Appendix I: Glossary

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.
Air District:	A political body responsible for managing air quality on a regional or county basis. California is currently divided into 35 air Districts. (See also Air Pollution Control District and Air Quality Management District).
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:	Air pollution is the introduction of chemicals, particulate matter, or biological materials that cause harm or discomfort to humans or other living organisms, or cause damage to the natural environment or built environment, into the atmosphere.
Air Pollution Control District (District):	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).
Air Quality Management Plan (AQMP):	A plan prepared by an District / AQMD, for a county or region designated as a nonattainment 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 Resources Board:	(See California Air Resources Board.)
Alternative Fuels:	Fuels such as methanol, ethanol, natural gas, and liquid petroleum gas that are cleaner burning and help to meet CARB's mobile and stationary emission standards. These fuels may be used in place of less clean fuels for powering motor vehicles. For more information, please visit our alternative fuels website.
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 which 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. For more information, please visit our area-wide source methodologies website.
Assembly Bill 32:	The California Global Warming Solution Act of 2006 and California Governor Schwarzenegger Executive Order S-3-05 (June 1, 2005), both requiring reductions of greenhouse gases in the State of California by 2020.
Atmosphere:	The gaseous envelope surrounding the Earth. The dry atmosphere consists almost entirely of nitrogen (78.1% volume mixing ratio) and oxygen (20.9% volume mixing ratio), together with a number of trace gases, such as argon (0.93% volume mixing ratio), helium and radioactively active greenhouse gases such as carbon dioxide (0.035% volume mixing ratio) and ozone. In addition, the atmosphere contains the greenhouse gas water vapor, whose amounts are highly variable but typically around 1% volume mixing ratio. The atmosphere also contains clouds and aerosols

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. For more information, please visit our area designations website.
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). For more information, please go to our BACT website.
California Air Pollution Control Officers Association (CAPCOA):	A nonprofit association of the air pollution control officers from all 35 air quality agencies throughout California. CAPCOA was formed in 1975 to promote clean air and to provide a forum for sharing of knowledge, experience, and information among the air quality regulatory agencies around the state. CAPCOA is an organization of air quality professionals-- leaders in their field -- who promote unity and efficiency, and strive to encourage consistency in methods and practices of air pollution control. For more information, please go to CAPCOA's website.
CA Air Resources Board (CARB):	The State's lead air quality agency consisting of an eleven-member board appointed by the Governor and several hundred employees. CARB is responsible for attainment and maintenance of the state and federal air quality standards, and is fully responsible for motor vehicle pollution control. It oversees county and regional air pollution management programs.
CA 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 which 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.
CalEEMod:	Quantifies potential criteria pollutant and greenhouse gas (GHG) emissions associated with construction and operation from a variety of land uses, such as residential and commercial facilities. The model quantifies direct emissions from construction and operation (including vehicle use), as well as indirect emissions, such as GHG emissions from energy production, solid waste handling, vegetation planting and/or removal, and water conveyance.
CALINE:	A model developed by the Air Resources Board that calculates carbon monoxide concentrations resulting from motor vehicle use.
California Environmental Quality Act (CEQA):	A California law that sets forth a process for public agencies to make informed decisions on discretionary project approvals. The process aids decision makers to determine whether any environmental impacts are associated with a proposed project. It requires environmental impacts associated with a proposed project to be eliminated or reduced, and that air quality mitigation measures are implemented.
Carbon Dioxide (CO_2):	The most common of the six primary GHGs. A naturally-occurring gas, and also a by-product of burning fossil fuels and biomass, as well as land-use changes and other industrial processes. It is the principal anthropogenic greenhouse gas that affects the Earth's radiative balance. It is the reference gas against which other greenhouse gases are measured and therefore has a Global Warming Potential of 1.
Carbon Dioxide Equivalent (CO_2e):	A metric used to compare emissions of various greenhouse gases. It is the mass of carbon dioxide that would produce the same estimated radiative forcing as a given mass of another greenhouse gas. Carbon dioxide equivalents are computed by multiplying the mass of the gas emitted by its global warming potential.

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.
Climate Action Plan:	A set of strategies intended to guide community efforts for reducing greenhouse gas emissions which focuses on improving energy efficiency and conservation in homes and businesses, as well as strategies to reduce emissions from transportation sources.
Climate Change:	Climate change refers to a statistically significant variation in either the mean state of the climate or in its variability, persisting for an extended period (typically decades or longer). Climate change may be due to natural internal processes or external forcing, or to persistent anthropogenic changes in the composition of the atmosphere or in land use.
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, and PM_{10} and $PM_{2.5}$. 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 CARB periodically review new scientific data and may propose revisions to the standards as a result.
Direct Emissions:	Emissions from applicable sources that are owned or controlled by the reporting organization.
Dust:	Solid particulate matter that can become airborne.
EMFAC2007/EMFAC2010:	A software package used to calculate emission rates from all motor vehicles, such as passenger cars to heavy-duty trucks, operating on highways, freeways and local roads in California.
Emission Factor:	A unique value for determining an amount of a GHG emitted for a given quantity of activity data (e.g., million metric tons of carbon dioxide emitted per barrel of fossil fuel).
Federal Clean Air Act (FCAA):	A federal law passed in 1970 and amended in 1974, 1977 and 1990 which 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. For more information, please go to the Federal Clean Air Act
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. A subset of fugitive emissions.
Global Warming:	Global warming is an average increase in the temperature of the atmosphere near the Earth's surface and in the troposphere, which can contribute to changes in global climate patterns. Global warming can occur from a variety of causes, both natural and human induced. In common usage, "global warming" often refers to the warming that can occur as a result of increased emissions of greenhouse gases from human activities. Also see Climate Change
Greenhouse Gas:	Any gas that absorbs infrared radiation in the atmosphere. Greenhouse gases include, but are not limited to, water vapor, carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), hydro chlorofluorocarbons (HCFCs), ozone (O3), hydro fluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF6).
Health Risk Assessment:	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.)

