CLEAN VIRGINIA WATERWAYS

Glossary

abiotic – pertaining to factors or things that are separate and independent from living things: nonliving.

acid – a substance that has a pH of less than 7 (7 is neutral). Specifically, an acid has more free hydrogen ions (H^+) than hydroxide ions (OH^-).

acid deposition – precipitation that has been made acidic by airborne pollutants. Includes acid rain (wet deposition) and dry particles. Precipitation composed of sulfuric acid, and/or nitric acid. These acids are formed from sulfur dioxides from the burning of coal and oil, and from nitrogen oxides emitted by motor vehicles. This precipitation form can change the chemistry of healthy soils and waters, potentially making them unfit to support life.

acid mine drainage – drainage of water from areas that have been mined for coal or other mineral ores; the water has low pH, sometimes less than 2.0 (very acid), because of its contact with sulfur-bearing material. Acid drainage is harmful because it often kills aquatic organisms.

acid rain (or acid precipitation) – see "acid deposition".

acre-foot (acre-ft) – the volume of water required to cover 1 acre of land (43,560 square feet) to a depth of 1 foot. Equal to 325,851 gallons or 1,233 cubic meters.

algae – any various, primitive, chiefly aquatic, one-celled or multicellular plants that lack true stems, roots, and leaves, but usually contain chlorophyll. Algae typically grow in sunlit waters in proportion to the amount of nutrients available, and serve as food for fish and small aquatic animals.

algal bloom – a sudden increase in the amount of algae, usually causing large, floating masses to form. Algal blooms can affect water quality by lowering dissolved oxygen content and decreasing sunlight penetration, are usually caused by excessive nutrient addition, and can be characteristic of a eutrophic lake.

alkaline – having a pH greater than 7.

alkalinity – the capacity of water for neutralizing an acid solution.

aquaculture – farming of plants and animals that live in water, such as fish, shellfish, and algae.

aquifer -– a geologic formation or structure that contains usable amounts of groundwater that can be accessed from a well or spring.

artesian water – groundwater that is under pressure when tapped by a well and is able to rise above the level at which it is first encountered. It may or may not flow out at ground level.

atmospheric deposition – The process whereby air pollutants are deposited on land and water, sometimes at great distances from their original sources. Pollution deposited in snow, fog, or rain is called wet deposition, while the deposition of pollutants as dry particles or gases is called dry deposition. Air pollution can be deposited into waterbodies either directly from the air or through indirect deposition, where the pollutants settle on the land and are then carried into a waterbody by runoff.

bacteria – typically one-celled, non-photosynthetic microorganisms that multiply by simple division.

They occur in three main forms: spherical (cocci), rod-shaped (bacilli), and spiral (spirilla).

base – a substance that has a pH of more than 7, (7 is neutral). A base has less free hydrogen ions (H^+) than hydroxide ions (OH^-).

base flow – streamflow coming from groundwater seepage into a stream.

bay – a body of water partly enclosed by land but with a wide outlet to the sea. Compare with "estuary".

bedrock – the solid rock beneath the soil and superficial rock. A general term for solid rock that lies beneath soil, loose sediments, or other unconsolidated material.

benthic – pertaining to the bottom (bed) of a waterbody.

benthos – the animal community associated with the bottom of a waterbody.

benthic macroinvertebrates – macroinvertebrates are large, generally soft-bodied organisms that lack backbones. Benthic macroinvertebrates live in or on the bottom sediment in aquatic environments.

best management practices (BMPs) – techniques of working the land that minimizes the impacts of disturbance and thus conserves soil and water resources. BMPs prevent or reduce pollutants from point or nonpoint sources, in order to protect water quality.

biodegradable – capable of being decomposed (broken down) by natural biological processes. The susceptibility of a substance to decomposition by the actions of microorganisms.

biological accumulation (bioaccumulation) – the uptake and storage of chemicals (e.g., DDT, PCBs) from the environment by animals and plants. Uptake can occur through feeding or direct absorption from water or sediments. The concentration of a substance in the tissue of an individual organism.

biological diversity (or biodiversity) – the variety and complexity of species present and interacting in an ecosystem and the relative abundance of each.

