

City of Springfield - Greene County, Missouri
Integrated Plan for the Environment
Glossary of Terms and Acronyms

This glossary of terms and acronyms is simply a resource for the general public. Keep in mind that we are not trying to create an exhaustive list, nor are we defining legal terminology.

There are several terms that are applicable to California laws. The reason for inclusion is that many manufacturers must meet these standards to sell products within the state of California. Several states and the regulators frequently reference California laws for background and recommendations.

10-Year Storm

A 10-year storm is better described as a 10% storm. That is, a storm that has a one in ten chance of occurring in any given year. It is referred to as a 10-year storm because, over a very long period of time, it occurs an average of once every ten years. Like other natural events, storm patterns do not follow a fixed time schedule. It is possible to have two 10-year storms in the same month and then not have another one for 15 years.

2-Year Storm

A 2-year storm is better described as a 50% storm. That is, a storm that has a one in two chance, or 50% chance, of occurring in any given year.

A

AB 1807 (Tanner)

A California state law (Health and Safety Code section 39650 et seq.) that became effective in January of 1984 and established the framework for California's toxic air contaminant identification and control program.

AB 998

Assembly Bill 998 established the Non-Toxic Dry Cleaning Incentive Program to provide the dry cleaning industry with \$10,000 grant funds to switch from systems using perchloroethylene (Perc), an identified toxic air contaminant and potential human carcinogen, to non-toxic and non-smog forming alternatives. The legislation also requires ARB to establish a demonstration program to showcase these non-toxic and non-smog forming technologies.

AB 2588 (Connelly) Air Toxics "Hot Spots" Information and Assessment Program

A California program (Health and Safety Code Section 44300 et seq.) that requires certain stationary sources to report the type and quantity of specific toxic substances they routinely release into the air. The program identifies high priority facilities and requires facilities posing significant risks to notify all exposed individuals

AB 2766 (Sher) Motor Vehicle Fee Program

A program that permits air districts and local governments to allocate vehicle registration surcharge fees to projects that reduce motor vehicle emissions such as zero-emission vehicles, bike lanes and trip reduction programs.

AB 32(The Global Warming Solutions Act of 2006)

The Legislature passed and Governor Schwarzenegger signed AB 32, which set the 2020 greenhouse gas emissions reduction goal into law. It directed ARB to develop discrete early actions to reduce greenhouse gases while also preparing a scoping plan to identify how best to reach the 2020 limit on greenhouse gas emissions.

Abatement

The reduction or elimination of pollution.

Acceptable Daily Intake (ADI)

The highest daily amount of a substance that may be consumed over a lifetime without adverse effects.

Acid Deposition

A comprehensive term for the various ways acidic compounds precipitate from the atmosphere and deposit onto surfaces. It can include: 1) wet deposition by means of acid rain, fog and snow; and, 2) dry deposition of acidic particles (aerosols).

Acid Rain

Rain that is especially acidic (pH is less than 5.2). Principal components of acid rain typically include nitric and sulfuric acid. These may be formed by the combination of nitrogen and sulfur oxides with water vapor in the atmosphere.

Acute Exposure

One or a series of short-term exposures generally lasting less than 24 hours.

Acute Health Effect

A health effect that occurs over a relatively short period of time (e.g., minutes or hours). The term is used to describe brief exposures and effects which appear promptly after exposure.

Add-On Control Device

An air pollution control device such as carbon absorber or incinerator that reduces the pollution in exhaust gas. The control device usually does not affect the process being controlled and thus is "add-on" technology, as opposed to a scheme to control pollution through altering the basic process itself. See also pollution prevention.

Adsorber

An emissions control device that removes VOCs from a gas stream as a result of the gas attaching (adsorbing) onto a solid matrix such as activated carbon.

Advanced Technology Partial Zero Emission Vehicle (AT PZEV)

A vehicle that meets the Partial Zero Emission Vehicle (PZEV) standard and includes zero emission vehicle enabling technologies.

Adverse Health Effect

A health effect from exposure to air contaminants that may range from relatively mild temporary conditions, such as eye or throat irritation, shortness of breath, or headaches, to permanent and serious conditions, such as birth defects, cancer or damage to lungs, nerves, liver, heart, or other organs.

Aerosol

Particles of solid or liquid matter that can remain suspended in air from a few minutes to many months depending on the particle size and weight.

AFIP (Alternative Fuel Incentive Program)

Pursuant to Assembly Bill 1811, ARB with the California Energy Commission, developed a joint plan to spend \$25 million for the purposes of incentivizing biofuels and high-efficiency, low-emitting vehicle technology. The funds were for developing specific measures to reduce air pollution and greenhouse gas emissions from fuels and mobile sources. AB 1811 required the funds to be encumbered by June 30, 2007, and expended by June 30, 2009.

Afforestation

The planting of new forests on lands where the preceding vegetation or land did not contain forests.

Afterburner

An air pollution abatement device that removes undesirable organic gases through incineration.

Agricultural Burning

The intentional use of fire for vegetation management in areas such as agricultural fields, orchards, rangelands and forests. The regulation is described in the Agricultural Burning Guidelines, Title 17, California Code of Regulations.

Air

So-called "pure" air is a mixture of gases containing about 78 percent nitrogen; 21 percent oxygen; less than 1 percent of carbon dioxide, argon and other gases; and, varying amounts of water vapor. See also ambient air.

Air Basin

A land area with generally similar meteorological and geographic conditions throughout. To the extent possible, air basin boundaries are defined along political boundary lines and include both the source and receptor areas. California is currently divided into 15 air basins.

Airborne Toxic Control Measure (ATCM)

A control measure adopted by the ARB (Health and Safety Code Section 39666 et seq.), that reduces emissions of toxic air contaminants.

Air Monitoring

Sampling for and measuring of pollutants present in the atmosphere.

Air Pollutants

Amounts of foreign and/or natural substances occurring in the atmosphere that may result in adverse effects to humans, animals, vegetation and/or materials. (See also air pollution.)

Air Pollution

Degradation of air quality resulting from unwanted chemicals or other materials occurring in the air. (See also air pollutants.)

Air Pollution Control District (APCD)

A county agency with authority to regulate stationary, indirect and area sources of air pollution (e.g., power plants, highway construction and housing developments) within a given county and governed by a district air pollution control board composed of the elected county supervisors. (See also air quality management district or Air pollution control district).

Air Quality Index (AQI)

A numerical index used for reporting severity of air pollution levels to the public. It replaces the formerly used Pollutant Standards Index (PSI). Like the PSI, the AQI incorporates five criteria pollutants -- ozone, particulate matter, carbon monoxide, sulfur dioxide and nitrogen dioxide -- into a single index. The new index also incorporates the 8-hour ozone standard and the 24-hour PM_{2.5} standard into the index calculation. AQI levels range from 0 (Good air quality) to 500 (Hazardous air quality). The higher the index, the higher the level of pollutants and the greater the likelihood of health effects. The AQI incorporates an additional index category -- unhealthy for sensitive groups -- that ranges from 101 to 150. In addition, the AQI comes with more detailed cautions.

Air Quality Management District (AQMD)

A group of counties or portions of counties, or an individual county specified in law with authority to regulate stationary, indirect and area sources of air pollution within the region and governed by a regional air pollution control board comprised mostly of elected officials from within the region. (See also air pollution control district).

Air Quality Management Plan (AQMP)

A plan prepared by an APCD/AQMD, for a county or region designated as a non-attainment area, for the purpose of bringing the area into compliance with the requirements of the national and/or California ambient air quality standards. AQMPs are incorporated into the State Implementation Plan (SIP).

Air Quality Manager

An individual employed by the local, state, or federal government to manage air quality.

Air Quality Simulation Model

A mathematical relationship between emissions and air quality which simulates on a computer the transport, dispersion and transformation of compounds emitted into the air.

Air Quality Standard (AQS)

The prescribed level of a pollutant in the outside air that should not be exceeded during a specific time period to protect public health. Established by both federal and state governments. (See also ambient air quality standards.).

Air Quality Working Groups (AQWG)

Advisory groups that provide forums for communication, cooperation and coordination in the development and implementation of air quality control measures. They may be comprised of representatives from the ARB, citizen groups, environmental groups, industry, local air districts and the U.S. EPA.

Air Resources Board (ARB)

(See California Air Resources Board.)

Airshed

A subset of air basin, the term denotes a geographical area that shares the same air because of topography, meteorology and climate.

Air Toxics

A generic term referring to a harmful chemical or group of chemicals in the air. Substances that are especially harmful to health, such as those considered under U.S. EPA's hazardous air pollutant program or California's AB 1807 and/or AB 2588 air toxics programs, are considered to be air toxics. Technically, any compound that is in the air and has the potential to produce adverse health effects is an air toxic.

Allowances

An authorization to emit, during a specified year, up to one ton of carbon dioxide equivalent.

Alternative Fuels

Fuels such as methanol, ethanol, natural gas and liquid petroleum gas that are cleaner burning and help to meet ARB's mobile and stationary emission standards. These fuels may be used in place of less clean fuels for powering motor vehicles.

Ambient Air

The air occurring at a particular time and place outside of structures. Often used interchangeably with "outdoor air." (See also air.)

Ambient Air Quality Standards (AAQS)

Health- and welfare-based standards for outdoor air which identify the maximum acceptable average concentrations of air pollutants during a specified period of time. (See also CAAQS and NAAQS and Criteria Air Pollutant.)

American Society for Testing and Materials (ASTM)

A non-profit organization that provides a forum for producers, consumers and representatives of government and industry to write laboratory test standards for materials, products, systems and services. ASTM publishes standard test methods, specifications, practices, guides, classifications and terminology.

Ammonia (NH₃)

A pungent colorless gaseous compound of nitrogen and hydrogen that is very soluble in water and can easily be condensed into a liquid by cold and pressure. Ammonia reacts with NO_x to form ammonium nitrate -- a major PM_{2.5} component in the western United States.

