

# Iowa Exceedances of the National Ambient Air Quality Standards, 2023

(Reported through December 8<sup>th</sup>)



*Iowa DNR  
Ambient Air Monitoring Group*

## What Are the NAAQS?

The Clean Air Act requires EPA to set National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment. The Clean Air Act established two types of national air quality standards.

***Primary standards*** set limits to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly.

***Secondary standards*** set limits to protect public welfare, including protection against decreased visibility, or damage to animals, crops, vegetation, and buildings. The table and key on the following page lists the NAAQS for the six criteria pollutants.

# National Ambient Air Quality Standards

Pollutant	Averaging Period	Exceedance Level	Units	Form of the standard
Ozone	8hr	71	ppb	To attain this standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 70 ppb.
PM <sub>2.5</sub>	24hr	35.5	micrograms per cubic meter	To attain this standard, the 3-year average of the 98th percentile of 24-hour concentrations at each population-oriented monitor within an area must not exceed 35.5 µg/m <sup>3</sup> .
PM <sub>2.5</sub>	annual	12.05	micrograms per cubic meter	To attain this standard, the 3-year average of the weighted annual mean PM <sub>2.5</sub> concentrations from a community-oriented monitor must not exceed 12.05 µg/m <sup>3</sup> .
PM <sub>10</sub>	24hr	155	micrograms per cubic meter	Not to be exceeded more than once per year on average over 3 years.
Sulfur dioxide	1hr	75.5	ppb	Final rule signed June 2, 2010. To attain this standard, the 3-year average of the 99th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 75 ppb.
Sulfur dioxide	3hr	0.55	ppm	Not to be exceeded more than once per year.
Carbon monoxide	1hr	35.5	ppm	Not to be exceeded more than once per year.
Carbon monoxide	8hr	9.5	ppm	Not to be exceeded more than once per year.
Nitrogen dioxide	annual	0.0535	ppm	
Nitrogen dioxide	1 hr	100.5	ppb	To attain this standard, the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 0.100 ppm.
Lead	Rolling 3-month average	0.155	micrograms per cubic meter	Final rule signed October 15, 2008.

See 40CFR Part 50 for details on attainment calculations

## **Ozone Data in This Report**

Nitrogen oxides (NO<sub>x</sub>) and volatile organic compounds (VOC's) react in sunlight and hot weather and can cause ground-level ozone to form in harmful concentrations in the air. Ozone is considered a summertime pollutant and data is collected seasonally from March 1 through October 31.

Both urban and rural areas may experience high ozone levels because wind can carry ozone and the pollutants that form it hundreds of miles away from their original sources.

Ozone monitors are continuous instruments that report hourly averages for each hour of each day of the ozone season.

## **Particulate Data Used for this Report**

Particulate data in this report is from filter based samplers where the data is collected over a 24-hour period and then analyzed in a laboratory. Filter samplers are normally operated on a schedule of one sample every third day (1 in 3). In areas of high population or high concentration, the samplers may be operated on an accelerated schedule (1 in 2 or daily).

EPA has encouraged States to use automated continuous samplers to inform the public of current air quality levels. EPA has approved the use of data from certain types of continuous samplers for regulatory purposes. Data from continuous monitors that pass EPA equivalency tests is included in this report.

# Iowa NAAQS Exceedances, 2023

(Reported through December 8<sup>th</sup>)