biological magnification *(also called bioamplification or bioconcentration)* – the progressive increase in the concentration of chemical contaminants (e.g., DDT, PCBs, methyl mercury) from the bottom of the food chain (e.g., bacteria, phytoplankton, zooplankton) to the top of the food chain (e.g., fishing-eating birds such as a cormorant).

biomonitoring – the use of living organisms to evaluate the anthropogenic, or human-induced, impacts on biota.

bloom – see "algal bloom".

brackish water – water that is a mixture of fresh and salt water.

buffer zone – an area between the water supply source and the possible contamination sources where no contamination activities are likely to occur.

capillary action – the means by which liquid moves through the porous spaces in a solid, such as soil, plant roots, and the capillary blood vessels in our bodies due to the forces of adhesion, cohesion, and surface tension. Capillary action is essential in carrying substances and nutrients from one place to another in plants and animals.

condensation – the process of water vapor in the air turning into liquid water. Water drops on the outside of a cold glass of water are condensed water. Condensation is the opposite process of evaporation.

consumptive use – that part of water withdrawn that is evaporated, transpired by plants, incorporated into products or crops, consumed by humans or livestock, or otherwise removed from the immediate water environment. Also referred to as water consumed.

contaminant – an impurity that causes air, soil, or water to be harmful to human health or the environment; something that makes a substance impure, infected, corrupted, or polluted.

data – facts or information about a particular subject, or a set of such facts, which can be analyzed to learn about the subject.

desalinization – the removal of salts from saline water to provide freshwater. This method is becoming a more popular way of providing fresh water to populations.

discharge – the volume of water that passes a given location within a given period of time. Usually expressed in cubic feet per second.

dissolved oxygen (DO) – oxygen molecules that are dissolved in water and available for living organisms to use for respiration. Usually expressed in milligrams per liter or percent of saturation. The concentration of DO is an important environmental parameter contributing to water quality.

domestic water use – water used for household purposes, such as drinking; food preparation, bathing; washing clothes, dishes, cars, and other items; flushing toilets; and watering lawns and gardens.

drainage basin – see "watershed".

drip irrigation – a common irrigation method where pipes or tubes filled with water are run along or under the ground to slowly drip into crop rows. Drip irrigation is a low-pressure method of irrigation and less water is lost to evaporation than high-pressure spray irrigation.

ecology – interrelationships between organisms and their environment.

ecosystem – a natural unit that includes living and nonliving parts interacting to produce a stable system in which the exchange of materials between the living and nonliving parts follow closed paths; all living things and their environment in an area of any size will all be linked together by energy and nutrient flow.

eelgrass – a rooted underwater grass type plant.

effluent – water that flows from a sewage treatment plant after it has been treated.

endangered – a species that is in immediate danger of becoming extinct and needs protection to survive.

entanglement – to become tangled in or ensnared. A common cause of death for marine animals is entanglement by marine debris. Animals can become caught in discarded fishing nets, monofilament line, and other gear, rope, six-pack rings, balloon ribbons, plastic grocery bags, and other floating debris. Entanglement may impair swimming and feeding, cause suffocation, decrease ability to elude predators, and cause open wounds.

erosion – the process where wind, water, ice, and other mechanical and chemical forces wear away rocks and soil, breaking up particles and moving them from one place to another.

estuary – a semi-enclosed coastal body of water that has free connection with the open sea and within which seawater is measurably diluted with fresh water derived from land drainage. Estuaries are transition zones between fresh water and the salt water of an ocean.

eutrophic – refers to a body of water characterized by nutrient-rich water supporting abundant growth of algae and/or other aquatic plants at the surface.

eutrophication – the process in which a body of water becomes oxygen deficient, nutrient-rich and supports an abundant growth of surface aquatic plants and algae; natural aging cycle of lakes, normally taking centuries, but it can be rapidly accelerated when outside sources of nutrients are added, such as wastewater, fertilizer, or feed lot runoff.

evaporation – the process of liquid water becoming water vapor, including vaporization from water surfaces, land surfaces, and snow fields, but not from leaf surfaces. See transpiration.

evapotranspiration – the sum of evaporation and transpiration.

fauna – all of the animals of a particular region or a particular era. For example, the fauna of the Chesapeake Bay.

fecal coliform bacteria – a type of coliform bacteria found in the intestines of humans and warmblooded animals that aids in the digestion process and is used as an indicator of fecal contamination and/or possible presence of pathogens.