Anaerobic Digestion

A biochemical process in which bacteria break down biodegradable organic material, such as manure, in an oxygen-free environment. Temperature, moisture, nutrient content and pH, can be controlled through the use of an airtight chamber (digester). The break-down of the organic material results in biogas, a mixture of methane (CH₄), carbon dioxide (CO₂) and trace amounts of other gases.

Area Sources

Those sources for which a methodology is used to estimate emissions. This can include area-wide, mobile and natural sources and also groups of stationary sources (such as dry cleaners and gas stations). The California Clean Air Act requires air districts to include area sources in the development and implementation of the AQMP. In the California emission inventory all sources that are not reported as individual point sources are included as area sources. The federal air toxics program defines a source that emits less than 10 tons-per-year of a single hazardous air pollutant (HAP) or 25 tons-per-year of all HAPs as an area source.

Area-Wide Sources

Sources of pollution where the emissions are spread over a wide area, such as consumer products, fireplaces, road dust and farming operations. Area-wide sources do not include mobile sources or stationary sources.

Aromatic

A type of hydrocarbon, such as benzene or toluene. Some aromatics are toxic.

Asbestos

A mineral fiber that can pollute air or water and cause cancer or asbestosis when inhaled. The U.S. EPA has banned or severely restricted its use in manufacturing and construction and the ARB has imposed limits on the amount of asbestos in serpentine rock that is used for surfacing applications.

Asbestos Containing Material (ACM)

Materials and products that contain asbestos fibers such as insulation in particular spray-on insulation, floor tiles, fireproofing products, roofing tiles, gaskets, soundproofing, brake linings, and house siding products. These products are an air quality concern when disturbed and improperly handled or managed.

Asthma

A chronic inflammatory disorder of the lungs characterized by wheezing, breathlessness, chest tightness and cough.

Atmosphere

The gaseous mass or envelope of air surrounding the Earth. From ground-level up, the atmosphere is further subdivided into the troposphere, stratosphere, mesosphere and the thermosphere.

Attainment Area

A geographical area identified to have air quality as good as, or better than, the national and/or California ambient air quality standards (NAAQS/CAAQS). An area may be an attainment area for one pollutant and a nonattainment area for others.

Authority to Construct (A/C)

A pre-construction permit issued by an air district.

B

Baghouse

An air pollution control device that traps particulates by forcing gas streams through large permeable bags usually made of glass fibers.

Banking

A provision in air district permit regulations that allows a facility to accumulate credits for reducing emissions beyond regulatory limits (emission reduction credits) and then use or sell those credits at a later date.

Battery Electric Vehicle (BEV)

A vehicle that runs on electricity stored in batteries and has an electric motor rather than an internal combustion engine. These vehicles also meet the requirements of the Zero Emission Vehicle Regulation.

Best Available Control Measure (BACM)

A term used to describe the "best" measures (according to U.S. EPA guidance) for controlling small or dispersed sources of particulate matter and other emissions from sources such as roadway dust, woodstoves and open burning.

Best Available Control Technology (BACT)

The most up-to-date methods, systems, techniques and production processes available to achieve the greatest feasible emission reductions for given regulated air pollutants and processes. BACT is a requirement of NSR (New Source Review) and PSD (Prevention of Significant Deterioration).

Best Available Retrofit Control Technology (BARCT)

An air emission limitation that applies to existing sources and is based on the maximum degree of reduction achievable, taking into account environmental, energy and economic impacts by each class or category of source. (See also Best Available Control Technology.)

Biogenic Source

Biological sources such as plants and animals that emit air pollutants such as volatile organic compounds. Examples of biogenic sources include animal management operations and oak and pine tree forests. (See also natural sources.)

Brownfield Site

Brownfield sites are real property, often in urban and industrial areas, whose redevelopment, reuse, or expansion may be complicated by the presence of a hazardous substance, pollutant, or contaminant.

Bulk Plant

An intermediate gasoline distribution facility where delivery of gasoline to and from the facility is solely by truck.

Bureau of Automotive Repair (BAR)

An agency of the California Department of Consumer Affairs that manages the implementation of the motor vehicle Inspection and Maintenance Program.

Burn Day

A day that is not officially determined by meteorologists and air quality managers to be a no-burn day. Burn days vary by air basin on any given day.

C

California Air Resources Board (ARB or CARB)

The state's lead air quality agency consisting of an 11-member board appointed by the Governor, and just over thousand employees. ARB is responsible for attainment and maintenance of the state and federal air quality standards, California climate change programs, and is fully responsible for motor vehicle pollution control. It oversees county and regional air pollution management programs.

California Ambient Air Quality Standard (CAAQS)

A legal limit that specifies the maximum level and time of exposure in the outdoor air for a given air pollutant and which is protective of human health and public welfare. CAAQSs are recommended by the OEHHA and adopted into regulation by the ARB. CAAQSs are the standards which must be met per the requirements of the California Clean Air Act (CCAA). Information regarding California laws is included because many product manufacturers and states require products to meet California's codes.

California Clean Air Act (CCAA)

A California law passed in 1988 which provides the basis for air quality planning and regulation independent of federal regulations. A major element of the Act is the requirement that local air districts in violation of the CAAQS must prepare attainment plans that identify air quality problems, causes, trends and actions to be taken to attain and maintain California's air quality standards by the earliest practicable date.

Cancer

A group of diseases characterized by uncontrolled invasive growth of body cells leading to the formation of malignant tumors that tend to grow rapidly and spread (i.e., metastasize).

Cap

An enforceable limit on total emissions for the facilities covered under the cap-and-trade program. The cap is set for each compliance period of the program by the state and emissions are reduced as the cap declines over time.

Cap-and-Trade

Cap-and-trade is a regulatory approach used to control pollution by setting a firm cap on allowed emissions while employing market mechanisms to achieve emissions reductions while driving costs down. In a cap-and-trade program, a limit, or cap is put on the amount of greenhouse gases that can be emitted.

Carbon Capture and Sequestration (CCS)

The process of capturing CO₂ from a stationary source, followed by compressing, transporting and injecting it into a suitable geologic formation where it will be sequestered.

Carbon Dioxide (CO₂)

A colorless, odorless gas that occurs naturally in the Earth's atmosphere. Significant quantities are also emitted into the air by fossil fuel combustion. (See also ClimateChange.ca.gov gloss.)

Carbon Dioxide Equivalent (CO₂E)

The amount of carbon dioxide by weight that would produce the same global warming impact as a given weight of another greenhouse gas, based on the best available science, including from the Intergovernmental Panel on Climate Change.

Carbon Monoxide (CO)

A colorless, odorless gas resulting from the incomplete combustion of hydrocarbon fuels. CO interferes with the blood's ability to carry oxygen to the body's tissues and results in numerous adverse health effects. Over 80 percent of the CO emitted in urban areas is contributed by motor vehicles. CO is a criteria air pollutant.

Carbon Sequestration

The process of removing carbon dioxide (CO₂) from the atmosphere by storing it in a carbon reservoir other than the atmosphere. Sequestration enhances carbon storage in trees and soils, preserves existing tree and soil carbon and reduces emissions of CO₂, methane (CH₄) and nitrous oxide (N₂O).

Carcinogen

A cancer-causing substance or chemical/substance suspected of causing cancer. (See also cancer.)

CAS Registry Number

The Chemical Abstracts Service Registry Number (CAS) is a numeric designation assigned by the American Chemical Society's Chemical Abstract Service and uniquely identifies a specific compound. This entry allows one to conclusively identify a material regardless of the name or naming system used.

Catalyst

A substance that can increase or decrease the rate of a chemical reaction between the other chemical species without being consumed in the process.

Catalytic Converter

A motor vehicle pollution control device designed to reduce emissions such as oxides of nitrogen, hydrocarbons and carbon monoxide. Catalytic converters have been required equipment on all new motor vehicles sold in California since 1979.

CERCLA – Comprehensive Emergency Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or Superfund act provides the mechanism to investigate and remedy old, abandoned, or derelict properties and disposal sites. These disposal or industrial sites have chemical and hazardous wastes in the environment (soil, ground water or surface water) that are harmful to human health and the environment.

Continuous Emission Monitor (CEM)

CEM involves determining compliance of stationary sources with their emission limitations on a continuous basis by installing a system to operate continuously inside of the smokestack or other emission source. CEM are also used for process control and to monitor the operations of the control equipment.

Certified, Certification

The formal process where the manufacturer of a vehicle, product, or process demonstrates compliance with all applicable regulations and is granted permission to market, sell, or deliver the item in California. Certification in California is usually indicated by the granting of an Executive Order (EO).

Chlorofluorocarbons (CFCs)

Any of a number of substances consisting of chlorine, fluorine and carbon. CFCs are used for refrigeration, foam packaging, solvents and propellants.

CHP

See Combined Heat and Power.

Chronic Exposure

Long-term exposure, usually lasting one year to a lifetime.

Chronic Health Effect

A health effect that occurs over a relatively long period of time (e.g., months or years). (See also acute health effect.)

Clean Air Act (CAA)

The federal law passed in 1970 and amended in 1974, 1977 and 1990 that forms the basis for the national air pollution control effort. Basic elements of the act include national ambient air quality standards for major air pollutants, mobile and stationary control measures, air toxics standards, acid rain control measures and enforcement provisions.

Clean Water Act (CWA)

The federal law that regulates the discharge of pollutants to waterways and sets water quality standards to protect them.

Clean Vehicle Rebate Project (CVRP)

CVRP is intended to encourage and accelerate zero-emission vehicle deployment and technology innovation by providing grants to eligible vehicles.

Cleaner-Burning Gasoline

Gasoline fuel that results in reduced emissions of carbon monoxide, nitrogen oxides, reactive organic gases and particulate matter, in addition to toxic substances such as benzene and 1,3-butadiene.

Climate Change

See Global Warming and/or its own glossary.

Coating

A layer of any substance such as paint, lacquer, or varnish applied over a surface for protection.

Coefficient of Haze (COH)

A measurement of the quantity of dust and smoke in the atmosphere in a theoretical 1,000 linear feet of air. A COH of less than three is considered clean air and more than five is of some concern. COH readings of 20 or more can occur in urban areas.

