

Glossary of Environment Terms

Abatement: Reduction in degree or intensity of pollution.

Absorbed dose: The energy imparted to a unit mass of matter by ionizing radiation. The unit of absorbed dose is the rad. One rad equals 100 ergs per gram.

Absorption: The penetration of one substance into or through another.

Acclimatization: The adaptation over several generations of a species to a marked change in the environment.

Acute respiratory disease: Respiratory infection, characterized by rapid onset and short duration.

Acute toxicity: Any poisonous effect produced within a short period of time following exposure, usually within 24-96 hours, resulting in severe biological harm and, often, death.

Aerosol: A particle of solid or liquid matter that can remain suspended in the air because of its small size. Particulates under 1 micron in diameter are generally called aerosols.

Agricultural solid waste: The solid waste that is generated by the rearing of animals, and the production and harvesting of crops or trees.

Air: The 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 inert gases; and varying amounts of water vapor.

Air contaminant: Any substance either man-made or of natural origin in the ambient air, such as dust, fly ash, gas fumes, mist (other than H₂O), smoke, radiation, heat, noise, etc.

Air pollutant: (i) Dust, fumes, mist, smoke, and other particulate matter, vapor, gas, odorous substances, or any combination thereof. (ii) Any air pollution agent or combination of such agents, including any physical, chemical, biological, radioactive (including source material, and by-product material) substance or matter that is emitted into or otherwise enters the ambient air.

Air quality criteria: The levels of pollution and lengths of exposure above which adverse effects may occur on health and welfare.

Air quality standards: The level of pollutants prescribed by law or regulation that cannot be exceeded during a specified time in a defined area.

Airborne pathogen: A disease-causing microorganism that travels in the air or on particles in the air.

Aldehydes: A class of fast-reacting organic compounds containing oxygen, hydrogen, and carbon.

Algae: Simple rootless plants that grow in bodies of water in relative proportion to the amounts of nutrients available. Algal blooms, or sudden growth spurts can affect water quality adversely.

Alkalinity: The measurable ability of solutions or aqueous suspensions to neutralize an acid.

Ambient air: The portion of the atmosphere, external to buildings, to which the general public has access.

Ambient water criterion: That concentration of a toxic pollutant in navigable water that, based upon available data, will not result in adverse impact on important aquatic life, or on consumers of such aquatic life, after exposure of that aquatic life for periods of time exceeding 96 hours and continuing at least through one reproductive cycle; and will not result in significant risk of adverse health effects in a large human population, according to available information such as mammalian laboratory toxicity data, epidemiological studies of human occupational exposures or human exposure data, or any other relevant data.

Aquatic flora: Plant life associated with the aquatic ecosystem including, but not limited to, algae and higher plants.

Aquifer: (i) An underground bed or layer of earth, gravel, or porous stone that contains water; (ii) A geological formation, group of formations, or part of a formation that is capable of yielding a significant amount of water to a well or spring.

Area source: Any small residential, governmental, institutional, commercial, or industrial fuel combustion operations that contribute air pollutants to the ambient air: on-site solid waste disposal facility; motor vehicles, aircraft, vessels, or other transportation facilities; or other miscellaneous sources.

Ash: Inorganic residue remaining after ignition of combustible substances determined by definite prescribed methods.

Ash pit: A pit or hopper located below a furnace in which residue is accumulated and from which it is removed.

Assimilative capacity: The capacity of a natural body of water to receive (i) waste-waters, without deleterious effects; (ii) toxic materials, without damage to aquatic life or humans who consume the water; (iii) Biological Oxygen Demand (BOD), within prescribed dissolved oxygen limits.

Backfill: The material used to refill a ditch or other excavation, or the process of doing so.

Background level: With respect to air pollution, amounts of pollutants present in the ambient air due to natural sources.

Bagasse: An agricultural waste material consisting of the dry pulp residue that remains after juice is extracted from sugarcane or sugar beets. The residue is used in the manufacture of pulp and paper.

Basin: Includes, but is not limited to, rivers and their tributaries, streams, coastal waters, sounds, estuaries, bays, lakes, and portions thereof, as well as the lands drained by them.

Bioassay: Using living organisms to measure the effect of a substance, factor, or condition.