Monitor Type	Site Location	Site Name	Exceedance Date	Concentration	Units	AQI
Ozone	Pisgah	Forestry Office	5/18/23	75	ppb	115
PM <sub>2.5</sub>	Emmetsburg	Iowa Lakes Coll.	5/18/23	46.7	µg/m <sup>3</sup>	129
PM <sub>2.5</sub>	Sioux City	Irving School	5/18/23	81.3	µg/m <sup>3</sup>	164
Ozone	Pisgah	Forestry Office	5/21/23	72	ppb	105
Ozone	Pisgah	Forestry Office	5/22/23	74	ppb	112
Ozone	Emmetsburg	Iowa Lakes Coll.	5/22/23	72	ppb	105
Ozone	Waverly	Waverly Airport	5/23/23	71	ppb	101
Ozone	Pisgah	Forestry Office	5/23/23	74	ppb	112
Ozone	North Cedar Rapids	Coggon	5/23/23	72	ppb	105
Ozone	Cedar Rapids	Linn Public Health	5/23/23	72	ppb	105
Ozone	Emmetsburg	Iowa Lakes Coll.	5/23/23	74	ppb	112
Ozone	North Davenport	Scott County Park	5/23/23	74	ppb	112
Ozone	Waverly	Waverly Airport	5/24/23	76	ppb	119
Ozone	Pisgah	Forestry Office	5/24/23	72	ppb	105
Ozone	North Cedar Rapids	Coggon	5/24/23	73	ppb	108
Ozone	Cedar Rapids	Linn Public Health	5/24/23	75	ppb	115
Ozone	Emmetsburg	Iowa Lakes Coll.	5/24/23	75	ppb	115
Ozone	North Davenport	Scott County Park	5/24/23	72	ppb	105

# Iowa NAAQS Exceedances, 2023

(Reported through December 8<sup>th</sup> Continued)

Monitor Type	Site Location	Site Name	Exceedance		Units	AQI
			Date	Concentration		
Ozone	Waverly	Waverly Airport	5/28/23	71	ppb	101
Ozone	Pisgah	Forestry Office	5/28/23	71	ppb	101
Ozone	Emmetsburg	Iowa Lakes Coll.	5/28/23	72	ppb	105
Ozone	Waverly	Waverly Airport	5/29/23	74	ppb	112
Ozone	Clinton	Rainbow Park	5/29/23	75	ppb	115
Ozone	North Cedar Rapids	Coggon	5/29/23	74	ppb	112
Ozone	Cedar Rapids	Linn Public Health	5/29/23	73	ppb	108
Ozone	North Davenport	Scott County Park	5/29/23	80	ppb	133
Ozone	Central Davenport	Jefferson Elementary	5/29/23	75	ppb	115
Ozone	Clinton	Rainbow Park	5/30/23	74	ppb	112
Ozone	North Cedar Rapids	Coggon	5/30/23	76	ppb	119
Ozone	Cedar Rapids	Linn Public Health	5/30/23	76	ppb	119
Ozone	North Davenport	Scott County Park	5/30/23	79	ppb	129
Ozone	Central Davenport	Jefferson Elementary	5/30/23	76	ppb	119
Ozone	Clinton	Rainbow Park	5/31/23	75	ppb	115
Ozone	North Davenport	Scott County Park	5/31/23	72	ppb	105
Ozone	Clinton	Rainbow Park	6/2/23	71	ppb	101
Ozone	Cedar Rapids	Linn Public Health	6/2/23	72	ppb	105

# Iowa NAAQS Exceedances, 2023

(Reported through December 8<sup>th</sup> Continued)

Monitor Type	Site Location	Site Name	Exceedance		Units	AQI
			Date	Concentration		
Ozone	North Davenport	Scott County Park	6/2/23	76	ppb	119
Ozone	Waverly	Waverly Airport	6/3/23	79	ppb	129
Ozone	Clinton	Rainbow Park	6/3/23	78	ppb	126
Ozone	Pisgah	Forestry Office	6/3/23	78	ppb	126
Ozone	North Cedar Rapids	Coggon	6/3/23	82	ppb	140
Ozone	Cedar Rapids	Linn Public Health	6/3/23	85	ppb	150
Ozone	Red Oak	Viking Lake	6/3/23	74	ppb	112
Ozone	Emmetsburg	Iowa Lakes Coll.	6/3/23	73	ppb	108
Ozone	Des Moines	Polk County Health	6/3/23	79	ppb	129
Ozone	North Des Moines	Sheldahl, Southern Crossroads	6/3/23	77	ppb	122
Ozone	North Davenport	Scott County Park	6/3/23	81	ppb	136
Ozone	Central Davenport	Jefferson Elementary	6/3/23	76	ppb	119
Ozone	Keosauqua	Lake Sugema	6/3/23	79	ppb	129
Ozone	Clinton	Rainbow Park	6/4/23	72	ppb	105
Ozone	Pisgah	Forestry Office	6/4/23	77	ppb	122
Ozone	Emmetsburg	Iowa Lakes Coll.	6/4/23	71	ppb	101
Ozone	North Davenport	Scott County Park	6/4/23	72	ppb	105
Ozone	Central Davenport	Jefferson Elementary	6/4/23	71	ppb	101



