

# **GLOSSARY OF TERMS, ACRONYMS & INITIALISMS**





# Glossary of Terms, Acronyms & Initialisms

## TERMS

**§303(d) List** A list of water bodies that do not meet state water quality standards that each state is required to submit to the Environmental Protection Agency (EPA) every 2 years.

## A

**Abiotic** Something that is non-living.

**Acre-feet (sing. acre-foot)** The volume of water required to cover one acre of land to a depth of 1 foot (43,560 cubic feet or 325,851 gallons).

**Adequate drainage** Depends on the soil types, slopes and expected rainfall amount, but designing for water drainage is the most important factor in controlling soil erosion and keeping roads in a serviceable condition.

**Ammonia (NH<sub>3</sub>)** A common form of nitrogen that can be toxic and also contribute to the nutrient enrichment of waters.

**Annual** A plant that completes its life cycle within a single growing season.

**Aquifer** An underground geological formation, or group of formations, containing water; they are sources of groundwater for wells and springs.

**Atmospheric deposition** The process by which particles suspended in the atmosphere are deposited by precipitation or wind in a body of water or on a land surface.

## B

**Bacteria (sing. bacterium)** A single-cell organism. Some bacteria can cause disease.

**Benthic macroinvertebrate** A bottom-dwelling organism that is large enough to be seen with the naked eye and that lacks a backbone.

**Best management practice (BMP)** As defined by the EPA, methods that have been determined to be the most effective, practical means of preventing or reducing pollution from nonpoint sources.

**Bioaccumulate** The process by which a chemical builds up in the tissue of a living organism as a result of uptake from the surrounding environment.

**Bioaccumulation** The net accumulation of a chemical in the tissue of a living organism as a result of uptake from the surrounding environment.

**Biochemical oxygen demand (BOD)** A measure of the amount of oxygen consumed by microorganisms in the process of decomposing organic matter in a body of water.

**Biocriteria** The biological characteristics that quantitatively describe a waterbody with a healthy community of fish and associated aquatic organisms. Components of biocriteria include the presence and seasonality of key indicator species; the abundance, diversity, and structure of the aquatic community; and the habitat conditions required for these organisms.

**Biodiversity** The variety of life on our planet; refers to the types and kinds of plants, animals, and humans.

**Bioengineering** Also referred to as biological engineering. It is a broad-based engineering discipline that deals with the design, sustainability, and analysis of biological systems.

**Biofilter** The use of living organisms to filter out pollutants contained in water.

**Biogeochemical** Refers to the chemical, physical, and biological reactions and transformations that occur in soil, water, and air.

**Biotic** Living or of life.



**Capture** The process by which water is transferred from the atmosphere and stored in the soil.

**Chelate** A complex organic molecule that surrounds certain trace elements, such as iron, and keeps them dissolved in a solution.

**Clean Water Act (CWA)** A set of laws passed in 1972 to regulate water pollution in the United States. Today, it forms the basis of water quality protection in all surface water and groundwater sources.

**Clean Water Act §303(d)** The section of the federal Clean Water Act that requires states, territories, and authorized tribes to develop a list of water bodies that do not or are not expected to meet water quality standards. States are then required to prioritize listed water bodies for TMDL development.

**Clean Water Act §319(h)** The section of the federal Clean Water Act that provides grants to states, territories, and authorized tribes to implement projects under the Nonpoint Source Pollution Management Program. CWA 319(h) grants are available to projects that reduce, control, and prevent nonpoint source pollution with the ultimate goal of improving water quality.

**Climate** The average weather conditions (i.e., temperature, precipitation, wind, etc.) over a long period of time.

**Coliform bacteria** A group of bacteria predominantly inhabiting the intestines of humans or other warm-blooded animals, but also occasionally found elsewhere. Used as an indicator of human fecal contamination.

**Combustion** Burning, or rapid oxidation, accompanied by release of energy in the form of heat and light

**Comprehensive plan** A plan that determines community goals and aspirations for community development; a comprehensive or master plan usually covers a wide range of issues, including transportation, utilities, land use, recreation, and housing.

**Condensation** The process by which water vapor changes into liquid water.



**Consensus** A collective opinion or general agreement.

**Conservation tillage** A tillage practice that leaves the soil surface covered with plant residue for erosion control and moisture conservation. Often used as an agricultural BMP.