Cold Ironing

Cold Ironing or Shore power refers to providing electrical power to a vessel that is docked. The purpose of shore power is to allow the vessel operator to turn off the vessel's auxiliary engines, which would normally be providing the necessary electricity. Although there are emissions associated with the generation of electricity used for shore power, those emissions are much less than those from the auxiliary engines, which burn diesel fuel.

Combined Heat and Power (CHP)

An approach to generating power and thermal energy from a single fuel source. CHP application involves the recovery of otherwise wasted thermal energy to produce additional power or useful thermal energy.

Combustion

The act or instance of burning some type of fuel, such as gasoline, to produce energy. Combustion is typically the process that powers automobile engines and power plant generators.

Compressed Natural Gas (CNG)

(See alternative fuels.)

Conformity

A demonstration of whether a federally-supported activity is consistent with the State Implementation Plan (SIP) -- per Section 176 (c) of the Clean Air Act. Transportation conformity refers to plans, programs and projects approved or funded by the Federal Highway Administration or the Federal Transit Administration. General conformity refers to projects approved or funded by other federal agencies.

Congestion Management Program

A state-mandated program (California Government Code Section 65089a) that requires each county to prepare a plan to relieve congestion and reduce air pollution.

Consumer Products

Products such as hairspray, detergents, cleaning compounds, polishes, lawn and garden products, personal care products and automotive specialty products that are part of our everyday lives and, through consumer use, may produce volatile organic air emissions which contribute to air pollution.

Continuous Sampling Device

An air analyzer that measures air quality components continuously. (See also Integrated Sampling Device.)

Control Techniques Guidelines (CTG)

Guidance documents issued by U.S. EPA that define reasonably available control technology (RACT) to be applied to existing facilities that emit excessive quantities of air pollutants; they contain information both on the economic and technological feasibility of available techniques.

Conveyance System

The system of sewers designed and operated to intercept and carry sewage from local government collection systems to the wastewater treatment plants.

COPD (Chronic Obstructive Pulmonary Disease)

COPD is a lung disease characterized by chronic obstruction of airflow that interferes with normal breathing and is generally progressive, but may be partially reversible. The more familiar terms 'chronic bronchitis' and 'emphysema' are included within the COPD diagnosis. COPD is strongly associated with tobacco smoking but can occur in non-smokers as well and is a serious, life-threatening lung disease.

Cost-Effectiveness

The cost of an emission control measure assessed in terms of dollars-per-pound, or dollars-per-ton, of air emissions reduced.

Criteria Air Pollutant

An air pollutant for which acceptable levels of exposure can be determined and for which an ambient air quality standard has been set. Examples include: ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, PM10 and PM2.5. The term "criteria air pollutants" derives from the requirement that the U.S. EPA must describe the characteristics and potential health and welfare effects of these pollutants. The U.S. EPA and ARB periodically review new scientific data and may propose revisions to the standards as a result.

Cyclone

An air pollution control device that removes larger particles -- generally greater than one micron -- from an air stream through centrifugal force.

D

Deciview

A measurement of visibility. One deciview represents the minimal perceptible change in visibility to the human eye.

Degreaser

Equipment that removes grease, dirt, or unwanted materials from any part or product. Degreasers typically use aqueous or nonaqueous solvents, as liquid baths or condensing vapors, to remove such material.

Deposit Control Additives

Substances added to motor vehicle fuel to reduce and prevent deposits in the fuel delivery system and engine intake valves.

Design Flow

Quantity of wastewater that a treatment facility is designed to handle, usually expressed in millions of gallons per day (MGD).

Design Value

The pollutant concentration used by air quality managers as the basis for determining attainment of an air quality standard, generally by using an air quality model. The design value may or may not be the same as the designation value.

Designation Value

The pollutant concentration used by air quality managers for designating attainment status of an air district with respect to the state and federal ambient air quality standards. Generally, the designation value is the highest concentration that remains after excluding certain qualifying values. For a specific pollutant, the designation value for the state and federal standards may not be the same.

Diesel Engine

A type of internal combustion engine that uses low-volatility petroleum fuel and fuel injectors and initiates combustion using compression ignition (as opposed to spark ignition that is used with gasoline engines).

Dispersion Model

See air quality simulation model.

Dose

The amount of a pollutant that is absorbed. A level of exposure which is a function of a pollutant's concentration, the length of time a subject is exposed and the amount of the pollutant that is absorbed. The concentration of the pollutant and the length of time that the subject is exposed to that pollutant determine dose.

Dose-Response

The relationship between the dose of a pollutant and the response (or effect) it produces on a biological system.

Dust

Solid particulate matter that can become airborne.

E

E85

A nominal blend of 85 volume percent denatured ethanol and 15 volume percent unleaded gasoline that is used in flexible fuel vehicles.

Effluent or Effluent Discharge

Sewage, water or other liquid, flowing out of a reservoir, basin or treatment plant.

Electric Vehicle

A motor vehicle that uses an electric motor as the basis of its operation. Such vehicles emit virtually no air pollutants. (See also hybrid electric vehicle.)

Electrostatic Precipitator (ESP)

An air pollution control device that removes particulate matter from an air stream by imparting an electrical charge to the particles for mechanical collection at an electrode.

Emission Factor

For stationary sources, the relationship between the amount of pollution produced and the amount of raw material processed or burned. For mobile sources, the relationship between the amount of pollution produced and the number of vehicle miles traveled. By using the emission factor of a pollutant and specific data regarding quantities of materials used by a given source, it is possible to compute emissions for the source. This approach is used in preparing an emissions inventory. Visit U.S. EPA emission factors, or ARB's emission factors and toxic air contaminants.

Emission Inventory

An estimate of the amount of pollutants emitted into the atmosphere from major mobile, stationary, area-wide and natural source categories over a specific period of time such as a day or a year.

Emission Offsets (also known as Emissions Trading)

A rule-making concept whereby approval of a new or modified stationary source of air pollution is conditional on the reduction of emissions from other existing stationary sources of air pollution. These reductions are required in addition to reductions required by best available control technology

Emission Permit

A non-transferable or tradable allocation of entitlements by a government to an individual firm to emit a specified amount of a substance.

Emission Rate

The weight of a pollutant emitted per unit of time (e.g., tons/year).

Emissions

Released or discharged air contaminants in the ambient air from any source.

Emission Standard

The maximum amount of a pollutant that is allowed to be discharged from a polluting source such as an automobile or smoke stack.

Energy Content

The amount of energy available for doing work. For example, the amount of energy in fuel available for powering a motor vehicle.

Enhanced AT PZEV

Emissions certification standard for motor vehicles; vehicle meets the requirements of an AT PZEV and has some all electric range, such as a plug-in hybrid, or has an internal combustion engine (ICE) that runs on hydrogen.

Environmental Justice (EJ)

The fair treatment of people of all races and incomes with respect to development, implementation and enforcement of environmental laws, regulations and policies.

Environmental Performance Label (EP Label)

A label that provides a Global Warming Score and Smog Score, both on a scale from 1 to 10 (10 being cleanest). The Environmental Performance Label is required on all new cars sold in California that are manufactured after January 1, 2009.

Environmental Protection Agency (EPA)

The Federal agency responsible for implementing environmental laws through promulgating and enforcing regulations under those laws. These laws include the Clean Air Act, Clean Water Act, RCRA, CERCLA, and Toxic Substances Control Act (ToSCA).

Environmental Tobacco Smoke (ETS)

Primarily a combination of sidestream smoke from the burning end of a cigarette, pipe or cigar and exhaled mainstream smoke from the smoker. Other components include smoke emitted at the mouthpiece during puff drawing.

Epidemiology

The study of the occurrence and distribution of disease within a population.

Ethanol (ETOH)

Ethyl-alcohol, a volatile alcohol containing two carbon groups ($\text{CH}_3\text{CH}_2\text{OH}$). For fuel use, ethanol is produced by fermentation of corn or other plant products.

ETO

The chemical ethylene oxide (,2-epoxyethane)

Evaporative Emissions

Emissions from evaporating gasoline, which can occur during vehicle refueling, vehicle operation and even when the vehicle is parked. Evaporative emissions can account for two-thirds of the hydrocarbon emissions from gasoline-fueled vehicles on hot summer days.

Exhaust Gas Recirculation (EGR)

An emission control method that involves recirculating exhaust gases from an engine back into the intake and combustion chambers. This lowers combustion temperatures and reduces NOx. (See also nitrogen oxides.)

Executive Order (EO)

The legal document that indicates that a product subject to ARB regulations has in fact meet those requirements and can be offered for sale in California. The Executive Order, or EO, also lists important compliance information such as the legal description of the product and manufacturer, the actual standards met, when the executive order was granted and any conditions of the certification.

Exceedance

A measured level of an air pollutant higher than the national or state ambient air quality standards. (See also NAAQS and CAAQS.)

Expected Peak Day Concentration (EPDC)

A calculated value that represents the concentration expected to occur at a particular site once per year, on average. The calculation procedure uses measured data collected at the site during a three-year period. Measured concentrations that are higher than the EPDC are excluded from the state area designation process.

Exposure

The concentration of the pollutant in the air multiplied by the population exposed to that concentration over a specified time period.

Exposure Assessment

Measurement or estimation of the magnitude, frequency, duration and route of exposure to a substance for the populations of interest.

F

Federal Clean Air Act (FCAA)

See Clean Air Act.

Federal Implementation Plan (FIP)

In the absence of an approved State Implementation Plan (SIP), a plan prepared by the U.S. EPA that provides measures that nonattainment areas must take to meet the requirements of the Federal Clean Air Act.

Feebate

A market-based emission fee in which the fee is levied on projected lifecycle vehicle emissions and is refunded according to an allocation formula.

Flexible Fuel Vehicle (FFV)

Vehicles that can use a combination of fuels such as alcohol fuel and unleaded gasoline.

Flow

The liquid (water, wastewater, stormwater) that moves from one location to another.

Fly Ash

Air borne solid particles that result from the burning of coal and other solid fuel.

Fossil Fuels

Fuels such as coal, oil and natural gas; so-called because they are the remains of ancient plant and animal life.