fertilizer – natural and synthetic materials including manure, nitrogen, phosphorus and treated sludge that are worked into the soil to provide nutrients and increase its fertility.

filter feeders – animals (e.g., clams and oysters) that feed by filtering out of the water column small food items such as detritus, phytoplankton, and zooplankton.

flood plain – a strip of relatively flat and normally dry land alongside a stream, river, or lake that is covered by water during a flood.

flora – all of the plants of a particular region or a particular era.

foamed plastic – a type of plastic that is generally made from polystyrene and consists of small spheres that are fused together.

fossil fuels – hydrocarbon fuels, such as petroleum, coal and oil. Derived from living things of a previous geologic time.

freshwater – water that contains less than 1,000 milligrams per liter (mg/L) of dissolved solids; generally, more than 500 mg/L of dissolved solids is undesirable for drinking and many industrial uses.

grey water – wastewater from clothes washing machines, showers, bathtubs, hand washing, and faucet uses. Kitchen sink and toilet water is excluded. This water has excellent potential to be reused as irrigation for yards.

groundwater – (1) water that flows or seeps downward and saturates soil or rock, supplying springs and wells. The upper surface of the saturated zone is called the water table. (2) water stored underground in rock crevices and in the pores of geologic materials that make up the Earth's crust. Groundwater is a major source of drinking water that can be polluted by leaching agricultural or industrial pollutants or substances from leaking underground storage tanks. Can be one word or two.

groundwater recharge – inflow of water to a groundwater aquifer from the surface. Infiltration of precipitation and its movement to the water table is one form of natural recharge. Also, the volume of water added by this process.

groundwater recharge area – the proportion of a watershed area that contributes to groundwater recharge.

groundwater recharge rate – rate at which downward movement of water from the land surface enters aquifers.

habitat – the arrangement of food, water, shelter or cover, and space suitable to an animal's needs. It is the “life range” which must include food and water as well as escape cover, winter cover, and cover to rear young.

hardness – a water quality indication of the concentration of alkaline salts in water, mainly calcium and magnesium. If the water you use is "hard" then more soap, detergent, or shampoo is necessary to raise a lather.

headwater(s) – the source and upper reaches of a stream; also the upper reaches of a reservoir. Also may be thought of as any and all parts of a river basin except the mainstream river and main tributaries.

hydroelectric power water use – the use of water in the generation of electricity at plants where the turbine generators are driven by falling water.

hydrologic cycle – see “water cycle”.

impermeable (substance) – a substance through which other substances are unable to pass.

impermeable layer – a layer of solid material, such as rock or clay, which does not allow water to pass through.

indicator – 1) A compound that changes color under a particular condition or over a particular range of conditions. 2) An organism whose presence suggests the presence of other organisms. 3) A measurement of environmental conditions or trends in environmental quality.

indicator organism – an organism whose presence or absence typically indicates or provides information on certain conditions within its environment.

infiltration – the flow of water downward from the land surface into and through the upper soil layers.

infiltration rate – the rate that rainfall soaks into the soil surface.

ingestion – the consumption of a piece of debris by an animal. This may cause clogging of the digestive tract, suffocation, or a false feeling of fullness that can lead to malnutrition or starvation.

inorganic – being or composed of matter other than plant or animal.

invertebrates – animals that lack a spinal column or backbone. Includes mollusks (e.g., clams and oysters), crustaceans (e.g., crabs and shrimp), insects, starfish, jellyfish, sponges, and many types of worms.

irrigation – the controlled application of water for agricultural purposes through manmade systems to supply water requirements not satisfied by rainfall. May also be used to maintain vegetative growth in recreational lands, such as parks and golf courses.

Karst topography – describes the topography formed over certain rock types by dissolution. Karst landscapes are characterized by the formation and collapse of caves and sinkholes.

land use – the way land is developed and used in terms of the kinds of human activities that occur (e.g., agriculture, residential areas, industrial areas).

leaching – the process by which soluble materials in the soil, such as salts, nutrients, pesticide chemicals, or contaminants, are washed into a lower layer of soil or are dissolved and carried away by water.

limiting factors – environmental variable, or combination of variables, that inhibits the rate of growth of an organism or an entire population.

litter – 1) dead and partially decomposing leaves and other recognizable plant residues on the soil surface of the forest floor. 2) trash inappropriately discarded by people.

