

Glossary

This glossary includes terms pertinent to erosion and sediment control and stormwater management and most of the terms are used in this handbook.

AASHTO classification - The official classification of soil materials and soil aggregate mixtures for highway construction used by the American Association of State Highway and Transportation Officials (AASHTD).

Abutment - The sloping sides of a valley that support the ends of a dam.

Acid soil - A soil with a preponderance of hydrogen ions (and probably of aluminum) in proportion to hydroxyl ions. Specifically, soil with a pH value less than 7.0. For most practical purposes, a soil with a pH value less than 6.6.

Acre-foot - The volume of soil or water that will cover 1 acre to a depth of 1 foot.

Alkaline soil - A soil that has a pH greater than 7.0, particularly above 7.3, throughout most or all of the root zone. The term is commonly applied to only the surface layer or horizon of a soil.

Alluvial soils - Soils developed from transported and relatively recently deposited material (alluvium) characterized by a weak modification (or none) of the original material by soil-forming processes.

Alluvium - A general term for all detrital material deposited by water and includes gravel, sand, clay and mixtures of these. Unless otherwise noted, alluvium is unconsolidated.

Antecedent moisture conditions - The degree of wetness of a watershed at the beginning of a storm.

Anti-seep collar - A device constructed around a pipe or other conduit placed through a dam, levee, or dike for the purpose of preventing soil movement and piping failures.

Anti-vortex device - A facility placed at the entrance to a pipe conduit structure such as a drop inlet spillway or hood inlet spillway to prevent air from entering the structure when the pipe is flowing full.

Apron - A pad of non-erosive material designed to prevent scour holes developing at the outlet ends of culverts, outlet pipes, grade stabilization structures, and other water control devices.

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Balled and burlapped plant - A tree or shrub that has been dug up and the soil around the tree roots has been retained by enclosing it with burlap.

Bare-root - Trees or seedlings that have been removed from the soil and have exposed roots.

Barrel - A conduit placed through a dam, levee, or dike to control the release of water.

Base flow - Stream discharge derived from groundwater sources as differentiated from surface runoff. Sometimes considered to include flows from regulated lakes or reservoirs.

Bearing capacity - The maximum load that a material can support before failing.

Bedrock - The more or less solid rock in place either on or beneath the surface of the earth. It may be soft, medium or hard and have a smooth or irregular surface.

Berm - A narrow shelf or flat area that breaks the continuity of a slope.

Borrow area - A source of earth fill material used in the construction of embankments or other earth fill structures.

Brownfield - The State of Alabama defines a “brownfield” as any abandoned, idled, or underused industrial and commercial property where expansion or redevelopment can be complicated by real or perceived contamination. Federal law expands this definition to include any real property, the expansion, redevelopment, or reuse of which may be complicated by the presences of a hazardous substance, pollutant, or contaminant. The Alabama Department of Environmental Management Land Division provides oversight of assessment and remediation activities concerning these types of sites through its Brownfield Redevelopment and Voluntary Cleanup Program.

Bunchgrass - A grass plant (species) that forms a distinct clump and does not spread by long, horizontal stems.

Buoyant weight - The downward force exerted by an object with a specific gravity greater than 1, when it is submerged in water.

Butt joint – a technique in which two fiber rolls are firmly pressed together, end to end, during the field installation process ensuring that there are no gaps between the adjacent rolls to minimize potential for water flow and erosion between the rolls.

Catch basin - A chamber usually built at the curb line of a street, for the admission of surface water to a storm sewer or subdrain, having at its base a sediment sump designed to retain grit and detritus below the point of overflow.

Channel stabilization - Protecting the sides and bed of a channel from erosion by controlling flow velocities and flow directions using jetties, drops or other structures and/or by lining the channel with a suitable liner such as vegetation, riprap, concrete or other similar material.

Chute - A high-velocity, open channel for conveying water down a steep slope without erosion, usually paved.