Biochemical oxygen demand (BOD): The dissolved oxygen required to decompose organic matter in water. It is a measure of pollution because heavy waste loads have a high demand for oxygen.

Biodegradable: Descriptive of any substance that decomposes through the action of microorganisms.

Biological agents: Microbiological cultures, enzymes, or nutrient additives that are deliberately introduced into an oil or hazardous substance spill for the purpose of encouraging biodegradation to mitigate the effects of the spill.

Biological monitoring: The determination of the effects of pollutants on aquatic life by techniques and procedures, including sampling of organisms representative of levels of the food chain appropriate to the volume and the physical, chemical, and biological characteristics of the effluent; and at appropriate frequencies and locations.

Biomonitoring: The use of living organisms to test water quality at a discharge site or downstream.

Biota: All living organisms that exist in an area.

Body burden: The amount of radioactive material present in the body of a man or an animal.

Carbonaceous matter: Pure carbon or carbon compounds present in the fuel or residue of a combustion process.

Carrying capacity: (i) In recreation, the amount of use a recreation area can sustain without deterioration of its quality. (ii) In wildlife, the maximum number of animals an area can support during a given period of the year.

Chemical oxygen demand (COD): A measure of the oxygen required to oxidize all compounds in water, organic and inorganic.

Chlorinated hydrocarbons: A class of persistent, broad-spectrum insecticides, notably DDT, that linger in the environment and accumulate in the food chain. Other examples are aldrin, dieldrin, heptachlor, chlordane, lindane, endrin, mirex, benzene, hexachloride, and toxaphene.

Clean water standards: Any enforceable limitation, control, condition, prohibition, standard, or other requirement, which is promulgated.

Coliform index: A rating of the purity of water based on a count of fecal bacteria.

Coliform organisms: Organisms found in the intestinal tract of humans and animals. Their presence in water indicates pollution and potentially dangerous bacterial contamination.

Compost: A relatively stable mixture of decomposed organic waste materials, generally used to fertilize and condition the soil.

Confined aquifer: An aquifer bounded above and below by impermeable beds or by beds of distinctly lower permeability than that of the aquifer itself; an aquifer containing confined groundwater.

Contaminant: Any biological, chemical, physical, or radiological substance or matter in water, air, or soil.

Decibel (dB): The unit of measurement of sound level calculated by taking ten times the common logarithm of the ratio of the magnitude of the particular sound pressure to the standard reference sound pressure of 20 micropascals and its derivatives. It is abbreviated as dB.

Density: (i) The mass of a unit volume; its numerical expression varies with the units selected. (ii) The mass of a unit volume of liquid, expressed as grams per cubic centimeter, kilograms per liter, or pounds per gallon, at a specified temperature.

Detergent: Synthetic washing agent that helps water to remove dirt and oil. Most contain large amounts of phosphorus compounds which

may kill useful bacteria and encourage algae growth in the receiving water.

Disposal: (i) The planned release or placement of waste in a manner that precludes recovery. (ii) The discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid waste or hazardous waste into or on any land or water so that such solid waste or hazardous waste or any of its constituent may enter the environment or be emitted into the air or discharged into any waters, including groundwaters.

Dissolved oxygen (DO): A measure of the amount of oxygen available for biochemical activity in a given amount of water. Adequate levels of DO are needed to support aquatic life. Low DO concentrations can result from inadequate waste treatment.

Dissolved solids: The total of disintegrated organic and inorganic material contained in water. Excesses can make water unfit to drink or use in industrial processes.

Dose: A general term denoting the quality of radiation or energy absorbed. For special purposes it must be appropriately qualified. If unqualified, it refers to absorbed dose.

Dose equivalent: The product of the absorbed dose from ionizing radiation and such factors as account for differences in biological effectiveness due to the type of radiation and its distribution in the body as specified by the International Commission on Radiological Units and Measurements (ICRU).

Dose rate: Absorbed dose delivered per unit time.

Dosimeter: An instrument that measures exposure to radiation.

Dust loading: The amount of dust in a gas, usually expressed in grains per cubic foot or pounds per thousand pounds of gas.

Ecosystem: The interacting system of a biological community and its nonliving surroundings.

