Mississippi Department of Environmental Quality

2013
Air Quality Data Summary

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Introduction

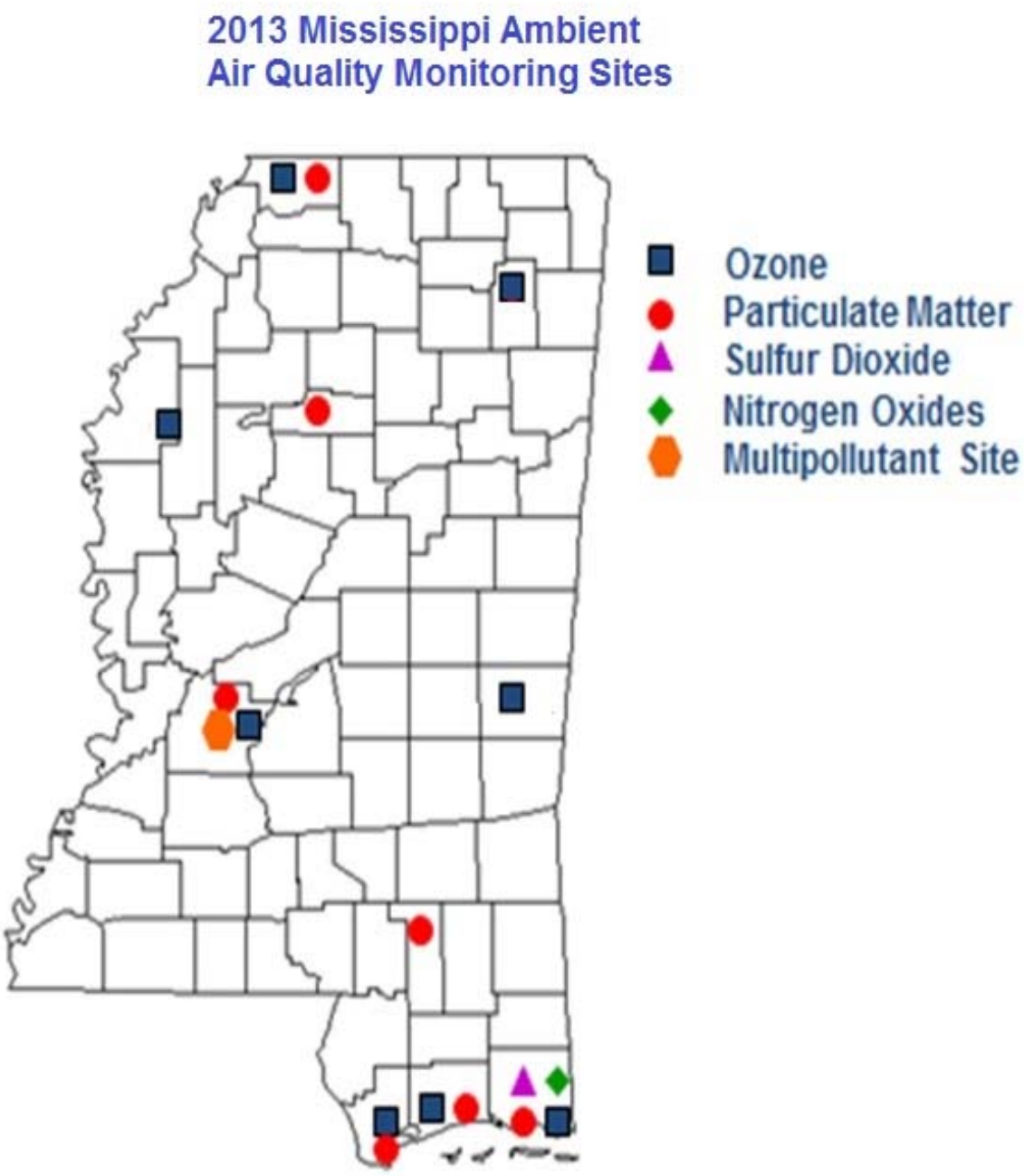
Under the Clean Air Act, the U.S. Environmental Protection Agency (EPA) establishes primary air quality standards to protect public health, including the health of "sensitive populations such as people with asthma, children, and older adults". EPA also sets secondary standards to protect public welfare. 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_3), Particulate Matter (PM), Nitrogen Dioxide (NO_2), Sulfur Dioxide (SO_2), Carbon Monoxide (CO), and Lead (Pb). The Mississippi Department of Environmental Quality (MDEQ) monitors all of these pollutants.

In July 2012, part of DeSoto County was designated as part of the Memphis Nonattainment Area by EPA. However, DeSoto County continues to meet the ozone standard as shown in this report. Also, EPA lowered the $PM_{2.5}$ annual primary standard from 15 $\mu g/m^3$ to 12 $\mu g/m^3$ in December 2012. MDEQ restarted operation of its multi-pollutant site (N-CORE) in July 2013. All data from the site is considered incomplete, therefore, it is not shown in the 10-year analysis.

This report looks at the reported levels of the criteria pollutants in 2013 at various monitoring sites located in Mississippi. It compares these levels to the NAAQS to determine how the state is doing in meeting these standards. As you will see, Mississippi is meeting all of the NAAQS.

MDEQ Air Monitoring Network

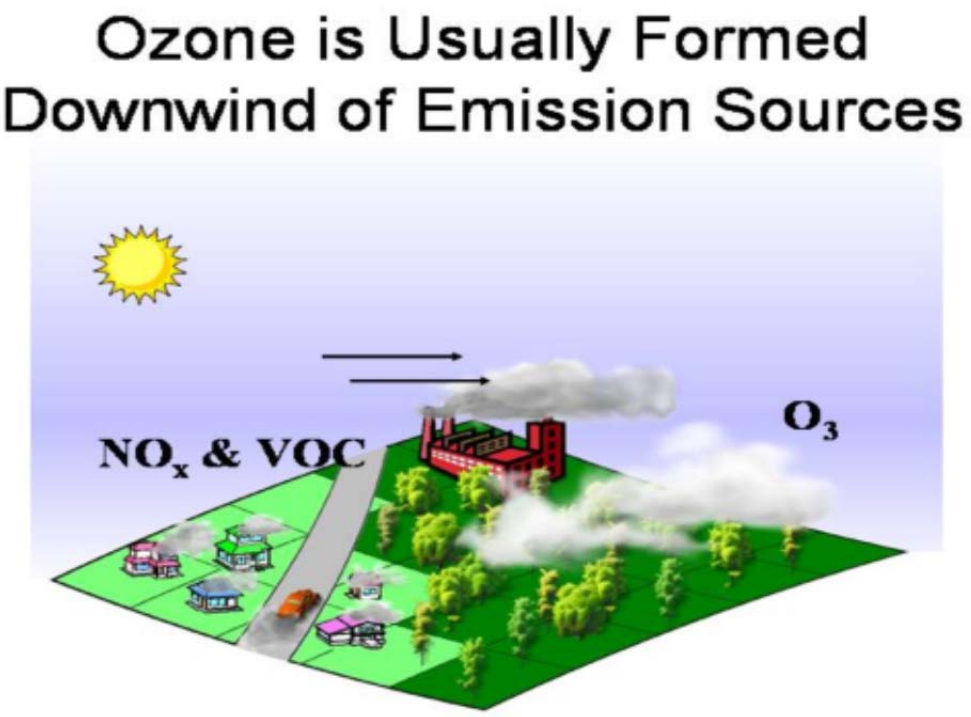


Monitoring Network Information

County	City	Monitoring Site ID	Pollutants Monitored	Latitude			Longitude		
				Deg.	Min.	Sec.	Deg.	Min.	Sec.
Bolivar	Cleveland	28-011-0001	Ozone	33	44	45	-90	43	23
DeSoto	Hernando	28-033-0002	Ozone, $PM_{2.5}$ 3-Day, $PM_{2.5}$ Continuous	34	49	14	-89	59	16
Forrest	Hattiesburg	28-035-0004	$PM_{2.5}$ 3-Day, $PM_{2.5}$ Continuous	31	19	23	-89	17	15
Grenada	Grenada	28-043-0001	$PM_{2.5}$ 3-Day	33	50	04	-89	47	34
Hancock	Waveland	28-045-0003	Ozone, $PM_{2.5}$ 3-Day	30	18	3	-89	23	45
Harrison	Gulfport	28-047-0008	Ozone, $PM_{2.5}$ 3-Day, $PM_{2.5}$ Continuous	30	23	24	-89	02	59
Hinds	Jackson	28-049-0010	Ozone, $PM_{2.5}$ 3-Day, $PM_{2.5}$ Continuous	32	23	06	-90	08	31
Hinds	Jackson N-CORE	28-049-0020	Ozone, $PM_{2.5}$ 3-Day, $PM_{2.5}$ Continuous, Speciated $PM_{2.5}$, $PM_{10-2.5}$, CO, Pb, NOy, SO_2	32	19	45	-90	10	58
Jackson	Pascagoula	28-059-0006	Ozone, $PM_{2.5}$ 3-Day, NO, NO_2, NOx, SO_2	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

Ground-Level Ozone (O_3)

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 and additional ozone is formed when nitrogen oxides (NO_x) and volatile organic compounds (VOCs) emitted by cars, power plants, industrial boilers, refineries, chemical plants, and 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 Standard

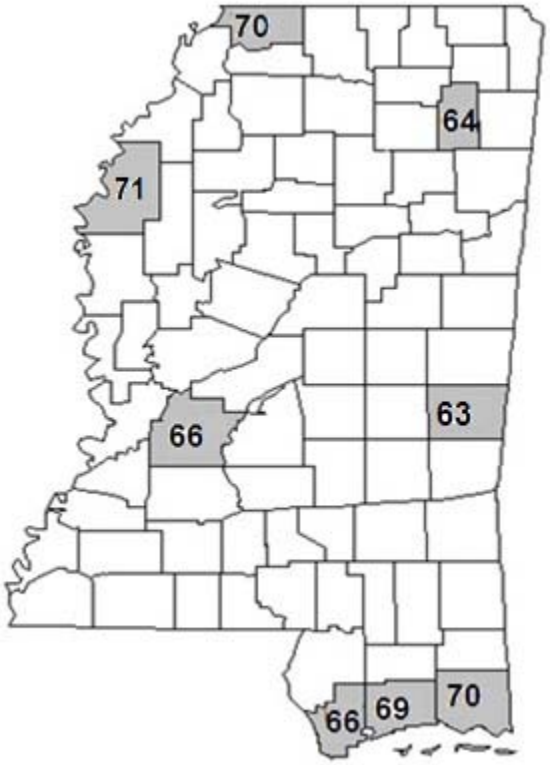
There is one primary and secondary ozone standard – the 8-hour average. MDEQ monitors ozone continuously from March 1 through October 31 each year at the monitoring sites listed below.

Primary and Secondary 8-Hour Ozone Standard

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 0.075 parts per million (ppm) or 75 parts per billion (ppb).

8-Hour Ozone Design Values
Standard – 75 ppb

County	City	2013 Design Values (ppb)
Bolivar County	Cleveland	71
DeSoto County	Hernando	70
Hancock County	Waveland	66
Harrison County	Gulfport	69
Hinds County	Jackson	66
Hinds County	N-CORE	60*
Jackson County	Pascagoula	70
Lauderdale County	Meridian	63
Lee County	Tupelo	64



*Incomplete Data

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 (µm) to more than 40 µm, while fine particles, also known as $PM_{2.5}$, include particles with diameters equal to or smaller than 2.5 µm. MDEQ also monitors PM_{10}, which refers to particles less than or equal to 10 µm 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.

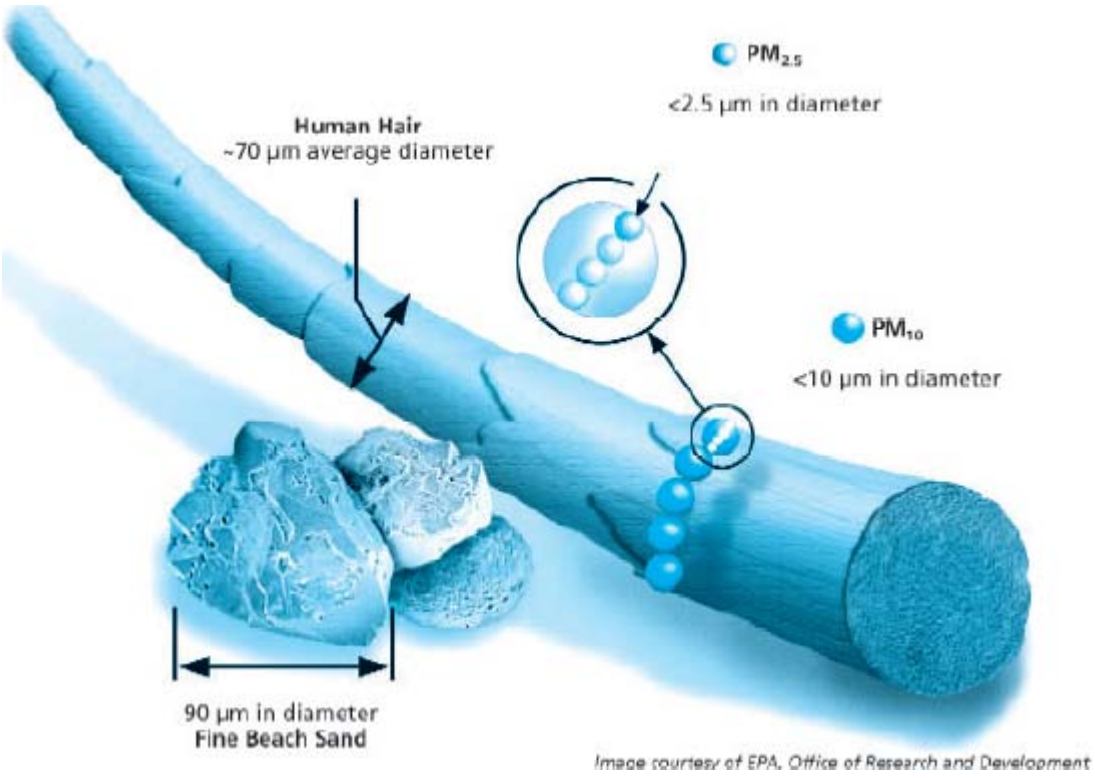


Image courtesy of EPA, Office of Research and Development

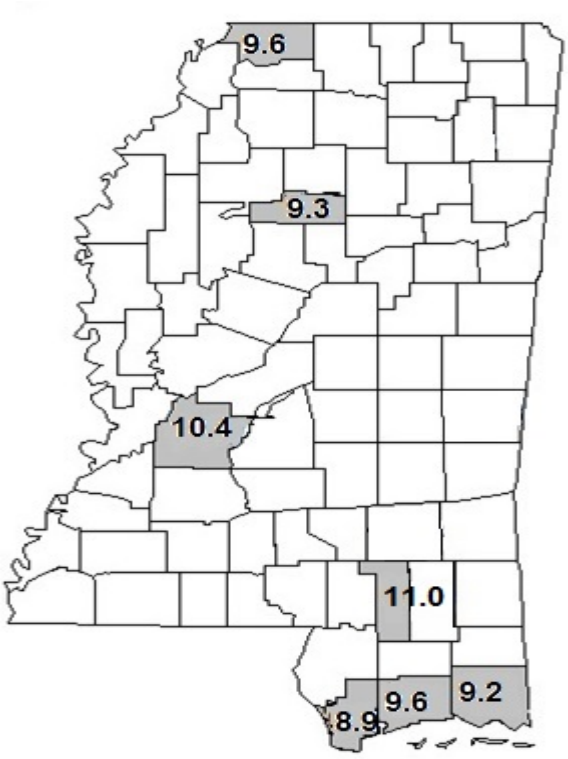
$PM_{2.5}$ Standards

There are two primary and secondary $PM_{2.5}$ standards: (1) Annual Average and (2) 24-Hour Average. MDEQ monitors $PM_{2.5}$ every 3rd day at the monitoring sites listed below.

Primary and SecondaryAnnual Average Standard – 12.0 µg/m^3 and 15.0 µg/m^3

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

County	City	2013 Annual Average Design Value (µg/m^3)
DeSoto County	Hernando	9.6
Forrest County	Hattiesburg	11.0
Grenada County	Grenada	9.3
Hancock County	Waveland	8.9
Harrison County	Gulfport	9.6
Hinds County	Jackson	10.4
Hinds County	N-CORE	11.5*
Jackson County	Pascagoula	9.2

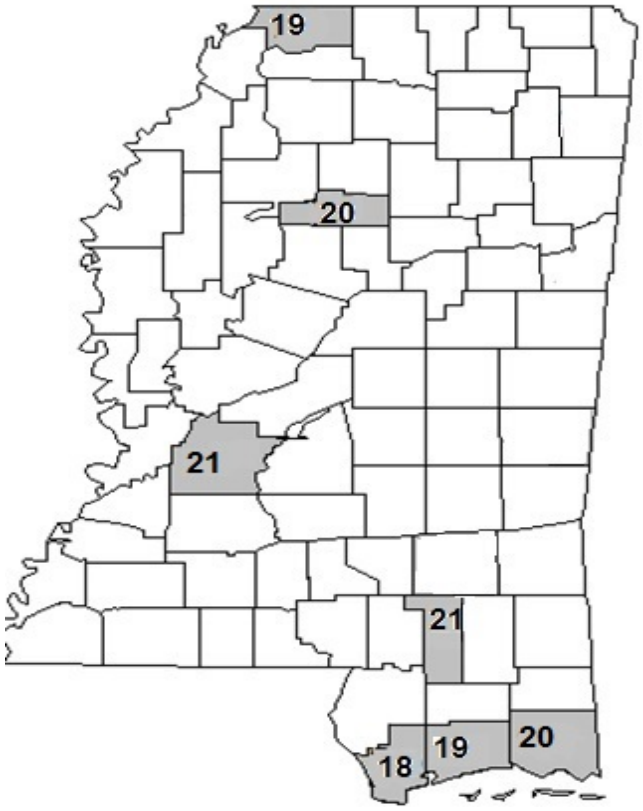


*Incomplete Data

Primary and Secondary 24-Hour Average Standard (98th Percentile) – 35 µg/m^3

The 24-hour average standard is met when the three-year average of the annual 98th percentiles of the 24-hour averages does not exceed 35 micrograms per cubic meter (µg/m^3).

County	City	2013 24-Hour Average Design Value (µg/m^3)
DeSoto County	Hernando	19
Forrest County	Hattiesburg	21
Grenada County	Grenada	20
Hancock County	Waveland	18
Harrison County	Gulfport	19
Hinds County	Jackson	21
Hinds County	N-CORE	23*
Jackson County	Pascagoula	20



*Incomplete Data

PM_{10} Standards

Primary and Secondary 24-Hour Average Standard (99th Percentile) – 150 µg/ m^3

The 24-hour average standard is met when the 99th percentile of the 24-hour averages do not exceed 150 micrograms per cubic meter (µg/m^3) on average over 3 years. MDEQ monitors PM_{10} every 6th day at the monitoring sites listed below.

County	City	2013 24-Hour Average Design Value (µg/m^3)
Hinds County	N-CORE	32*

*Incomplete Data

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 carbon monoxide standards: (1) 8-Hour Average and (2) 1-Hour Standard. MDEQ monitors carbon monoxide continuously year-round at the monitoring site listed below.

Primary CO Standard – 8-Hour 9 ppm
1-Hour 35 ppm

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.

County	City	2013 Annual 2nd Max (ppm)
Hinds County	N-CORE	8 - Hour: 1.5*
		1 - Hour: 1.9*

*Incomplete Data

Lead

Lead (Pb) is a metal found naturally in the environment as well as in manufactured products. The major sources of lead emissions have historically been from fuels in on-road motor vehicles (such as cars and trucks) and industrial sources. As a result of EPA's regulatory efforts to remove lead from on-road motor vehicle gasoline, emissions of lead from the transportation sector dramatically declined by 95 percent between 1980 and 1999, and levels of lead in the air decreased by 94 percent between 1980 and 1999. Today, the highest levels of lead in air are usually found near lead smelters. The major sources of lead emissions to the air today are ore and metals processing and piston-engine aircraft operating on leaded aviation gasoline.

Lead Standards

Both the primary and secondary standards are calculated by a rolling 3 month average yearly. MDEQ monitors lead every 6th day at the monitoring sites listed below.
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Primary Lead Standard – 0.15 µg/m^3

County	City	2013 Maximum rolling 3 Month Average (µg/m^3)
Hinds County	N-CORE	0.11*

*Incomplete Data

Nitrogen Dioxide

Nitrogen dioxide (NO_2) 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.

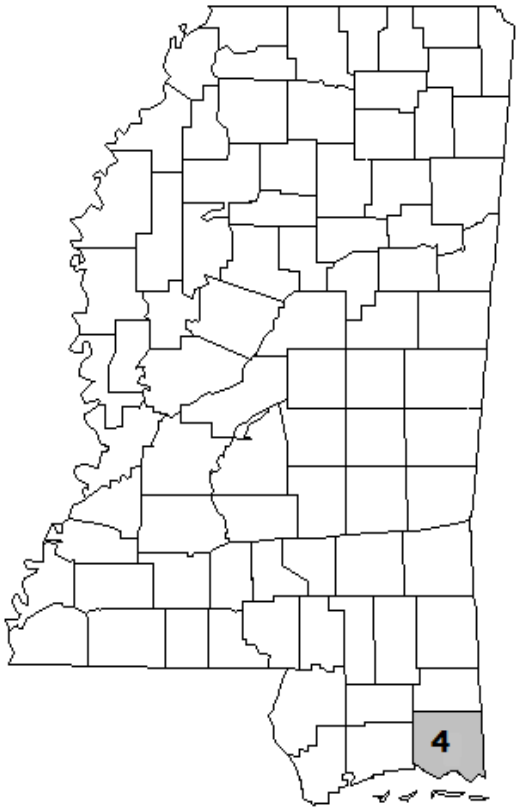
Nitrogen Dioxide Standards

There are two NO_2 standards: (1) Annual Average (Primary and Secondary) and (2) 1-Hour Average (Primary). MDEQ monitors nitrogen dioxide continuously year-round at the monitoring site listed below.

Primary and Secondary Annual Average Standard – 53 ppb

The annual average NO_2 standard is met when the annual average does not exceed 53 parts per billion (ppb).

County	City	2013 Annual Average (ppb)
Jackson County	Pascagoula	4



Primary 1-Hour Average Standard – 100 ppb

The 1-hour average NO_2 standard is met when the three-year average of the annual 98th percentiles of the 24-hour averages does not exceed 100 parts per billion (ppb).

County	City	2013 1-Hour Average Design Value (ppb)
Jackson County	Pascagoula	33

Sulfur Dioxide

Sulfur dioxide (SO_2) belongs to the family of sulfur oxide gases (SO_x). These gases dissolve easily in water. Sulfur is prevalent in all raw materials, including crude oil, coal, and ore that contains common metals like aluminum, copper, zinc, lead, and iron. SO_x 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 ore. SO_2 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 65% of SO_2 released to the air comes from electric utilities, especially those that burn coal. Other sources of SO_2 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 three primary sulfur dioxide standards – the 1-Hour average, the annual, and the 24-hour average. There is one secondary sulfur dioxide standard – the 3-Hour average. MDEQ monitors sulfur dioxide continuously year-round at the monitoring site listed below.

Primary 1-Hour Average Standard – 75 ppb

The 1-hour average SO_2 standard is met when the three-year average of the annual 99th percentiles of the 1-hour averages does not exceed 75 parts per billion (ppb).

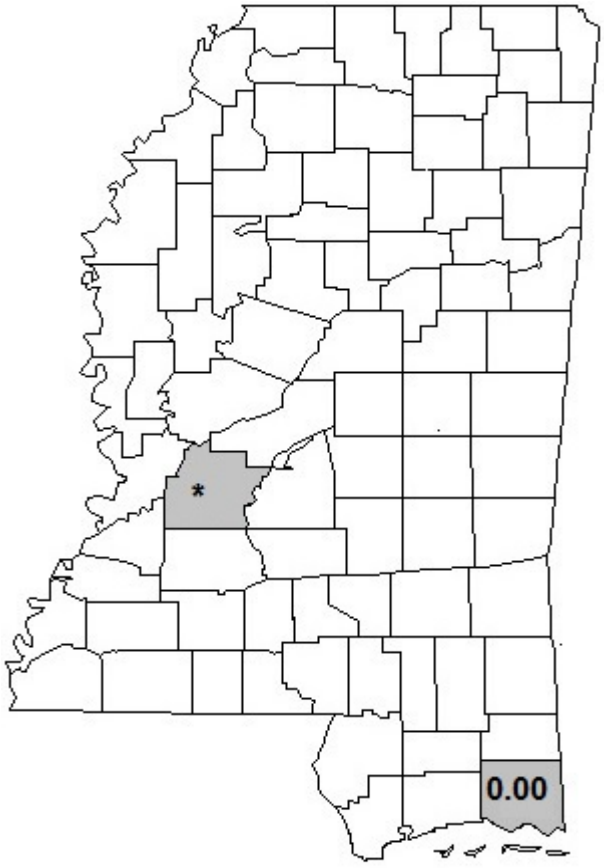
County	City	2013 1-Hour Average Design Value (ppb)
Hinds County	N-CORE	31*
Jackson County	Pascagoula	23

*Incomplete Data

Primary Annual Standard – 0.03 ppm

Annual SO_2 standard is met when the maximum annual average does not exceed 0.030 parts per million (ppm).

County	City	2013 Annual Average (ppm)	2013 Number of Exceedances
Hinds County	N-CORE	0.00*	0
Jackson County	Pascagoula	0.00	0

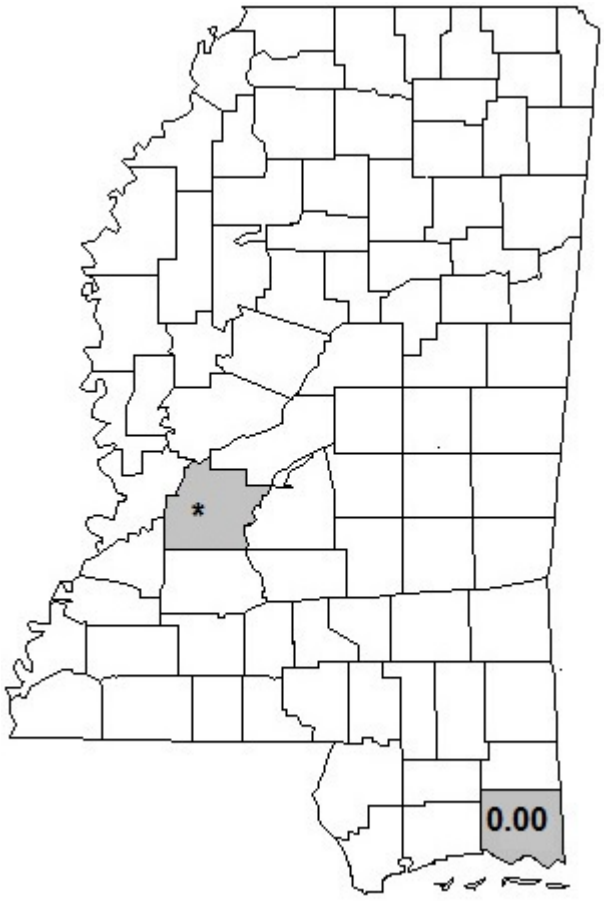


*Incomplete Data

Primary 24-Hour Standard – 0.14 ppm

24-Hour SO_2 standard is met when the maximum annual average concentration of 0.14 parts per million (ppm) is not exceeded more than once per calendar year.