**Constructed wetland system** Constructed wetland systems include BMPs designed to mimic the natural functions of wetlands to aid in pollutant removal from urban stormwater. In a constructed wetland system, the water, plants, animals, microorganisms, and environment (sun, soil, and air) work together to improve water quality.

**Contour farming** Contour farming is the alignment and operation of all farm tillage, planting and harvesting practices as close as possible to the true contour of the land. The goal is to reduce erosion and surface runoff and, thus, the transport of sediments, nutrients, and pesticides from the field.

**Contour planting** Contour planting is the alignment and operation of all tree planting and harvesting practices as close as possible to the true contour of the land. The goal is to reduce erosion and surface runoff and, thus, the transport of sediments, nutrients, and pesticides from the field.

**Cover crop** A close-growing crop that is planted in the absence of the normal crop to provide erosion control, nutrient cycling, carbon addition, wildlife habitat, and moisture regulation.

**Cross drain** A pipe or culvert installed under roads to transmit water from the roadside ditch, storm runoff, seeps, and drains without eroding the drainage system or road surface.

**Crowned road** A crowned road surface is one which slopes gently away from the centerline of the road and drains to both sides of the crown. Crowning a road surface is one method of providing for surface drainage. The inside half of the road drains inward to the cutbank and ditch, while the outside half drains out across the fillslope.

**Crowning** The sloping of a road surface toward either side to allow for proper drainage.

**Culvert** A structure that conveys stormwater under a road, usually a metal or plastic pipe but can be a constructed wooden trough

## D

**Decomposition** The breakdown or decay of organic matter.

**Designated use** Simple narrative description of water quality expectations or water quality goals. A designated use is a legally recognized description of a desired use of a waterbody, such as (1) support of communities of aquatic life, (2) body contact recreation, (3) fish consumption, and (4) public drinking water supply. These are uses that the state or authorized tribe wants the waterbody to be healthy enough to fully support. The Clean Water Act requires that water bodies attain or maintain the water quality needed to support designated uses.

**Detention system** Detention systems include urban BMPs that are designed to intercept and temporarily store stormwater runoff for gradual release into a receiving waterbody or storm sewer system.

**Diffusing** When a substance, such as oxygen or water vapor, moves from an area of high concentration to an area of low concentration

**Diffusion** The movement of a substance, such as oxygen or water vapor, from an area of high concentration to an area of low concentration.

**Dilute** make a liquid or substance thinner or weaker by adding water or another solvent to it.

**Dioxins** Dioxins are formed as unintentional by-products of many industrial activities, forest fires, and human activity. Dioxins bioaccumulate in the food chain. Eating fish containing dioxins may cause chloracne, a severe skin disease, and can cause skin rashes, skin discoloration, excessive body hair, liver damage, weight loss, reproductive damage, and birth defects.

**Discharge** The volume of water that moves over a designated point during a fixed period of time. Used to describe stream flow and the release of wastewater.

**Dissolved oxygen (DO)** A measure of the amount of gaseous oxygen (O<sub>2</sub>) dissolved in water and other aqueous solutions.

**Divide** The boundary between two watersheds.

## E

**E. coli** *Escherichia coli* are a large and diverse group of bacteria found in the environment, foods, and intestines of people and animals; some strains of *E. coli* are pathogenic, causing diarrhea, UTIs, and other illnesses; as such, it is a key indicator of water quality.

**Effluent** Treated or partially treated wastewater that flows out of a treatment plant, septic system, pipe, etc.

**Electrical conductivity** The measurement of a solution's ability to conduct an electrical current which is used as an estimate for salinity.

**Environmental Protection Agency (EPA)** The federal agency responsible for enforcing and regulating environmental laws such as the National Environmental Policy Act, Clean Air Act, and Clean Water Act.

**Ephemeral** streams flow only in direct response to precipitation; they appear immediately or shortly after a rain event, but their channels are above the water table at all times.

**Erosion** The wearing away of the land surface by rain, running water, wind, ice, gravity, or other natural or man-made agents.

**Estuary** Region of interaction between rivers and near-shore ocean waters, where tidal action and river flow mix fresh and saltwater. Such areas include bays, mouths of rivers, salt marshes, and lagoons. These brackish water ecosystems shelter and feed marine life, birds, and wildlife.

**Eutrophication** Enrichment of an aquatic ecosystem with nutrients (nitrogen, phosphorus) that accelerates biological productivity (growth of algae and weeds) and the undesirable accumulation of algal biomass.