marine debris – any man-made, solid material that enters our waterways directly (e.g., by dumping) or indirectly (e.g., washed out to sea via rivers, streams, storm drains, etc.). Bottles, nets, hazardous medical wastes, and discarded fishing line all qualify as marine debris. In addition to being unsightly, it can be life-threatening to marine organisms and humans and can wreak havoc on coastal communities and the fishing industry.

microorganism – a microscopic or submicroscopic organism, too small to be seen by the naked eye. Bacteria, viruses, protozoans, and some fungi and algae are microorganisms.

milligrams per liter (mg/L) – a unit of the concentration of a constituent in water or wastewater. It represents 0.001 gram of a constituent in 1 liter of water. It is approximately equal to one part per million (ppm).

municipal water system – a water system that has at least five service connections or which regularly serves 25 individuals for 60 days; also called a public water system.

niche – an organism's physical location and function within an ecosystem; all the components of the environment with which an organism or population interacts.

nitrates – compounds containing nitrogen as nitrates (NO_3^-). In the environment, these compounds are found in animal wastes, fertilizers, and in septic tanks and untreated municipal sewage.

nonbiodegradable – describing a substance that is not broken down by natural processes and so remains in its original form for long periods of time. Many plastics and some pesticides are nonbiodegradable.

nonpoint source (NPS) pollution – pollution discharged over a wide land area, not from one specific location so sources are hard to identify. These are forms of diffuse pollution caused by sediment, nutrients, organic and toxic substances originating from land-use activities, which are carried to lakes and streams by surface runoff. Nonpoint source pollution is contamination that occurs when rainwater, snowmelt, or irrigation washes off plowed fields, city streets, or suburban backyards. As this runoff moves across the land surface, it picks up soil particles and pollutants, such as nutrients and pesticides.

nutrients – compounds, minerals, or elements needed by living organisms to carry on their functions. Nitrogen, phosphorus, potassium, and other elements are examples of nutrients required for plant growth.

nutrient cycling – the cycling of chemicals such as carbon, oxygen, phosphorus, nitrogen, and water within or between ecosystems and throughout the biosphere. These compounds are assimilated and broken down over and over again by living organisms.

optical brighteners – a common additive to laundry detergents. The presence of optical brighteners in surface water or groundwater can indicate faulty septic systems, storm drain cross-connections, or other problems where untreated or partially treated human sewage is entering water.

organic matter – plant and animal residues, or substances made by living organisms. All are based upon carbon compounds.

osmosis – the movement of water molecules through a thin membrane. The osmosis process occurs in our bodies and is also one method of desalinizing saline water.

parts per million (ppm) – the number of "parts" by weight of a substance per million parts of water. This unit is commonly used to represent pollutant concentrations.

pathogen – a disease-producing agent; usually applied to a living organism. Generally, any viruses, bacteria, or fungi that cause disease.

per capita use – the average amount of water used per person during a standard time period, generally per day.

percolation – (1) the movement of water through the openings in rock or soil. (2) the entrance of a portion of the streamflow into the channel materials to contribute to groundwater replenishment.

permeability – the ability of a material to allow the passage of a liquid, such as water through rocks. Permeable materials, such as gravel and sand, allow water to move quickly through them, whereas impermeable material, such as clay and cement, do not allow water to flow freely.

persistent – capable of remaining in the environment for long periods of time without being broken down into smaller pieces.

pH – a measure of the relative acidity or alkalinity of water. Water with a pH of 7 is neutral; lower pH levels indicate increasing acidity, while pH levels higher than 7 indicate increasingly basic solutions.

phosphorus – an element considered the key nutrient in controlling eutrophication in lakes and ponds.

phytoplankton – any of the many species of plants (such as algae) that consist of single cells or small groups of cells that live and grow freely suspended in the water near the surface.

plankton – microscopic plants and animals in water that are influenced in mobility by the movement of water (i.e., as opposed to fish which can swim).

point-source pollution – pollution emanating from and traceable to a distinct point of origin. For example, water pollution coming from a sewage-outflow pipe.

pollution – the addition of unwanted substance to or the alteration of the environment in a way that adversely affects human health or living systems. Pollutants may be biodegradable, non-biodegradable, or slowly degradable.