Clay - (1) Soil fraction consisting of particles less than - 0.002 mm in diameter. (2) A soil texture class which is dominated by clay or at least has a larger proportion of clay than either silt or sand.

Coir - A term used to refer to products such as erosion control blankets and wattles manufactured from the fibers of coconuts.

Compaction - In soil engineering, the process by which the soil grains are rearranged to decrease void space and bring them into closer contact with one another, thereby increasing the weight of solid material per cubic foot. In soil quality, a dense layer of soil, created by traffic, that impedes root penetration and moisture movement through the soil.

Conservation district - A special-purpose entity created under state enabling law to develop and carry out a program of soil, water, and related resource conservation, use, and development within its boundaries, usually a subdivision of state government with a local governing body but with limited authorities. Other names include soil conservation district, soil and water conservation district and natural resources district.

Containerized plant - A plant that is grown in a container for the purpose of being transplanted.

Contour - An imaginary line on the surface of the earth connecting points of the same elevation.

Critical area - A severely eroded sediment producing area that requires special management to establish and maintain vegetation in order to stabilize soil conditions.

Cut - Portion of land surface or area from which earth has been removed or will be removed by excavating; the depth below the original ground surface to the excavated surface.

Cut-and-fill - Process of earth grading by excavating part of a higher area and using the excavated material for fill to raise the surface of an adjacent lower area.

Cutoff trench - A long, narrow excavation (keyway) constructed along the center line of a dam, dike, levee or embankment and filled with relatively impervious material intended to reduce seepage of water through porous strata.

Dam - A barrier to confine or impound water for storage or diversion, to prevent gully erosion, or for retention of soil, sediment, or other debris.

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Design highwater - The elevation of the water surface at peak flow conditions of the design flood.

Design life - The period of time for which a facility is expected to perform its intended function.

Design storm - A selected rainfall pattern of specified amount, intensity, duration, and frequency that is used as a basis for design.

Dewatering - The removal of water temporarily impounded in a holding basin.

Dibble bar - A tool used for planting trees consisting of either a flat or pointed blade and a bar with a handle for pushing the blade into the soil.

Dike - An embankment to confine or control water, often built along the banks of a river to prevent overflow of lowlands; a levee.

Discharge - Usually the rate, of water flow; a volume of a fluid passing a point per unit time commonly expressed as cubic feet per second, cubic meters per second, gallons per minute, or millions of gallons per day.

Diversion - A channel with a supporting ridge on the lower side constructed at the top, across, or at the bottom of a slope for the purpose of controlling surface runoff.

Diversion dike - A barrier built to divert surface runoff.

Divide, drainage - The boundary between watersheds.

Drainageway - A natural or artificial depression that carries surface water to a larger watercourse or outlet such as a river, lake, or bay.

Drawdown - Lowering of the water surface in an open channel or lake or groundwater.

Drop inlet - Overall structure in which the water drops through a vertical riser connected to a discharge conduit or storm sewer.

Drop spillway - Overall structure in which the water drops over a vertical wall onto an apron at a lower elevation.

Drop structure - A structure for dropping water to a lower level and dissipating its surplus energy without erosion.

Earth dam - A dam constructed of compacted suitable soil materials.

Embankment - A man-made deposit of soil, rock, or other material often used to form an impoundment.

Emergency Spillway - Usually a vegetated earth channel used to safely convey flood discharges around an impoundment structure.

Energy Dissipator - A device used to reduce the energy of flowing water to prevent erosion.

Environment - The sum total of all the external conditions that may act upon a living organism or community to influence its development or existence.

Erodibility - Susceptibility to erosion.

Erosion - The wearing away of the land surface by water, wind, ice, gravity, or other geological agents. The following terms are used to describe different types of water erosion:

Accelerated erosion - erosion as a result of the activities of man.

Channel erosion - the erosion process whereby the volume and velocity of flow wears away the bed and/or banks of a well-defined channel.

