

Terminology and Vocabulary

Algae - group of primitive, non-flowering plants which include certain seaweed and microscopic phytoplankton

Anadromous fish - fish such as American shad, that migrate from their primary habitat in the ocean to freshwater to spawn

Benthic organisms - plants and animals living in or on the bottom in aquatic environments

Brackish water - mixture of fresh and salt water

Catadromous fish - fish such as the American eel, that migrate from their primary habitat (ie. freshwater) to the ocean to spawn

Copepods - minute shrimp-like crustaceans; often they are the most common zooplankton in estuarine waters

Decomposer - organisms (chiefly bacteria and fungi) that break down dead organic matter

Detritus - decomposed or partly decomposed plant and animal matter

Dissolved oxygen - free oxygen (O₂) released into the water by photosynthesis and by air-water interactions; it is essential for respiration of aquatic animals

Ebb tide - falling or lowering tide

Ecology - the study of interrelationships of living things to one another and to their environment

Ecosystem - an interactive system of a biological community and its non-living environment

Erosion - the wearing away of land surfaces by wind or water; erosion occurs naturally but it is often intensified by man's land use practices

Estuary - semi-enclosed, tidal, coastal body of water open to the sea in which fresh and salt water mix

Eutrophication - over-enrichment of a body of water as a result of excessive nutrient loading, often resulting in depletion of dissolved oxygen

Flood tide - rising tide

Food web - complex interaction of food chains in a biological community

Habitat - the place where a plant or animal lives

Intertidal Zone the area between high and low tide

Marsh - low, wet, grassland without trees, periodically covered by water

Nekton - free swimming aquatic organisms such as fish

Nitrogen - an inorganic nutrient essential for plant growth and reproduction when in oxidized forms (nitrate, nitrite, ammonia); excess can cause eutrophication; problems are usually associated with agricultural runoff and sewage

Non-point source pollution - pollutants entering waterways from a general area, such as runoff from farmland or suburban communities

Nutrients - chemicals (primarily nitrogen and phosphorous) necessary for organisms to live

Organic matter - chemical compounds made with carbon, made in live processes by plants and animals

pH - a measure of the acidity or alkalinity of a material, liquid or solid; estuarine water is, naturally, slightly base. (The pH scale is logarithmic, thus pH 4 is 10x more acidic than pH 5, and 100x more acidic than pH 6)

	strong acid		neutral		strong base
		14			
	7.5		12.6		
battery acid	orange juice		blood		clorox bleach

Phosphorous - an inorganic nutrient essential for plant growth and reproduction; problems are usually associated with farmland runoff, sewage and detergents.

Phytoplankton - the plant form of plankton, most are microscopic; they are important as primary producers in an estuarine ecosystem

Photosynthesis - the process by which plants convert sunlight into living tissue using carbon dioxide, water and nutrients; primary production

Plankton - passively drifting or weakly swimming organisms living suspended in the water column, often microscopic but sometimes visible to the naked eye

Plant zonation - the distribution of plant species into zones in response to some habitat condition such as salinity or moisture.

Point source pollution - pollution from a definable source, such as an outfall pipe

Pollution - the addition of a substance(s) to an environment in greater than natural concentrations as a result of human activity producing a net, detrimental effect on the environment

Primary producers - organisms using the sun's energy and inorganic nutrients to synthesize organic compounds which in turn may provide energy to other organisms.

Phytoplankton - the plant form of plankton

Salinity - the measurement of the amount of dissolved salts in water, usually measured in parts per thousand; 35 ppt is average for seawater, 0 ppt for freshwater

Secchi Disk - a white plate-sized disk attached to a rope, that when lowered down into the water measures turbidity

Sediment - particles which accumulate on the bottom of a waterway

Sewage treatment -

primary = screening or settling large solids out of sewage (only removes visible material)

secondary = removal of organic material in sewage by aeration and by bacterial action

tertiary = removal of nutrients and traces of toxic organic material from sewage by additional treatment processes

Submerged Aquatic Vegetation (SAV) - rooted vegetation which grows beneath the water surface

Tides - periodic movement (raising and lowering) of a body of water by the gravitational attraction of the moon and sun with the rotation of the earth

Tributaries - streams and rivers that supply a larger body of water

Trophic Levels - the levels at which an organism feeds in a food web (producer, primary consumers etc.)

Turbidity - the measurement of water cloudiness; it may be affected by such things as sediment and plankton concentrations

Watershed - an area of land that is drained by a specified river or other body of water

Zooplankton - the animal form of plankton