Effluent: Waste material discharged into the environment, treated or untreated. Generally refers to water pollution.

Emission factor: The relationship between the amount of pollution produced and the amount of raw material processed. For example, an emission factor for a blast furnace making iron would be the number of pounds of particulates per ton of raw materials.

Emission standard: The maximum amount of a pollutant that is permitted to be discharged from a single polluting source; e.g., the number of pounds of fly ash per cubic foot of air that may be emitted from a coal-fired boiler.

Environment: Water, air, and land and the interrelationship that exists among and between water, air, and land and all living things.

Epidemiology: The study of diseases as they affect populations rather than individuals. It includes the distribution and incidence of disease; mortality and morbidity rates; and the relationship of climate, age, sex, race, and other factors.

Episode (pollution): An air pollution incident in a given area caused by a concentration of atmospheric pollutants reacting with meteorological conditions that may result in a significant increase in illnesses or deaths.

Erosion: The wearing away of the land surface by wind or water. Erosion occurs naturally from weather or runoff, but can be intensified by land clearing practices.

Estuaries: Areas where freshwater meets saltwater (bays, mouths of rivers, salt marshes, lagoons). These brackish water ecosystems shelter and feed marine life, birds, and wildlife.

Eutrophication: The slow aging process of a lake evolving into a marsh and eventually disappearing. During eutrophication, the lake is choked by abundant plant life. Human activities that add nutrients to a water body can speed up this action.

Exhaust emissions: Substances emitted to the atmosphere from any opening downstream from the exhaust port of a motor vehicle engine.

Exposure: A measure of the ionization produced in air by x or gamma radiation. It is the sum of the electrical charges on all ions of one sign produced in air when all electrons liberated by photons in a volume element of air are completely stopped in air, divided by the mass of the air in the volume element. The special unit of exposure is the roentgen.

Fecal coliform bacteria: Organisms associated with the intestines of warm-blooded animals and commonly used to indicate the presence of fecal material and the potential presence of organisms capable of causing human disease.

Flue: Any passage designed to carry combustion gases and entrained particulates.

Fly ash: (i) The component of coal that results from the combustion of coal, and is the finely divided mineral residue typically collected from boiler stack gases by electrostatic precipitators or mechanical collection devices; (ii) The ash that is carried out of the furnace by the gas stream and collected by mechanical precipitators, electrostatic precipitators, and/or fabric filters. Economizer ash is included when it is collected with fly ash.

Fog: Suspended liquid particles formed by condensation of vapor.

Fossil fuel: Natural gas, petroleum, coal, and any form of solid, liquid, or gaseous fuel derived from such materials for the purpose of creating useful heat.

Fugitive dust: Particulate matter composed of soil that is uncontaminated by pollutants resulting from industrial activity. Fugitive dust may include emissions from haul roads, surfaces and soil storage piles, and other activities in which soil is either removed, stored, transported, or redistributed; also dust emitted from any source other than through a stack.

Fugitive emissions: (i) Emissions that could not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening; (ii) Any air pollutants emitted to the atmosphere other than from a stack.

Garbage: Waste materials that are likely to decompose or putrefy.

Green belts: Certain areas restricted from being used for building and houses; they often serve as separating buffers between pollution sources and concentrations of population.

Greenhouse effect: The warming of the earth's atmosphere caused by the buildup of carbon dioxide, which allows light from the sun's rays to heat the earth but prevents loss of the heat.

Groundwater infiltration: Water that enters the treatment facility as a result of the interception of natural springs, aquifers, or runoff, which percolates into the ground and seeps into the treatment facility's tailings pond or wastewater holding facility and that cannot be diverted by ditching or grouting the tailings pond or wastewater holding facility.

Habitat: The sum of environmental conditions in a specific place that is occupied by an organism, population, or community.

Hard water: Alkaline water containing dissolved mineral salts that interfere with some industrial processes and prevent soap from lathering.

Hazard: A probability that a given pesticide (or other pollutants) will have an adverse effect on man or the environment in a given situation, the relative likelihood of danger or ill effect being dependent on a number of interrelated factors present at any given time.