County	City	2013 2nd Maximum 24-Hour (ppm)	2013 Number of Exceedances
Hinds County	N-CORE	0.00*	0
Jackson County	Pascagoula	0.00	0

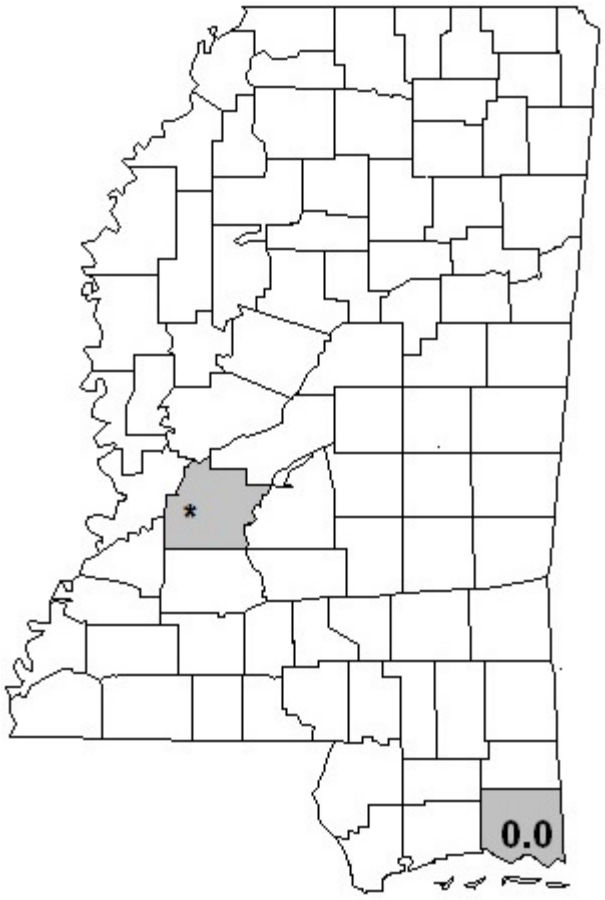


*Incomplete Data

Secondary 3-Hour Average Standard – 0.5 ppm

The 3-hour average SO_2 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.

County	City	2013 2nd Maximum 3-Hour Average (ppm)	2013 Number of Exceedances
Hinds County	N-CORE	0.0*	0
Jackson County	Pascagoula	0.0	0

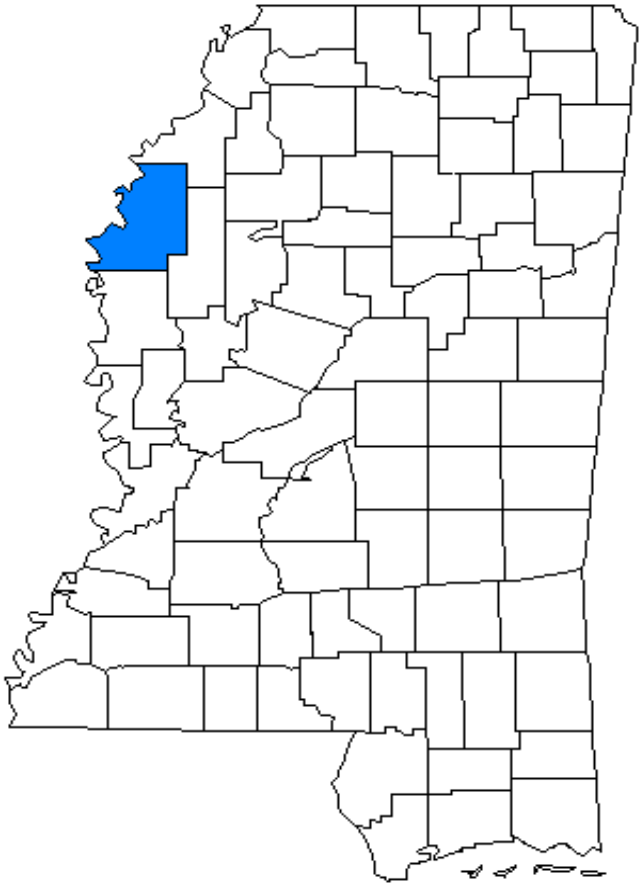


*Incomplete Data

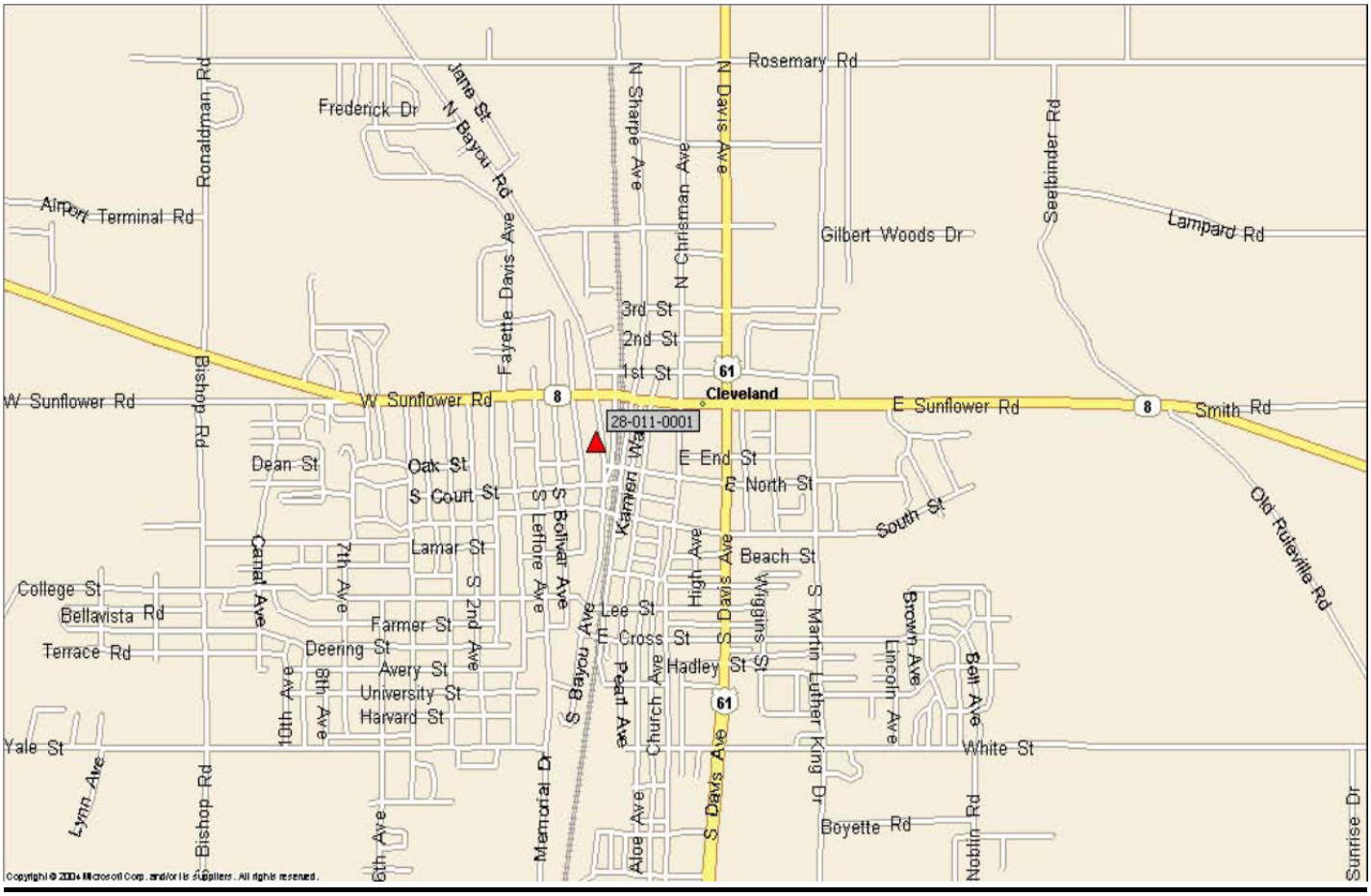
Appendix 1

10-Year Data Trends
By County

Bolivar County

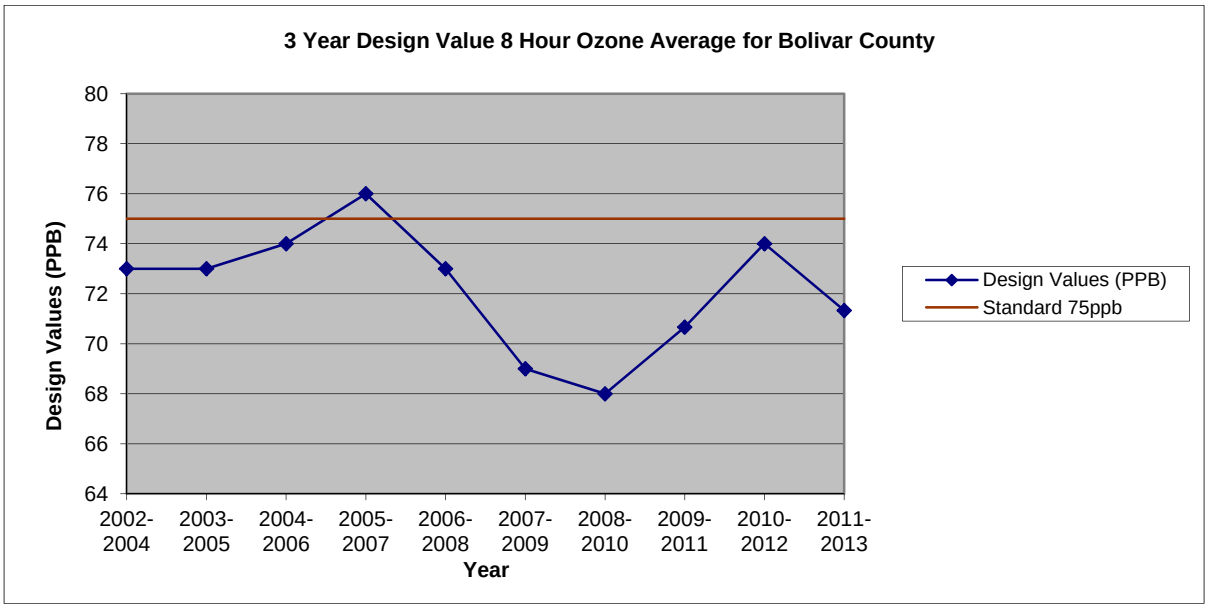


Bolivar County
Monitoring Site No. 28-011-0001
Location

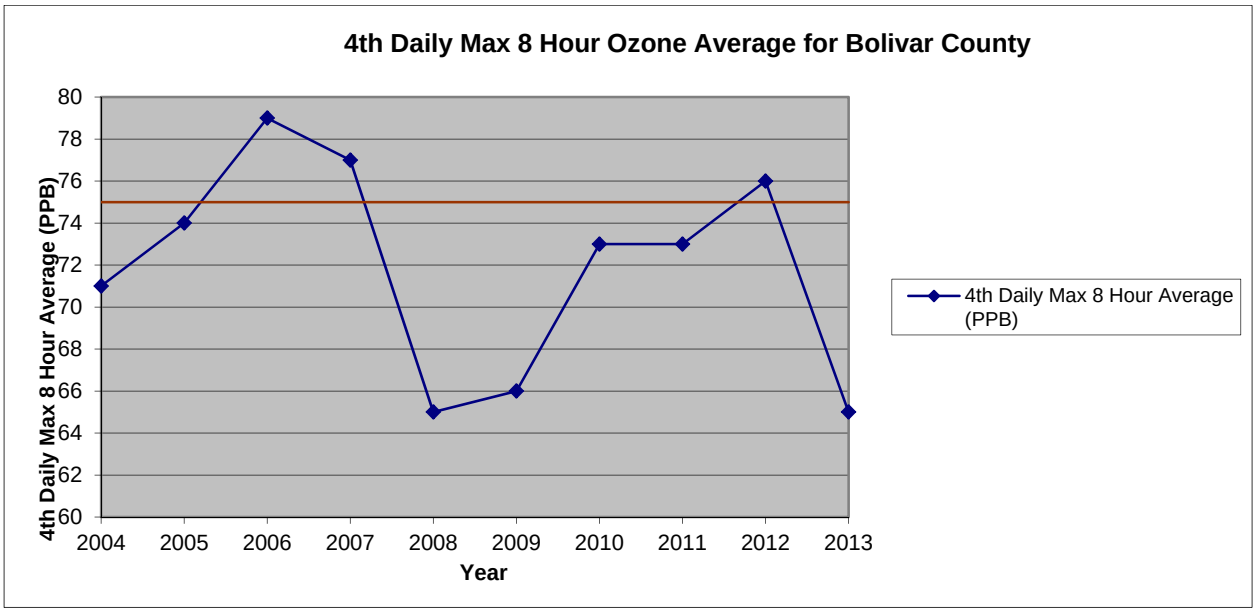


Bolivar County
8-Hour Ozone (ppb)

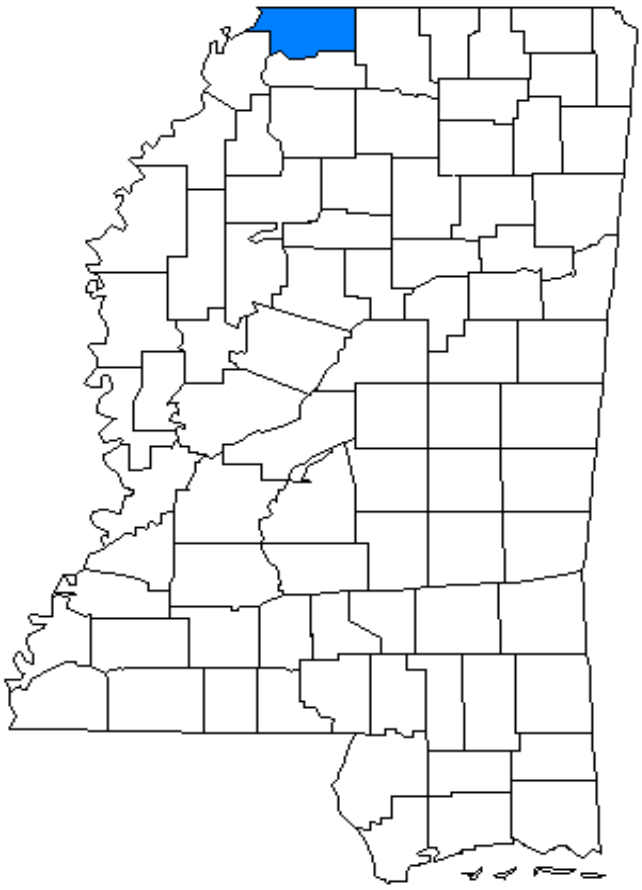
3–Year Period	2002-2004	2003-2005	2004-2006	2005-2007	2006-2008	2007-2009	2008-2010	2009-2011	2010-2012	2011-2013
Design Value	73	73	74	76	73	69	68	70	74	71



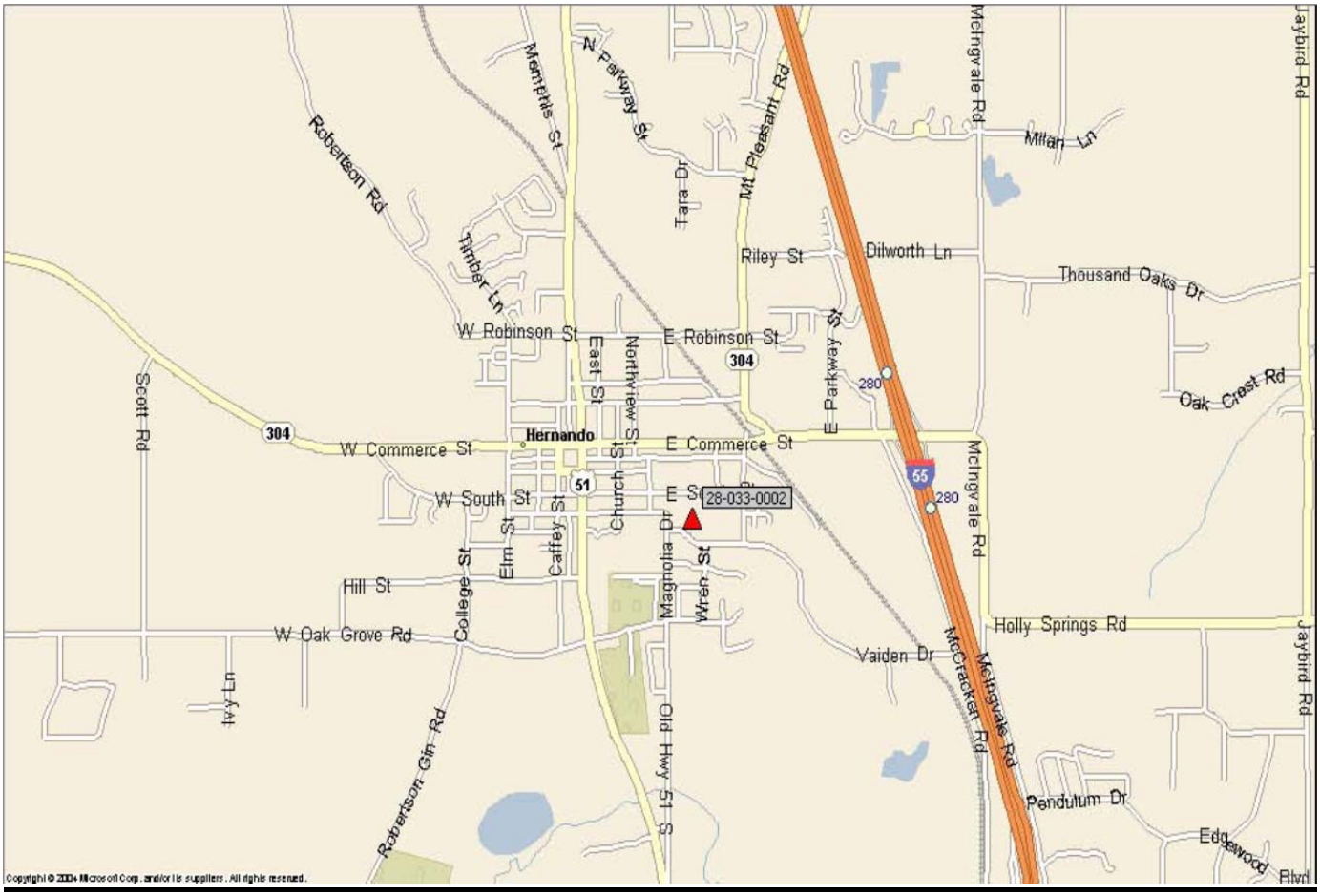
Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Annual 4th Max. 8-Hour Avg.	71	74	79	77	65	66	73	73	76	65



DeSoto County

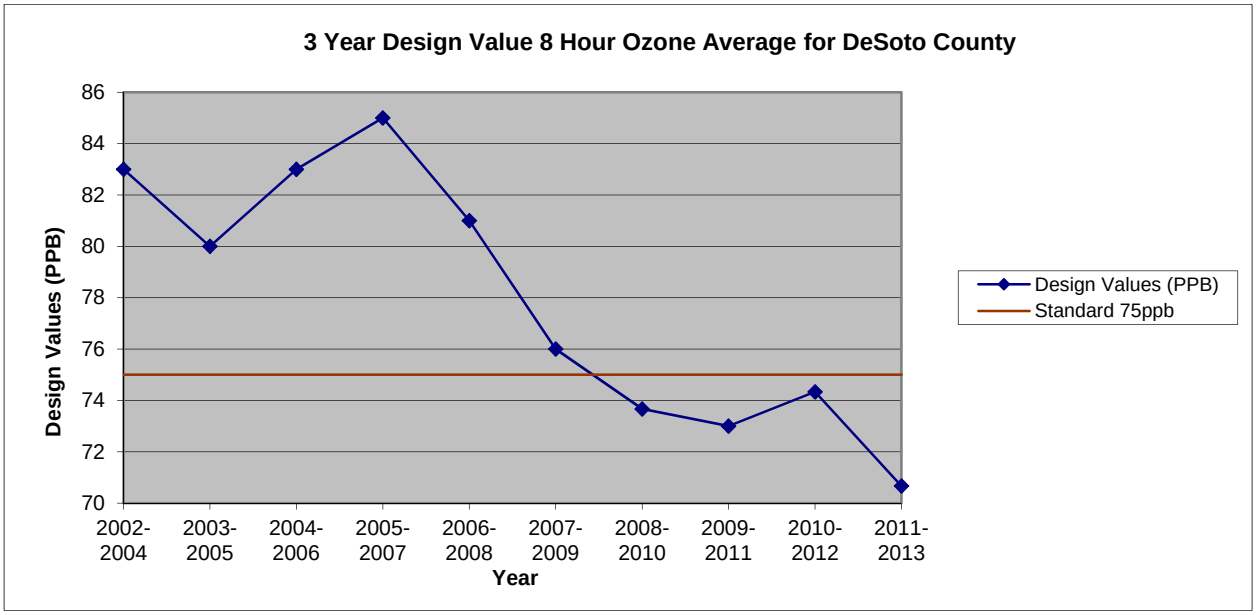


DeSoto County
Monitoring Site No. 28-033-0002
Location

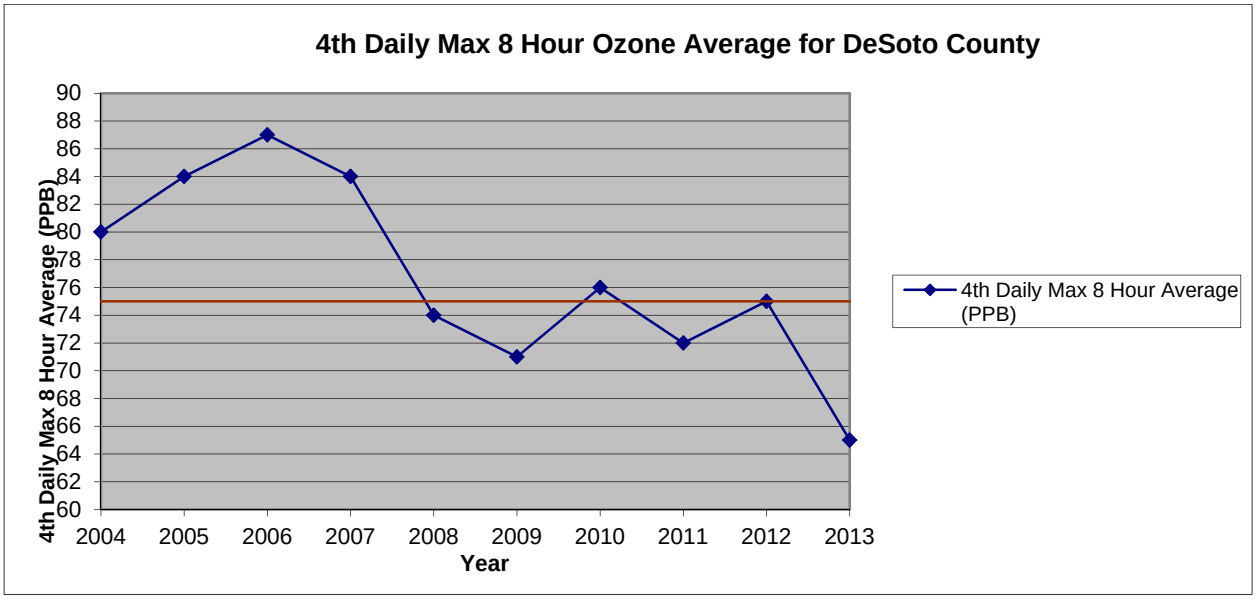


DeSoto County
8-Hour Ozone (ppb)

3-Year Period	2002-2004	2003-2005	2004-2006	2005-2007	2006-2008	2007-2009	2008-2010	2009-2011	2010-2012	2011-2013
Design Value	83	80	83	85	81	76	73	73	74	70

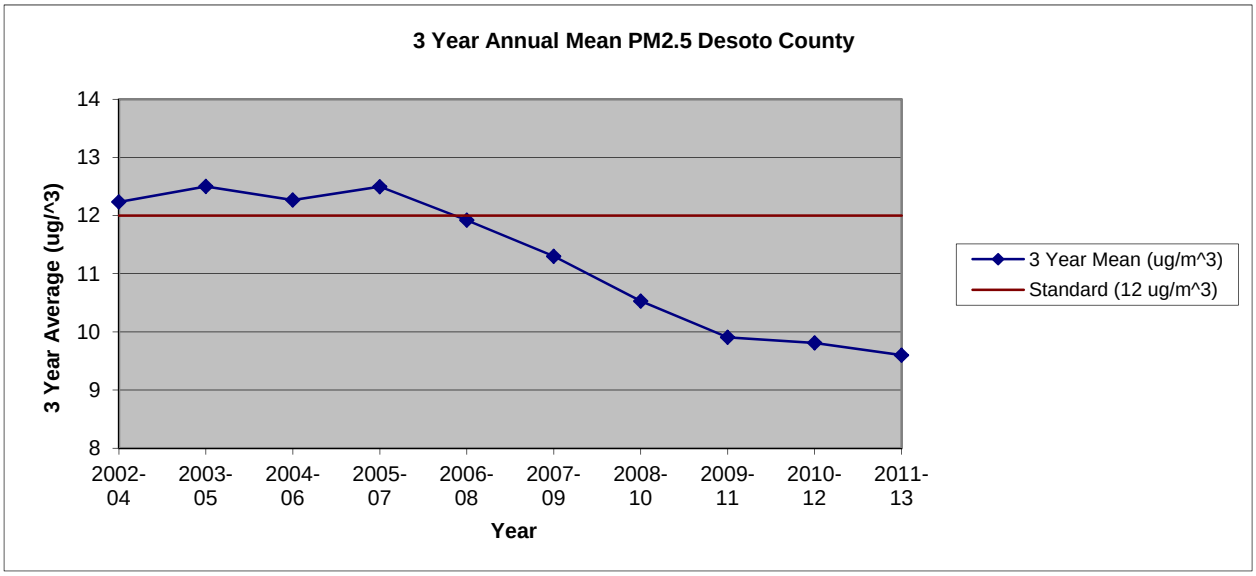


Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Annual 4th Max. 8-Hour Avg.	80	84	87	84	74	71	76	72	75	65

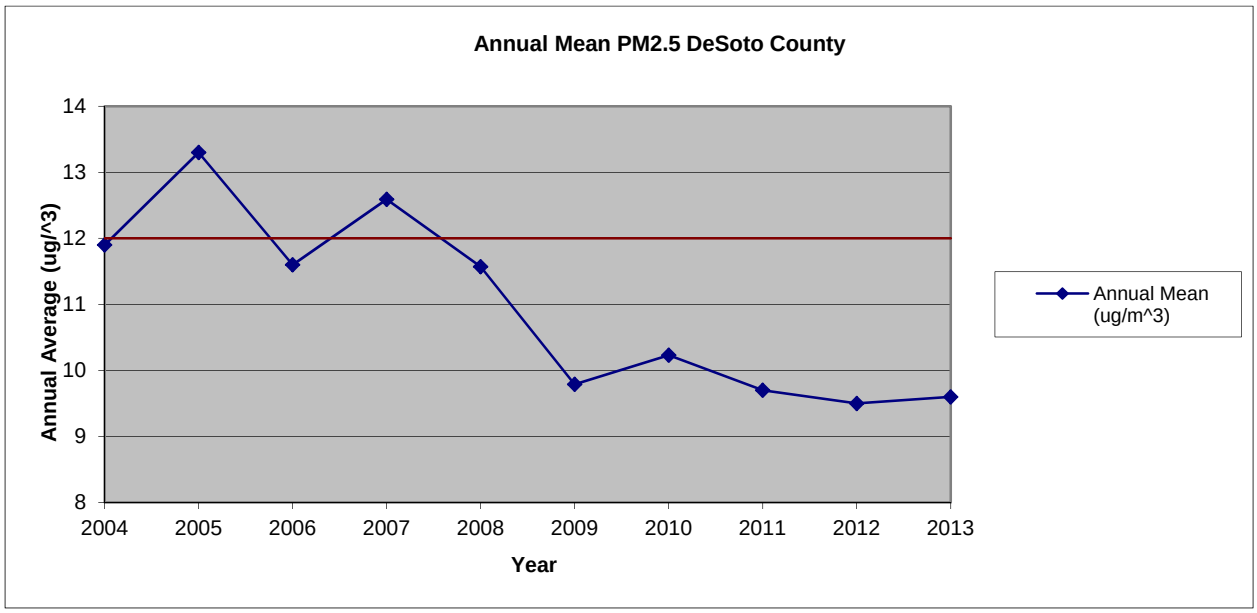


DeSoto County
$PM_{2.5}$
Annual Mean ($\mu g/m^3$)

3-Year Period	2002-2004	2003-2005	2004-2006	2005-2007	2006-2008	2007-2009	2008-2010	2009-2011	2010-2012	2011-2013
3-Year Average of the Annual Means	12.2	12.5	12.3	12.5	11.9	11.3	10.5	9.9	9.8	9.6