Geologic erosion - the normal or natural erosion caused by geological processes acting over long geologic periods and resulting in the wearing away of mountains, the building up of floodplains, coastal plains, etc.

Gully erosion - the erosion process whereby runoff water accumulates in narrow channels and, over relatively short periods, removes the soil to considerable depths.

Rill erosion - an erosion process in which numerous small channels only several inches deep are formed; occurs mainly on recently disturbed and exposed soils.

Splash erosion - the spattering of small soil particles caused by the impact of raindrops on bare soils.

Sheet erosion - the removal of a fairly uniform thin layer of soil from the l surface layer by runoff water.

Evapotranspiration - The combined loss of water from an area by evaporation from the soil surface and by transpiration of plants.

Excess rainfall - The amount of rainfall that runs directly off an area.

Fertilizer - Any organic or inorganic material of natural or synthetic origin that is added to a soil to supply elements essential to plant growth.

Fertilizer analysis - The percentage composition of fertilizer, expressed in terms of nitrogen, phosphoric acid, and potash. For example, a fertilizer with a 6-12-6 analysis contains 6 percent nitrogen (N), 12 percent available phosphoric acid (P_2O_5) and 6 percent water-soluble potash (K_2O).

Filter fabric - A woven or non-woven, water-permeable material generally made of synthetic products such as polypropylene and used in erosion and sediment control applications to trap sediment or prevent the movement of fine soil particles.

Flood Peak - The highest stage or greatest discharge attained by a flood event. Thus, peak stage or peak discharge.

Flood plain - The lowland that borders a stream and is subject to flooding when the stream overflows its banks.

Flood stage - The stage at which overflow of the natural banks of a stream begins.

Floodway - A channel, either natural, excavated, or bounded by dikes and levees, used to carry flood flows.

Flume - A constructed channel lined with erosion-resistant materials used to convey water on steep grades without erosion.

Freeboard - A vertical distance between the elevation of the design high-water and the top of a dam, diversion ridge, or other water control device.

Frequency of storm (design storm frequency) - The anticipated period in years that will elapse before another storm of equal intensity and/or total volume will recur: a 10-year storm can be expected to occur on the average once every 10 years.

Froude no. (F) - A calculated no. for classifying water flow as critical ($F=1$), supercritical ($F>1$) or subcritical ($F<1$).

Gabion - A wire mesh cage, usually rectangular, filled with rock and used to protect channel banks and other sloping areas from erosion.

Gauge - A device for measuring precipitation, water level, discharge, velocity, pressure, temperature, etc., e.g., a rain gauge. A measure of the thickness of metal, e.g., diameter of wire or wall thickness of steel pipe.

Geotextile - A permeable textile of synthetic fibers used in earth-related projects.

Gradation - The distribution of the various sized particles that constitute a sediment, soil, or other material such as riprap.

Grade - (1) The slope of a road, a channel, or natural ground. (2) The finished surface of a canal bed, roadbed, top of embankment, or bottom of excavation; any surface prepared to a design elevation for the support of construction such as paving or the laying a conduit. (3) To finish the surface of a canal bed, roadbed, top of embankment, or bottom of excavation, or other land area to a smooth, even condition.

Grade stabilization structure - A structure for the purpose of stabilizing the grade of a gully or other watercourse, thereby preventing further head-cutting or lowering of the channel bottom, commonly referred to as a Drop Structure.

Gradient - Change of elevation, velocity, pressure, or other characteristics per unit length; slope.

Grading - The cutting and/or filling of the land surface to a desired slope or elevation.

Grass - A member of the botanical family Gramineae, characterized by blade-like leaves that originate as a sheath wrapped around the stem.

Grass or legume, annual - A plant which germinates, grows, reproduces, and dies in one growing season or 1 year's time.

Grass or legume, cool-season - A grass or legume which is usually planted in the fall or occasionally late winter and it makes most of its growth during the cool season of the year, (fall, late winter and spring). Flowering and seed production occur in late spring. Cool-season species are usually dormant or make little growth during the hot summer months.