pollution prevention – the reduction or elimination of pollutants prior to removing off-site for recycling, treatment, or disposal. P2 (as it is called) can include substi-tution of different raw materials, reduction of toxic chem-ical use, and increased recycling or treatment of wastes. Companies often find reduced costs for raw materials, energy, pollution control, and waste disposal, while fewer pollutants are discharged into the air, water, or land. Preventing pollution improves the environment today and may help prevent tomorrow's problems.

porosity – a measure of the water-bearing capacity of subsurface rock. With respect to water movement, it is not just the total magnitude of porosity that is important, but also the size of the voids and the extent to which they are interconnected, as the pores in a formation may be open, or interconnected, or closed and isolated. For example, clay may have a very high porosity with respect to potential water content, but it constitutes a poor medium as an aquifer because the pores are usually so small.

potable water – water of a quality suitable for drinking.

precipitation – rain, snow, hail, sleet, dew, and frost.

protozoa – mostly microscopic animals made up of a single cell or a group of more or less identical cells. Protozoa live chiefly in water, but many are parasitic.

public supply – water withdrawn by public governments and agencies, such as a county water department, and by private companies that is then delivered to users.

recharge – see "groundwater recharge".

reclaimed wastewater – treated wastewater that can be used for beneficial purposes, such as irrigating certain plants.

recycled water – water that is used more than one time before it passes back into the natural hydrologic system.

renewable resource – a resource that can be used, then grown or replenished in some manner from year to year. Timber, shellfish and grasslands are examples of renewable resources.

reservoir – a pond, lake, or basin, either natural or artificial, for the storage, regulation, and control of water.

reverse osmosis – the process of removing salts (desalination) from water using a membrane. With reverse osmosis, water passes through a fine membrane that the salts are unable to pass through, while the salt waste (brine) is removed and disposed.

riparian – of, adjacent to, or living on the bank of a river, stream, or sometimes, of a lake or pond.

riparian buffer – a zone of vegetation along a river or stream corridor that offers wildlife habitat and helps absorb runoff from the land during storm events.

river – A natural stream of water of considerable volume, larger than a brook or creek.

runoff – the amount of water (from precipitation, snowmelt, or irrigation water) that flows along the land surface.

saline water – water that contains significant amounts of dissolved solids.

Parameters for saline water:
Fresh water - Less than 1,000 parts per million (ppm)
Slightly saline water - From 1,000 ppm to 3,000 ppm
Moderately saline water - From 3,000 ppm to 10,000 ppm
Highly saline water - From 10,000 ppm to 35,000 ppm

saltwater intrusion – occurs when groundwater supplies are depleted to the extent that coastal salt water infiltrates local aquifers.

saturation – being filled to capacity; having absorbed all that can be taken up.

saturated zone – a portion of the soil profile where all pores are filled with water. Aquifers are located in this zone.

seagrass – rooted vascular plants that generally grow up to the water surface but not above it. See "submerged aquatic vegetation".

Secchi depth – the depth beneath the water's surface at which a Secchi disk can no longer be seen.

Secchi disc – a round, eight-inch (20 cm), weighted, usually black and white disk that is lowered by rope into the water. Secchi disks are used to measure transparency, which is an integrated measure of light scattering and absorption.

sediment – usually applied to material (soil, clay, etc.) in suspension in water or recently deposited from suspension. In the plural the word is applied to all kinds of deposits from the waters of streams, lakes, or seas.

sedimentation – the process of depositing sediment, or the addition of soils to lakes that is part of the natural aging process.

sedimentary rock – rock formed of sediment, and specifically: (1) sandstone and shale, formed of fragments of other rock transported from their sources and deposited in water; and (2) rocks formed by or from secretions of organisms, such as most limestone. Many sedimentary rocks show distinct layering, which is the result of different types of sediment being deposited in succession.

septic system – on-site equipment or system to treat wastewater, consisting of a septic tank and an absorption field.

septic tank – a tank used to detain domestic wastes to allow the settling of solids prior to distribution to a leach field for soil absorption. Septic tanks are used when a sewer line is not available to carry wastewater to a treatment plant. Bacteria in the wastes decompose some of the organic matter and sludge settles on the bottom of the settling tank. The effluent flows out of the tank into the ground through drains.

sewage – waste and wastewater produced by residential, commercial, and light industrial establishment; typically discharged into sewers and sometimes, into septic tanks.

sewage treatment plant – a facility designed to receive the wastewater from domestic sources and to remove materials that damage water quality and threaten public health and safety. The substances removed are:

[1] greases and fats;

[2] solids from human waste and other sources;

[3] dissolved pollutants from human waste and decomposition products; and

[4] dangerous microorganisms.

