

Iowa Exceedances of the National Ambient Air Quality Standards, 2021



*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 _{2.5}	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 ³ .
PM _{2.5}	annual	12.05	micrograms per cubic meter	To attain this standard, the 3-year average of the weighted annual mean PM _{2.5} concentrations from a community-oriented monitor must not exceed 12.05 µg/m ³ .
PM ₁₀	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_x) 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

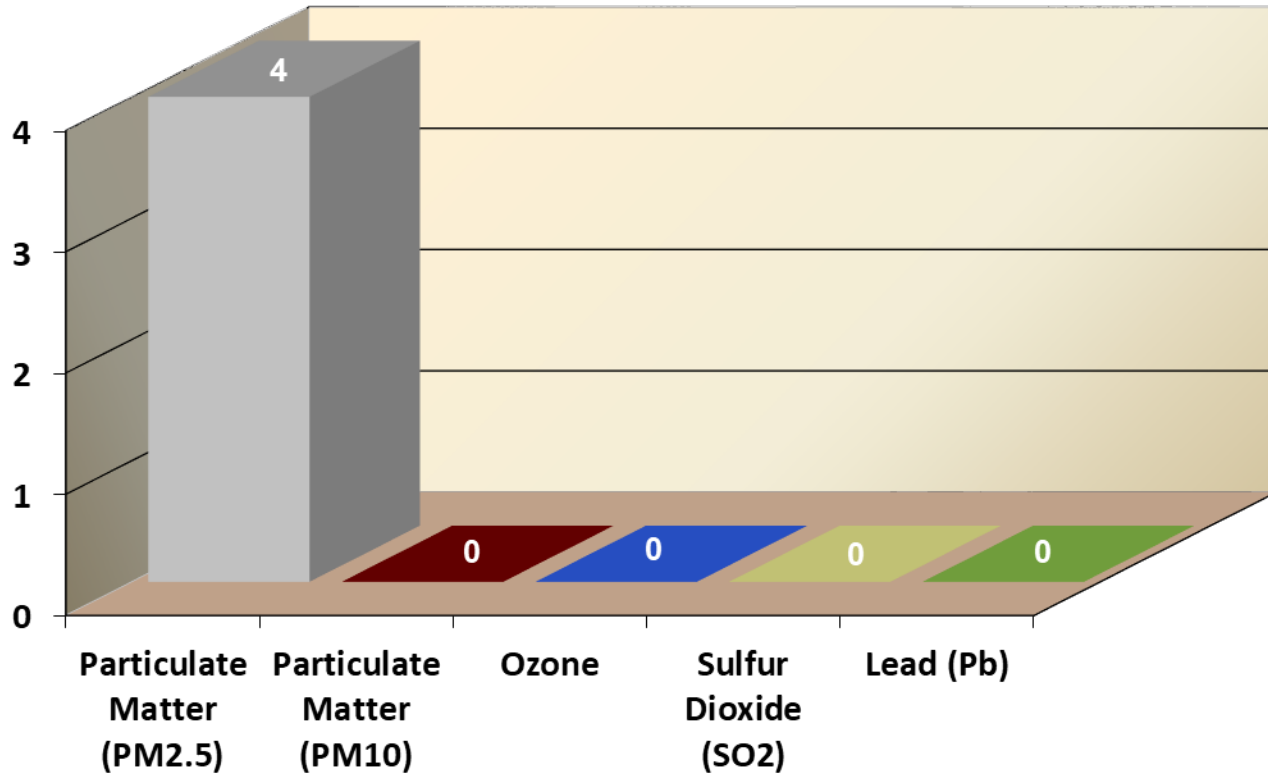
Particulate data in this report is from filter based samplers where the data is collected over a 24-hour period and then analyzed in a laboratory. Filter samplers are normally operated on a schedule of one sample every third day (1 in 3). In areas of high population or high concentration, the samplers 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, 2021

Date	PM _{2.5}	PM ₁₀	Ozone	SO ₂	Lead
7/30/21	3				
8/1/21	1				

Iowa NAAQS Exceedances, 2021



Iowa NAAQS Exceedances, 2021

2021 NAAQS Exceedances						
Monitor Type	Site Location	Site Name	Exceedance		Units	AQI
			Date	Concentration		
PM _{2.5}	Sioux City	Irving School	7/30/21	79.4	µg/m ³	163
PM _{2.5}	Emmetsburg	Iowa Lakes Coll.	7/30/21	76.5	µg/m ³	162
PM _{2.5}	Council Bluffs	Franklin School	7/30/21	42.2	µg/m ³	117
PM _{2.5}	Des Moines	Des Moines Health Department	8/1/21	37.3	µg/m ³	105

Web Resources

Real-time Air Monitoring Data:

[In Polk County](#)

[In Linn County](#)

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

[National Ozone and Particulate Maps](#)

[National Pollution Trends](#)

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