

2022 Air Quality Annual Report

Allegheny County Air Quality

Today

Over Time

FAQs

All times are reported in Eastern Standard Time (EST), in accordance with EPA standards.

Please note that the EPA's use of EST means that when Daylight Savings Time is in effect, the reporting hours will be off by an hour.

SELECT POLLUTANT

- Fine Particulate Matter (PM2.5)
- Ozone
- Sulfur Dioxide (SO2)

What is PM2.5?

Fine particulate matter (PM2.5) consists of a mixture of solids and liquid droplets so small they are only visible with an electron microscope. These particles can be inhaled and may contain hundreds of different chemicals - some are released into the air directly, while others form when they react with other pollutants in the atmosphere.

Causes: power plants, motor vehicles, forest fires, and industrial processes

Sensitive groups: children, older adults, people with heart disease, and people with lung disease

PM2.5 Monitor Locations

Click location on map to see hourly data for that monitor
Click map or hit "escape" to clear selection



Most Recent

PM2.5 AQI

40

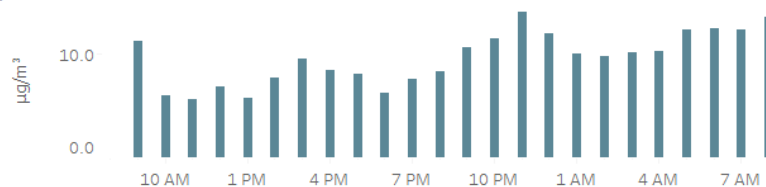
9/8/2023 8:00 AM EST
Occurred at: North Braddock

AQI: The site's current rolling 24-hour average air quality index for PM2.5.

Air Quality Index (AQI)



Last 24 Hours of PM2.5 - North Braddock



← Undo → Redo ↺ Replay ↶ Revert 🔄 Refresh ⏸ Pause ✎ Edit 🔗 Share 📄 Download 🖥 Full Screen



ALLEGHENY COUNTY HEALTH DEPARTMENT AIR QUALITY ANNUAL REPORT, 2022

A publication of the
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Annual Report for 2022
with 2002-2022 Trends

December 2023

ACHD Mission

Protect, promote, and preserve the health and well-being of all Allegheny County residents, particularly the most vulnerable.

Pictured on the front cover...

A snapshot of the ACHD's Air Quality Dashboard. The snapshot shows $PM_{2.5}$ at North Braddock. The Air Quality Dashboard can display $PM_{2.5}$ throughout all of Allegheny County or a specific site can be selected. Similarly, to $PM_{2.5}$, ozone and SO_2 can be displayed throughout all of Allegheny County, or a specific site can be selected. A second tab provides users AQI values for either $PM_{2.5}$, ozone, or SO_2 overtime. Finally, a third tab shows users answers to frequently asked questions.

Below is a map of all monitoring locations in 2022. Downtown Pittsburgh comprises the Flag Plaza site.



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Preface

This report reflects air quality as sampled and validated by the Allegheny County Health Department (ACHD) through the calendar year of 2022.

For comparison to previous years, this report also provides 2021 data and twenty-year trends. For pollutant standards that require averages over consecutive years, multi-year averages are also given. Multi-year values were calculated as specified by the U.S. Environmental Protection Agency (EPA); if the standard requires calculations on a quarterly basis, such as with PM_{2.5}, the multi-year averages were calculated as such.

Exceedances are given for pollutants. An exceedance is a concentration that goes above a standard but does not necessarily constitute a violation of a standard. For some standards, a violation is a collection of several exceedances over a multi-year period. The standards for each pollutant are described in detail in the pollutant sections.

Official validated pollutant concentrations are submitted to the EPA's Air Quality System (AQS) on a quarterly basis, and selected parameters are available at the AirData website: www.epa.gov/airdata/. Allegheny County 2022 air quality data was submitted for certification in mid-2023.

Unofficial data for ozone and PM_{2.5} are reported to the EPA's AIRNow on an hourly basis and are available at the AIRNow website: www.airnow.gov/.

Unofficial Air Quality Index (AQI) levels are also available each hour for SO₂, ozone and PM_{2.5} that are continuously monitored, via the Allegheny County website: www.alleghenycounty.us/Health-Department/Programs/Air-Quality/Air-Quality.aspx

1. Executive Summary

All exceedances of the short-term standards in 2022 are shown in the table on the next page. All other criteria pollutants were below the annual and short-term federal standards in 2022.

Ozone: The county recorded two exceedance days for 8-hour ozone in 2022. The ACHD monitors showed attainment of the 8-hour standard of 0.070 ppm for the sixth time in seven years (2015-2022). The 2016-2018 average concentration for the South Fayette monitor was 0.071 ppm. The 4th maximum concentration for 2020-2022 was 0.067 ppm.

PM_{2.5}: For particulate matter 2.5 microns or less in diameter (PM_{2.5}), none of the eight monitoring sites was above the annual standard of 12.0 µg/m³ (micrograms/cubic meter): Liberty was 10.9 µg/m³ for the years 2020-2022.

In 2022, the Liberty FRM (Federal Reference Method) PM_{2.5} monitor exceeded the 24-hour standard of 35 µg/m³ six times, leading to a 98th-percentile value of 33.5 µg/m³. Data from the Liberty PM_{2.5} monitor in Allegheny County met attainment of this standard for the past five 3-year periods.

SO₂: The 1-hour federal standard of 75 ppb was promulgated in 2010 for SO₂. To attain this standard, the 3-year average of the 99th percentile of the daily maximum 1-hour average at each monitor must not exceed 75 ppb. Data from all ACHD monitors show attainment of the federal standard for the first time at yearend 2021.

NO₂: The 1-hour federal standard of 100 ppb was promulgated in 2010 for NO₂. To attain this standard, the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor must not exceed 100 ppb. Data from all ACHD monitors show attainment of the federal standard.

In the following table, ozone short-term exceedances are for the 8-hour standard, the PM_{2.5} short-term exceedances are for the 24-hour standard and the SO₂ short-term exceedances are for the 1-hour standard.

2022 Exceedances of the Short-Term Federal Standards

Pollutant	Site	Date	Concentration	Standard
Ozone	Harrison	6/21/2022	0.076 ppm (8-hr.)	0.070 ppm
Ozone	South Fayette	6/21/2022	0.073 ppm (8-hr.)	0.070 ppm
Ozone	Harrison	6/22/2022	0.073 ppm (8-hr.)	0.070 ppm
PM _{2.5}	Liberty	6 Days	Max = 50.2 µg/m ³	35 µg/m ³
SO ₂	Liberty	3 Hours	Max = 89 ppb	75 ppb

2. Attainment of the Federal Standards

8-Hour Ozone

Allegheny County and the surrounding six counties of the Pittsburgh-Beaver Valley Area were designated nonattainment of the previous 1997 and 2008 standards (0.08 ppm and 0.075 ppm, respectively) for 8-hour ozone. The Pittsburgh-Beaver Valley Area has since been in attainment of these standards. For the 1997 standard the EPA used the 2009-2011 values to determine attainment on May 6, 2013, and for the 2008 standard the EPA used the 2013-2015 values to determine attainment on January 5, 2017. Allegheny County and surrounding counties have not been designated under the 2015 standard (0.070 ppm). The monitor at South Fayette had the highest 3-year average of 0.066 ppm for 2019-2021 in the area. The monitor at Harrison had the highest ozone levels in Allegheny County for 2020-2022 at 0.067 ppm. Allegheny County is in attainment of the current 8-hour ozone standard of 0.070 ppm at all sites based on 2020-2022 data.

PM_{2.5}

For the 1997 and 2006 standards, Allegheny County had been designated nonattainment for PM_{2.5} as part of a multi-county Pittsburgh-Beaver Valley Area. Additionally, a five-municipality Liberty-Clairton Area was designated nonattainment as a separate area within Allegheny County. These areas have since been in attainment of these standards. In 2015, Allegheny County was designated a nonattainment area for the 2012 standards, and a State Implementation Plan (SIP) was developed for the attainment of this standard to demonstrate attainment by the end of 2021. Monitored results for 2020-2022 show levels of attainment county-wide for the annual standard of 12.0 µg/m³.

SO₂

The county has monitored attainment for the annual and 24-hour SO₂ standards for 23 consecutive years. In 2013, the EPA designated a 22-municipality nonattainment area in the Monongahela Valley region of Allegheny County for the 2010 1-hour standard of 75 ppb, and a SIP has been developed for this area. The Liberty monitor is in attainment of the standard, with 2020-2022 results showing a 3-year average of 56 ppb.

Other Criteria Pollutants

For PM₁₀ the county has monitored attainment for 28 consecutive years. The EPA redesignated Allegheny County to attainment for PM₁₀ in 2003.

For 1-hour ozone, the county has monitored attainment for 25 consecutive years. The EPA redesignated Allegheny County to attainment for the 1-hour ozone standard in 2001. The EPA revoked this standard for Southwestern PA in 2005.

For CO, the county has monitored attainment for 35 consecutive years. The EPA redesignated Allegheny County to attainment for CO in 2003.

For NO₂, the county has monitored attainment for more than 35 consecutive years and has been in attainment since the announcement of the standard.

For Lead (Pb), in 2014 the county had monitored nonattainment for the first time in more than 25 years for the 0.15 µg/m³ rolling 3-month average. The county has monitored attainment in 2015, 2016 and 2017.

3. Air Monitoring Results

A. Ozone (O₃)

The federal standard for ozone is based on maximum 8-hour averages within each 8-hour block period within a calendar day. The 8-hour standard of 0.070 parts per million (ppm) must not be exceeded by the 3-year average of the 4th highest 8-hour concentrations. Since 2016, the ozone season for Allegheny County extends from March 1 through October 31.

There were two exceedance days overall for 8-hour ozone in 2022. One day included an exceedance at two monitors.

Based on predominant wind flow for Allegheny County, South Fayette is considered to represent incoming ozone levels, Lawrenceville represents ambient urban ozone levels, and Harrison represents outgoing ozone levels.

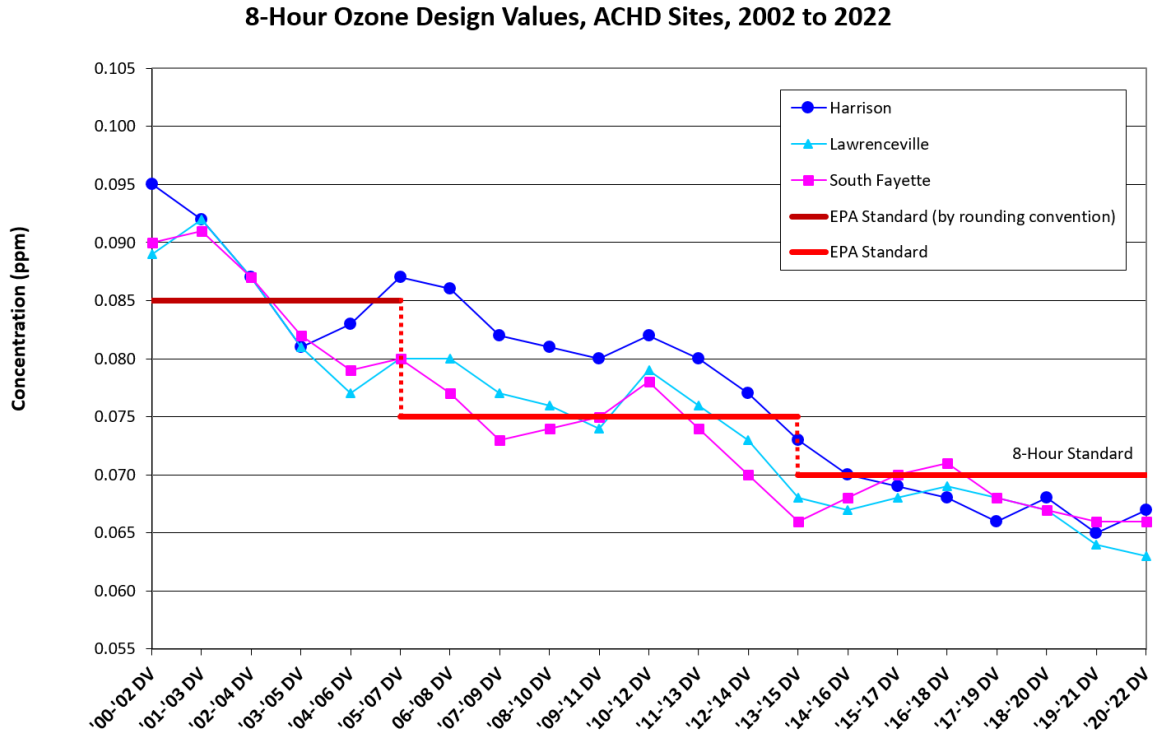
8-Hour Ozone Concentrations

Maximum 8-hour ozone concentrations and exceedance days are given below for 2022, with exceedance concentrations and days shown in red. The 2021 values are shown in gray for comparison.