Fuel Cell

An electrochemical cell that captures the electrical energy of a chemical reaction between fuels such as liquid hydrogen and liquid oxygen and converts it directly and continuously into the energy of a direct electrical current.

Fuel Cell Electric Vehicle (FCEV)

A zero-emission vehicle that runs on compressed hydrogen fed into a fuel cell "stack" that produces electricity to power the vehicle.

Fugitive Dust

Dust particles that are introduced into the air through certain activities such as soil cultivation, or vehicles operating on open fields or dirt roadways. This is a subset of fugitive emissions.

Fugitive Emissions

Emissions not caught by a capture system; which are often due to equipment leaks, evaporative processes and windblown disturbances.

Fume

Solid particles under 1 micron in diameter formed as vapors condense, or as chemical reactions take place.

Furnace

A combustion chamber; an enclosed structure in which fuel is burned to heat air or material.

G

Gas Turbine

An engine that uses a compressor to draw in air and compress it. Fuel is then added to the air and combusted in a combustor. Hot combustion gases exiting the engine turn a turbine which also turns the compressor. The engine's power output can be delivered from the compressor or turbine side of the engine.

Gasoline Volatility

The evaporative properties of gasoline. Gasoline vapor is a volatile organic compound. (See also Reid Vapor Pressure.)

Global Warming

An increase in the temperature of the Earth's troposphere. Global warming has occurred in the past as a result of natural influences, but the term is most often used to refer to the warming predicted by computer models to occur as a result of increased emissions of greenhouse gases.

Global Warming Potential (GWP)

The relative warming of a greenhouse gas over a specified period of time as compared to carbon dioxide (GWP of 1). GWP allows for the conversion of different greenhouse gas emissions into the same emissions unit, carbon dioxide equivalents (CO₂E).

Global Warming Score

A score that ranks each vehicle's CO₂-equivalent value on a scale of 1-10 (10 being the cleanest) relative to all other vehicles. All vehicles manufactured after January 1, 2009, must display this score on the Environmental Performance Label.

Goods Movement

The processes and activities involved in the pickup, movement and delivery of goods (agricultural, consumer, industrial products and raw materials) from producers/points of origin to consumers/point of use or delivery. 'Goods movement' relies on a series of transportation, financial and information systems for this to occur, that involves an international, national, state, regional and local networks of producers and suppliers, carriers and representative agents from the private sector, the public sector (federal, state, regional and local governmental agencies) and the general public.

Greenhouse Effect

The warming effect of the Earth's atmosphere. Light energy from the sun which passes through the Earth's atmosphere is absorbed by the Earth's surface and re-radiated into the atmosphere as heat energy. The heat energy is then trapped by the atmosphere, creating a situation similar to that which occurs in a car with its windows rolled up. A number of scientists believe that the emission of CO₂ and other gases into the atmosphere may increase the greenhouse effect and contribute to global warming.

Greenhouse Gases (GHG)

Atmospheric gases such as carbon dioxide, methane, chlorofluorocarbons, nitrous oxide, ozone and water vapor that slow the passage of re-radiated heat through the Earth's atmosphere.

GREET

Greenhouse Gases, Regulated Emissions and Energy Use in Transportation model used to determine emissions from various vehicle and fuel combinations.

Growth Management Plan

A plan for a given geographical region containing demographic projections (i.e., housing units, employment and population) through some specified point in time and which provides recommendations for local governments to better manage growth and reduce projected environmental impacts.

H

Hazardous Air Pollutant (HAP)

An air pollutant listed under section 112 (b) of the Federal Clean Air Act as particularly hazardous to health. Emission sources of hazardous air pollutants are identified by U.S. EPA and emission standards are set accordingly.

Hazardous Waste

Haze (Hazy)

A phenomenon that results in reduced visibility due to the scattering of light caused by aerosols. Haze is caused in large part by man-made air pollutants.

Heavy-Duty Vehicle Inspection Program (HDVIP)

This regulation authorizes random roadside smoke opacity testing of heavy-duty diesel trucks and buses. The opacity of exhaust emitted from these engines must not exceed 40 percent (1991 and newer engine model years) or 55 percent (all pre-1991 engines). Gasoline and diesel trucks and buses are also inspected for tampering and for engine certification label compliance.

Health-Based Standard (Primary Standard)

A dosage of air pollution scientifically determined to protect against human health effects such as asthma, emphysema and cancer.

Health Risk Assessment (HRA)

A document that identifies the risks and quantities of possible adverse health effects that may result from exposure to emissions of toxic air contaminants. A health risk assessment cannot predict specific health effects; it only describes the increased possibility of adverse health effects based on the best scientific information available.

"Hot Spot"

(See toxic hot spot.)

Hybrid Electric Vehicle (HEV)

A vehicle that combines an internal combustion engine with a battery and electric motor. This combination offers the range and refueling capabilities of a conventional vehicle, while providing improved fuel economy and lower emissions.

Hydrocarbons

Compounds containing various combinations of hydrogen and carbon atoms. They may be emitted into the air by natural sources (e.g., trees) and as a result of fossil and vegetative fuel combustion, fuel volatilization and solvent use. Hydrocarbons are a major contributor to smog. (See also Reactive Organic Gases).

Hydrogen Sulfide (H₂S)

A colorless, flammable, poisonous compound having a characteristic rotten-egg odor. It is used in industrial processes and may be emitted into the air.

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Incremental Reactivity (IR)

The additional ozone formed in the atmosphere with the incremental addition of a certain amount of a volatile organic compound.

Incineration

The act of burning a material to ashes.

Indirect Source

Any facility, building, structure, or installation, or combination thereof, which generates or attracts mobile source activity that results in emissions of any pollutant (or precursor) for which there is a state ambient air quality standard. Examples of indirect sources include employment sites, shopping centers, sports facilities, housing developments, airports, commercial and industrial development and parking lots and garages.

Indirect Source Control Program

Rules, regulations, local ordinances and land use controls and other regulatory strategies of air pollution control districts or local governments used to control or reduce emissions associated with new and existing indirect sources. Indirect source control programs include regulatory strategies such as transportation control measures (e.g., South Coast's Regulation XV for employer-based trip reduction); parking charges; land use controls that reduce the need for vehicle travel and increase transit, bicycle and pedestrian access; and, source-specific regulations such as truck idling and travel schedule requirements.

Indirect Source Review

A major component of an indirect source control program which applies to new and modified indirect sources. Strategies for indirect source review include permit programs, review and comment on new and modified indirect source projects through the California Environmental Quality Act (CEQA) process and coordination of air quality, transportation and land use policies through local government general plans. Indirect source review reduces emissions from new and modified sources through best available mitigation measures and additional offsite mitigation such as offsets and mitigation fees.

Individual Cancer Risk

The probability, expressed as chances in a million, that a person experiencing 70 years of continuous area-wide outdoor exposure to a toxic air contaminant will develop cancer.

Indoor Air Pollution

Air pollutants that occur within buildings or other enclosed spaces, as opposed to those occurring in outdoor, or ambient air. Some examples of indoor air pollutants are nitrogen oxides, smoke, asbestos, formaldehyde and carbon monoxide.

Industrial Source

Any of a large number of sources -- such as manufacturing operations, oil and gas refineries, food processing plants and energy generating facilities -- that emit substances into the atmosphere.

Inert Gas

A gas that does not react with the substances coming in contact with it.

Infiltration/Inflow

Extraneous water that has entered a sanitary sewer system. **Infiltration** is groundwater-related flow that enters the sanitary sewer system through physical defects such as cracked pipes, deteriorated pipe joints, and leaking manholes. **Inflow** is rainfall-related flow that enters the sanitary sewer system from surface flows through sources such as building roof drains, yard drains, storm water sump pumps, manhole covers, and cross-connections between the storm sewer and sanitary sewer system.

Inspection and Maintenance Program (I/M Program)

Interceptor

Large sewers that collect wastewater from local trunk sewers and convey it to the wastewater treatment plants.

Integrated Sampling Device

An air sampling device that allows estimation of air quality components over a period of time through laboratory analysis of the sampler's medium. (See also Continuous Sampling Device.)

Internal Combustion Engine

An engine in which both the heat energy and the ensuing mechanical energy are produced inside the engine. Includes gas turbines, spark ignition gas and compression ignition diesel engines.

International Agency for Research on Cancer (IARC)

An expert international agency of the World Health Organization which publishes evaluations of evidence on the carcinogenicity of a wide range of chemicals.

Inversion

A layer of warm air in the atmosphere that prevents the rise of cooling air and traps pollutants beneath it.

Intergovernmental Panel on Climate Change (IPCC)

A scientific intergovernmental body set up by the World Meteorological Organization (WMO) and by the United Nations Environment Programme (UNEP) to provide the decision-makers and others interested in climate change with an objective source of information about climate change.

Investor Owned Utilities (IOUs)

Private companies that provide a utility, such as water, natural gas or electricity, to a specific service area.

K

Karst

Geological formation which is composed of limestone bedrock that is easily dissolved by water. Karst features include caves, sinkholes, "losing" streams that lose their water through porous bedrock into the subsurface groundwater system, and springs through which groundwater emerges.

L

Lead

A gray-white metal that is soft, malleable, ductile and resistant to corrosion. Sources of lead resulting in concentrations in the air include industrial sources and crustal weathering of soils followed by fugitive dust emissions. Health effects from exposure to lead include brain and kidney damage and learning disabilities. Lead is the only substance which is currently listed as both a criteria air pollutant and a toxic air contaminant.

Leakage

A reduction in emissions of greenhouse gases within the state that is offset by an increase in emissions of greenhouse gases outside the state.

Light-Duty Vehicle (LDV)

Any motor vehicle with a gross vehicle weight of 6,000 pounds or less.

Limit of Detection (LOD)

The lowest concentration of a substance that can be reliably measured.

Liquefied Natural Gas (LNG)

(See Alternative Fuels.)

Liquefied Petroleum Gas (LPG)

(See Alternative Fuels.)

Low Carbon Fuels Standard (LCFS)

LCFS is a discreet early action measure of the Global Warming Solutions Act of 2006. This regulation reduces the carbon intensity (greenhouse gas emissions per unit of energy in the fuel) of transportation fuels by 10 percent by 2020.