# Iowa NAAQS Exceedances, 2023

(Reported through December 8<sup>th</sup> Continued)

Monitor Type	Site Location	Site Name	Exceedance		Units	AQI
			Date	Concentration		
Ozone	Waverly	Waverly Airport	6/5/23	81	ppb	136
Ozone	Pisgah	Forestry Office	6/5/23	72	ppb	105
Ozone	North Cedar Rapids	Coggon	6/5/23	71	ppb	101
Ozone	Emmetsburg	Iowa Lakes Coll.	6/5/23	74	ppb	112
Ozone	North Des Moines	Sheldahl, Southern Crossroads	6/5/23	74	ppb	112
Ozone	North Davenport	Scott County Park	6/5/23	74	ppb	112
Ozone	Pisgah	Forestry Office	6/6/23	82	ppb	140
Ozone	Red Oak	Viking Lake	6/6/23	72	ppb	105
Ozone	Des Moines	Polk County Health	6/6/23	77	ppb	122
Ozone	North Davenport	Scott County Park	6/6/23	72	ppb	105
Ozone	Central Davenport	Jefferson Elementary	6/6/23	74	ppb	112
Ozone	Pisgah	Forestry Office	6/7/23	78	ppb	126
Ozone	Clinton	Rainbow Park	6/10/23	72	ppb	105
Ozone	Cedar Rapids	Linn Public Health	6/10/23	72	ppb	105
Ozone	North Davenport	Scott County Park	6/10/23	77	ppb	122
Ozone	Central Davenport	Jefferson Elementary	6/10/23	72	ppb	105
Ozone	Emmetsburg	Iowa Lakes Coll.	6/13/23	73	ppb	108
Ozone	Pisgah	Forestry Office	6/13/23	71	ppb	101

# Iowa NAAQS Exceedances, 2023

(Reported through December 8<sup>th</sup> Continued)

Monitor Type	Site Location	Site Name	Exceedance			AQI
			Date	Concentration	Units	
Ozone	Pisgah	Forestry Office	6/14/23	73	ppb	105
Ozone	Red Oak	Viking Lake	6/14/23	72	ppb	105
Ozone	Emmetsburg	Iowa Lakes Coll.	6/14/23	74	ppb	112
Ozone	Des Moines	Polk County Health	6/14/23	72	ppb	105
Ozone	North Des Moines	Sheldahl, Southern Crossroads	6/14/23	71	ppb	101
Ozone	Pisgah	Forestry Office	6/15/23	76	ppb	119
Ozone	Emmetsburg	Iowa Lakes Coll.	6/15/23	77	ppb	122
Ozone	Des Moines	Polk County Health	6/15/23	72	ppb	105
PM <sub>2.5</sub>	Iowa City	Hoover School	6/15/23	36.5	µg/m <sup>3</sup>	103
PM <sub>2.5</sub>	Clinton	Chancy Park	6/15/23	43.4	µg/m <sup>3</sup>	120
PM <sub>2.5</sub>	Central Davenport	Jefferson Elementary	6/15/23	38.7	µg/m <sup>3</sup>	109
PM <sub>2.5</sub>	Cedar Rapids	Linn Public Health	6/15/23	43.0	µg/m <sup>3</sup>	119
Ozone	Clinton	Rainbow Park	6/19/23	83	ppb	143
Ozone	North Cedar Rapids	Coggon	6/19/23	79	ppb	129
Ozone	Cedar Rapids	Linn Public Health	6/19/23	85	ppb	150
Ozone	North Davenport	Scott County Park	6/19/23	82	ppb	140
Ozone	Central Davenport	Jefferson Elementary	6/19/23	79	ppb	129
Ozone	Keosauqua	Lake Sugema	6/19/23	73	ppb	108

