

CHAPTER 18 VOCABULARY – Air Pollution

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acid deposition	The falling of acids and acid-forming compounds from the atmosphere to the earth's surface. Acid deposition is commonly known as <i>acid rain</i> , a term that refers to the wet deposition of droplets of acids and acid-forming compounds.
acid rain	See <i>acid deposition</i> .
air pollution	One or more chemicals in high enough concentrations in the air to harm humans, other animals, vegetation, or materials. Excess heat is also considered a form of air pollution. Such chemicals or physical conditions are called air pollutants. See <i>primary pollutant</i> , <i>secondary pollutant</i> .
atmospheric pressure	Force or mass per unit area of air, caused by the bombardment of a surface by the molecules in air.
EPA	U.S. Environmental Protection Agency; responsible for managing federal efforts to control air and water pollution, radiation and pesticide hazards, environmental research, hazardous waste, and solid waste disposal.
industrial smog	Type of air pollution consisting mostly of a mixture of sulfur dioxide, suspended droplets of sulfuric acid formed from some of the sulfur dioxide, and suspended solid particles. Compare <i>photochemical smog</i> .
inversion	See <i>temperature inversion</i> .
metropolitan area	See <i>urban area</i> .
nitrogen oxides (NO_x)	See <i>nitric oxide</i> and <i>nitrogen dioxide</i> .
ozone (O₃)	Colorless and highly reactive gas and a major component of photochemical smog. Also found in the ozone layer in the stratosphere. See <i>photochemical smog</i> .
ozone depletion	Decrease in concentration of ozone (O ₃) in the stratosphere. See <i>ozone layer</i> .
ozone layer	Layer of gaseous ozone (O ₃) in the stratosphere that protects life on earth by filtering out most harmful ultraviolet radiation from the sun.
PANs	Peroxyacyl nitrates; group of chemicals found in photochemical smog.
particulates	Also known as suspended particulate matter (SPM); variety of solid particles and liquid droplets small and light enough to remain suspended in the air for long periods. About 62% of the SPM in outdoor air comes from natural sources such as dust, wild fires, and sea salt. The remaining 38% comes from human sources such as coal-burning electric power and industrial plants, motor vehicles, plowed fields, road construction, unpaved roads, and tobacco smoke.
photochemical smog	Complex mixture of air pollutants produced in the lower atmosphere by the reaction of hydrocarbons and nitrogen oxides under the influence of sunlight. Especially harmful components include ozone, peroxyacyl nitrates (PANs), and various aldehydes. Compare <i>industrial smog</i> .
primary pollutant	Chemical that has been added directly to the air by natural events or human activities and occurs in a harmful concentration. Compare <i>secondary pollutant</i> .

secondary pollutant	Harmful chemical formed in the atmosphere when a primary air pollutant reacts with normal air components or other air pollutants. Compare <i>primary pollutant</i> .
smog	Originally a combination of smoke and fog but now used to describe other mixtures of pollutants in the atmosphere. See <i>industrial smog</i> , <i>photochemical smog</i> .
stratosphere	Second layer of the atmosphere, extending about 17–48 kilometers (11–30 miles) above the earth's surface. It contains small amounts of gaseous ozone (O ₃), which filters out about 95% of the incoming harmful ultraviolet radiation emitted by the sun. Compare <i>troposphere</i> .
sulfur dioxide (SO₂)	Colorless gas with an irritating odor. About one-third of the SO ₂ in the atmosphere comes from natural sources as part of the sulfur cycle. The other two-thirds come from human sources, mostly combustion of sulfur-containing coal in electric power and industrial plants and from oil refining and smelting of sulfide ores.
suspended particulate matter	See <i>particulates</i> .
temperature inversion	Layer of dense, cool air trapped under a layer of less dense, warm air. It prevents upward-flowing air currents from developing. In a prolonged inversion, air pollution in the trapped layer may build up to harmful levels.
thermal inversion	See <i>temperature inversion</i> .
troposphere	Innermost layer of the atmosphere. It contains about 75% of the mass of earth's air and extends about 17 kilometers (11 miles) above sea level. Compare <i>stratosphere</i> .
urban area	Geographic area containing a community with a population of 2,500 or more. The number of people used in this definition may vary, with some countries setting the minimum number of people at 10,000–50,000.
volatile organic compounds (VOCs)	Organic compounds that exist as gases in the atmosphere and act as pollutants, some of which are hazardous.