8-Hour Standard = 0.070 ppm						
Site	2021 8-Hour Maximum (ppm)	2022 8-Hour Maximum (ppm)	2021 Exceedance Days	2022 Exceedance Days	2019-2021 8-Hour 3-Yr. Avg. of 4 th Max. (ppm)	2020-2022 8-Hour 3-Yr. Avg. of 4 th Max. (ppm)
Harrison	0.072	0.076	1	2	0.065	0.067
South Fayette	0.070	0.073	0	1	0.066	0.066
Lawrenceville	0.068	0.068	0	0	0.064	0.063

Note: For comparison to the standards, values are truncated at 1/1000th ppm (e.g., 0.0706 truncates to 0.070 ppm). An exceedance day is one in which any 8-hour period has an average of greater than 0.070 ppm.

Below is a chart showing the 8-hour design values for the three Allegheny County Health Department sites since 2002.



1-Hour Ozone Concentrations

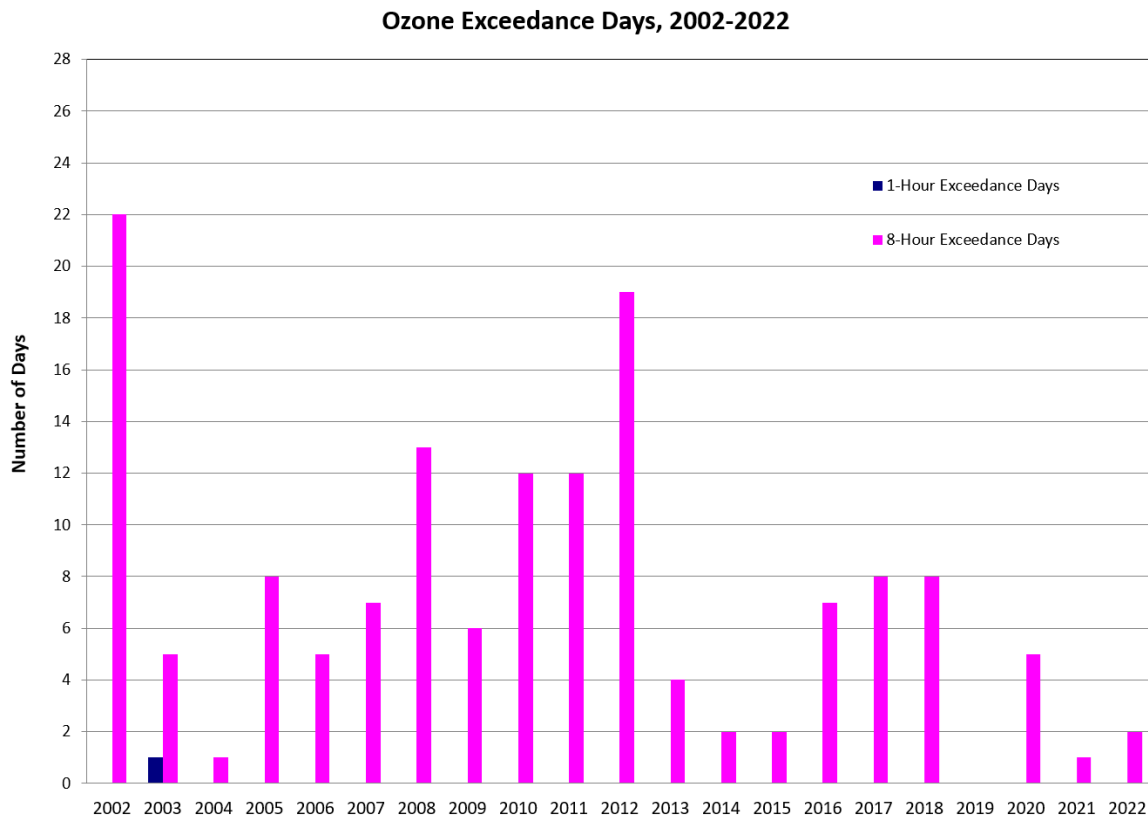
The 1-hour standard was revoked for the Pittsburgh-Beaver Valley Area in mid-2005. The former 1-hour standard of 0.12 ppm was not to be exceeded more than once a year, averaged over a 3-year period. The 1-hour ozone maximums and exceedances are given in this report for comparative purposes.

Maximum 1-hour concentrations for ozone are given in the table that follows for 2022, with 2021 values shown in gray. “Expected” exceedance days are based on the 3-year average of the actual exceedance days per year, adjusted for missing data.

Former 1-Hour Standard = 0.12 ppm						
Site	2021 1-Hour Maximum (ppm)	2022 1-Hour Maximum (ppm)	2021 Exceedance Days	2022 Exceedance Days	2019-2021 Expected Exceedance Days	2020-2022 Expected Exceedance Days
Harrison	0.079	0.084	0	0	0.0	0.0
South Fayette	0.074	0.077	0	0	0.0	0.0
Lawrenceville	0.073	0.070	0	0	0.0	0.0

Note: For comparison to the standards, values are rounded to the nearest 1/100th ppm (e.g., 0.126 rounds up to 0.13 ppm). An exceedance day is one in which any hour has a concentration of 0.125 ppm or greater. Concentrations are shown here in thousandths of ppm for detail.

Below is a chart showing ozone exceedance days, both 1-hour and 8-hour, for all Allegheny County sites over the period 2002-2022. Exceedance days represent days when at least one site exceeded the standard.



B. Particulate Matter - 2.5 microns or less (PM_{2.5})

PM_{2.5} is sampled using both intermittent filter-based and continuous monitors throughout the county. Both types of PM_{2.5} monitors can be used for comparison to the federal standard of 12.0 µg/m³ on an annual basis and 35 µg/m³ on a 24-hour basis.

The combined site records of the FRM and FEM PM_{2.5} monitors are used to determine attainment for an area. The annual federal standard for PM_{2.5} is 12.0 µg/m³ on an annual basis (3-year average). The ACHD had eight PM_{2.5} monitors across the county and additional monitors at several sites for quality assurance. The North Park monitor was discontinued in the fourth quarter of 2020.

Annual averages for 2022 are given in the table below, with 2021 averages shown in gray. The annual and 3-year standards were met in 2022.

Annual Standard = 12.0 µg/m ³				
Site	2021 Average	2022 Average	2019-2021 3-Year Average	2020-2022 3-Year Average
Liberty	11.8	11.0	11.2	10.9
North Braddock	10.7	9.3	9.9	9.7
Lawrenceville	9.8	8.4	8.8	8.6
Clairton	9.2	8.0	8.1	8.2
Harrison	8.2	7.1	8.1	7.5
South Fayette	7.8	6.5	7.3	7.0

Note: Starting April 2022, the Clairton filter-based monitor is now the quality assurance monitor.

PM_{2.5} Continuous Monitors, Annual

ACHD's six continuous PM_{2.5} monitors are used mainly for AQI reporting but can also serve as official data. The Parkway East monitor started operation in 2016 and the Avalon monitor started operation in 2017; both monitors are used to determine attainment of the federal standards. Continuous monitors at Liberty, Lawrenceville and North Braddock are only used to determine attainment of the federal standards if the filter-based monitors are not in operation. The North Braddock and Clairton monitors started operation in 2022. Continuous data, that would replace the missing filter-based monitor data, are incorporated in the above table.

Annual averages for 2022 are given in the table below, with 2021 averages shown in gray. The annual and 3-year average standards were met in 2022.

Annual Standard = 12.0 $\mu\text{g}/\text{m}^3$				
Site	2021 Average	2022 Average	2019-2021 3-Year Average	2020-2022 3-Year Average
Parkway East	10.4	9.0	10.0	9.4
Avalon	9.8	8.9	9.4	9.1

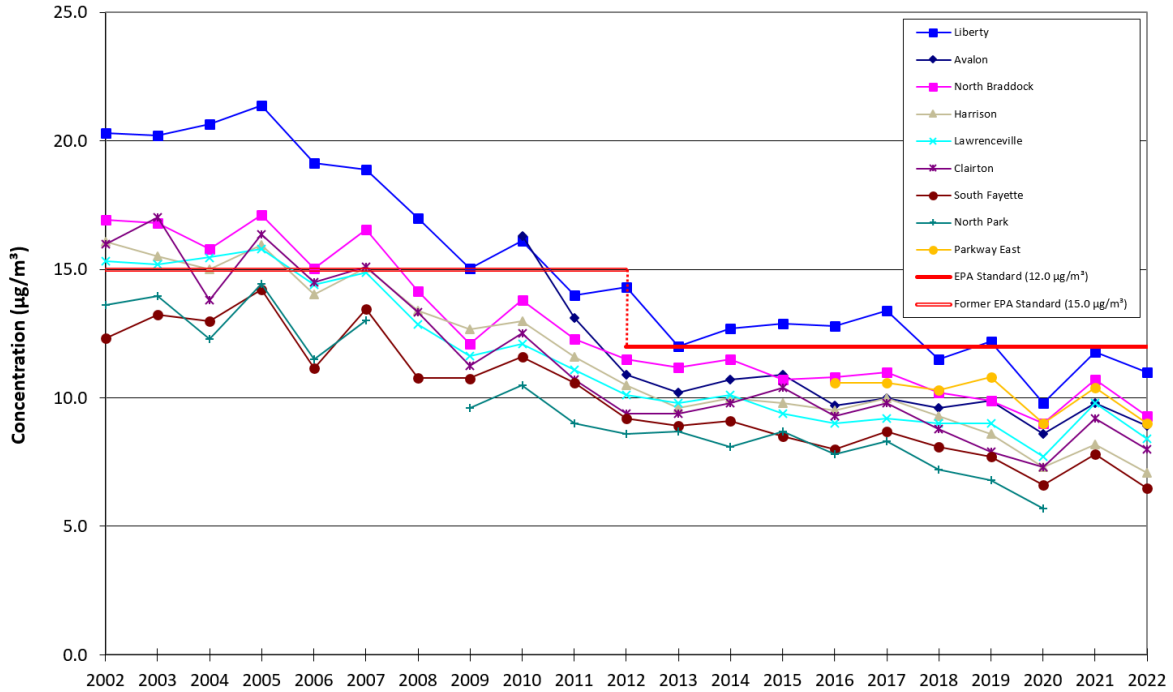
2022 FRM annual averages are shown on the map below. Sites that exceeded the standard are shown in red. 2022 FEM annual averages are also shown on the map below in blue.

