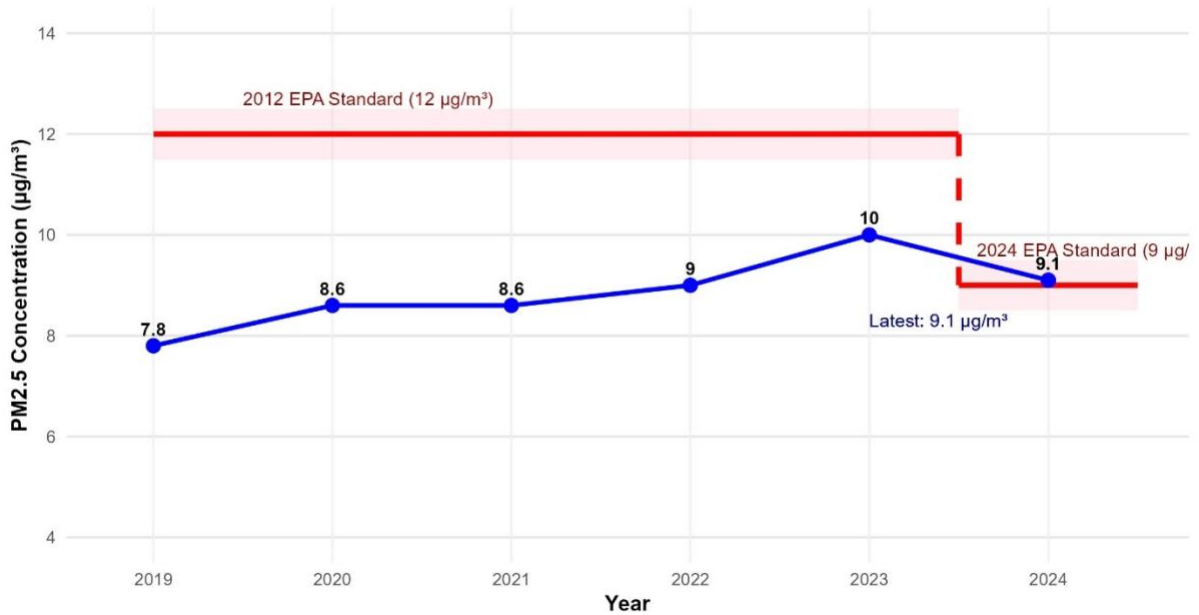
# Forrest County PM<sub>2.5</sub> Annual Mean

**Forrest County - Hattiesburg**  
PM<sub>2.5</sub> Design Values (2021-2024)



Design values are 3-year rolling averages of the annual PM<sub>2.5</sub> concentration

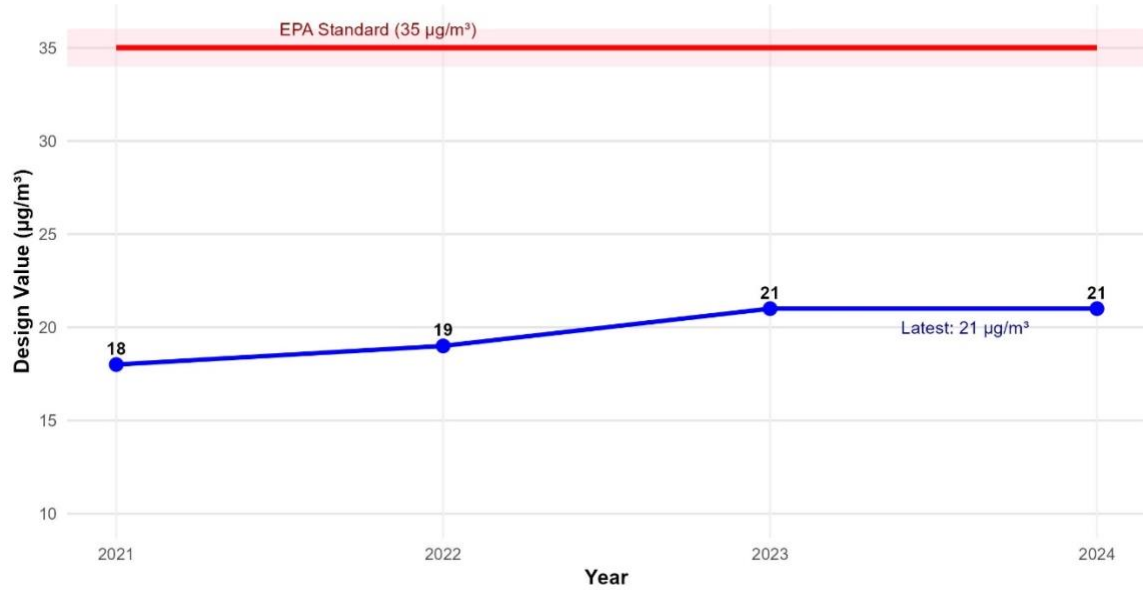
**Forrest County - Hattiesburg**  
Annual PM<sub>2.5</sub> Means (2019-2024)



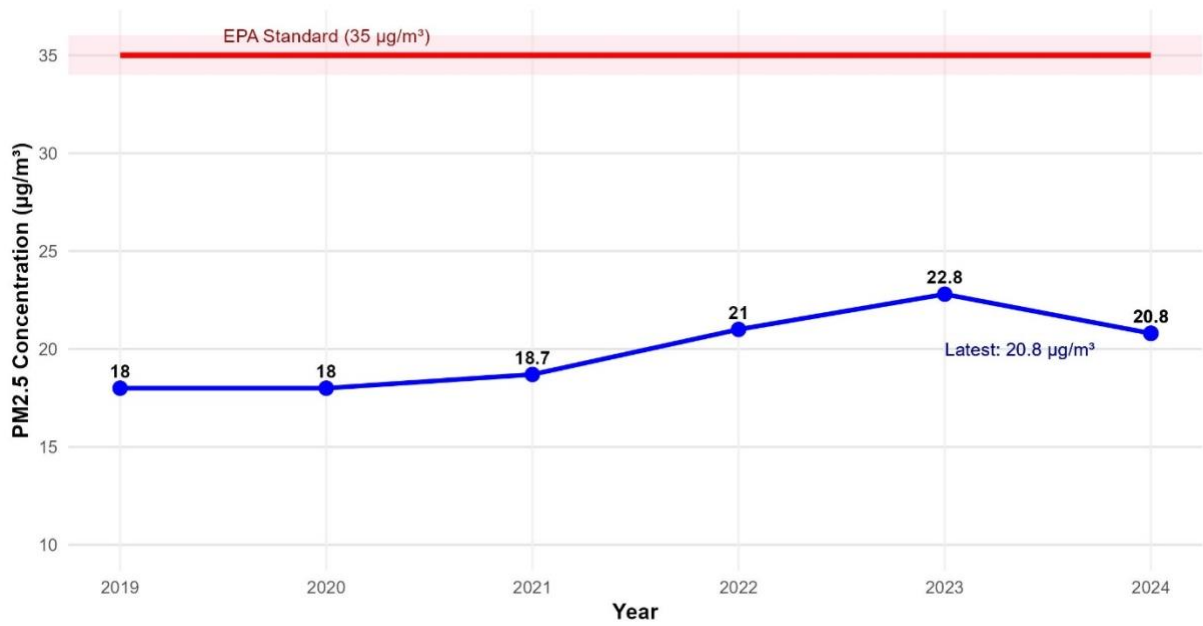
Annual arithmetic mean of 24-hour PM<sub>2.5</sub> concentrations

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

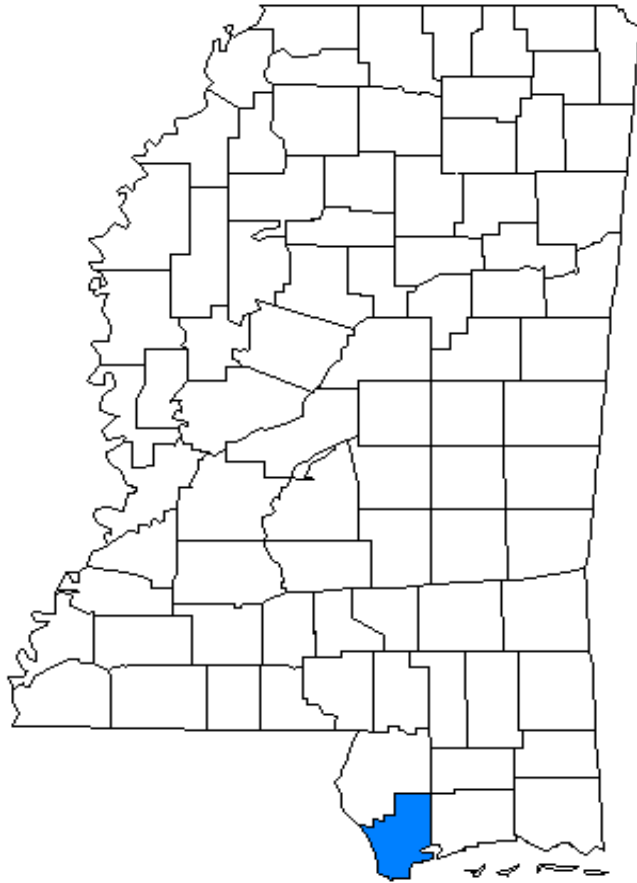
**Forrest County - Hattiesburg**  
PM<sub>2.5</sub> 24-hr Design Values (2021-2024)



**Forrest County - Hattiesburg**  
98th Percentile PM<sub>2.5</sub> Values (2019-2024)

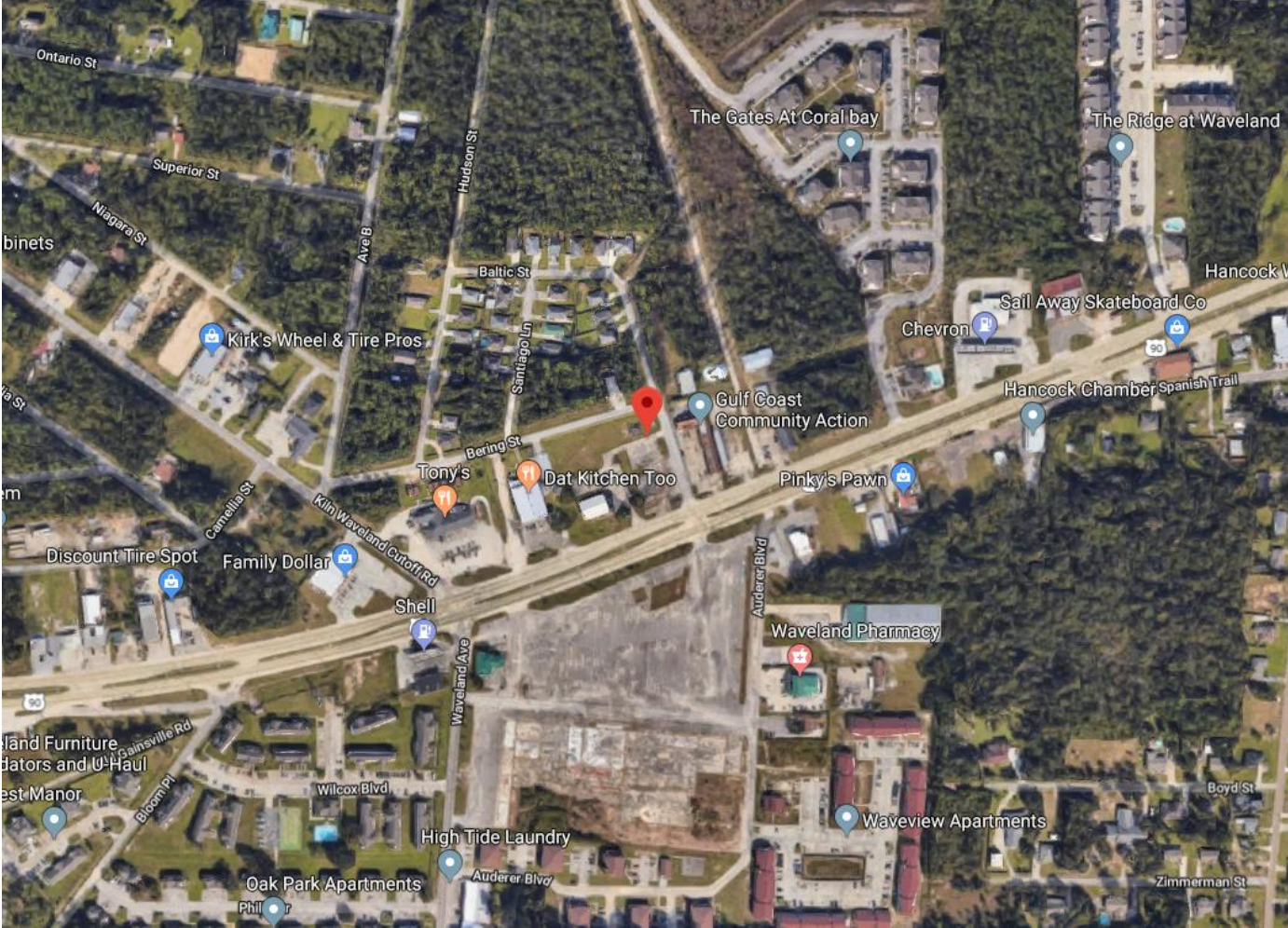


# Hancock County





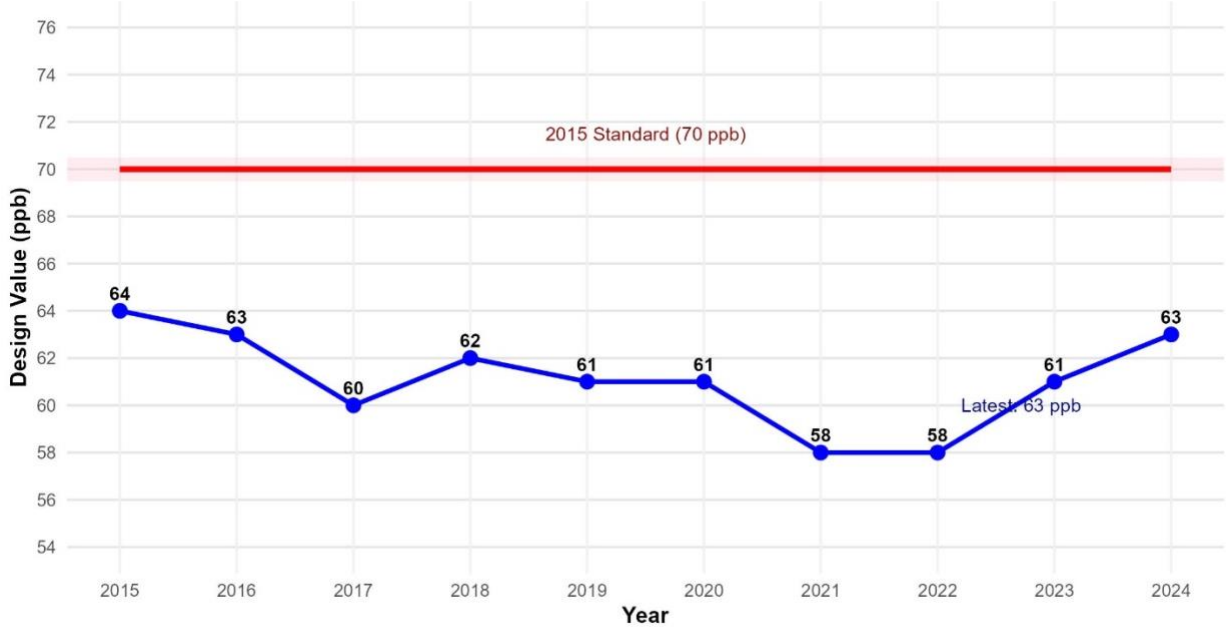
**Hancock County**  
**Monitoring Site No. 28-045-0003**  
**Location**





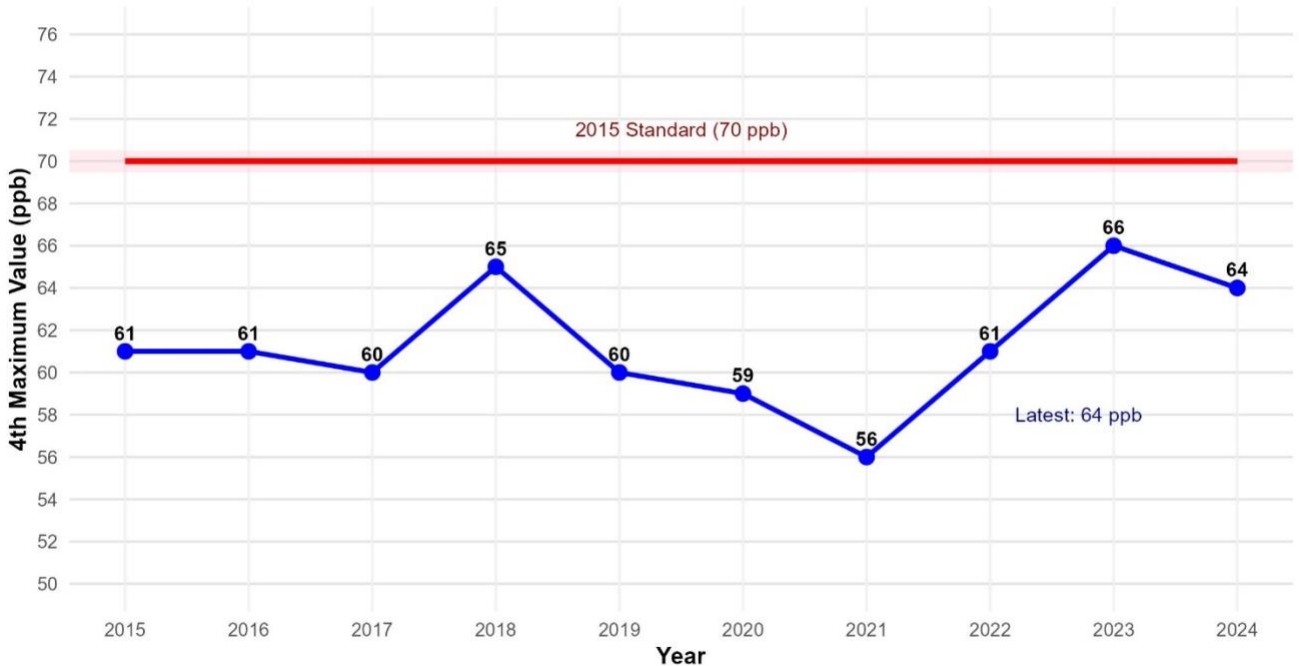
# Hancock County 8-Hour Ozone

**Hancock County - Waveland**  
Annual Ozone Design Values (2015-2024)



Design values are 3-year rolling averages of the annual 4th maximum 8-hour ozone concentration

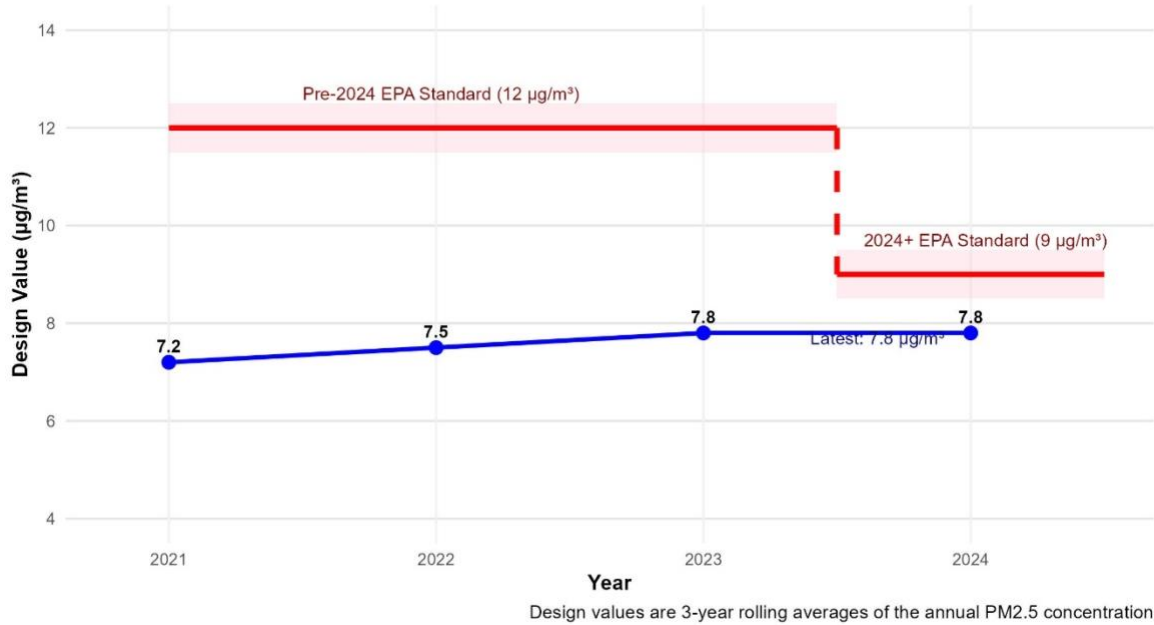
**Hancock County - Waveland**  
Annual 4th Maximum 8-hour Ozone Values (2015-2024)