Heavy metals: Metallic elements like mercury, chromium, cadmium, arsenic, and lead, with high molecular weights. At low concentrations they can damage living things and tend to accumulate in the food chain.

Humus: The dark brown or black residue found in soil resulting from the decomposition of organic matter. Residues in well-digested sludges and activated sludge are similar to humus in appearance and behavior.

Hydrocarbon: Any of a vast family of compounds containing carbon and hydrogen in various combinations and found especially in fossil fuels. Some hydrocarbon compounds are major air pollutants; they may be carcinogenic or active participants in the photochemical process.

Hydrology: The science dealing with the properties, distribution, and circulation of water.

Incineration: The controlled process in which combustible solid, liquid, or gaseous wastes are burned and changed into noncombustible gases.

Inorganic matter: Chemical substances of mineral origin, not containing carbon-to-carbon bonding. Generally structured through ionic bonding.

Inorganic refuse: Solid waste composed of matter other than plant, animal, and certain carbon compounds (e.g., metals and glass).

Insecticides: All substances or mixtures of substances intended for preventing or inhibiting the establishment, reproduction, development, growth of, or destroying or repelling any member of the class Insecta or other allied classes in phylum Arthropoda, declared to be pests.

Lagoon: A shallow pond where sunlight, bacterial action, and oxygen work to purify wastewater.

Landfill: A disposal facility or part of a facility where hazardous waste is placed in or on land and which is not a land treatment facility, a surface impoundment, or an injection well.

LC₅₀ (lethal concentration): The concentration of material that is lethal to one half of the test population of aquatic animals upon continuous exposure for 96 hours or less.

LD₅₀ (lethal dose): Generally, the quantity of a substance that is fatal to 50 percent of the population on which it is tested. With large test subjects, LD₅₀ is often given as a quantity per unit of body weight.

Leach: To undergo the process by which materials in the soil are moved into a lower layer of soil or are dissolved and carried through soil by water.

Leachate: Any liquid, including any suspended components in the liquid, that has percolated through or drained from hazardous waste.

Marsh: Wet, soft, low-lying land that provides a habitat for many plants and animals. It can be destroyed by dredging and filling.

Material balance: An accounting of the weights of materials entering or leaving a processing unit, such as an incinerator, usually on an hourly basis.

Mine: An active mining area, including all land and property placed under or above the surface of such land, used in or resulting from the work of extracting metal ore or minerals from their natural deposits by any means or method, including secondary recovery of metal ore from refuse or other storage piles, wastes, or rock dumps and mill tailings derived from the mining, cleaning, or concentration of metal ores.

Mining wastes: Residues that result from the extraction of raw materials from the earth.

Mixing depth: The expanse in which air rises from the earth and mixes with the air above it until it meets air that is equal or warmer in temperature.

Mobile source: A moving producer of air pollution, mainly forms of transportation such as cars, motorcycles, planes.

Monitoring: Periodic or continuous sampling to determine the level of pollution or radioactivity.

Municipal incinerator: A privately or publicly owned incinerator primarily designed and used to burn residential and commercial solid waste within a community.

Municipal sanitary landfill: The disposal site for residential and commercial solid waste generated, collected, and processed within a community.

Mutagen: Any substance that causes changes in the genetic structure in subsequent generations.

National ambient air quality standard: A federally promulgated maximum level of an air pollutant that can exist in the ambient air without producing an adverse effect on humans (primary standard) or the public welfare (secondary standard).

Nitrogen oxides: Gases formed in great part from atmospheric nitrogen and oxygen when combustion takes place under conditions of high temperature and pressure. Nitrogen oxides include nitric oxide (NO) and nitrogen dioxide (NO₂). Can be harmful themselves and are precursors of photochemical oxidant.

Nitrogenous wastes: Animal or plant residues that contain large amounts of nitrogen.

Nonattainment area: For any air pollutant, an area that is shown by monitored data or which is calculated by air quality modeling (or other methods determined by the administrator to be reliable) to exceed any national ambient air quality standard for such pollutant.

