

CHAPTER 1 - Air Quality Standards

One of the primary goals of the ambient air monitoring program is to obtain data to compare against air quality standards. Pennsylvania has adopted and incorporated by reference all of the National Ambient Air Quality Standards (NAAQS), as well as several state ambient air quality standards. These standards, designed to protect the public health and welfare, are shown in Tables 1-1 and 1-2.

There are two types of NAAQS standards: primary and secondary. Primary standards protect against adverse health effects, while secondary standards protect against welfare effects such as damage to crops, vegetation, and buildings, and decreased visibility.

Table 1-1. National Ambient Air Quality Standards (NAAQS)

Pollutant	Primary (Health Related)		Secondary (Welfare Related)	
	Type of Average	Standard Level Concentration	Type of Average	Standard Level Concentration
Carbon Monoxide	8-hour Running (not to be exceeded more than once per year)	9 ppm	No Secondary Standard	
	1-hour (not to be exceeded more than once per year)	35 ppm	No Secondary Standard	
Lead	Maximum Quarterly Average	1.5 µg/m ³	Same as Primary Standard	
Nitrogen Dioxide	Annual Arithmetic Mean	0.053 ppm	Same as Primary Standard	
Ozone	Maximum Daily 1-Hour Average (only applies in areas that have not attained the standard)	0.12 ppm	Same as Primary Standard	
	Fourth-Highest Daily Maximum 8-hour Running Mean (based on 3- year average)	0.08 ppm	Same as Primary Standard	
Particulate Matter PM ₁₀	Annual Arithmetic Mean (based on 3-year average)	50 µg/m ³	Same as Primary Standard	
	24-hour (not to be exceeded more than once per year)	150 µg/m ³	Same as Primary Standard	
Particulate Matter PM _{2.5}	Annual Arithmetic Mean (based on 3- year average)	15 µg/m ³	Same as Primary Standard	
	24-hour (based on 3 year average of 98th percentile)	65 µg/m ³	Same as Primary Standard	
Sulfur Dioxide	Annual Arithmetic Mean	0.03 ppm	3-hour (block average) (not to be exceeded more than once per year)	0.50 ppm
	24-hour (daily mean) (not to be exceeded more than once per year)	0.14 ppm		

Table 1-2. Pennsylvania Ambient Air Quality Standards

Pollutant	Type of Average	Standard Level Concentration
Beryllium	30-day	0.01 $\mu\text{g}/\text{m}^3$
Fluorides (total soluble, as HF)	24-hour	5 $\mu\text{g}/\text{m}^3$
Hydrogen Sulfide	24-hour	0.005 ppm
	1-hour	0.1 ppm
Settled Particulate (Total)	30-day	43 tons/mile ² /month
	1-year	23 tons/mile ² /month