

GLOSSARY OF WATERSHED TERMS

Acid Mine Drainage – Drainage of water from areas that have been mined for coal or other mineral ores. Because of its contact with sulfur-bearing material, the water may have a very low pH and be harmful to aquatic organisms.

Algae – Microscopic plants which contain chlorophyll and survive by floating or being suspended in water. They also may be attached to structures, rocks, or other submerged surfaces. They are food for fish and small aquatic animals. Excess algal growths can impart tastes and odors to potable water. Algae produce oxygen during sunlight hours and use oxygen during the night hours. Their biological activities appreciably affect the pH and dissolved oxygen of the water.

Antidegradation – Part of federal water quality requirements. Calls for all existing uses to be protected, for deterioration to be avoided, or at least minimized when water quality meets or exceeds standards, and for outstanding waters to be strictly protected.

Aquifer – An underground geological formation, or group of formations, containing water. Sources of groundwater for wells and springs.

Assessed Waters – Waters that States, Tribes, and other jurisdictions have assessed according to physical, chemical, and biological parameters to determine whether or not the waters meet quality standards and support designated beneficial uses.

Best Management Practices (BMPs) – Methods that have been determined to be effective, practical means of preventing or reducing pollution from nonpoint sources.

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.

Channelization – Straightening and deepening streams so water will move faster – a tactic that can interfere with waste assimilation capacity, disturb fish and wildlife habitats, and aggravate flooding.

Clearcut – Harvesting all the trees in one area at one time, a practice that can encourage fast runoff, erosion, sedimentation of streams and lakes, flooding, and destroy vital habitat.

Compliance Monitoring – Collection and evaluation of data, including self-monitoring reports, and verification to show whether pollutant concentrations and loads contained in permitted discharges are in compliance with the limits and conditions specified in the permit.

Designated Uses – Those water uses identified in state water quality standards that must be achieved and maintained as required under the Clean Water Act.

Dissolved Oxygen (Do) – The total amount of free oxygen dissolved in water. Fish and other aquatic life need adequate amounts (7 to 9 milligrams per liter for fish) of dissolved oxygen to

thrive.

Dredging – Removal of mud from the bottom of water bodies. This can disturb the ecosystem and cause silting that can kill or harm aquatic life. Dredging of contaminated mud can expose biota to heavy metals and other toxics. Dredging activities are subject to regulation under Section 404 of the Clean Water Act.

Effluent – Wastewater, treated or untreated, that flows out of a treatment plant, sewer, or industrial outfall.

Ground Water – The supply of fresh water found beneath the Earth's surface, usually in aquifers, which supply wells and springs. Because groundwater is a major source of drinking water, there is growing concern over contamination from leaching agricultural or industrial pollutants or leaking underground storage tanks.

Impaired Waters – Water bodies not fully supporting their uses.

Navigable Waters – Traditionally, waters sufficiently deep and wide for navigation; such waters in the United States come under federal jurisdiction and are protected by the Clean Water Act.

Nonpoint Source – Diffuse pollution sources (i.e., without a single point of origin or not introduced into a receiving stream from a specific outlet).

pH – An expression of the intensity of the basic or acid condition of a liquid. The pH may range from 0 to 14, where 0 is most acid, 14 most basic, and 7 neutral. Natural waters usually have a pH between 6.5 and 8.5.

Point Source – A stationary location or fixed facility from which pollutants are discharged or emitted. Also, any single identifiable source of pollution, e.g., a pipe, ditch, ship, ore pit, or factory smokestack.

Riparian – Of or growing on a bank of a river or stream.

Sediment – Soil, sand, and minerals washed from land into water, usually after rain. Sediment can accumulate in reservoirs, rivers, and harbors, destroying fish and wildlife habitat, and clouding the water so that sunlight cannot reach aquatic plants. Careless farming, mining, and building activities will expose sediment materials, allowing them to wash off the land after rainfall.

Sluicing/Sluice Gate – A water release practice from a dam which maintains colder water downstream by drawing in water from deep lake levels where the temperature is low and releasing it below the dam. Sluicing also provides good oxygenation due to the turbulence of the release. On the down side, sluicing is a labor intensive process to start and stop, in order to operate the machinery.

Thermocline – Lakes and reservoirs typically feel warmer near the surface and colder at lower levels. This is the area that separates the warmer surface water from colder water below which is lower in oxygen.

Total Maximum Daily Load (TMDL) – The sum of the individual wasteload allocations (WLAs) for point sources, load allocations (LAs) for nonpoint sources and natural background, and a

margin of safety (MOS). TMDLs can be expressed in terms of mass-per-time, toxicity, or other appropriate measure that relates to a state's water quality standards.

Toxicity – The degree to which a substance or mixture of substances can harm humans or animals. Acute toxicity involves harmful effects in an organism through a single or short-term exposure. Chronic toxicity is the ability of a substance or mixture of substances to cause harmful effects over an extended period, usually upon repeated or continuous exposure sometimes lasting for the entire life of the exposed organism.

Urban Runoff – Stormwater from city streets and adjacent domestic or commercial properties that may carry pollutants of various kinds into the sewer systems and/or receiving waters.

Vertical Mixing – The process within a lake or reservoir of breaking down (mixing) the temperature layers of the water body usually during the fall and spring of the year.

Wastewater – The used water and solids from a community (including used water from industrial processes) that flow to a treatment plant. Storm water, surface water, and groundwater infiltration also may be included in the wastewater that enters a wastewater treatment plant. The term sewage usually refers to household wastes, but this word is being replaced by the term wastewater.

Watershed – The land area that drains into a stream. An area of land that contributes runoff to one specific delivery point; large watersheds may be composed of several smaller "subsheds," each of which contributes runoff to different locations that ultimately combine at a common delivery point.

Wetlands – Areas characterized by saturated or nearly saturated soils most of the year that form an interface between terrestrial (land-based) and aquatic environments; include freshwater marshes around ponds and channels (rivers and streams), and brackish and salt marshes. Other common names include swamps and bogs.

Year-class – All individual fish species hatched in the same year, usually defined as strong, moderate, or weak in terms of abundance of fish.