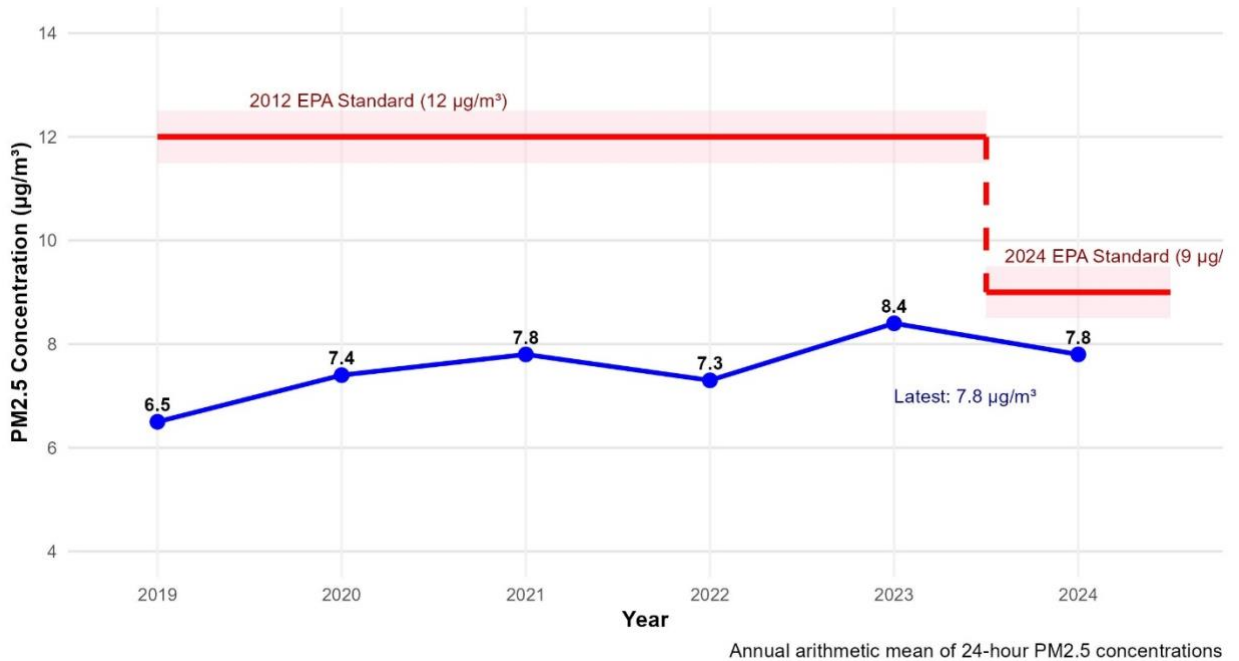
4th highest daily maximum 8-hour ozone concentration at each site

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

**Hancock County - Waveland**  
PM<sub>2.5</sub> Design Values (2021-2024)

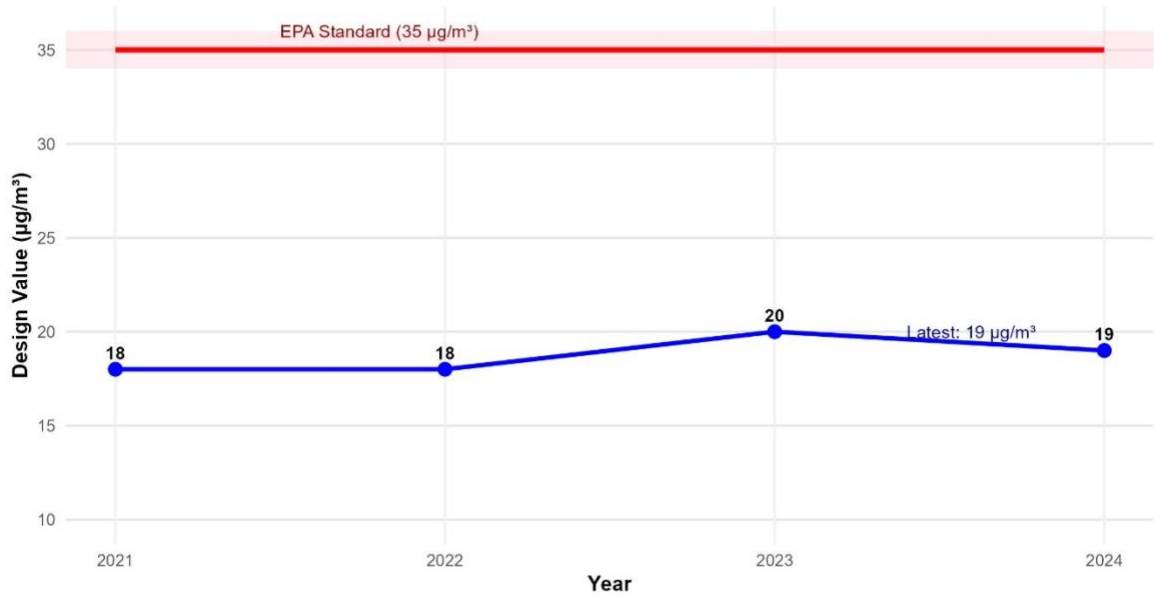


**Hancock County - Waveland**  
Annual PM<sub>2.5</sub> Means (2019-2024)



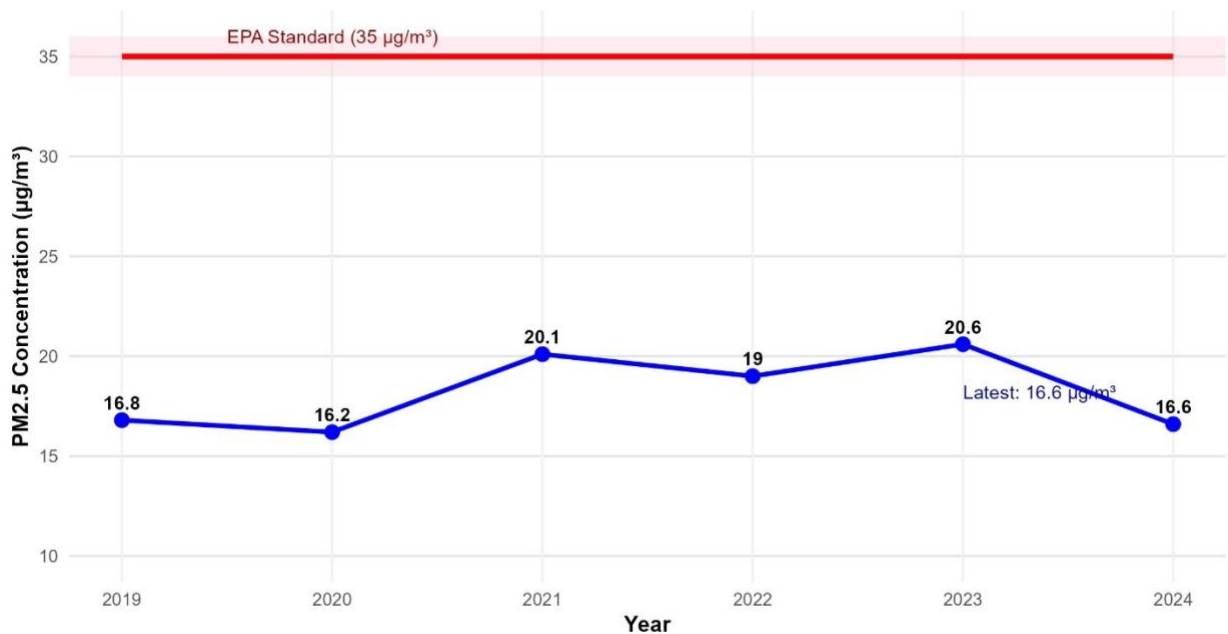
# Hancock County PM<sub>2.5</sub> 24-Hour Average

**Hancock County - Waveland**  
PM<sub>2.5</sub> 24-hr Design Values (2021-2024)



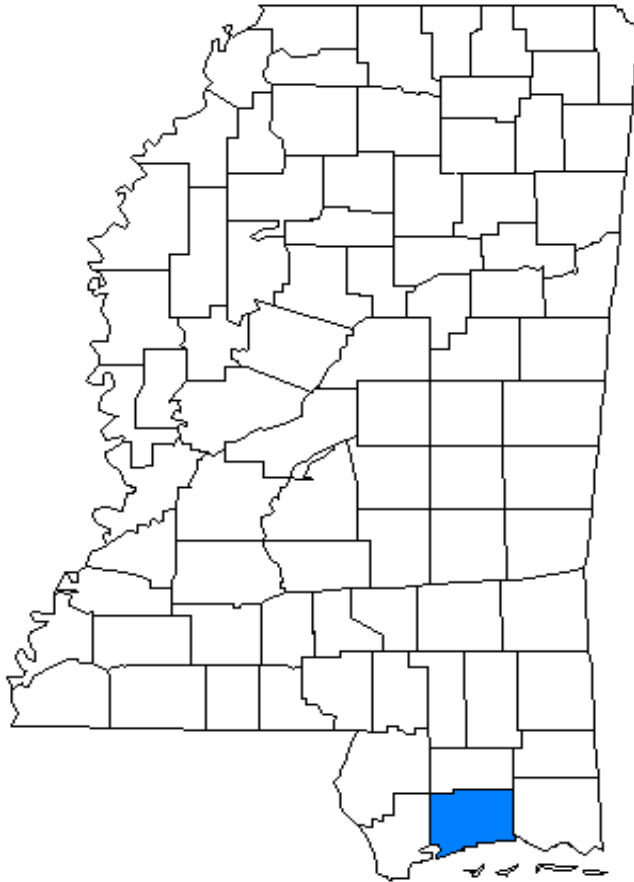
Design values are 3-year rolling averages of the 98th percentile PM<sub>2.5</sub> concentration

**Hancock County - Waveland**  
98th Percentile PM<sub>2.5</sub> Values (2019-2024)

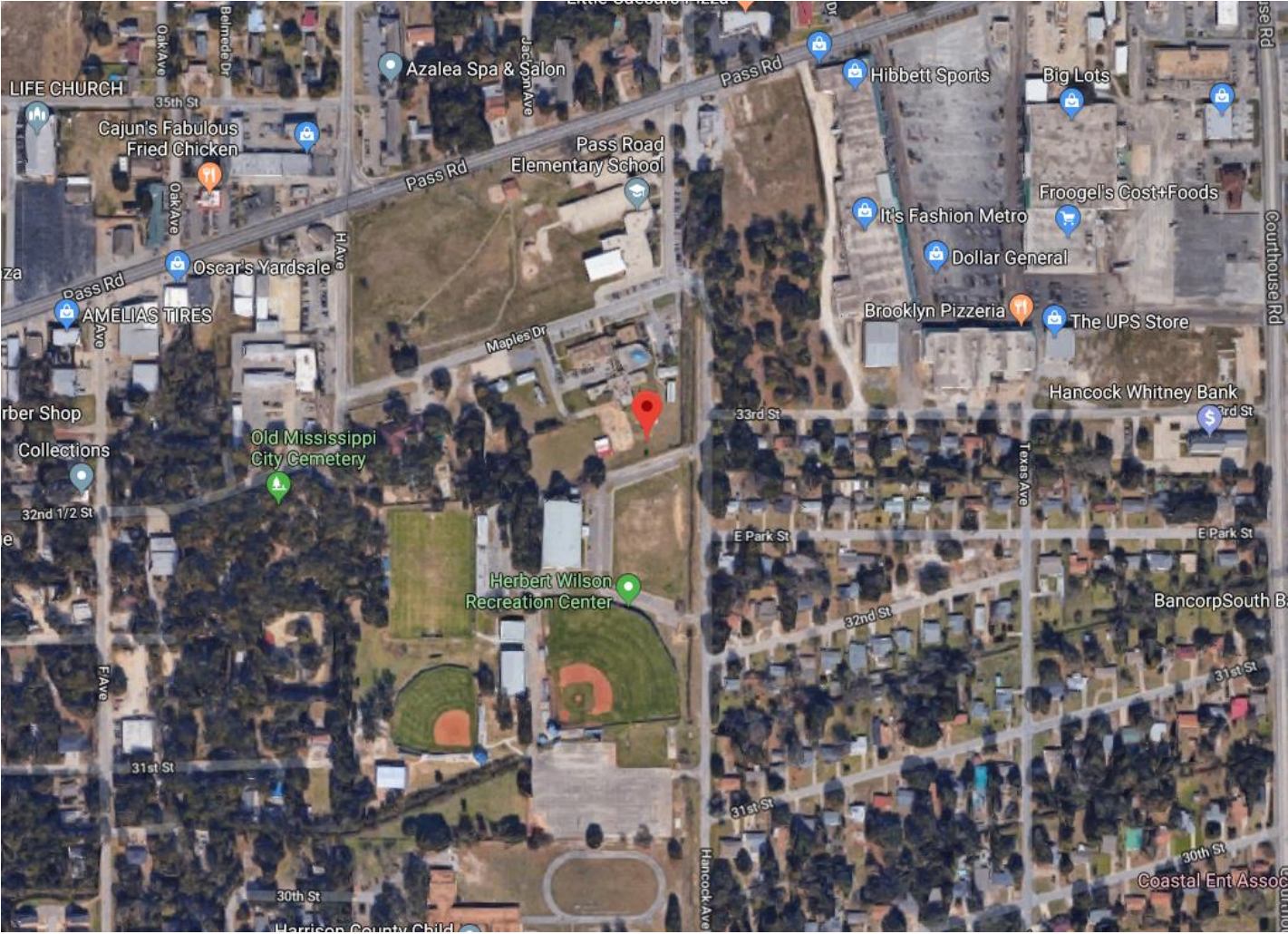


98th percentile of 24-hour PM<sub>2.5</sub> concentrations

# Harrison County



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

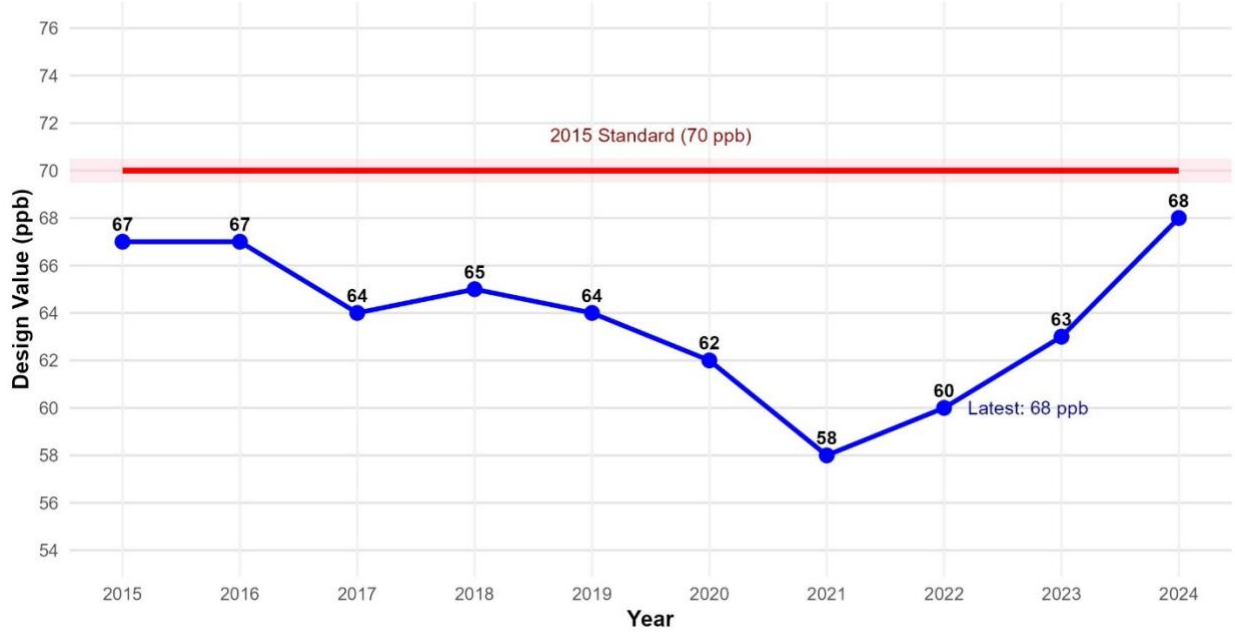




# Harrison County 8-Hour Ozone

## Harrison County - Gulfport Youth Court

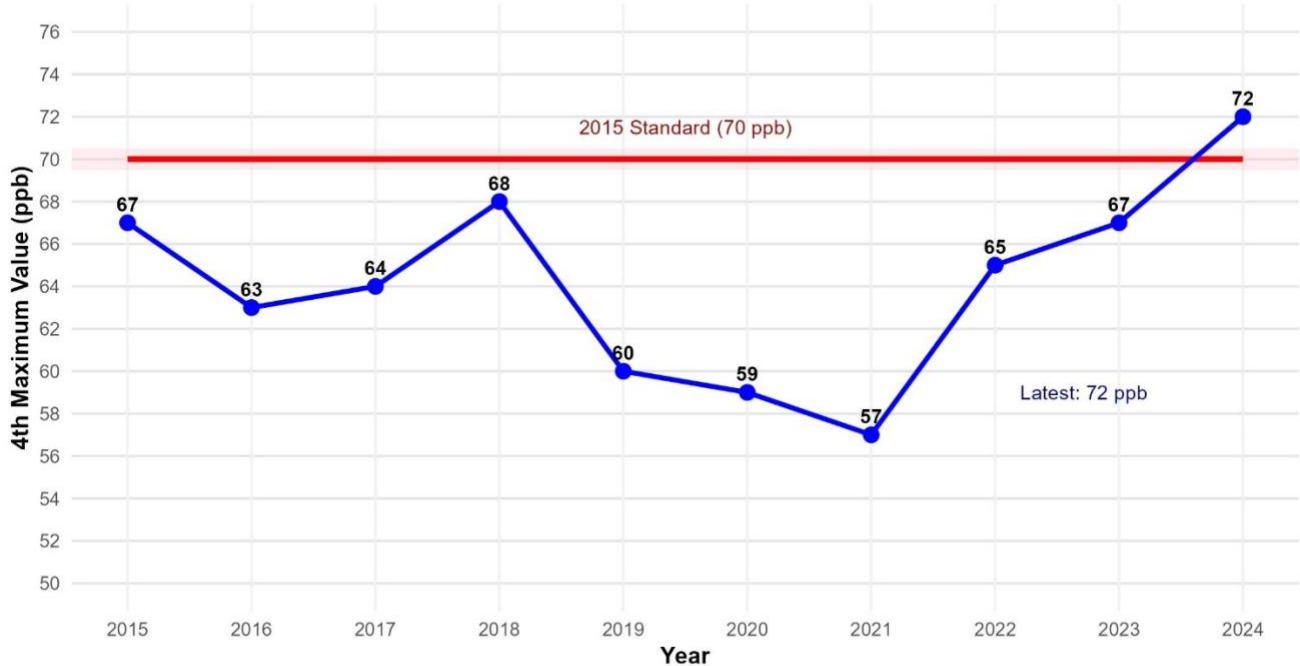
Annual Ozone Design Values (2015-2024)



Design values are 3-year rolling averages of the annual 4th maximum 8-hour ozone concentration

## Harrison County - Gulfport Youth Court

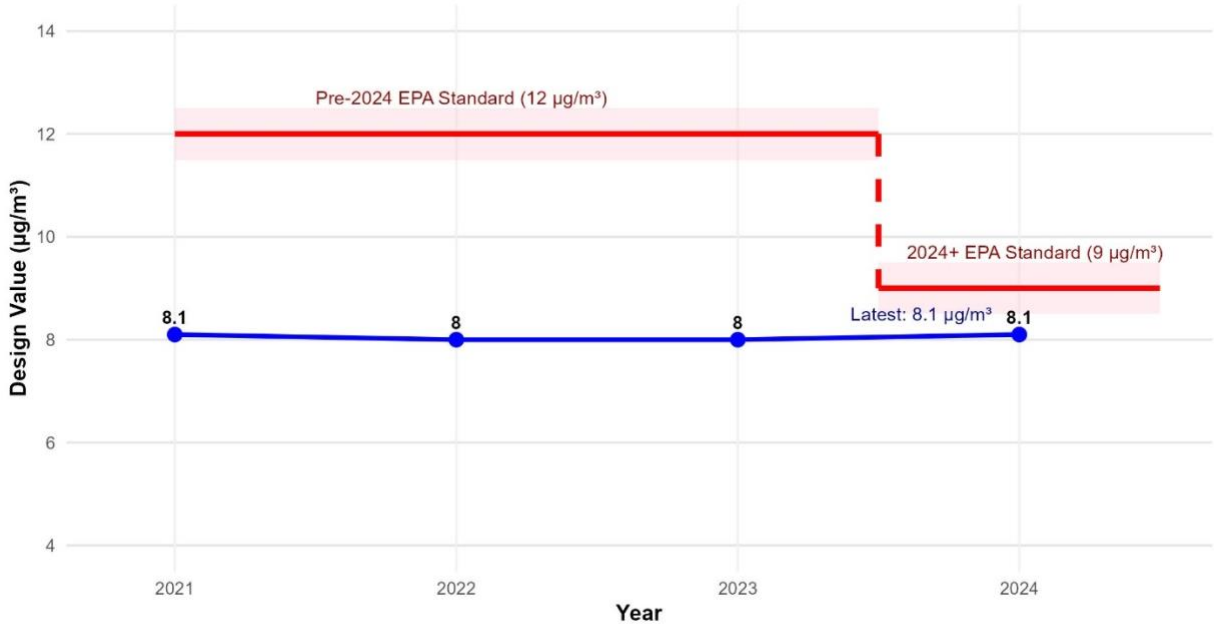
Annual 4th Maximum 8-hour Ozone Values (2015-2024)