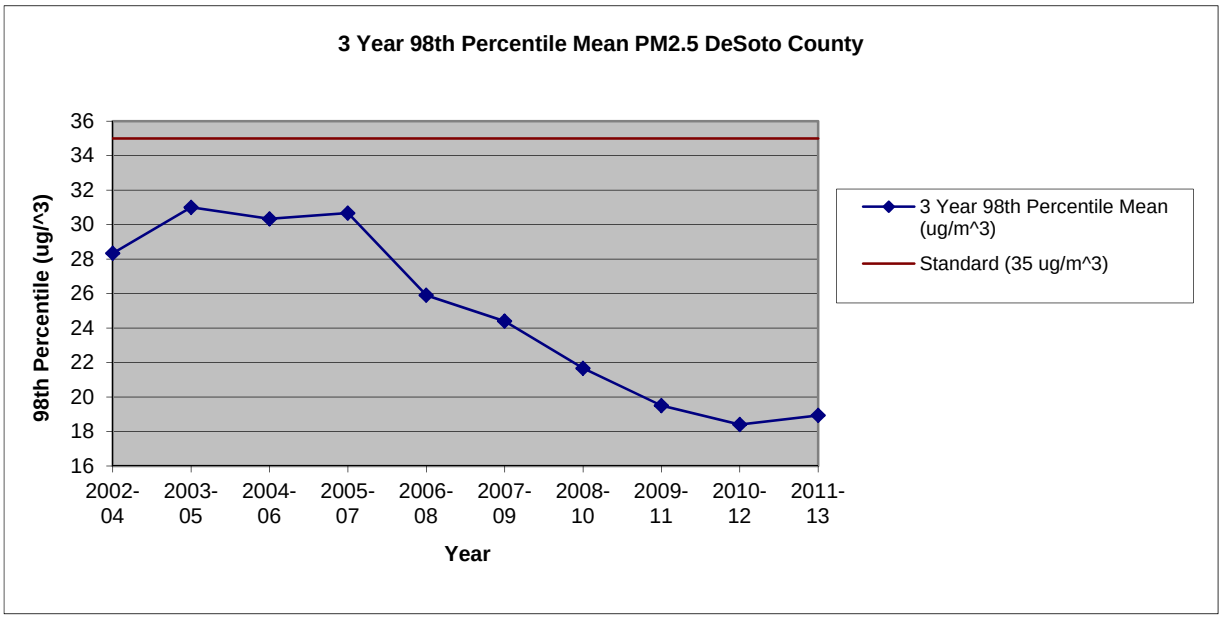


Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Annual Mean	11.9	13.3	11.6	12.6	11.6	9.8	10.2	9.7	9.5	9.6

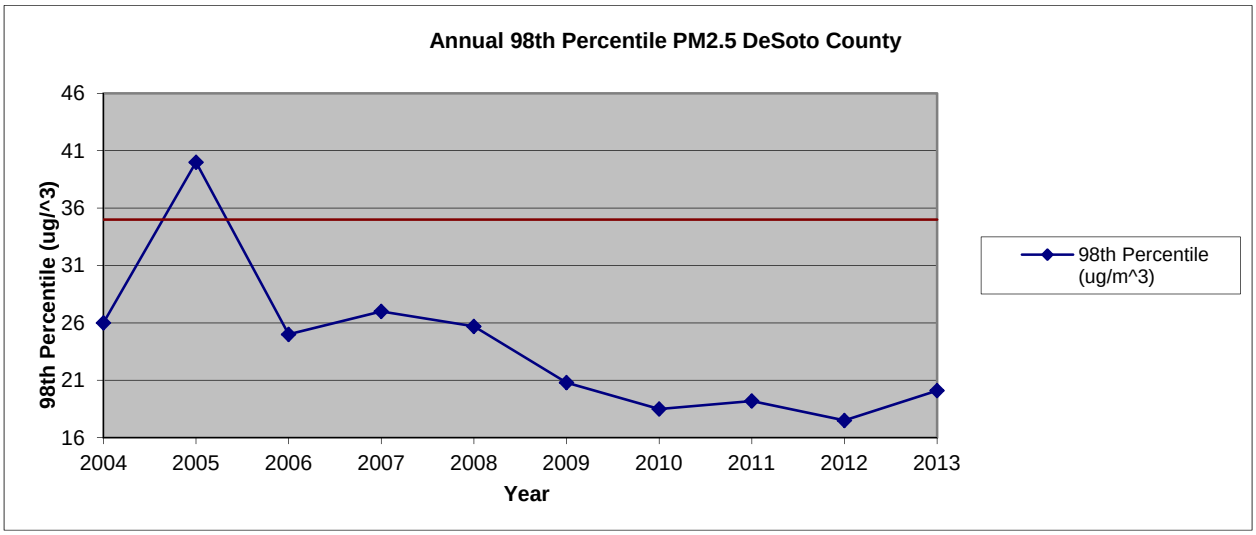


DeSoto County
$PM_{2.5}$
24-Hour Average ($\mu g/m^3$)

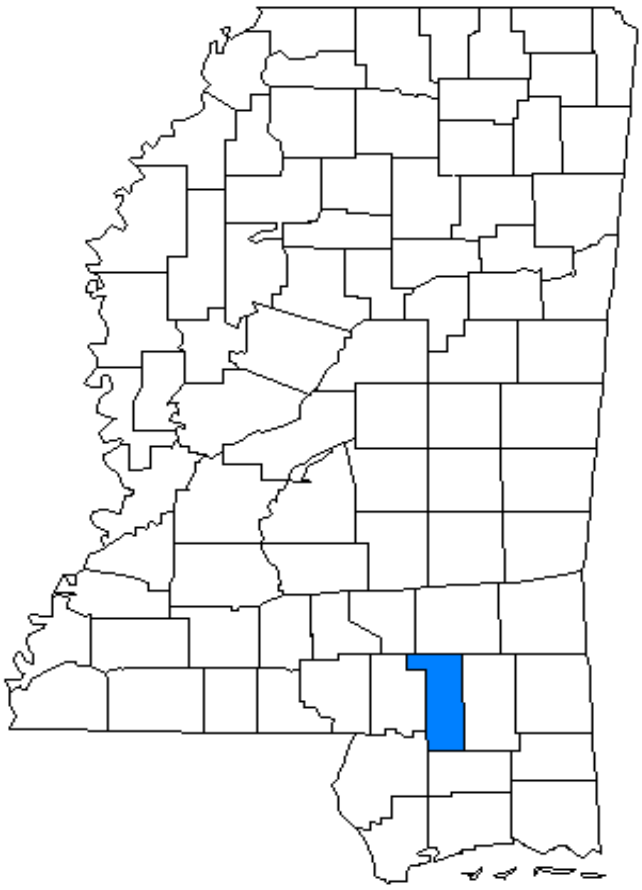
3-Year Period	2002-2004	2003-2005	2004-2006	2005-2007	2006-2008	2007-2009	2008-2010	2009-2011	2010-2012	2011-2013
3-Year Average of the Annual 98th Percentiles	28	31	30	31	26	24	22	20	18	19



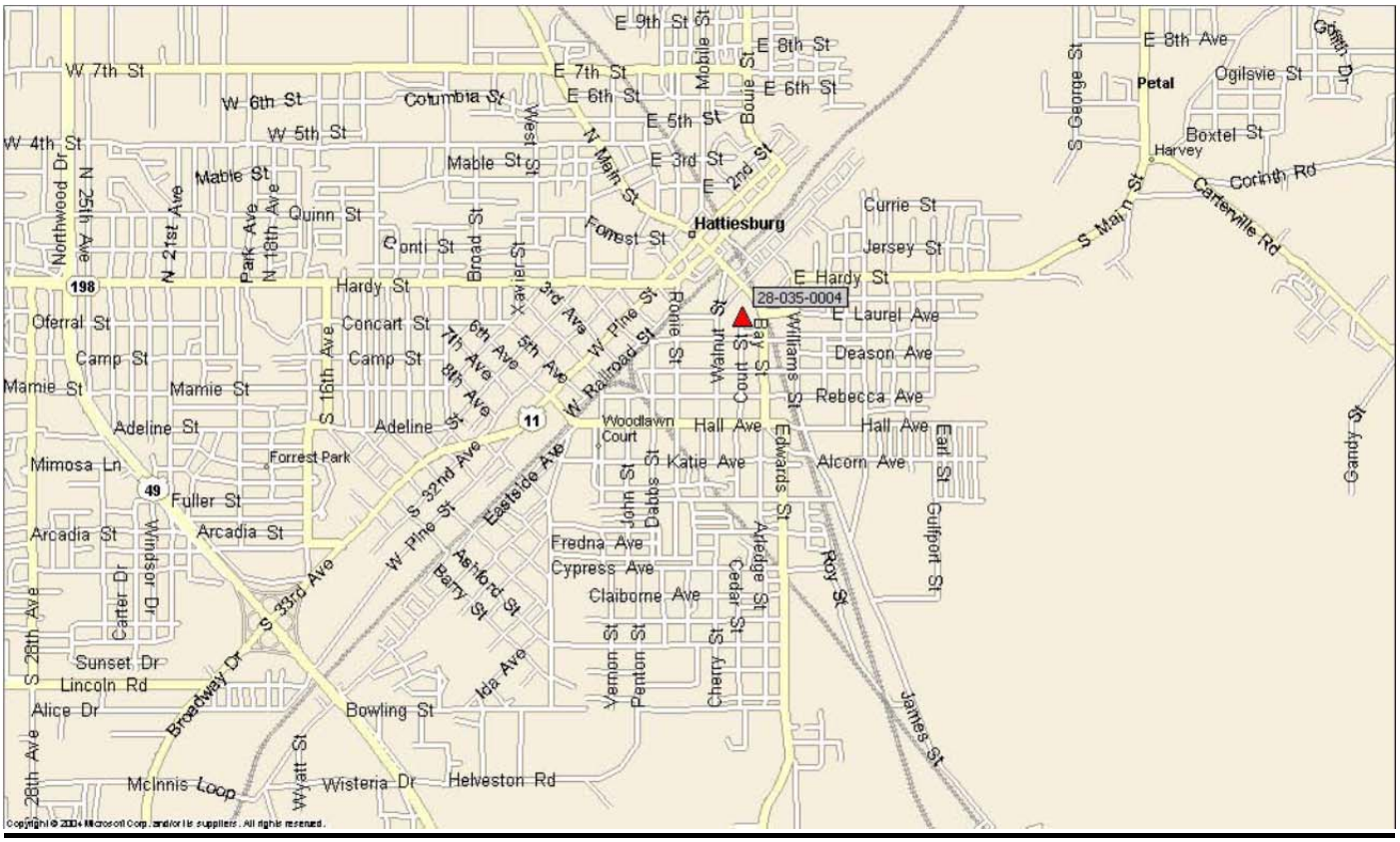
Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Annual 98th Percentile	26	40	25	27	26	21	19	19	18	20



Forrest County

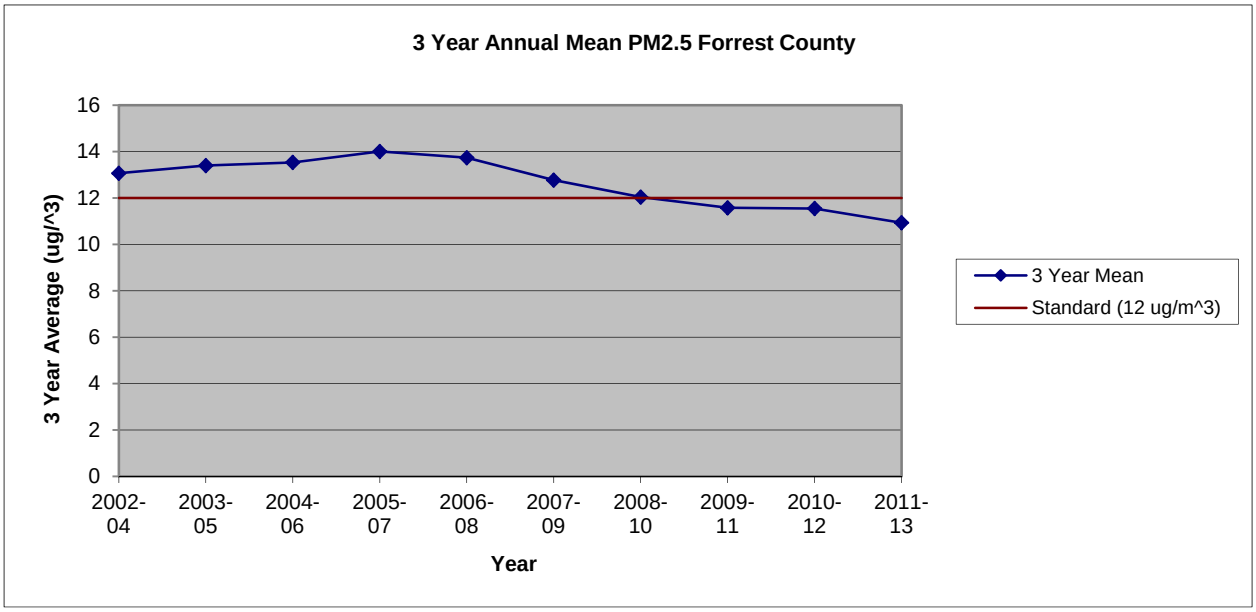


Forrest County
Monitoring Site No. 28-035-0004
Location

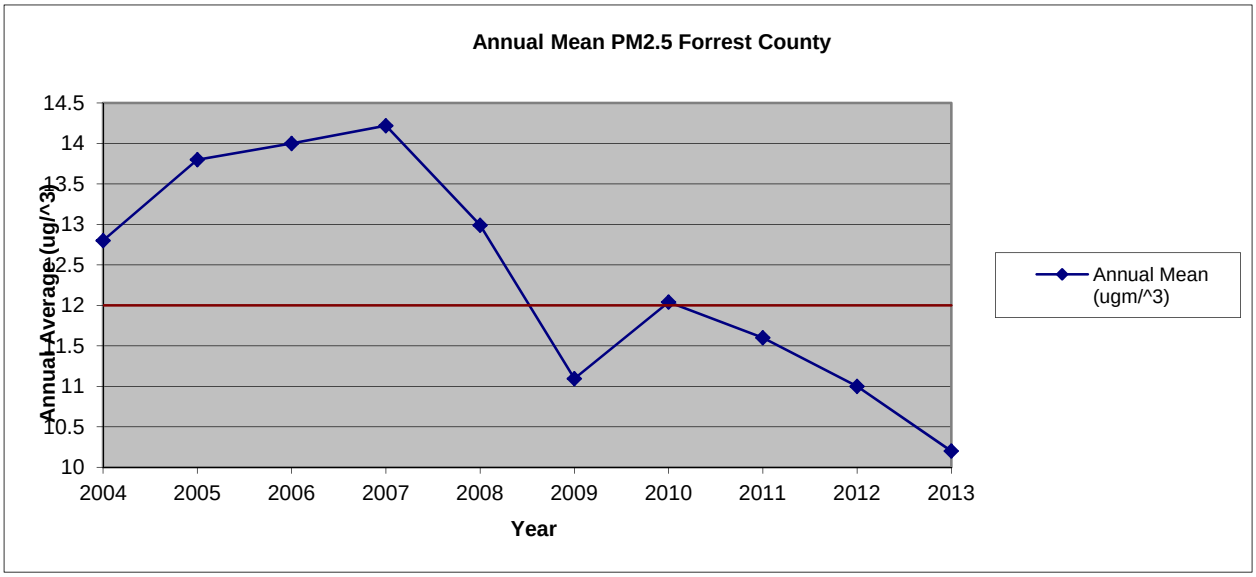


Forrest County
$PM_{2.5}$
Annual Mean ($\mu g/m^3$)

3-Year Period	2002-2004	2003-2005	2004-2006	2005-2007	2006-2008	2007-2009	2008-2010	2009-2011	2010-2012	2011-2013
3-Year Average of the Annual Means	13.1	13.4	13.5	14.0	13.7	12.8	12.0	11.6	11.6	11

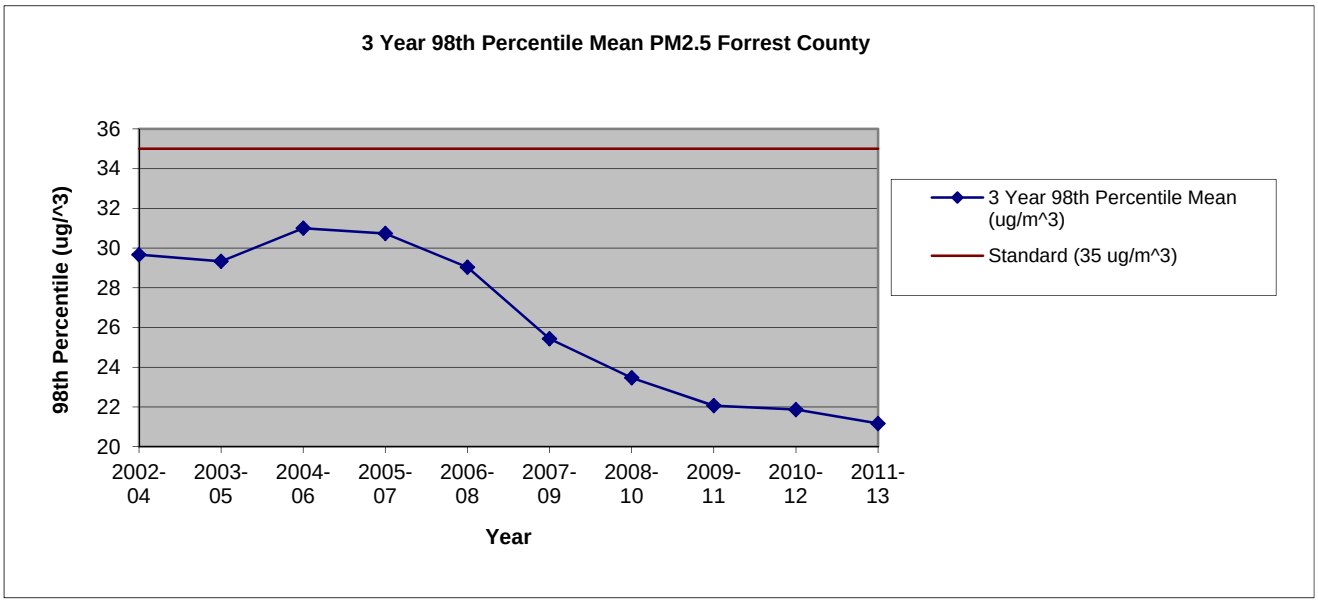


Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Annual Mean	12.8	13.8	14	14.2	13.0	11.1	12.0	11.6	11.0	10.2

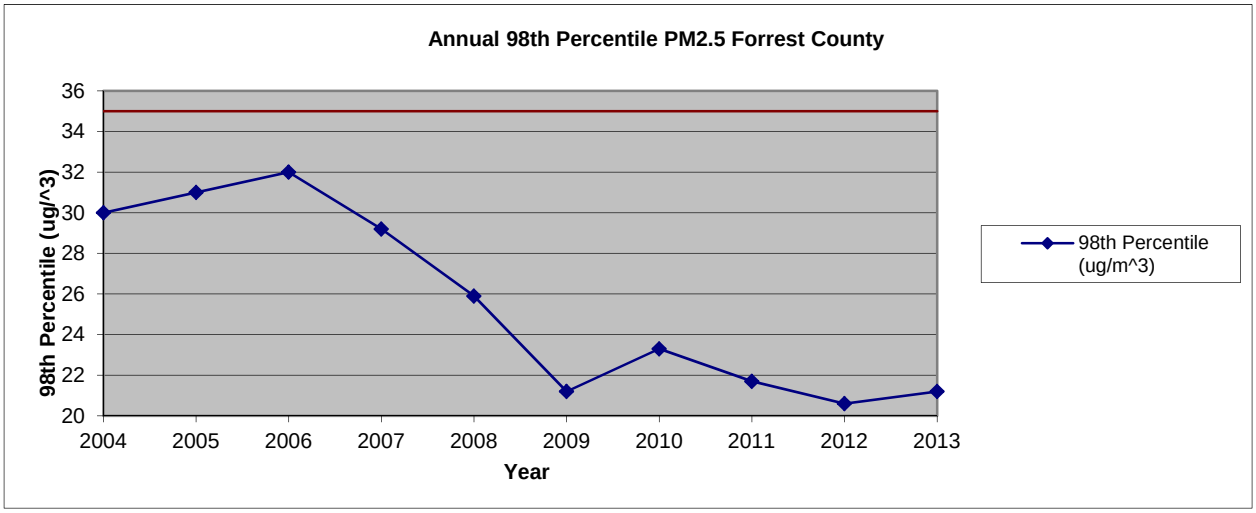


Forrest County
$PM_{2.5}$
24-Hour Average ($\mu g/m^3$)

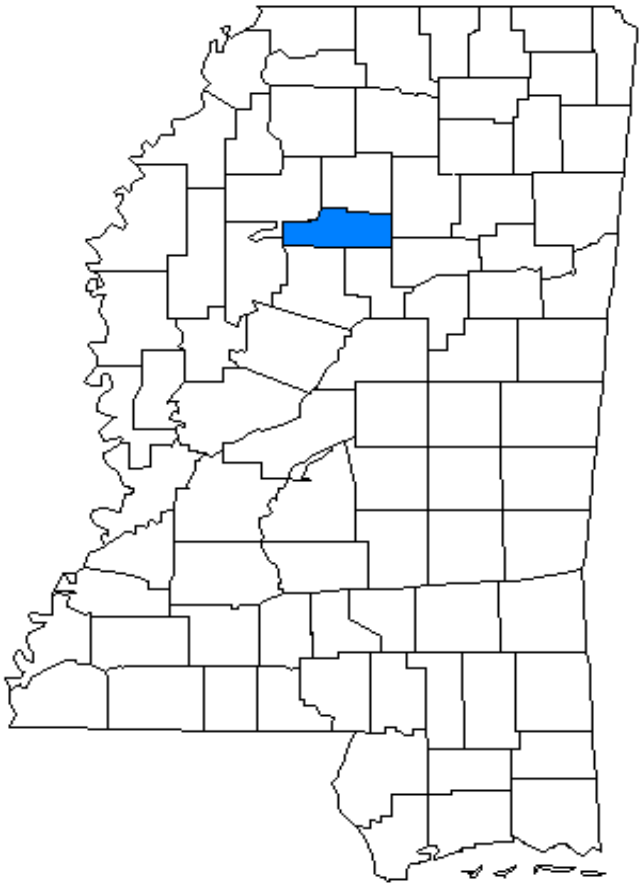
3-Year Period	2002-2004	2003-2005	2004-2006	2005-2007	2006-2008	2007-2009	2008-2010	2009-2011	2010-2012	2011-2013
3-Year Average of the Annual 98th Percentiles	30	29	31	31	29	25	24	22	22	21



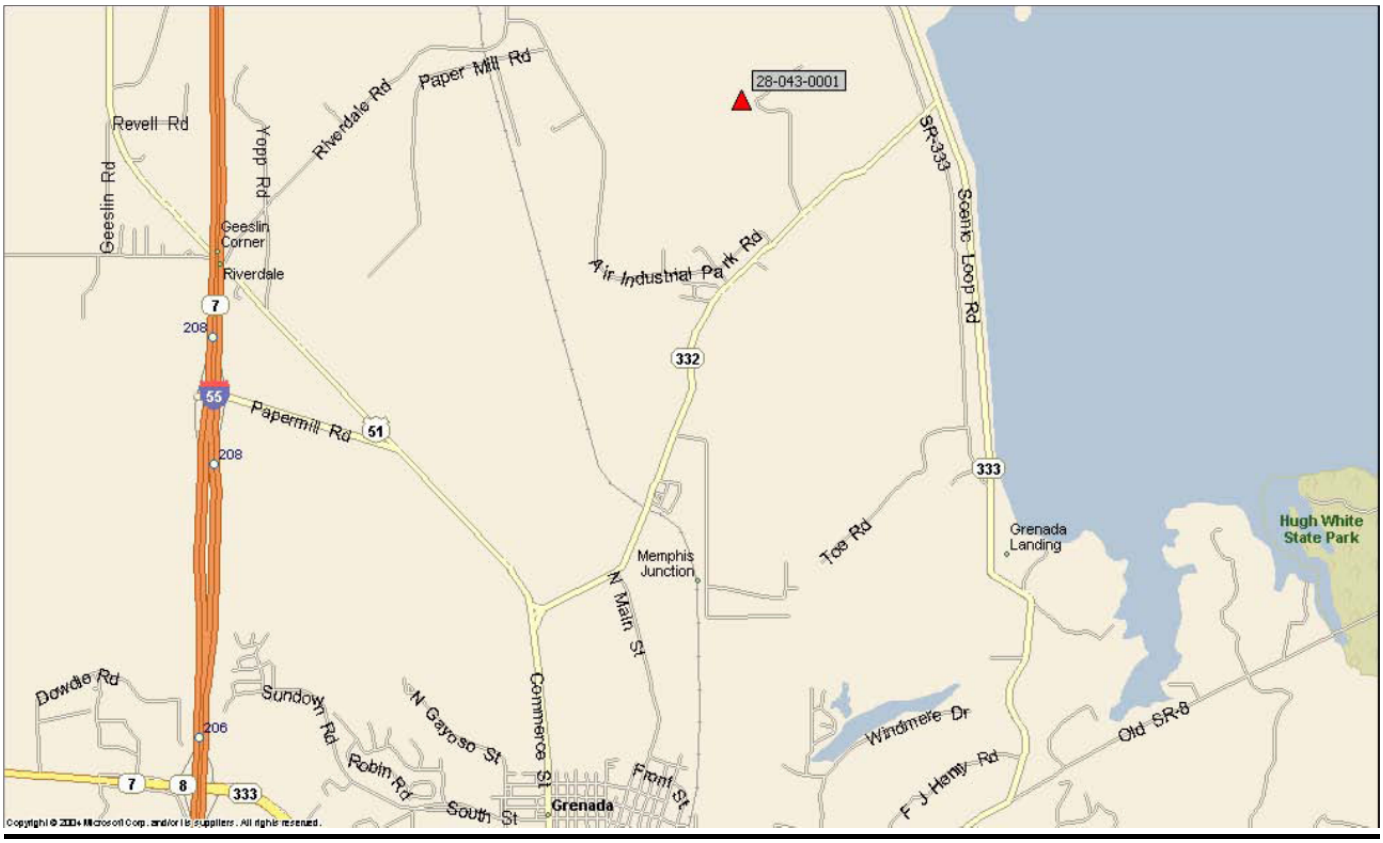
Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Annual 98th Percentile	30	31	32	29	26	21	23	22	21	21