2022 $\text{PM}_{2.5}$ FRM/FEM Annual Averages by Site, in $\mu\text{g}/\text{m}^3$

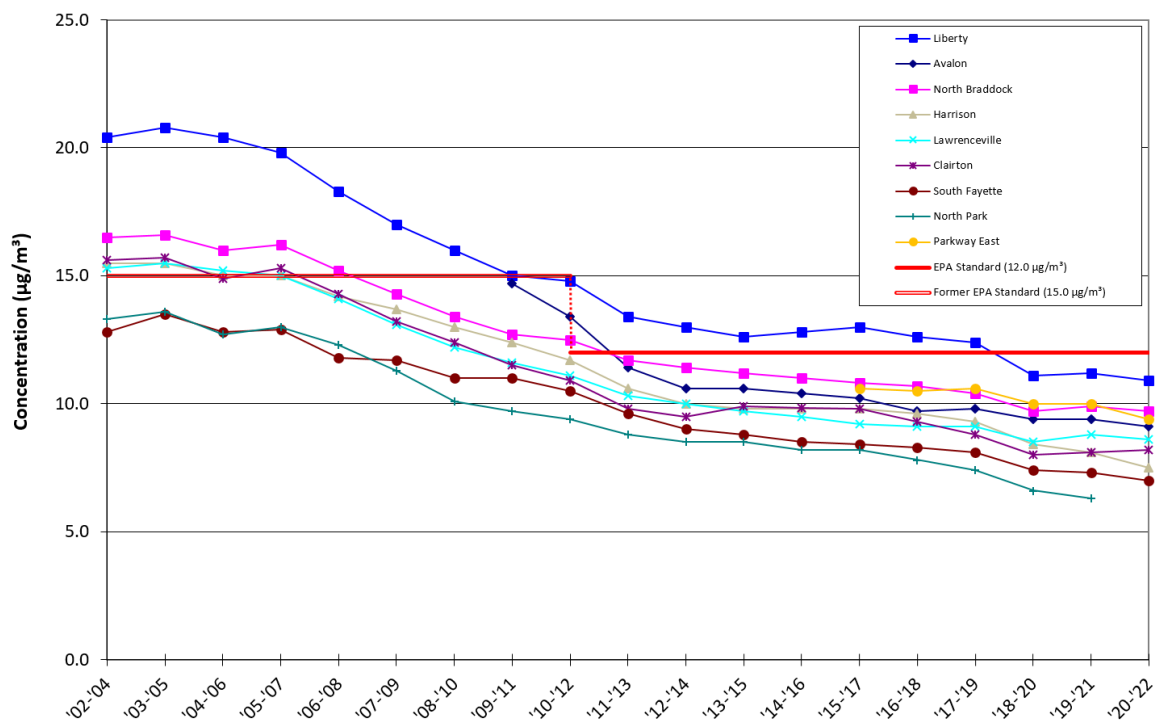


Long-term trends for the PM_{2.5} annual averages and the PM_{2.5} annual design values are shown in the charts below.

PM_{2.5} Annual Weighted Means by Year, 2002 to 2022



PM_{2.5} Annual Design Values by 3-Year Period, 2002 to 2022



The 24-hour standard for PM_{2.5} of 65 µg/m³ on a 24-hour basis (3-year average of the 98th-percentile value) was revised in December 2006 to 35 µg/m³.

The maximum 2022 24-hour concentrations and number of exceedance days are shown in the following table, with 2021 values shown in gray. The 98th-percentile values by year and by 3-year average are also shown. Exceedances in 2022 are shown in red.

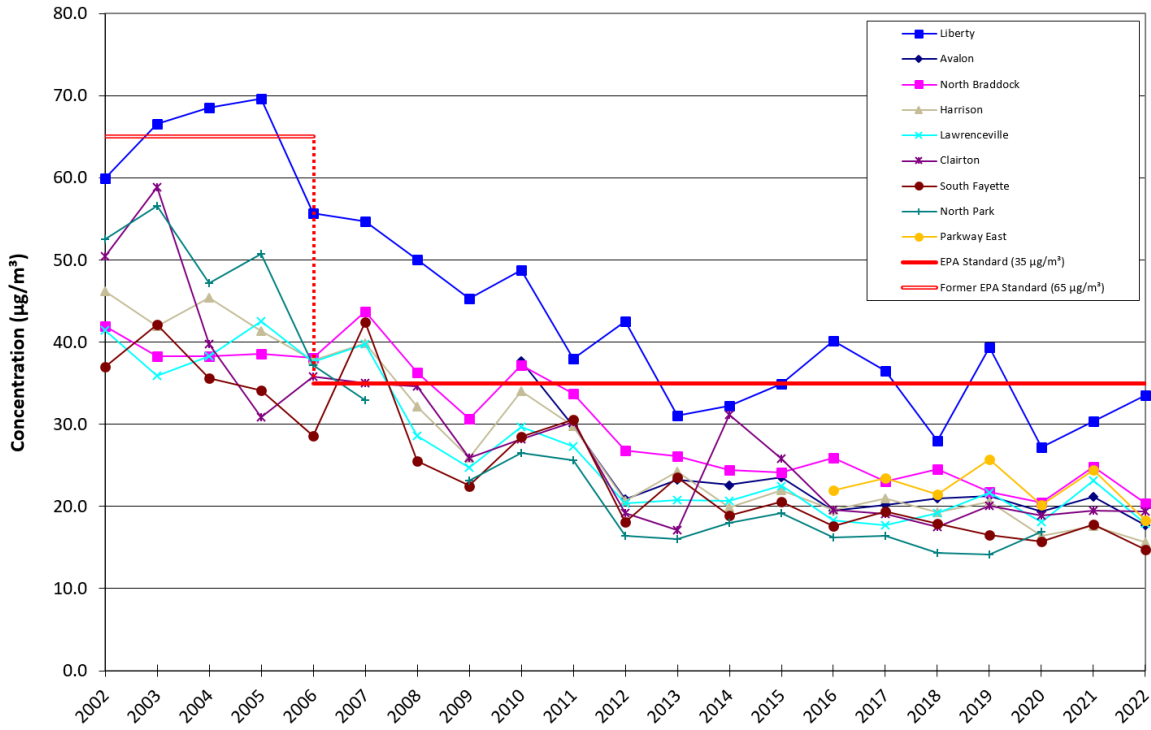
24-Hour Standard = 35 µg/m ³								
Site	2021 24-Hour Max.	2022 24-Hour Max.	2021 24-Hour Exceed.	2022 24-Hour Exceed.	2021 98 th - Percentile Value	2022 98 th - Percentile Value	2019-2021 3-Year Avg. of 98 th - Percentile	2020-2022 3-Year Avg. of 98 th - Percentile
Liberty	51.5	50.2	4	6	30.4	33.5	32.3	30.4
North Braddock	29.2	24.8	0	0	24.8	20.4	22.4	21.9
Clairton	20.7	27.1	0	0	19.5	19.4	19.5	19.3
Lawrenceville	46.7	21.8	2	0	23.1	17.9	21.0	19.7
Harrison	23.7	22.7	0	0	17.6	15.6	18.2	16.5
South Fayette	23.2	20.5	0	0	17.8	14.7	16.7	16.1

The maximum 2022 24-hour concentrations and number of exceedance days are shown in the following table, with 2021 values shown in gray. 98th-percentile values by year and by 3-year average are also shown.

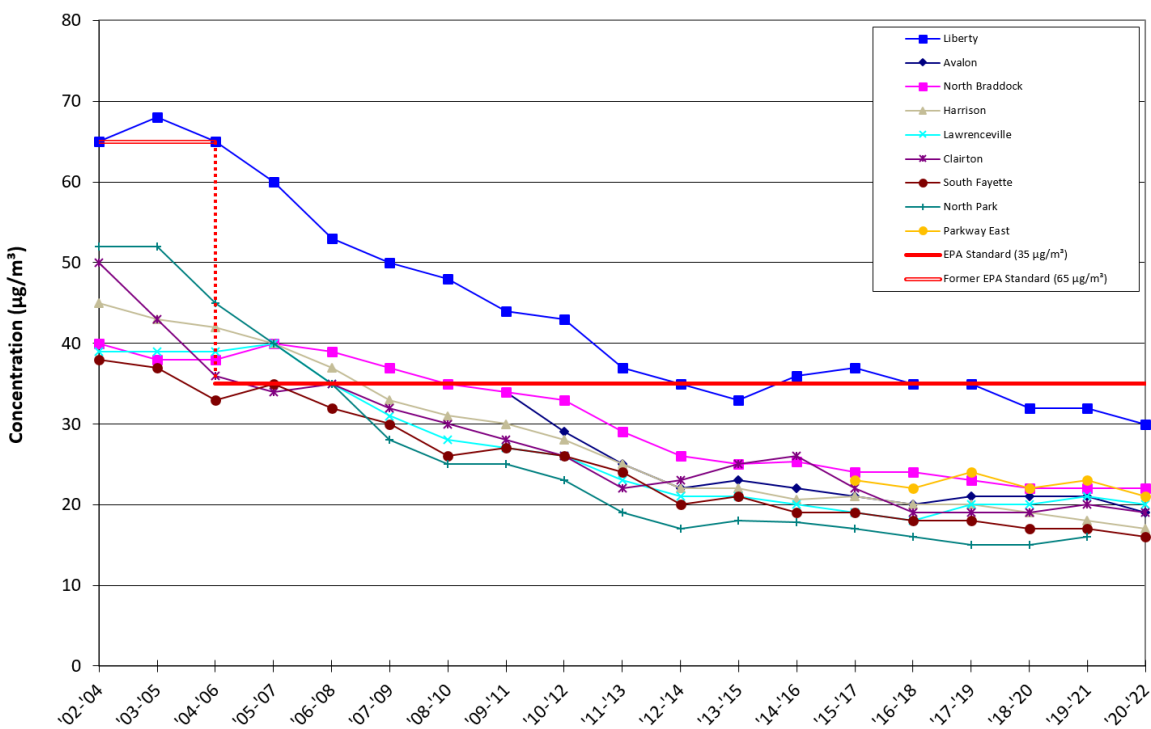
24-Hour Standard = 35 µg/m ³								
Site	2021 24-Hour Max.	2022 24-Hour Max.	2021 24-Hour Exceed.	2022 24-Hour Exceed.	2021 98 th - Percentile Value	2022 98 th - Percentile Value	2019-2021 3-Year Avg. of 98 th - Percentile	2020-2022 3-Year Avg. of 98 th - Percentile
Parkway East	59.1	24.0	2	0	24.4	18.3	23.4	21.0
Avalon	38.0	23.9	1	0	21.2	17.7	20.6	19.4

Long-term trends for the PM_{2.5} 24-hour 98th-percentile by year and the design values by 3-year period are shown in the charts that follow.

PM_{2.5} 24-Hour 98th Percentile Values by Year, 2002 to 2022



PM_{2.5} 24-Hour Design Values by 3-Year Period, 2002 to 2022



PM_{2.5} Continuous Monitors

The ACHD's six continuous PM_{2.5} monitors are used mainly for AQI reporting. The Parkway East monitor started operation in 2016 and the Avalon monitor started operation in 2017; both monitors are used to determine attainment of the federal standards. Liberty, Lawrenceville, and North Braddock 24-Hour values are only used in determining the federal standards, if the FRM sample(s) from that day is(are) voided. The Liberty continuous monitor was not used formally in determining attainment of the federal standards until 2019. The Clairton continuous monitor started capturing data April 1, 2023.