4th highest daily maximum 8-hour ozone concentration at each site

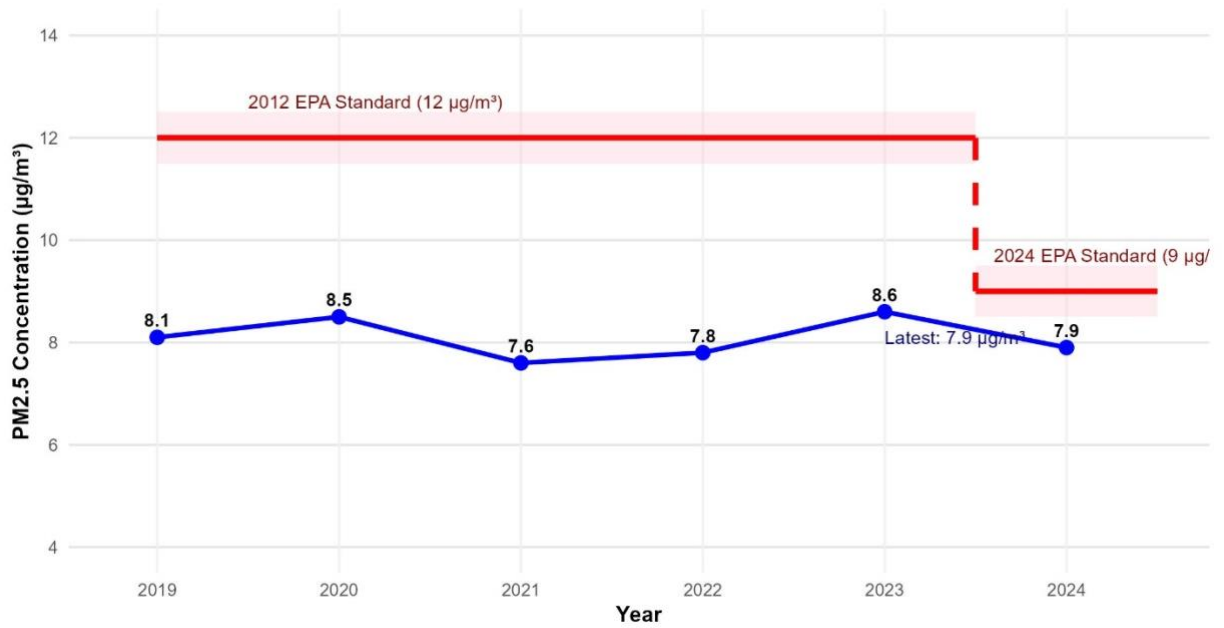
# Harrison County PM<sub>2.5</sub> Annual Mean

**Harrison County - Gulfport Youth Court**  
PM<sub>2.5</sub> Design Values (2021-2024)



Design values are 3-year rolling averages of the annual PM<sub>2.5</sub> concentration

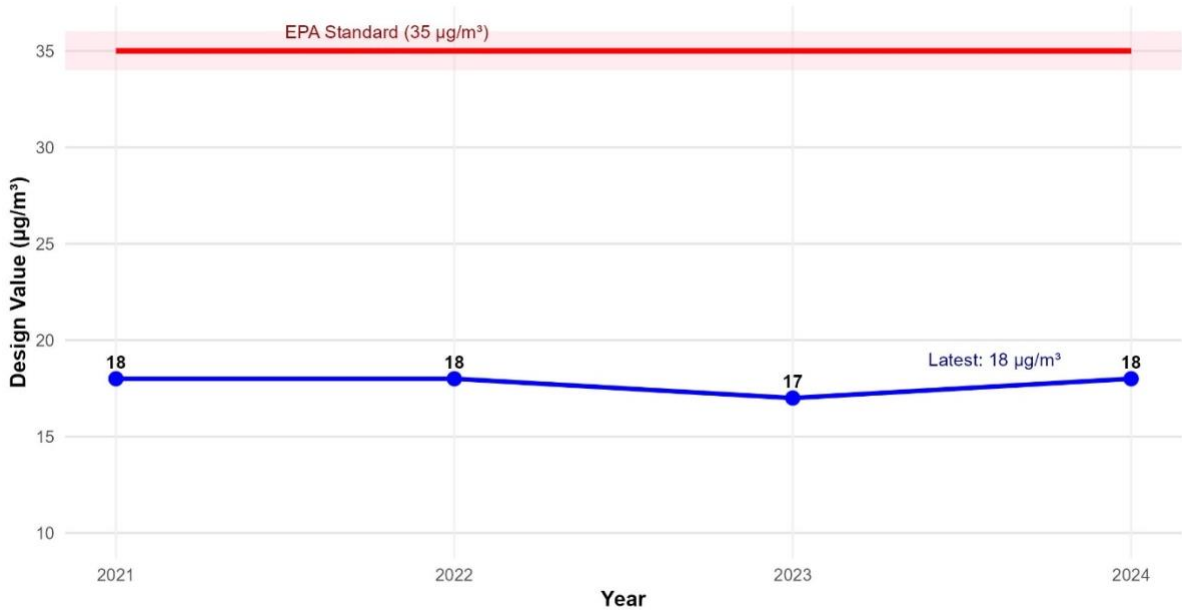
**Harrison County - Gulfport Youth Court**  
Annual PM<sub>2.5</sub> Means (2019-2024)



Annual arithmetic mean of 24-hour PM<sub>2.5</sub> concentrations

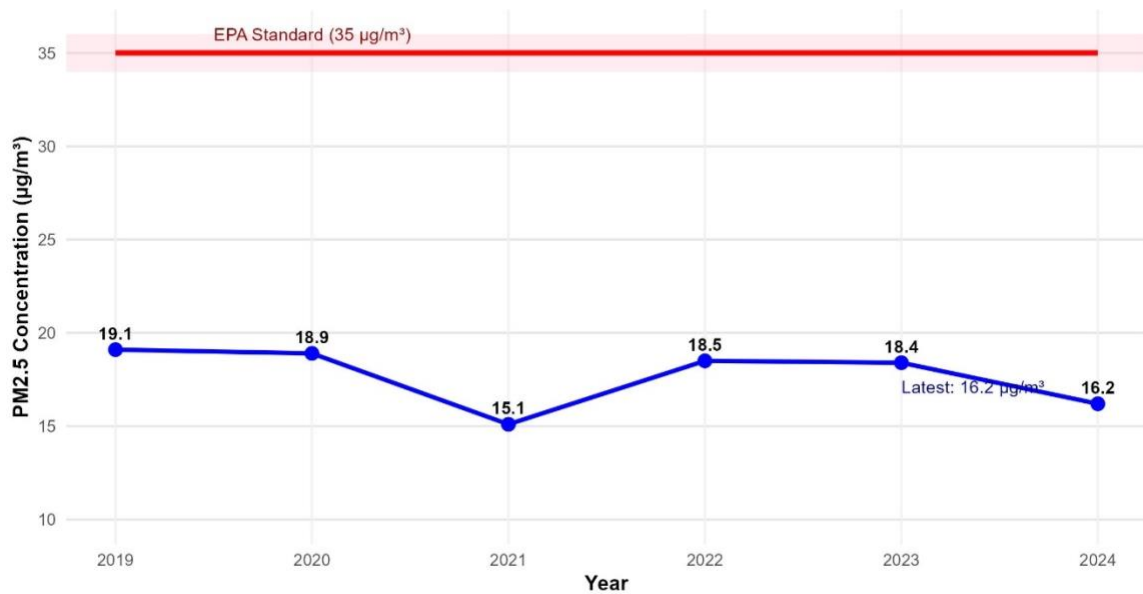
# Harrison County PM<sub>2.5</sub> 24-Hour Average

Harrison County - Gulfport Youth Court  
PM<sub>2.5</sub> 24-hr Design Values (2021-2024)



Design values are 3-year rolling averages of the 98th percentile PM<sub>2.5</sub> concentration

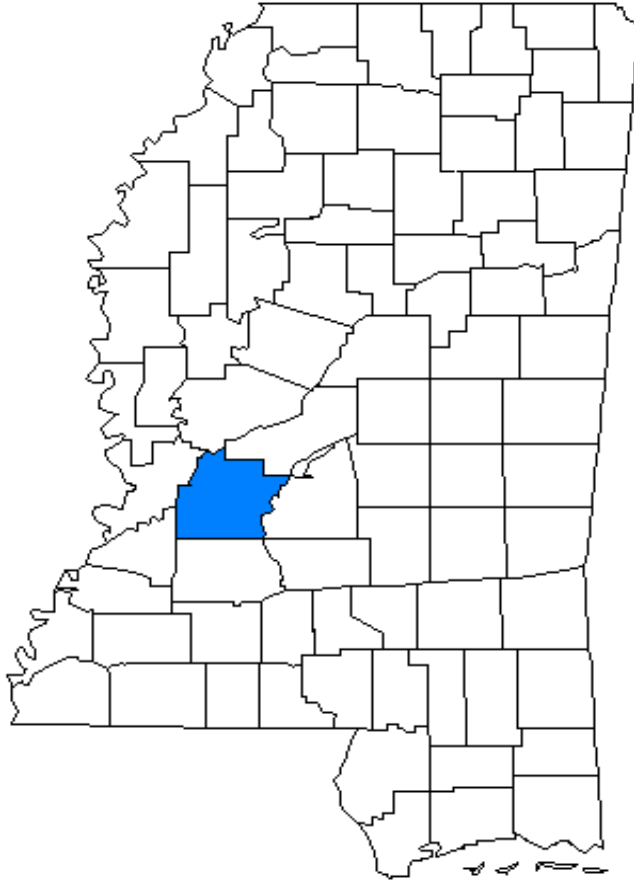
Harrison County - Gulfport Youth Court  
98th Percentile PM<sub>2.5</sub> Values (2019-2024)



98th percentile of 24-hour PM<sub>2.5</sub> concentrations



# Hinds County

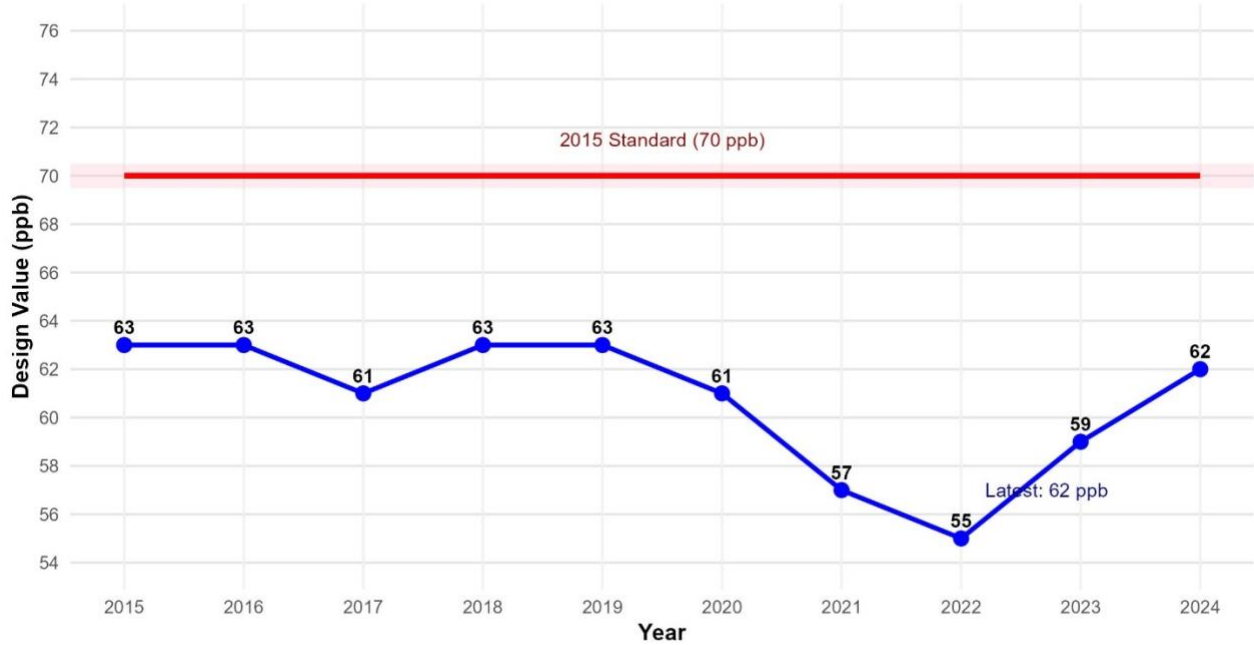


**Hinds County (CC)**  
**Monitoring Site No. 28-049-0021**



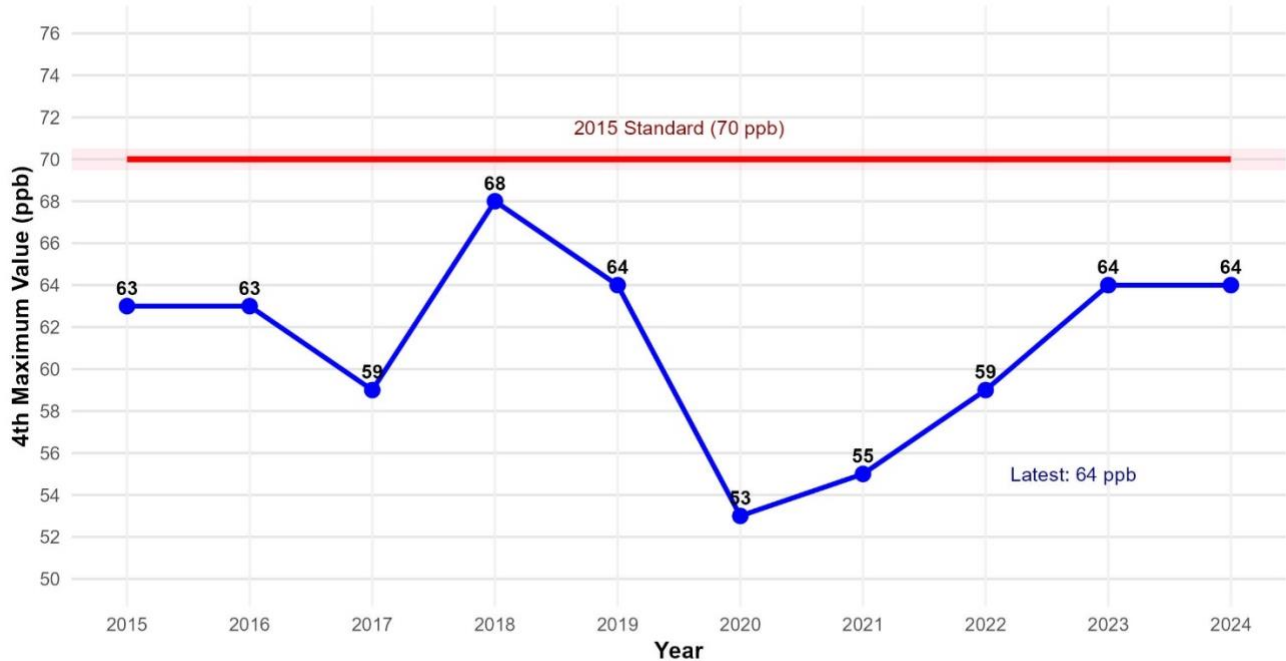
# Hinds County (CC) 8-Hour Ozone

**Hinds County - Hinds CC**  
Annual Ozone Design Values (2015-2024)



Design values are 3-year rolling averages of the annual 4th maximum 8-hour ozone concentration

**Hinds County - Hinds CC**  
Annual 4th Maximum 8-hour Ozone Values (2015-2024)



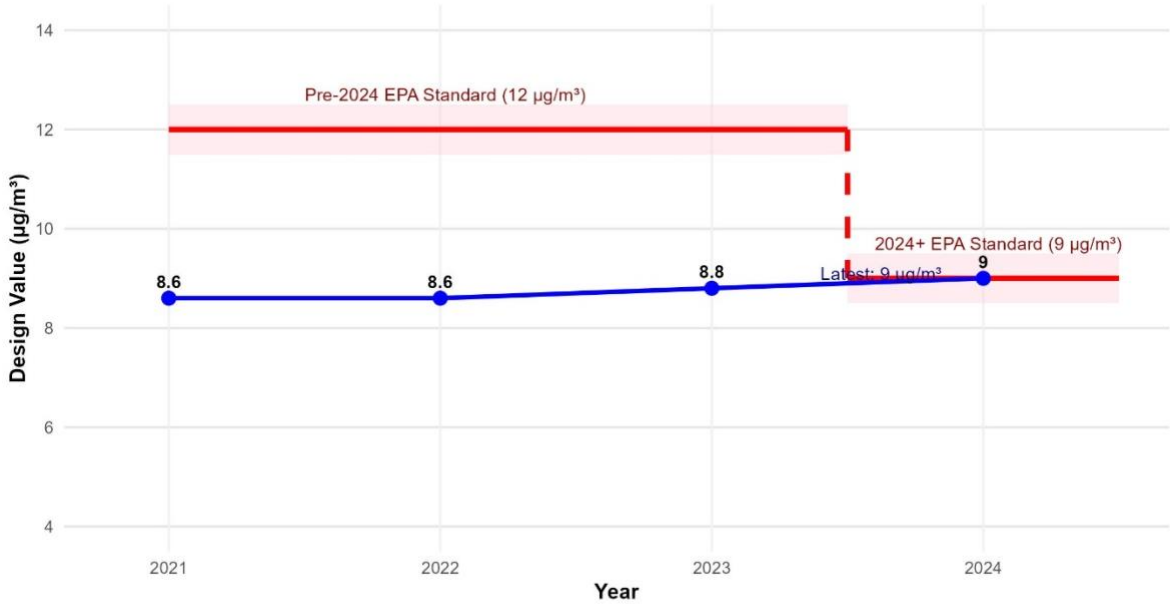
4th highest daily maximum 8-hour ozone concentration at each site

# Hinds County (CC)

## PM<sub>2.5</sub>

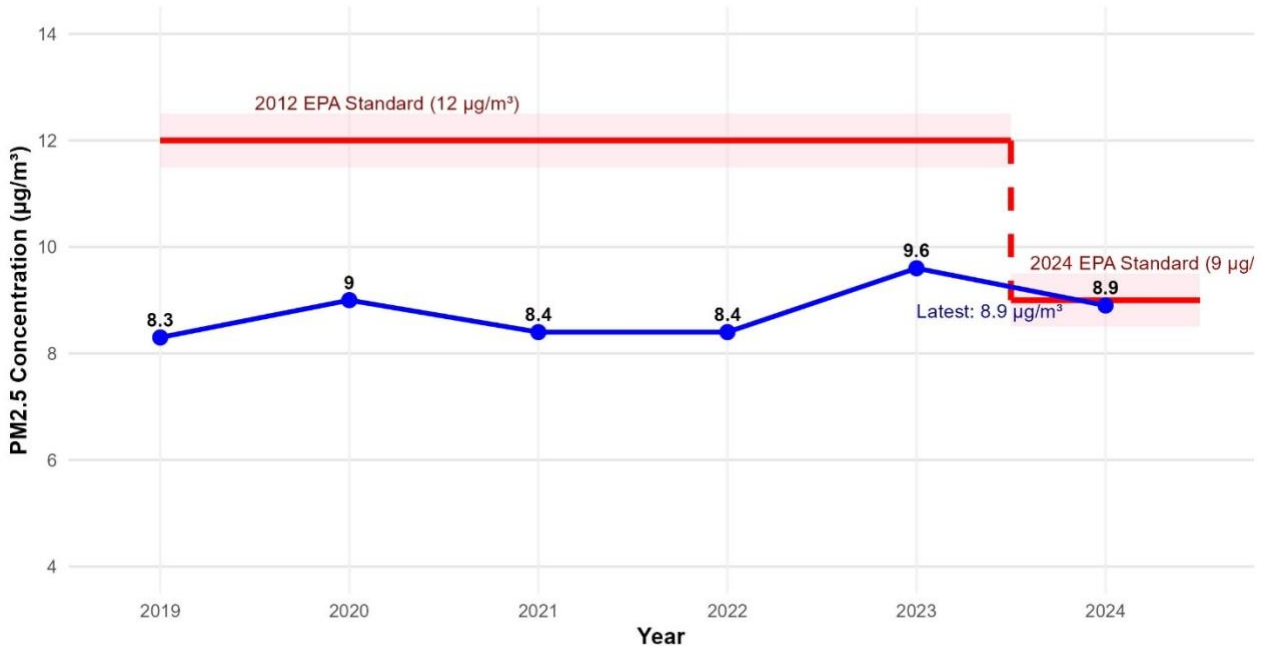
### Annual Mean

**Hinds County - Hinds CC**  
PM<sub>2.5</sub> Design Values (2021-2024)



Design values are 3-year rolling averages of the annual PM<sub>2.5</sub> concentration