Nonpoint source: Cause of water pollution that is not associated with point sources. Examples include (i) agriculturally related nonpoint sources of pollution including runoff from manure disposal areas and from land used for livestock and crop production; (ii) silviculturally related nonpoint sources of pollution; (iii) mine-related sources of pollution including new, current, and abandoned

surface and underground mine runoff; (iv) construction-activity-related sources of pollution; (v) sources of pollution from waste disposal on land, in wells, or in subsurface excavations that affect groundwater and surface water quality; (vi) saltwater intrusion into rivers, lakes, estuaries, and groundwater resulting from reduction of fresh water flow from any cause, including irrigation, obstruction, groundwater extraction, and diversion; and (vii) sources of pollution related to hydrologic modifications, including those caused by changes in the movement, flow, or circulation of any navigable waters or groundwaters due to construction and operation of dams, levees, channels, or flow diversion facilities.

Nutrients: Elements or compounds (e.g., carbon, oxygen, nitrogen, potassium, phosphorus) essential to the growth and development of living things.

Oil spill: Accidental discharge into bodies of water.

Open dump: Any facility or site, but not a sanitary landfill, where solid waste is disposed of.

Organic content: The ratio of carbon compounds, whether from living organisms or not, to the total chemical composition of a substance.

Organic materials: Chemical compounds of carbon excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides, metallic carbonates, and ammonium carbonate.

Organic refuse: Solid waste composed of carbon compounds and generally, but not exclusively, by-products of plant and animal life processes (e.g., paper, wood, excreta, yard trimmings).

Oxidant: A substance containing oxygen that reacts chemically in air to produce a new substance; primary source of photochemical smog.

Oxide: A compound of two elements, one of which is oxygen.

Ozone (O₃): A pungent, colorless, toxic gas that contributes to photochemical smog.

Parameter: A quantitative or characteristic element that describes physical, chemical, or biological conditions of water.

Particulate: A particle of solid or liquid matter.

Particulate matter: Any material, except water in uncombined form, that is or has been airborne and exists as a liquid or a solid at standard conditions.

Particulates: Fine liquid or solid particles such as dust smoke, mist, fumes, or smog, found in the air or emissions.

Parts per million (ppm): A volume unit of measurement; the number of parts of a given pollutant in a million parts of air.

Pathogen: Any virus, microorganism, or other substance causing disease.

Pathogenic waste: Discarded materials that contain organisms capable of causing disease.

pH: The logarithm of the reciprocal of hydrogen ion concentration.

Photochemical oxidants: Air pollutants formed by the action of sunlight on oxides of nitrogen and hydrocarbons.

Photochemical smog: Air pollution caused by not one pollutant but by chemical reactions of various pollutants emitted from different sources.

Phytotoxic: Poisonous to plants.

Point source: A stationary location where pollutants are discharged, usually from an industry. Any discernible, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, vessel, or other floating craft, from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture.

ppb: Parts per billion.

ppm: Parts per million.

Precursor: A pollutant that takes part in a chemical reaction resulting in the formation of one or more new pollutants.

Putrescible: Can rot quickly enough to cause odors and attract flies.

Radioactive: Substances that emit rays either naturally or as a result of scientific manipulation.

Receiving waters: Any body of water where untreated wastes are dumped.

Recharge zone: The area through which water is added to an aquifer.

Recycling: Converting solid waste into new products by using the resources contained in discarded materials.

Region: Usually a rural area of reasonable homogeneous geography extending from tens to hundreds of kilometers.

Residual wastes: Those solid, liquid, or sludge substances from man's activities in the urban, agricultural, mining, and industrial environments remaining after collection and necessary treatment.

Runoff: (i) That portion of precipitation that flows over the ground surface and returns to streams. It can collect pollutants from air or land and carry them to the receiving waters; (ii) Any rainwater, leachate, or other liquid that drains over land from any part of a facility.

Salinity: The degree of salt in water.

Sanitary landfill: A facility for the disposal of solid waste; a land disposal site employing an engineered method of disposing of solid wastes on land in a manner that minimizes environmental hazards by spreading the solid wastes in thin layers, compacting the solid

wastes to the smallest practical volume, and applying and compacting cover material at the end of each operating day.

Sanitation: Control of physical factors in the human environment that can harm development, health, or survival.

Secondary standard: A standard that establishes an ambient concentration of the pollutant that, with an adequate margin of safety, will protect the public welfare (i.e., all parts of the environment other than human health) from adverse impacts.