Low Emission Vehicle (LEV)

A vehicle that meets the ARB's low emission vehicle standards.

Low Emission Vehicle II (LEV II)

California exhaust emission standards for 2004 and subsequent model passenger cars, light-duty trucks and medium-duty vehicles.

Lowest Achievable Emission Rate (LAER)

Under the Clean Air Act, the rate of emissions that reflects, the most stringent emission limitation in the State Implementation Plan of any state for a given source unless the owner or operator demonstrates such limitations are not achievable; or, the most stringent emissions limitation achieved in practice, whichever is more stringent.

Low NOx Burners

One of several combustion technologies used to reduce emissions of nitrogen oxides.

Lubricity

A measure of the ability of an oil or other compound to lubricate (reduce friction) between two surfaces in contact.

M

Major Source

A stationary facility that emits a regulated pollutant in an amount exceeding the threshold level depending on the location of the facility and attainment with regard to air quality status. (See Source.)

Market-Based Approaches

A system of market-based declining annual aggregate emissions limitations for sources, or categories of sources, that emit greenhouse gases. Market-based can also refer to greenhouse gas emissions exchanges, banking, credits and other transactions, governed by rules and protocols established by the ARB, that result in the same greenhouse gas emission reduction, over the same time period, as direct compliance with a greenhouse gas emission limit or emission reduction measure adopted by the ARB.

Maximum Achievable Control Technology (MACT)

Federal emissions limitations based on the best demonstrated control technology or practices in similar sources to be applied to major sources emitting one or more federal hazardous air pollutants

Maximum Incremental Reactivity (MIR)

A measure of the increase in ozone formation per unit weight of a hydrocarbon when added to the atmosphere.

Mean

Average.

Median

The middle value in a population distribution, above and below which lie an equal number of individual values; midpoint.

Melting Point

The temperature at which a solid becomes a liquid. At this temperature, the solid and the liquid have the same vapor pressure.

Mesosphere

The layer of the Earth's atmosphere above the stratosphere and below the thermosphere. It is between 35 and 60 miles from the Earth.

Methyl Tertiary Butyl Ether (MTBE)

An ether compound added to gasoline to provide oxygen and enhance complete combustion.

Military Personnel

Active duty members of the U.S. armed forces or reserves assigned to California facilities and active duty.

Million gallons per day (MGD)

A unit of measurement commonly used for wastewater discharges. One MGD is equivalent to 1.547 cubic feet per second.

Miscible

Capable of being mixed with other substances.

MMTCO₂E

Million metric tons of carbon dioxide equivalents.

Mobile Sources

Sources of air pollution such as automobiles, motorcycles, trucks, off-road vehicles, boats and airplanes. (See also stationary sources.)

Monitoring

The periodic or continuous sampling and analysis of air pollutants in ambient air or from individual pollution sources.

Motor Vehicle Fee Program

See AB 2766.

Morbidity

Rate of disease incidence.

Mortality

Death rate.

Multimedia Exposure

Exposure to a toxic substance from multiple pathways such as air, water, soil, food and breast milk.

Mutagenic

The ability of a chemical or physical agent to produce heritable changes in the DNA of living cells.

N

National Ambient Air Quality Standards (NAAQS)

Standards established by the U.S. EPA that apply for outdoor air throughout the country. There are two types of NAAQS. Primary standards set limits to protect public health and secondary standards set limits to protect public welfare.

National Pollutant Discharge Elimination System (NPDES)

The national program administered by the EPA in compliance with the Clean Water Act that controls discharges of pollutants into waters such as lakes, rivers and streams. NPDES permits contain limitations based on water pollution control technology and surface water (lakes, rivers, streams) quality standards, whichever is more stringent. They also establish best management practices and monitoring and reporting requirements. Entities that discharge or propose to discharge into the Nation's waters must apply for a permit.

NESHAP

The National Emissions Standards for Hazardous Air Pollutants (NESHAPs) are set by the U.S. EPA for an air pollutant not covered by National Ambient Air Quality Standards that may cause an increase in fatalities or in serious, irreversible, or incapacitating illness.

Natural Sources

Non-manmade emission sources, including biological and geological sources, wildfires and windblown dust.

New Source Performance Standards (NSPS)

Uniform national U.S. EPA air emission standards that limit the amount of pollution allowed from new sources or from modified existing sources.

New Source Review (NSR)

A Clean Air Act requirement that State Implementation Plans must include a permit review, which applies to the construction and operation of new and modified stationary sources in nonattainment areas, to ensure attainment of National Ambient Air Quality Standards. The two major requirements of NSR are Best Available Control Technology and Emission Offsets.

New Vehicle

Any vehicle transferred with less than 7,500 miles, or any vehicle that has not yet been issued a title (regardless of mileage).

NIST Cert of Standards

The National Institute of Standards and Technology (NIST) provides standard reference materials used to confirm the accuracy and traceability of standards for calibrating instrumentation used to measure atmospheric concentrations of air pollutants.

Nitric Oxide (NO)

A Precursor of ozone, NO₂ and nitrate; nitric oxide is usually emitted from combustion processes. Nitric oxide is converted to nitrogen dioxide (NO₂) in the atmosphere and then becomes involved in the photochemical processes and/or particulate formation. (See Nitrogen Oxides.)

Nitrogen Oxides (Oxides of Nitrogen, NO_x)

A general term pertaining to compounds of nitric oxide (NO), nitrogen dioxide (NO₂) and other oxides of nitrogen. Nitrogen oxides are typically created during combustion processes and are major contributors to smog formation and acid deposition. NO₂ is a criteria air pollutant and may result in numerous adverse health effects.

NOA

Naturally occurring asbestos (NOA) is the six asbestos minerals that have been identified as toxic air contaminants and occur naturally in rocks and soils. During many earth-disturbing activities, asbestos minerals may be released from rocks and soils, become airborne and inhaled deep into the lung.

NOAA

National Oceanic and Atmospheric Association. Federal agency tasked with tracking weather. Collect, analyze data from the oceans and atmosphere used for weather forecasts and air quality.

Nonattainment Area

A geographic area identified by the U.S. EPA as not meeting either NAAQS or CAAQS standards for a given pollutant.

Nonattainment Transitional

A subcategory of the nonattainment designation category for state standards that signals progress and implies the area is nearing attainment. Districts with nonattainment-transitional status may revise their attainment plans to delay adoption of control measures anticipating attainment without the measures.

Non-carcinogenic Effects

Non-cancer health effects which may include birth defects, organ damage, morbidity and death.

Non-Industrial Source

Any of a large number of sources -- such as mobile, area-wide, indirect and natural sources -- which emit substances into the atmosphere.

Non-Methane Hydrocarbon (NMHC)

The sum of all hydrocarbon air pollutants except methane. NMHCs are significant precursors to ozone formation.

Non-Methane Organic Gas (NMOG)

The sum of non-methane hydrocarbons and other organic gases such as aldehydes, ketones and ethers.

Non-Point Sources

Diffuse pollution sources that are not recognized to have a single point of origin.

Non-Road Emissions

Pollutants emitted by a variety of non-road sources such as farm and construction equipment, gasoline-powered lawn and garden equipment, power boats and outboard motors.

No-Observed-Adverse-Effect-Level (NOAEL)

A term used in risk assessment. An exposure level at which there are no statistically or biologically significant increases in the frequency or severity of adverse effects between an exposed population and a comparable non-exposed population.

No-Observed-Effect-Level (NOEL)

A term used in risk assessment. An exposure level at which there are no statistically or biologically significant difference or severity of any effect between an exposed population and a comparable non-exposed population.

O

Octane Number

A numerical measure of the antiknock properties of gasoline used as a motor fuel. The higher the octane number, the greater the antiknock properties.

Offsets

Offsets are tradable credits that represent greenhouse gas emissions reductions that are made in areas or sectors not covered by a cap-and-trade program. Under a greenhouse gas cap-and-trade program, covered entities could buy offset credits in lieu of buying allowances or reducing their greenhouse gas emissions on-site. One offset credit would be equal to one metric ton of greenhouse gas emissions. Offsets must meet rigorous criteria that demonstrate that the emissions reductions are real, permanent, verifiable, enforceable and quantifiable.

Olefin

A class of unsaturated hydrocarbons having the general formula C_nH_{2n} . Olefins in gasoline are responsible for the formation of deposits in storage tanks, fuel ducts and injectors. Therefore, their volume is limited by the reformulated gasoline regulation.

Onboard Diagnostics (OBD)

Devices that are incorporated into the computer systems of new motor vehicles to monitor components and systems that affect emissions when malfunctioning. If a problem is detected, the OBD system illuminates a warning lamp on the vehicle instrument panel to alert the driver. This warning lamp typically contains the phrase Check Engine or Service Engine Soon. The system will also store important information about the detected malfunction so that a repair technician can accurately find and fix the problem.

Onboard Vapor Recovery

Devices placed on vehicles to capture gasoline vapor during refueling and then route the vapors to the engine when the vehicle is started so that they can be efficiently burned.

On-Road, On-Road Vehicle

Vehicles that are intended by their manufacturer for use on public highways. On-road vehicles must be certified by their manufacturer with the U.S. Department of Transportation (DOT), National Highway Traffic Administration (NHTSA), as compliant with on-highway safety standards as well as certified to all applicable ARB and U.S. EPA on-road emission standards. Compliance with these standards is indicated by separate safety and emissions labels on the vehicle.

Opacity

The amount of light obscured by particle pollution in the atmosphere. Opacity is used as an indicator of changes in performance of particulate control systems.

Organic Compounds

A large group of chemical compounds containing mainly carbon, hydrogen, nitrogen and oxygen. All living organisms are made up of organic compounds.

Outer Continental Shelf (OCS)

The OCS is all submerged lands lying seaward of state coastal waters (3 miles offshore) which are under U.S. jurisdiction.