Grass or legume, perennial - A plant which under suitable conditions has the ability to live for more than 1 year. A perennial may become dormant at certain times of the year, but will resume growth at the end of its dormant period.

Grass or legume, warm-season - A grass or legume which is usually planted in the spring and makes its growth during the warm season (late spring and summer months). Flowering and seed production usually occur in late summer or early fall. Warm-season species are dormant in late fall and resume growth in the early spring.

Grassed waterway - A natural or constructed waterway, usually broad and shallow, covered with erosion-resistant, grasses and used to safely conduct surface water from an area. Usually referred to as a Grass Swale on construction sites.

Groundcover - Low-growing, herbaceous or woody plants that spread vegetatively to produce a dense, continuous cover.

Ground water - That water that moves through the plant root zone and under the influence of gravity continues moving downward until it enters the ground water reservoir.

Head - The height of water above any plain of reference. The energy, either kinetic or potential, possessed by each unit weight of a liquid, expressed as the vertical height through which a unit weight would have to fall to release the average energy possessed. Used in various compound terms such as pressure head or velocity head.

Head loss - Energy loss due to friction, eddies, changes in velocity, elevation or direction of flow.

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Headwater - The source of a stream. The water upstream from a structure or point on a stream.

Hydraulic erosion control product (HECP) – a manufactured, temporary degradable, pre-packaged fibrous material that is mixed with water and hydraulically applied as a slurry designed to reduce soil erosion and assist in the establishment and growth of vegetation.

Hydrograph - A graph showing for a given point on a stream - the discharge, stage (depth), velocity, or other property of water with respect to time.

Hydrologic cycle - The circuit of water movement from the atmosphere to the earth and back to the atmosphere through various stages or processes such as precipitation, interception, runoff, infiltration, percolation, storage, evaporation, and transpiration.

Hydrologic soil group - Categories that reflect runoff and are good indicators of infiltration and how rapidly water moves through the soil.

<u>Group</u>	<u>Soil Description</u>
A	Deep, well drained sands and gravels with low runoff potential and high infiltration rates.
B	Soils that are moderately deep to deep, moderately drained, moderately fine to moderately coarse texture. Moderate runoff potential and moderate infiltration rates.
C	Soils with an impeding layer, or moderately fine to fine texture. High runoff potential and low infiltration rates.
D	Clay, or soils with high water table, or shallow over an impervious layer such as stone. Very high runoff potential and very low infiltration rates.

Hydrology - The science of the behavior of water in the atmosphere, on the surface of the earth, and underground.

Impact basin - A device used to dissipate the energy of flowing water to reduce erosion. Generally constructed of concrete partially submerged with baffles to dissipate velocities.

Impervious - Not allowing infiltration.

Impoundment - Generally, an artificial water storage area, as a reservoir, pit, dugout, sump, etc.

Infiltration - The gradual downward flow of water from the surface through soil to ground water and water table reservoirs.

Invert - The inside bottom of a culvert or other conduit.

Keyway - A cutoff trench dug beneath the entire length of a dam to cut through soil layers that may cause seepage and possible dam failure.

Laminar flow - Flow at relatively slow velocity in which fluid particles slide smoothly along straight lines everywhere parallel to the axis of a channel or pipe.

Legume - Any member of the pea or pulse family which includes peas, beans, peanuts, clovers, alfalfas, sweet clovers, lespedezas, vetches, black locust, and kudzu. Practically all legumes are nitrogen-fixing plants.

Liquid limit - The moisture content at which the soil passes from a plastic to a liquid state.

Mean depth - Average depth; cross-sectional area of a stream or channel divided by its surface or top width.

Mean velocity - The average velocity of a stream flowing in a channel conduit at a given cross-section or in a given reach. It is equal to the discharge divided by the cross-sectional area of the reach.