Site	Annual Standard = 12.0 µg/m ³ [FRM]			24-Hour Standard = 35 µg/m ³ [FRM]		
	2021 Average	2022 Average	2020-2022 3-Year Average	2021 24-Hour Maximum	2022 24-Hour Maximum	2020-2022 3-Year Avg. of 98 th -Percentile
Parkway East	10.4	9.0	9.4	59.1	24.0	21.0
Avalon	9.8	8.9	9.1	38.0	23.9	19.4
Clairton	--	8.3	N/A	--	27.1	N/A
Lawrenceville	10.3	8.9	N/A	46.7	23.2	N/A
Liberty	12.9	12.7	N/A	53.7	55.5	N/A
North Braddock	--	9.6	N/A	--	24.9	N/A

PM_{2.5} Speciation Monitors

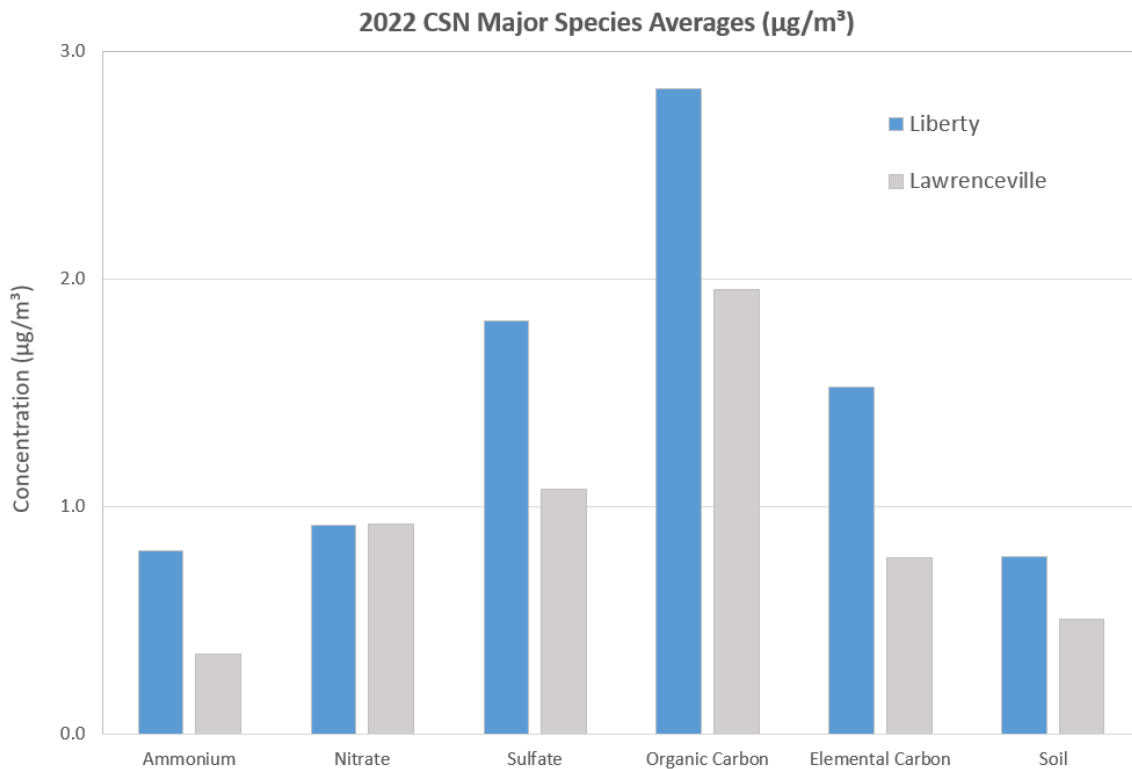
Physically, PM_{2.5} is any particle that is 2.5 microns or less in diameter. Chemically, PM_{2.5} is composed of many different chemical compounds. In addition to the FRM and continuous PM_{2.5} monitors, the county operates two PM_{2.5} speciation monitors that are used to measure specific components, or species, of the total collected sample. In the Pittsburgh metro area, the most dominant PM_{2.5} species are sulfates and organic carbon compounds.

The averages of the major species concentrations are given below. Crustal component is made up of fine soil or minute dust particles. Additional material collected by the monitors and not shown below can include particle-bound water, trace amounts of metals and non-metals, and unspciated material.

Annual averages for major species at Lawrenceville and Liberty for 2022 are given below in $\mu\text{g}/\text{m}^3$. It should be noted, that on June 16, 2022, an African dust event added a large amount of soil to the $\text{PM}_{2.5}$ speciation monitors.

Site	Ammonium	Nitrate	Sulfate	Organic Carbon	Elemental Carbon	Soil
Liberty	0.804	0.918	1.819	2.840	1.524	0.779
Lawrenceville	0.351	0.924	1.075	1.954	0.776	0.504

The 2022 major species averages are also shown in the column chart below.



C. Particulate Matter - 10 microns or less (PM₁₀)

PM₁₀ is sampled using both intermittent filter-based and continuous monitors throughout the county. Both types of PM₁₀ monitors can be used for comparison to the federal standard of 150 µg/m³ (24-hour). The 24-hour standard can be exceeded an average of once per year over a 3-year period. The PM₁₀ annual standard of 50 µg/m³ was revoked by the EPA in December 2006; annual averages have been given below for comparative purposes. The North Braddock filter-based monitor and the Monroeville continuous monitor were discontinued yearend 2015. The Avalon filter-based monitor was discontinued after the first quarter of 2017. The Manchester, South Fayette, and Liberty filter-based monitors and the Lincoln continuous monitor were discontinued in 2020. The Clairton filter-based monitor and the Flag Plaza continuous monitor were discontinued after the first quarter of 2022. The Lawrenceville continuous monitor was activated the beginning of 2022.

2022 maximums and averages are shown in the tables below, with 2021 values shown in gray. There were no exceedances in 2022.

PM₁₀ Filter-Based Monitors

	24-Hour Standard = 150 µg/m ³		Former Annual Standard = 50 µg/m ³	
Site	2021 24-Hour Maximum	2022 24-Hour Maximum	2021 Average	2022 Average
Clairton	24	10	12.3	7.8

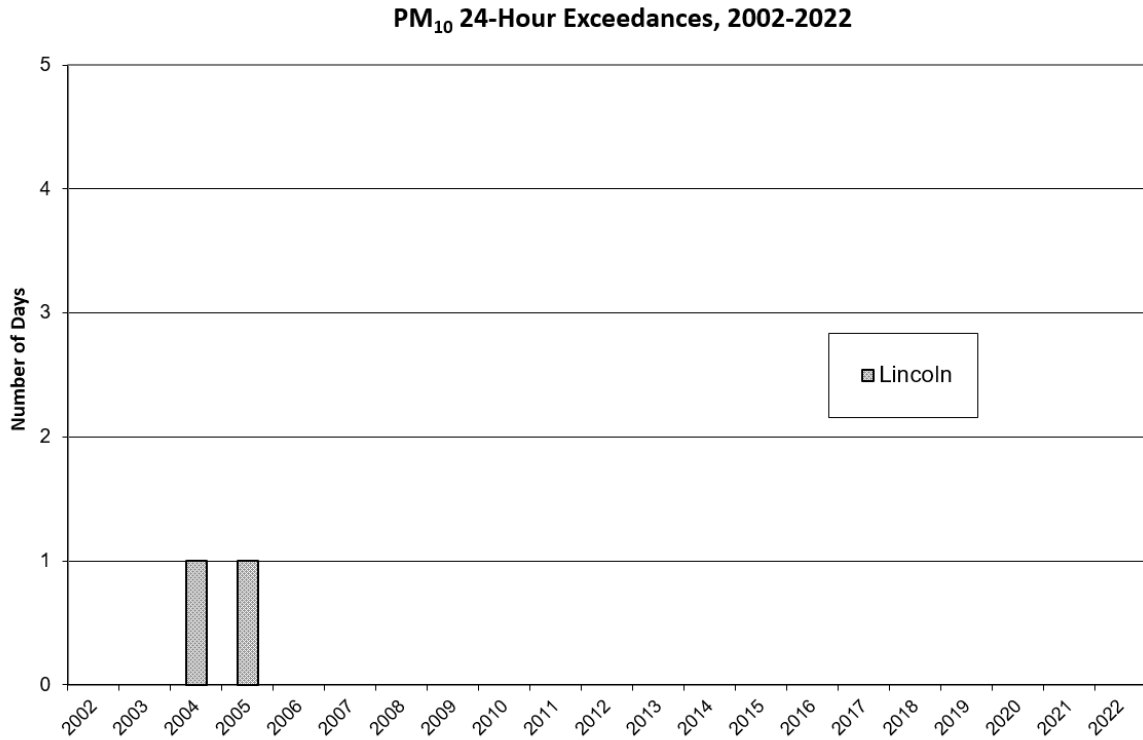
Note: Clairton was discontinued in March 2022

PM₁₀ Continuous Monitors

	24-Hour Standard = 150 µg/m ³		Former Annual Standard = 50 µg/m ³	
Site	2021 24-Hour Maximum	2022 24-Hour Maximum	2021 Average	2022 Average
North Braddock	82	70	27.9	20.5
Glassport	58	67	15.6	14.9
Lawrenceville	--	66	--	16.8
Liberty	57	59	17.7	16.5
Flag Plaza	58	36	15.1	13.2

Note: Flag Plaza was discontinued in March 2022

The following chart shows PM₁₀ 24-hour exceedances for the period 2002-2022. For sites with both filter-based and continuous monitors, data for only the filter-based monitors are shown.



D. Sulfur Dioxide (SO₂)

Sulfur dioxide is monitored at four sites in the county, mostly in industrial areas. The South Fayette monitor is used as a background monitor, providing a measurement of SO₂ entering Allegheny County from the southwest. The former primary federal standards were 0.14 ppm (24-hour average) and 0.03 ppm (annually); the 1-hour primary federal standard of 75 ppb was promulgated in 2010. To attain this standard, the 3-year average of the 99th percentile of the daily maximum 1-hour average at each monitor must not exceed 75 ppb. Maximums and averages for 2022 are shown in the table below, with 2021 values shown in gray. Exceedances in 2022 are shown in red. The Avalon SO₂ gas analyzer was discontinued in November 2020. The South Fayette SO₂ gas analyzer was discontinued after the first quarter of 2022.

Site	Former 24-Hour Std. = 0.14 ppm		Former Annual Std. = 0.03 ppm	
	2021 24-Hour Maximum	2022 24-Hour Maximum	2021 Average	2022 Average
Liberty	0.021	0.027	0.003	0.003
North Braddock	0.011	0.013	0.002	0.001
Lawrenceville	0.004	0.003	0.001	0.001
South Fayette	0.003	0.004	0.001	0.000

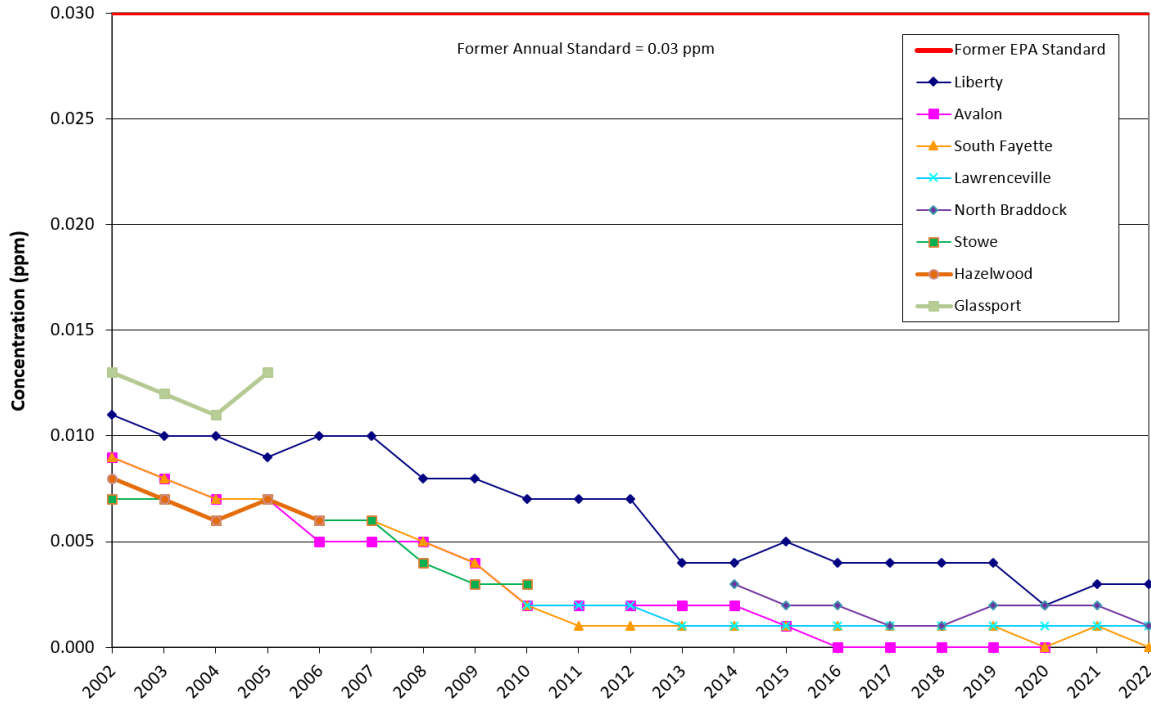
Note: South Fayette was discontinued in March 2022

