



Air Quality Terminology

Air Quality: The state of the air within a specific area. “Air quality” is a neutral term: it can be good or bad (in or between).

Air Quality Health Index (AQHI): The Air Quality Health Index reports on the current state of the air and identifies the related health risk associated it.

Air Pollution: Unwanted chemicals or other materials found in the air, at high enough concentrations to endanger the environment and people’s health. Many air pollutants occur as gases or vapours, but some are very tiny solid particles: dust, smoke or soot. Common pollutants are wood smoke, ground-level ozone and particulate matter.

Airshed: An area where the movement of air tends to be limited to the bounds of that area, as a result of specific geographical or meteorological conditions.

Ambient Air: Outside air, surrounding air, air occurring at a particular time and place outside of structures. All living beings are exposed to the ambient air.

Asthma: When people have asthma, the airways in their lungs get inflamed (red and swollen). They become extremely sensitive to dust particles and other airborne substances like pet dander. When these substances come in contact with the already inflamed and sensitive airways, the airways tighten and narrow, making it hard to breathe.

Bronchitis: Inflammation of the mucous membrane of the main airways of the lung, or the bronchial tubes.

Cardiovascular: Relating to the heart and blood vessels.

Chronic Obstructive Pulmonary Disease (COPD): COPD is a term that includes a number of lung diseases. The most common are chronic bronchitis and emphysema. Many people with COPD have both of these lung diseases. COPD makes breathing hard. It slowly damages the airways of the lungs, making them swollen and blocked and causing them to lose their elasticity or stretchiness.





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Common Air Contaminants (CACs): (Also called “Criteria Air Contaminants”)

Air pollutants commonly found in the atmosphere, namely carbon monoxide (CO), particulate matter (PM), sulphur oxides (SO_x), nitrogen oxides (NO_x), volatile organic compounds (VOCs) and ammonia (NH₃). Ground-level ozone (O₃) is often referred to with CACs because it is a byproduct of CAC interactions.

Emissions: The release of substances (pollutants) into the atmosphere from natural or human sources.

Environment: The combination of all external conditions and influences relating to the life, development, and survival of all living things.

Idling: Running the vehicle engine, instead of turning it off, when it’s sitting still or parked longer than 10 seconds (e.g., when you’re waiting for someone). Idling is a health risk, wastes fuel and money, contributes unnecessarily to engine wear, and generates needless greenhouse gas (GHG) emissions.

Nitrogen Dioxide (NO₂): A common pollutant along with particles in the air can often be seen as a reddish-brown layer over many urban areas. It causes lung irritation and damage, and environmental impacts.

Nonpoint Source: Pollution that comes from many sources, such as motor vehicles, rather than one source, such as an industrial facility.

Ozone (O₃): A colorless gas that is formed when pollutants react with sunlight. Ozone is a major part of smog (called “ground-level ozone”), which can make people sick. Ozone is also found in the stratosphere, where it forms a protective band of gases around the earth.

Particulate Matter (PM): Tiny solid or liquid particles that are suspended in air. Particulate matter is produced from a wide variety of sources — natural and human-caused, large and small. Wood and fossil-fuel burning are the two main human-caused sources. Particulate matter that is 10 [microns](#) (micrometres) in diameter or less is called **PM₁₀**. Of major concern are particles that are 2.5 micrometres or smaller in diameter (**PM_{2.5}**) because they can lodge deep in the lungs, and cause respiratory and cardiac problems.





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Primary Pollutants: Air pollutants generated during various processes and emitted directly from the sources as such.

Respiratory: Refers to the lungs and the act of breathing.

Smog: The word “smog” originated in the UK in the mid-20th century to refer to the unique atmospheric condition resulting from a combination of smoke and fog. Smog now refers to the yellow-brown haze that is a mixture of pollutants, mainly ground-level ozone and particulate matter (PM_{2.5}).

Sources: Sources of air pollution are identified by the activities that cause emissions. They can be natural or created through human activities. Natural sources include dust and forest fires. Human sources include fossil fuel burning and wood burning.

Pollution Sources:

- **Natural Sources:** Sources of emissions that occur in nature without the influence of human beings. They include categories such as wildfires, plants, wildlife and marine aerosols.
- **Area Sources:** Stationary sources which are not normally required to obtain an air discharge permit from the Ministry of Environment. They include prescribed burning, residential fuel wood use, light industrial, and other residential, commercial and institutional sources. Emissions from most of these area sources individually are small compared to emissions from point sources but can be significant when considered collectively.
- **Mobile Sources:** Mobile sources include on-road motor vehicles primarily involved in the transportation of people and goods, including passenger cars, trucks and motorcycles, and off-road sources including aircraft, marine vessels and railways, off-road vehicles and small off-road engines such as agricultural, lawn and garden, construction, or recreational equipment.

SOURCE: <http://www.bcairquality.ca/glossary/index.html>