Mulch - A natural or artificial layer of plant residue or other materials covering the land surface which conserves moisture, holds soil in place, aids in establishing plant cover, and minimizes temperature fluctuations.

Natural drainage - The flow patterns of stormwater runoff over the land in its pre-development state.

Nonpoint source pollution - Pollution that enters a water body from diffuse origins on the watershed and does not result from discernible, confined, or discrete conveyances.

Normal depth - The depth of flow in an open conduit during uniform flow for the given conditions.

Open drain - A natural watercourse or constructed open channel that conveys drainage water.

Outfall - The point, location, or structure where runoff discharges from a drainageway or conduit to a receiving stream or body of water.

Outlet - The point of water disposal from a stream, river, lake, tidewater, or artificial drain.

Outlet channel - A waterway constructed or altered primarily to carry water from man-made structures, such as smaller channels, tile lines, and diversions.

Peak discharge - The maximum instantaneous flow from a given storm condition at a specific location.

Percolation - The movement of water through soil.

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Percolation rate - The rate, usually expressed as inches/hour or inches/day, at which water moves through the soil profile.

Perennial stream - A stream that maintains water in its channel throughout the year.

Pervious - Allowing movement of water.

Pesticides - Chemical compounds used for the control of undesirable plants, animals, or insects. The term includes insecticides, herbicides, algacides, rodenticides, nematocides, fungicides, and growth regulators.

pH - A numerical measure of hydrogen ion activity. The neutral point is pH 7.0. All pH values below 7.0 are acid and all above 7.0 are alkaline.

Physiographic region (Province) - Large-scale unit of land defined by its climate, geology, and geomorphic history and, therefore, relatively uniform in physiographic features.

Plastic index - The numerical difference between the liquid limit and the plastic limit of soil; the range of moisture content within which the soil remains plastic.

Plastic limit - The moisture content at which a soil changes from a semi-solid to a plastic state.

Plunge pool - A basin used to dissipate the energy of flowing water usually constructed to a design depth and shape. The pool may be protected from erosion by various lining materials.

Point source - Any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, vessel or other floating craft, from which pollutants are or may be discharged. (Public Law 92-500, Section 5014).

Pollutant - Pollutant includes but is not limited to sediment, dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal and agricultural waste discharged into water.

Porosity - The volume of pore space in soil or rock.

Principal spillway - A dam spillway generally constructed of permanent material and designed to regulate the normal water level, provide flood protection and/or reduce the frequency of operation of the emergency spillway.

Qualified design professional - A person adequately trained, experienced and in some instances registered, to plan and/or design erosion and sediment control and stormwater measures applicable to site conditions where assistance is provided. Certified or registered professionals are bound by their ethics commitment to practice in only the areas that they have adequate expertise. Designing certain measures is restricted by state law to specific categories of

professionals, i.e. structural measures can only be designed in Alabama by professional engineers registered in Alabama.

Rainfall intensity - The rate at which rain is falling at any given instant, usually expressed in inches per hour.

Rational method - A means of computing storm drainage flow rates, Q , by use of the formula $Q = CIA$, where C is a coefficient describing the physical drainage area, I is the rainfall intensity and A is the area.

Reach - The smallest subdivision of the drainage system consisting of a uniform length of open channel. Also, a discrete portion of river, stream or creek.

Receiving stream - The body of water into which runoff or effluent is discharged.

Retention - The permanent storage of stormwater to prevent it from leaving the development site; Storage for temporary periods is referred to as detention.

Revetment - A constructed face or wall.

Revised Universal Soil Loss Equation 2 – An equation developed by the USDA Agricultural Research Service (USDA-ARS) and partners that predicts sheet and rill erosion rates on sloping landscapes. The equation may be applied to various land uses as a tool for planners to evaluate the effects of various vegetative, structural and management practices.

Rhizome - A modified plant stem that grows horizontally underground. A rhizomatous plant spreads (reproduces) vegetatively and can be transplanted with rhizome fragments.

Rill - A small intermittent watercourse with steep sides, only a few inches deep.

