



U.S. Environmental Protection Agency Terms of Environment: Glossary, Abbreviations and Acronyms

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Glossary: B

Back Pressure: A pressure that can cause water to backflow into the water supply when a user's waste water system is at a higher pressure than the public system.

Backflow/Back Siphonage: A reverse flow condition created by a difference in water pressures that causes water to flow back into the distribution pipes of a drinking water supply from any source other than the intended one.

Background Level: 1. The concentration of a substance in an environmental media (air, water, or soil) that occurs naturally or is not the result of human activities. 2. In exposure assessment the concentration of a substance in a defined control area, during a fixed period of time before, during, or after a data-gathering operation..

Backwashing: Reversing the flow of water back through the filter media to remove entrapped solids.

Backyard Composting: Diversion of organic food waste and yard trimmings from the municipal waste stream by composting them in one's yard through controlled decomposition of organic matter by bacteria and fungi into a humus-like product. It is considered source reduction, not recycling, because the composted materials never enter the municipal waste stream.

Barrel Sampler: Open-ended steel tube used to collect soil samples.

BACT - Best Available Control Technology: An emission limitation based on the maximum degree of emission reduction (considering energy, environmental, and economic impacts) achievable through application of production processes and available methods, systems, and techniques. BACT does not permit emissions in excess of those allowed under any applicable Clean Air Act provisions. Use of the BACT concept is allowable on a case by case basis for major new or modified emissions sources in attainment areas and applies to each regulated pollutant.

Bacteria: (Singular: bacterium) Microscopic living organisms that can aid in pollution control by metabolizing organic matter in sewage, oil spills or other pollutants. However, bacteria in soil, water or air can also cause human, animal and plant health problems.

Bactericide: A pesticide used to control or destroy bacteria, typically in the home, schools, or hospitals.

Baffle: A flat board or plate, deflector, guide, or similar device constructed or placed in flowing water or slurry systems to cause more uniform flow velocities to absorb energy and to divert, guide, or agitate liquids.

Baffle Chamber: In incinerator design, a chamber designed to promote the settling of fly ash and coarse particulate matter by changing the direction and/or reducing the velocity of the gases produced by the combustion of the refuse or sludge.

Baghouse Filter: Large fabric bag, usually made of glass fibers, used to eliminate

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intermediate and large (greater than 20 PM in diameter) particles. This device operates like the bag of an electric vacuum cleaner, passing the air and smaller particles while entrapping the larger ones.

Bailer: A pipe with a valve at the lower end, used to remove slurry from the bottom or side of a well as it is being drilled, or to collect groundwater samples from wells or open boreholes. 2. A tube of varying length.

Baling: Compacting solid waste into blocks to reduce volume and simplify handling.

Ballistic Separator: A machine that sorts organic from inorganic matter for composting.

Band Application: The spreading of chemicals over, or next to, each row of plants in a field.

Banking: A system for recording qualified air emission reductions for later use in bubble, offset, or netting transactions. (See: emissions trading.)

Bar Screen: In wastewater treatment, a device used to remove large solids.

Barrier Coating(s): A layer of a material that obstructs or prevents passage of something through a surface that is to be protected; e.g., grout, caulk, or various sealing compounds; sometimes used with polyurethane membranes to prevent corrosion or oxidation of metal surfaces, chemical impacts on various materials, or, for example, to prevent radon infiltration through walls, cracks, or joints in a house.

Basal Application: In pesticides, the application of a chemical on plant stems or tree trunks just above the soil line.

Basalt: Consistent year-round energy use of a facility; also refers to the minimum amount of electricity supplied continually to a facility.

Bean Sheet: Common term for a pesticide data package record.

Bed Load: Sediment particles resting on or near the channel bottom that are pushed or rolled along by the flow of water.

BEN: EPA's computer model for analyzing a violator's economic gain from not complying with the law.

Bench-scale Tests: Laboratory testing of potential cleanup technologies (See: treatability studies.)

Benefit-Cost Analysis: An economic method for assessing the benefits and costs of achieving alternative health-based standards at given levels of health protection.

Benthic/Benthos: An organism that feeds on the sediment at the bottom of a water body such as an ocean, lake, or river.

Bentonite: A colloidal clay, expansible when moist, commonly used to provide a tight seal around a well casing.

Beryllium: An metal hazardous to human health when inhaled as an airborne pollutant. It is discharged by machine shops, ceramic and propellant plants, and foundries.

Best Available Control Measures (BACM): A term used to refer to the most

effective measures (according to EPA guidance) for controlling small or dispersed particulates and other emissions from sources such as roadway dust, soot and ash from woodstoves and open burning of brush, timber, grasslands, or trash.

Best Available Control Technology (BACT): For any specific source, the currently available technology producing the greatest reduction of air pollutant emissions, taking into account energy, environmental, economic, and other costs.

