
Appendix A: Glossary

- accuracy** - a measure of how close repeated trials are to the desired target.
- acidity** - a measure of the number of free hydrogen ions (H^+) in a solution that can chemically react with other substances.
- alkalinity** - a measure of the negative ions that are available to react and neutralize free hydrogen ions. Some of the most common of these include hydroxide (OH^-), sulfate (SO_4), phosphate (PO_4), bicarbonate (HCO_3^-) and carbonate (CO_3).
- ambient** - pertaining to the current environmental condition.
- assemblage** - the set of related organisms that represent a portion of a biological community (e.g., benthic macroinvertebrates).
- benthic** - pertaining to the bottom (bed) of a water body.
- biochemical oxygen demand (BOD)** - the amount of oxygen consumed by microorganisms as they decompose organic materials in water.
- biological criteria** - numerical values or narrative descriptions that depict the biological integrity of aquatic communities in that state. May be listed in state water quality standards.
- buret** - a graduated glass tube used for measuring and releasing small and precise amounts of liquid.
- channel** - the section of the stream that contains the main flow.
- channelization** - the straightening of a stream; this often is a result of human activity.
- chemical constituents** - chemical components that are part of a whole.
- cobble** - medium-sized rocks (2-10 inches) that are found in a stream bed.
- combined sewer overflow (CSO)** - sewer systems in which sanitary waste and stormwater are combined in heavy rains; this is especially common in older cities. The discharge from CSOs is typically untreated.
- community** - the whole of the plant and animal population inhabiting a given area.
- culvert** - man-made construction that diverts the natural flow of water.
- d-frame net** - a fine mesh net that is attached to a pole and used for sampling. It resembles a butterfly net.
- deionized water** - water that has had all of the ions (atoms or molecules) other than hydrogen and oxygen removed.
- designated uses** - state-established desirable uses that waters should support, such as fishing, swimming, and aquatic life. Listed in state water quality standards.
- dissolved oxygen (DO)** - oxygen dissolved in water and available for living organisms to use for respiration.
- distilled water** - water that has had most of its impurities removed.
- effluent** - wastewater discharge.
- dredge** - to remove sediments from the stream bed to deepen or widen the channel.
- ecoregion** - geographic areas that are distinguished from others by ecological characteristics such as climate, soils, geology, and vegetation.
- embeddedness** - the degree to which rocks in the streambed are surrounded by sediment.
- emergent plants** - plants rooted underwater, but with their tops extending above the water.
- Erlenmeyer flask** - a flask having a wide bottom and a smaller neck and mouth that is used to mix liquids.

eutrophication - the natural and artificial addition of nutrients to a waterbody, which may lead to depleted oxygen concentrations. Eutrophication is a natural process that is frequently accelerated and intensified by human activities.

floating plants - plants that grow free floating, rather than being attached to the stream bed.

flocculent (floc) - a mass of particles that form into a clump as a result of a chemical reaction.

glide/run - section of a stream with a relatively high velocity and with little or no turbulence on the surface of the water.

graduated cylinder - a cylinder used to measure liquids that is marked in units.

gross morphological features - large obvious identifying physical characteristics of an organism.

headwaters - the origins of a stream.

hypoxia - depletion of dissolved oxygen in an aquatic system.

impairment - degradation.

impoundment - a body of water contained by a barrier, such as a dam.

inert - not chemically or physically active.

kick-net - a fine mesh net used to collect organisms. Kick-nets vary in size, but generally are about three feet long and are attached to two wooden poles at each end.

land uses - activities that take place on the land, such as construction, farming, or tree clearing.

macroinvertebrate - organisms that lack a backbone and can be seen with the naked eye.

NPDES - National Pollutant Discharge Elimination System, a national program in which pollution dischargers such as factories and sewage treatment plants are given permits to discharge. These permits contain limits on the pollutants they are allowed to discharge.

orthophosphate - inorganic phosphorus dissolved in water.

outfall - the pipe through which industrial facilities and wastewater treatment plants discharge their effluent (wastewater) into a waterbody.

permeable - porous

pH - a numerical measure of the hydrogen ion concentration used to indicate the alkalinity or acidity of a substance. Measured on a scale of 1.0 (acidic) to 14.0 (basic); 7.0 is neutral.

phosphorus - a nutrient that is essential for plants and animals.

photosynthesis - the chemical reaction in plants that utilizes light energy from the sun to convert water and carbon dioxide into simple sugars. This reaction is facilitated by chlorophyll.

pipet - an eye dropper-like instrument that can measure very small amounts of a liquid.

pool - deeper portion of a stream where water flows slower than in neighboring, shallower portions.

precision - a measure of how close repeated trials are to each other.

protocol - defined procedure.

reagent - a substance or chemical used to indicate the presence of a chemical or to induce a chemical reaction to determine the chemical characteristics of a solution.

riffle - shallow area in a stream where water flows swiftly over gravel and rock.

riparian - of or pertaining to the banks of a body of water.

riparian zone - the vegetative area on each bank of a body of water.

riprap - rocks used on an embankment to protect against bank erosion.

run/glide - see glide/run.

saturated - inundated; filled to the point of capacity or beyond.

sheen - the glimmering effect that oil has on water as light is reflected more sharply off of the surface.

sieve bucket - a bucket with a screen bottom that is used to wash macroinvertebrate samples and to remove excess silt and mud.

silviculture - forestry and the commercial farming of trees.

submergent plants - plants that live and grow fully submerged under the water.

substrate - refers to a surface. This includes the material comprising the stream bed or the surfaces which plants or animals may attach or live upon.

taxon (plural taxa) - a level of classification within a scientific system that categorizes living organisms based on their physical characteristics.

taxonomic key - a quick reference guide used to identify organisms. They are available in varying degrees of complexity and detail.

titration - the addition of small, precise quantities of a reagent to a sample until the sample reaches a certain endpoint. Reaching the endpoint is usually indicated by a color change.

tolerance - the ability to withstand a particular condition - e.g. pollution tolerant indicates that ability to live in polluted waters.

tributaries - a body of water that drains into another, typically larger, body of water.

turbidity - murkiness or cloudiness of water, indicating the presence of some suspended sediments, dissolved solids, natural or man-made chemicals, algae, etc.

volumetric flask - a flask that holds a predetermined amount of liquid.

water quality criteria - maximum concentrations of pollutants that are acceptable, if those waters are to meet water quality standards. Listed in state water quality standards.

water quality standards - written goals for state waters, established by each state and approved by EPA.

watershed - the area of land drained by a particular river or stream system.