Grenada County

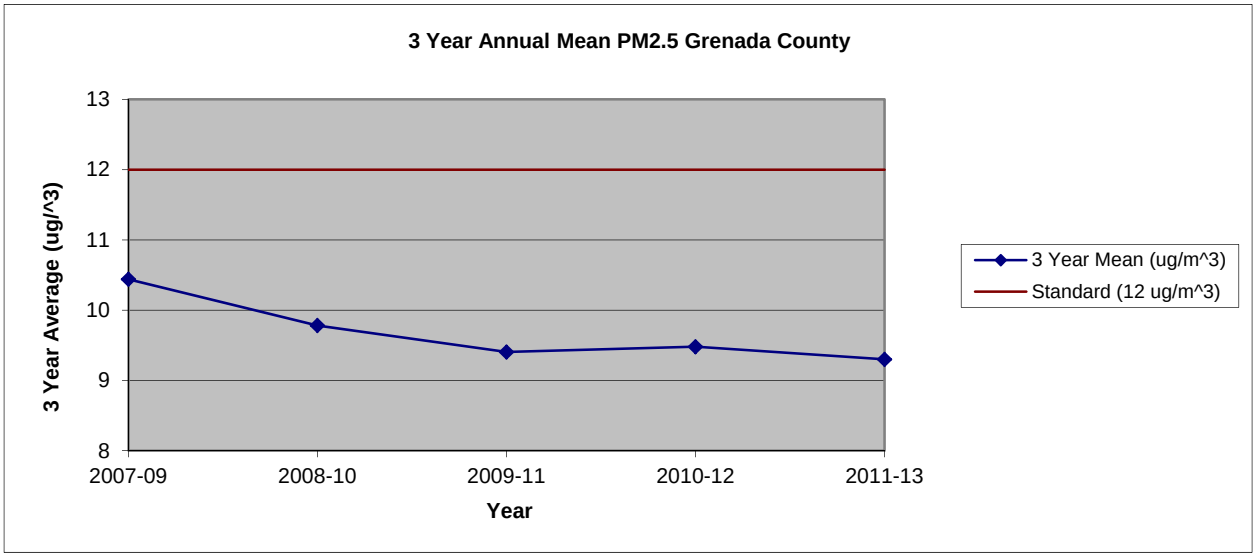


Grenada County
Monitoring Site No. 28-043-0001
Location

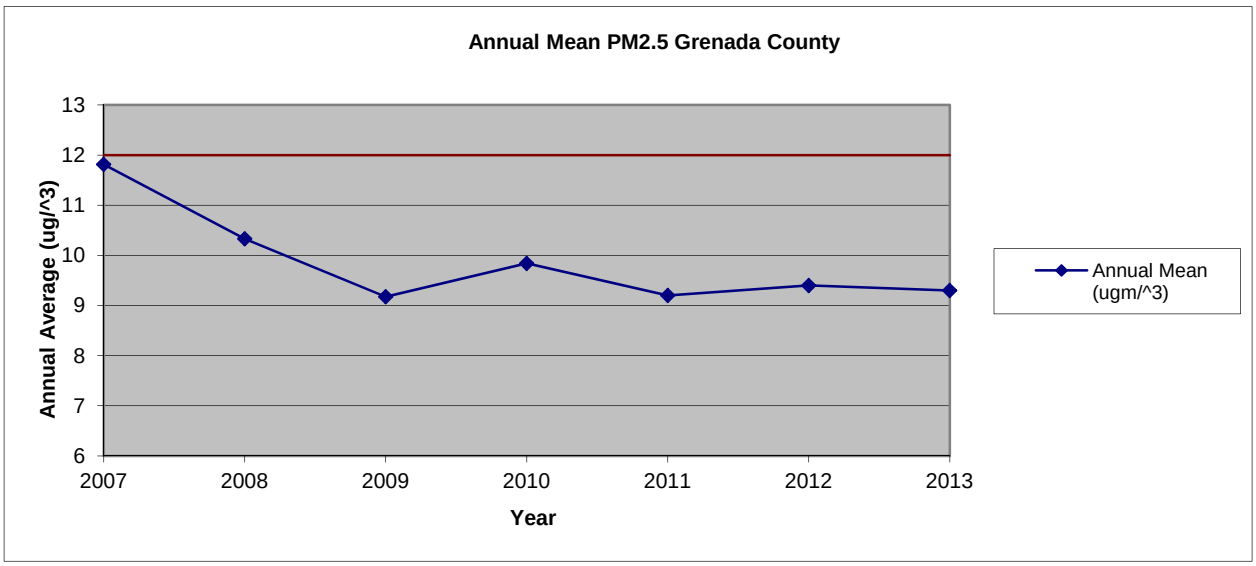


Grenada County
$PM_{2.5}$
Annual Mean ($\mu g/m^3$)

3-Year Period	2002-2004	2003-2005	2004-2006	2005-2007	2006-2008	2007-2009	2008-2010	2009-2011	2010-2012	2011-2013
3-Year Average of the Annual Means	*	*	*	*	*	10.4	9.8	9.4	9.5	9.3

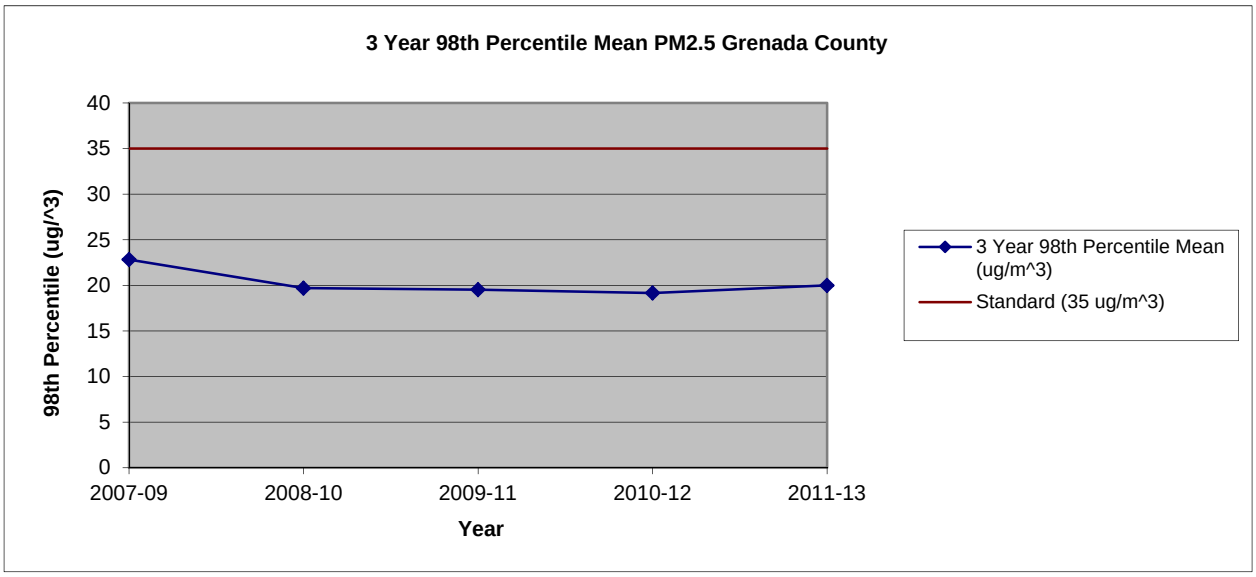


Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Annual Mean	*	*	*	11.8	10.3	9.2	9.8	9.2	9.4	9.3

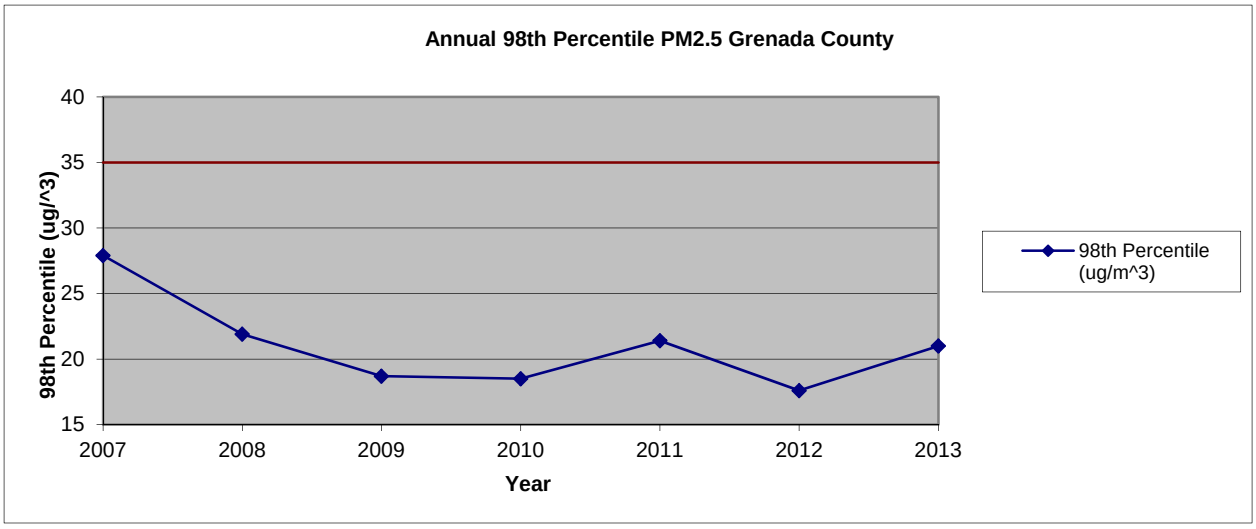


Grenada County
$PM_{2.5}$
24-Hour Average ($\mu g/m^3$)

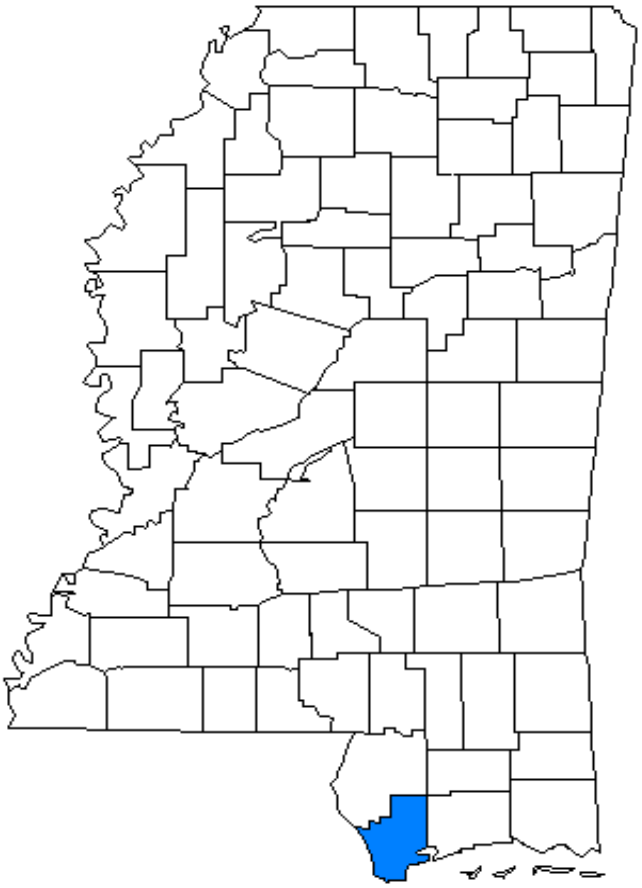
3-Year Period	2002-2004	2003-2005	2004-2006	2005-2007	2006-2008	2007-2009	2008-2010	2009-2011	2010-2012	2011-2013
3-Year Average of the Annual 98th Percentiles	*	*	*	*	*	23	20	20	19	20



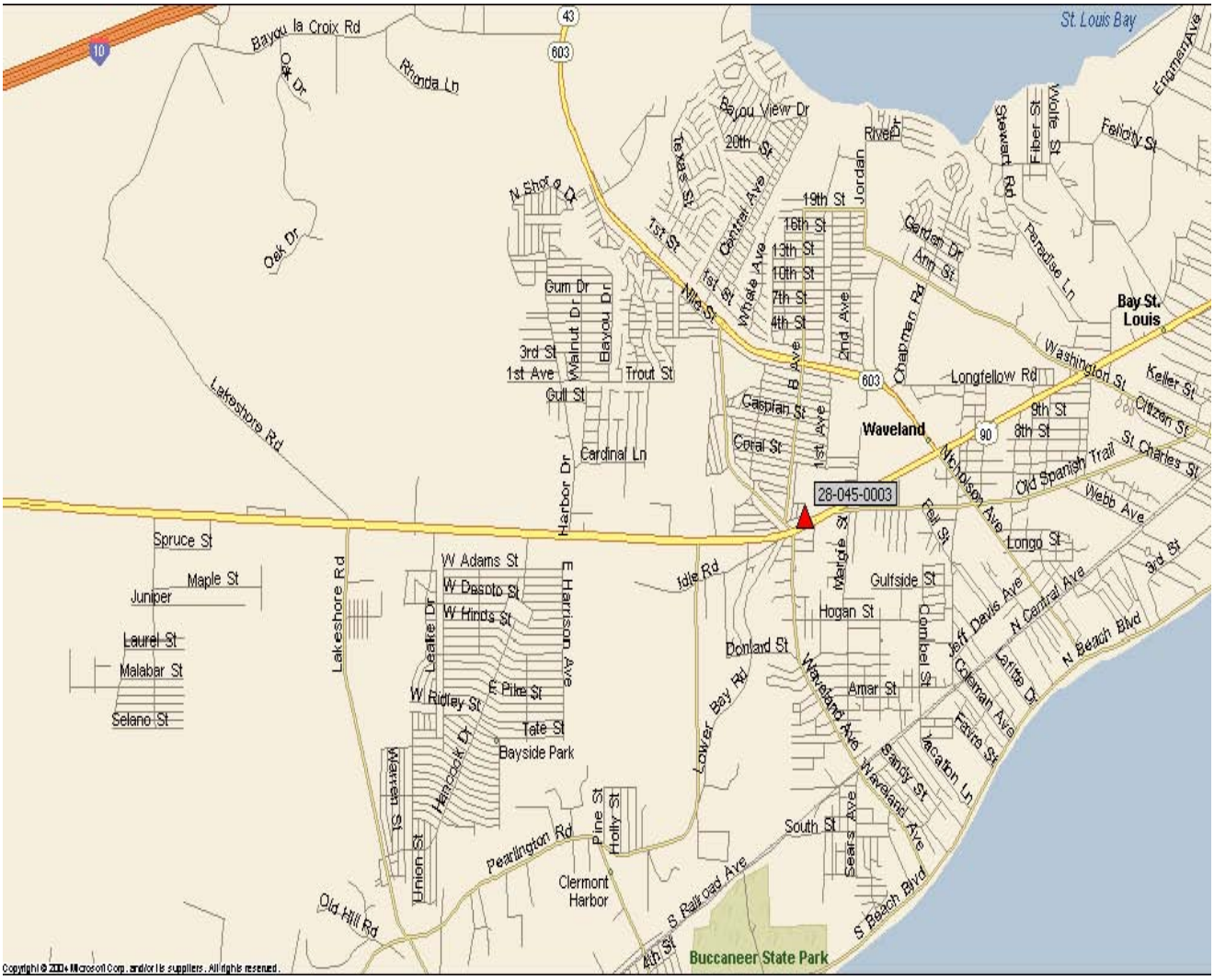
Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Annual 98th Percentile	*	*	*	28	22	19	19	21	18	21



Hancock County

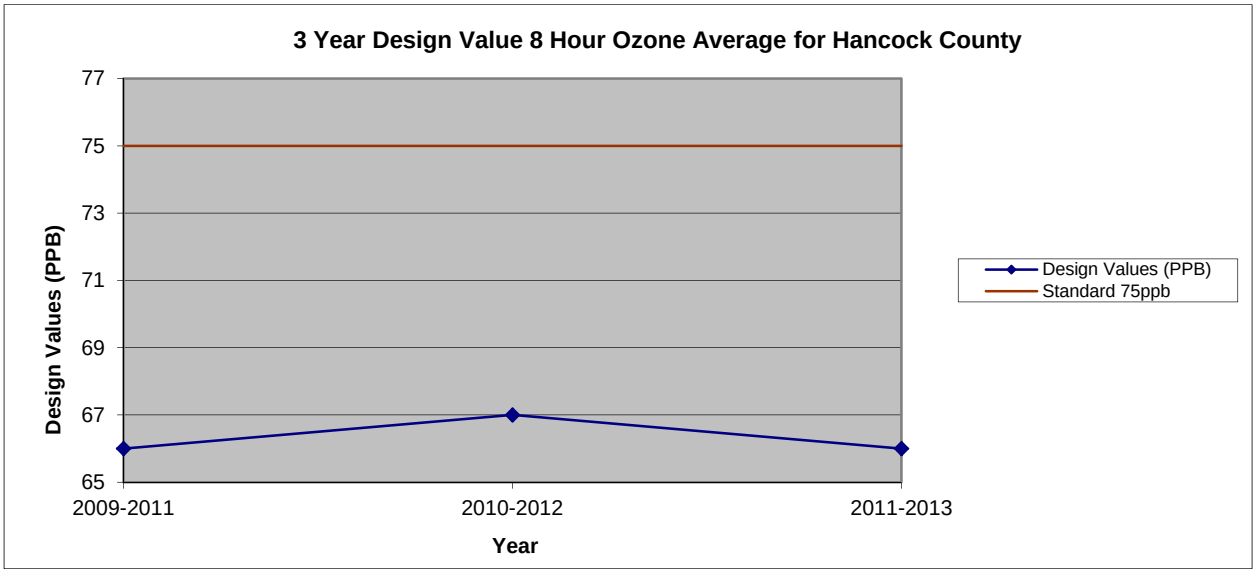


Hancock County
Monitoring Site No. 28-045-0003
Location

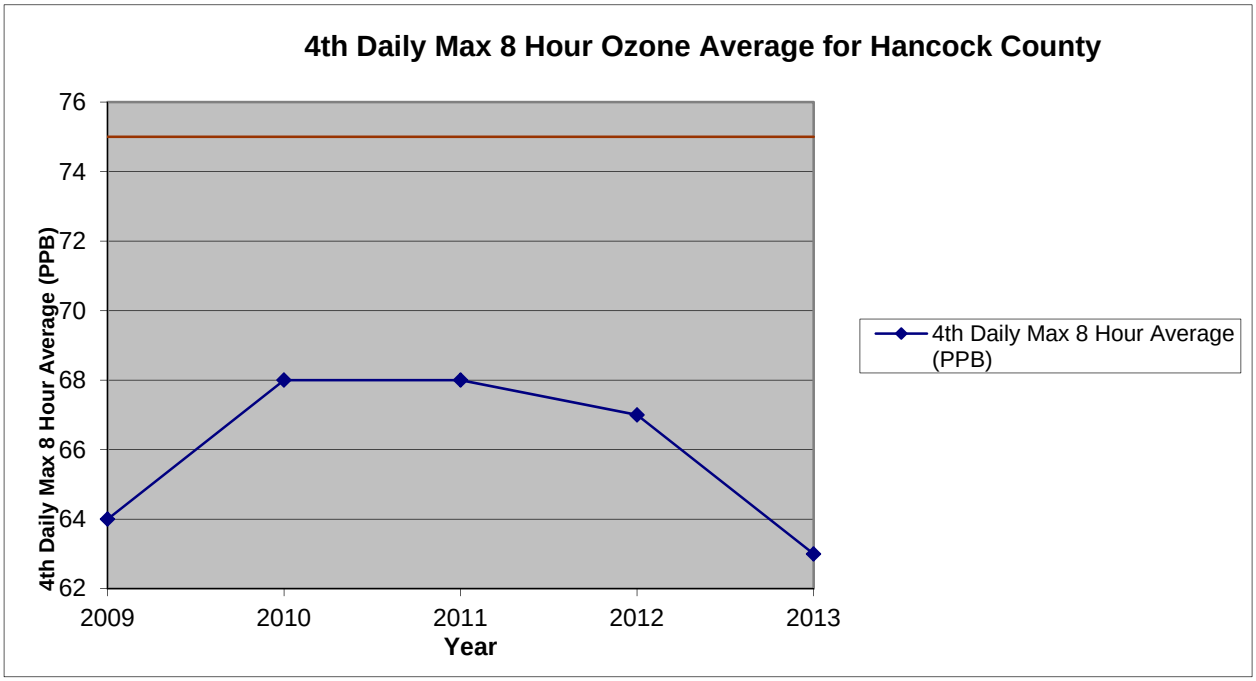


Hancock County
8-Hour Ozone (ppb)

3–Year Period	2002-2004	2003-2005	2004-2006	2005-2007	2006-2008	2007-2009	2008-2010	2009-2011	2010-2012	2011-2013
Design Value	*	*	*	*	*	*	*	66	67	66

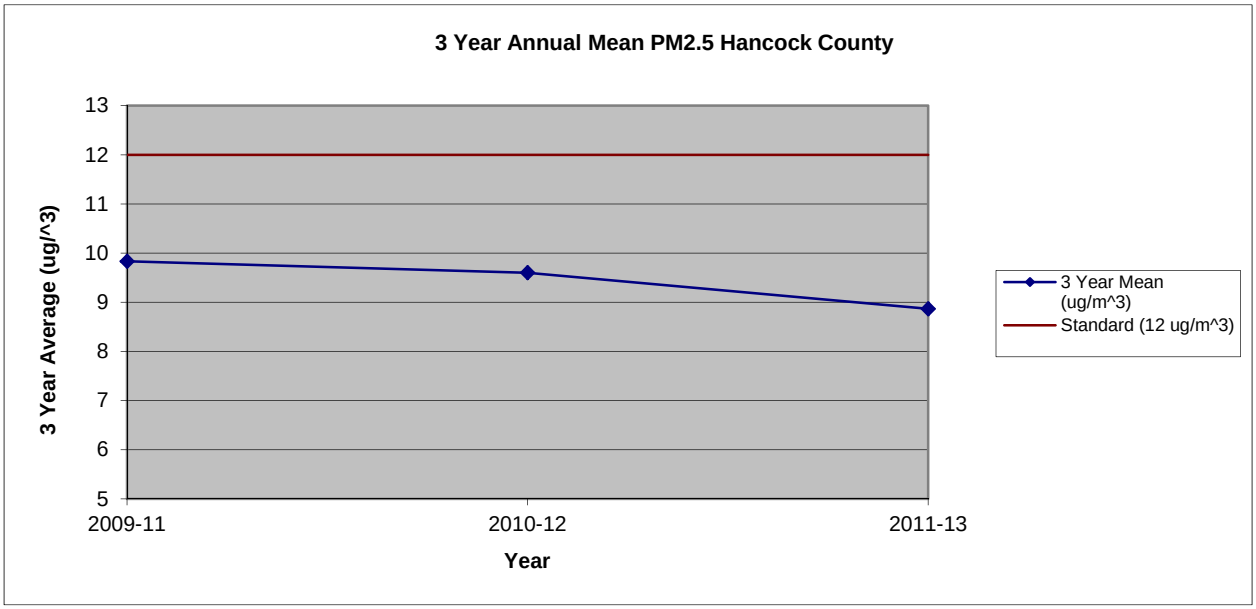


Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Annual 4th Max. 8-Hour Avg.	*	*	*	*	*	64	68	68	67	63

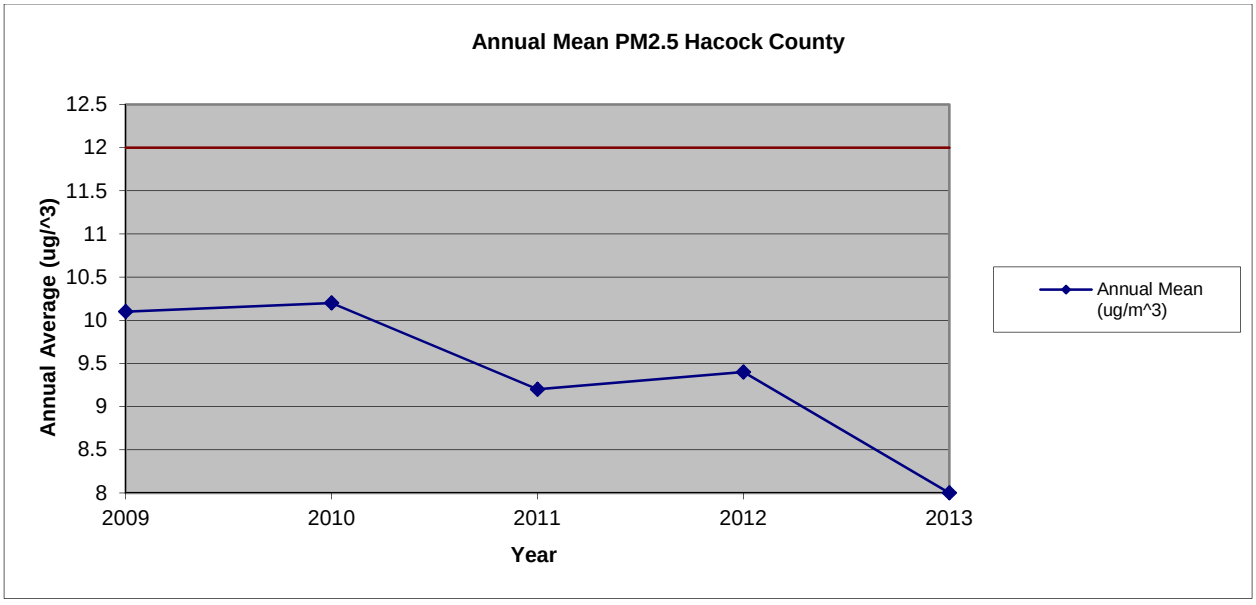


Hancock County
$PM_{2.5}$
Annual Mean ($\mu g/m^3$)

3-Year Period	2002-2004	2003-2005	2004-2006	2005-2007	2006-2008	2007-2009	2008-2010	2009-2011	2010-2012	2011-2013
3-Year Average of the Annual Means	*	*	*	*	*	*	*	9.8	9.6	8.9

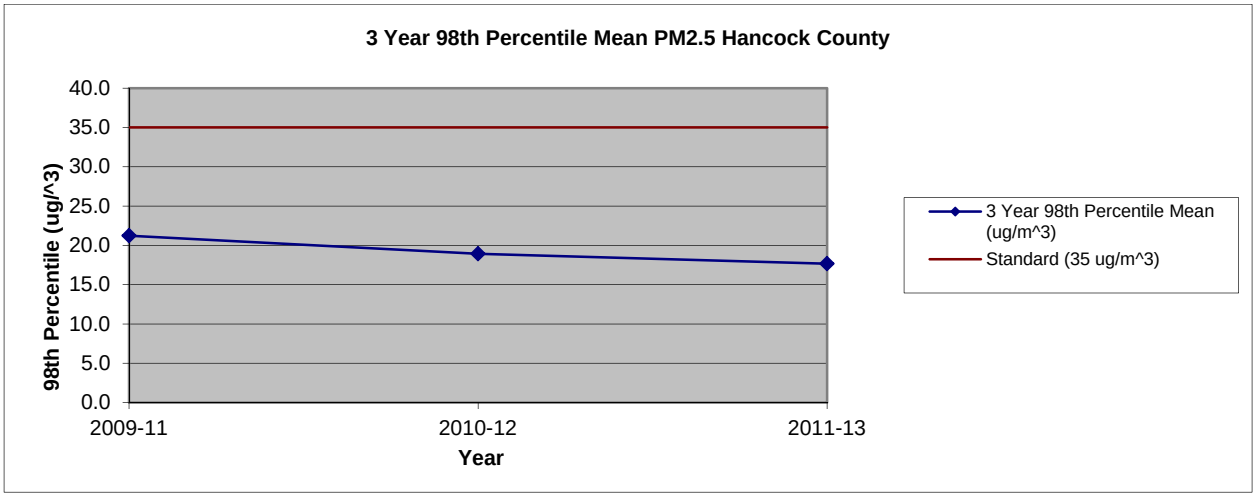


Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Annual Mean	*	*	*	*	*	10.1	10.2	9.2	9.4	8.0

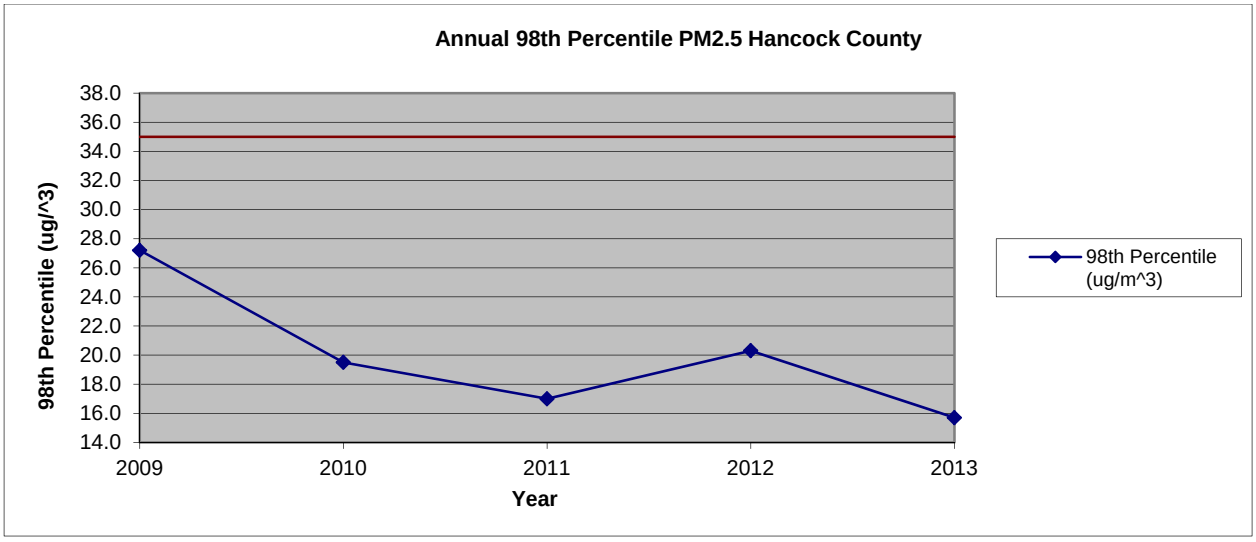


Hancock County
$PM_{2.5}$
24-Hour Average ($\mu g/m^3$)