Best Available Control Technology (BACT): The most stringent technology available for controlling emissions; major sources are required to use BACT, unless it can be demonstrated that it is not feasible for energy, environmental, or economic reasons.

Best Demonstrated Available Technology (BDAT): As identified by EPA, the most effective commercially available means of treating specific types of hazardous waste. The BDATs may change with advances in treatment technologies.

Best Management Practice (BMP): Methods that have been determined to be the most effective, practical means of preventing or reducing pollution from non-point sources.

Bimetal: Beverage containers with steel bodies and aluminum tops; handled differently from pure aluminum in recycling.

Bioaccumulants: Substances that increase in concentration in living organisms as they take in contaminated air, water, or food because the substances are very slowly metabolized or excreted. (See: biological magnification.)

Bioassay: A test to determine the relative strength of a substance by comparing its effect on a test organism with that of a standard preparation.

Bioavailability: Degree of ability to be absorbed and ready to interact in organism metabolism.

Biochemical Oxygen Demand (BOD): A measure of the amount of oxygen consumed in the biological processes that break down organic matter in water. The greater the BOD, the greater the degree of pollution.

Bioconcentration: The accumulation of a chemical in tissues of a fish or other organism to levels greater than in the surrounding medium.

Biodegradable: Capable of decomposing under natural conditions.

Biodiversity: Refers to the variety and variability among living organisms and the ecological complexes in which they occur. Diversity can be defined as the number of different items and their relative frequencies. For biological diversity, these items are organized at many levels, ranging from complete ecosystems to the biochemical structures that are the molecular basis of heredity. Thus, the term encompasses different ecosystems, species, and genes.

Biological Contaminants: Living organisms or derivatives (e.g. viruses, bacteria, fungi, and mammal and bird antigens) that can cause harmful health effects when inhaled, swallowed, or otherwise taken into the body.

Biological Control: In pest control, the use of animals and organisms that eat or otherwise kill or out-compete pests.

Biological Integrity: The ability to support and maintain balanced, integrated, functionality in the natural habitat of a given region. Concept is applied primarily in drinking water management.

Biological Magnification: Refers to the process whereby certain substances such as pesticides or heavy metals move up the food chain, work their way into rivers or lakes, and are eaten by aquatic organisms such as fish, which in turn are eaten by large birds, animals or humans. The substances become concentrated in tissues or internal organs as they move up the chain. (See: bioaccumulants.)

Biological Measurement: A measurement taken in a biological medium. For exposure assessment, it is related to the measurement is taken to related it to the established internal dose of a compound.

Biological Medium: One of the major component of an organism; e.g. blood, fatty tissue, lymph nodes or breath, in which chemicals can be stored or transformed. (See: ambient medium, environmental medium.)

Biological Oxidation: Decomposition of complex organic materials by microorganisms. Occurs in self-purification of water bodies and in activated sludge wastewater treatment.

Biological Oxygen Demand (BOD): An indirect measure of the concentration of biologically degradable material present in organic wastes. It usually reflects the amount of oxygen consumed in five days by biological processes breaking down organic waste.

Biological pesticides: Certain microorganism, including bacteria, fungi, viruses, and protozoa that are effective in controlling pests. These agents usually do not have toxic effects on animals and people and do not leave toxic or persistent chemical residues in the environment.

Biological Stressors: Organisms accidentally or intentionally dropped into habitats in which they do not evolve naturally; e.g. gypsy moths, Dutch elm disease, certain types of algae, and bacteria.

Biological Treatment: A treatment technology that uses bacteria to consume organic waste.

Biologically Effective Dose: The amount of a deposited or absorbed compound reaching the cells or target sites where adverse effect occur, or where the chemical interacts with a membrane.

Biologicals: Vaccines, cultures and other preparations made from living organisms and their products, intended for use in diagnosing, immunizing, or treating humans or animals, or in related research.

Biomass: All of the living material in a given area; often refers to vegetation.

Biome: Entire community of living organisms in a single major ecological area. (See: biotic community.)

Biomonitoring: 1. The use of living organisms to test the suitability of effluents for discharge into receiving waters and to test the quality of such waters downstream from the discharge. 2. Analysis of blood, urine, tissues, etc. to measure chemical exposure in humans.

Bioremediation: Use of living organisms to clean up oil spills or remove other pollutants from soil, water, or wastewater; use of organisms such as non-harmful insects to remove agricultural pests or counteract diseases of trees, plants, and garden soil.

Biosensor: Analytical device comprising a biological recognition element (e.g. enzyme, receptor, DNA, antibody, or microorganism) in intimate contact with an

electrochemical, optical, thermal, or acoustic signal transducer that together permit analyses of chemical properties or quantities. Shows potential development in some areas, including environmental monitoring.

Biosphere: The portion of Earth and its atmosphere that can support life.

Biostabilizer: A machine that converts solid waste into compost by grinding and aeration.