**Evaporation** The process by which liquid water changes into water vapor.

## F

**Fecal bacteria** Microscopic organisms that are found in the waste of humans and other warm-blooded animals. Detection of fecal coliform bacteria may indicate the presence of pathogenic bacteria, viruses, and parasites.

**Federal Safe Drinking Water Act (SDWA) of 1974** A federal law that established drinking water standards to protect surface and groundwater sources used for drinking water.

**Filter strip** A strip of grass or other vegetation placed along streams or drainage areas to trap sediment and to promote infiltration and filtering of nutrients and other pollutants. Also called a **vegetative buffer strip**.

**Filtration system** Filtration systems include a variety of urban BMPs that use sand, gravel, peat, compost, or other types of vegetative media to remove contaminants found in urban stormwater runoff.

**First order stream** A stream that flows year-round and has no tributaries.

**Floodplain** The flat or nearly flat land along a river or stream or in a tidal area that is covered by water during a flood.

**Ford** a shallow place in a river or stream that allows one to cross.

**Forming stage** The first stage in watershed group development; the group begins to form and realize its identity and starts laying the groundwork for its future goals and expectations.

**Fossil fuel** Oil, coal, and natural gas that originates from decayed plants and animals.

## G

**Goal** A general, broad statement of a desired outcome for an organization or entity. Goals differ from objectives in that goals are generally more long-term in nature, while objectives are much more specific and short-term.

**Grassed waterway** A grassed waterway is a natural drainage way that is planted to sod-forming grasses to help control runoff water from agricultural lands. Covering the drainage way with grass helps prevent gullies from forming in the fields, traps sediment, absorbs chemicals and nutrients in runoff water, and provides cover for small birds and mammals.

**Green infrastructure (GI)** an approach to water management that protects, restores, or mimics the natural water cycle by using vegetation to manage stormwater. While single-purpose gray stormwater infrastructure—conventional piped drainage and water treatment systems—is designed to move urban stormwater away from the built environment, green infrastructure reduces and treats stormwater at its source while delivering environmental, social, and economic benefits.

**Green manure crop** A crop (such as rye grass, vetch, clover) that is grown specifically to be plowed back into the soil to increase soil fertility and organic matter content.

**Gross per capita** The total water withdrawn divided by the total population.

**Groundwater** The fresh water found beneath the Earth's surface, usually in aquifers, which supplies wells and springs.

**Groundwater recharge** The downward replenishing flow of rainfall through the soil profile to an underground aquifer.

# H

**Habitat** The natural home of a plant or animal.

**Headwater stream** (Stream orders 1-3) usually a small, steep gradient stream with fast flows and cool temperatures.

**Herbicide** A substance that is toxic to plants, used to destroy unwanted vegetation.

**Hydrocarbon** A chemical compound consisting of carbon and hydrogen. They can be found in gaseous, liquid, or solid forms. Petroleum, natural gas, and other fossil fuels are examples of hydrocarbons.

**Hydrologic cycle** The movement or exchange of water between the atmosphere and earth; also known as the water cycle.

**Hydrology** The science dealing with the properties, distribution, and circulation of water.

**Hypoxia** A condition describing low levels of oxygen in the blood and tissue.

**Impairment** A detrimental effect on the biological integrity of a waterbody that prevents attainment of the designated use.

**Impermeable** See **Impervious**.

**Impervious** Not easily penetrated. The property of a material or soil that does not allow, or allows only with great difficulty, the movement or passage of water.

**Indicator** Direct or indirect measurements of some valued component or quality in a system. Can be used to measure the current health of the watershed and to provide a way to measure progress toward meeting the watershed goals.

**Infiltration** The movement of surface water into soil or rock through cracks and pores.

**Infiltration system** Types of urban BMPs designed to capture and store stormwater runoff so that it can infiltrate into the soil profile. Infiltration BMPs include infiltration basins, porous pavement systems, and infiltration trenches and wells.

**Inorganic** Substances such as sand, salt, iron, and other materials that have their origins from non-living minerals, not from living or once-living organisms. The opposite of organic.

**Insloped road** Road surface that is sloped in toward the cutbank. Insloped roads usually have an inboard ditch that collects runoff from the road surface and cutbank.

**Integrated pest management (IPM)** An ecologically based, integrated pest control strategy that uses a series of pest management evaluations, decisions, and controls aimed at reducing pesticide use and the movement of pesticides into the environment.