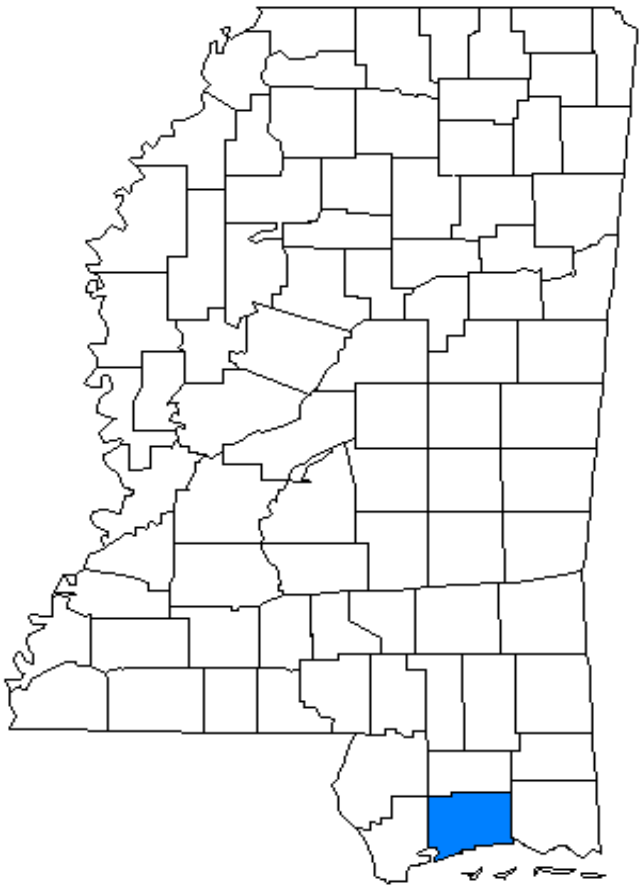
3-Year Period	2002-2004	2003-2005	2004-2006	2005-2007	2006-2008	2007-2009	2008-2010	2009-2011	2010-2012	2011-2013
3-Year Average of the Annual 98th Percentiles	*	*	*	*	*	*	*	21	19	18



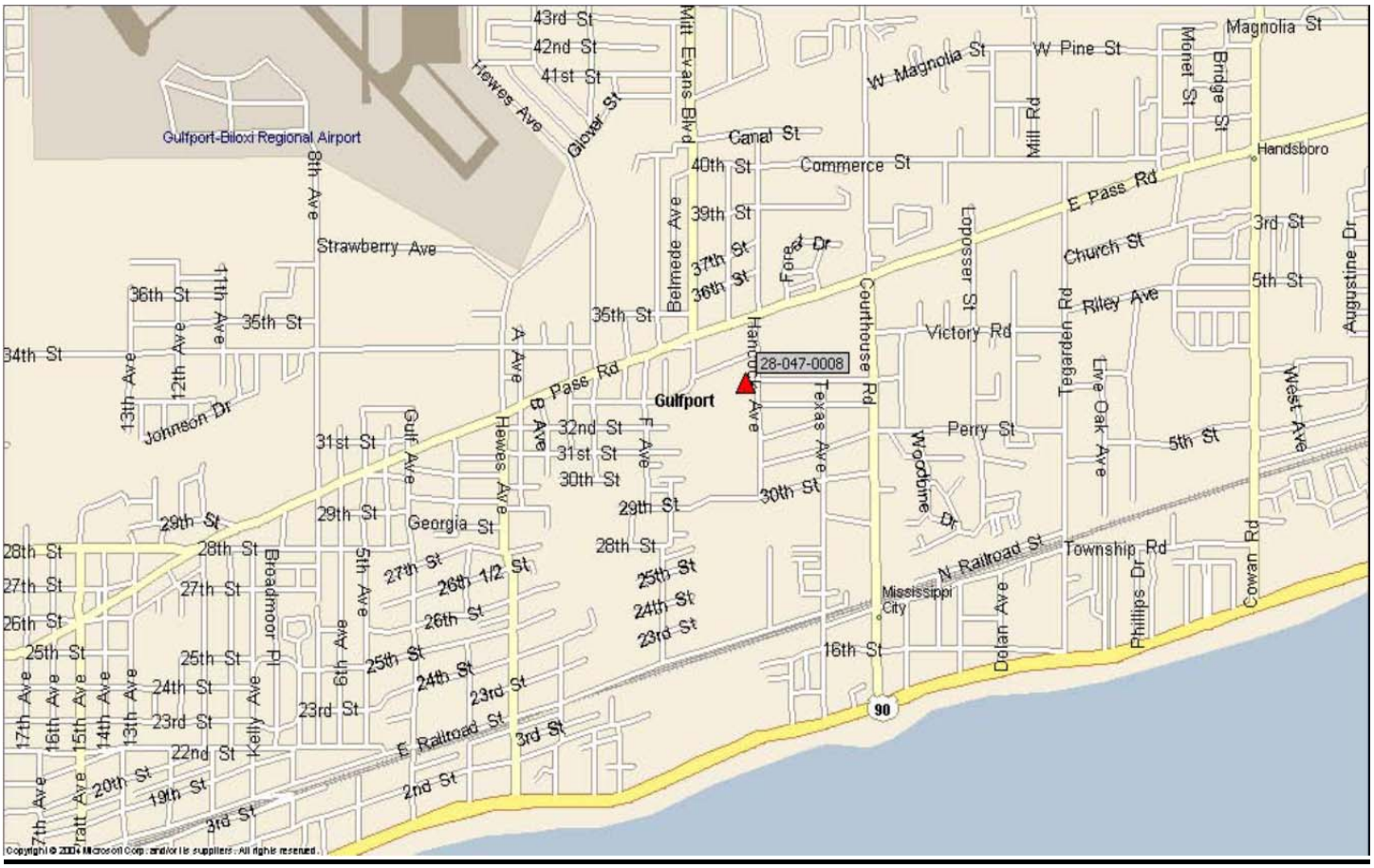
Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Annual 98th Percentile	*	*	*	*	*	27	20	17	20	16



Harrison County

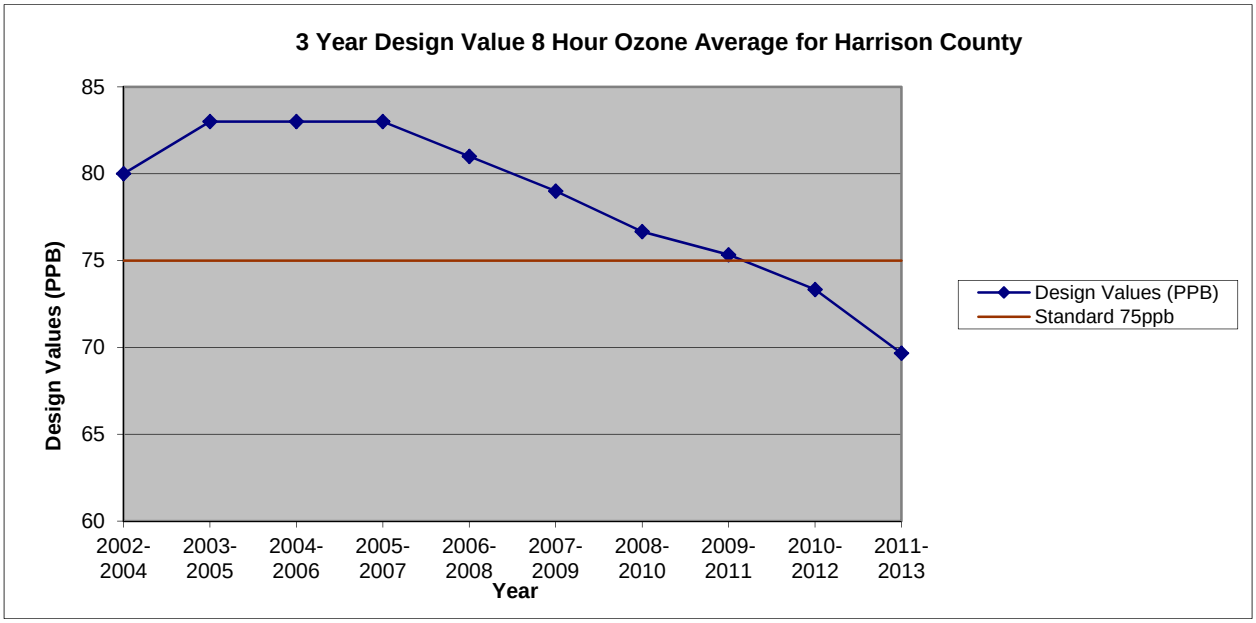


Harrison County
Monitoring Site No. 28-047-0008
Location

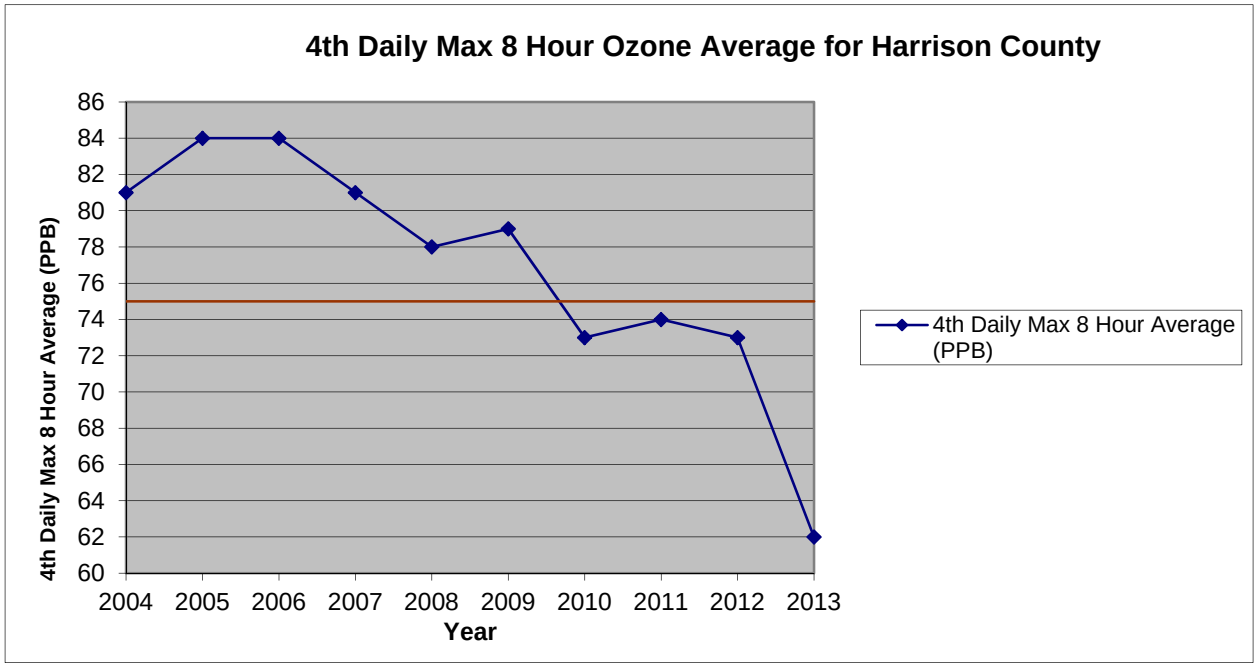


Harrison County
8-Hour Ozone (ppb)

3–Year Period	2002-2004	2003-2005	2004-2006	2005-2007	2006-2008	2007-2009	2008-2010	2009-2011	2010-2012	2011-2013
Design Value	80	83	83	83	81	79	76	75	73	69

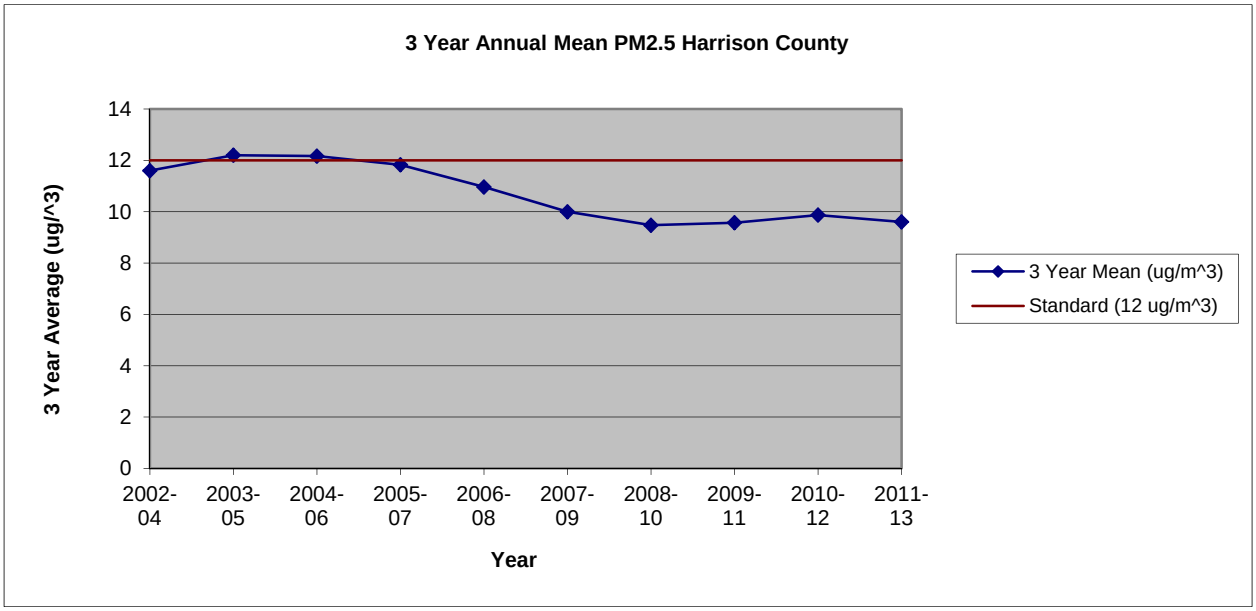


Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Annual 4th Max. 8-Hour Avg.	81	84	84	81	78	79	73	74	73	62

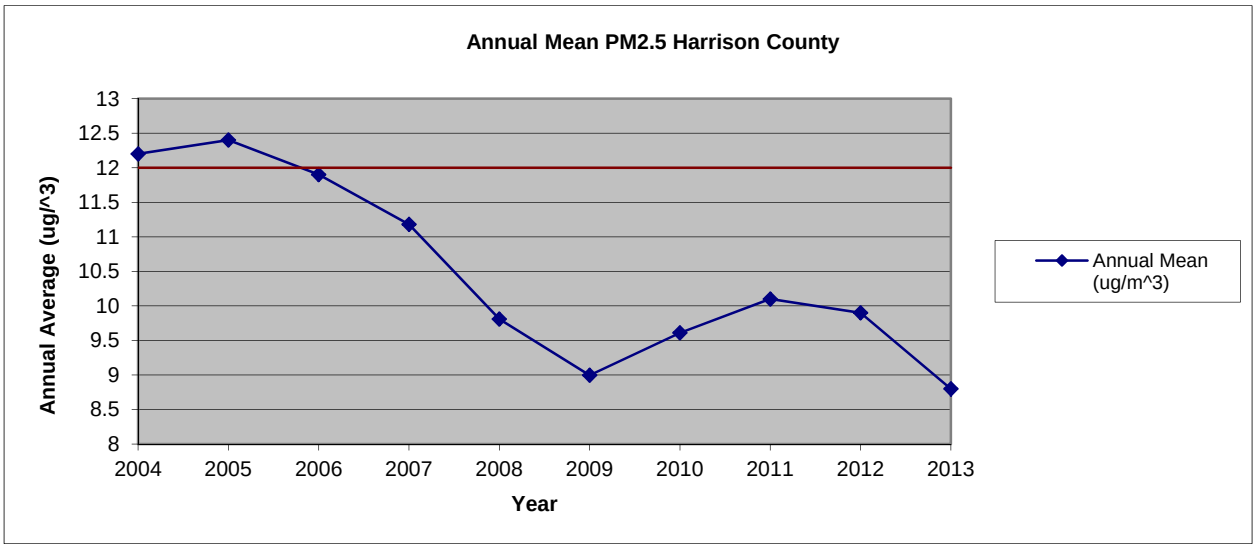


Harrison County
$PM_{2.5}$
Annual Mean ($\mu g/m^3$)

3-Year Period	2002-2004	2003-2005	2004-2006	2005-2007	2006-2008	2007-2009	2008-2010	2009-2011	2010-2012	2011-2013
3-Year Average of the Annual Means	11.6	12.2	12.2	11.8	11.0	10.0	9.5	9.6	9.9	9.6

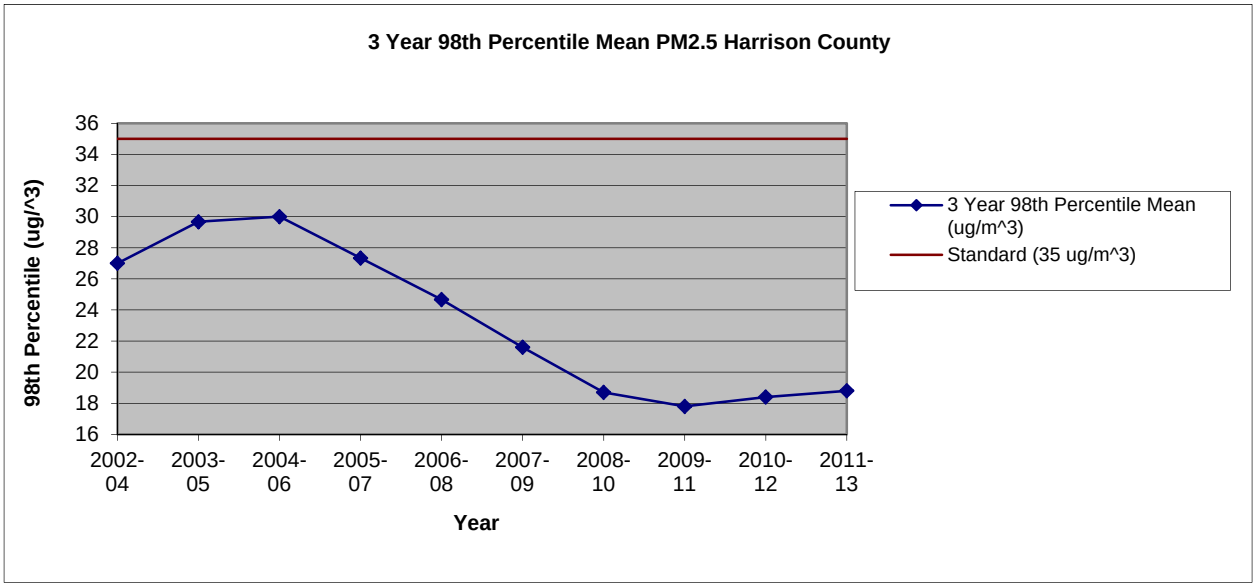


Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Annual Mean	12.2	12.4	11.9	11.2	9.8	9.0	9.6	10.1	9.9	8.8

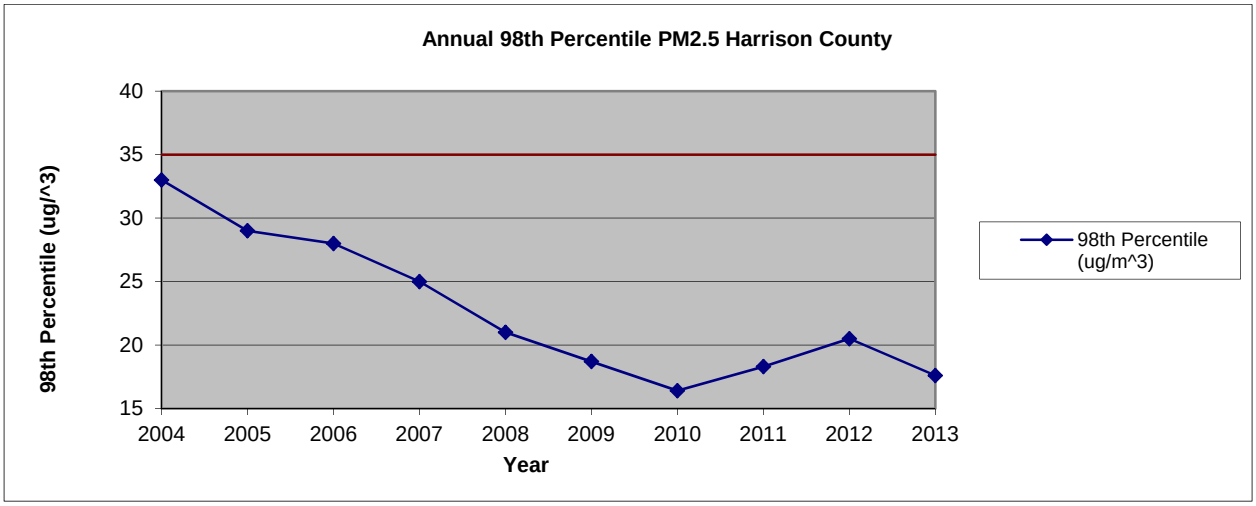


Harrison County
$PM_{2.5}$
24-Hour Average ($\mu g/m^3$)

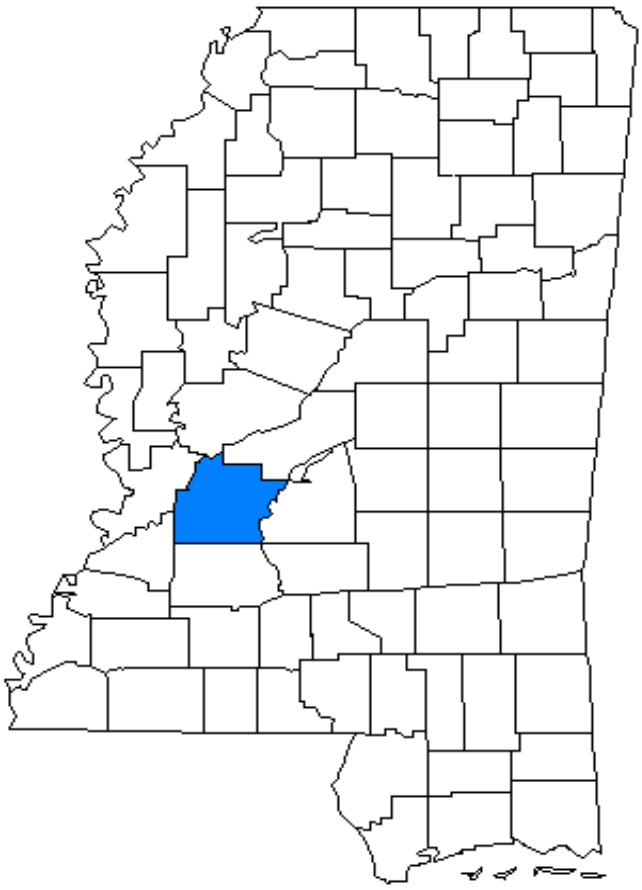
3-Year Period	2002-2004	2003-2005	2004-2006	2005-2007	2006-2008	2007-2009	2008-2010	2009-2011	2010-2012	2011-2013
3-Year Average of the Annual 98th Percentiles	27	30	30	27	25	22	19	18	18	19



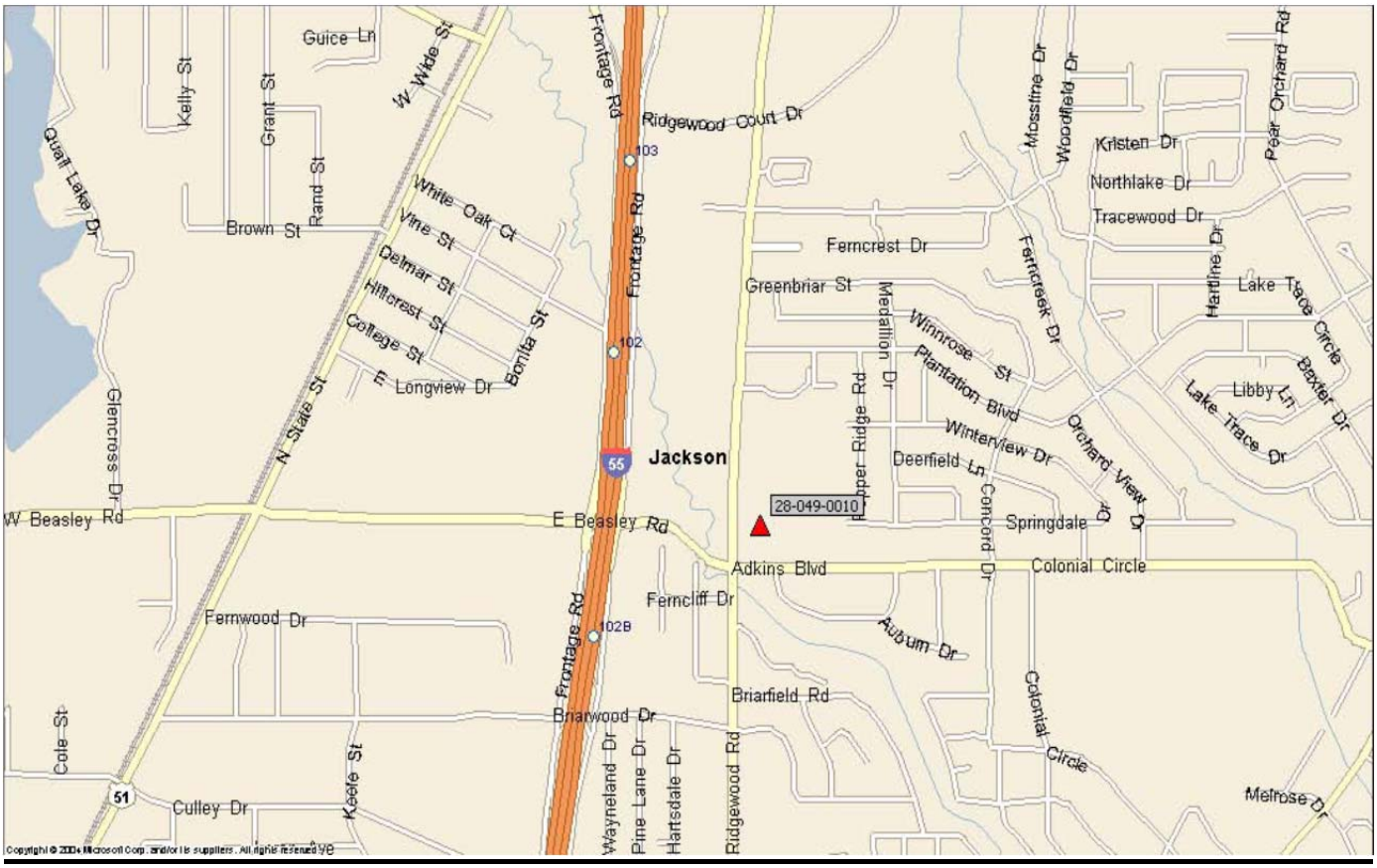
Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Annual 98th Percentile	33	29	28	25	21	19	16	18	21	18