Site	1-Hour Standard = 75 ppb				2022 Exceedances
	2021 1-Hour Maximum	2022 1-Hour Maximum	2019-2021 99 th percentile	2020-2022 99 th percentile	
Liberty	60	89	59	56	3
North Braddock	69	63	58	56	0
Lawrenceville	15	12	8	7	0
South Fayette	10	7	10	7	0

Note: South Fayette was discontinued in March 2022

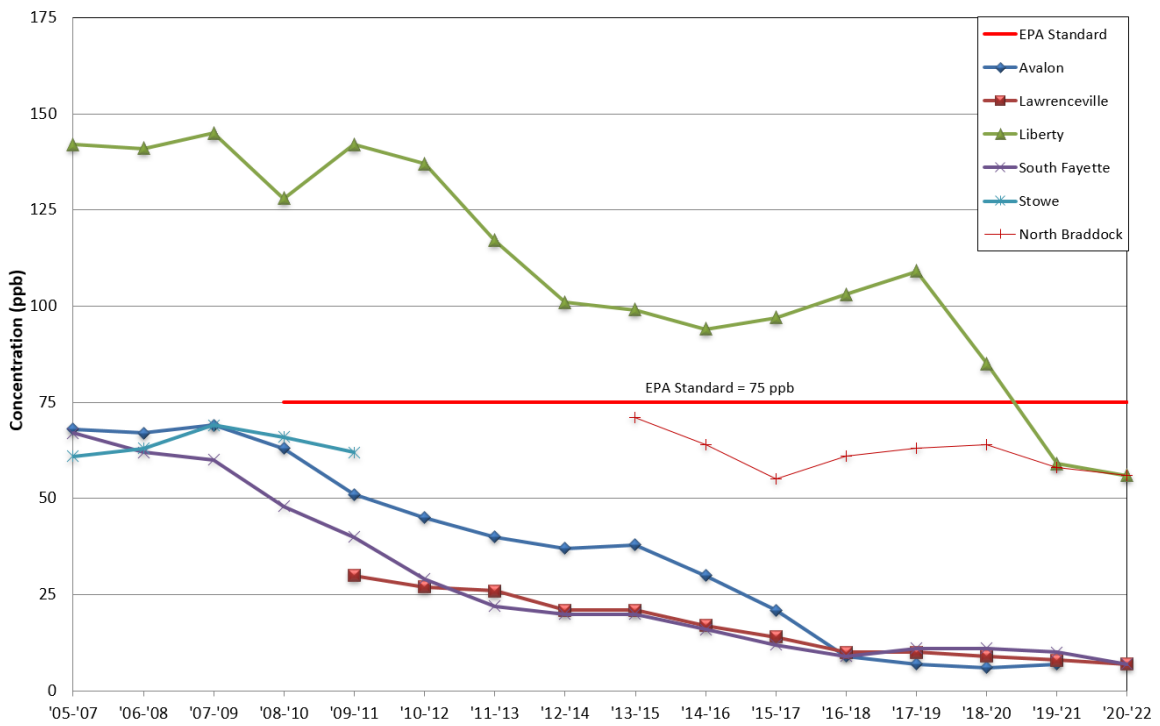
The former 24-hour standard can be exceeded once per year. Glassport was the last site to exceed the 24-hour standard in 1999. SO₂ annual average trends are shown on the following page for 2002-2022.

Sulfur Dioxide Annual Averages, 2002-2022



SO₂ one-hour design value trends are shown below for 2005-2022.

Sulfur Dioxide 1-HR Design Values, 2005 to 2022

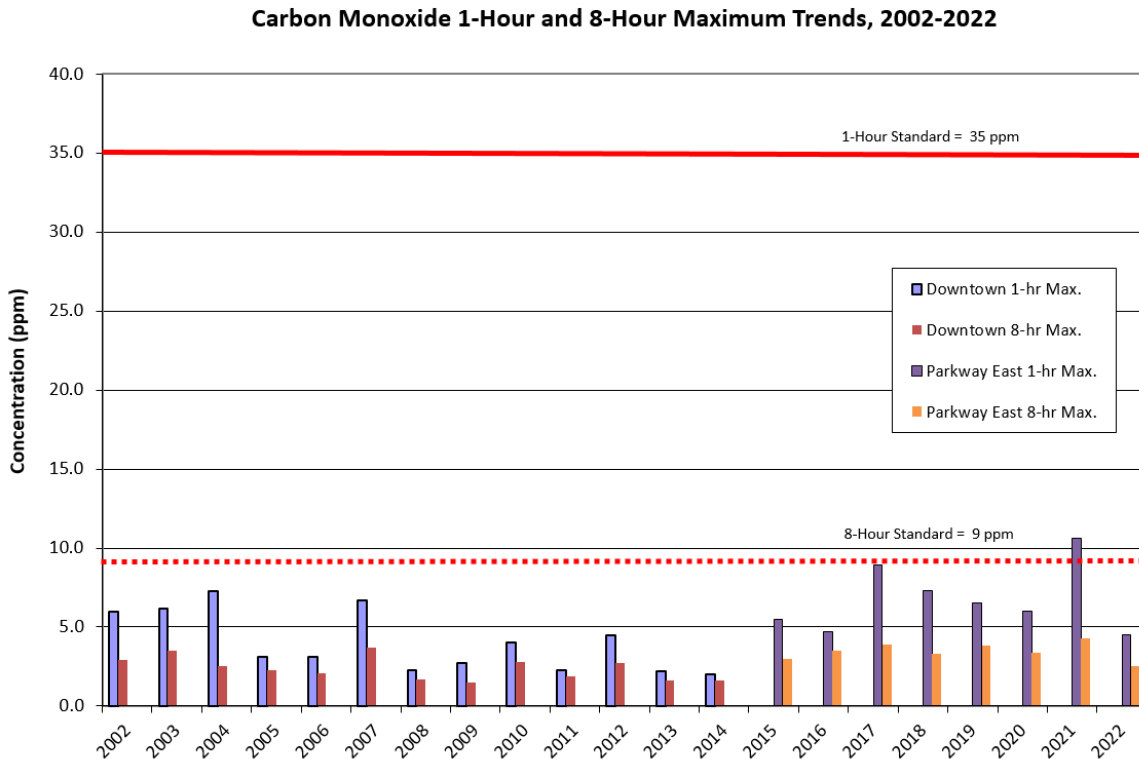


E. Carbon Monoxide (CO)

The county operates three carbon monoxide (CO) monitors. The Lawrenceville trace gas analyzer for CO started operation in 2010. The Parkway East, Near Road, trace gas analyzer for CO started operation on September 1, 2014, and the Downtown CO monitor was discontinued on August 27, 2014. The federal standards for CO are 35 ppm on an hourly basis and 9 ppm on an 8-hour average basis. Maximums for 2022 are shown in the table below, with 2021 values shown in gray. The Flag Plaza CO gas analyzer was discontinued in 2020. The North Braddock trace gas analyzer started operation in 2022.

Site	1-Hour Standard = 35 ppm		8-Hour Standard = 9 ppm	
	2021 1-Hour Maximum	2022 1-Hour Maximum	2021 8-Hour Maximum	2022 8-Hour Maximum
North Braddock	--	8.9	--	3.2
Parkway East	10.6	4.5	4.3	2.5
Lawrenceville	2.3	1.7	1.1	1.0

Carbon monoxide maximum trends are shown below for 2002-2022. The county has not exceeded the 8-hour standard since 1987.



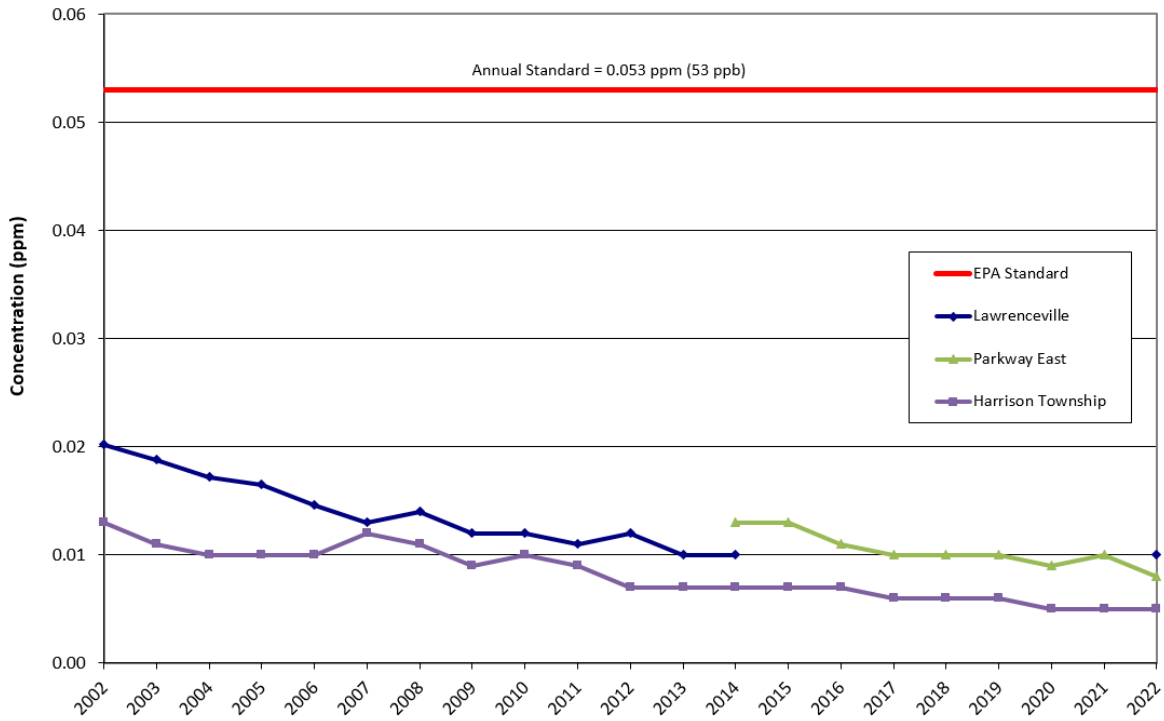
F. Nitrogen Dioxide (NO₂)

Nitrogen oxides are monitored at three sites in the county. Since 2010, the standard for NO₂ is now 0.053 ppm (53 ppb) on an annual average basis. The 1-hour federal standard 100 ppb was promulgated in 2010. To attain this standard, the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor must not exceed 100 ppb. The 2022 averages are shown in the table below, with 2021 values shown in gray. The Parkway East, Near Road, trace gas analyzer for NO₂ started operation on September 1, 2014. The Lawrenceville NO₂ monitor was discontinued on August 25, 2014 and restarted the second quarter of 2022.