**Intermittent** streams that flow for at least 30 days during parts of the year, depending upon when the area receives water from springs, rainfall or snow melts.

**Invertebrate** animal without a backbone, such as arthropods, mollusks, annelids, etc.

**Irrigation water management** Practices that promote the efficient use of irrigation water to produce profitable yields, conserve water, and minimize the leaching of nutrients into groundwater.

**L** **Land cover** Refers to the observed biological or physical features on the surface of the Earth. Land cover types include forests, agriculture fields, lakes, rivers, buildings, streets, and even parking lots.

**Land use** Refers to the way in which land is used. Examples include agriculture, industry, recreation, residential, and urban.

**Leaching** The movement of pollutants through the soil by percolating rain, melting snow, or irrigation water.

**Lentic** Water bodies that are non-flowing systems, such as ponds and lakes.

**Littoral zone** The region of the shore that occurs between the high and low water marks.

**Log crossings** The placing of hollow or solid logs into shallow channels, designed to be a temporary crossing

**Log deck** A site where logs are sorted and loaded onto trucks for hauling to handling or processing facilities; a landing.

**Lotic** Water bodies that are flowing systems such as streams and rivers.

**Lower-reach stream** (Stream orders 7 and above) A stream that is further down the watershed than the headwater and middle-reach streams. Lower-reach streams are consequently wider, deeper, have slower flow than headwater and middle-reach streams. These large streams often split into **meanders**, creating marshes and wetlands.

**Low-impact development (LID)** Types of structural and non-structural BMPs that are designed to significantly reduce urban runoff volumes to minimize impacts from urban runoff and to remove pollutants from urban runoff. The overall goal of a low-impact development approach is to balance urban growth with environmental integrity. Abbreviated as LID.

**M** **Maximum contaminant level (MCL)** The maximum amount of primary contaminants (pathogens, radioactive elements, toxic chemicals) that can be present in drinking water supplied by a public water system.

**Meander** A turn or winding portion of a stream or river.

**Microorganism** a microscopic organism such as bacterium, viruses, or fungi.

**Middle-reach stream** (Stream orders 4–6) A stream that is further down the watershed than the headwater streams. Middle-reach streams are consequently wider, deeper, have slower flow and less oxygen than headwater streams. Pools and riffles are common in this type of stream.

**Millions of gallons of water used per day (MGD)** A unit of measurement commonly used to express water-use data.

**Minimum tillage** A tillage practice that leaves at least 30 percent of the soil surface covered with plant residue for erosion control and moisture conservation. Often used as an agricultural BMP.

**Mission** A concise statement that defines the core purpose of the organization or entity.



**Model** A representation of an environmental system obtained through the use of mathematical equations or relationships.

**Monitoring** With regard to water quality, it is the process of sampling and analyzing water quality parameters over a period of time.

## N

**Natural Resources Conservation Service** An agency of the United States Department of Agriculture that provides technical assistance to farmers and other private landowners and managers.

**Nitrate (NO<sub>3</sub>)** A common form of nitrogen that is produced from decomposing organic materials like manure, plants, and human waste.

**Nitrite (NO<sub>2</sub>)** An intermediate form of nitrogen produced during the conversion of ammonium to nitrate.

**Nitrogen** Chemical, gaseous element that makes up almost 80 percent of the Earth's atmosphere. It is found in the cells of all living things and is a major component of proteins.

**Nonpoint source (NPS)** Diffuse pollution source; a source without a single point of origin or not introduced into a receiving stream from a specific outlet. The pollutants are generally carried off the land by stormwater. Common nonpoint sources are agriculture, forestry, urban areas, mining, construction, dams, channels, land disposal, saltwater intrusion, and city streets.

**Norming stage** The third stage in group development at which group cohesion and action are prominent, helping to set the stage for the development of a solid group structure and a sense of community. The members of the group begin to form an identity and recognize each others' strengths and weakness.

**Nonstructural BMP** A practice that prevents or reduces runoff problems in receiving waters by reducing the generation of pollutants and managing runoff at the source; this type of practice may be included in a regulation or may involve voluntary pollution prevention practices.

**No-tillage** No-tillage is the practice of leaving the soil undisturbed from harvest to planting except for nutrient injection. During planting, crop seeds are placed into the soil by a device that opens a trench or slot through the sod or previous crop residue.