# Iowa NAAQS Exceedances, 2023

(Reported through December 8<sup>th</sup> Continued)

Monitor Type	Site Location	Site Name	Exceedance		Units	AQI
			Date	Concentration		
Ozone	Waverly	Waverly Airport	6/20/23	85	ppb	150
Ozone	Clinton	Rainbow Park	6/20/23	80	ppb	133
Ozone	Pisgah	Forestry Office	6/20/23	75	ppb	115
Ozone	North Cedar Rapids	Coggon	6/20/23	81	ppb	139
Ozone	Cedar Rapids	Linn Public Health	6/20/23	82	ppb	140
Ozone	Red Oak	Viking Lake	6/20/23	74	ppb	112
Ozone	Emmetsburg	Iowa Lakes Coll.	6/20/23	87	ppb	154
Ozone	Des Moines	Polk County Health	6/20/23	79	ppb	129
Ozone	North Des Moines	Sheldahl, Southern Crossroads	6/20/23	76	ppb	119
Ozone	North Davenport	Scott County Park	6/20/23	80	ppb	133
Ozone	Central Davenport	Jefferson Elementary	6/20/23	79	ppb	129
Ozone	Keosauqua	Lake Sugema	6/20/23	83	ppb	143
Ozone	Clinton	Rainbow Park	6/21/23	77	ppb	122
Ozone	Pisgah	Forestry Office	6/21/23	75	ppb	115
Ozone	Emmetsburg	Iowa Lakes Coll.	6/21/23	76	ppb	119
Ozone	North Davenport	Scott County Park	6/21/23	75	ppb	115
Ozone	Waverly	Waverly Airport	6/22/23	78	ppb	126
Ozone	North Cedar Rapids	Coggon	6/22/23	78	ppb	126

# Iowa NAAQS Exceedances, 2023

(Reported through December 8<sup>th</sup> Continued)

Monitor Type	Site Location	Site Name	Exceedance			
			Date	Concentration	Units	AQI
Ozone	Cedar Rapids	Linn Public Health	6/22/23	80	ppb	133
Ozone	Emmetsburg	Iowa Lakes Coll.	6/22/23	75	ppb	115
Ozone	Des Moines	Polk County Health	6/22/23	73	ppb	108
Ozone	North Davenport	Scott County Park	6/22/23	73	ppb	108
Ozone	Waverly	Waverly Airport	6/23/23	75	ppb	115
Ozone	Clinton	Rainbow Park	6/23/23	71	ppb	101
Ozone	North Cedar Rapids	Coggon	6/23/23	76	ppb	119
Ozone	Cedar Rapids	Linn Public Health	6/23/23	78	ppb	126
Ozone	Des Moines	Polk County Health	6/23/23	77	ppb	122
Ozone	North Des Moines	Sheldahl, Southern Crossroads	6/23/23	72	ppb	105
Ozone	North Davenport	Scott County Park	6/23/23	77	ppb	122
Ozone	Central Davenport	Jefferson Elementary	6/23/23	76	ppb	119
Ozone	Clinton	Rainbow Park	6/24/23	75	ppb	115
Ozone	North Davenport	Scott County Park	6/24/23	74	ppb	112
Ozone	Cedar Rapids	Linn Public Health	6/27/23	71	ppb	101
Ozone	Central Davenport	Jefferson Elementary	6/27/23	72	ppb	105
PM <sub>2.5</sub>	Iowa City	Hoover School	6/27/23	102.1	µg/m <sup>3</sup>	175
PM <sub>2.5</sub>	Clinton	Chancy Park	6/27/23	93.1	µg/m <sup>3</sup>	170