Site	Annual Std. = 53 ppb		1-Hour Standard = 100 ppb			
	2021 Average	2022 Average	2021 1-Hour Maximum	2022 1-Hour Maximum	2019-2021 98 th percentile	2020-2022 98 th percentile
Lawrenceville	--	10	--	42	--	--
Parkway East	10	8	46	38	35	35
Harrison	5	5	42	37	31	30

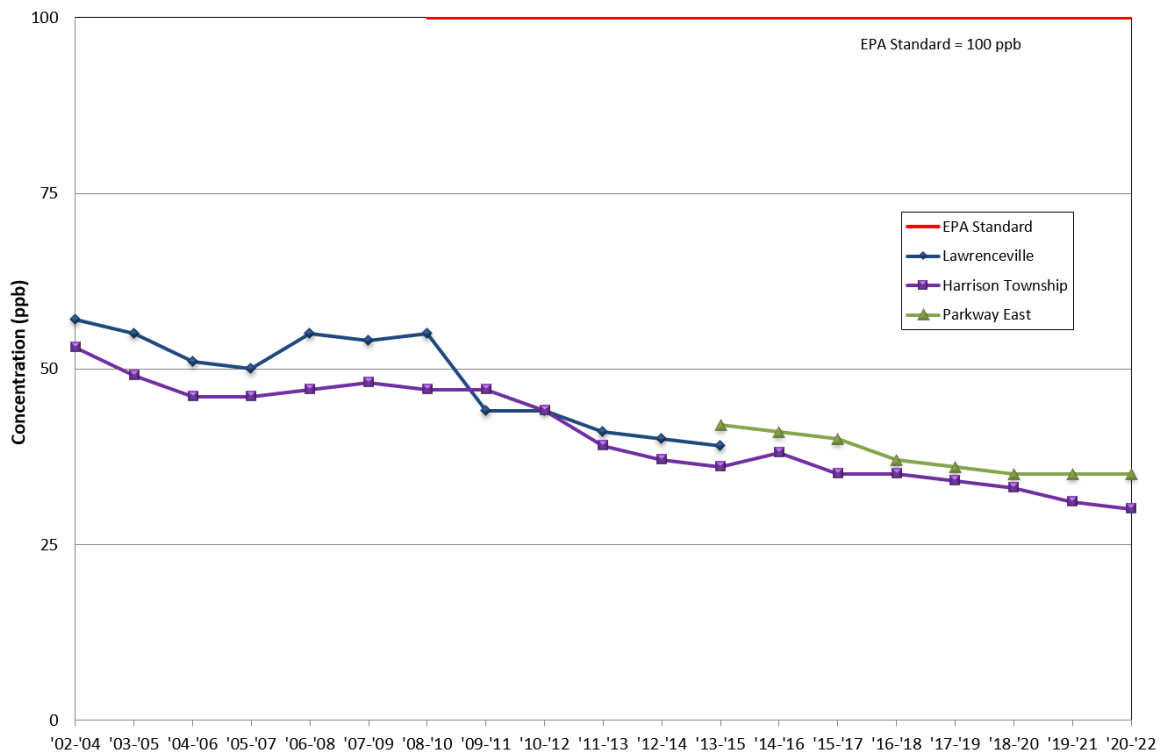
Long-term trends for NO₂ annual averages are shown on the following page for 2002-2022.

Nitrogen Dioxide Annual Averages, 2002-2022



NO₂ one-hour design value trends are shown below for 2002-2022.

Nitrogen Dioxide 1-HR Design Values, 2002 to 2022



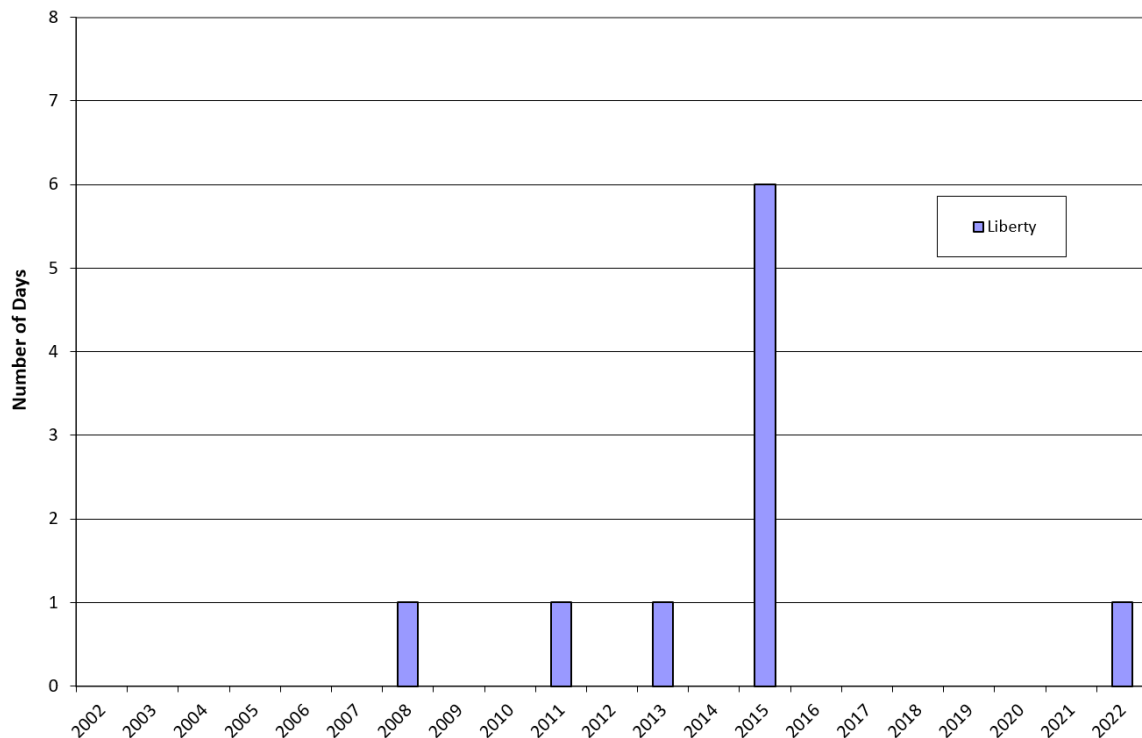
G. Hydrogen Sulfide (H₂S)

There are no federal standards for hydrogen sulfide. The Pennsylvania state standards for protection against odor nuisances are 0.1 ppm on a 1-hour basis and 0.005 ppm on a 24-hour average basis.

Hydrogen sulfide 1-hour concentrations for 2022 are given in the table below, with 2021 values shown in gray. 2022 1-hour concentrations that exceeded the standard are shown in red. Long-term exceedances for 2002-2022 are also given in the chart below. Liberty exceeded the 1-hour PA standard one time in 2022. The West Allegheny monitor started operation in May 2009 and was discontinued on August 29, 2014. The Avalon monitor was discontinued on September 15, 2020 and was installed in North Braddock on December 9, 2020.

Site	1-Hour PA Standard = 0.1 ppm			
	2021 1-Hour Maximum	2022 1-Hour Maximum	2021 Exceedances	2022 Exceedances
Liberty	0.053	0.105	0	1
North Braddock	0.081	0.045	0	0

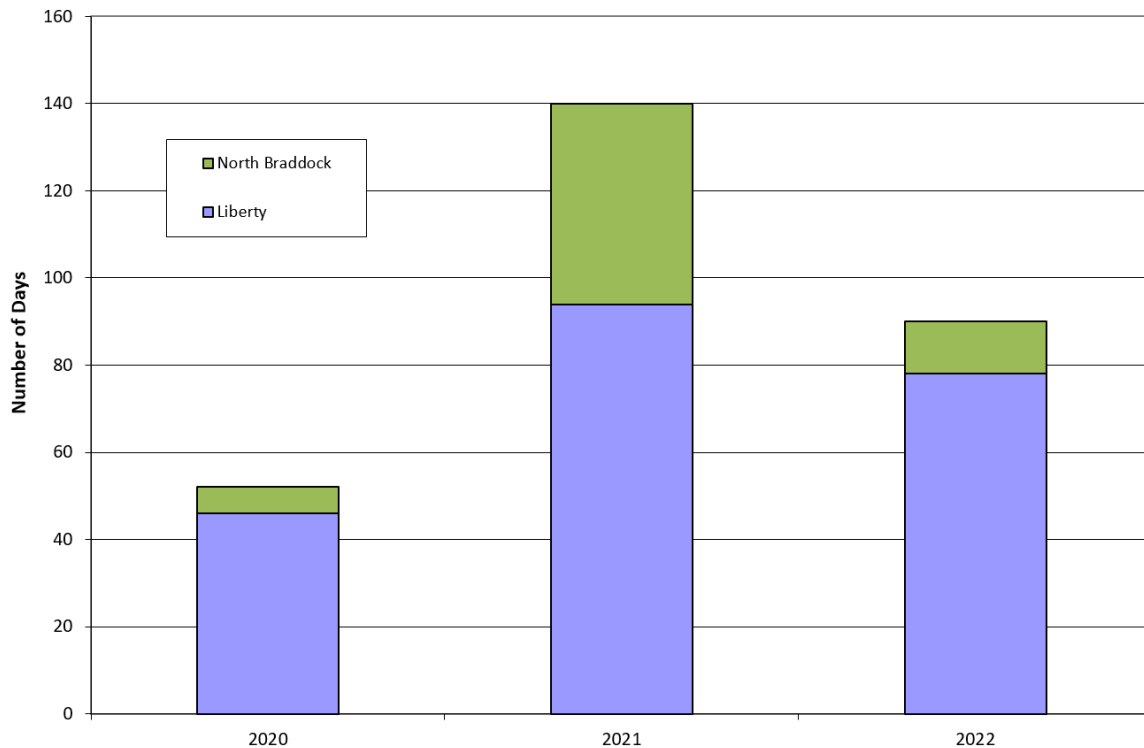
Hydrogen Sulfide 1-Hour Exceedances, 2002-2022



Hydrogen sulfide 24-hour concentrations and exceedances for 2022 are given in the following table, with 2021 values shown in gray. Long-term exceedances for 2020-2022 are also given in the chart below; these exceedances are daily maximum rolling 24-Hour averages. Exceedances for 2022 are shown in red. Each exceedance constitutes a violation of the state 24-Hour H₂S standard. The Avalon monitor was discontinued on September 15, 2020 and was installed in North Braddock on December 9, 2020.

	24-Hour PA Standard = 0.005 ppm			
Site	2021 Rolling 24-Hour Maximum	2022 Rolling 24-Hour Maximum	2021 Daily Exceedances	2022 Daily Exceedances
Liberty	0.019	0.028	94	78
North Braddock	0.015	0.011	46	12

Hydrogen Sulfide Daily Maximum Rolling 24-Hour Exceedances, 2020-2022



H. Dustfall

Dustfall (or total settled particulates) is more of a nuisance than a health hazard, in that the particles are too large to be inhaled into the respiratory system.

PA state standards for protection against dust nuisances are 0.8 mg/cm²/month (formerly 23 tons/mile²/month) on an annual average basis and 1.5 mg/cm²/month (formerly 43 tons/mile²/month) on a monthly basis.

Annual averages, monthly maximums, and exceedances for 2022 are shown in the table below, with 2021 values shown in gray. Exceedances for 2022 are shown in red. Each exceedance constitutes a violation of the state dustfall standards.

Collier, Natrona 8, and Natrona 9 dustfall collectors were in operation for 2009 and were discontinued after July 2022. North Braddock, Neville, Neville 2 and Forward dustfall collectors were discontinued year end 2008. West Deer and Russellton began operation in April 2018 and were discontinued in November 2020. The Braddock dustfall collector started operation in May of 2021. The Lawrenceville dustfall collector started operation in October 2022.

Site	Annual PA Standard = 0.8 mg/cm ² /month		Monthly PA Standard = 1.5 mg/cm ² /month		Monthly Exceedances	
	2021 Average	2022 Average	2021 Monthly Maximum	2022 Monthly Maximum	2021 Exceedances	2022 Exceedances
Natrona 9	0.84	0.98	1.58	1.51	1	1
Braddock	0.83	0.69	1.12	1.00	0	0
Natrona 8	0.42	0.57	1.17	0.89	0	0
Collier	0.58	0.46	1.55	0.69	1	0
Lawrenceville	--	0.25	--	0.31	--	0

I. Hazardous Air Pollutants (HAPs)

Hazardous Air Pollutants (HAPs), or air toxics, are a group of 188 EPA-classified pollutants that can cause cancer or other serious health effects or adverse environmental and ecological effects. HAPs have been sampled by various methods at several locations in the county. HAPs are not criteria pollutants, and there are no federal ambient standards for these compounds.