**Nutrient management** Practices that work on reducing the amount of fertilizer used by applying only the amount a crop needs.

## O

**Objective** An expected achievement or outcome that is well defined, specific and measurable. Objectives are derived from the written goals of the organization/entity.

**Organic** Substances that have their origins from living, or previously-living, organisms. The opposite of inorganic.

**Outsloping** The sloping of a roadbed on a hill so that water will flow across the road toward its downhill side.

**Overland flow** The flow of water above the ground surface; it occurs when precipitation exceeds the soil's infiltration rate and flows over the soil surface.

# P

**Particulate** Very fine solid particles that are not dissolved in water.

**Pathogen** An organism that is capable of causing a disease. Pathogenic organisms include certain bacteria, viruses, and parasites.

**Pathogenic** Referring to an organism that is capable of causing disease. Pathogenic organisms include certain bacteria, viruses, and parasites.

**Percolation** The downward movement of water through subsurface soil layers.

**Perennial** (1) A plant that completes its life cycle in three or more growing seasons. (2) streams typically flow continuously of the time during a normal year, have well-defined channels, little to no vegetation growing in the channel, and may pool or dry up during drought years.

**Performing stage** The fourth stage of group development; this is the optimal stage of group development during which members are more like a close-knit family and trust is at its highest.

**Permeable** Allowing water to easily pass through; **permeability** refers to the ease with which water is allowed to move through the soil profile.

**Pesticide** A substance used to eliminate or control pests, such as insects, fungi, weeds, and certain animals.

**pH** A measure of the concentration of hydrogen ions found in a solution that describes whether a solution is acidic or basic. pH is measured on a scale that ranges from 0 (very acidic) to 14 (very basic).

**Phosphate (PO<sub>4</sub>)** A chemical compound that contains **phosphorus**, an element that is necessary for plant and animal growth, and which, if too much is present in water, can lead to **eutrophication**.

**Phosphorus** A natural element found in rocks, soils and organic material; a nutrient required by all organisms for the basic processes of life.

**Photosynthesis** The process by which plants use sunlight to convert water and carbon dioxide into carbohydrates. All green plants rely on photosynthesis for their growth.

**Point source pollution** A stationary location or fixed facility from which pollutants are discharged; any single, identifiable source of pollution, such as a pipe, ditch, ship, ore pit, or factory smokestack.

**Pollutant** A contaminant in a concentration or amount that adversely alters the physical, chemical, or biological properties of the natural environment.

**Pollutant load** The amount of a specific pollutant in a waterbody.

**Pollution** Contamination of air, soil, or water with harmful substances.

**Polychlorinated biphenyl (PCB)** Synthetic (man-made) substances once used commercially in electrical transformers, carbonless copy papers, cutting oils, and hydraulic fluids; PCBs were banned in 1979 by the EPA because they bioaccumulate in the internal organs of fish and other animals.

**Pool** A deep, still body of water.

**Precipitation** Any or all forms of water particles that fall from the atmosphere, such as rain, snow, hail, and sleet.

**Pre-harvest planning** A process that identifies and summarizes pertinent information about a tract of land where timber will be harvested in order to best meet both the harvest objectives and address the environmental characteristics of the site.

**Primary standard** Refers to drinking water standards that protect against contaminants (pathogens, radioactive elements, toxic chemicals) that are harmful to human health. Maximum limits on these contaminants are established through Maximum Contaminant Levels (MCL).

## R

**Rangeland** Land on which the natural plant cover is made up primarily of native grasses, forbs, or shrubs valuable for forage.

**Respiration** The process by which living organisms use oxygen from the atmosphere to breathe.

**Retention system** Includes a number of BMPs such as retention ponds (also called wet ponds or stormwater ponds) and a variety of underground vaults, pipes, and tanks that are designed to intercept, store, and treat urban stormwater runoff. In retention systems, water is held for indefinite periods of time.

**Revegetating** Establishing grass and/or legume vegetation on disturbed soil that is not expected to naturally revegetate in time to prevent erosion.

**Revegetation** The establishment of grass and/or legume vegetation on disturbed soil that is not expected to naturally revegetate in time to prevent erosion.

**Ridges** The highest point of an area of land, such as the top of a hill or mountain.

**Riffle** A shallow, swift and turbulent water in rivers and streams.

**Riparian zone** Anything connected with or immediately adjacent to the banks of a stream or other body of water.

**River basin** A collection of watersheds that are drained by a river and its tributaries.

**Road system planning** Refers to the careful planning of forest roads, which can be one of the most significant sources of forestry-related pollutants.