**Hinds County - Hinds CC**  
Annual PM<sub>2.5</sub> Means (2019-2024)



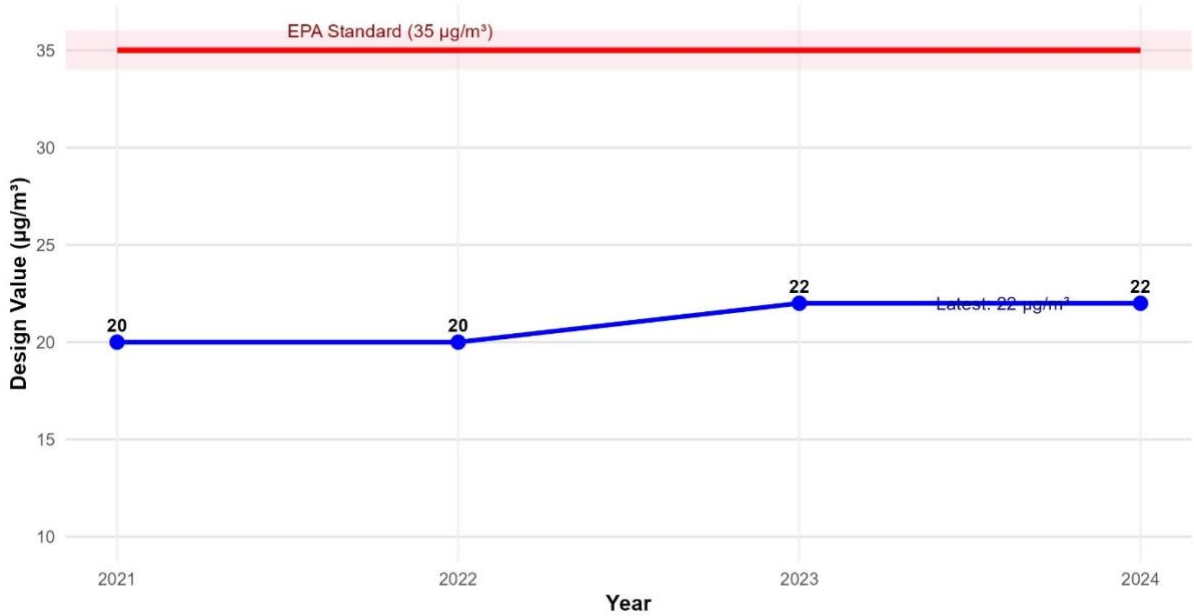
Annual arithmetic mean of 24-hour PM<sub>2.5</sub> concentrations

# Hinds County (CC)

## PM<sub>2.5</sub>

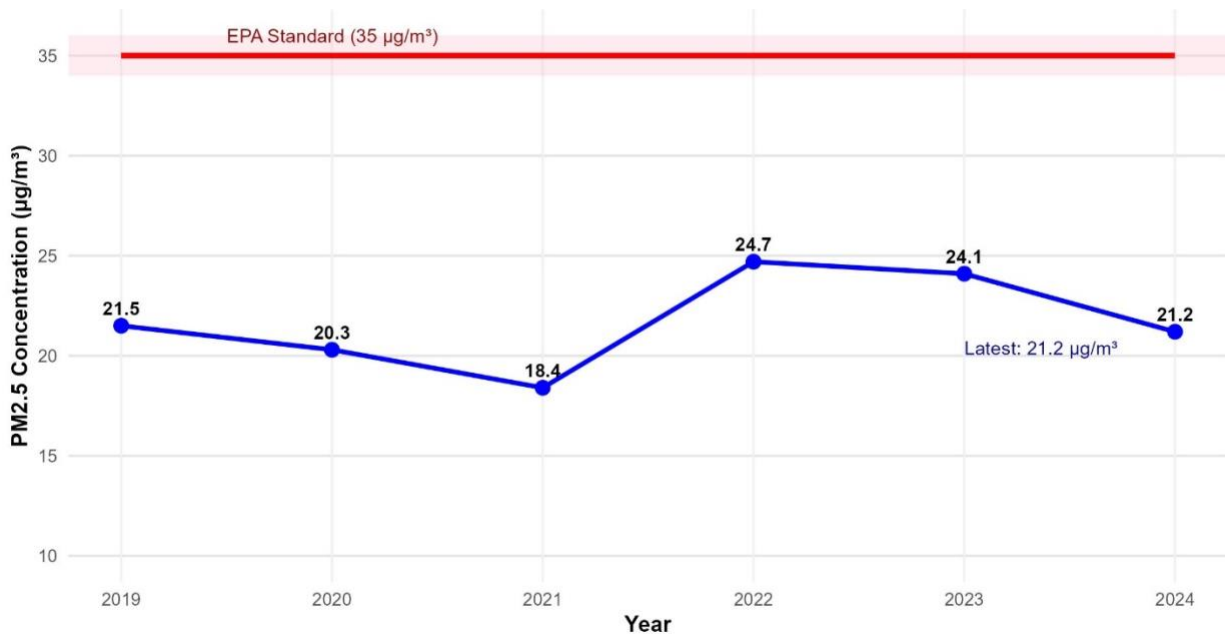
### 24-Hour Average

**Hinds County - Jackson NCORE**  
PM<sub>2.5</sub> 24-hr Design Values (2021-2024)



Design values are 3-year rolling averages of the 98th percentile PM<sub>2.5</sub> concentration

**Hinds County - Hinds CC**  
98th Percentile PM<sub>2.5</sub> Values (2019-2024)



98th percentile of 24-hour PM<sub>2.5</sub> concentrations

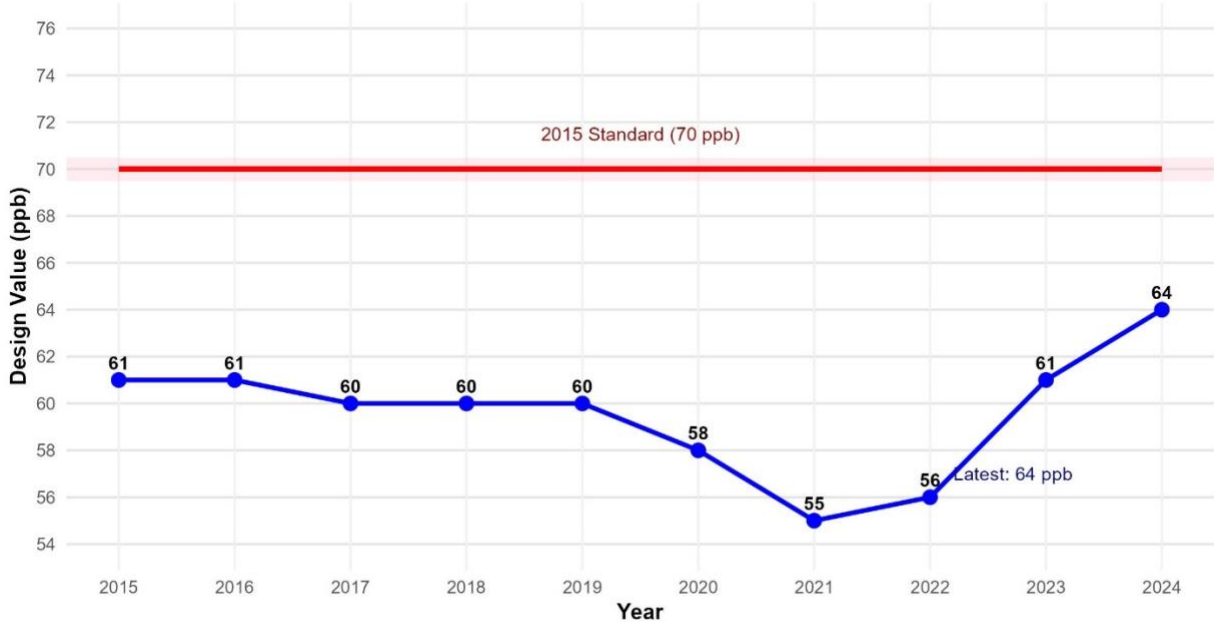


**Hinds County (N-CORE)**  
**Monitoring Site No. 28-049-0020**



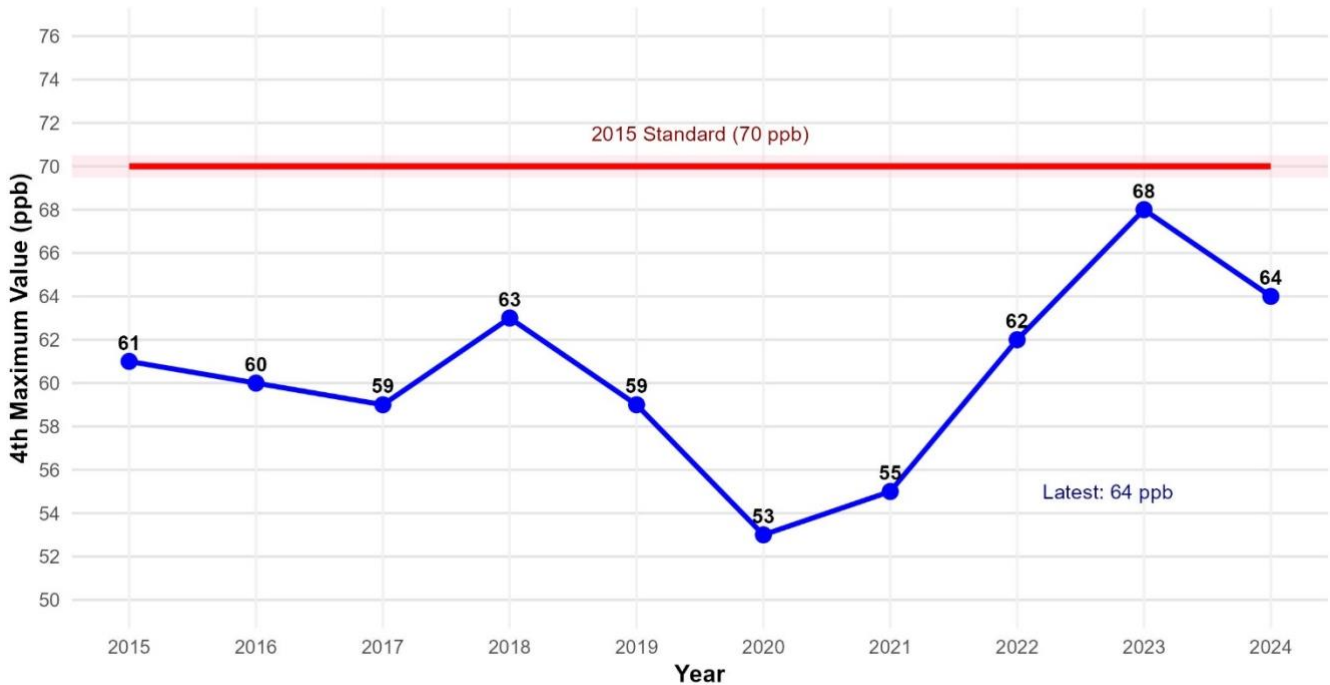
# Hinds County (N-CORE) 8-Hour Ozone

**Hinds County - Jackson N CORE**  
Annual Ozone Design Values (2015-2024)



Design values are 3-year rolling averages of the annual 4th maximum 8-hour ozone concentration

**Hinds County - Jackson N CORE**  
Annual 4th Maximum 8-hour Ozone Values (2015-2024)



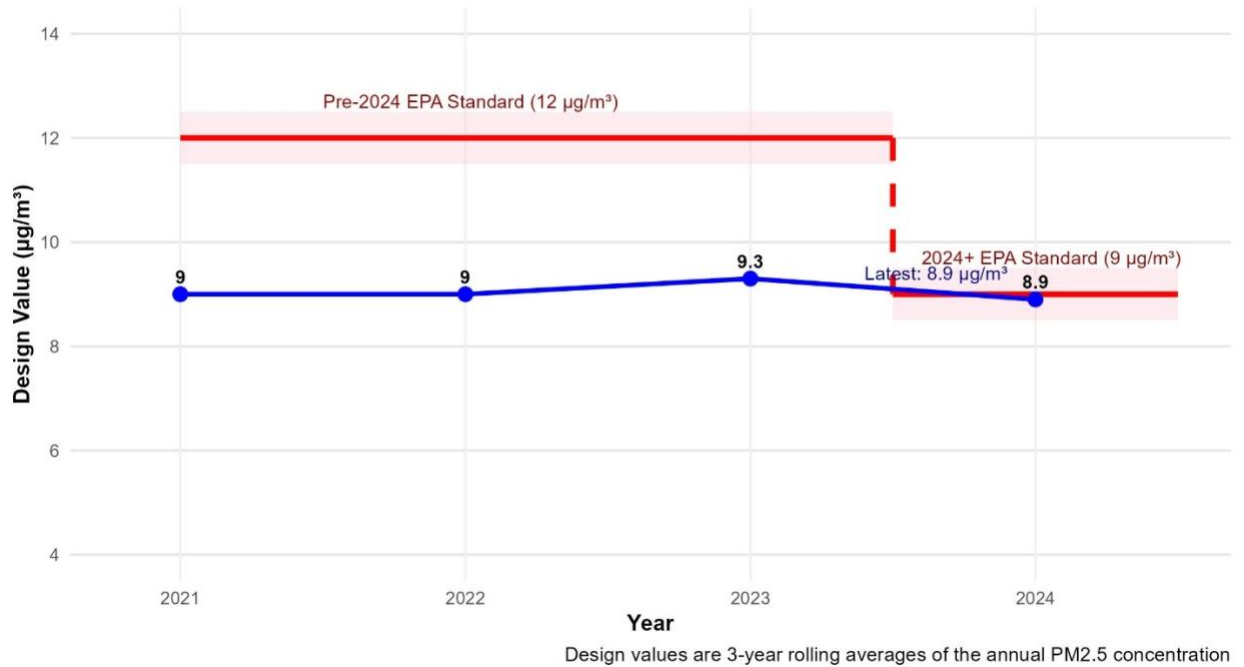
4th highest daily maximum 8-hour ozone concentration at each site

# Hinds County (N-CORE)

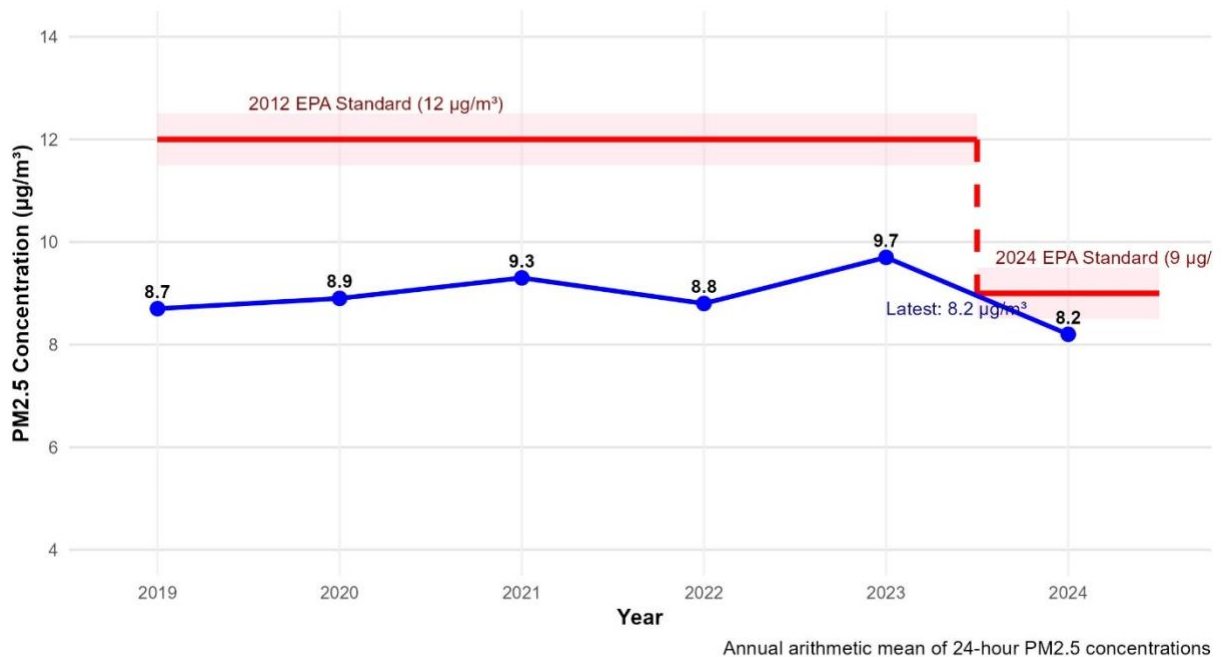
## PM<sub>2.5</sub>

### Annual Mean

**Hinds County - Jackson NCORE**  
PM<sub>2.5</sub> Design Values (2021-2024)



**Hinds County - Jackson NCORE**  
Annual PM<sub>2.5</sub> Means (2019-2024)



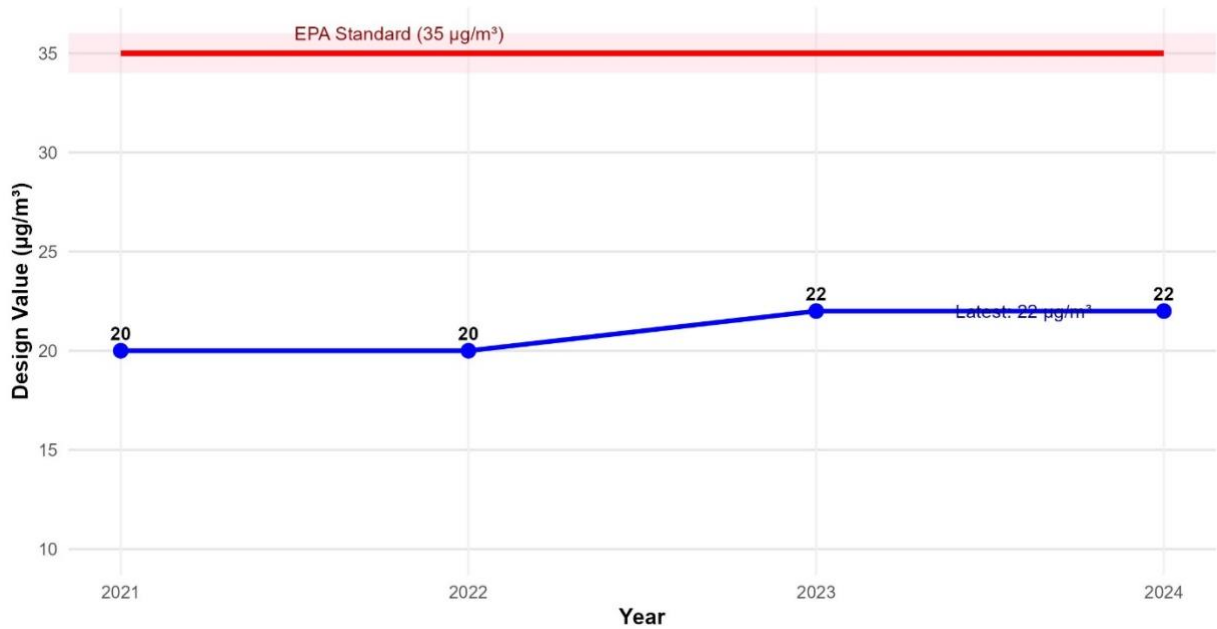


# Hinds County (N-CORE)

## PM<sub>2.5</sub>

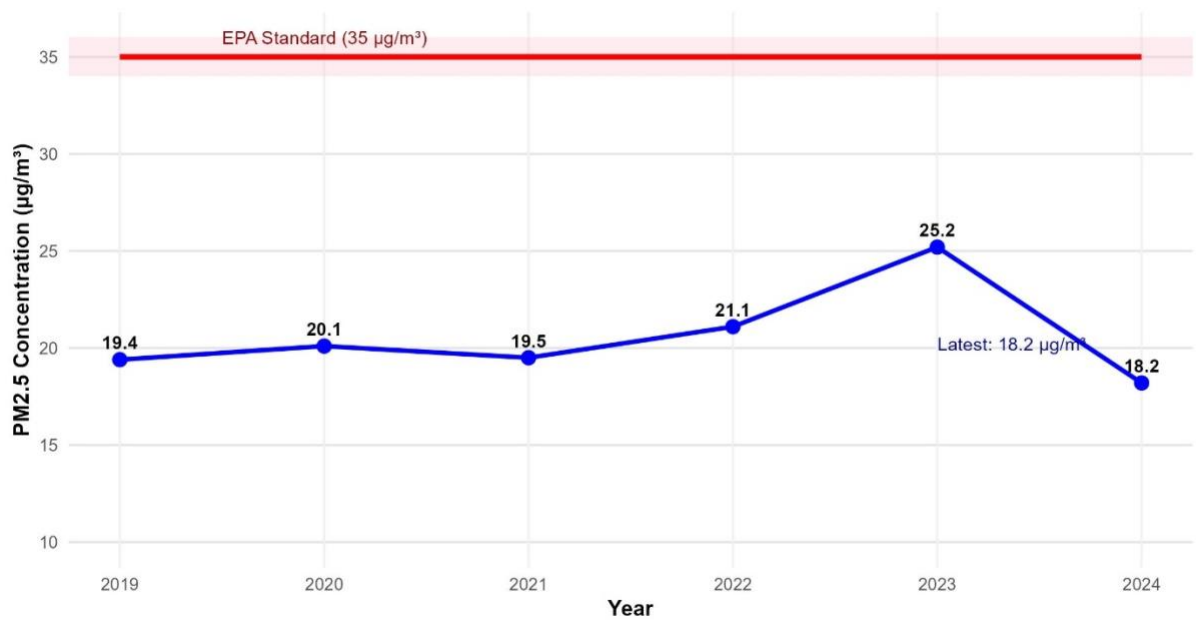
### 24-Hour Average

**Hinds County - Jackson N CORE**  
PM<sub>2.5</sub> 24-hr Design Values (2021-2024)



Design values are 3-year rolling averages of the 98th percentile PM<sub>2.5</sub> concentration

