

## AQUATICS ECOLOGY GLOSSARY

Acid rain: rain containing pollutants that give it a pH of less than 7.0.

Algae: photosynthetic organisms with a one-celled or simple multicellular body plan.

Aqueous: containing or composed largely of water.

Aquifer: a sand, gravel or rock formation capable of storing or conveying water below the surface of the land.

Bacteria: unicellular microorganisms of the class Schizomycetes existing as free living organisms or parasites.

Benthos: bottom dwelling or substrate-oriented organisms.

Best Management Practices: a practice or combination of practices that provide an effective, practical means of preventing or reducing pollution from non-point sources.

Bioaccumulate: the practice of concentrating a particular substance over time.

Biomonitoring: the use of organisms to assess or monitor environmental conditions.

Biochemical Oxygen Demand (BOD): a measure of the quantity of oxygen used by microorganisms in the aerobic oxidation of organic matter.

Brook: a small stream

Buffer: a vegetated area of grass, shrubs or trees designed to capture and filter runoff from adjoining land uses.

Channelization: the practice of straightening a water course or stream to remove meanders and make the water flow faster. Sometimes concrete is used to line the sides and bottom.

Cobble stone: 2-10 inch size stones where stream life can be found.

Coliform Bacteria: a group of bacteria found in cold and warm blooded animal intestines commonly used as indicators of pathogens.

Cultural Eutrophication: process whereby human activity increases the amount of nutrients entering surface waters.

Culvert: a closed passageway (such as a pipe) under roadways and embankments which drains surface water.

Decomposition: the separating or decaying of organic or chemical matter.

Dendritic: a pattern of stream drainage that resembles the pattern of a tree.

Density of water: Is greatest at 4°(39.2°F).

Dilute and disperse: the practice of discharging a substance into a large body of water that will carry the substance away from its source and reduce its concentration.

Discharge: the flow of surface water in a stream or canal or the outflow of groundwater from a flowing artesian well, ditch or spring.

Discharge pipe: a pipe used to carry wastewater from a factory or other facility into a receiving stream or lake.

Dissolved oxygen: oxygen dissolved in water which is readily available to plants and animals.

Drainage basin: a large watershed usually referring to the combination of several watersheds.

Ecology: the science of the relationships between organisms and their environments.

Ecosystem: an ecological community together with its physical environment, usually considered as a unit.

Ephemeral Stream: a stream that flows only during wet periods or rainstorms.

Epilimnion: topmost layer of water in a lake.

Estuary: an arm of the sea that extends inland to meet the mouth of a river, usually characterized by tidal changes and rich diversity of aquatic life.

Eutrophication: a process in which organic matter accumulates in a body of water until eventually it fills in and becomes dry land.

Fecal coliform: that part of the coliform group of bacteria originating in the intestinal tract of warm blooded animals.

Floodplain: a low area of land, surrounding streams or rivers, which holds the overflow of water during a flood.

Freshwater: water that is not saline or brackish.

Groundwater: water beneath the earth's surface between saturated soil and rock.

Habitat: the area or environment in which an organism lives.

Hardness: a characteristic of water caused by the presence of various salts, calcium, magnesium and iron.

Headwaters: the uppermost reaches of a river or stream.

Hydric soils: soils found in saturated, anaerobic environments usually characterized by gray or mottled appearance, found in wetlands.

Hydrologic cycle: the series of pathways the earth's water may take on its journey from the sea to the atmosphere to the land and ultimately back to the sea.

Hydrologic unit: all land and water within a drainage area.

Hypolimnion: lower layer of water in a lake.

Infiltration: the downward entry of water into the soil.

Instar: the individual insect between two molting events or an organism between egg hatching and the first larval molt.

Intermittent stream: a stream which has an interrupted flow or does not flow continuously.

Larvae: the plural of larva, the first major mobile life stage of an insect or first development following egg hatching.

Lentic: standing water as in a lake.

Limiting factor: something that determines the presence, survival and success of an organism.

Limnology: the study of inland water: ponds, lakes and streams.

Littoral: region of shallow water where light reaches the bottom.

Lotic: running water as in a river.

Macroinvertebrates: an animal without a backbone visible to the naked eye or larger than 0.5 millimeters.

Meander: the circuitous winding or sinuosity of a stream, used to refer to a bend in the river.

Monitoring: to watch and care for a stream on a regular basis.

Nitrate: an important nutrient for building protein in plants and animals.

Nonpoint source pollution (NPS): pollution that originates from many diffuse sources and usually is not regulated, such as runoff from streets that carries with it oil, feces and sediment.

Oligotrophic: a body of fresh water that contains few nutrients and few organisms.

Part per million (ppm): the quantity of one substance contained in one million units of another substance. Equivalent to milligram per liter (mg/l).

Perennial stream: a stream which flows continually.

pH: a symbol used to indicate how acidic or basic a solution is.

Phosphorus: an important nutrient for life, especially plants and algae.

Plankton: collective word for microscopic organisms that drift around in the upper level of a body of water.

Point source pollution: Pollution that is discharged through a pipe or other conduit and is usually a regulated discharge.

Pollutant: any substance or mixture of substances that defile or contaminate the soil, water or atmosphere.

Pond: a quiet body of water so shallow that rooted plants usually grow completely across it.

Profoundal: region of water below photosynthetic light penetration.

Receiving waters: all distinct bodies of water that receive runoff such as streams, rivers, ponds, lakes and estuaries.

Riffle: a shallow section of a stream where water bubbles over rocks, often found at the bend in a river.

Riparian: relating to the banks of a stream or river.

River: a body of running water of considerable volume usually moving over the earth's surface in a channel or bed.

Run: the straight section in a river between riffles, also refers to fish migration.

Runoff: water, including rain and snow, which is not absorbed into the ground: instead it flows across the land and eventually runs into streams and rivers. Runoff can pick up pollutants from the air and land, carrying them into the stream.

Salt water: water that is saline.

Secchi disk: a simple device for measuring turbidity.

Sediment: soil, sand, and materials washed from land into waterways.

Settling ponds: ponds constructed or used to hold storm water and other runoff where heavy materials can settle and the water can become clear before being discharged.

Stream: a body of running water moving over the earth's surface in a channel or bed.

Stream order: system used to number streams and their tributaries with first order as the headwater stream. When joined by another first order stream the union of two streams becomes a second order stream and so on.

Streambank: the side of a stream.

Subwatershed: a small watershed that is part of a larger watershed such as the watershed of a tributary stream.

Surface water: Water that flows over or is found on the earth's surface.

Thermocline (metalimnion): intermediate (middle) layer of water in a lake.

Total solids: a term used to describe all the matter suspended or dissolved in water.

Tributary: a stream or river that flows into another larger stream or river.

Turbidity: a measure of water cloudiness caused by suspended solids.

Waterfowl: birds that depend on water for habitat i.e. ducks.

Watershed: an area of land that drains into a particular river or body of water usually divided by topography.

Watertable: the upper level of groundwater.

Waterway: a natural or man-made place for water to run through (such as river, stream, creek, or channel)

Wetland: an area of land that is saturated at least part of the year by water, usually found in depressions, low-lying areas or along floodplains or coastal areas.