**Runoff** That part of precipitation, snow melt, or irrigation water that runs off the land into streams or other surface water; typically occurs when the rate of precipitation exceeds the rate at which the water can be absorbed into the ground.

**Run** An intermediate stretch that is neither a pool nor a riffle of streams and rivers.

## S

**Saturated** A condition in which all easily drained voids (pores) between soil particles are temporarily or permanently filled with water.

**Saturation** The act of soaking thoroughly with a liquid.

**Secchi disk** A black and white patterned disk used for measuring the turbidity, or clarity, of water. Water clarity decreases as turbidity increases.

**Secondary maximum contaminant level (SMCL)** The maximum amount of secondary contaminants (contaminants not harmful to human health) that can be present in drinking water supplied by a public water system.

**Secondary standard** Refers to drinking water standards that protect against contaminants that are not harmful to human health, but pose a nuisance because they cause unacceptable odor, taste, color, corrosion, foaming, or staining. Maximum limits on these contaminants are established through Secondary Maximum Contaminant Levels (SMCL).

**Second order stream** A stream that is formed by the union of two **first order streams**.

**Sediment** Topsoil, sand, and minerals washed from the land into water, usually after rain or snow melt.

**Sediment control basin** An erosion control structure commonly installed across the bottom of a drainage way to prevent bank and gully erosion on farmland and to minimize sedimentation of nearby water bodies. Basins help improve downstream water quality by trapping sediment, controlling water flow within a drainage area, and by storing runoff water and allowing it to slowly infiltrate into the soil profile.

**Seeps** Wet areas, normally not flowing, arising from an underground water source.

**Sewage** Also known as wastewater.

**Silvicultural** Referring to the management of forests or woodlands for the production of timber and other wood products; growing trees as a crop.

**Site preparation** A general term for removing unwanted vegetation and other material if necessary and any soil preparation carried out before reforestation.

**Skid Trail** Paths where logs have been dragged.

**Sonde** A type of instrument that is ideal for profiling and monitoring water conditions in industrial and wastewater effluents, lakes, rivers, wetlands, estuaries, coastal waters, and the open ocean. Torpedo-shaped in appearance, sondes may have multiple sensors that record a range of water quality data including temperature, conductivity, salinity, dissolved oxygen, pH, turbidity, and depth.

**Soil and water conservation districts** A subdivision of state government established to provide leadership, technical assistance, information, and education to the counties on proper soil stewardship, agricultural conservation methods, water quality protection, nonpoint source pollution, streambank stabilization, stream health, conservation planning, and various other topics related to watershed planning.

**Soil profile** A vertical section of the soil through its horizontal layers.

**Solubility** A measure of the ability of a substance to dissolve in water and other liquid solutions.

**Sonar** A device that takes measurements and pictures of the subsurface by using sound waves.

**Stakeholder** Specific individuals or groups of people who have an interest, or stake, in the success of a project, activity, set of activities, or process.

**Stored** Refers to the tying up of water into solid form. Stored water includes the frozen water found in glaciers and icecaps.

**Stormwater control measure** Practices designed and implemented to eliminate, reduce contact, or remove stormwater pollutants.

**Stormwater management practice** A means of reducing or eliminating the negative impacts of stormwater runoff. Can include controlling flooding, reducing erosion and improving water quality.

**Storming stage** The second stage in group development; the group may experience many conflicts as group members feel the need to exert themselves more as the group dynamic continues to develop.

**Stream crossing** A culvert, bridge, or rock ford that enables equipment to cross streams, drains, and drainage ditches to reduce negative impacts to the stream from traffic.

**Stream flow** The volume of water that moves over a designated point during a fixed period of time. Also known as discharge.

**Streamflow hydrograph** A graph or chart that depicts changes in water quantity over time.

**Streamside management zone (SMZ)** Forested riparian buffers purposefully maintained along streams that receive special management attention because of their value in protecting water quality and other beneficial uses.

**Structural BMP** A practice, such as a stormwater basin or streambank fence, that requires construction, installation and maintenance.

**Sub-basin** A smaller scale basin.

**Submerged aquatic vegetation (SAV)** Refers to plants that float or grow below the surface of the water.

**Subsurface flow** The flow of water beneath the ground surface; it can eventually return to the surface (e.g., as a spring or by being pumped) or can seep into the oceans.