Biota: The animal and plant life of a given region.

Biotechnology: Techniques that use living organisms or parts of organisms to produce a variety of products (from medicines to industrial enzymes) to improve plants or animals or to develop microorganisms to remove toxics from bodies of water, or act as pesticides.

Biotic Community: A naturally occurring assemblage of plants and animals that live in the same environment and are mutually sustaining and interdependent. (See: biome.)

Biotransformation: Conversion of a substance into other compounds by organisms; includes biodegradation.

Blackwater: Water that contains animal, human, or food waste.

Blood Products: Any product derived from human blood, including but not limited to blood plasma, platelets, red or white corpuscles, and derived licensed products such as interferon.

Bloom: A proliferation of algae and/or higher aquatic plants in a body of water; often related to pollution, especially when pollutants accelerate growth.

BOD5: The amount of dissolved oxygen consumed in five days by biological processes breaking down organic matter.

Body Burden: The amount of a chemical stored in the body at a given time, especially a potential toxin in the body as the result of exposure.

Bog: A type of wetland that accumulates appreciable peat deposits. Bogs depend primarily on precipitation for their water source, and are usually acidic and rich in plant residue with a conspicuous mat of living green moss.

Boiler: A vessel designed to transfer heat produced by combustion or electric resistance to water. Boilers may provide hot water or steam.

Boom: 1. A floating device used to contain oil on a body of water. 2. A piece of equipment used to apply pesticides from a tractor or truck.

Borehole: Hole made with drilling equipment.

Botanical Pesticide: A pesticide whose active ingredient is a plant-produced chemical such as nicotine or strychnine. Also called a plant-derived pesticide.

Bottle Bill: Proposed or enacted legislation which requires a returnable deposit on beer or soda containers and provides for retail store or other redemption. Such legislation is designed to discourage use of throw-away containers.

Bottom Ash: The non-airborne combustion residue from burning pulverized coal in a boiler; the material which falls to the bottom of the boiler and is removed

mechanically; a concentration of non-combustible materials, which may include toxics.

Bottom Land Hardwoods: Forested freshwater wetlands adjacent to rivers in the southeastern United States, especially valuable for wildlife breeding, nesting and habitat.

Bounding Estimate: An estimate of exposure, dose, or risk that is higher than that incurred by the person in the population with the currently highest exposure, dose, or risk. Bounding estimates are useful in developing statements that exposures, doses, or risks are not greater than an estimated value.

Brackish: Mixed fresh and salt water.

Breakpoint Chlorination: Addition of chlorine to water until the chlorine demand has been satisfied.

Breakthrough: A crack or break in a filter bed that allows the passage of floc or particulate matter through a filter; will cause an increase in filter effluent turbidity.

Breathing Zone: Area of air in which an organism inhales.

Brine Mud: Waste material, often associated with well-drilling or mining, composed of mineral salts or other inorganic compounds.

British Thermal Unit: Unit of heat energy equal to the amount of heat required to raise the temperature of one pound of water by one degree Fahrenheit at sea level.

Broadcast Application: The spreading of pesticides over an entire area.

Brownfields: Abandoned, idled, or under used industrial and commercial facilities/sites where expansion or redevelopment is complicated by real or perceived environmental contamination. They can be in urban, suburban, or rural areas. EPA's Brownfields initiative helps communities mitigate potential health risks and restore the economic viability of such areas or properties.

Bubble: A system under which existing emissions sources can propose alternate means to comply with a set of emissions limitations; under the bubble concept, sources can control more than required at one emission point where control costs are relatively low in return for a comparable relaxation of controls at a second emission point where costs are higher.

Bubble Policy: (See: emissions trading.)

Buffer: A solution or liquid whose chemical makeup is such that it minimizes changes in pH when acids or bases are added to it.

Buffer Strips: Strips of grass or other erosion-resisting vegetation between or below cultivated strips or fields.

Building Cooling Load: The hourly amount of heat that must be removed from a building to maintain indoor comfort (measured in British thermal units (Btus).

Building Envelope: The exterior surface of a building's construction--the walls, windows, floors, roof, and floor. Also called building shell.

Building Related Illness: Diagnosable illness whose cause and symptoms can be directly attributed to a specific pollutant source within a building (e.g. Legionnaire's disease, hypersensitivity, pneumonitis.) (See: sick building syndrome.)

Bulk Sample: A small portion (usually thumbnail size) of a suspect asbestos-containing building material collected by an asbestos inspector for laboratory analysis to determine asbestos content.

Bulky Waste: Large items of waste materials, such as appliances, furniture, large auto parts, trees, stumps.

Burial Ground (Graveyard): A disposal site for radioactive waste materials that uses earth or water as a shield.

Buy-Back Center: Facility where individuals or groups bring recyclables in return for payment.

By-product: Material, other than the principal product, generated as a consequence of an industrial process or as a breakdown product in a living system.

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