Hinds County

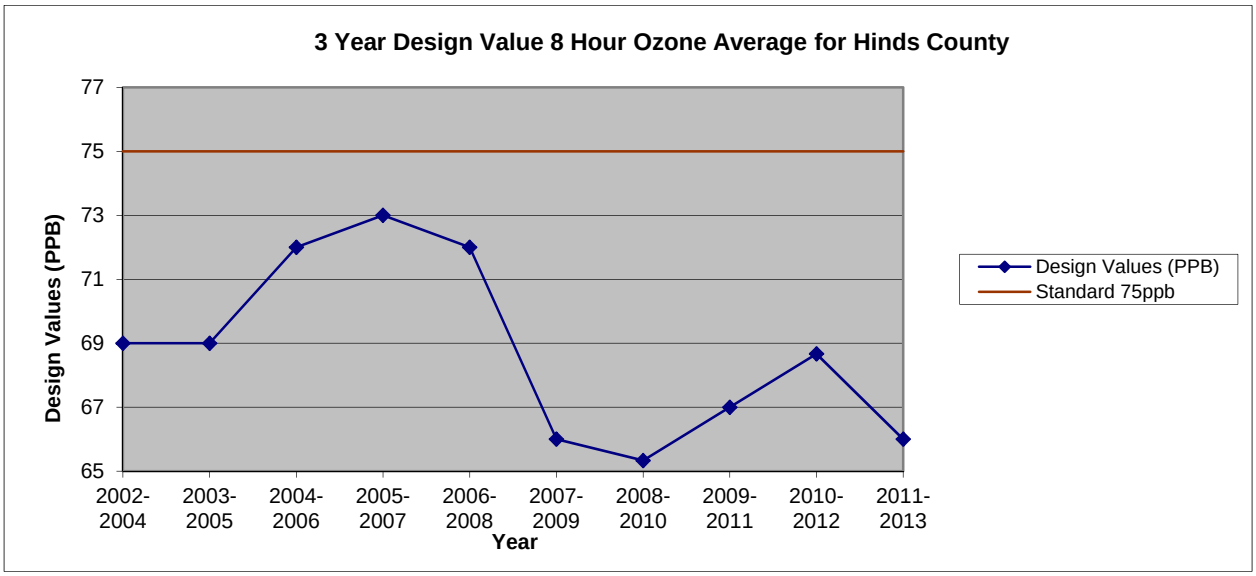


Hinds County
Monitoring Site No. 28-049-0010

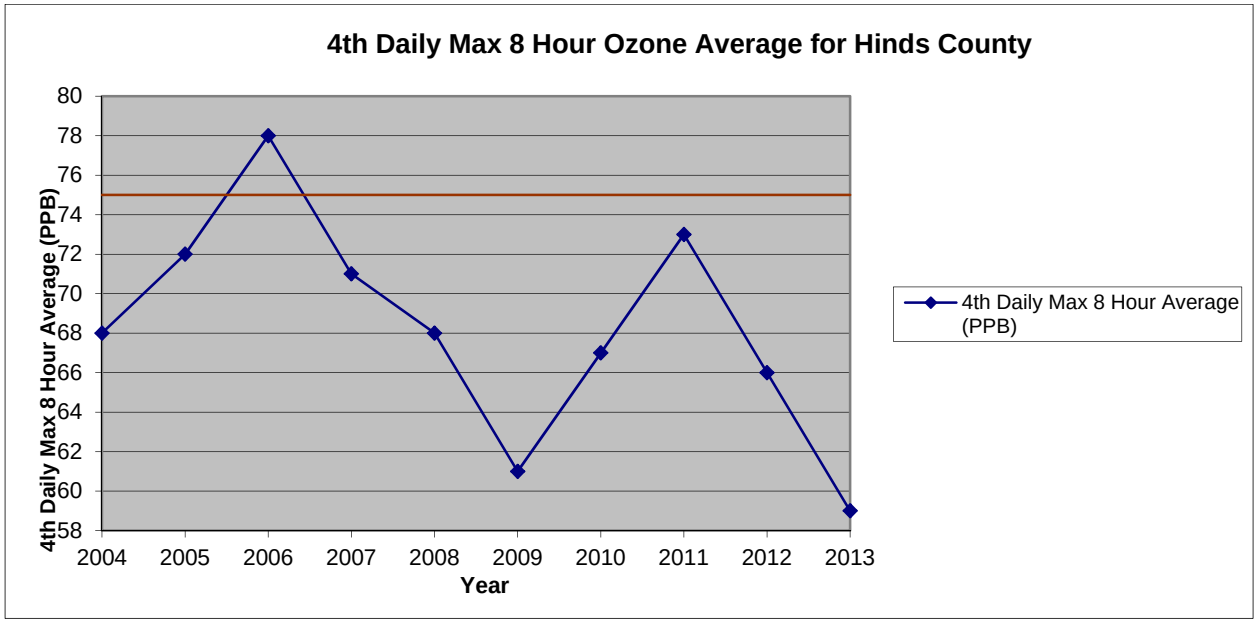


Hinds County
8-Hour Ozone (ppb)

3-Year Period	2002-2004	2003-2005	2004-2006	2005-2007	2006-2008	2007-2009	2008-2010	2009-2011	2010-2012	2011-2013
Design Value	69	69	72	73	72	66	65	67	68	66

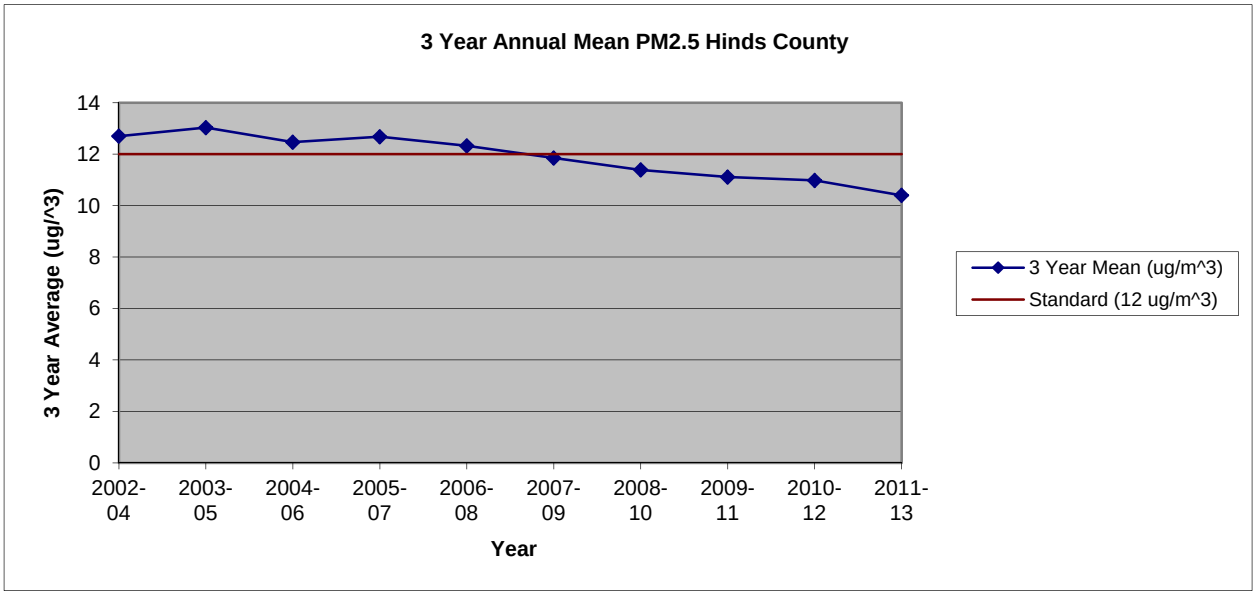


Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Annual 4th Max. 8-Hour Avg.	68	72	78	71	68	61	67	73	66	59

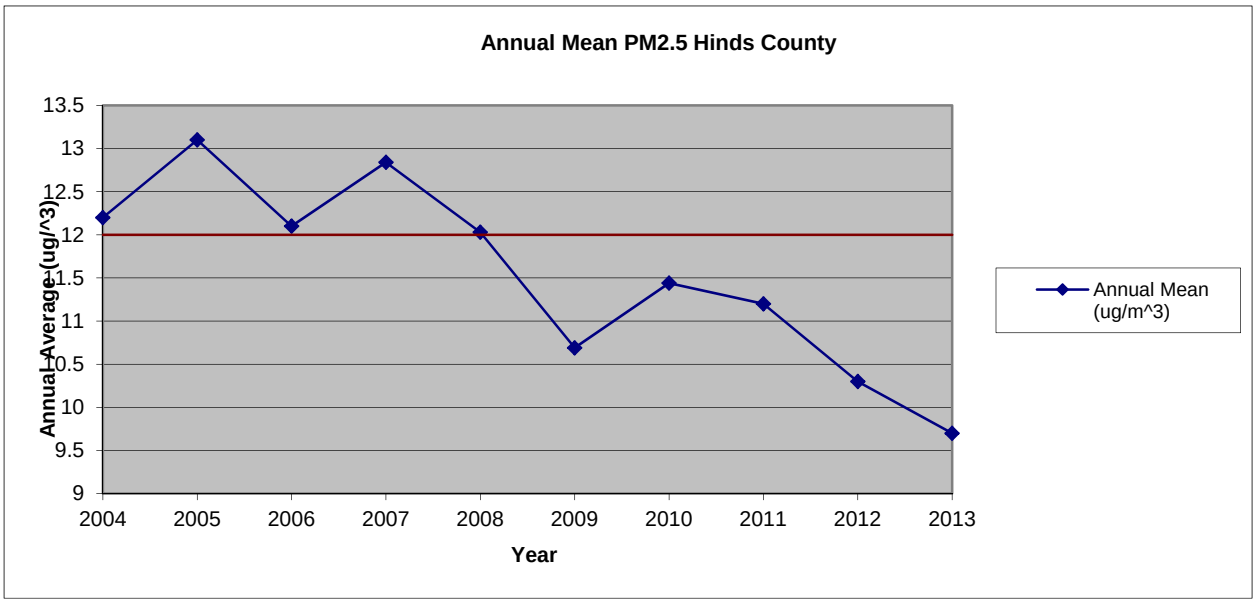


Hinds County
$PM_{2.5}$
Annual Mean ($\mu g/m^3$)

3-Year Period	2002-2004	2003-2005	2004-2006	2005-2007	2006-2008	2007-2009	2008-2010	2009-2011	2010-2012	2011-2013
3-Year Average of the Annual Means	12.7	13.0	12.5	12.7	12.3	11.9	11.4	11.1	11.0	10.4

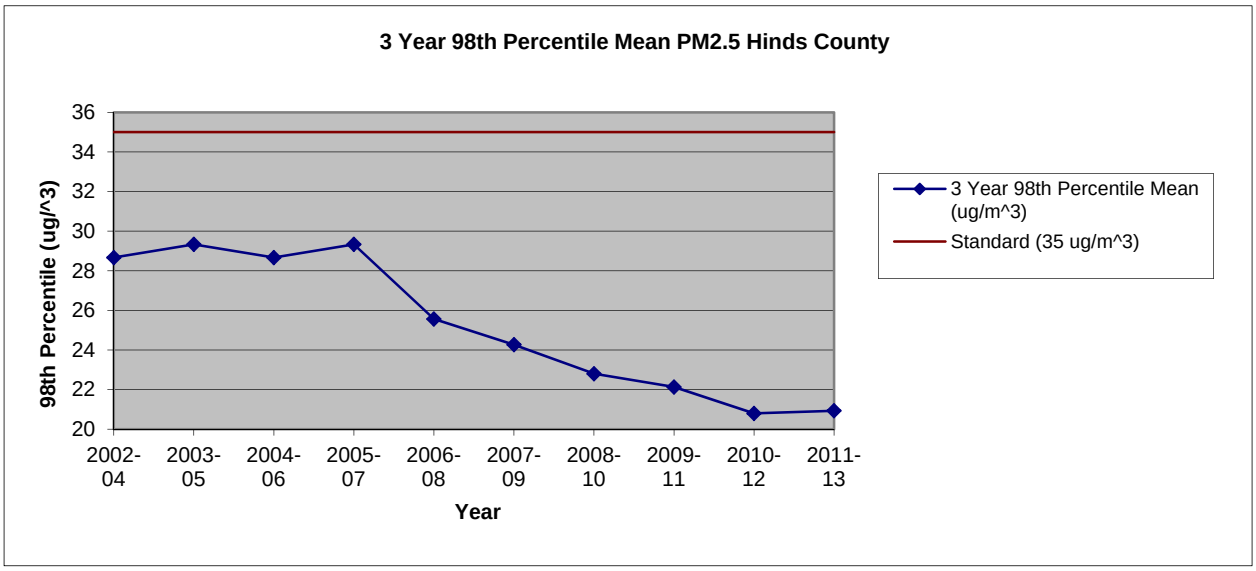


Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Annual Mean	12.2	13.1	12.1	12.8	12.0	10.7	11.4	11.2	10.3	9.7

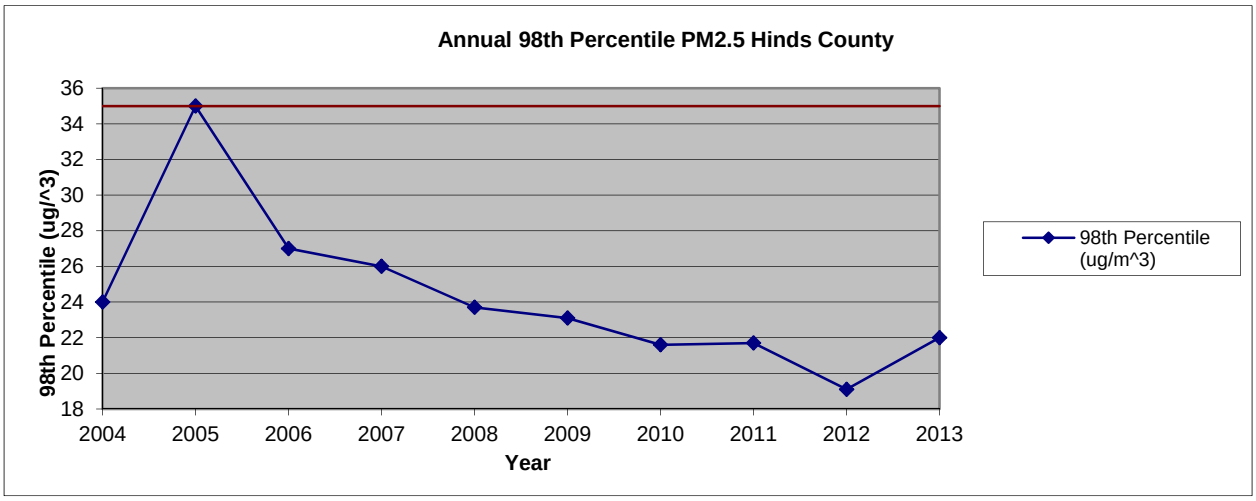


Hinds County
$PM_{2.5}$
24-Hour Average ($\mu g/m^3$)

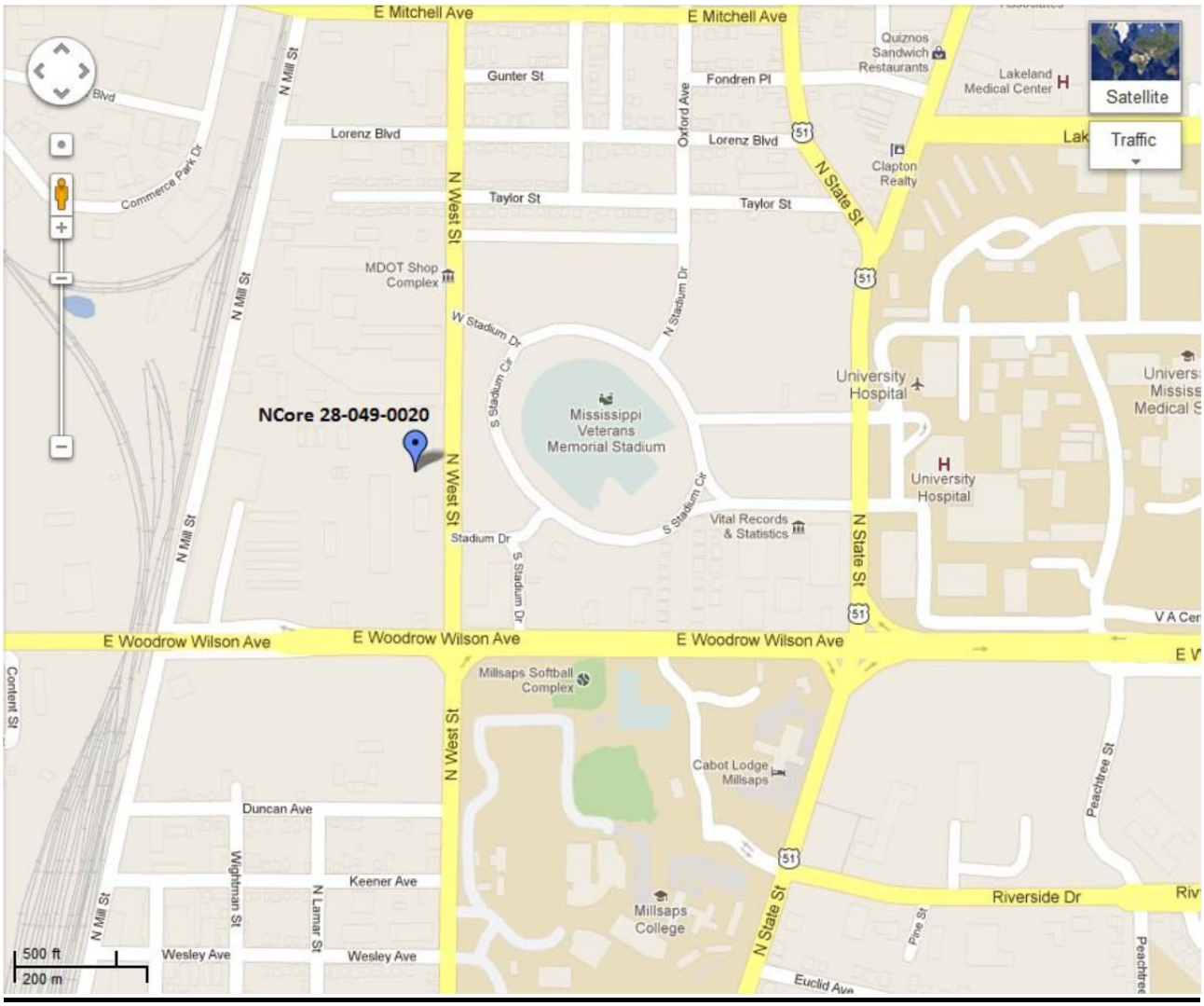
3-Year Period	2002-2004	2003-2005	2004-2006	2005-2007	2006-2008	2007-2009	2008-2010	2009-2011	2010-2012	2011-2013
3-Year Average of the Annual 98th Percentiles	29	29	29	29	26	24	23	22	21	21



Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Annual 98th Percentile	24	35	27	26	24	23	22	22	19	22

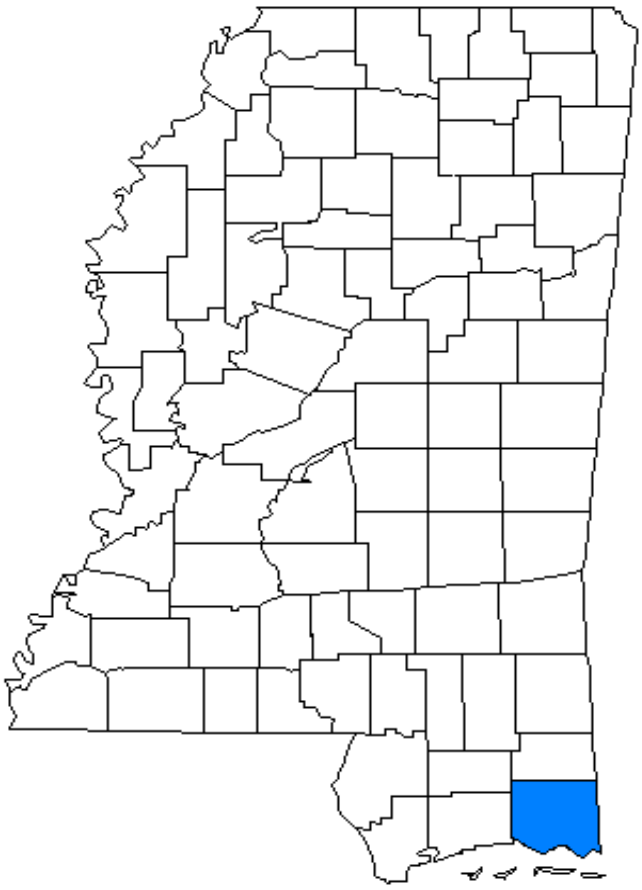


Hinds County (N-CORE)
Monitoring Site No. 28-049-0020

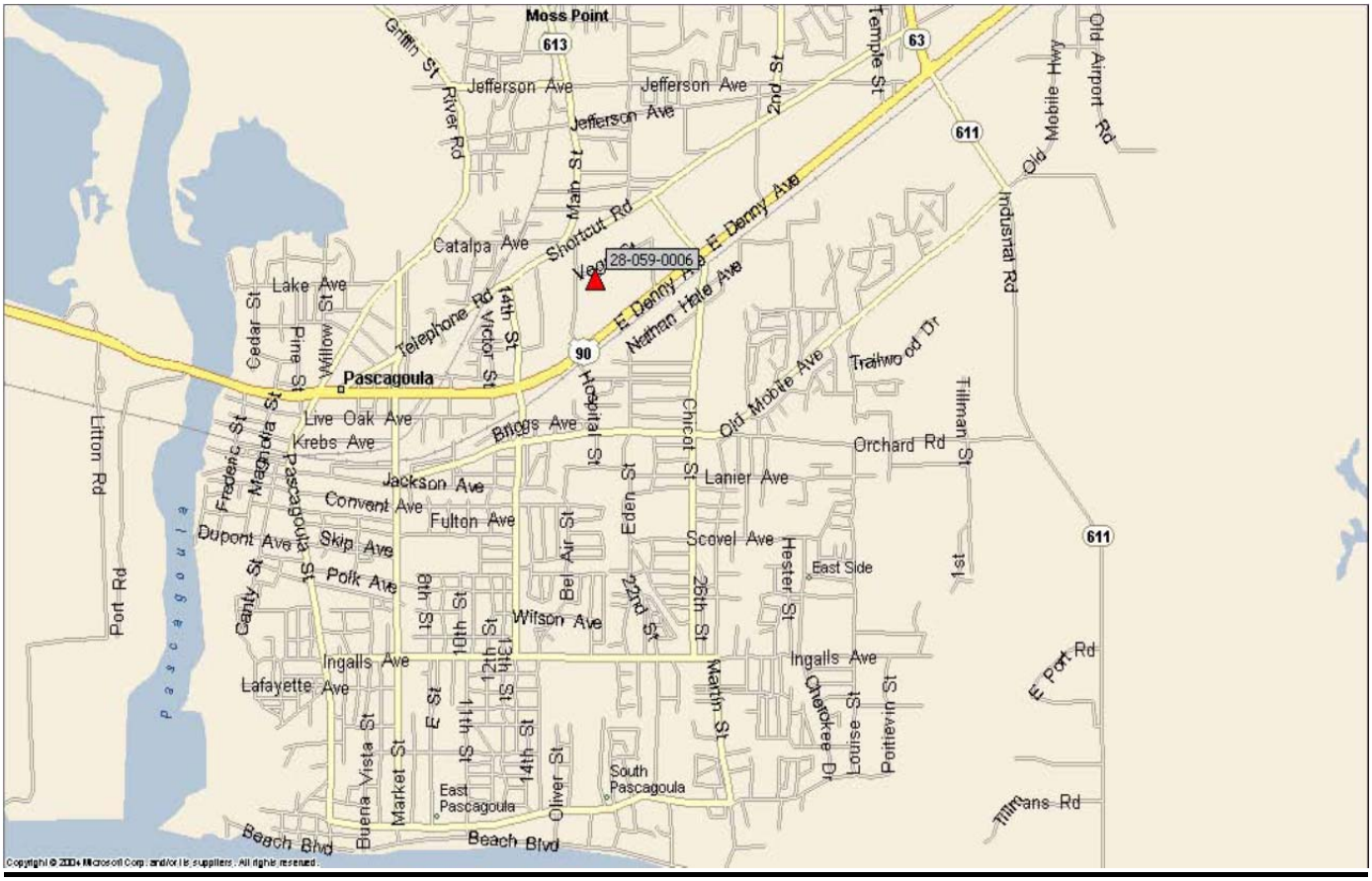


MDEQ restarted operation of its multi-pollutant site (N-CORE) in July 2013. All data from the site is considered incomplete, therefore, it is not shown in the 10-year analysis.

Jackson County

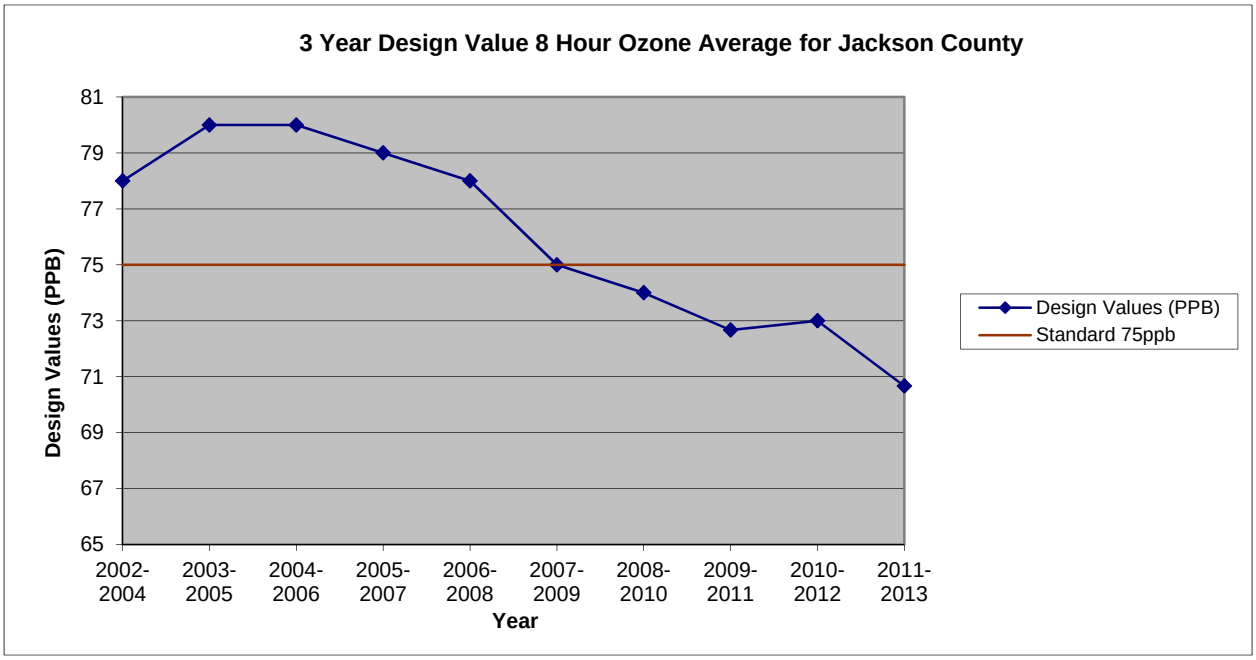


Jackson County
Monitoring Site No. 28-059-0006
Location

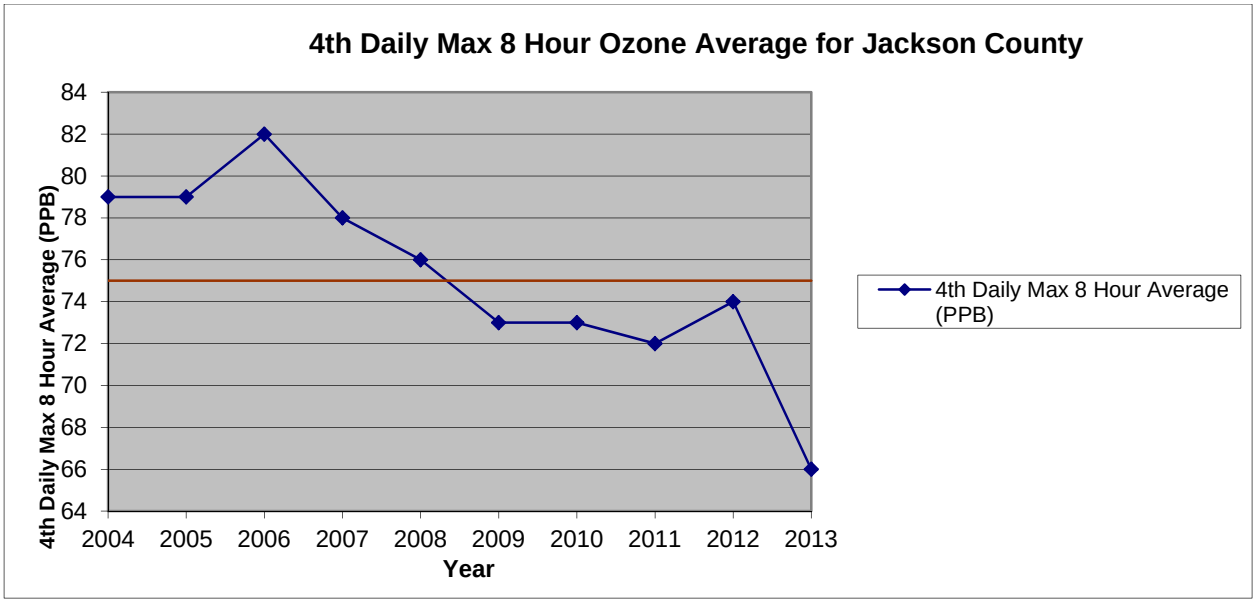


Jackson County
8-Hour Ozone (ppb)

3-Year Period	2002-2004	2003-2005	2004-2006	2005-2007	2006-2008	2007-2009	2008-2010	2009-2011	2010-2012	2011-2013
Design Value	78	80	80	79	78	75	74	72	73	70