# Iowa NAAQS Exceedances, 2023

(Reported through December 8<sup>th</sup> Continued)

Monitor Type	Site Location	Site Name	Exceedance			
			Date	Concentration	Units	AQI
PM <sub>2.5</sub>	Central Davenport	Jefferson Elementary	6/27/23	93.1	µg/m <sup>3</sup>	170
PM <sub>2.5</sub>	Cedar Rapids	Linn Public Health	6/27/23	95.1	µg/m <sup>3</sup>	171
PM <sub>2.5</sub>	Muscatine	Muscatine H.S. East Campus	6/27/23	93.0	µg/m <sup>3</sup>	170
PM <sub>2.5</sub>	Des Moines	Des Moines, Health Dept.	6/27/23	52.3	µg/m <sup>3</sup>	142
PM <sub>2.5</sub>	Des Moines	Public Works	6/27/23	59.6	µg/m <sup>3</sup>	153
Ozone	Clinton	Rainbow Park	6/28/23	86	ppb	151
Ozone	North Cedar Rapids	Coggon	6/28/23	73	ppb	108
Ozone	North Davenport	Scott County Park	6/28/23	79	ppb	129
Ozone	Central Davenport	Jefferson Elementary	6/28/23	76	ppb	119
PM <sub>2.5</sub>	Iowa City	Hoover School	6/28/23	116.9	µg/m <sup>3</sup>	183
PM <sub>2.5</sub>	Clinton	Chancy Park	6/28/23	133.1	µg/m <sup>3</sup>	191
PM <sub>2.5</sub>	Central Davenport	Jefferson Elementary	6/28/23	127.5	µg/m <sup>3</sup>	188
PM <sub>2.5</sub>	Muscatine	Muscatine H.S. East Campus	6/28/23	125.5	µg/m <sup>3</sup>	187
PM <sub>2.5</sub>	Cedar Rapids	Linn Public Health	6/28/23	110.0	µg/m <sup>3</sup>	179
PM <sub>2.5</sub>	Des Moines	Des Moines, Health Dept.	6/28/23	63.1	µg/m <sup>3</sup>	155
PM <sub>2.5</sub>	Des Moines	Public Works	6/28/23	76.8	µg/m <sup>3</sup>	162
PM <sub>10</sub>	Buffalo	Linwood Mining	6/28/23	160	µg/m <sup>3</sup>	103
PM <sub>2.5</sub>	Iowa City	Hoover School	6/29/23	100.6	µg/m <sup>3</sup>	188

# Iowa NAAQS Exceedances, 2023

(Reported through December 8<sup>th</sup> Continued)