Since August 2020, Lawrenceville has been included as part of the EPA's National Air Toxics Trends Stations (NATTS) network. Starting in January 2021, Eastern Research Group, Inc. (ERG) provides most of the lab analysis of the HAPs, with metals analyzed from PM₁₀ filters provided by the WV Department of Environmental Protection (WV DEP).

The groups of Lawrenceville NATTS compounds and methods are described below, along with tables of annual average and 24-hour concentrations for 2022 and 2021. Each method collects a 24-hour (midnight-to-midnight) sample once every six calendar days.

Some compounds included in this section are not classified as HAPs but are included as part of the lab analysis. The list of HAPs, with modifications since 1990, can be found at the EPA's website: www.epa.gov/haps/initial-list-hazardous-air-pollutants-modifications.

Volatile Organic Compounds (VOCs)

Volatile Organic Compounds (VOCs) are collected by SUMMA canister via EPA Method TO-15. The compounds measured by this method include benzene, 1,3-butadiene, tetrachloroethylene (also known as perchloroethylene), vinyl chloride, ethylene oxide, and others. These compounds are given below in units of parts per billion.

Compound	2021 Average	2021 24-Hour Maximum	2022 Average	2022 24-Hour Maximum
Carbon disulfide	0.057	0.501	0.026	0.171
Propylene	0.818	1.850	0.903	2.710
Acetylene	0.812	7.970	0.597	1.900
1,2-Dichloro-1,1,2,2,tetrafluoroethane	0.015	0.019	0.017	0.024
1,3-Butadiene	0.020	0.079	0.013	0.053
n-Octane	0.031	0.092	0.031	0.076
2-methoxy-2-methyl-propane	0.000	0.000	0.000	0.003
Tert-amyl methyl ether	0.000	0.000	0.000	0.009
Tert-butyl ethyl ether	0.000	0.003	0.000	0.008
Ethyl acrylate	0.000	0.000	0.000	0.000
Methyl methacrylate	0.000	0.027	0.000	0.012
Acrolein - Verified	0.432	0.954	0.324	0.949
Methyl Isobutyl Ketone	0.060	0.218	0.036	0.115
Ethylene oxide	0.152	0.456	0.150	0.607
Acetonitrile	33.602	129.000	15.855	115.000
Acrylonitrile	0.010	0.162	0.003	0.016
Chloromethane	0.528	0.736	0.495	0.640
Methylene Chloride	0.169	0.581	0.183	0.552
Chloroform	0.027	0.056	0.024	0.041
Carbon tetrachloride	0.076	0.105	0.080	0.101
Bromoform	0.001	0.003	0.002	0.016
Trichlorofluoromethane	0.238	0.310	0.246	0.308
Chloroethane	0.019	0.105	0.013	0.029
1,1-Dichloroethane	0.000	0.002	0.001	0.011
1,1,1-Trichloroethane	0.002	0.005	0.003	0.011
1,2-Dichloroethane	0.013	0.026	0.015	0.024
Tetrachloroethylene	0.023	0.058	0.017	0.037
1,1,2,2-Tetrachloroethane	0.000	0.003	0.000	0.007
Bromomethane	0.009	0.015	0.010	0.016
1,1,2-Trichloroethane	0.000	0.000	0.000	0.010
1,1,2-Trichloro-1,2,2-trifluoroethane	0.075	0.098	0.077	0.090
Dichlorodifluoromethane	0.505	0.656	0.506	0.598
Trichloroethene	0.009	0.043	0.008	0.020
1,1-Dichloroethylene	0.000	0.000	0.000	0.009
Bromodichloromethane	0.001	0.006	0.002	0.012

Compound	2021 Average	2021 24-Hour Maximum	2022 Average	2022 24-Hour Maximum
1,2-Dichloropropane	0.000	0.008	0.001	0.015
trans-1,3-Dichloropropene	0.000	0.000	0.000	0.010
cis-1,3-Dichloropropene	0.000	0.000	0.000	0.010
Dibromochloromethane	0.000	0.004	0.001	0.012
Chloroprene	0.000	0.000	0.000	0.011
Bromochloromethane	0.000	0.001	0.000	0.009
trans-1,2-Dichloroethylene	0.002	0.018	0.003	0.015
cis-1,2-Dichloroethene	0.000	0.000	0.000	0.000
1,2-Dibromoethane	0.000	0.001	0.000	0.009
Hexachlorobutadiene	0.000	0.004	0.001	0.009
Chloroethene	0.000	0.002	0.001	0.010
m- & p-Xylene	0.154	0.462	0.107	0.398
Benzene	0.230	0.656	0.201	0.586
Toluene	0.439	1.230	0.308	0.822
Ethylbenzene	0.047	0.134	0.037	0.114
o-Xylene	0.064	0.170	0.041	0.134
1,3,5-Trimethylbenzene	0.014	0.042	0.008	0.030
1,2,4-Trimethylbenzene	0.041	0.175	0.024	0.097
Styrene	0.022	0.077	0.032	0.347
Chlorobenzene	0.002	0.012	0.001	0.006
1,2-Dichlorobenzene	0.010	0.045	0.001	0.009
1,3-Dichlorobenzene	0.000	0.006	0.001	0.009
1,4-Dichlorobenzene	0.008	0.029	0.004	0.011
1,2,4-Trichlorobenzene	0.002	0.033	0.001	0.011

Carbonyls

Carbonyl compounds are collected by DNPH cartridge via EPA Method TO-11A. The compounds measured by this method include acetaldehyde, formaldehyde, and others. These compounds below are given in units of micrograms/cubic meter ($\mu\text{g}/\text{m}^3$) at standard ambient temperature (25 °C).

Compound	2021 Average	2021 24-Hour Maximum	2022 Average	2022 24-Hour Maximum
Formaldehyde	3.352	27.600	2.308	6.090
Acetaldehyde	1.751	5.590	1.336	4.730
Propionaldehyde	0.273	0.748	0.233	0.506
Butyraldehyde	0.236	0.921	0.120	0.518
Hexanaldehyde	0.291	3.300	0.579	4.390
Valeraldehyde	0.163	0.728	0.114	0.330
Crotonaldehyde	0.051	0.523	0.015	0.064
Acetone	1.589	4.550	1.795	7.710
Methyl Ethyl Ketone	0.298	0.966	0.225	0.598
Benzaldehyde	0.142	0.648	0.129	0.603

Polycyclic Aromatic Hydrocarbons (PAHs)

Polycyclic Aromatic Hydrocarbons (PAHs) are collected by glass cartridge PUF sampling via EPA Method TO-13A. The compounds measured by this method include benzo(a)pyrene, naphthalene, and others. These compounds are often referred to as Semi-Volatile Organic Compounds (SVOCs) because they are less volatile than VOCs. These compounds are given below in units of nanograms/cubic meter (ng/m³) at standard ambient temperature (25 °C).

Compound	2021 Average	2021 24-Hour Maximum	2022 Average	2022 24-Hour Maximum
Naphthalene	59.909	206.000	54.619	191.000
Acenaphthene	3.702	22.700	3.492	12.100
Acenaphthylene	0.346	2.720	0.266	2.060
Fluorene	4.578	21.500	3.482	12.100
Phenanthrene	9.177	31.800	7.394	23.700
Anthracene	0.224	0.679	0.188	0.548
Fluoranthene	2.376	7.120	1.947	8.260
Pyrene	1.234	3.060	1.021	4.270
Chrysene	0.000	0.000	0.187	1.260
Coronene	0.072	0.353	0.064	0.204
Perylene	0.009	0.111	0.008	0.146
Benzo(a)anthracene	0.114	0.569	0.098	0.597
Benzo(b)fluoranthene	0.382	1.700	0.228	1.620
Benzo(k)fluoranthene	0.099	0.534	0.084	0.768
Benzo(e)pyrene	0.152	0.778	0.132	1.010
Dibenz(a,h)anthracene	0.015	0.158	0.016	0.102
Benzo(g,h,i)perylene	0.134	0.739	0.144	1.020
Benzo(a)pyrene	0.124	0.704	0.103	1.310
Indeno(1,2,3-c,d)pyrene	0.146	0.752	0.112	1.060

Metals (from PM₁₀)

Metals are collected by Hi-Vol PM₁₀ samplers and quartz fiber filters via EPA Method IO-3.5. The metals measured by this method include arsenic, lead, manganese, and others. These compounds are given below in units of nanograms/cubic meter (ng/m³) at local conditions (LC).

Compound	2021 Average	2021 24-Hour Maximum	2022 Average	2022 24-Hour Maximum
Arsenic	1.250	6.067	1.012	5.127
Beryllium	0.004	0.012	0.005	0.039
Cadmium	0.170	0.565	0.145	0.482
Chromium	1.601	3.640	1.701	5.687
Lead	4.574	31.733	3.334	12.878
Manganese	6.782	22.400	7.971	28.353
Nickel	0.608	1.587	0.677	1.659

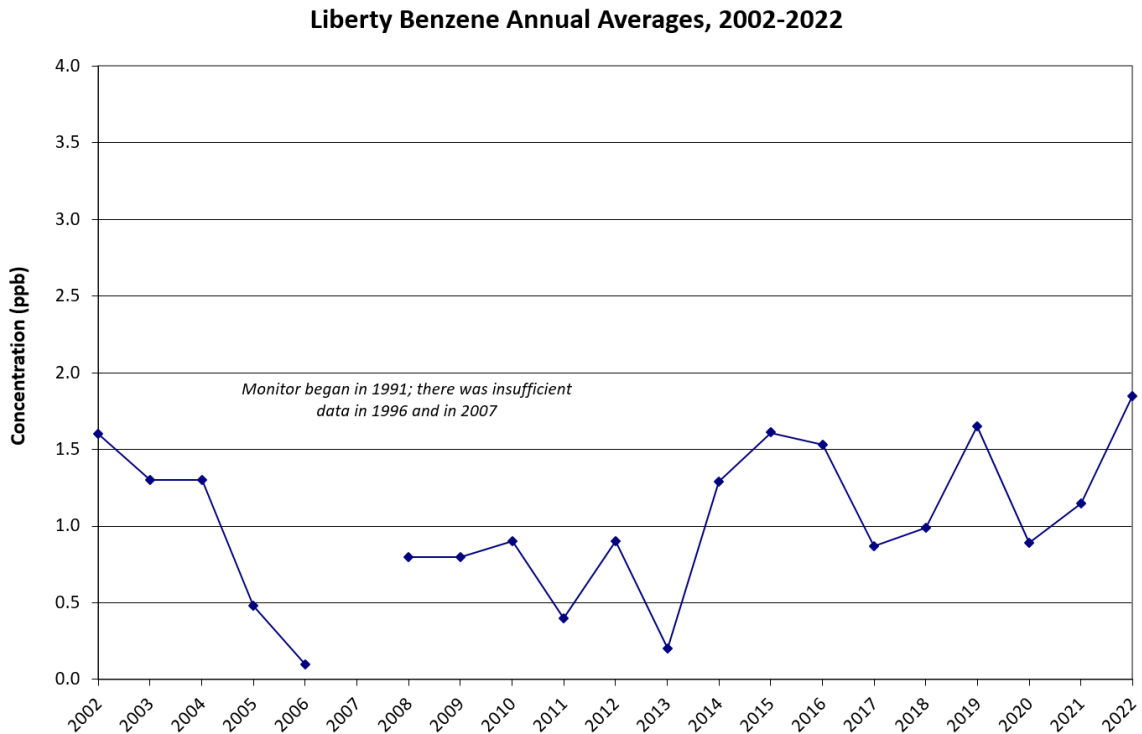
Benzene

Additionally, benzene was measured continuously at Liberty through 2013. The ACHD started monitoring benzene at Liberty in January and Avalon in April of 2014 using charcoal tubes on a 24-hour basis. Monitoring of benzene at Avalon was discontinued in 2018 but continues at Liberty. The annual average and 24-hour maximum for benzene in 2022 are shown below, with 2021 values shown in gray.