**Hinds County - Jackson N CORE**  
98th Percentile PM<sub>2.5</sub> Values (2019-2024)



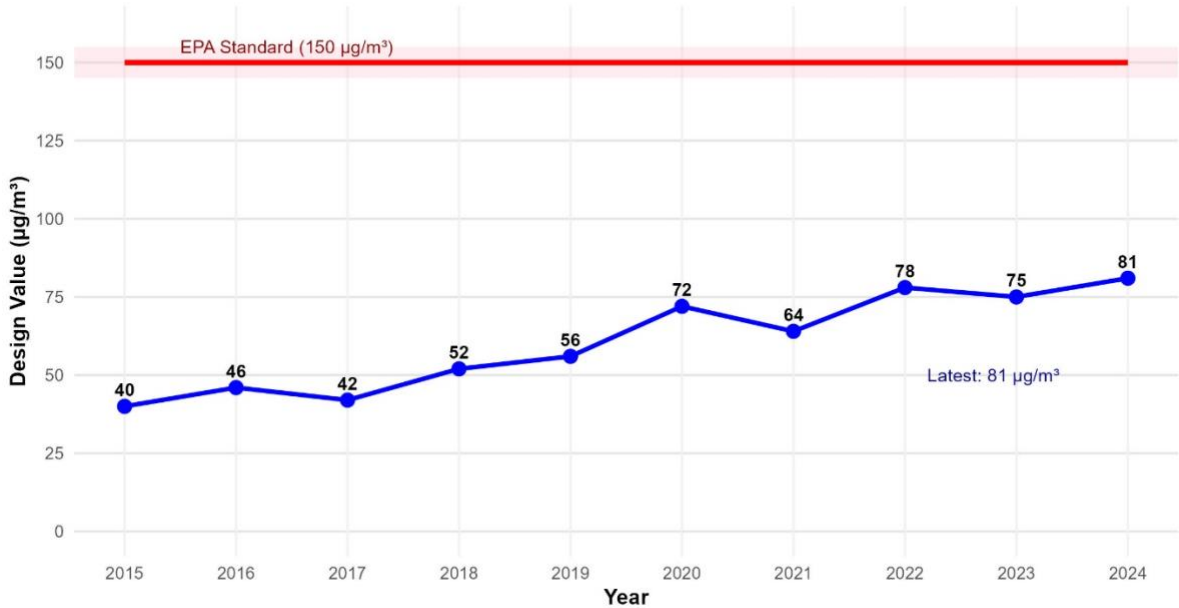
98th percentile of 24-hour PM<sub>2.5</sub> concentrations

# Hinds County (N-CORE)

## PM<sub>10</sub>

### 3-Year Average of the Annual 2<sup>nd</sup> Max

**Hinds County - Jackson NCORE**  
PM10 Design Values (2015-2024)



Design values are 3-year rolling averages of the second maximum PM10 concentration

**Hinds County - Jackson NCORE**  
Annual PM10 Second Maximum Values (Last 10 Years)



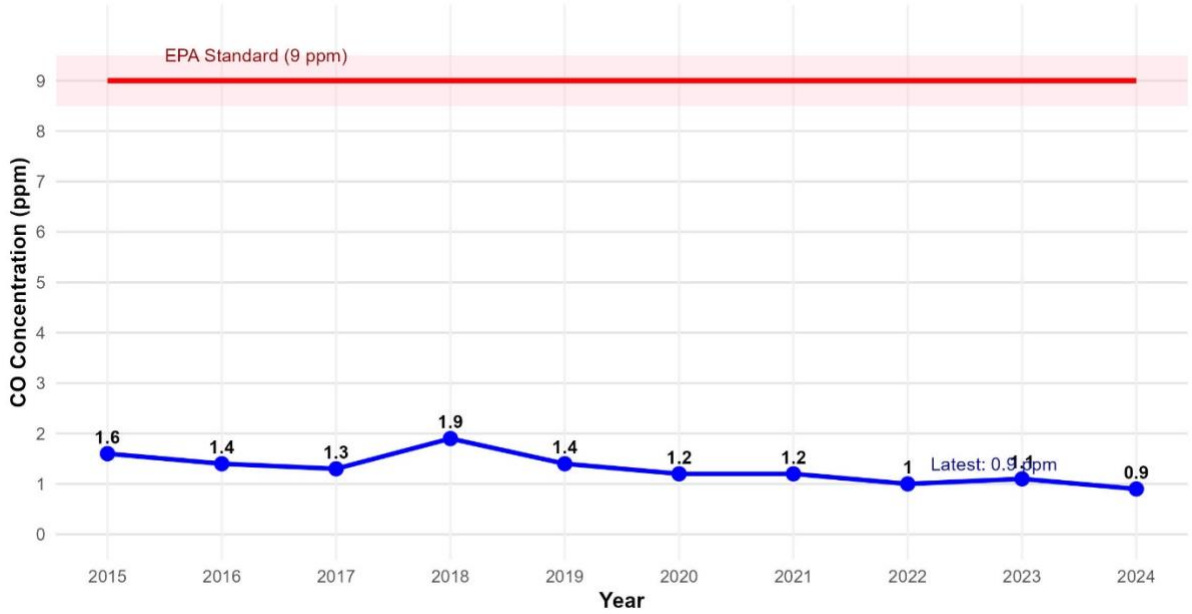
Annual second maximum of 24-hour PM10 concentrations

# Hinds County (N-CORE)

## CO

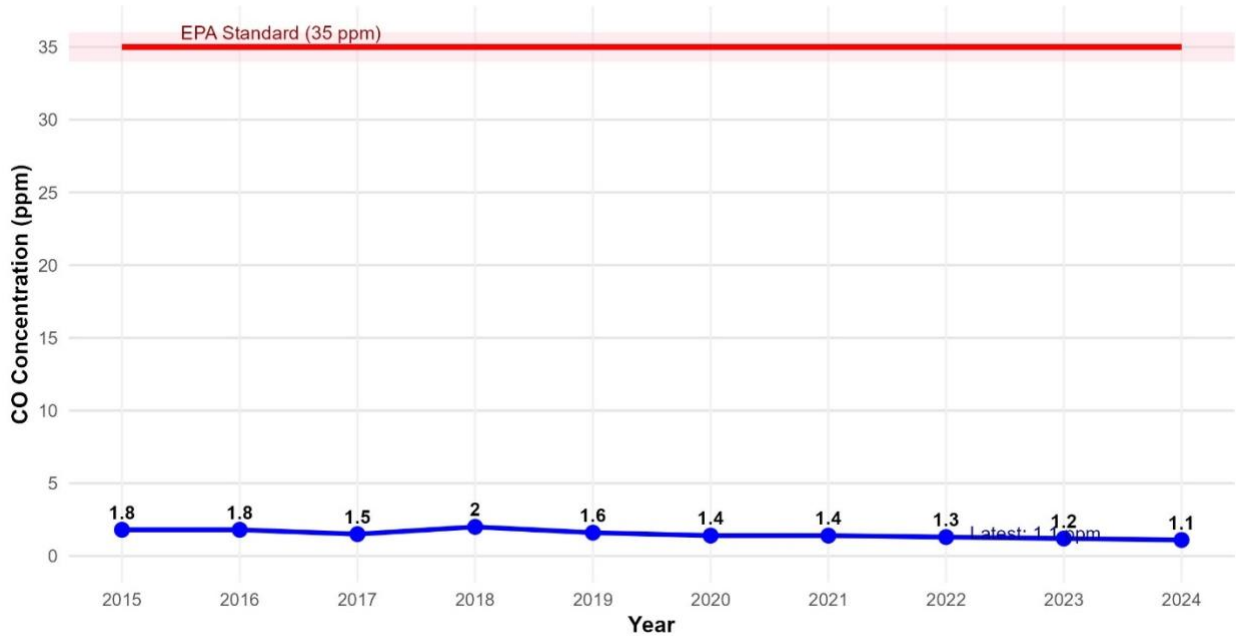
### 8-Hour and 1- Hour Average

**Hinds County - Jackson NCORE**  
8-Hour CO Second Maximum Values (2015-2024)



Annual second maximum of 8-hour CO concentrations

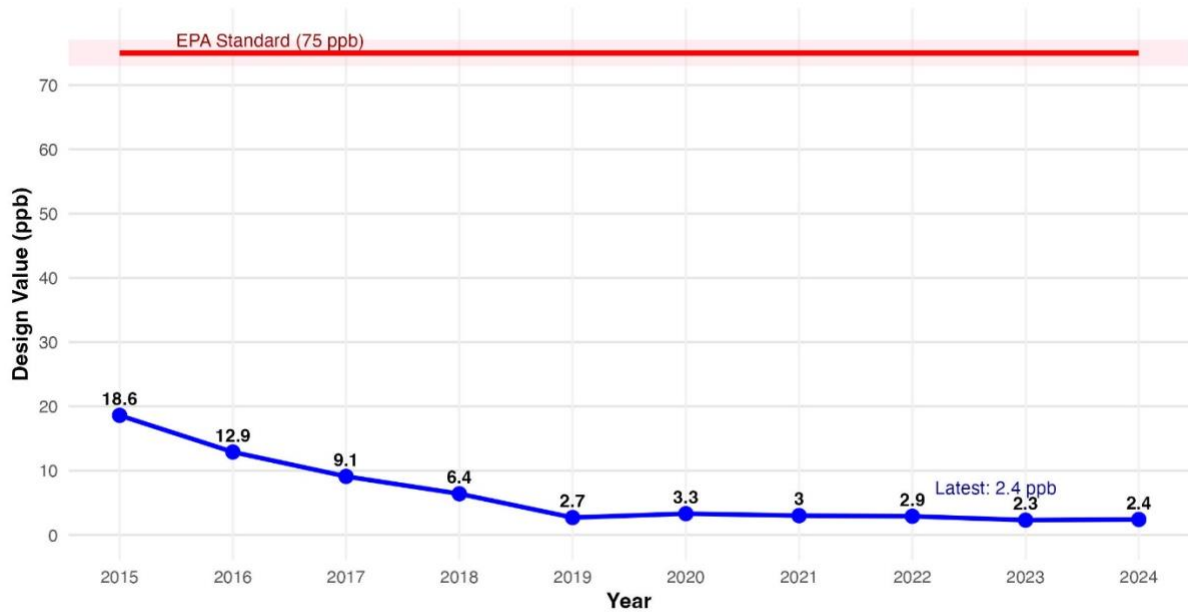
**Hinds County - Jackson NCORE**  
1-Hour CO Second Maximum Values (2015-2024)



Annual second maximum of 1-hour CO concentrations

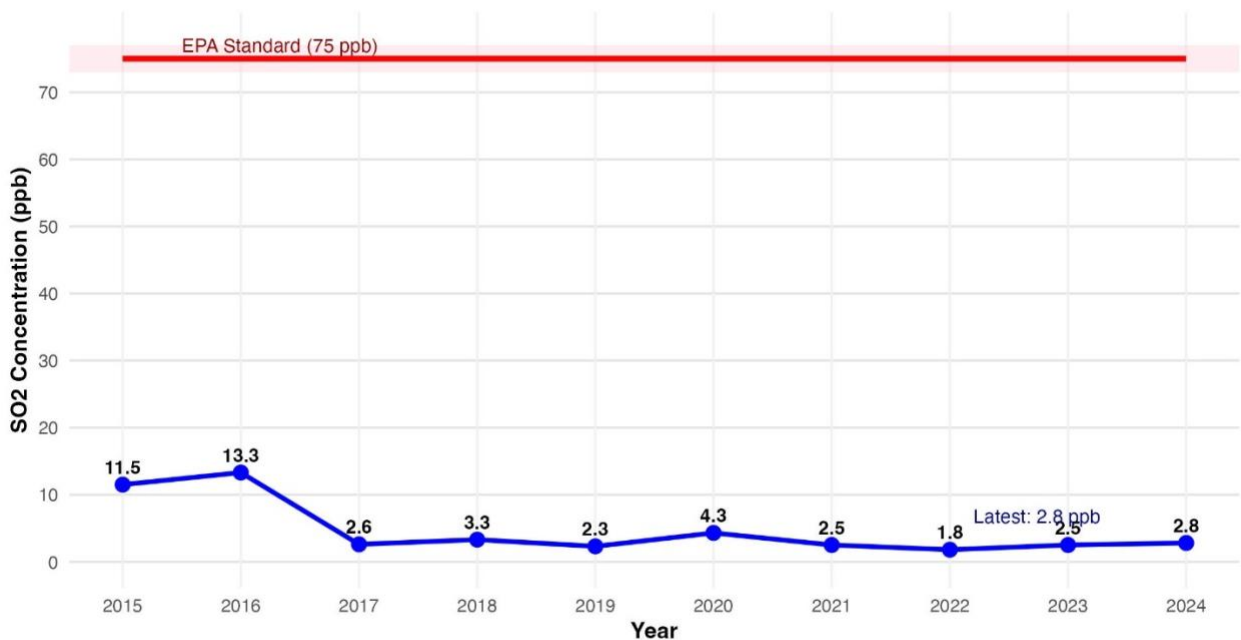
# Hinds County (N-CORE) Sulfur Dioxide 1-Hour Average

**Hinds County - Jackson NCORE**  
1-Hour SO<sub>2</sub> Design Values (3-Year Average)



Design values are 3-year rolling averages of the 99th percentile SO<sub>2</sub> concentration

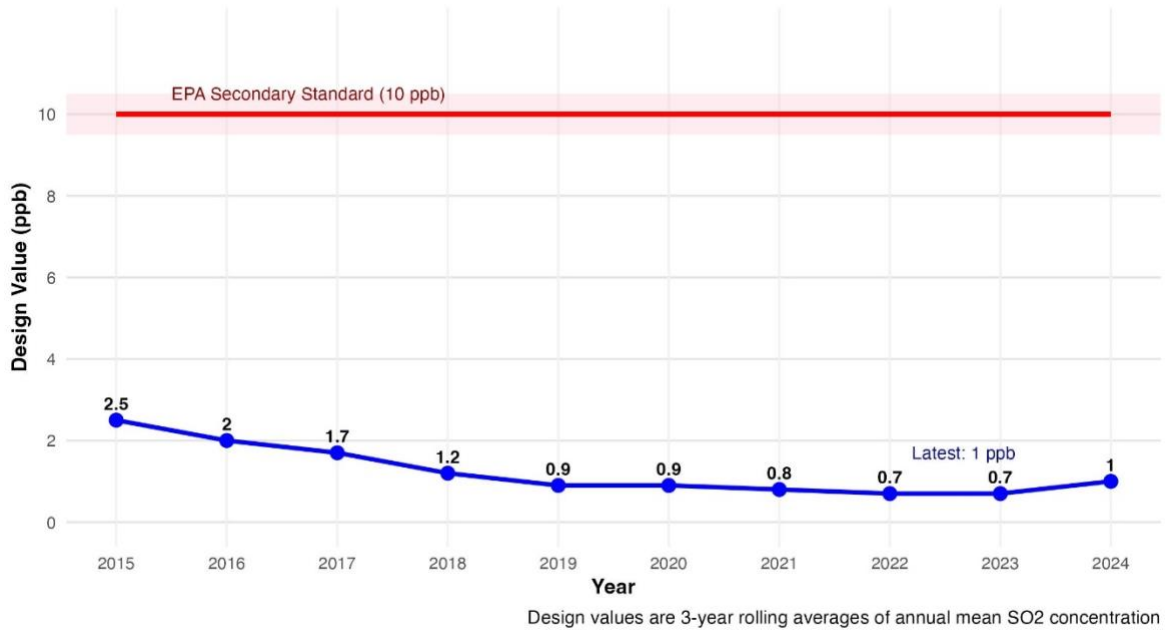
**Hinds County - Jackson NCORE**  
99th Percentile SO<sub>2</sub> Values (Last 10 Years)



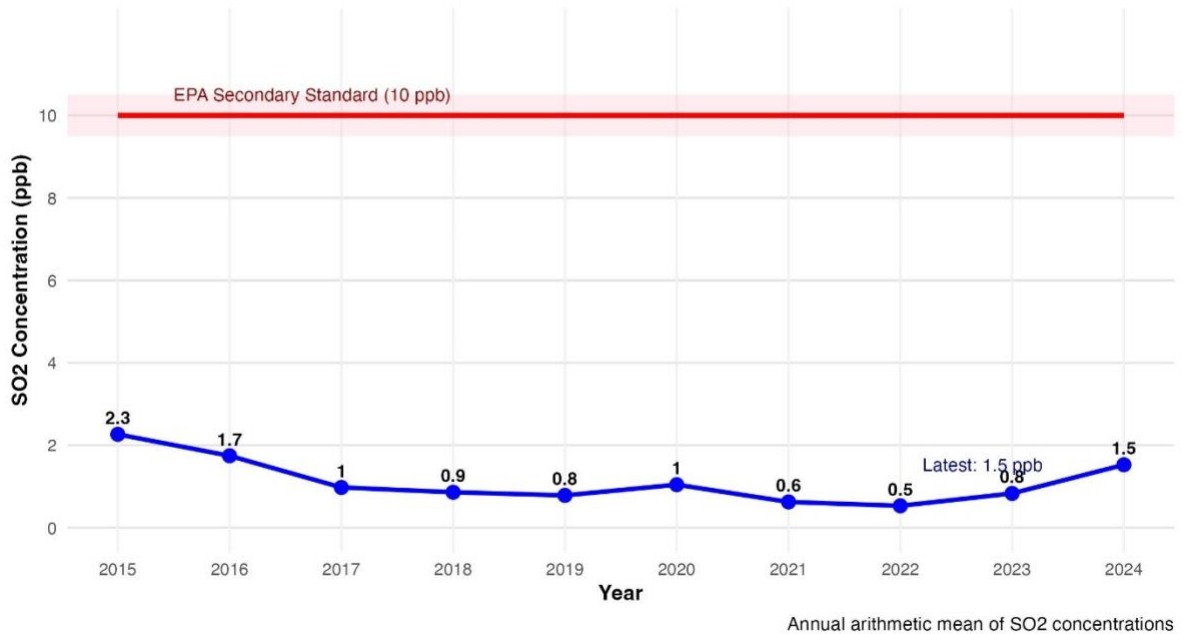
99th percentile of 1-hour SO<sub>2</sub> concentrations

# Hinds County (N-CORE) Sulfur Dioxide Annual Mean

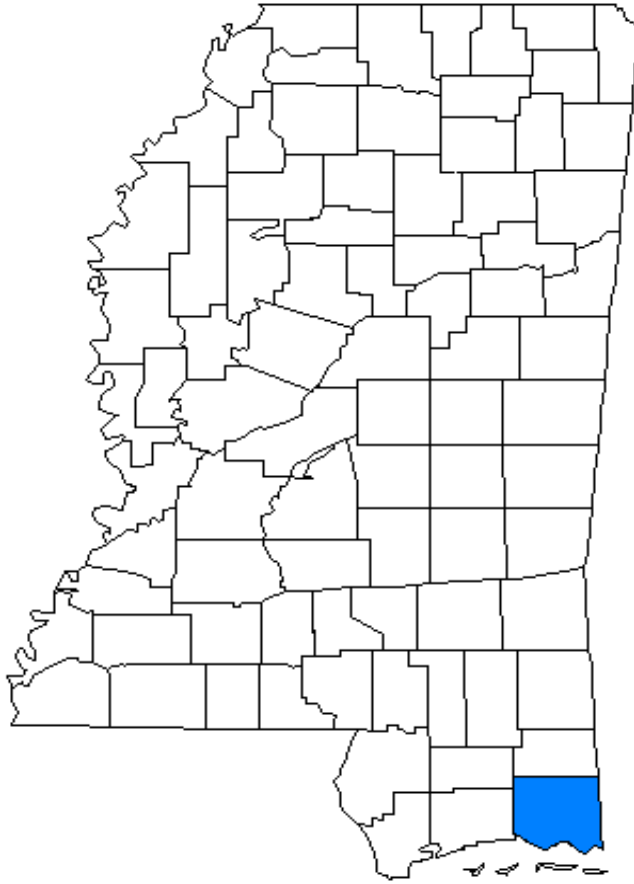
**Hinds County - Jackson N CORE**  
Annual SO<sub>2</sub> Design Values (3-Year Average)



