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# APPENDIX E

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## *Glossary of Air Quality Terms*

**Air:** So-called “pure” air is a mixture of gases containing about 78 percent nitrogen; 21 percent oxygen; less than one percent of carbon dioxide, argon, and other gases; and varying amounts of water vapor.

**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.

**Air Monitoring:** Sampling for and measuring of pollutants present in the atmosphere.

**Air Pollution:** Degradation of air quality resulting from unwanted chemicals or other materials occurring in the air.

**Air Pollution Control District (APCD):** An 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.

**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.

**Air Quality Management Plan (AQMP):** A plan prepared by an APCD / 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 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.

**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.

**Ambient Air Quality Standards (California-CAAQS or National-NAAQS):** Health- and welfare-based standards for outdoor air which identify the maximum acceptable average concentrations of air pollutants during a specified period of time.

**Area-wide Sources (also known as “Area Sources”):** Stationary sources of pollution (e.g., water heaters, gas furnaces, fireplaces, and woodstoves) that are typically associated with homes and non-industrial sources. Area-wide sources do not include mobile sources. The California Clean Air Act requires air districts to include area-wide sources in the development and implementation of their Air Quality Maintenance Plan. Under the federal air toxics program, an area-wide source is defined as any source that emits less than 10 tons per year of a single hazardous air pollutant (HAP) or 25 tons per year of all HAPs.

**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. An area may be an attainment area for one pollutant and a nonattainment area for others.

**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, PM<sub>10</sub>, and PM<sub>2.5</sub>.

**Climate Change:** A change in the temperature of the earth's troposphere. Climate change has occurred in the past as a result of natural influences, but the term is most often used in reference to the warming predicted by computer models to occur as a result of increased emissions of greenhouse gases.

**Design Value (DV):** The concentration that is compared to the standard for the purpose of determining attainment status.

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

**Expected Peak Day Concentration (EPDC):** See Peak Indicator

**Exceedance:** A measured level of an air pollutant higher than the national or state ambient air quality standards.

**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.

**Hydrocarbon:** A general term used to describe compounds comprised of hydrogen and carbon atoms. Hydrocarbons are classified as to how photochemically reactive they are: relatively reactive or relatively non-reactive.

**Mean:** Average.

**Mobile Sources:** Sources of air pollution such as automobiles, motorcycles, trucks, off-road vehicles, boats, and airplanes (compare with Stationary Sources).

**Nonattainment Area:** A geographic area that does not meet either a State or federal standard for a given pollutant. This area usually consists of an air basin or county, but can be any geographic area defined by the U.S. EPA.

**Nonattainment Transitional:** A subcategory of the nonattainment designation category for State standards that signals progress and implies the area is nearing attainment.

**Peak Indicator:** Using a statistical process, it is a site-specific and pollutant-specific value that represents the concentration expected to be exceeded once per year, on average, based on the distribution of data for the monitoring site. The calculation procedure uses data collected at the monitoring site for a three-year period. For example, the 2004 peak indicator is calculated using data for the years 2002, 2003, and 2004. The site with the highest peak indicator for a region is used for the long-term trends in the almanac. It is also referred to as the California Design Value or the Expected Peak Day Concentration.

**Precursor Emissions:** Emissions which form pollutants in the atmosphere due to the reaction of themselves with each other or with sunlight. Ozone is formed in the atmosphere when hydrocarbon and NO<sub>x</sub> react in the presence of sunlight. Particulate Matter (PM) is a complex pollutant that can be formed from the reaction of gaseous precursors such as NO<sub>x</sub>, ROG, SO<sub>x</sub>, and ammonia.

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**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 modeling analyses.

**Stationary Sources:** Non-mobile sources such as power plants, refineries, and manufacturing facilities which emit air pollutants (compare with Mobile Sources).

**Total Organic Gases (TOG):** All gases consisting of substances containing carbon, except carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate.

**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.

**Volatile Organic Compounds (VOC):** A group of chemicals that react in the ambient air with nitrogen oxides in the presence of heat and sunlight to form ozone. Examples of VOCs include gasoline fumes and oil-based paints. This group of chemicals does not include methane or other compounds determined by U.S. EPA to have negligible photochemical reactivity.

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