Monitor Type	Site Location	Site Name	Exceedance			
			Date	Concentration	Units	AQI
PM <sub>2.5</sub>	Clinton	Chancy Park	6/29/23	78.9	µg/m <sup>3</sup>	163
PM <sub>2.5</sub>	Central Davenport	Jefferson Elementary	6/29/23	67.0	µg/m <sup>3</sup>	157
PM <sub>2.5</sub>	Cedar Rapids	Linn Public Health	6/29/23	103.3	µg/m <sup>3</sup>	176
PM <sub>2.5</sub>	Des Moines	Des Moines, Health Dept.	6/29/23	38.3	µg/m <sup>3</sup>	108
PM <sub>2.5</sub>	Des Moines	Public Works	6/29/23	41.9	µg/m <sup>3</sup>	117
PM <sub>2.5</sub>	Waterloo	Water Tower	6/29/23	56.2	µg/m <sup>3</sup>	151
PM <sub>2.5</sub>	Muscatine	Muscatine H.S. East Campus	6/29/23	76.0	µg/m <sup>3</sup>	162
PM <sub>2.5</sub>	Keosauqua	Lake Sugema	6/29/23	38.7	µg/m <sup>3</sup>	109
PM <sub>2.5</sub>	Clinton	Rainbow Park	6/29/23	84.1	µg/m <sup>3</sup>	166
PM <sub>2.5</sub>	Muscatine	Greenwood Cemetery	6/29/23	76.8	µg/m <sup>3</sup>	162
PM <sub>2.5</sub>	Muscatine	Musser Park	6/29/23	77.6	µg/m <sup>3</sup>	162
PM <sub>2.5</sub>	Davenport	Hayes School	6/29/23	70.5	µg/m <sup>3</sup>	159
PM <sub>2.5</sub>	Des Moines	Des Moines, Health Dept.	7/15/23	44.5	µg/m <sup>3</sup>	123
PM <sub>2.5</sub>	Des Moines	Public Works	7/15/23	47.4	µg/m <sup>3</sup>	130
PM <sub>2.5</sub>	Muscatine	Muscatine H.S. East Campus	7/16/23	52.3	µg/m <sup>3</sup>	142
PM <sub>2.5</sub>	Iowa City	Hoover School	7/16/23	49.5	µg/m <sup>3</sup>	135
PM <sub>2.5</sub>	Central Davenport	Jefferson Elementary	7/16/23	45.3	µg/m <sup>3</sup>	125
PM <sub>2.5</sub>	Cedar Rapids	Linn Public Health	7/16/23	46.9	µg/m <sup>3</sup>	129

# Iowa NAAQS Exceedances, 2023

(Reported through December 8<sup>th</sup> Continued)

Monitor Type	Site Location	Site Name	Exceedance Date	Concentration	Units	AQI
PM <sub>2.5</sub>	Des Moines	Des Moines, Health Dept.	7/16/23	61.6	µg/m <sup>3</sup>	154
PM <sub>2.5</sub>	Des Moines	Public Works	7/16/23	67.2	µg/m <sup>3</sup>	157
PM <sub>2.5</sub>	Emmetsburg	Iowa Lakes Coll.	9/6/23	41.6	µg/m <sup>3</sup>	116
PM <sub>2.5</sub>	Red Oak	Viking Lake	9/6/23	50.0	µg/m <sup>3</sup>	137
PM <sub>2.5</sub>	Sioux City	Irving School	9/6/23	58.0	µg/m <sup>3</sup>	152
PM <sub>2.5</sub>	Council Bluffs	Franklin School	9/6/23	55.5	µg/m <sup>3</sup>	151

# Iowa NAAQS Exceedances, 2023

(Reported through December 8<sup>th</sup>)

Date	PM <sub>2.5</sub>	PM <sub>10</sub>	Ozone	SO <sub>2</sub>	Lead
5/18/23	2		1		
5/21/23			1		
5/22/23			2		
5/23/23			6		
5/24/23			6		
5/28/23			3		
5/29/23			6		
5/30/23			5		
5/31/23			2		
6/2/23			3		
6/3/23			12		
6/4/23			5		
6/5/23			6		
6/6/23			5		
6/7/23			1		