Most facilities employ a combination of mechanical removal steps and bacterial decomposition to achieve the desired results. Chlorine is often added to discharges from the plants to reduce the danger of spreading disease by the release of pathogenic bacteria.

sewer (sanitary sewers) – a system of underground pipes that collect and deliver wastewater to treatment facilities.

sinkhole – a depression in the Earth's surface caused by dissolving of underlying limestone, salt, or gypsum. Drainage is provided through underground channels that may be enlarged by the collapse of a cavern roof. Found in areas with Karst topography.

sludge – any solid, semisolid, or liquid waste that settles to the bottom of sedimentation tanks (in wastewater treatment plants or drinking water treatment plants) or septic tanks.

soft water – water that is low in mineral content because it has flowed through soils and rocks containing minerals that react poorly. Soaps are very "sudsy" in soft waters.

solute – a substance that is dissolved in another substance, thus forming a solution.

solution – a mixture of a solvent and a solute. In some solutions, such as sugar water, the solute cannot be seen. But in other solutions, such as water mixed with dye, the solution is visibly changed.

solvent – a substance that dissolves other substances, thus forming a solution. Water dissolves more substances than any other, and is known as the "universal solvent".

specific conductance – a measure of the ability of water to conduct an electrical current. Specific conductance can be used for approximating the total dissolved solids content of water by testing its capacity to carry an electrical current.

specific gravity – also called relative density. The ratio of the density of a substance to the density of some reference substance. Hydrometers use this principle to determine salinity of a water sample, compared to fresh water.

spring – flow of groundwater that emerges naturally at the land surface.

stakeholders – people who have a "stake" or interest in an issue. For example, all the people who live in the Chesapeake Bay watershed are stakeholders when it comes to the Bay's water quality.

storm sewer – a sewer that carries only surface runoff, street wash, and snowmelt from the land. In a separate sewer system, storm sewers are completely separate from those that carry domestic and commercial waste water (sanitary sewers).

stream – a general term for a body of flowing water; natural water course containing water at least part of the year. In hydrology, it is generally applied to the water flowing in a natural channel as distinct from a human made canal.

streamflow – the water discharge that occurs in a natural channel.

submerged aquatic vegetation (*SAV*) – aquatic plants that generally include rooted vascular plants that grow up to the water surface but not above it (although a few species have flowers or tufts that may stick a few centimeters above the surface). The definition of SAV usually excludes algae, floating plants, and plants that grow above the water surface. Sometimes called seagrass in marine environments.

subsidence – a dropping of the land surface as a result of groundwater being pumped. Cracks and fissures can appear in the land. Subsidence usually implies a gradual sinking, but it also can refer to an instantaneous or catastrophic collapse.

surface water – water that is on the Earth's surface, such as in a stream, river, lake, or reservoir.

suspended sediment – very fine soil particles that remain in suspension in water for a considerable period of time without contact with the bottom. Such material remains in suspension due to the upward components of turbulence and currents and/or by suspension.

suspended solids – solids that are not in true solution and that can be removed by filtration. Such suspended solids usually contribute directly to turbidity.

thermal pollution – a reduction in water quality caused by increasing its temperature, often due to disposal of waste heat from industrial or power generation processes. Another source is runoff from hot, paved surfaces. Thermally polluted water can harm plants and animals. Warm water holds less dissolved oxygen than cooler water, so thermal pollution decreases the amount of oxygen available to aquatic animals.

thermoelectric power water use – water used in the process of the generation of thermoelectric power. Power plants that burn coal and oil are examples of thermoelectric-power facilities.

threatened species – species with populations that are declining sharply in parts of their range, and which may be in danger of becoming extinct in specific areas. Threatened is a classification between rare and endangered.

topographic map – a two-dimensional representation of the earth's surface used to illustrate topographic relief by the use of contour lines. The shape and spacing of contour lines portray the size, shape, and elevation of landscape features.

topography – the general description of a land surface including its relief and the position of natural and man-made features.

toxic – poisonous; caused by, producing, or relating to a poison or toxin. Harmful to living organisms.