**Sub-watershed** A smaller area of land draining to a single tributary of a larger river.

**Sunlight availability** can determine the types of plants that grow naturally or can be planted, can also influence pathogen treatment.

**Surface water** Water on the surface of the ground, (lakes, river, ponds, floodwater, oceans, etc.); precipitation that does not soak into the ground or return to the atmosphere by evaporation or transpiration.

**Swale** A small dip in the ground that can become an effective BMP.



# T

**Terrace** Level soil embankments that are usually constructed on the contour of the land and designed to control runoff and soil erosion.

**Third order stream** A stream that is formed by the union of two **second order streams**. If a second order stream is joined by a **first order stream**, it remains a second order stream.

**Timber harvesting BMP** Ways of working to protect the forest and its soil and water resources while harvesting timber.

**Topography** The physical characteristics of land, including its elevation, slope, and orientation.

**Total dissolved solids (TDS)** A measure of the amount of dissolved materials contained in water.

**Total maximum daily load (TMDL)** Refers to the amount, or load, of a specific pollutant that a waterbody can assimilate on a daily basis and still meet water quality standards.

**Total suspended solids (TSS)** A physical water quality parameter that relates to the amount of solids found in water or wastewater.

**Toxic chemical** A substance that can be harmful to the environment or hazardous to human and animal health if inhaled, ingested, or absorbed through the skin. Toxic chemicals include, but are not limited to fossil fuels, household cleaners, battery acid, and pesticides.

**Toxicity** A measure of the degree to which a substance is toxic or poisonous.

**Transforming stage** The fifth stage of group development; this is when groups decide their future direction and work on renewing or redirecting their efforts.

**Transpiration** The process by which water vapor is lost to the atmosphere from living plants.

**Turbidity** A physical water quality parameter that is a measure of the relative clarity of water.

**Turnout ditch** A roadside ditch that angles away from the road base and into surrounding vegetation. Turnout ditches can help carry water away from the road, avoiding erosion.

# U

**Uncultivated** Land that is not prepared for growing crops.

**Upland** Land that is at a higher elevation than the floodplain.

**Urbanization** The changing of land from agricultural uses to suburban and urban uses; in terms of water quality, urbanization means an increase in impervious surfaces, which in turn increases runoff.

**U.S. Army Corps of Engineers** The federal agency responsible for implementing Section 404 of the Clean Water Act dealing with wetlands and assisting with engineering projects for the United States.



**Vegetated system** Vegetated systems, or biofilters, use natural vegetation to “filter” stormwater as it flows across the land surface. These types of BMPs transport and treat stormwater before it is discharged into a storm sewer system.

**Vegetative buffer strip** Strips of grasses or other vegetation placed along streams or drainage areas to trap sediment and to promote infiltration and filtering of nutrients and other pollutants. Also called a **filter strip**.

**Vision** The long-term desired future accomplishments of an organization or entity. Visions should inspire and motivate.

**Virus** A microorganism that can infect cells and cause disease. Viruses are not affected by antibiotics, the drugs used to kill bacteria.

**Volatile organic compound (VOC)** A carbon-based chemical compound that may easily evaporate under normal, room-temperature conditions. These compounds are used to make many products, especially plastics and solvents. Eating fish containing VOCs may cause cancer in animals and humans.

**Volatilization** The process of transfer of a chemical from the aqueous or liquid phase to the gas phase; solubility, molecular weight, and vapor pressure of the liquid and the nature of the gas-liquid interface affect the rate of volatilization.

**Volatile organic compounds (VOCs)-** Organic chemicals that have a high vapor pressure at ordinary room temperature. They include both human-made and naturally occurring chemical compounds.



**Wastewater** Also known as sewage. It is the water that has been used by homes, businesses, and industries that eventually makes its way to a wastewater treatment plant. Examples of wastewater include the water you flush down the toilet and the water that drains from your bathtub, sink, washing machine, and other sources.

**Water (drainage) basin** Any area of land where precipitation collects and drains off into a common outlet, such as into a **river**, bay, or other body of **water**.

**Waterbody** An accumulation of water. Water bodies can be used for purposes such as recreation (e.g., swimming and boating), scenic enjoyment, and fishing, and are the home to many aquatic organisms.