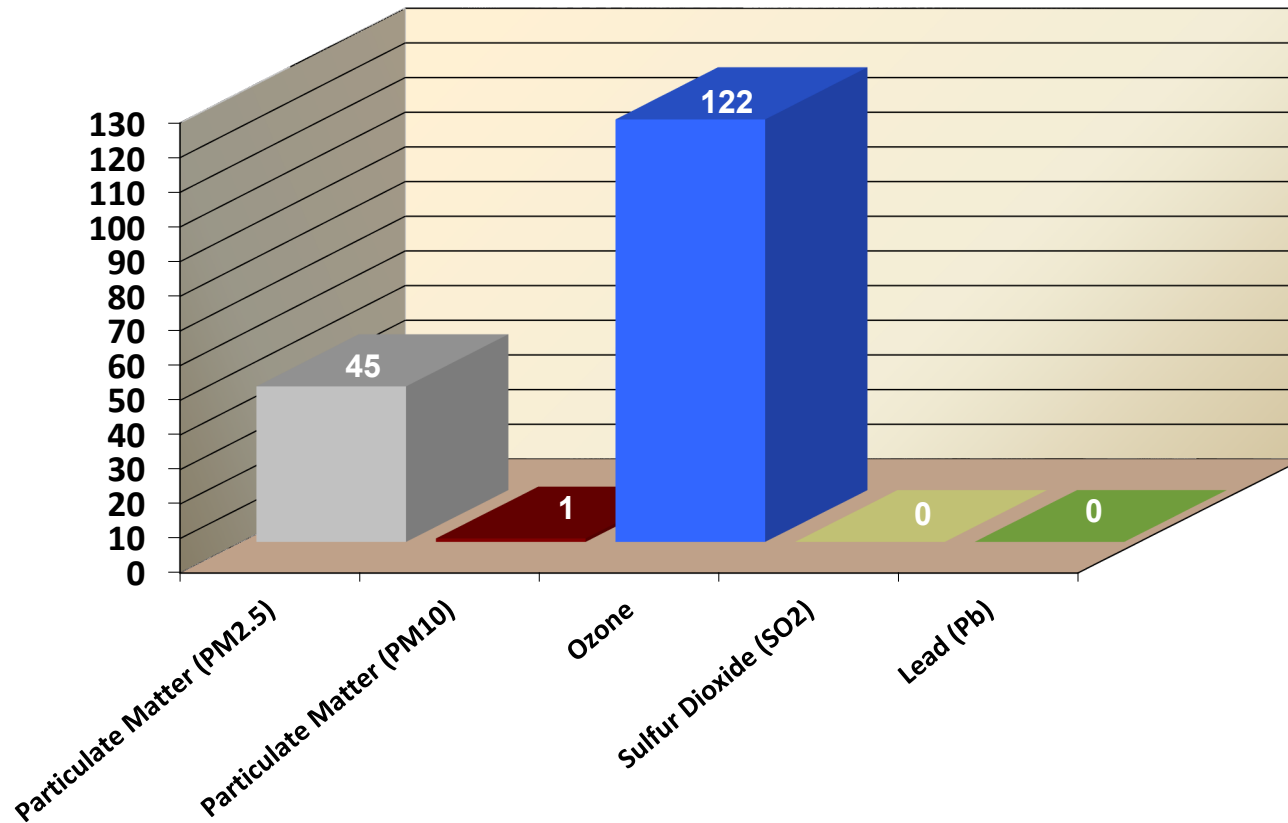
# Iowa NAAQS Exceedances, 2023

(Reported through December 8<sup>th</sup>, continued)

Date	PM <sub>2.5</sub>	PM <sub>10</sub>	Ozone	SO <sub>2</sub>	Lead
6/10/23			4		
6/13/23			2		
6/14/23			5		
6/15/23	4		3		
6/19/23			6		
6/20/23			12		
6/21/23			4		
6/22/23			6		
6/23/23			8		
6/24/23			2		
6/27/23	7		2		
6/28/23	7	1	4		
6/29/23	13				
7/15/23	2				
7/16/23	6				
<b>TOTAL</b>	<b>45</b>	<b>1</b>	<b>122</b>	<b>0</b>	<b>0</b>

# Iowa NAAQS Exceedances, 2023

(Reported through December 8<sup>th</sup>)



# Web Resources

Real-time Air Monitoring Data:

[\*In Polk County\*](#)

[\*In Linn County\*](#)

[\*Outside Polk and Linn Counties \(SHL\)\*](#)

[\*Attainment Calculations\*](#)

[\*National Ozone and Particulate Maps\*](#)

[\*Historical Air Monitoring Data for Iowa and Other States\*](#)