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 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 fee.
Metric Ton:	The tonne (t) or metric ton, sometimes referred to as a metric tonne, is an international unit of mass. A metric ton is equal to a Megagram (Mg), 1000 kilograms, 2204.6 pounds, or 1.1023 short tons.
Million Metric Tons (MMT):	Common measurement used in GHG inventories. It is equal to a Teragram (Tg).
Mobile Sources:	Sources of air pollution such as automobiles, motorcycles, trucks, off-road vehicles, boats, and airplanes
National Ambient Air Quality Standards (NAAQS):	Standards established by the United States 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. For more information, please go to our AAQS website.
New Source Review:	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. For more information, please go to our New Source Review website.
Nitrogen Oxides (NO_x):	A powerful greenhouse gas with a global warming potential of 298 times that of carbon dioxide (CO2). Major sources of nitrous oxide include soil cultivation practices, especially the use of commercial and organic fertilizers, manure management, fossil fuel combustion, nitric acid production, and biomass burning. The GWP is from the IPCC's Fourth Assessment Report (AR4).
Nitrous Oxide (N_2O):	Is a chemical compound with the formula N_2O. At room temperature, it is a colorless non-flammable gas, used in surgery and dentistry for its anesthetic and analgesic effects. It is also used as an oxidizer in rocketry and in motor racing to increase the power output of engines, as well as a propellant.
Nonattainment Area:	A geographic area identified by the U.S. EPA and / or CARB as not meeting either NAAQS or CAAQS standards for a given pollutant. For more information, please view our designated areas website.
OFFROAD 2007:	A software package used to generate and calculate emissions inventory data for off-road mobile sources.
Ozone:	Ozone, the triatomic form of oxygen (O3), is a gaseous atmospheric constituent. In the troposphere, it is created both naturally and by photochemical reactions involving gases resulting from human activities (smog). Tropospheric ozone acts as a greenhouse gas. In the stratosphere, it is created by the interaction between solar ultraviolet radiation and molecular oxygen (O2). Stratospheric ozone plays a dominant role in the stratospheric radiative balance. Its concentration is highest in the ozone layer

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.
Particulate Matter:	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. For more information, please take a look at our PM brochure.
$PM_{2.5}$:	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. For more information, please go to our particulate matter website.
PM_{10}:	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 . PM_{10} also causes visibility reduction. For more information, please view our particulate matter brochure.
Precursor:	Compounds that change chemically or physically after being emitted into the air and eventually produce air pollutants. For example, organic compounds are precursors to ozone.
Reactive Organic Gasses (ROG):	A photo chemically 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.)
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.
Sensitive Receptors:	Facilities or land uses that include members of the population which are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples include schools, hospitals and residential areas.
Significance Threshold:	Under CEQA, every agency in the state "is encouraged to develop and publish thresholds of significance" against which to compare the environmental impacts of projects. A lead agency will normally consider the environmental impacts of a project to be significant if and only if they exceed established thresholds of significance.
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. The primary source of smog in California is motor vehicles.
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). For more information, please go to our SIP website.
Stationary Sources:	Non-mobile sources such as power plants, refineries, and manufacturing facilities which emit air pollutants.
Sulfur Dioxide (SO_2):	A compound composed of one sulfur and two oxygen molecules. Sulfur dioxide emitted into the atmosphere through natural and anthropogenic processes is changed in a complex series of chemical reactions in the atmosphere to sulfate aerosols. These aerosols are believed to result in negative radiative forcing (i.e., tending to cool the Earth's surface) and do result in acid deposition (e.g., acid rain).
Sulfur Hexafluoride (SF_6):	An inorganic, colorless, odorless, non-toxic and non-flammable greenhouse gas which is considerably higher than the density of air.

Toxic Air Contaminants (TAC):	An air pollutant, identified in regulation by the CARB, 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. For more information, please view our toxics website.
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. For more information, please go to our toxics hot spots website.
URBEMIS (URBan EMISsions):	Air quality model utilized in California for land use project related air quality impact analysis. URBEMIS includes emissions factors for estimating emission from construction activities, motor vehicles, and area sources resulting from the project.
U.S. 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, please go to the U.S. EPA website.
Vehicle Miles Travelled (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.
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 be toxic. VOCs often have an odor, and some examples include gasoline, alcohol, and the solvents used in paints.