

- **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 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 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 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.

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.

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.

- **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.
- **bioaugmentation** - Similar to bioremediation, but involving the introduction of organisms to affect cleanup.
- **biological control** - In pest control, the use of animals and organisms that eat or otherwise kill or out-compete pests.
- **biological oxidation** - Decomposition of complex organic materials by microorganisms. Occurs in self-purification of water bodies and in activated sludge wastewater treatment.
- **biological treatment** - A treatment technology that uses bacteria to consume organic waste.
- **biomonitoring** - 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.

- **bioremediation** - The process by which bacteria remove contaminant from a groundwater system.
 - **extrinsic bioremediation** - In this process bacteria are added to the system.
 - **intrinsic bioremediation** - In this process we rely on bacteria already existing in the system.

biodiversity - Refers to the variety and variability among living organisms and the ecological complexes in which they occur.

- **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.)
- **biota** - The total assemblage of plants and animals in an area. The biota is the sum of the plant life (flora) and animal life (fauna).
- **biotic community** - A naturally occurring assemblage of plants and animals that live in the same environment and are mutually sustaining and interdependent. (See: biome.)
- **bloom** - A proliferation of algae and/or higher aquatic plants in a body of water; often related to pollution, especially when pollutants accelerate growth.

brackish water - Mixed fresh and salt water; \approx (103 - 104 mg / l).

breathing zone - Area of air in which an organism inhales.

brine - Water with a salinity $>$ 104 mg / l.

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.

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

cadmium (Cd) - A heavy metal that accumulates in the environment.

CAS registration number - A number assigned by the Chemical Abstract Service to identify a chemical.

carbon monoxide (CO) - A colorless, odorless, poisonous gas produced by incomplete fossil fuel combustion.

carbon tetrachloride (CCl₄) - Compound consisting of one carbon atom and four chlorine atoms, once widely used as an industrial raw material, as a solvent, and in the production of CFCs. Use as a solvent ended when it was discovered to be carcinogenic.

carcinogenic - Event, condition, or effect that produces cancer.

catalyst - A substance that changes the speed or yield of a chemical reaction without being consumed or chemically changed by the chemical reaction.

central collection point - Location where a generator of regulated medical waste consolidates wastes originally generated at various locations in his facility. The wastes are gathered together for treatment on-site or for transportation elsewhere for treatment and/or disposal. This term could also apply to community hazardous waste collections, industrial and other waste management systems.

chemical oxygen demand (COD) - A measure of chemically oxidizable material in water. COD is an approximation of the amount of organic and reducing material present.

chemical stressors - Chemicals released to the environment through industrial waste, auto emissions, pesticides, and other human activity that can cause illnesses and even death in plants and animals.

chlorinated hydrocarbons - 1. Chemicals containing only chlorine, carbon, and hydrogen. These include a class of persistent, broad-spectrum insecticides that linger in the environment and accumulate in the food chain. Among them are DDT, aldrin, dieldrin, heptachlor, chlordane, lindane, endrin, mirex, hexachloride, and toxaphene. Other examples include TCE, used as an industrial solvent. 2. Any chlorinated organic compounds including chlorinated solvents such as dichloromethane, trichloromethylene, chloroform.

chlorinated solvent - An organic solvent containing chlorine atoms (e.g. methylene chloride and 1,1,1-trichloromethane). Uses of chlorinated solvents are included in aerosol spray containers, highway paint, and dry cleaning fluids.

cleanup - Actions taken to deal with a release or threat of release of a hazardous substance that could affect humans and/or the environment. The term "cleanup" is sometimes used interchangeably with the terms remedial action, removal action, response action, or corrective action.