Site	2021 Average (ppb)	2021 24-Hour Maximum (ppb)	2022 Average (ppb)	2022 24-Hour Maximum (ppb)
Liberty	1.15	6.48	1.85	29.82

Note: Also, data below the Method Detection Limit (MDL) is reported as the (MDL/2); formerly zero for years 2014-2019.

A chart showing Liberty benzene annual averages for 2002-2022 is shown below. The continuous monitor began operation in 1991 and was not operational in 1996, most of 2006, 2007, and portions of 2011, 2012 and 2013.



4. Short-Term Exceedances

Exceedances of the federal short-term primary standards are listed below for the years 2008 through 2022 for each standard. Exceedances are given by year, site, number of exceedances, and maximum concentration.

Standard	Year	Site	Number of Exceedances	Maximum Concentration
24-Hour PM _{2.5} 35 µg/m ³	2008	Liberty	31	70.8 µg/m ³
	2008	N. Braddock	4	38.4 µg/m ³
	2008	Harrison	2	41.3 µg/m ³
	2008	Clairton	1	40.6 µg/m ³
	2008	Lawrenceville	1	39.7 µg/m ³
	2009	Liberty	12	92.1 µg/m ³
	2009	Harrison	1	43.5 µg/m ³
	2010	Liberty	25	69.9 µg/m ³
	2010	N. Braddock	3	40.6 µg/m ³
	2010	Lawrenceville	2	41.5 µg/m ³
	2010	Harrison	2	39.7 µg/m ³
	2010	Clairton	1	37.0 µg/m ³
	2011	Liberty	10	59.0 µg/m ³
	2011	Avalon	1	35.6 µg/m ³
	2011	N. Braddock	1	35.5 µg/m ³
	2012	Liberty	9	54.7 µg/m ³
	2013	Liberty	6	43.6 µg/m ³
	2014	Liberty	4	63.8 µg/m ³
	2015	Liberty	7	58.1 µg/m ³
	2016	Liberty	13	56.0 µg/m ³
2017	Liberty	10	77.7 µg/m ³	
2017	Parkway East	1	44.9 µg/m ³	
2017	N. Braddock	1	41.6 µg/m ³	
2018	Liberty	2	43.8 µg/m ³	
2019	Liberty	9	66.4 µg/m ³	
2020	Liberty	3	41.0 µg/m ³	
2020	Avalon	1	41.0 µg/m ³	

Standard	Year	Site	Number of Exceedances	Maximum Concentration
24-Hour PM _{2.5} 35 µg/m ³	2021	Parkway East	2	59.1 µg/m ³
	2021	Liberty	4	51.5 µg/m ³
	2021	Lawrenceville	2	46.7 µg/m ³
	2021	Avalon	1	38.0 µg/m ³
	2022	Liberty	6	50.2 µg/m ³
8-Hour Ozone 0.075 ppm	2008	Harrison	10	0.091 ppm
	2008	Lawrenceville	7	0.084 ppm
	2008	South Fayette	3	0.079 ppm
	2009	Harrison	6	0.084 ppm
	2009	Lawrenceville	1	0.077 ppm
	2010	Harrison	6	0.105 ppm
	2010	Lawrenceville	7	0.087 ppm
	2010	South Fayette	5	0.089 ppm
	2011	Harrison	10	0.085 ppm
	2011	Lawrenceville	3	0.095 ppm
	2011	South Fayette	6	0.086 ppm
	2012	Harrison	16	0.094 ppm
	2012	Lawrenceville	7	0.089 ppm
	2012	South Fayette	6	0.085 ppm
	2013	Harrison	4	0.085 ppm
2013	Lawrenceville	1	0.095 ppm	
2013	South Fayette	2	0.089 ppm	
2014	Harrison	2	0.076 ppm	
2015	Harrison	2	0.084 ppm	
0.070 ppm	2016	Harrison	1	0.076 ppm
	2016	Lawrenceville	3	0.077 ppm
	2016	South Fayette	4	0.081 ppm
	2017	Harrison	1	0.071 ppm
	2017	South Fayette	8	0.082 ppm
	2018	Harrison	5	0.087 ppm
2018	Lawrenceville	6	0.079 ppm	

Standard	Year	Site	Number of Exceedances	Maximum Concentration	
8-Hour Ozone 0.070 ppm	2018	South Fayette	3	0.078 ppm	
	2020	Harrison	4	0.077 ppm	
	2020	Lawrenceville	2	0.071 ppm	
	2020	South Fayette	2	0.071 ppm	
	2021	Harrison	1	0.072 ppm	
	2022	Harrison	2	0.076 ppm	
	2022	South Fayette	1	0.073 ppm	
	1-Hour SO ₂ 75 ppb	2010	Liberty	34	215 ppb
	2010	South Fayette	1	108 ppb	
	2010	Avalon	2	97 ppb	
2010	Stowe Township	3	93 ppb		
2011	Liberty	45	450 ppb		
2012	Liberty	43	199 ppb		
2013	Liberty	9	99 ppb		
2013	Lawrenceville	2	100 ppb		
2014	Liberty	14	122 ppb		
2014	North Braddock	5	126 ppb		
2015	Liberty	17	244 ppb		
2015	North Braddock	1	80 ppb		
2016	Liberty	4	171 ppb		
2017	Liberty	18	163 ppb		
2017	North Braddock	3	127 ppb		
2018	Liberty	11	155 ppb		
2018	North Braddock	3	113 ppb		
2019	Liberty	5	85 ppb		
2019	North Braddock	2	83 ppb		
2020	North Braddock	2	105 ppb		
2022	Liberty	1	89 ppb		

5. Air Quality Index

The Air Quality Index (AQI) is a method of quantifying air quality on any given day according to the highest measurements. The EPA’s AQI scale is shown below:

Air Quality Index (AQI) Values	Levels of Health Concern	Colors
<i>When the AQI is in this range:</i>	<i>...air quality conditions are:</i>	<i>...as symbolized by this color:</i>
0 to 50	Good	Green
51 to 100	Moderate	Yellow
101 to 150	Unhealthy for Sensitive Groups	Orange
151 to 200	Unhealthy	Red
201 to 300	Very Unhealthy	Purple
301 to 500	Hazardous	Maroon

The Pennsylvania Department of Environmental Protection (PA DEP) forecasts daily AQI levels for PM_{2.5} (year-round) and for ozone (March through October) for Southwestern Pennsylvania.

Allegheny County AQI levels based upon actual monitored results for 2008-2022 are shown in the table below, by number of days.

Year	Good Days	Moderate Days	Unhealthy for Sensitive Groups Days	Unhealthy Days
2008	187	157	20	2
2009	214	136	14	1
2010	146	163	48	8
2011	176	156	30	3
2012	136	183	46	1
2013	175	175	15	0
2014	169	179	16	1
2015	166	181	16	2
2016	177	168	20	1
2017	161	173	30	1

Year	<i>Good Days</i>	<i>Moderate Days</i>	<i>Unhealthy for Sensitive Groups Days</i>	<i>Unhealthy Days</i>
2018	159	183	22	1
2019	138	212	11	4
2020	213	141	12	0
2021	177	181	6	1
2022	184	170	10	1

The Unhealthy for Sensitive Groups range represents an exceedance level for criteria pollutants (meaning for PM_{2.5} above the 24-Hour Standard of 35 µg/m³). In Allegheny County, unhealthy days can occur during different air quality scenarios. Elevated PM_{2.5} days can be either widespread or localized and can also coexist with elevated ozone concentrations in summer months. Days in the unhealthy ranges are shown below for 2022, broken down by air quality scenario.

2022 Unhealthy Scenarios	<i>Unhealthy for Sensitive Groups Days</i>	<i>Unhealthy Days</i>
Elevated PM _{2.5} - Liberty Only	7	1
Elevated PM _{2.5} - Widespread	0	0
Elevated Sulfur Dioxide Only	0	0
Elevated Ozone Only	2	0
Elevated PM _{2.5} with Elevated Sulfur Dioxide	1	0
Elevated PM _{2.5} with Elevated Ozone	0	0
Elevated Ozone with Elevated Sulfur Dioxide	0	0
Elevated PM _{2.5} , Elevated Ozone and Elevated Sulfur Dioxide	0	0

6. Pollutants, Sources, and Health Effects

The EPA promulgated the National Ambient Air Quality Standards (NAAQS) for six criteria pollutants. In addition, the Commonwealth of Pennsylvania has also adopted standards for hydrogen sulfide (H₂S) and dustfall (total settled particulate matter). The Clean Air Act also defines Hazardous Air Pollutants (HAPs) but does not address specific ambient limits for these compounds.

<i>Pollutant</i>	<i>Primary Sources</i>	<i>Health Effects</i>
<u>Criteria Pollutants</u>		
Ozone – O ₃ (colorless gas)	Formed in hot, sunny conditions from vehicle, commercial, and industrial emissions	Respiratory problems; eye, nose, and throat irritation
Particulate Matter – PM (solid or liquid particles)	Coke plants, steel mills, power plants, road dust, vehicles	Respiratory problems; small particles may also aggravate heart conditions
Sulfur Dioxide – SO ₂ (colorless gas)	Power plants, coke plants	Respiratory problems
Carbon Monoxide – CO (colorless, odorless gas)	Motor vehicles, especially congested areas	Heart or lung disease; headache; fatigue; impaired reflexes and alertness
Nitrogen Dioxide – NO ₂ (colorless, odorless gas)	Power and industrial plants, motor vehicles	Respiratory problems; eye irritation
Lead – Pb (in particulates)	Incinerators, glass making, metallurgical facilities	Headache; fatigue; sleep and digestive disorders

<i>Pollutant</i>	<i>Primary Sources</i>	<i>Health Effects</i>
	<u>Other</u>	
Hydrogen Sulfide – H ₂ S (colorless, pungent gas)	Coke plants, waste treatment plants	Respiratory problems; eye irritation; malodorous
HAPs (often carcinogens)	Various, including motor vehicles, chemical and power plants, steel mills, dry cleaners, print shops	Can be carcinogenic; can cause birth defects
Benzo(a)pyrene – B(a)P	Coke plants	Carcinogen

7. Air Monitoring Network

Below is a table of monitor sites corresponding to pollutant types, current through 2022. Meteorological monitors (wind and temperature) are also included.

	SO ₂	CO	NO _x	O ₃	PM ₁₀	PM _{2.5}	H ₂ S	HAPs	Dustfall	Met
Flag Plaza					C					
Lawrenceville	C(T)	C(T)	C(T)	C	C	C, I(3) SPC(3)		I(6) NATTS(6)	I	C
Avalon						C				
Harrison			C	C		I(3)				
Natrona									I, I	
N. Braddock	C	C(T)			C	C, I(3)	C			C
Liberty	C				C	C, I(1) I(12) SPC(6)	C	I		C
Glassport					C					
Clairton					I(6)	C, I(6)				
South Fayette	C			C		I(3)				
Collier									I	
Braddock									I	
Parkway East		C(T)	C(T)			C, I(12)		BC		C
Total	C = 4	C = 3	C = 3	C = 3	C = 5 I = 1	C = 6 I = 8 SPC = 2	C = 2	C = 1 I = 3	I = 5	C = 4

KEY C = Continuous; I = Intermittent or Filter-Based; BC = Black Carbon (Aethalometer, Continuous data)
 (1), (3), (6), or (12) = Sampling Frequency [for example, (3) means every third day]
 SPC = Speciation; (S) = Seasonal Continuous Monitor; (T) = Trace Level Monitor
 NATTS = National Air Toxics Station: PM10 metals, volatile organic compounds, carbonyls, polycyclic aromatic hydrocarbons

Additional Information

For more information concerning Allegheny County air quality data, contact the ACHD Air Quality Program, Planning and Data Analysis Section, by calling 412-578-8120, or emailing [Shaun Vozar](mailto:Shaun.Vozar@alleghenycounty.org).

For information concerning Pennsylvania Air Quality, visit:
www.dep.state.pa.us/dep/deputate/airwaste/ag/default.htm.

For information about national air quality, visit EPA's website: www.epa.gov.

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