Sedimentation: The process of letting solids settle out of wastewater by gravity during wastewater treatment.

Seepage: The movement of liquids or gases through soil without the formation of definite channels.

Sewage: Human body wastes and the wastes from toilets and other receptacles intended to receive or retain body wastes.

Sewer: A channel that carries wastewater and storm water runoff from the source to a treatment plant or receiving stream., Sanitary sewers carry household and commercial waste. Storm sewers carry runoff from rain or snow. Combined sewers are used for both purposes.

Silviculture: Management of forestland for timber. Silviculture sometimes contributes to water pollution, as in clear-cutting.

Smog: (i) The irritating haze resulting from the sun's effect on certain pollutants in the air, notably those from automobile exhaust. (ii) Also a mixture of fog and smoke.

Smoke: (i) Solid or liquid particles less than 1 micron in diameter. (ii) Particles suspended in air after incomplete combustion of materials containing carbon. (iii) The matter in exhaust emissions that obscures the transmission of light.

Soil pH: The value obtained by sampling the soil to the depth of cultivation or solid waste placement, whichever is greater, and analyzing by the electrometric method.

Solid waste: Any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility; and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities. Does not include solid or dissolved material in domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharges.

Soot: Carbon dust formed by incomplete combustion.

Source/receptor area: Source area is that area in which contaminants are discharged and a receptor area is that area in which the contaminants accumulate and are measured.

Stationary source: Any building, structure, facility, or installation that emits or may emit any air pollutant.

Subsidence: The lowering of the natural land surface in response to earth movements; lowering of fluid pressure; removal of underlying supporting material by mining or solution of solids, either artificially or from natural causes; compaction due to wetting oxidation of organic matter in soils; or added load on the land surface.

Subsoil: The layer of earth beneath the topsoil, and usually lacking in appreciable quantities of organic matter.

Suspended solids: Tiny particles of solids dispersed but undissolved in a solid, liquid, or gas. Suspended solids in sewage cloud the water and require special treatment to remove.

Tailings: Residue of raw materials or waste separated out during the processing of crops or mineral ores.

Tidal marsh: Low, flat marshlands traversed by interlaced channels and tidal sloughs and subject to tidal inundation; normally, the only vegetation present is salt-tolerant bushes and grasses.

Topography: The physical features of a surface area including relative elevations and the position of natural and man-made features.

Topsoil: The surface layer of soil; it contains humus and is capable of supporting good plant growth.

Total solids: The sum of dissolved and undissolved constituents in wastewater, usually stated in milligrams per liter.

Toxic substance: A chemical or a mixture that may present an unreasonable risk of injury to health or the environment.

Trophic condition: A relative description of a lake's biological productivity based on the availability of plant nutrients. The range of trophic conditions is characterized by the terms oligotrophic for the least biologically productive, to eutrophic for the most biologically productive.

Troposphere: The portion of the atmosphere between seven and ten miles from the earth's surface, where clouds form.

Vapor: The gaseous phase of substances that are liquid or solid at atmospheric temperature and pressure, such as steam.

Vector: An organism, often an insect, that carries disease.

Virgin material: A raw material, including previously unused copper, aluminum, lead, zinc, iron, or other metal or metal ore, any undeveloped resource that is - or with new technology will become - a source of raw materials.

Volatile organic compound: Any compound containing carbon and hydrogen or containing carbon and hydrogen in combination with any other element which has a vapor pressure of 1.5 pounds per square inch absolute (77.6 mm. Hg) or greater under actual storage conditions.

Wastewater: Water carrying dissolved or suspended solids from homes, farms, businesses, and industries.

Water quality criteria: Levels of pollutants in bodies of water that are consistent with various uses of water, i.e., drinking water, sport fishing, industrial use.

Watershed: The land area that drains into a stream.

Wetlands: Areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support - and that under normal circumstances do support - a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Zone of saturation: That part of the earth's crust in which all voids are filled with water.

Zooplankton: Tiny aquatic animals that fish feed on.

Source: Frick G W. 1984. *Environmental Glossary*. Rockville: Government Institutes. 325 pp.