Overflow

(1) The untreated [wastewater](#) and [stormwater](#) that empties out of the combined sewer system directly into lakes, rivers or streams when the sewer system is overloaded during [wet weather](#). (2) The untreated [wastewater](#) that empties out of the [sanitary sewer system](#) into lakes, rivers, streams, streets, or buildings when the sewer system is overloaded, often due to [wet weather](#).

Outfall Sewer

Any pipe or conduit used to carry either raw sewage or treated effluent to a final point of discharge into a body of water.

Oxidant

A substance that brings about oxidation in other substances. Oxidizing agents (oxidants) contain atoms that have suffered electron loss. In oxidizing other substances, these atoms gain electrons. Ozone, which is a primary component of smog, is an example of an oxidant.

Oxidation

The chemical reaction of a substance with oxygen or a reaction in which the atoms in an element lose electrons and its valence is correspondingly increased.

Oxygenate

An organic molecule that contains oxygen. Oxygenates are typically ethers and alcohols. The most common oxygenate is ethanol in gasoline, which now runs about 10 percent by volume. The purpose of the oxygenate is to help the gasoline burn more completely, reducing carbon monoxide emissions. This is especially important during the winter months.

Ozone

A strong smelling, pale blue, reactive toxic chemical gas consisting of three oxygen atoms. It is a product of the photochemical process involving the sun's energy and ozone precursors, such as hydrocarbons and oxides of nitrogen. Ozone exists in the upper atmosphere ozone layer (stratospheric ozone) as well as at the Earth's surface in the troposphere (ozone). Ozone in the troposphere causes numerous adverse health effects and is a criteria air pollutant. It is a major component of smog.

Ozone Depletion

The reduction in the stratospheric ozone layer. Stratospheric ozone shields the Earth from ultraviolet radiation. The breakdown of certain chlorine and/or bromine-containing compounds that catalytically destroy ozone molecules in the stratosphere can cause a reduction in the ozone layer. For more information, go to U.S. EPA's website on this subject.

Ozone-Forming Potential

(See Reactivity.)

Ozone Generator

Some indoor "air purifiers" or air cleaners emit ozone, a major component of outdoor smog, either intentionally or as a by-product of their design. Those that intentionally emit ozone are often called "ozone generators."

Ozone Layer

A layer of ozone in the lower portion of the stratosphere -- 12 to 15 miles above the Earth's surface -- which helps to filter out harmful ultraviolet rays from the sun. It may be contrasted with the ozone component of photochemical smog near the Earth's surface, which is harmful.

Ozone Precursors

Chemicals such as non-methane hydrocarbons and oxides of nitrogen, occurring either naturally or as a result of human activities, which contribute to the formation of ozone, a major component of smog.

P

Partial Zero Emission Vehicle (PZEV)

Vehicles that meet the ARB super ultra-low emissions standard, have zero evaporative emissions and have a 15 year/150,000 mile warranty.

Particulate Matter (PM)

Any material, except pure water, that exists in the solid or liquid state in the atmosphere. The size of particulate matter can vary from coarse, wind-blown dust particles to fine particle combustion products.

Peak Flow

The maximum volume of [effluent](#) expected to enter a treatment system over a given time period. Treatment systems are designed based on an estimate of the rate of peak flow to average flow for different segments of the system.

Peak Levels

A level of airborne pollutants that is much higher than average. They can occur over a short period of minutes or hours in response to sudden releases, or they can occur due to a longer term build-up over several days.

Perchloroethylene (Perc)

The substance with the chemical formula 'C₂Cl₄,' also known by the name 'tetrachloroethylene' which has been identified by the ARB and listed as a toxic air contaminant (title 17, California Code of Regulations, section 93000).

Periodic Smoke Inspection Program (PSIP)

Regulation requiring fleet owners of two or more heavy-duty diesel powered trucks or buses to perform annual smoke opacity inspections on each vehicle's engine that is four years old or older. Engines that exceed opacity standards must be repaired to be brought into compliance. Fleet owners must keep records of the annual smoke test for two years and make these records available to ARB upon request.

Permit

Written authorization from a government agency (e.g., an air quality management district) that allows for the construction and/or operation of an emissions generating facility or its equipment within certain specified limits.

Permit to Operate (P/O)

An operational permit issued yearly by an air district to sources that meet specified regulations.

Peroxyacetyl Nitrate (PAN)

A group of compounds formed from the photochemical reactions of nitrogen and organic compounds. PANs are components of smog and known to cause eye irritation.

Persistence

Refers to the length of time a compound stays in the atmosphere, once introduced. A compound may persist for less than a second or indefinitely.

Personal Watercraft (PWC)

Watercraft that do not have outboard, inboard, or stern drive engines. This encompasses the watercraft typically referred to as Jet Skis, Waverunners, etc.

Phase I and Phase II Site Assessments

Also called Due Diligence Assessments. A historical review and inspection of a piece of property conducted prior to sale or purchase. The purpose is to identify any known or probable causes of pollution, contamination, improper handling of chemicals and waste, and regulatory violations.

Photochemical Reaction

A term referring to chemical reactions brought about by the light energy of the sun. The reaction of nitrogen oxides with hydrocarbons in the presence of sunlight to form ozone is an example of a photochemical reaction.

Photolysis

Chemical decomposition induced by light or other energy.

Plug-in Hybrid Electric Vehicle (PHEV)

A vehicle that is similar to traditional hybrids but is also equipped with a larger, more advanced battery that allows the vehicle to be plugged in and recharged in addition to refueling with gasoline. This larger battery allows you to drive on a combination of electric and gasoline fuels.

Plume

A visible or measurable discharge of a contaminant from a given point of origin that can be measured according to the Ringelmann scale. (See Ringelmann Chart.)

PM

See Particulate Matter.

PM2.5

Includes tiny particles with an aerodynamic diameter less than or equal to a nominal 2.5 microns. This fraction of particulate matter penetrates most deeply into the lungs.

PM10 (Particulate Matter)

A criteria air pollutant consisting of small particles with an aerodynamic diameter less than or equal to a nominal 10 microns (about 1/7 the diameter of a single human hair). Their small size allows them to make their way to the air sacs deep within the lungs where they may be deposited and result in adverse health effects. PM10 also causes visibility reduction.

Point Sources

Specific points of origin where pollutants are emitted into the atmosphere such as factory smokestacks. (See also Area-Wide Sources and Fugitive Emissions.)

Pollutant Standards Index (PSI)

A numerical index formerly used for reporting severity of air pollution levels to the general public. The PSI incorporated the five criteria pollutants -- ozone, PM10, carbon monoxide, sulfur dioxide and nitrogen dioxide -- into one single index. The PSI was based on the 1-hour ozone standard. PSI levels ranged from 0 (Good air quality) to 500 (Hazardous air quality). The higher the index, the higher the level of pollutants and the greater likelihood of health effects

Pollution Prevention

The use of materials, processes, or practices to reduce, minimize, or eliminate the creation of pollutants or wastes. It includes practices that reduce the use of toxic or hazardous materials, energy, water and/or other resources.

Polycyclic Aromatic Hydrocarbons (PAHs)

Organic compounds which include only carbon and hydrogen with a fused ring structure containing at least two benzene (six-sided) rings. PAHs may also contain additional fused rings that are not six-sided. The combustion of organic substances is a common source of atmospheric PAHs.

Polymer

Natural or synthetic chemical compounds composed of up to millions of repeated linked units, each of a relatively light and simple molecule.

Positive Crankcase Ventilation (PCV)

An emission control system for a reciprocating internal combustion engine that involves recirculating gases that blow by the piston rings during combustion from the crankcase back into the intake manifold so they can be more completely burned.

POTW

Publically Owned Treatment Works (POTW) are facilities designed to collect, transmit and treat wastewater that may be generated by industrial, commercial and/or domestic sources. Treatment works include the wastewater treatment units themselves, as well as intercepting sewers, outfall sewers, sewage collection systems, pumping, power and other equipment.

Precipitator

Pollution control device that collects particles from an air stream. (See Electrostatic Precipitator.)

Prescribed Burning

The planned application of fire to vegetation to achieve any specific objective on lands selected in advance of that application. In California, prescribed burning is governed under the Agricultural Burning Guidelines.

Prevention of Significant Deterioration (PSD)

A permitting program for new and modified stationary sources of air pollution located in an area that attains or is unclassified for national ambient air quality standards (NAAQS). The PSD program is designed to ensure that air quality does not degrade beyond those air quality standards or beyond specified incremental amounts. The PSD permitting process requires new and modified facilities above a specified size threshold to be carefully reviewed prior to construction for air quality impacts. PSD also requires those facilities to apply BACT to minimize emissions of air pollutants. A public notification process is conducted prior to issuance of final PSD permits.

Primary Particles

Particles that are directly emitted from combustion and fugitive dust sources. (Compare with Secondary Particle.)

Propellant

A gas with a high vapor pressure used to force formulations out of aerosol spray cans. Among the gases used are butanes, propanes and nitrogen.

Proposition 65

Safe Drinking and Toxic Enforcement Act of 1986, also known as Proposition 65. This act is codified in California Health and Safety Code section 25249.5, et seq. No person in the course of doing business shall knowingly discharge or release a chemical known to the state to cause cancer or reproductive toxicity into water or into land where such chemical passes or probably will pass into any source of drinking water, without first giving clear and reasonable warning to such individual. For more information, visit the OEHHA's Prop 65 website.

Public Owned Utilities (POUs)

Non-profit utility providers owned by a community and operated by municipalities, counties, states, public power districts, or other public organizations. Within POUs, residents have a say in decisions and policies about rates, services, generating fuels and the environment.

Public Workshop

A workshop held by a public agency for the purpose of informing the public and obtaining its input on the development of a regulatory action or control measure by that agency.

R

Radon

A colorless, naturally occurring, radioactive, inert gaseous element formed by radioactive decay of radium atoms in soil or rocks.

RCRA – Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) is the federal law that regulates hazardous chemicals used in active businesses and facilities. The storage of chemical products and the storage and disposal of chemical wastes are the focus of the regulation.

Reactive Organic Gas (ROG)

A photochemically reactive chemical gas, composed of non-methane hydrocarbons that may contribute to the formation of smog. Also sometimes referred to as Non-Methane Organic Gases (NMOGs). (See also Volatile Organic Compounds and Hydrocarbons.)