**Hinds County - Jackson N CORE**  
Annual SO<sub>2</sub> Mean Values (Last 10 Years)



# Jackson County





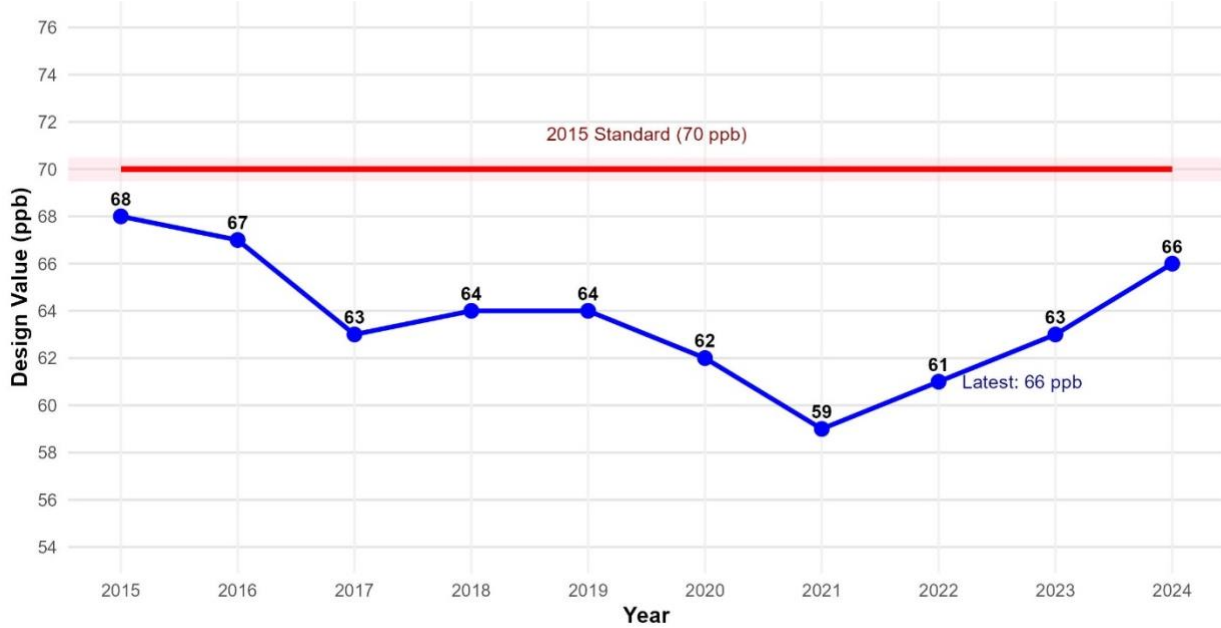
**Jackson County**  
**Monitoring Site No. 28-059-0006**  
**Location**





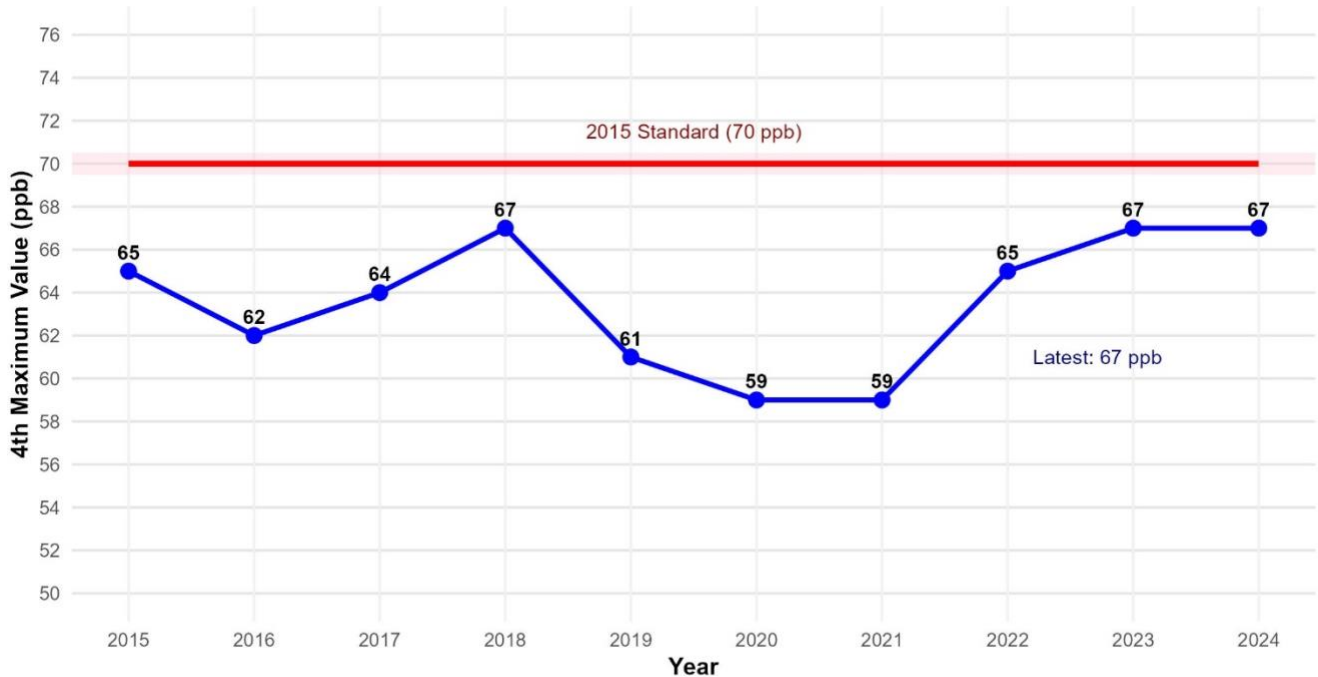
# Jackson County 8-Hour Ozone

**Jackson County - Pascagoula**  
Annual Ozone Design Values (2015-2024)



Design values are 3-year rolling averages of the annual 4th maximum 8-hour ozone concentration

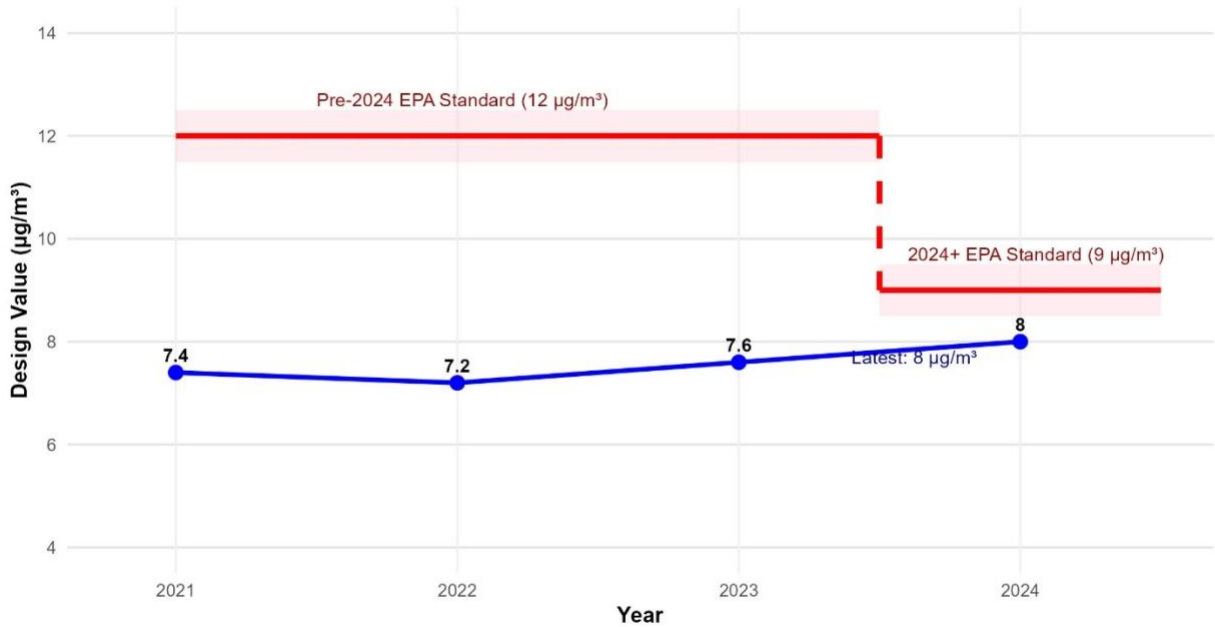
**Jackson County - Pascagoula**  
Annual 4th Maximum 8-hour Ozone Values (2015-2024)



4th highest daily maximum 8-hour ozone concentration at each site

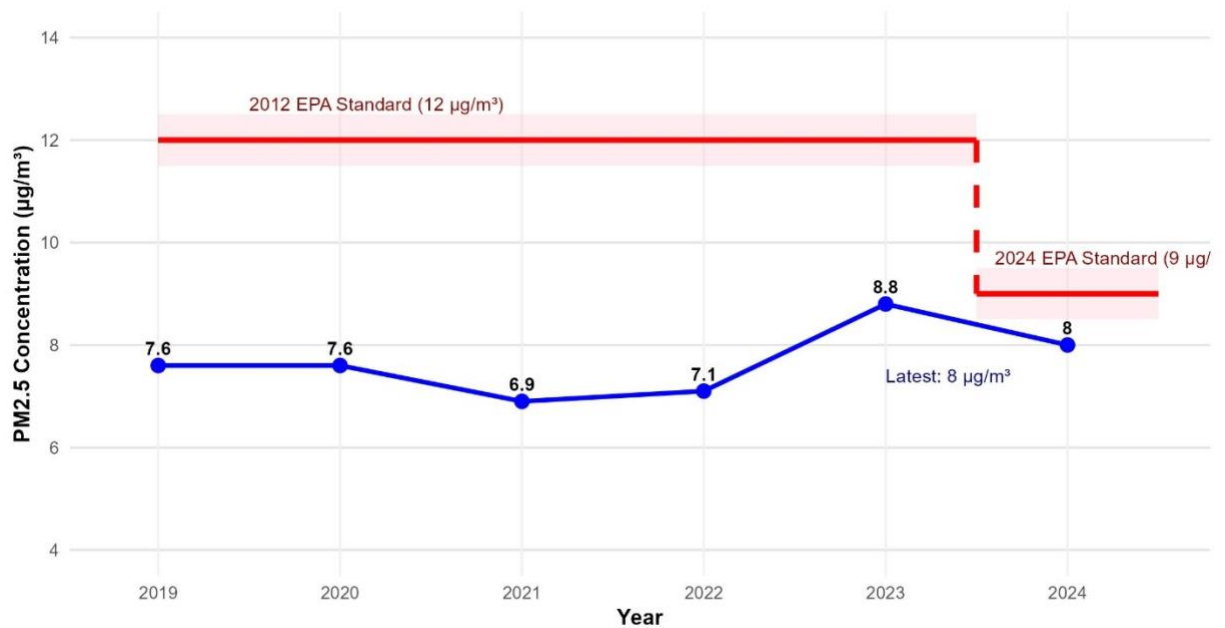
# Jackson County PM<sub>2.5</sub> Annual Mean

**Jackson County - Pascagoula**  
PM2.5 Design Values (2021-2024)



Design values are 3-year rolling averages of the annual PM2.5 concentration

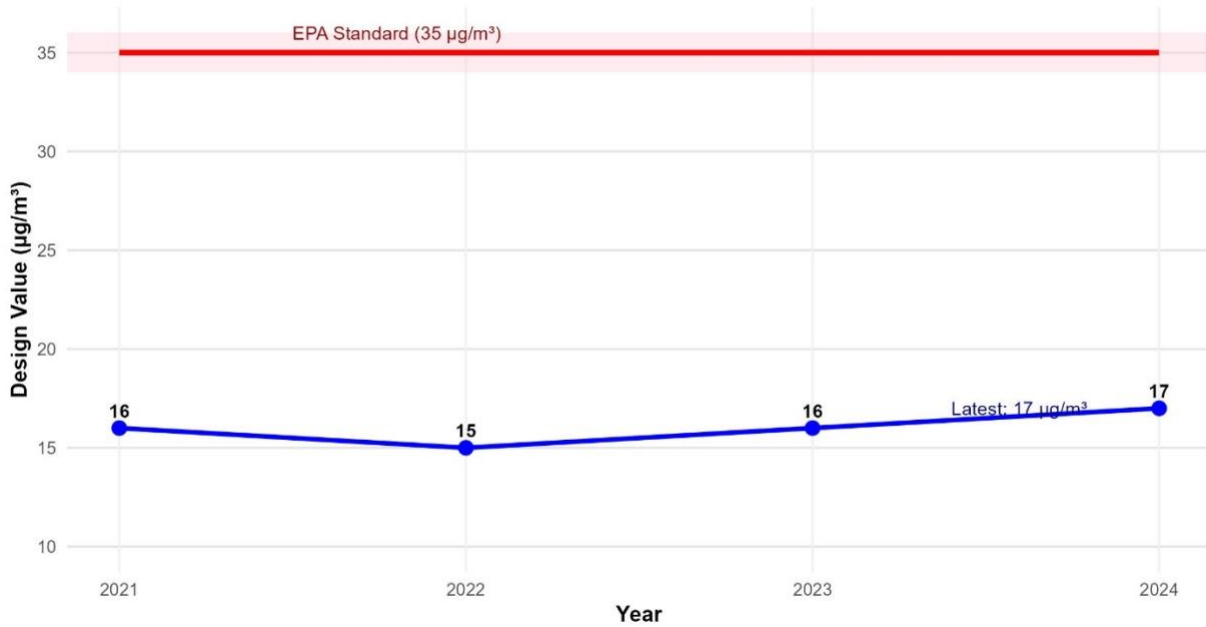
**Jackson County - Pascagoula**  
Annual PM2.5 Means (2019-2024)



Annual arithmetic mean of 24-hour PM2.5 concentrations

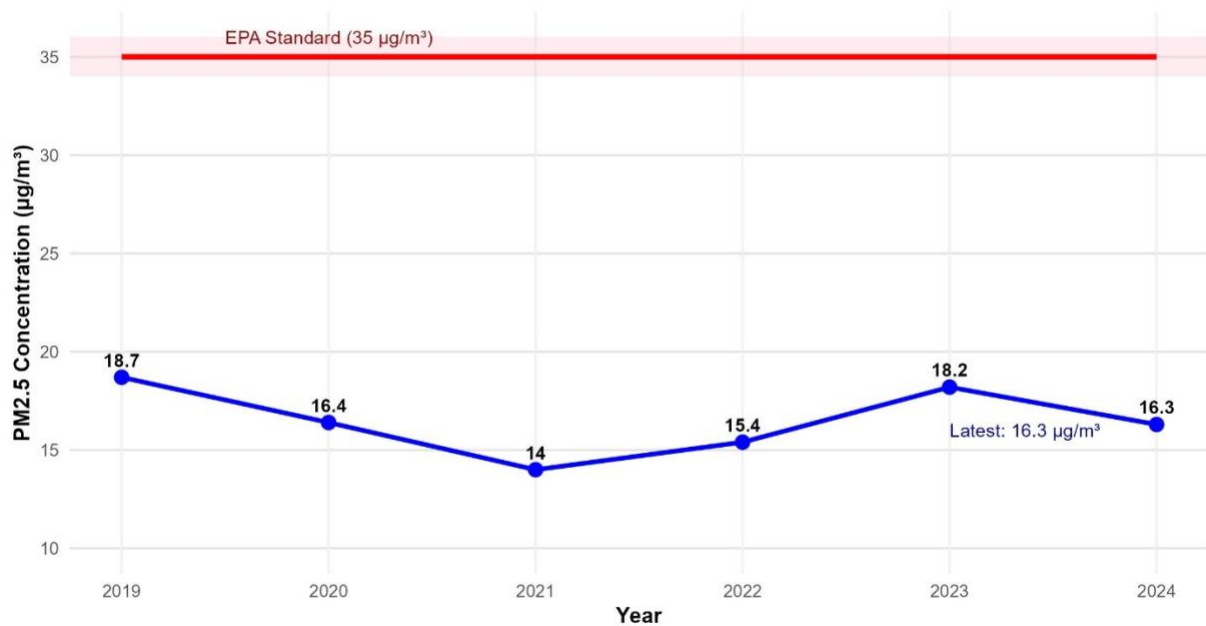
# Jackson County PM<sub>2.5</sub> 24-Hour Average

**Jackson County - Pascagoula**  
PM<sub>2.5</sub> 24-hr Design Values (2021-2024)



Design values are 3-year rolling averages of the 98th percentile PM<sub>2.5</sub> concentration

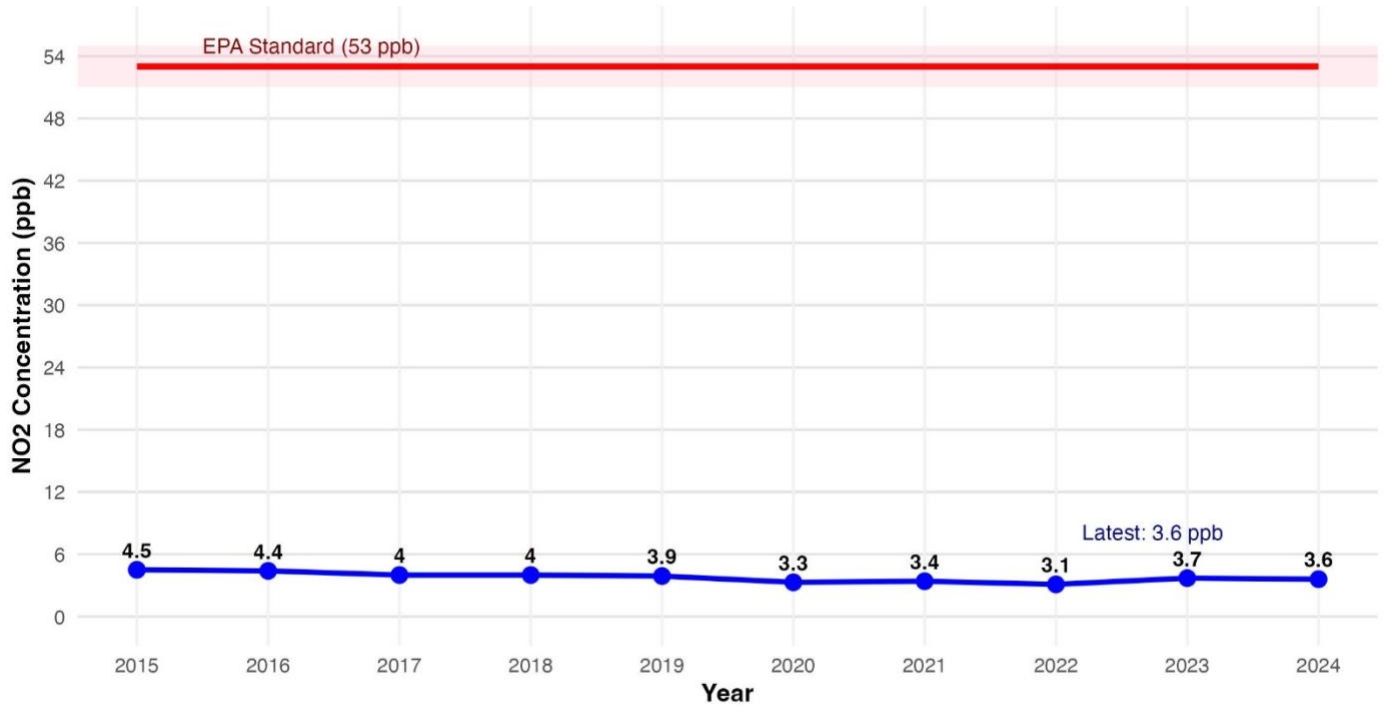
**Jackson County - Pascagoula**  
98th Percentile PM<sub>2.5</sub> Values (2019-2024)



98th percentile of 24-hour PM<sub>2.5</sub> concentrations

# Jackson County Nitrogen Dioxide Annual Mean

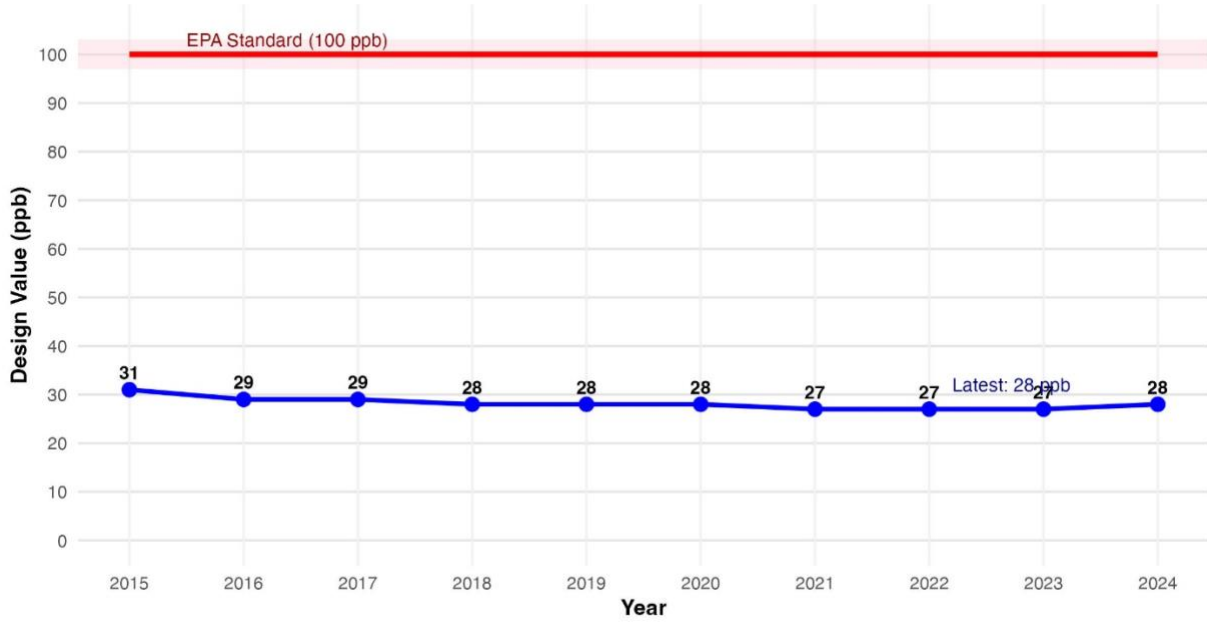
**Jackson County - Pascagoula**  
Annual NO2 Mean Values (Last 10 Years)