toxic chemical – a chemical with the potential of causing death or damage to humans, animals, plants, protists; poison.

transpiration – process by which water that is absorbed by plants, usually through the roots, is evaporated into the atmosphere from the plant surface, such as leaf pores. See "evapotranspiration".

trash – articles that have been made or used by people and discarded.

tributary – a smaller river or stream that flows into a larger river or stream. Usually, a number of smaller tributaries merge to form a river.

turbidity – the amount of solid particles that are suspended in water and that cause light rays shining through the water to scatter. Thus, turbidity makes the water cloudy or even opaque in extreme cases.

unsaturated zone – the zone immediately below the land surface where the pores contain both water and air, but are not totally saturated with water. These zones differ from an aquifer, where the pores are saturated with water.

USGS – United States Geological Survey

waste water – a general term for the effluent from a residential or municipal sewage collection system.

water analysis – series of tests to determine various chemical or physical characteristics of a sample of water.

water clarity – measurement of how far you can see through the water. The greater the water clarity, the further you can see through the water. Often measured with a Secchi disk.

water column – the water between the surface and the bottom of a river, lake, estuary, or ocean.

water cycle – the circuit of water movement from the oceans to the atmosphere and to the Earth and return to the atmosphere through various stages or processes such as precipitation, interception, runoff, infiltration, percolation, storage, evaporation, and transportation.

water pollution – any chemical, physical or biological change in water quality that has a harmful effect on living organisms or makes water unsuitable for desired uses.

Sewage, industrial chemicals, heavy metals, and household cleaners are examples of materials commonly discharged into streams and rivers. In addition, chemicals from the air dissolved in rainwater, pesticides, and fertilizers leached from the land run off into water.

water quality – a term used to describe the chemical, physical, and biological characteristics of water, usually in respect to its suitability for a particular purpose.

water quality parameters – any of the measurable qualities or contents of water. Includes temperature, salinity, turbidity, nutrients, dissolved oxygen, and others.

watershed – the land area that collects and channels water to a particular stream, river, or lake. The entire area of land whose runoff of water, sediments, and dissolved materials (e.g., nutrients, contaminants) drain into a river, lake, estuary, or ocean. It is a land feature that can be identified by tracing a line along the highest elevations between two areas on a map, often a ridge. Large watersheds, like the Chesapeake Bay basin, contain thousands of smaller watersheds. Also called a "drainage basin".

water table – the first occurrence of groundwater. The upper limit of groundwater within an unconfined aquifer. The water table forms the boundary between the zone of saturation and the zone of aeration.

water use – water that is used for a specific purpose, such as for domestic use, irrigation, or industrial processing. Water use pertains to humans' interaction with and influence on the hydrologic cycle, and includes elements, such as water withdrawal from surface and groundwater sources, water delivery to homes and businesses, consumptive use of water, water released from wastewater treatment plants, water returned to the environment, and instream uses, such as using water to produce hydroelectric power.

well (water) – an artificial excavation put down by any method for the purposes of withdrawing water from an underground aquifer. A bored, dug or drilled shaft, whose purpose is to reach groundwater.

wetlands – lands that are often transitional areas between terrestrial and aquatic systems, with enough surface or groundwater to support a complex chain of life, including microorganisms, vegetation, reptiles, fish, and amphibians. Wetlands usually border larger bodies of water such as rivers, lakes, bays, estuaries and the open sea, and may serve as breeding grounds for many species. Examples include swamps, marshes, and bogs.

withdrawal – water removed from a ground- or surfacewater source for use.

zone of aeration – a soil zone between the land surface and the water table.

zone of saturation – the subsurface portion of the soil in which all pores and spaces are completely filled with water (called groundwater). Found below the water table.

zooplankton – a community of floating, often microscopic animals that inhabit aquatic environments. Unlike phytoplankton, zooplankton cannot produce their own food, and so are consumers.

THIS GLOSSARY WAS COMPILED FROM SEVERAL SOURCES INCLUDING

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Virginia Water Monitoring Council: *http://www.vwrrc.vt.edu/vwmc/*

Water Quality Association: *http://www.wqa.org/glossary.cfm*

Water Words Dictionary by the *Nevada Division of Water Planning. http://water.nv.gov/Water%20planning/dict-1/ww-index.htm*

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