Reactivity (or Hydrocarbon Photochemical Reactivity)

A term used in the context of air quality management to describe a hydrocarbon's ability to react (participate in photochemical reactions) to form ozone in the atmosphere. Different hydrocarbons react at different rates. The more reactive a hydrocarbon, the greater potential it has to form ozone.

Reasonably Available Control Measures (RACM)

A broadly defined term referring to technologies and other measures that can be used to control pollution. They include Reasonably Available Control Technology and other measures. In the case of PM10, RACM refers to approaches for controlling small or dispersed source categories such as road dust, woodstoves and open burning.

Reasonably Available Control Technology (RACT)

Control techniques defined in U.S. EPA guidelines for limiting emissions from existing sources in nonattainment areas. RACTs are adopted and implemented by states.

Reasonably Available Retrofit Control Technology (RARCT)

(See also Best Available Control Technology.)

Reciprocating Internal Combustion Engine

An engine in which air and fuel are introduced into cylinders, compressed by pistons and ignited by a spark plug or by compression. Combustion in the cylinders pushes the pistons sequentially, transferring energy to the crankshaft, causing it to rotate.

Reference Dose (RfD)

An estimate delivered by the U.S. EPA (with uncertainty spanning perhaps an order of magnitude) of the daily exposure to the human population, (including sensitive subpopulations) that is likely to be without deleterious effects during a lifetime. The RfD is reported in units of mg of substance/kg body weight/day for oral exposures.

Reference Exposure Concentration (RfC)

An estimate, derived by the U.S. EPA with an uncertainty spanning perhaps an order of magnitude) of a daily exposure to the human population, (including sensitive subgroups) that is likely to be without appreciable risk of deleterious effects during a lifetime of exposure. The RfC is derived from a no or lowest observed adverse effect level from human or animal exposures, to which uncertainty or "safety" factors are applied.

Reference Exposure Level (REL)

A term used in risk assessment. It is the concentration at or below which no adverse health effects are anticipated for a specified exposure period.

Refinery

A facility that produces liquid fuels by distilling petroleum.

Reformulated Gasoline (RFG)

Also called Cleaner Burning Gasoline (CBG). Gasoline with a different composition from conventional gasoline (e.g., lower aromatics content) that results in the production of lower levels of air pollutants.

Reformulated Gasoline Predictive Model

A set of mathematical equations that predict the emissions likely to occur from the combustion of a given formulation of gasoline.

Reforestation

Establishing native tree cover on lands that were previously forested, but that have had less than 10 percent tree canopy cover for a minimum time of 10 years.

Regional Haze

The haze produced by a multitude of sources and activities which emit fine particles and their precursors across a broad geographic area. National regulations require states to develop plans to reduce the regional haze that impairs visibility in national parks and wilderness areas.

Registration Stop (or VLT Stop)

A hold placed on a motor vehicle or motor vehicle engine to prevent registration or title being issued. Registration stops may be placed by DMV, ARB or CHP staff. Stops are placed because of illegal registration attempts, illegal sales, or placed on heavy-duty vehicles that have been retired by their previous owners. Registration stops do not expire; however, a vehicle with a stop may be dropped from the DMV computer record after 7-10 years.

Reid Vapor Pressure (RVP)

Refers to the vapor pressure of the fuel expressed in the nearest hundredth of a pound per square inch (psi) with a higher number reflecting more gasoline evaporation. (See also Gasoline Volatility.)

Renewable Fuel Standard (RFS)

A federal program to increase the volume of renewable fuels used in transportation fuels. Created under the Energy Policy Act of 2005, and revised by the Energy Independence and Security Act of 2007, the RFS program requires increasing annual volumes of renewable fuel, starting from 9 billion gallons in 2008 to 36 billion gallons by 2022. Within those total volumes, the RFS also requires certain volumes of specific fuels, such as cellulosic and advanced biofuels.

Ringelmann Chart

A series of charts, numbered 0 to 5 that simulate various smoke densities by presenting different percentages of black. A Ringelmann No. 1 is equivalent to 20 percent black; a Ringelmann No. 5 is 100 percent black. They are used for measuring the opacity or equivalent obscuration of smoke arising from stacks and other sources by matching the actual effluent with the various numbers, or densities, indicated by the charts.

Research Screening Committee (RSC)

The Board's legislatively mandated committee consists of scientists, engineers and others knowledgeable, technically qualified and experienced in air pollution problems. The committee meets approximately four times a year to review proposed and completed research projects.

Residual Risk

The quantity of health risk remaining after application of emission control.

Risk Assessment

An evaluation of risk which estimates the relationship between exposure to a harmful substance and the likelihood that harm will result from that exposure.

Risk Management

An evaluation of the need for and feasibility of reducing risk. It includes consideration of magnitude of risk, available control technologies and economic feasibility.

S

Sanctions

Actions taken against a state or local government by the federal government for failure to plan or to implement a State Implementation Plan (SIP). Examples include withholding of highway funds and a ban on construction of new sources of potential pollution.

Sanitary Sewers

Sewers that are designed to carry only sewage (wastewater) coming from inside buildings (from sinks, showers, toilets, etc.). Stormwater runoff is carried in a separate sewer.

Sanitary Sewer Overflows (SSO)

Unintentional discharges of raw sewage from municipal sanitary sewers to a navigable waterway.

SB 25 (Children's Environmental Health Protection Act)

Changes to state law (Senate Bill 25, Escutia, 1999) established requirements for the ARB and the OEHHA to examine the impacts of air pollution on children's health. Specifically, the act required the state to evaluate all ambient air quality standards to determine whether these standards adequately protect human health, particularly that of infants and children; and, to identify toxic air contaminants that disproportionately impact children.

Scrubber

An air pollution control device that uses a high energy liquid spray to remove aerosol and gaseous pollutants from an air stream. The gases are removed either by absorption or chemical reaction.

Secondhand Smoke

Environmental tobacco smoke (ETS), or secondhand smoke, is a complex mixture of thousands of gases and fine particles emitted by the burning of tobacco products from the smoke exhaled by the smoker. Other minor contributors to ETS are from the smoke that is emitted from the smoldering end of the tobacco product and the vapor-phase related compounds that diffuse from the wrapper of the tobacco product.

Secondary Particle

Particles that are formed in the atmosphere. Secondary particles are products of the chemical reactions between gases, such as nitrates, sulfur oxides, ammonia and organic products.

Senate Bill 1731 (Calderon, 1993)

SB 1731 amended the Air Toxics "Hot Spots" Information and Assessment Act (AB 2588, "Hot Spots" or Program; 1987, Connelly) by adding two major elements. The first element required the OEHHA to adopt risk assessment guidelines for the program using a full public review process. These new risk assessment guidelines superseded the previous guidelines and include "supplemental" exposure information. Second, facilities determined to have a significant risk by the district, must conduct an airborne toxic risk reduction audit and develop a plan to implement airborne toxic risk reduction measures. The ARB is required to provide assistance to smaller businesses for developing and applying risk reduction techniques. As part of that assistance, the ARB developed guideline documents on how to conduct an audit, including a self-conducted checklist for certain industries.

Selective Catalytic Reduction (SCR) System

An emission control system that reduces NO_x emissions through the catalytic reduction of NO_x in diesel exhaust to N₂ and H₂O by injecting nitrogen-containing compounds into the exhaust stream, such as ammonia or urea.

Sensitive Groups

Identifiable subsets of the general population that are at greater risk than the general population to the toxic effects of a specific air pollutant (e.g., infants, asthmatics, elderly).

Sequestration

see Carbon Sequestration.

SF₆ (Sulfur Hexafluoride)

SF₆ is a colorless, non-toxic and non-flammable gas under standard conditions. It is used in many applications including as a gaseous dielectric medium in the electrical industry, an inert gas for the casting of magnesium, a tracer gas and an etchant in the semiconductor industry. SF₆ is the most potent greenhouse gas with a global warming potential of 23,900 times that of carbon dioxide when compared over a 100-year period.

Shore Power

"Shore power", also known as Cold Ironing, refers to providing electrical power to a vessel that is docked. The purpose of shore power is to allow the vessel operator to turn off the vessel's auxiliary engines, which would normally be providing the necessary electricity. Although there are emissions associated with the generation of electricity used for shore power, those emissions are much less than those from the auxiliary engines, which burn diesel fuel.

Smog

A combination of smoke and other particulates, ozone, hydrocarbons, nitrogen oxides and other chemically reactive compounds which, under certain conditions of weather and sunlight, may result in a murky brown haze that causes adverse health effects.

Smog Check Program

(See Inspection and Maintenance Program).

Smog Score

A score that ranks each vehicle's smog emissions on a scale of 1-10 (10 being the cleanest) relative to all other vehicles. All vehicles manufactured after January 1, 2009, must display this score on the Environmental Performance Label.

Smoke

A form of air pollution consisting primarily of particulate matter (i.e., particles released by combustion). Other components of smoke include gaseous air pollutants such as hydrocarbons, oxides of nitrogen and carbon monoxide. Sources of smoke may include fossil fuel combustion, agricultural burning and other combustion processes.

Solvent Base

Hydrocarbon-containing compounds such as paint thinner used for the purpose of thinning various types of coatings such as paint.

Soot

Very fine carbon particles that have a black appearance when emitted into the air.

Source

Any place or object from which air pollutants are released. Sources that are fixed in space are stationary sources and sources that move are mobile sources.

Speciation

Speciation is the analytical activity of identifying and/or measuring the quantities of one or more individual chemical species in a sample.

Spray Booth

A power ventilated structure enclosing a coating operation, to confine and limit the escape of spray, vapor and residue and to safely conduct or direct them to an exhaust system. The spray booth contains and captures particulate emissions and vents them to a control device.

Stakeholders

Residents, environmentalists, businesses and government representatives that have a stake or concern about how air quality is managed.

