

Project Glossary

AQI - Air Quality Index is a scale used to report ground level ozone and other common pollutants in the air.

Asthma - Asthma is a chronic lung disease that can be life threatening. Asthma causes breathing problems, called attacks or episodes, during which cells in the air tubes make more mucus than normal, clogging up the air tubes. The air tubes tend to swell, the muscles in your air tubes tighten, causing the air tubes to narrow, making it hard to breathe.

CTDEP - Connecticut Department of Environmental Protection

Carbon Monoxide - Carbon monoxide, or CO, is a colorless, odorless gas that is formed when carbon in fuel is not burned completely.

Cloud Cover - the amount of clouds in the sky is measured by scientists and recorded as part of the daily weather record.

Connecticut Clean School Bus Project - a program that will introduce ultra clean technologies to meet diesel emission standards. The use of low sulfur diesel fuel and retrofits with emission control equipment will reduce diesel particulate matter emissions by as much as 90 percent.

Coarse Particle Pollution - coarse particles come from sources such as wind blown dust, unpaved roads and fuel combustion. Coarse particles can accumulate in the respiratory system and aggravate health problems such as asthma.

Criteria - a standard on which a decision may be based, a matter of importance.

Diesel Particulate Matter - Diesel particulate matter is part of a complex mixture that makes up diesel exhaust. Diesel exhaust is emitted from a broad range of diesel engines; on road diesel engines of trucks, buses and cars and off road diesel engines including locomotives, marine vessels and heavy duty equipment. School buses are a significant contributor to the overall emissions.

EPA - Environmental Protection Agency

Ground Level Ozone - Ozone (O₃) is a gas composed of three oxygen atoms. At ground level, ground level ozone is created by a chemical reaction between oxides of nitrogen (NO_x) and volatile organic compounds (VOC) in the presence of heat and sunlight.

Haze - Haze is caused by fine particles that scatter and absorb light before it reaches the observer. As the number of fine particles increases, more light is absorbed and scattered, resulting in less clarity, color, and visual range. Five types of fine particles contribute to haze: sulfates, nitrates, organic carbon, elemental carbon, and crustal material. The importance of each type of particle varies across the U.S. and from season to season.

Inversion Layer - an inversion is an extremely unstable layer of the atmosphere, which does not allow for upward air motion. Inversions often act like a cap on the atmosphere.

KWL - is a teaching tool used in classrooms that involves activating students' prior knowledge by asking them what they already Know about a topic; then students set goals specifying what they Want to learn about the topic; and after completing the activity or lesson, students discuss what they have Learned.

Lead - Lead is a metal found naturally in the environment as well as in manufactured products.

NOx - Nitrogen oxides, or NO_x, is the generic term for a group of highly reactive gases, all of which contain nitrogen and oxygen in varying amounts. Many of the nitrogen oxides are colorless and odorless.

Off Road Vehicles - includes airplanes, trains, power boats, earth movers, tractors, harvesters, forklifts, bulldozers, and backhoes.

Ozone - Ozone (O₃) is a gas composed of three oxygen atoms. "Good" ozone occurs naturally in the stratosphere approximately 10 to 30 miles above the earth's surface and forms a layer that protects life on earth from the sun's harmful rays. In the earth's lower atmosphere, [ground level ozone](#) is considered "bad."

Ozone Action Day - An Ozone Action Day program is a voluntary initiative by government, environmental groups, and business leaders working with the general public to take extra action to prevent air pollution when high ozone levels are predicted

Particulate Matter - Particulate matter, or PM, is the term for particles found in the air, including dust, dirt, soot, smoke, and liquid droplets.

Photochemical Reaction - A photochemical reaction is a chemical reaction that requires light (in this case sunlight) to provide the energy for the reaction to proceed.

Pollutant - something that contaminates (makes unclean) an environment, especially with man-made waste.

Retrofit - A retrofitted school bus is a cleaner school bus. It is cleaner because it either has been fitted with a device designed to reduce pollution and/or it uses a cleaner fuel. There are a variety of ways to retrofit a school bus. Retrofit options range in cost as well as effectiveness and some come with special requirements.

SO_x - Sulfur dioxide, or SO₂, belongs to the family of sulfur oxide gases (SO_x). These gases dissolve easily in water. Sulfur is prevalent in all raw materials, including crude oil, coal, and ore that contains common metals like aluminum, copper, zinc, lead, and iron.

Smog - Smog is a brownish haze that is a combination of ground level ozone (containing VOCs and NO_x), SO_x and PM.

Sunlight/Ultraviolet Radiation - the light energy produced by the sun.

Surface Winds - winds that range from 0 to 3,000 feet in altitude.

Transport - Transport is the movement of emissions, by the wind, long distances from the original emission sources. Pollutant transport is an important issue because it creates regional pollution problems, rather than simply affecting the local area where the pollutant is emitted.

Triggers - things that may cause an asthma attack, including; weather, dust or dust mites, animals, pollen, tobacco smoke, mold, pests, strong smells, food and medicines, exercise, infections and strong emotions.

VOCs - Volatile Organic Compounds also known as hydrocarbons can be found in household products including: paints, paint strippers, and other solvents; wood preservatives; aerosol sprays; cleansers and disinfectants; moth repellents and air fresheners; stored fuels and automotive products; hobby supplies; dry-cleaned clothing.