Annual arithmetic mean of NO2 concentrations

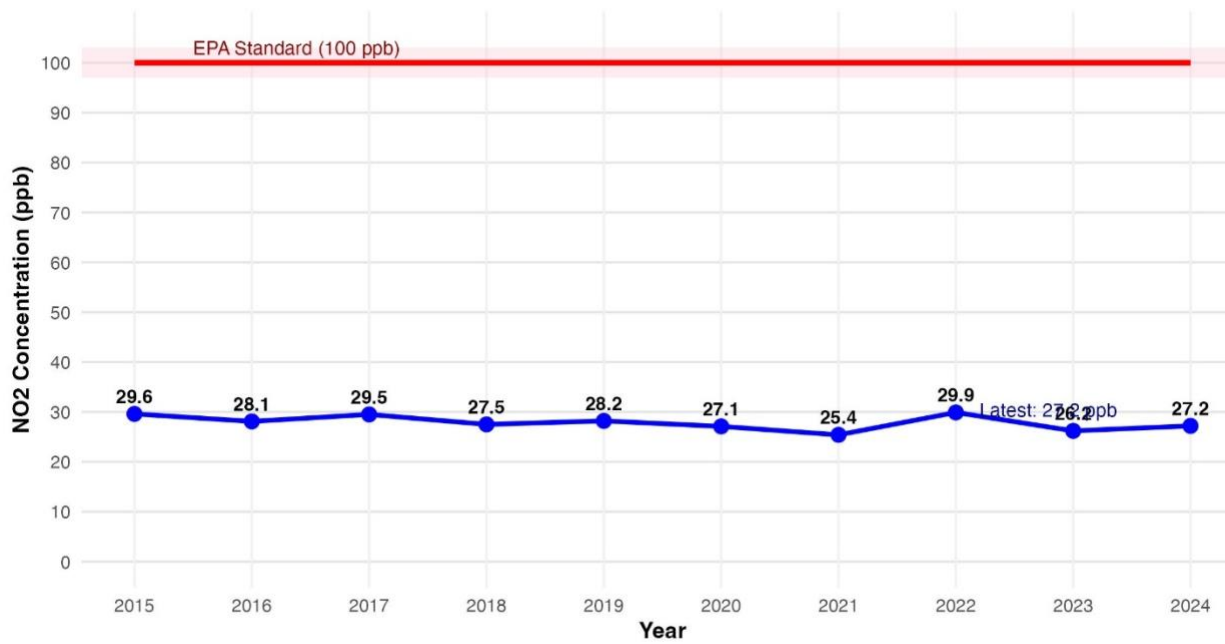
# Jackson County Nitrogen Dioxide 1-Hour Average

**Jackson County - Pascagoula**  
NO2 1-Hour Design Values (3-Year Average)



Design values are 3-year rolling averages of the 98th percentile NO2 concentration

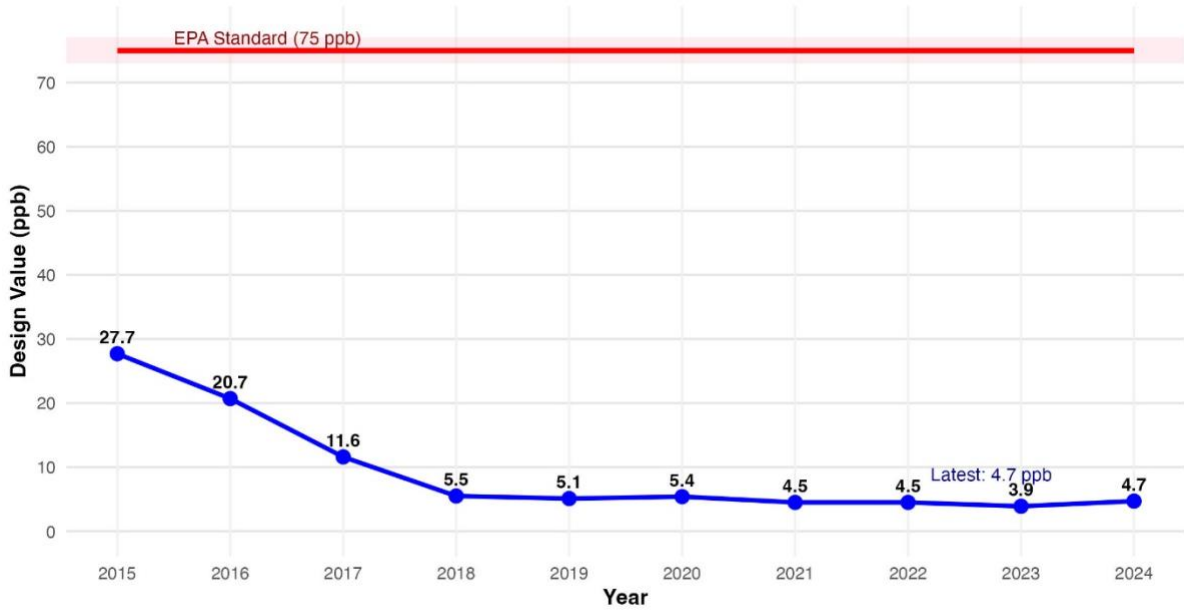
**Jackson County - Pascagoula**  
98th Percentile NO2 Values (Last 10 Years)



98th percentile of 1-hour NO2 concentrations

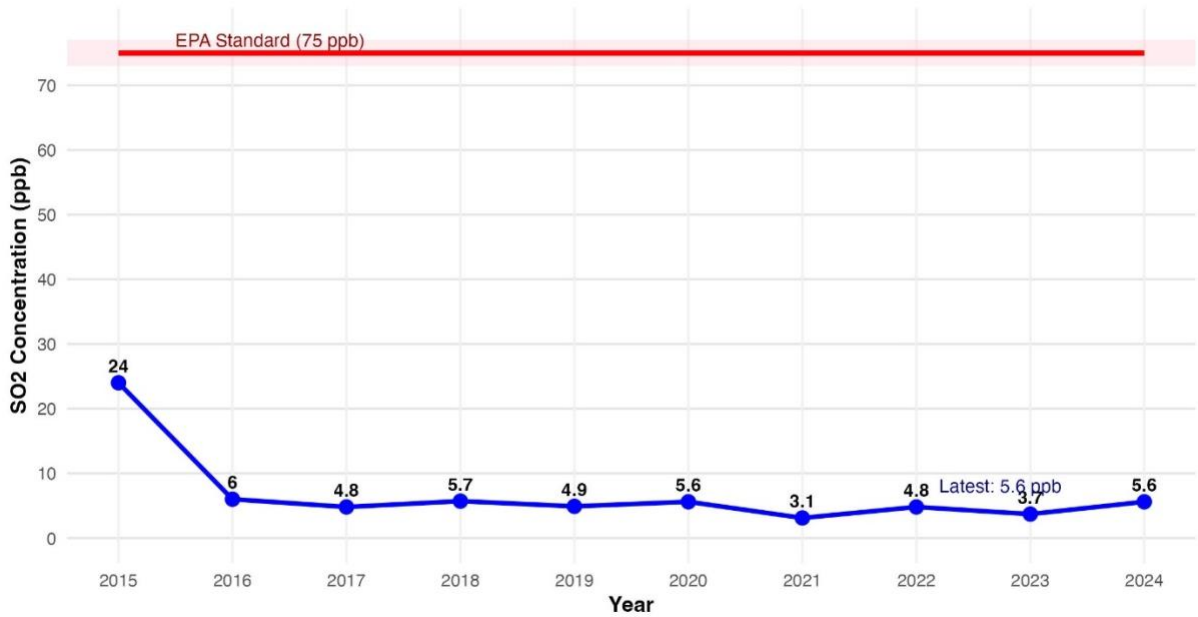
# Jackson County Sulfur Dioxide 1-Hour Average

**Jackson County - Pascagoula**  
1-Hour SO<sub>2</sub> Design Values (3-Year Average)



Design values are 3-year rolling averages of the 99th percentile SO<sub>2</sub> concentration

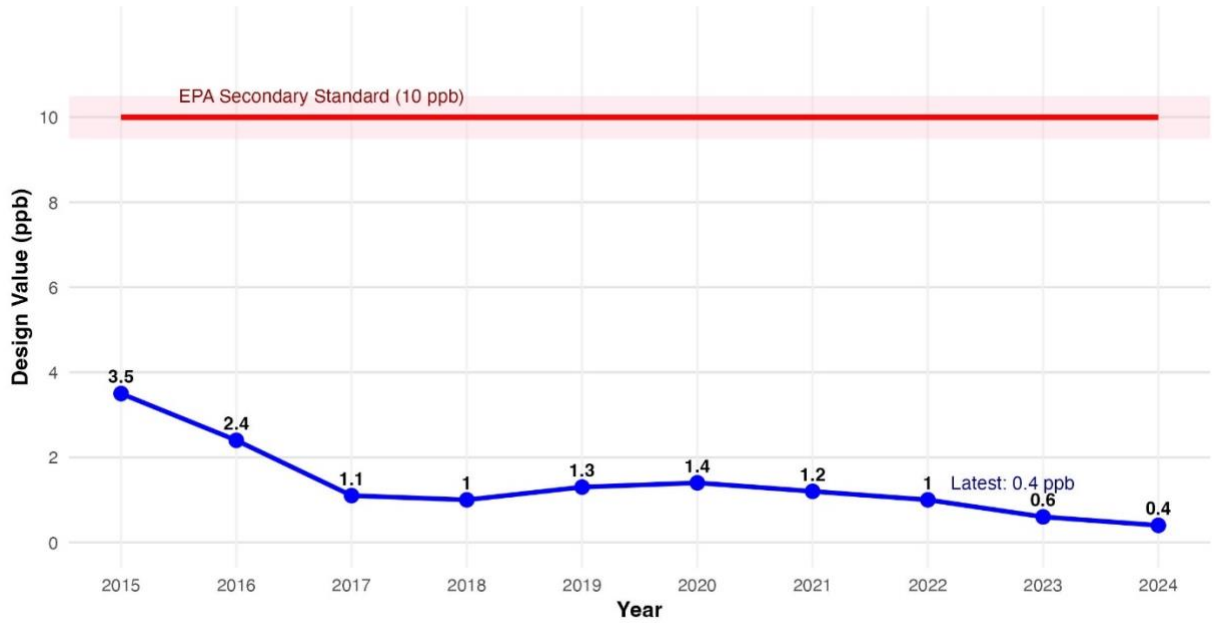
**Jackson County - Pascagoula**  
99th Percentile SO<sub>2</sub> Values (Last 10 Years)



99th percentile of 1-hour SO<sub>2</sub> concentrations

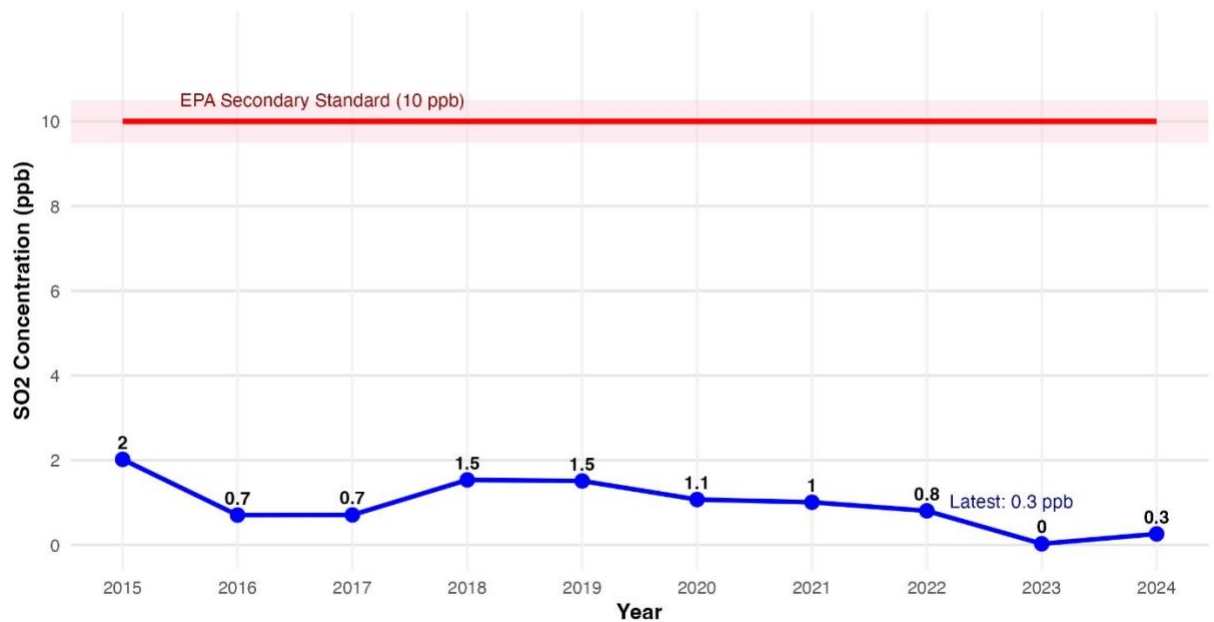
# Jackson County Sulfur Dioxide Annual Mean

**Jackson County - Pascagoula**  
Annual SO<sub>2</sub> Design Values (3-Year Average)



Design values are 3-year rolling averages of annual mean SO<sub>2</sub> concentration

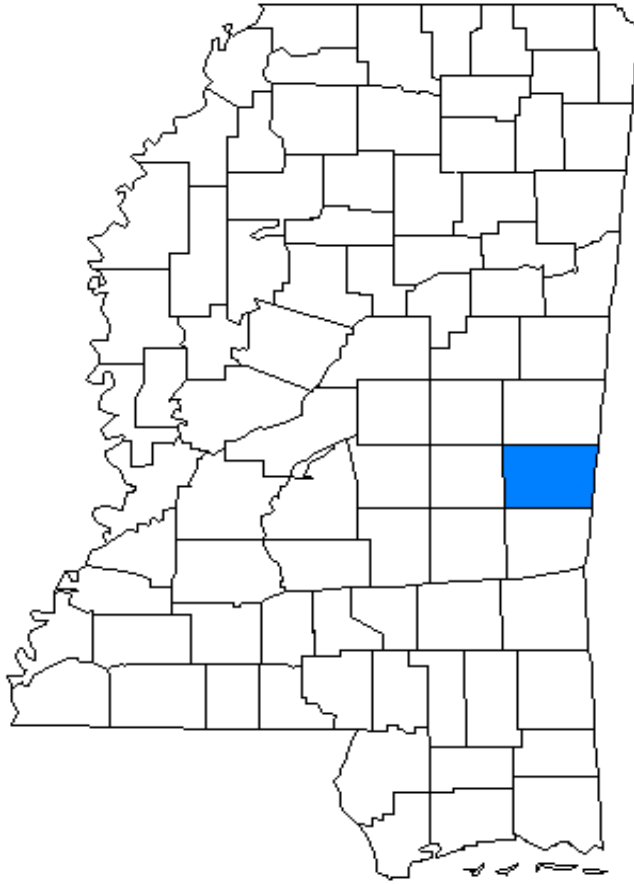
**Jackson County - Pascagoula**  
Annual SO<sub>2</sub> Mean Values (Last 10 Years)



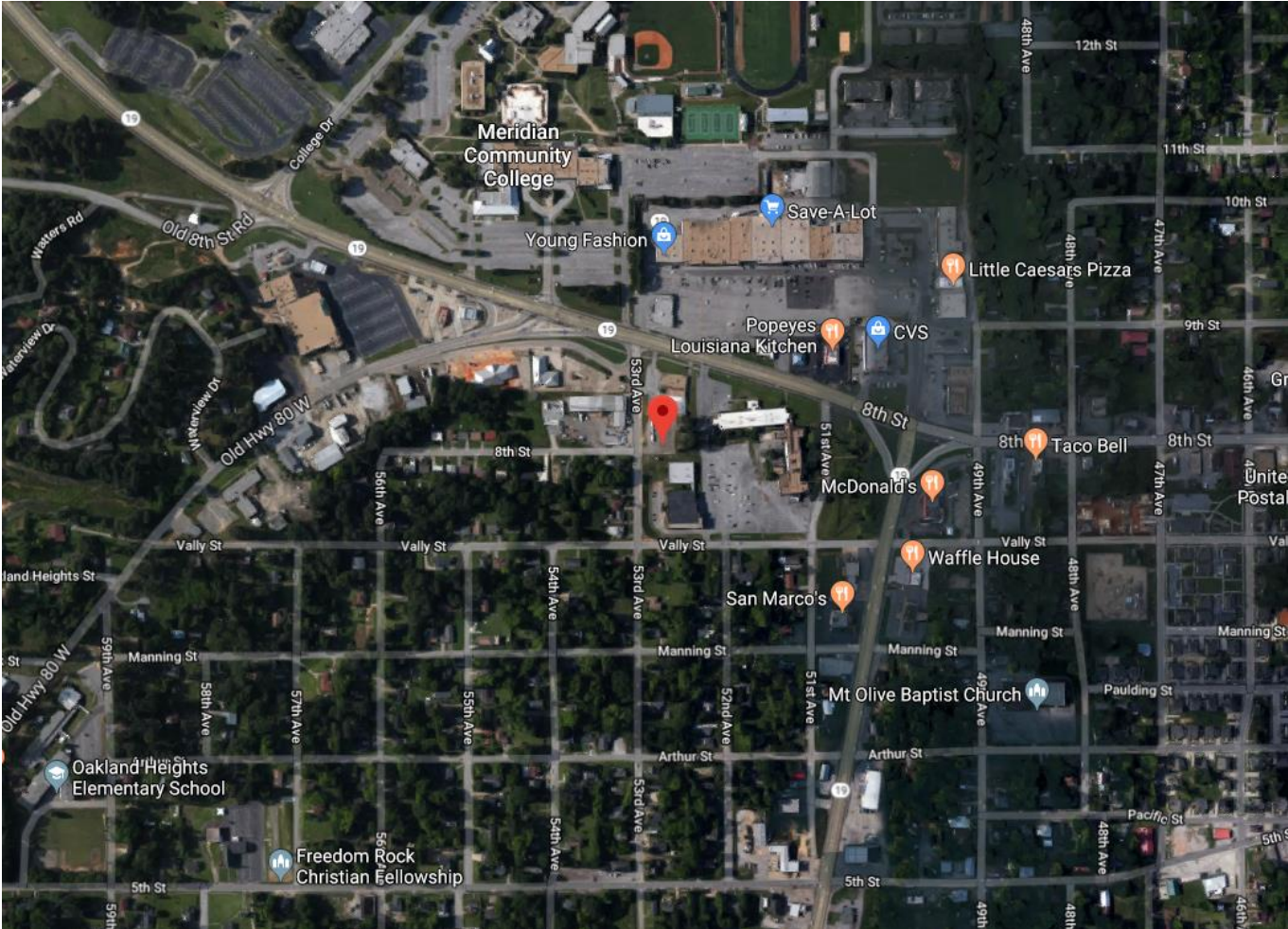
Annual arithmetic mean of SO<sub>2</sub> concentrations