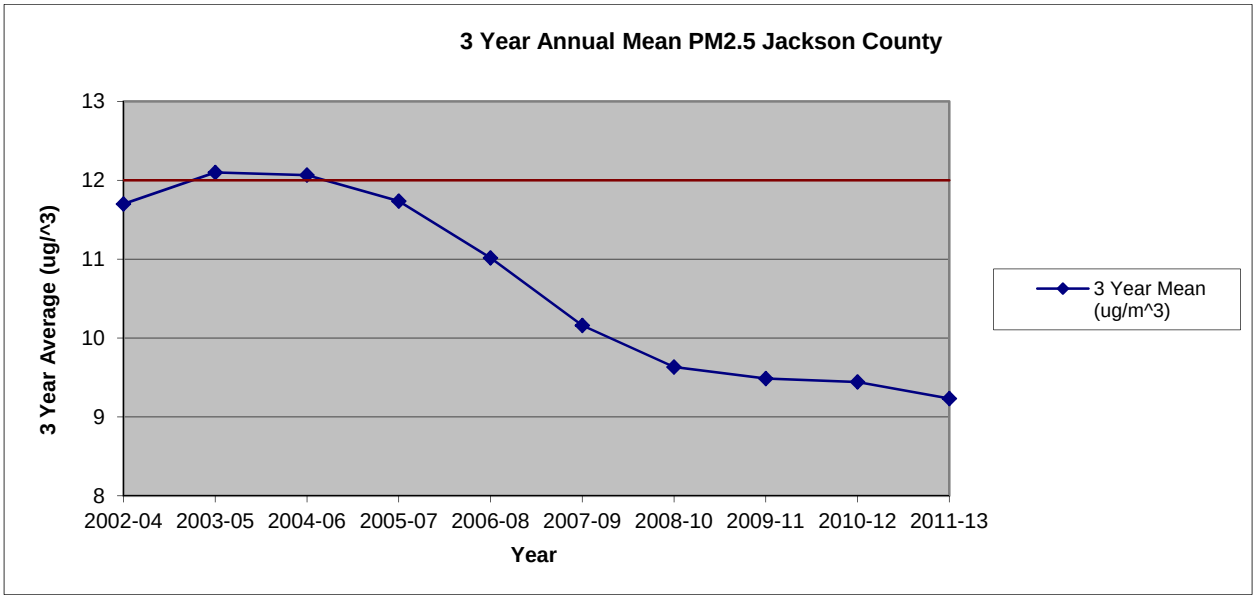


Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Annual 4th Max. 8-Hour Avg.	79	79	82	78	76	73	73	72	74	66

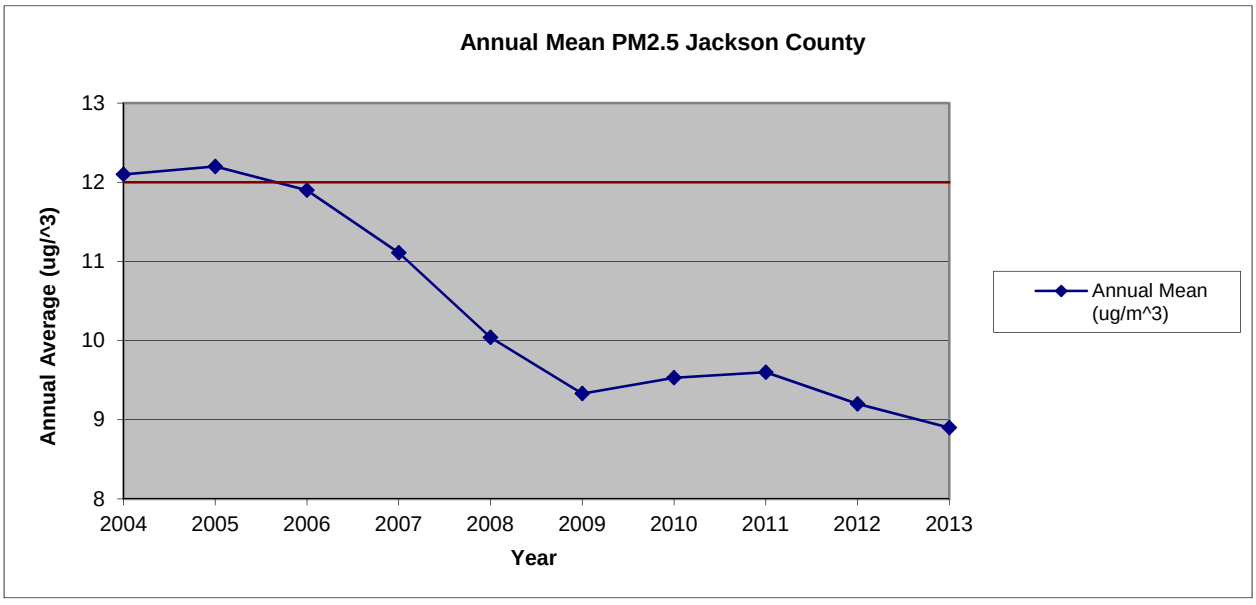


Jackson County
$PM_{2.5}$
Annual Mean ($\mu g/m^3$)

3-Year Period	2002-2004	2003-2005	2004-2006	2005-2007	2006-2008	2007-2009	2008-2010	2009-2011	2010-2012	2011-2013
3-Year Average of the Annual Means	11.7	12.1	12.1	11.7	11.0	10.2	9.6	9.5	9.4	9.2

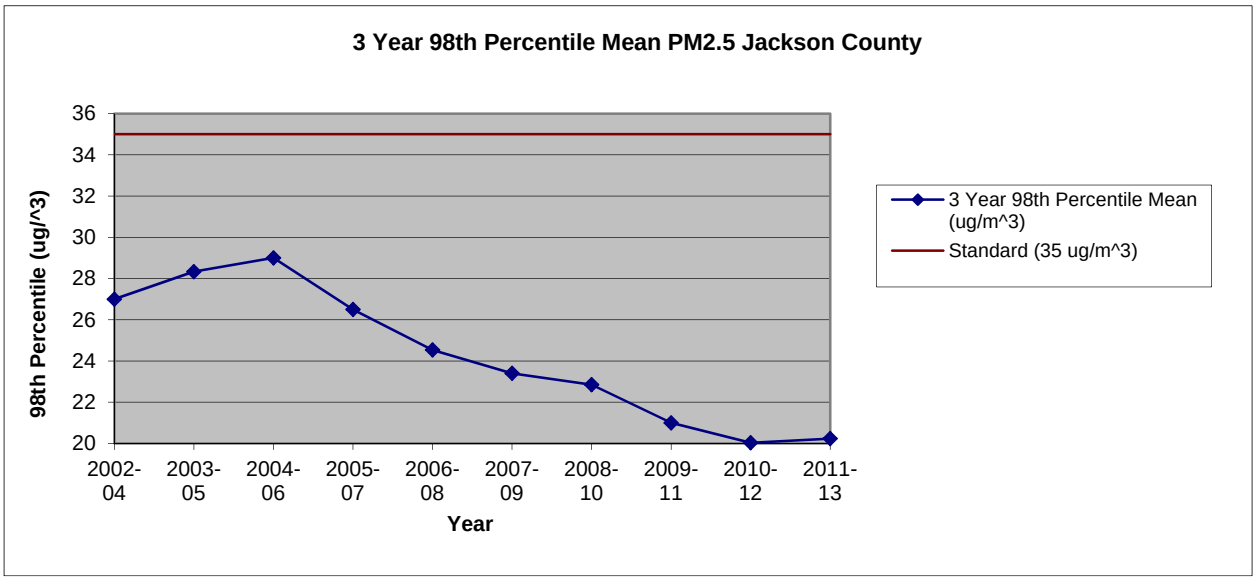


Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Annual Mean	12.1	12.2	11.9	11.1	10.0	9.3	9.5	9.6	9.2	8.9

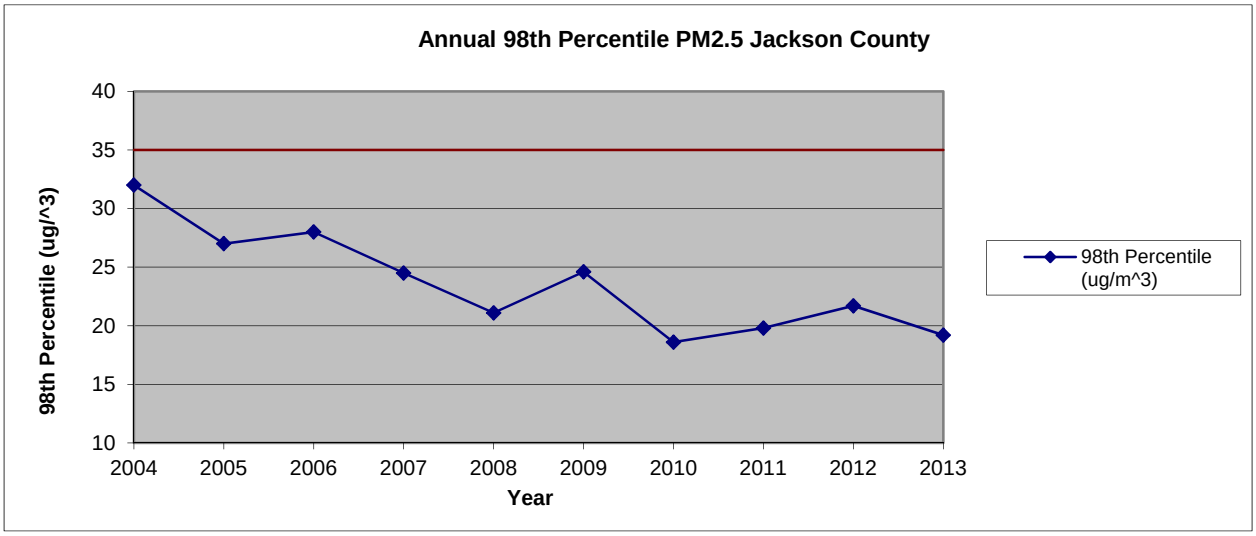


Jackson County
$PM_{2.5}$
24-Hour Average ($\mu g/m^3$)

3-Year Period	2002-2004	2003-2005	2004-2006	2005-2007	2006-2008	2007-2009	2008-2010	2009-2011	2010-2012	2011-2013
3-Year Average of the Annual 98th Percentiles	27	28	29	27	25	23	23	21	20	20

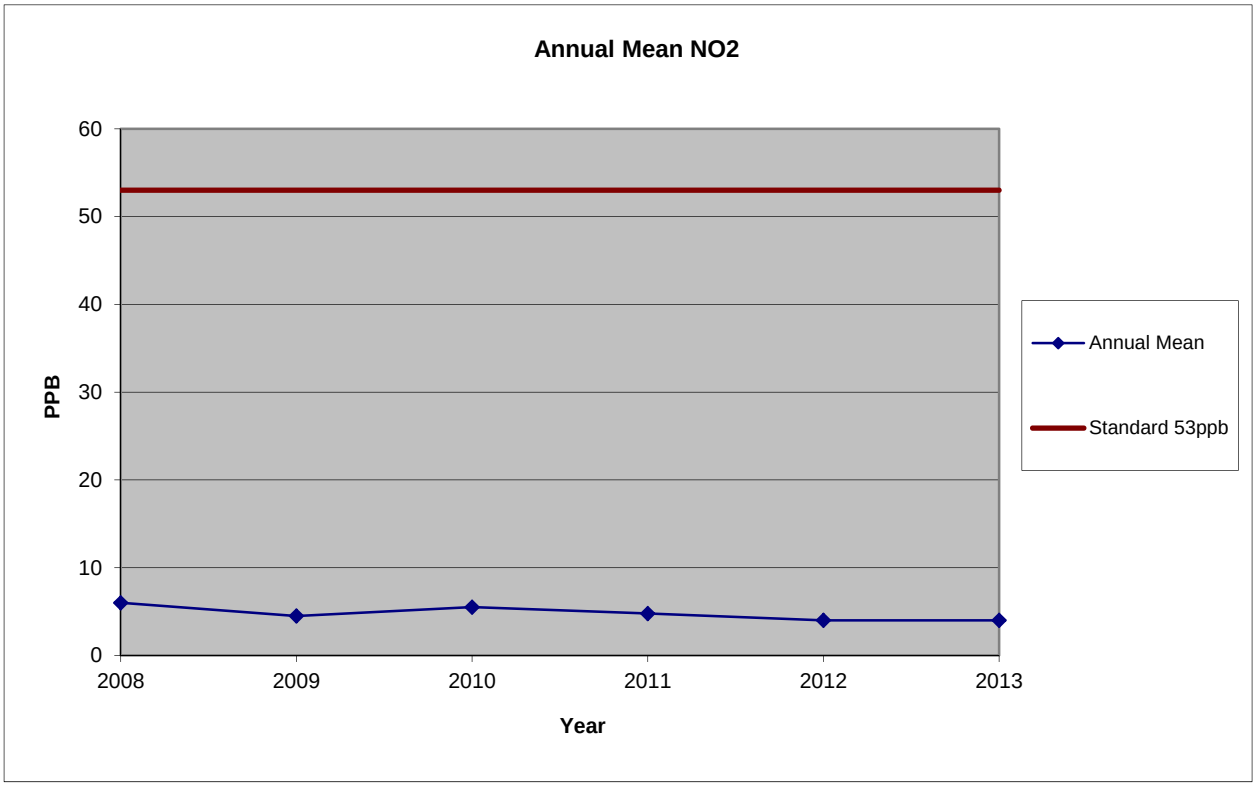


Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Annual 98th Percentile	32	27	28	25	21	25	19	20	22	19



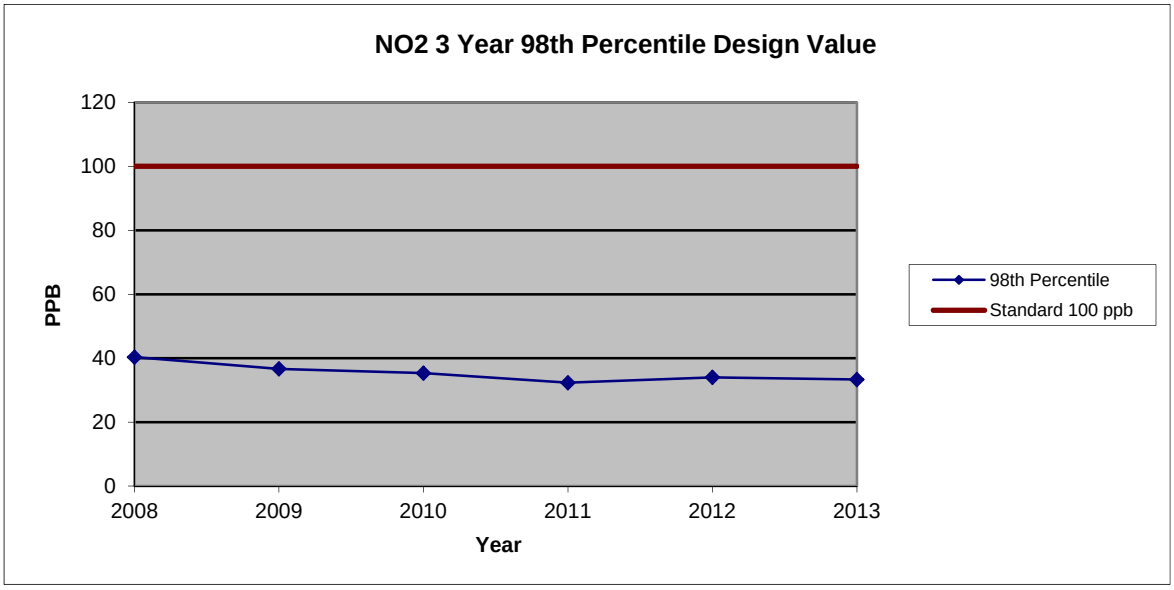
Jackson County
Nitrogen Dioxide
Annual Average (ppb)

Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Annual Average	7	8	7	6	6	5	5	5	4	4

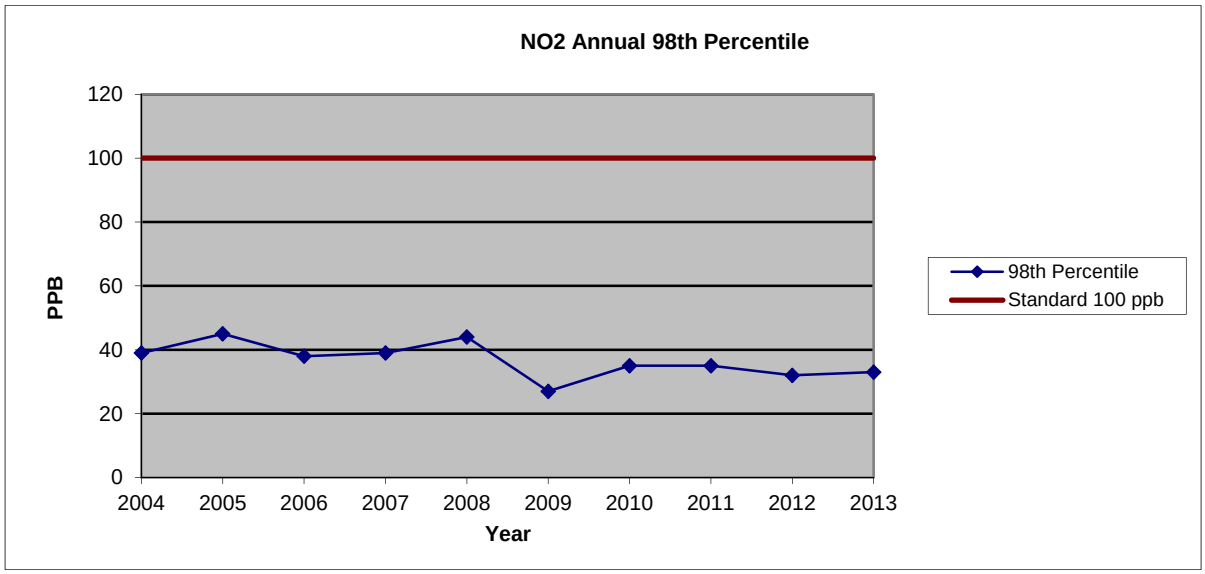


Jackson County
Nitrogen Dioxide
1-Hour Average (ppb)

3-Year Period	2002-2004	2003-2005	2004-2006	2005-2007	2006-2008	2007-2009	2008-2010	2009-2011	2010-2012	2011-2013
3-Year Average of the Annual 98th Percentiles	*	*	40	40	40	36	35	32	34	33

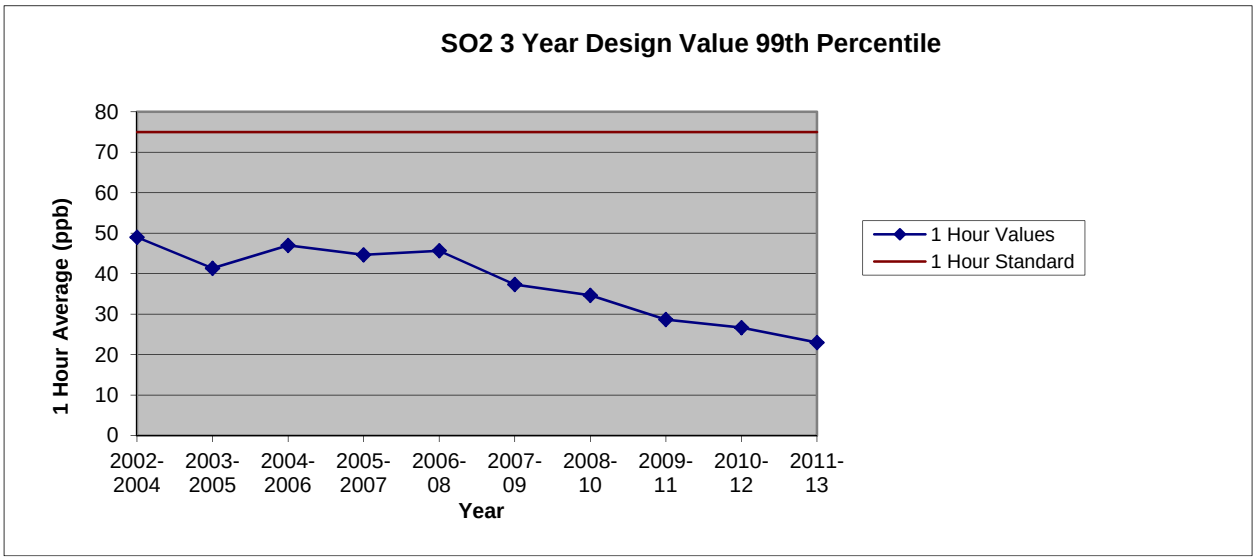


Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Annual 98th Percentiles	39	45	38	39	44	27	35	35	32	33

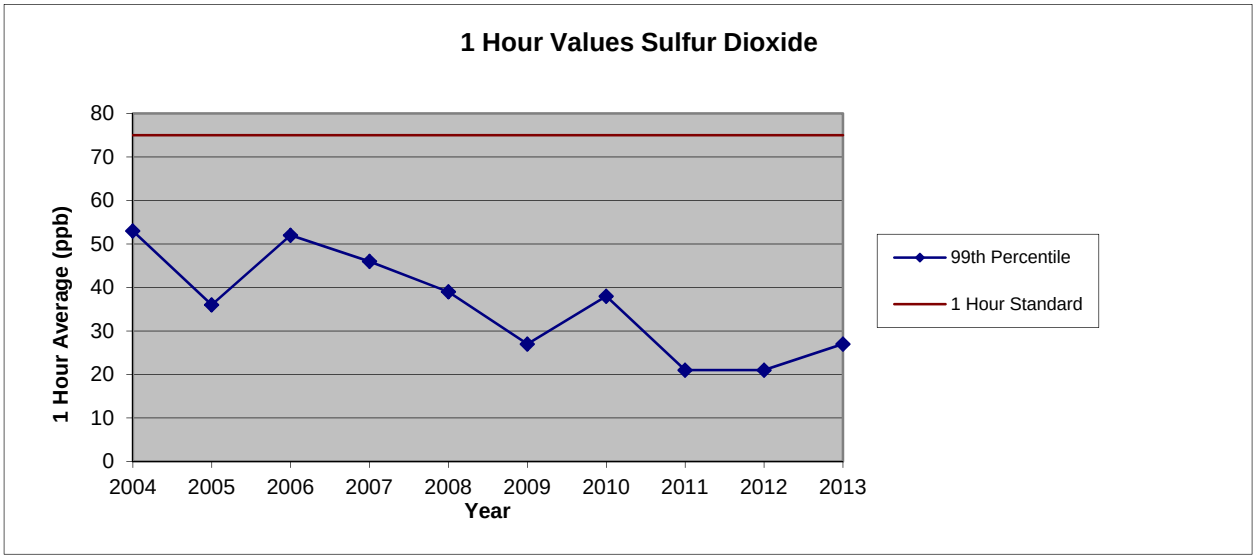


Jackson County
Sulfur Dioxide
1-Hour Average (ppb)

3-Year Period	2002-2004	2003-2005	2004-2006	2005-2007	2006-2008	2007-2009	2008-2010	2009-2011	2010-2012	2011-2013
3-Year Average of the Annual 99th Percentiles	49	41	47	45	46	37	35	29	27	23

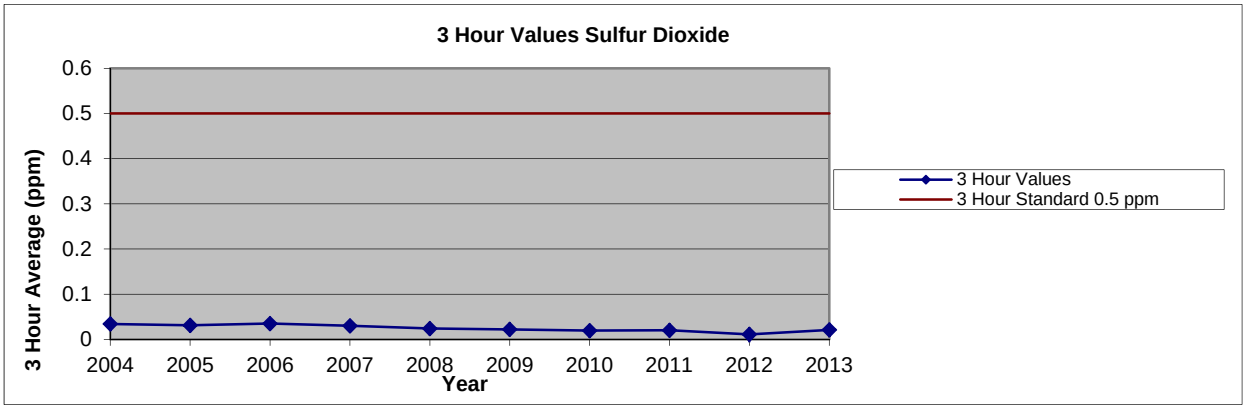


Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Annual 99th Percentiles	53	36	52	46	39	27	38	21	21	27



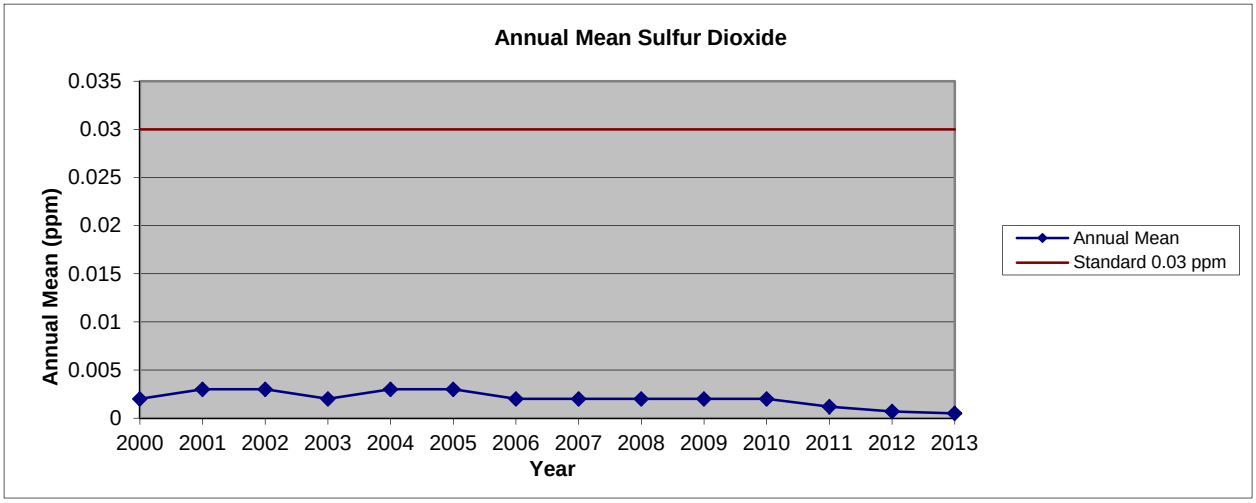
Jackson County
Sulfur Dioxide
3-Hour Annual 2nd Max (ppm)

Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Annual 2nd Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



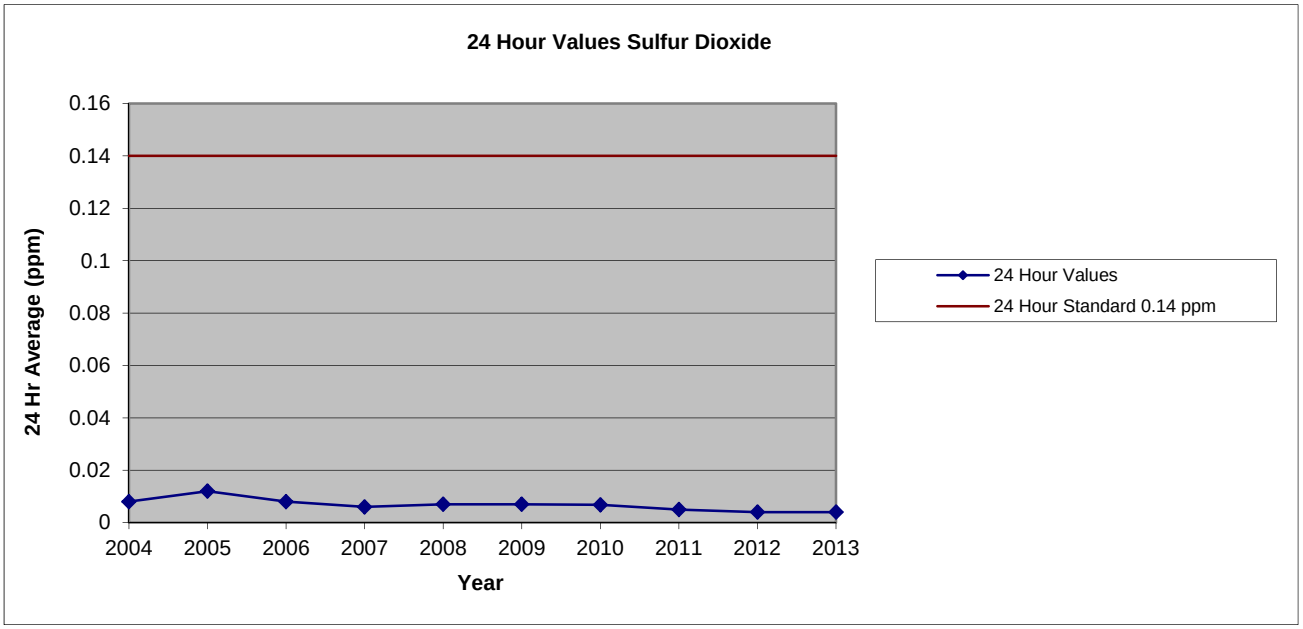
Jackson County
Sulfur Dioxide
Annual Mean (ppm)

Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Annual Mean	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

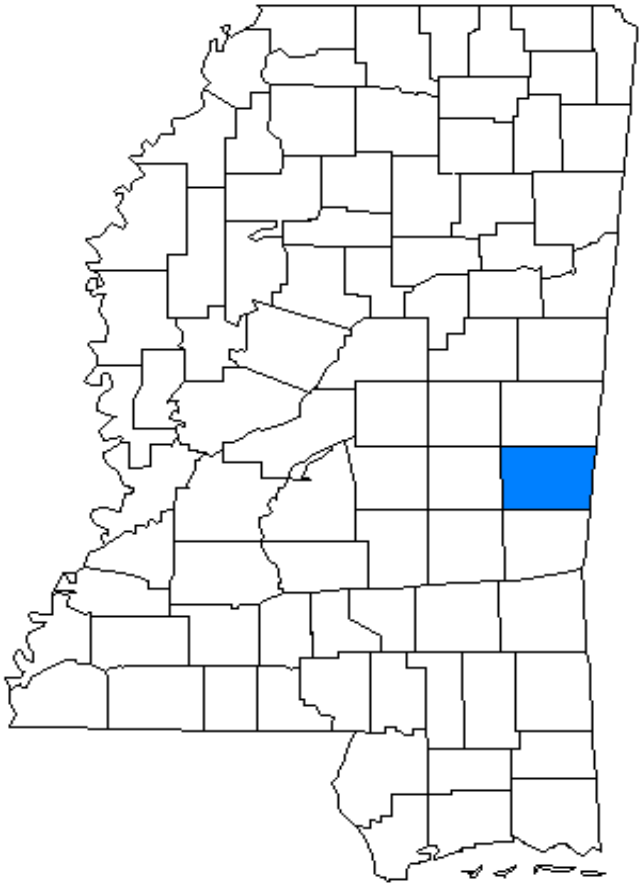


Jackson County
Sulfur Dioxide
24-Hour 2nd Max (ppm)

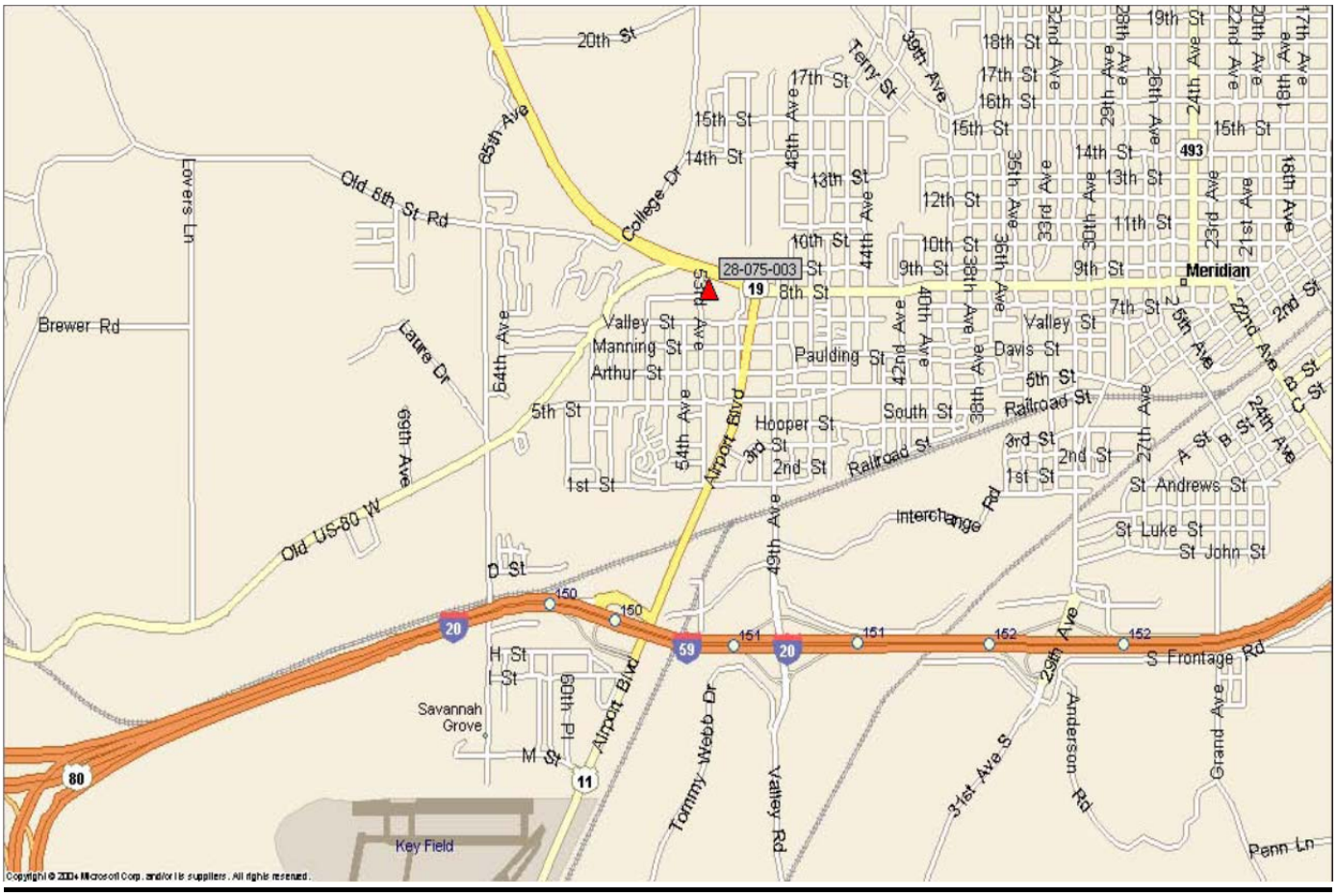
Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Annual 2nd Max	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00



Lauderdale County

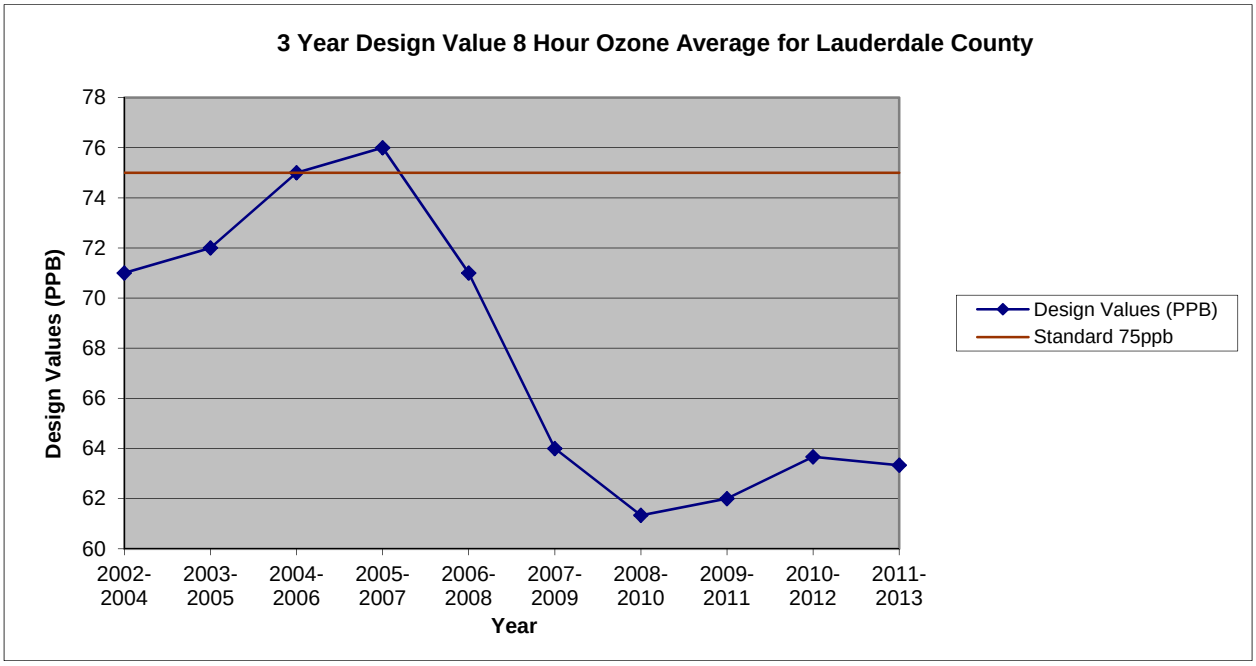


Lauderdale County
Monitoring Site No. 28-075-0003
Location

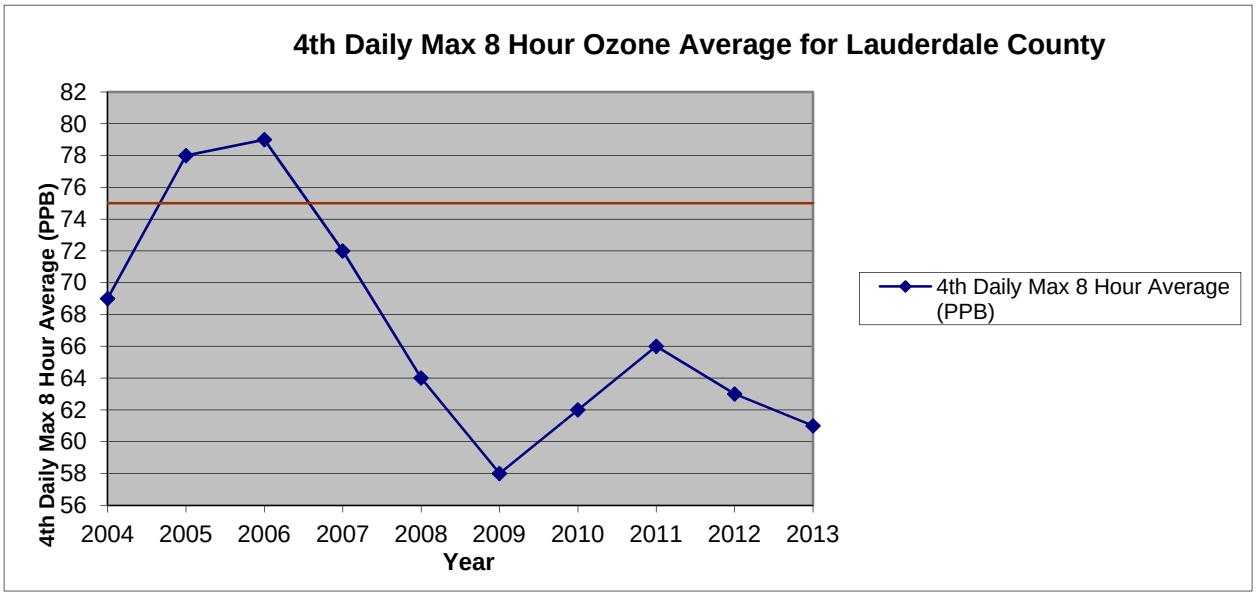


Lauderdale County
8-Hour Ozone (ppb)

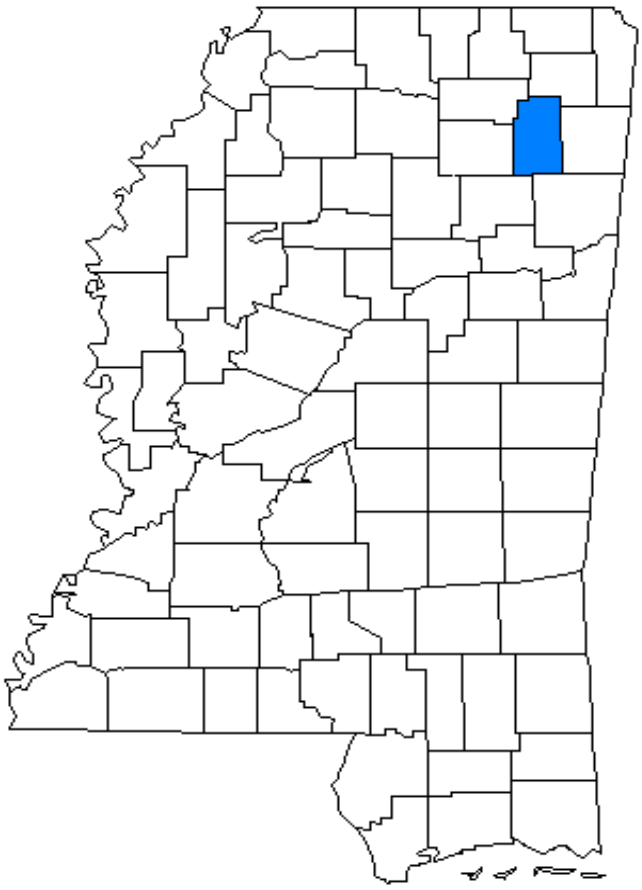
3-Year Period	2002-2004	2003-2005	2004-2006	2005-2007	2006-2008	2007-2009	2008-2010	2009-2011	2010-2012	2011-2013
Design Value	71	72	75	76	71	64	61	62	63	63



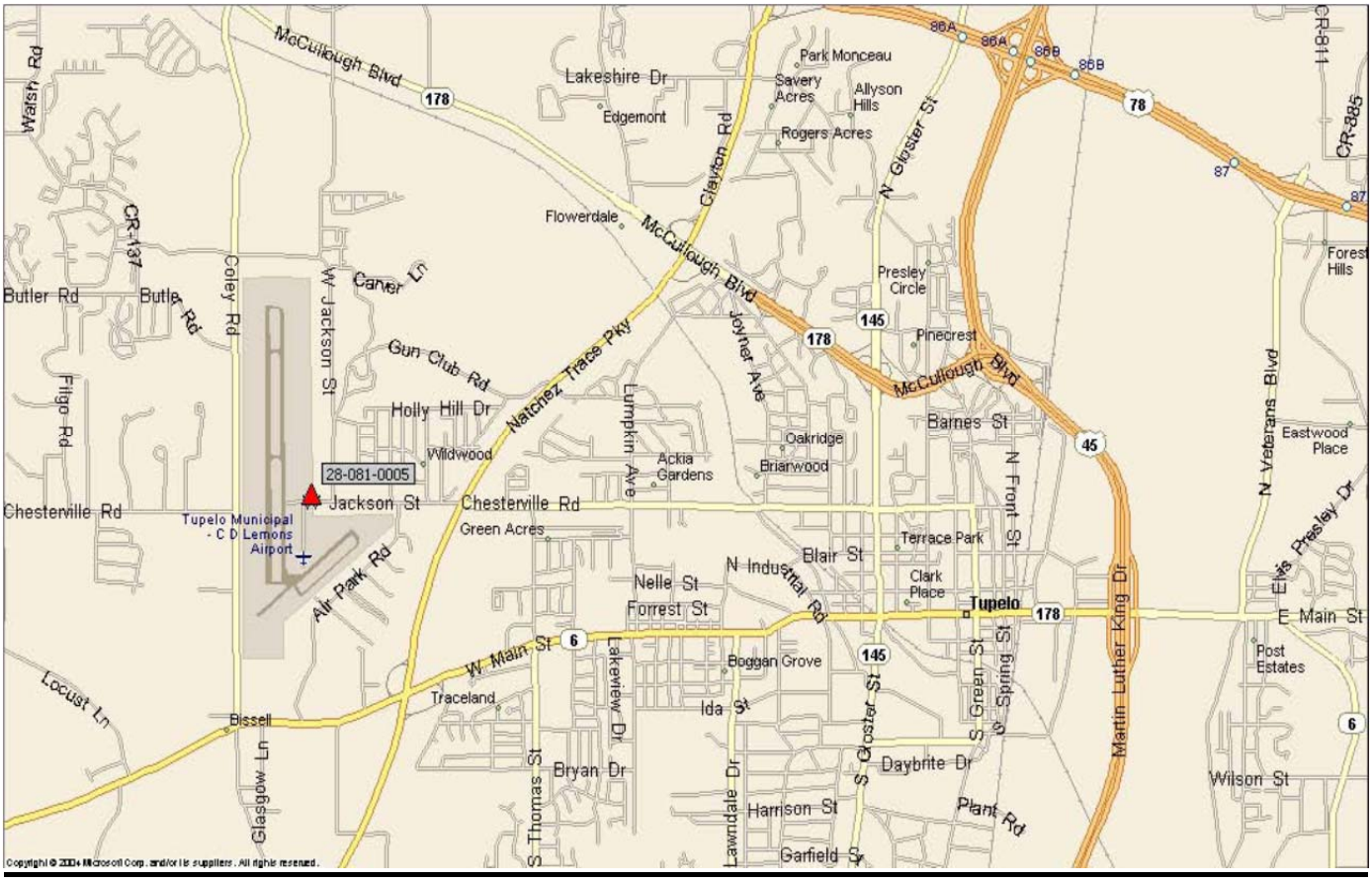
Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Annual 4th Max. 8-Hour Avg.	69	78	79	72	64	58	62	66	63	61



Lee County

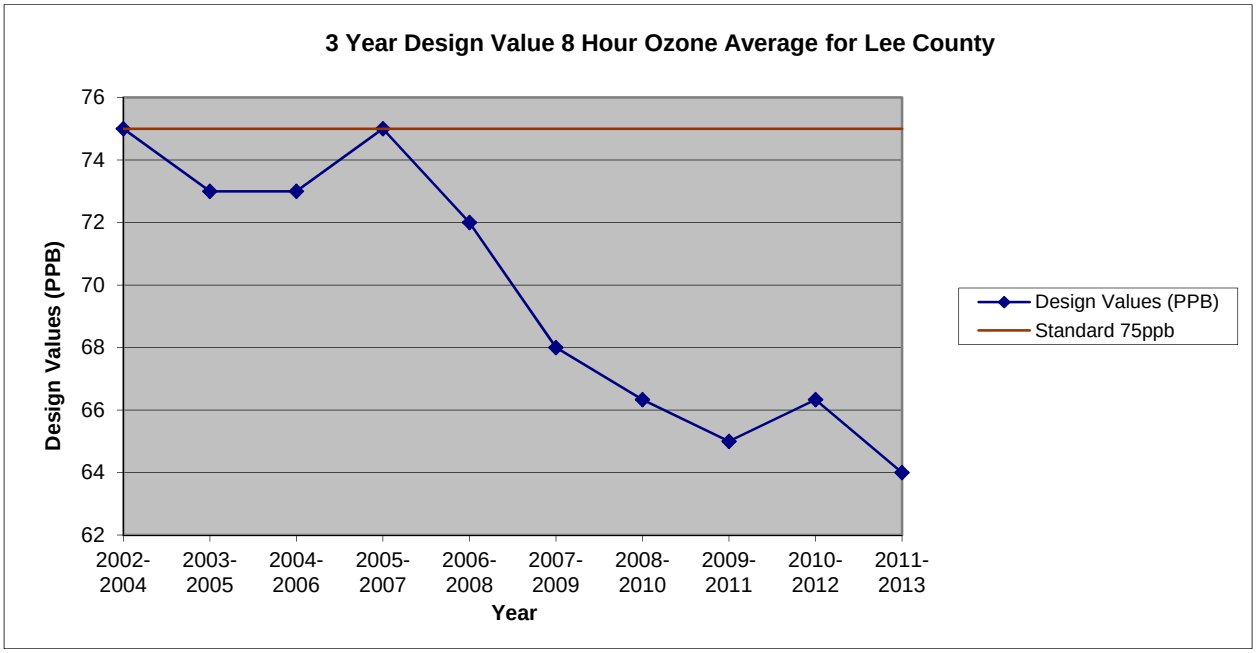


Lee County
Monitoring Site No. 28-081-0005
Location

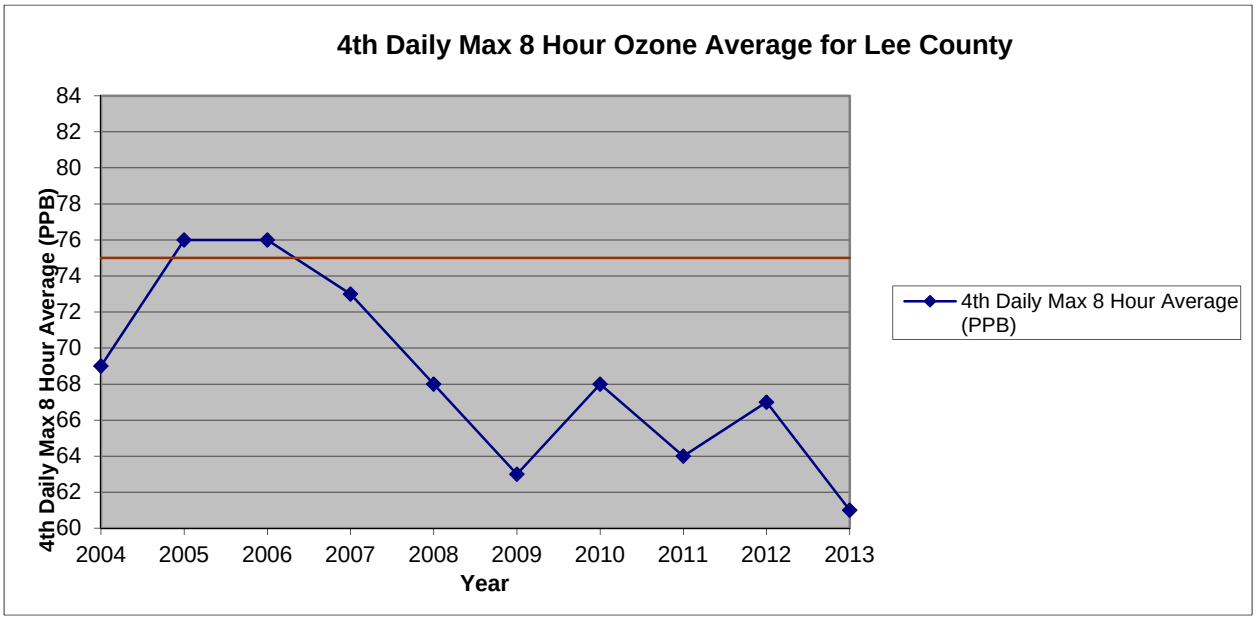


Lee County
8-Hour Ozone (ppb)

3-Year Period	2002-2004	2003-2005	2004-2006	2005-2007	2006-2008	2007-2009	2008-2010	2009-2011	2010-2012	2011-2013
Design Value	75	73	73	75	72	68	66	65	66	64



Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Annual 4th Max. 8-Hour Avg.	69	76	76	73	68	63	68	64	67	61



Appendix 2

Data Completeness By Pollutant

8-Hour Ozone
Data Completeness

Standard

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	2011	2012	2013	Standard	2011-2013
Bolivar	**75%**	92%	98%	100%	**90%**	97%
DeSoto	**75%**	100%	98%	100%	**90%**	99%
Hancock	**75%**	99%	93%	98%	**90%**	97%
Harrison	**75%**	99%	98%	95%	**90%**	97%
Hinds	**75%**	99%	99%	100%	**90%**	99%
N-CORE*	**75%**	*	*	50%*	90%*	11.2%*
Jackson	**75%**	100%	98%	97%	**90%**	98%
Lauderdale	**75%**	98%	96%	99%	**90%**	98%
Lee	**75%**	95%	100%	99%	**90%**	98%

*Site not operational until July 2013.

$PM_{2.5}$
Data Completeness

Standard

The standard for $PM_{2.5}$ data completeness is:

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

2011 Quarterly $PM_{2.5}$ Data Completeness

County	Standard	January - March	April - June	July - September	October - December
DeSoto	75%	73%	100%	84%	100%
Forrest	75%	93%	97%	100%	100%
Grenada	75%	83%	93%	77%	97%
Hancock	75%	87%	87%	97%	100%
Harrison	75%	93%	87%	100%	93%
Hinds	75%	97%	97%	97%	93%
N-CORE*	75%	*	*	*	*
Jackson	75%	97%	83%	97%	100%

2012 Quarterly $PM_{2.5}$ Data Completeness

County	Standard	January - March	April - June	July - September	October - December
DeSoto	75%	100%	100%	97%	53%
Forrest	75%	97%	93%	71%	83%
Grenada	75%	100%	97%	100%	80%
Hancock	75%	100%	100%	84%	77%
Harrison	75%	93%	87%	100%	93%
Hinds	75%	77%	70%	100%	87%
N-CORE*	75%	*	*	*	*
Jackson	75%	87%	97%	87%	67%

2013 Quarterly $PM_{2.5}$ Data Completeness

County	Standard	January - March	April - June	July - September	October - December
DeSoto	75%	97%	100%	80%	87%
Forrest	75%	93%	87%	80%	74%
Grenada	75%	90%	84%	83%	74%
Hancock	75%	100%	100%	87%	87%
Harrison	75%	100%	100%	77%	84%
Hinds	75%	97%	90%	97%	77%
N-CORE*	75	*	*	93%	81%
Jackson	75%	87%	84%	73%	84%

*Site not operational until July 2013.

PM_{10}
Data Completeness

Standard

The standard for PM_{10} data completeness is:

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

2011 Quarterly PM_{10} Data Completeness

County	Standard	January - March	April - June	July - September	October - December
N-CORE*	75%	*	*	*	*

2012 Quarterly PM_{10} Data Completeness

County	Standard	January - March	April - June	July - September	October - December
N-CORE*	75%	*	*	*	*

2013 Quarterly PM_{10} Data Completeness

County	Standard	January - March	April - June	July - September	October - December
N-CORE*	75%	*	*	86%	81%

*Site not operational until July 2013.

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.

2011 Quarterly CO Data Completeness

County	Standard	January - March	April - June	July - September	October - December
N-CORE*	**75%**	*	*	*	*

2012 Quarterly CO Data Completeness

County	Standard	January - March	April - June	July - September	October - December
N-CORE*	**75%**	*	*	*	*

2013 Quarterly CO Data Completeness

County	Standard	January - March	April - June	July - September	October - December
N-CORE*	**75%**	*	*	100%	100%

*Site not operational until July 2013.

Lead
Data Completeness

Standard

The standard for lead data completeness is:

- A quarter is complete if the average of the three constituent monthly means is greater than or equal to 75%.

2013 Quarterly Pb Data Completeness

County	Standard	July-September	August-October	Sept- Nov	October - December
N-CORE*	**75%**	93%	100%	100%	100%

*Site not operational until July 2013.

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.

2013 Annual Mean Nitrogen Dioxide Data Completeness

County	Standard	2013
Jackson	**75%**	98%

2011 Quarterly 1-Hour Nitrogen Dioxide Data Completeness

County	Standard	January - March	April - June	July - September	October - December
Jackson	**75%**	99%	99%	100%	100%

2012 Quarterly 1-Hour Nitrogen Dioxide Data Completeness

County	Standard	January - March	April - June	July - September	October - December
Jackson	**75%**	100%	99%	38%	100%

2013 Quarterly 1-Hour Nitrogen Dioxide Data Completeness

County	Standard	January - March	April - June	July - September	October - December
Jackson	**75%**	100%	100%	100%	90%

Sulfur Dioxide
Data Completeness

Standard

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.

2011 Quarterly 1-Hour Sulfur Dioxide Data Completeness

County	Standard	January - March	April - June	July - September	October - December
N-CORE*	75%	*	*	*	*
Jackson	75%	99%	100%	100%	100%

2012 Quarterly 1-Hour Sulfur Dioxide Data Completeness

County	Standard	January - March	April - June	July - September	October - December
N-CORE*	75%	*	*	*	*
Jackson	75%	100%	100%	100%	100%

2013 Quarterly 1-Hour Sulfur Dioxide Data Completeness

County	Standard	January - March	April - June	July - September	October - December
N-CORE*	75%	*	*	100%	100%
Jackson	75%	100%	100%	100%	98%

*Site not operational until July 2013.