**Water control basin** See Sediment Control Basin

**Water cycle** See hydrologic cycle.

**Water of the state** (In Alabama) all waters of any river, stream, watercourse, pond, lake, coastal, ground or surface water, wholly or partially within the state, natural or artificial, not including waters which are entirely confined and retained completely upon the property of a single individual, partnership, or corporation unless such waters are used in interstate commerce.

**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 or designated use.

**Water quality parameters** The chemical, physical, and biological attributes of water that are used to indicate the health of a waterbody.

**Water quantity** Refers to the volume or amount of water that is available in the water supply.

**Water vapor** The invisible, gaseous state of water.

**Waterbar** A cross drainage diversion ditch and/or hump in a trail or road for the purpose of diverting surface water runoff into roadside vegetation, duff, ditch, or dispersion area to minimize the volume and velocity of runoff that can cause soil erosion.

**Watershed hydrology** The study of water as it interacts with various parts of the watershed, including the land, the sea, and the sky.

**Watershed** Land area that drains to a common waterway, such as a stream, lake, estuary, wetland, or ultimately the ocean.

**Watershed approach** A flexible framework for managing the quantity and quality of water resources found within specified watershed boundaries. There are four main features typical of a watershed management approach (1) Identify and prioritize water quality/quantity problems in the watershed; (2) Develop increased public awareness and involvement; (3) Coordinate efforts with other agencies/organizations in the watershed; and (4) Measure success through monitoring and other data collection.

**Watershed management plan (WMP)** A community-driven management framework that uses the watershed approach to address complex water quality problems and to provide solutions for improving and maintaining water quality within the watershed. Ultimately, WMPs aim to protect unimpaired water bodies and to restore impaired water bodies by taking a holistic look at the watershed to address all potential sources of impairments. WMPs are developed and integrated through diverse partnerships within the watershed and rely heavily on stakeholder involvement at the local level.

**Watershed partnership** A voluntary organization made up of different stakeholders who all share a common interest in protecting and helping their watershed. Watershed partnerships are also called watershed groups, action groups, coalitions, councils, and associations.

**Wetland** An area inundated by surface or groundwater at a frequency sufficient to support, and under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soils.

**Wing ditch** A water turnout or diversion ditch that moves water away from the road and/or side ditch.

## ACRONYMS AND INITIALISMS

**A&I** Agricultural and Industrial Water Supply

**ACES** Alabama Cooperative Extension System

**ADECA** Alabama Department of Economic and Community Affairs

**ADEM** Alabama Department of Environmental Management

**ADPH** Alabama Department of Public Health

**ASY** Alabama Smart Yards

**AWIC** Alabama Water Improvement Commission

**AWW** Alabama Water Watch

**BMP** Best Management Practice

**BOD** Biochemical Oxygen Demand

**CWA** Clean Water Act

**DO** Dissolved Oxygen

**EPA** Environmental Protection Agency

**F&W** Fish and Wildlife

**FFA** Future Farmers of America

**GI** Green Infrastructure

**GSA** Geological Survey of Alabama

**IBI** Index of Biotic Integrity

**IPM** Integrated Pest Management

**LID** Low-Impact development.

**LWF** Limited Warmwater Fishery

**MCL** Maximum Contaminant Level

**MGD** Million Gallons per Day

**NH<sub>3</sub>** Ammonia

**NO<sub>2</sub>** Nitrite

**NO<sub>3</sub>** Nitrate

**NPS** Nonpoint Source

**NRCS** National Resources Conservation Service

**OAW** Outstanding Alabama Water

**ONRW** Outstanding National Resource Water

**OWR** Office of Water Resources

**PCB** Polychlorinated Biphenyl

**PO<sub>4</sub>** Phosphate

**PPCPs** Pharmaceuticals and Personal Care Products

**PWS** Public Water Supply

**S** Swimming and Other Whole Body Water-Contact Sports

**SAV** Submerged Aquatic Vegetation

**SCM** Stormwater Control Measure

**SDWA** Safe Drinking Water Act

**SH** Shellfish Harvesting

**SMCL** Secondary Maximum Contaminant Level

**SMZ** Streamside Management Zone

**STORET** The storage and retrieval of water quality and biological data.

**TAL** Treasured Alabama Lake

**TDS** Total Dissolved Solids

**TMDL** Total Maximum Daily Load

**TSS** Total Suspended Solids

**US** United States

**USGS** United States Geological Survey

**VOC** Volatile Organic Compound

**WMP** Watershed Management Plan









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