# Lauderdale County

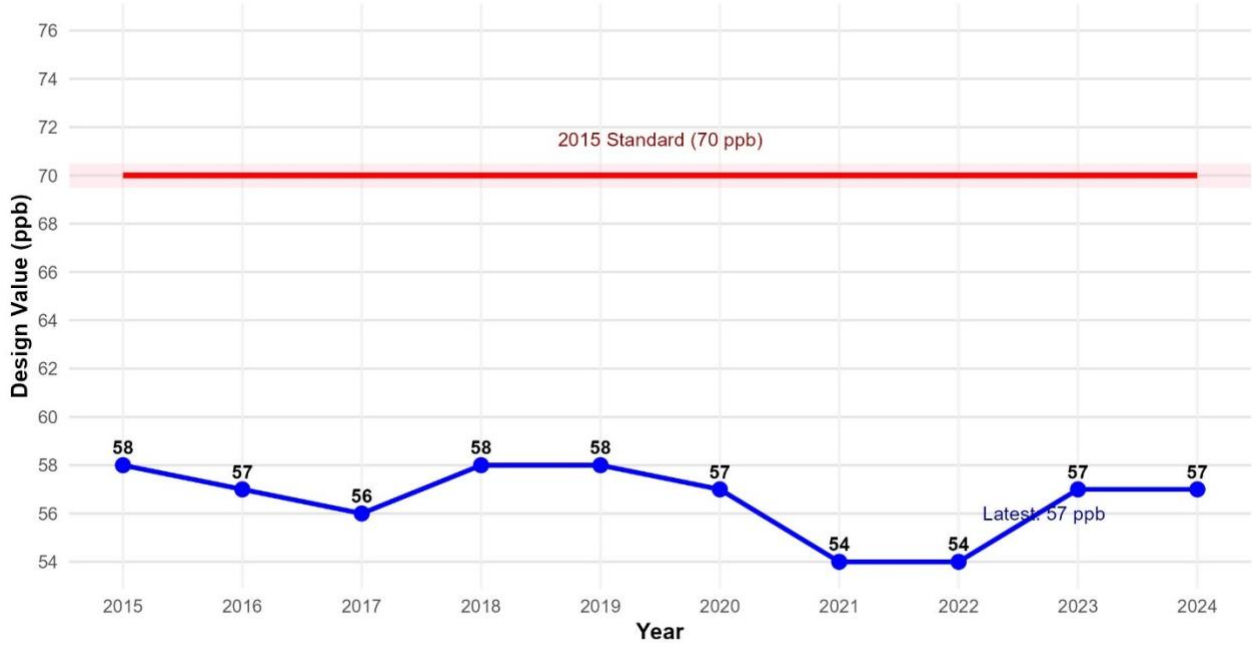


**Lauderdale County**  
**Monitoring Site No. 28-075-0003**  
**Location**



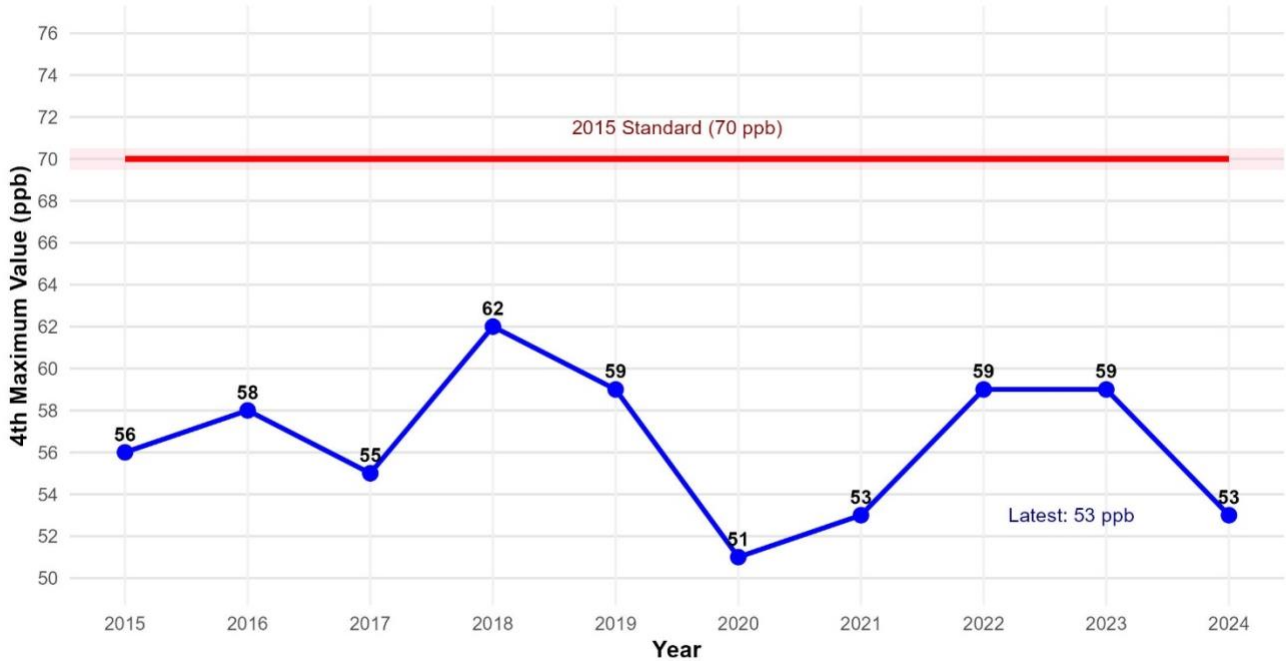
# Lauderdale County 8-Hour Ozone

**Lauderdale County - Meridian**  
Annual Ozone Design Values (2015-2024)



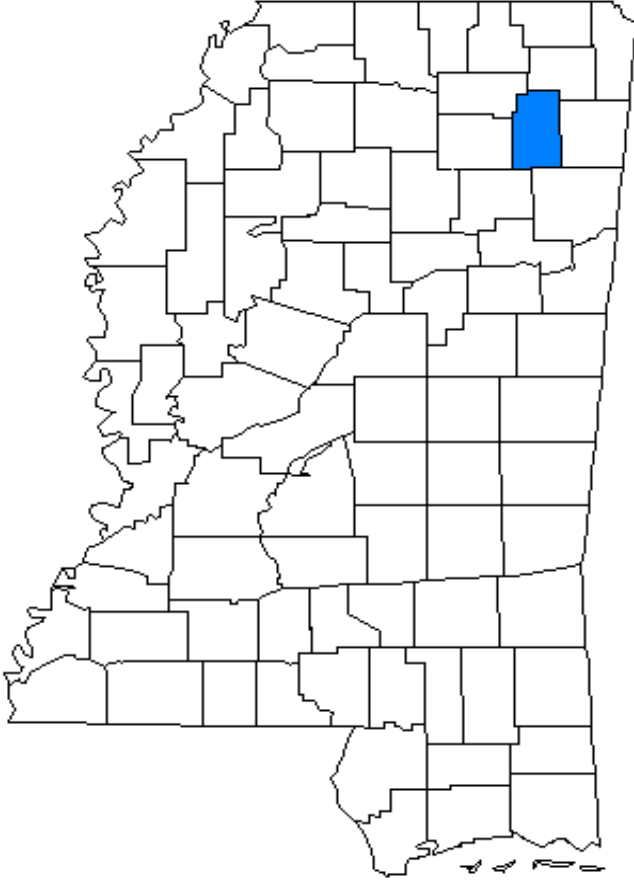
Design values are 3-year rolling averages of the annual 4th maximum 8-hour ozone concentration

**Lauderdale County - Meridian**  
Annual 4th Maximum 8-hour Ozone Values (2015-2024)



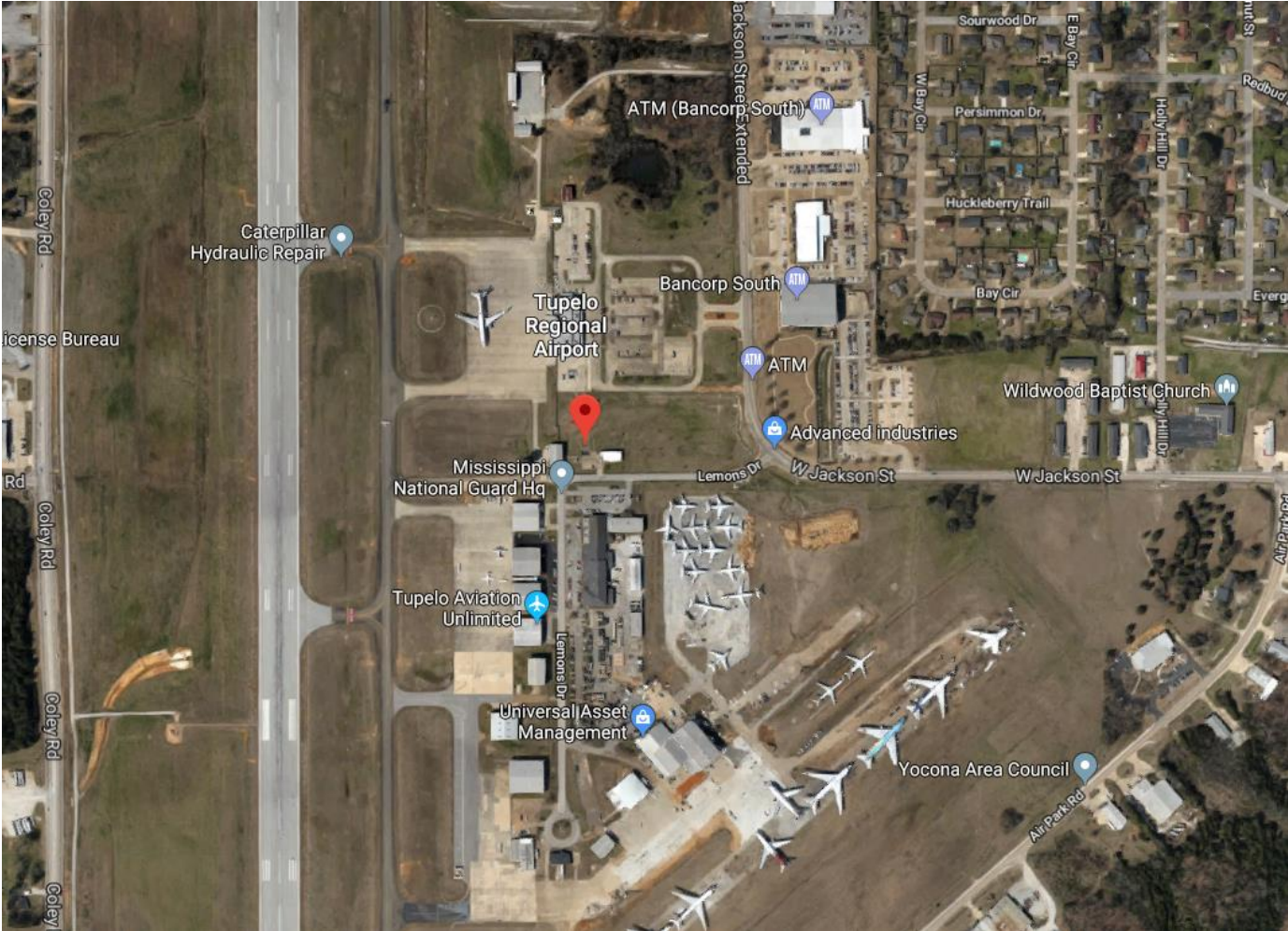
4th highest daily maximum 8-hour ozone concentration at each site

# Lee County





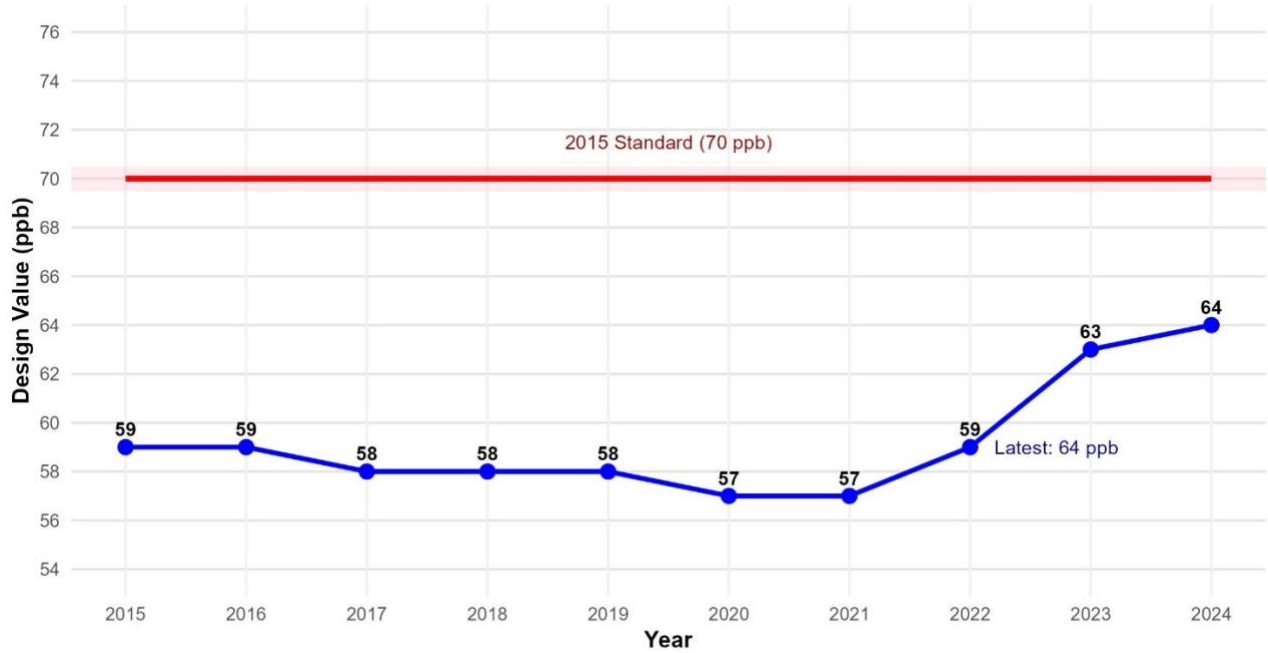
**Lee County**  
**Monitoring Site No. 28-081-0005**  
**Location**



# Lee County 8-Hour Ozone

## Lee County - TUPELO AIRPORT NEAR OLD NWS OFFICE

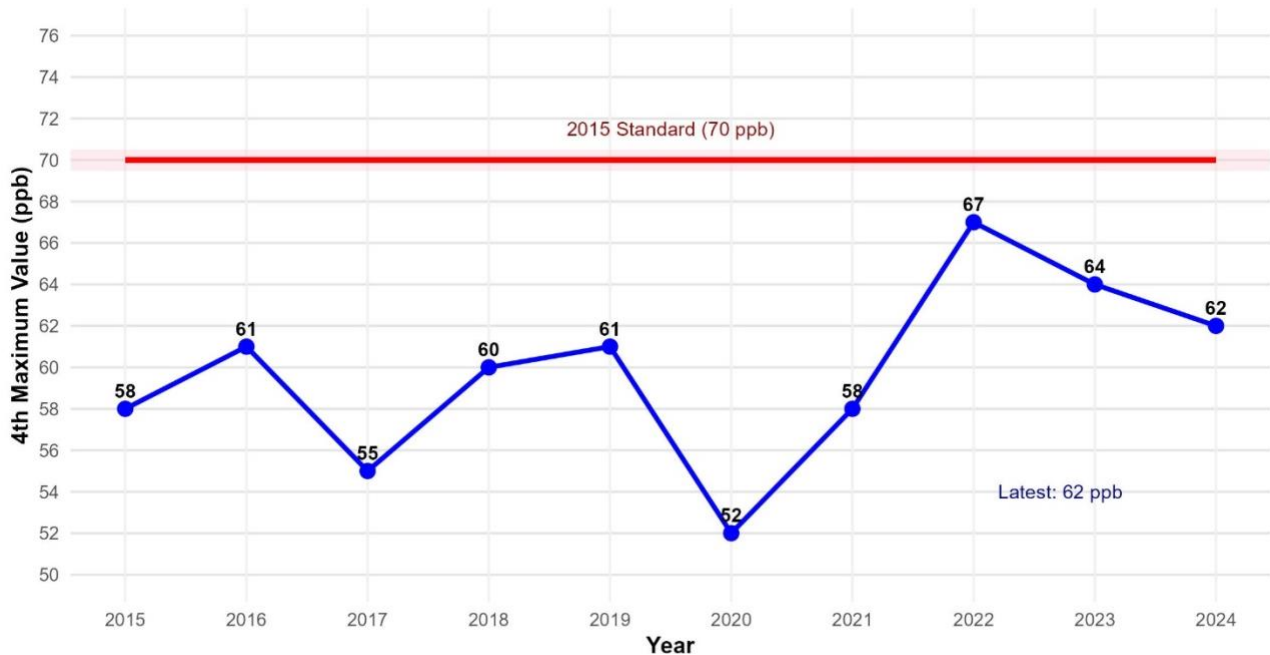
Annual Ozone Design Values (2015-2024)



Design values are 3-year rolling averages of the annual 4th maximum 8-hour ozone concentration

## Lee County - TUPELO AIRPORT NEAR OLD NWS OFFICE

Annual 4th Maximum 8-hour Ozone Values (2015-2024)



4th highest daily maximum 8-hour ozone concentration at each site

# 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.

### Ozone Monitoring Data Completeness

Mississippi 2022 - 2024

County	2022	2023	2024	3-Year Completeness
011 - Cleveland Delta State	98%	98%	100%	98.4%
033 - Hernando	94%	96%	96%	95.2%
045 - Waveland	99%	97%	93%	96.3%
047 - Gulfport Youth Court	98%	98%	96%	97.6%
049 - Hinds CC	99%	100%	98%	99%
049 - Jackson NCORE	98%	97%	96%	97%
059 - Pascagoula	99%	98%	96%	97.6%
075 - Meridian	97%	98%	99%	98.1%
081 - TUPELO AIRPORT NEAR OLD NWS OFFICE	99%	100%	99%	99%
161 - Coffeeville	93%	92%	96%	93.6%

Annual standard: 75% completeness; 3-Year standard: 90% completeness

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.

# 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.

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

Mississippi 2022

County	Standard	January - March	April - June	July - September	October - December
Bolivar	75%	100%	100%	100%	100%
DeSoto	75%	100%	100%	100%	100%
Forrest	75%	100%	100%	100%	100%
Hancock	75%	100%	100%	99%	95%
Harrison	75%	100%	100%	100%	100%
Hinds	75%	100%	100%	99%	99%
Jackson	75%	100%	100%	96%	100%

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.

## PM2.5 Quarterly Data Completeness

Mississippi 2023

County	Standard	January - March	April - June	July - September	October - December
Bolivar	75%	100%	97%	93%	100%
DeSoto	75%	100%	100%	95%	98%
Forrest	75%	100%	100%	100%	100%
Hancock	75%	100%	96%	96%	100%
Harrison	75%	100%	100%	100%	96%
Hinds	75%	100%	95%	91%	100%
Jackson	75%	99%	100%	100%	100%

The standard for PM2.5 data completeness is:

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

## PM2.5 Quarterly Data Completeness

Mississippi 2024

County	Standard	January - March	April - June	July - September	October - December
Bolivar	75%	100%	100%	96%	100%
DeSoto	75%	100%	100%	100%	100%
Forrest	75%	100%	96%	100%	99%
Hancock	75%	92%	95%	96%	100%
Harrison	75%	97%	100%	96%	100%
Hinds	75%	98%	99%	100%	99%
Jackson	75%	100%	100%	97%	100%

The standard for PM2.5 data completeness is:

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

# 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.

### PM10 Quarterly Data Completeness

Mississippi 2022-2023-2024

Site	Year	Standard	January - March	April - June	July - September	October - December
Jackson NCORE	2022	75%	100%	100%	98.9%	100%
Jackson NCORE	2023	75%	100%	89%	82.6%	100%
Jackson NCORE	2024	75%	94.5%	100%	100%	100%

The standard for PM10 data completeness is:

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

# 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.

### CO Quarterly Data Completeness

Mississippi 2024

Site	Quarter	Standard	1-hr Completeness	8-hr Completeness
28-049-0020-1	Q1	75%	96.3%	99.1%
28-049-0020-1	Q2	75%	96.2%	98.8%
28-049-0020-1	Q3	75%	96.5%	99.2%
28-049-0020-1	Q4	75%	96.9%	100%

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.

# 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.

### **Annual Mean Nitrogen Dioxide Data Completeness**

Mississippi

<b>County</b>	<b>Standard</b>	<b>Year</b>	<b>Annual Completeness</b>
Jackson County	75%	2022	92.6%
Jackson County	75%	2023	93%
Jackson County	75%	2024	92.5%

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.

## Quarterly 1-Hour Nitrogen Dioxide Data Completeness

Mississippi 2022-2023-2024

County	Year	Standard	January - March	April - June	July - September	October - December
Jackson County	2022	75%	92.7%	91.8%	93.2%	92.8%
Jackson County	2023	75%	89%	93.5%	94.9%	94.5%
Jackson County	2024	75%	92.4%	92.3%	91%	94.2%

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.



# 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.

### Quarterly 1-Hour Sulfur Dioxide Data Completeness

Mississippi 2022-2023-2024

County	Year	Standard	January - March	April - June	July - September	October - December
Hinds County	2022	75%	96.2%	93.3%	96.1%	95%
Hinds County	2023	75%	95.2%	89.8%	96.4%	96.2%
Hinds County	2024	75%	96.2%	96.2%	96.8%	96.8%
Jackson County	2022	75%	96%	96.2%	96%	88.8%
Jackson County	2023	75%	90.2%	89.8%	96.2%	95.8%
Jackson County	2024	75%	89.9%	91.9%	91.5%	95.4%

The standards for sulfur dioxide data completeness are:

- A complete quarter requires at least 75% of hourly data for the scheduled sampling days.
- A complete year requires all 4 quarters to be complete.
- A 1-hour design value is valid if it encompasses 3 consecutive calendar years of complete data.