State Implementation Plan (SIP)

A plan prepared by states and submitted to U.S. EPA describing how each area will attain and maintain national ambient air quality standards. SIPs include the technical foundation for understanding the air quality (e.g., emission inventories and air quality monitoring), control measures and strategies and enforcement mechanisms. (See also AQMP.)

Stationary Sources

Non-mobile sources such as power plants, refineries and manufacturing facilities which emit air pollutants.

Storage Tank

Any stationary container, reservoir, or tank, used for storage of liquids.

Stratosphere

The layer of the Earth's atmosphere above the troposphere and below the mesosphere. It extends between 10 and 30 miles above the Earth's surface and contains the ozone layer in its lower portion. The stratospheric layer mixes relatively slowly; pollutants that enter it may remain for long periods of time.

Storm Sewer

A conduit that collects and transports rain and snow runoff only. In a separate sewer system, storm sewers are entirely separate from those carrying wastewater.

Stormwater

Rain water and snow melt that runoff hard surfaces such as buildings, streets, sidewalks, parking lots and driveways.

Suggested Control Measure (SCM)

A model rule developed by air quality managers for local air districts to use to control the emissions from certain stationary sources of air pollution.

Sulfates

(See Sulfur Oxides.)

Sulfur Dioxide (SO₂)

A strong smelling, colorless gas that is formed by the combustion of fossil fuels. Power plants, which may use coal or oil high in sulfur content, can be major sources of SO₂ and other sulfur oxides contribute to the problem of acid deposition. SO₂ is a criteria air pollutant.

Sulfur Oxides

Pungent, colorless gases (sulfates are solids) formed primarily by the combustion of sulfur-containing fossil fuels, especially coal and oil. Considered major air pollutants, sulfur oxides may impact human health and damage vegetation.

Sump Pump

A pump, often in the basement of a house, that removes water from a drain or receptacle for liquids.

Superfund

(See CERCLA)

Super Ultra Low Emission Vehicle (SULEV)

A vehicle that meets the ARB's super ultra-low emission vehicle standard of 0.03 grams per mile of NMOG + NOx.

T

Terminal

An intermediate gasoline distribution facility where delivery of gasoline to and from the facility is solely by pipeline.

Thermal Spraying

A process in which metallic or nonmetallic materials are heated to a molten or nearly molten state and are sprayed onto a surface to form a coating. The material may originate in the form of powder, rod, or wire before it is heated, prior to spraying and deposition. Materials can be heated by combustion of fuel gases (similar to welding) or by using electricity. Thermal spraying includes processes such as flame spraying, plasma spraying, high velocity oxyfuel (HVOF) spraying and twin wire electric arc spraying.

Thermosphere

The outermost layer of the Earth's atmosphere extending from about 60 miles to several hundred miles above the planet's surface. The temperature of this layer varies from many hundreds to thousands of degrees Celsius.

Title III

A section of the 1990 amendments to the federal Clean Air Act that addresses the control of toxic air emissions.

Title V

A section of the 1990 amendments to the federal Clean Air Act that requires a federally enforceable operating permit for major sources of air pollution.

Topography

The configuration of a surface, especially the Earth's surface, including its relief and the position of its natural and man-made features.

Total Organic Gases (TOG)

Gaseous organic compounds, including reactive organic gases and the relatively unreactive organic gases such as methane.

Total Suspended Particulate (TSP)

Particles of solid or liquid matter -- such as soot, dust, aerosols, fumes and mist -- up to approximately 30 microns in size.

Toxic Air Contaminant (TAC)

An air pollutant, identified in regulation by the ARB, which may cause or contribute to an increase in deaths or in serious illness, or which may pose a present or potential hazard to human health. TACs are considered under a different regulatory process (California Health and Safety Code section 39650 et seq.) than pollutants subject to CAAQSs. Health effects to TACs may occur at extremely low levels and it is typically difficult to identify levels of exposure which do not produce adverse health effects.

Toxic Best Available Control Technology (T-BACT)

The most effective emission limitation or control technique which has been achieved in practice or found by the ARB Executive Officer or Air Pollution Control Officer of the local districts to be technologically feasible.

Toxic Hot Spot

A location where emissions from specific sources may expose individuals and population groups to elevated risks of adverse health effects -- including but not limited to cancer -- and contribute to the cumulative health risks of emissions from other sources in the area.

Transfer Efficiency

For coatings, a measure of the percent of the total amount of coating used which is transferred to a unit surface by a spray gun or other device.

Transport Refrigeration Unit (TRU)

Refrigeration systems powered by integral internal combustion engines designed to control the environment of temperature-sensitive products that are transported in trucks and refrigerated trailers. TRUs may be capable of both cooling and heating.

Transportation Control Measure (TCM)

Any control measure to reduce vehicle trips, vehicle use, vehicle miles traveled, vehicle idling, or traffic congestion for the purpose of reducing motor vehicle emissions. TCMs can include encouraging the use of carpools and mass transit.

Troposphere

The layer of the Earth's atmosphere nearest to the surface of the Earth. The troposphere extends outward about five miles at the poles and about 10 miles at the equator.

U

Ultra Low Emissions Vehicle (ULEV)

A vehicle that meets the ARB's ultra-low emission standards of 0.125 grams per mile of NMOG + NOx.

Underground Storage Tank (UST)

Refers to tanks used to store gasoline underground.

United States Environmental Protection Agency (U.S. EPA)

The federal agency charged with setting policy and guidelines and carrying out legal mandates for the protection of national interests in environmental resources. For more information, visit the U.S. EPA website.

Unit Risk Number

The number of potential excess cancer cases from a lifetime exposure to one microgram per cubic meter (μ/m^3) of a given substance. For example, a unit risk value of 5.5×10^{-6} would indicate an estimated 5.5 cancer cases per million people exposed to an average concentration of $1 \mu/m^3$ of a specific carcinogen for 70 years.

Upstream Emissions

Emissions from processes that take place up to when the fuel enters a vehicle---typically during extraction, production, distribution and dispensing of the fuel.

Urban Airshed Model

A three-dimensional photochemical grid model designed to calculate the concentrations of both inert and chemically reactive pollutants in the atmosphere. It simulates the physical and chemical processes that affect pollution concentrations.

Used Vehicle

Any vehicle that has been transferred after being issued a title and has over 7,500 miles.

V

Vapor

The gaseous phase of liquids or solids at atmospheric temperature and pressure.

Vapor Density

The vapor density is expressed in grams per liter (g/L) and is compared to the density of air (air=1).

Vapor Pressure

The pressure, often expressed in millimeters of mercury (mm Hg) or pounds per square inch (PSI) that is characteristic at any given temperature of a vapor in equilibrium with its liquid or solid form.

Vapor Recovery Systems

Mechanical systems that collect and recover chemical vapors resulting from transfer of gasoline from operations such as tank-to-truck systems at refineries, tanker-to-pipeline systems at offshore oil operations and pump-to-vehicle systems at gasoline stations.

Variance

Permission granted for a limited time (under stated conditions) for a person or company to operate outside the limits prescribed in a regulation.

Vehicle Miles Traveled (VMT)

The miles traveled by motor vehicles over a specified length of time (e.g., daily, monthly or yearly) or over a specified road or transportation corridor.

Vessel Speed Reduction (VSR)

A way to reduce emissions of NO_x, SO_x, diesel PM and CO₂ from oceangoing vessels. Emissions are decreased when vessels slow their speeds, thereby reducing the energy requirements of the main engine. The Ports of Los Angeles (POLA), Long Beach (POLB), and San Diego (POSD) currently have a voluntary VSR program in place which requests that vessels slow to 12 knots from certain distances from port (20 nautical miles (nm) for POSD and 20 or 40 nm for POLA and POLB). Ports typically offer incentives for complying.

Viscosity

The degree to which a fluid resists flow under an applied force.

Visibility

A measurement of the ability to see and identify objects at different distances. Visibility reduction from air pollution is often due to the presence of sulfur and nitrogen oxides, as well as particulate matter.

Visibility Reducing Particles (VRP)

Any particles in the atmosphere that obstruct the range of visibility.

Volatile

Any substance that evaporates readily.

Volatile Organic Compounds (VOCs)

Carbon-containing compounds that evaporate into the air (with a few exceptions). VOCs contribute to the formation of smog and/or may themselves be toxic. VOCs often have an odor and some examples include gasoline, alcohol and the solvents used in paints.

W

Wastewater

Water that has been used and rendered unsuitable for reuse without treatment. It is collected from buildings (homes, businesses, institutions, industrial facilities) and transported through sewers.

Water Base

Water used as the solvent for coatings such paint.

Watershed

The land that stormwater runs across to a common point such as a lake, river or stream. Watershed boundaries are formed by the natural topography of the land and are rarely modified significantly by human activity.

Water Solubility

The solubility of a substance in water provides information on the fate and transport in the environment. The higher the water solubility, the greater the tendency to remain dissolved and the less likely to volatilize from the water. Low water soluble substances will volatilize more readily in water and will partition to soil or bioconcentrate in aquatic organisms.

Weight of Evidence

The extent to which the available information supports the hypothesis that a substance causes an effect in humans. For example, factors which determine the weight-of-evidence that a chemical poses a hazard to humans include the number of tissue sites affected by the agent; the number of animal species, strains, sexes, relationship, statistical significance in the occurrence of the adverse effect in treated subjects compared to untreated controls; and, the timing of the occurrence of adverse effect.

Welfare-Based Standard (Secondary Standard)

An air quality standard that prevents, reduces, or minimizes injury to agricultural crops and livestock, damage to and the deterioration of property and hazards to air and ground transportation.

Well to Tank

Emissions associated with a fuel from extraction to the tank it sits in prior to entering a vehicle.

Well to Wheels

Emissions associated with a fuel from extraction to when it enters and is used by a vehicle.

Wet Weather Flow

The amount of [wastewater](#) and [stormwater](#) in the sewer system during periods of rain or snow melt.

Woodburning Pollution

Air pollution caused by woodburning stoves and fireplaces that emit particulate matter, carbon monoxide, and odorous and toxic substances.

Z

Zero Emission Vehicle (ZEV)

Vehicles which produce no emissions from the on-board source of power (e.g., an electric vehicle).

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