

Appendix E-2
Federal and State Ambient Air Quality Standards

Excerpts from the NYS DEC Website regarding air pollution. (Source: <http://www.dec.ny.gov/chemical/281.html>)
Air pollution can harm human health, and damage all the elements of the ecosystem. For nearly four decades, state and federal governments have controlled the emission of pollutants through permits with enforceable requirements, and have measured and monitored pollution levels in the air.

DEC is the state agency that carries out both the state and federal air pollution control and monitoring programs. This website includes detailed information about how New York State controls air pollution, offering data gathered by the air program and information about the sources and effects of air pollution.

Sources and Effects of Air Pollution -

Air pollutants originate from many human activities. Most pollutants come from industries that manufacture chemicals and other goods, from on- and off-road vehicles and power equipment, and from energy facilities that burn oil, gas or coal. Pollutants emitted from tall stacks move high in the air, descending to earth to do damage miles downwind from their source.

Air pollution damages health and the environment in a variety of ways. Hot summer weather sets the stage for formation of ozone (O₃) and fine particulate matter (PM_{2.5}), two pollutants of concern for human health. Fish and wildlife show harmful effects from acid rain and mercury in air. So-called *greenhouse gases* (chiefly carbon dioxide) in the air may be changing the world's climate.

New York's Air Pollution Control Program

The federal and state air pollution programs include permits and technical requirements to control emission of pollutants, along with extensive measurement and monitoring of ambient pollutant levels. A key element of the program is the Vehicle Inspection and Maintenance Program, which checks vehicle emissions and requires repairs to failed pollution control equipment.

Federal law requires DEC to submit a State Implementation Plan that demonstrates how state air pollution control programs will be carried out to reduce pollution and to ensure that air contaminant levels are in compliance with the National Ambient Air Quality Standards (NAAQS). The SIP includes plans to bring areas that contravene the NAAQS into attainment.

Ambient Air Quality Standards - New York State and Federal Standards

Pollutant	NYS Standard	Federal Standard	New York State Standard		Federal Standard	
			Concentration	Unit	Concentration	Unit
Sulfur Dioxide	12 consecutive months	0.03	PPM	Arithmetic Mean (A.M)	80	$\mu\text{g}/\text{m}^3$ A.M.
	24-hour	0.14	PPM	Maximum	365	$\mu\text{g}/\text{m}^3$ Maximum
	3-hour	0.50	PPM	Maximum	1300	$\mu\text{g}/\text{m}^3$ Maximum
	8-hour	9	PPM	Maximum	10	$\mu\text{g}/\text{m}^3$ Maximum
Carbon Monoxide	1-hour	35	PPM	Maximum	40	$\mu\text{g}/\text{m}^3$ Maximum
	1-hour	0.12	PPM	Maximum	235	$\mu\text{g}/\text{m}^3$ Maximum
Ozone ⁴	8-hour	0.08	PPM	Maximum	157	$\mu\text{g}/\text{m}^3$ Maximum
	3-hour (6-9 am)	0.24	PPM	Maximum		
Hydrocarbons (non-methane)	12 consecutive months	0.05	PPM	Maximum	100	$\mu\text{g}/\text{m}^3$ A.M.
	3 consecutive months				1.5	$\mu\text{g}/\text{m}^3$ Maximum
Nitrogen Dioxide	12 consecutive months				15	$\mu\text{g}/\text{m}^3$ A.M.
	24-hours				35 ⁶	$\mu\text{g}/\text{m}^3$ Maximum
Lead ⁵	12 consecutive months				50	$\mu\text{g}/\text{m}^3$ A.M.
	24-hours				150	$\mu\text{g}/\text{m}^3$ Maximum
Fine Particulate Matter (PM _{2.5})	12 consecutive months					
	24-hours					
Inhalable Particulates (PM ₁₀) ⁶	12 consecutive months					
	24-hours					
Total Suspended Particulates (TSP) ⁷	12 consecutive months	75	$\mu\text{g}/\text{m}^3$	Geometric Mean (G.M.)		
	24-hours	250	$\mu\text{g}/\text{m}^3$	Maximum	260	$\mu\text{g}/\text{m}^3$ Maximum

Footnotes

1	New York State also has standards for beryllium, fluorides, hydrogen sulfide, and settleable particulates (dustfall). Ambient monitoring for these pollutants is not currently conducted.
2	All maximum values are concentrations not to be exceeded more than once per calendar year. (Federal 1 hour Ozone Standard not to be exceeded more than three days in three calendar years).
3	Gaseous concentrations for Federal standards are corrected to a reference temperature of 25°C and to a reference pressure of 760 millimeters of mercury.
4	Former NYS Standard for ozone of 0.08 PPM was not officially revised via regulatory process to coincide with the Federal standard of 0.12 PPM which is currently being applied by NYS to determine compliance status. Compliance with the Federal 8 hour standard is determined by using the average of the 4th highest daily value during the past three years, which can not exceed 0.084 PPM.
5	Federal standard for lead not yet officially adopted by NYS, but is currently being applied to determine compliance status.
6	Federal standard for PM ₁₀ not yet officially adopted by NYS, but is currently being applied to determine compliance status.
7	New York State also has 30, 60, and 90-day standards as well as geometric mean standards of 45, 55, and 65 µg/m ³ in Part 257 of NYCRR. While these TSP standards have been superseded by the above PM ₁₀ standards, TSP measurements may still serve as surrogates to PM ₁₀ measurements in the determination of compliance status.
8	Federal standard was changed from 65 to 35 µg/m ³ on December 17, 2006. Compliance with the Federal standard is determined by using the average of 98th percentile 24 hour value during the past three years, which can not exceed 35 µg/m ³ .