Riparian - Of, on, or pertaining to the banks of a stream, river, or pond.

Riparian rights - A principle of common law which requires that any user of waters adjoining or flowing through his lands must so use and protect them that he will enable his neighbor to utilize the same waters undiminished in quantity and undefiled in quality.

Riser - The inlet portions of a drop inlet spillway that extend vertically from the pipe conduit barrel to the water surface.

Rolled erosion control product (RECP) – a temporary degradable or long-term non-degradable material manufactured or fabricated into rolls designed to reduce soil erosion and assist in the growth, establishment, and protection of vegetation. Sometimes referred to as erosion control blanket or mat.

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Runoff - That portion of precipitation that flows from a drainage area on the land surface, in open channel or in stormwater conveyance systems.

Sand - (1) Soil particles between 0.05 and 2.0 mm in diameter. (2) A soil textural class inclusive of all soils which are at least 70% sand and 15% or less clay.

Saturation - In soils, the point at which a soil or an aquifer will no longer absorb any amount of water without losing an equal amount.

Scarified seed - Seed which has been subjected to abrasive treatment to encourage germination.

Scour - The clearing and digging action of flowing water, especially the downward erosion caused by stream water in sweeping away mud and silt from the stream bed and outside bank of a curved channel.

Sediment - Solid material, both mineral and organic, that is in suspension, is being transported, or has been moved from its site of origin by air, water, gravity, or ice and has come to rest on the earth's surface.

Sediment delivery ratio - The fraction of the soil eroded from upland sources that actually reaches a stream channel or storage reservoir.

Sediment retention barrier – A measure constructed onsite on the contour similarly to a conventional silt fence to protect water quality by reducing turbidity of stormwater. It consists of two high-flow silt fences installed about 18” apart with straw loosely placed between the fences and either straw or a fabric such as jute placed on the ground surface downslope of the fences. An approved flocculant powder is added to the straw and straw/fabric prior to runoff events to remove fines from the runoff. A Buffer Zone must be downstream of the practice.

Sediment retention fiber roll (SRFR) - A manufactured device of a filler material encapsulated within a flexible containment material utilized in sediment and flow control applications such as sediment barriers, inlet protection and small sediment traps. Also, referred to as a sediment log and as a wattle.

Sediment pool - The reservoir space allotted to the accumulation of sediment during the life of the structure.

Seedbed - The soil prepared by natural or artificial means to promote the germination of seed and the growth of seedlings.

Seedling - A young plant grown from seed, either planted or a volunteer.

Sensitive Waters - A non-regulatory term to describe waters of the state that have been classified, designated, or otherwise identified to have increased significance or recognized uses such as waters classified as suitable for swimming and other whole body water contact sports

(S), public water supply (PWS), etc., waters designated as outstanding national resource waters (ONRW) or outstanding Alabama water (OAW), and water designated as a Tier 1 (impacted water), CWA Section 303(d) listed water, etc. where specialized planning and an increased level of BMP implementation may be warranted.

Shear stress - The coplanar surface stress applied by concentrated flowing stormwater to a swale surface. Swale surfaces have a maximum shear strength that can be withstood without failure of the surface.

Silt - (1) Soil fraction consisting of particles between 0.0002 and 0.05 mm in diameter. (2) A soil textural class indicating more than 80% silt.

Slope - Degree of deviation of a surface from the horizontal; measured as a numerical ratio or percent. Expressed as a ration, the first no. is the horizontal distance (run) and the second is the vertical distance (rise), e.g., 2:1. Slope can also be expressed as the rise over the run. For instance, a 2:1 slope is a 50 percent slope.

Sod - A surface layer of turf grass (including roots and surface soil) harvested in blocks or rolls and transported for establishment at another site.

Soil - The unconsolidated mineral and organic material on the immediate surface of the earth that serves as a natural medium for the growth of land plants.

Soil horizon - A horizontal layer of soil that, through processes of soil formation, has developed characteristics distinct from the layers above and below.

Soil permeability - The attribute of a soil that enables water or air to move through it. Usually expressed in inches/hour or inches/day.

Soil profile - A vertical section of the soil from the surface through all horizons.

Soil structure - The relation of particles or groups of particles which impart to the whole soil a characteristic manner of breaking; some types are crumb structure, block structure, platy structure, and columnar structure.

Soil texture - The physical structure or character of soil determined by the relative proportions of the soil separates (sand, silt and clay) of which it is composed.

Soil type - the lowest unit in the natural system of soil classification; a subdivision of soil series and consisting of or describing soils that are alike in all characteristics including the texture of the A horizon, i.e. the Bama series in a specific county may have two soil types of the Bama series: Bama fine sandy loam, 0-2 % slopes and Bama fine sandy loam 2-6% slopes.

Spillway - A passage such as a paved apron or channel for surplus water over or around or through a dam or similar structure. An open or closed channel, or both, used to convey excess

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water from a reservoir. It may contain gates, either manually or automatically controlled, to regulate the discharge of excess water.

Sprig - The section of plant stem material (rhizome, shoot, or stolon) used in vegetative planting referred to as sprigging.

Stolon - Plant stem that grows horizontally on the soil surface.

Storm frequency - The time interval between major storms of predetermined intensity and volumes of runoff, e.g., a 5-year, 10-year or 20-year storm.

Storm sewer - A sewer that carries stormwater, surface drainage, street wash and other wash waters, but excludes sewage and industrial wastes, preferably called a storm drain.

Stormwater pollution prevention plan (SWPPP) – EPA description of a comprehensive site-specific plan of measures committed to address all water (pollutant) discharges and receiving waterbody quality related challenges and issues that are expected to be created by construction on a specific site. The ADEM Construction Best Management Practices Plan (CBMPP) is equivalent to SWPPP.

Streambanks - The usual boundaries, not the flood boundaries, of a stream channel. Right and left banks are named facing downstream.

Subcritical flow - Flow at relatively high velocity where the wave from a disturbance can move upstream. Froude No. less than 1.

Subsoil - The B horizons of soils with distinct profiles. In soils with weak profile development the subsoil can be defined as the soil below which roots do not normally grow.

Subsurface drain - A pervious backfilled trench usually containing stone and perforated pipe for intercepting groundwater or seepage.

Subwatershed - A watershed subdivision of unspecified size that forms a convenient natural unit.

Supercritical flow - Flow at relatively high velocity where - the wave from a disturbance will always be swept downstream. Froude no. is greater than 1.

Surface runoff - Precipitation that falls onto the surfaces of roofs, streets, the ground, etc., and is not absorbed or retained by that surface, but collects and runs off.

Swale - An elongated depression on the land surface that is occasionally wet and is heavily vegetated. Swales conduct stormwater into primary drainage channels and may provide some groundwater recharge.

Tailwater depth - The depth of flow immediately downstream from a discharge structure.

Temporary cover - Temporary vegetative cover of rapid growing annual grasses, small grains, or legumes to provide initial, temporary cover for erosion control on disturbed sites.

Toe of dam - The base or bottom of the sloping faces of a constructed dam at the point of intersection with the natural ground surface. A dam has an inside toe (the impoundment or upstream side) and an outside toe (the downgradient side).

Toe of slope - The base or bottom of a slope at the point where the ground surface abruptly changes to a significantly flatter grade.

Topography - General term to include characteristics of the ground surface such as plains, hills, mountains, degree of relief, steepness of slopes, and other physiographic features.

Topsoil - The dark-colored surface layer or A horizon of a soil. When present it ranges in depth from a fraction of an inch to 2 or 3 ft.; equivalent to the plow layer of cultivated soils. Commonly used to refer to the surface soil layer(s), enriched in organic matter and having textural and structural characteristics favorable for plant growth.

Trash rack - A structural device used to prevent debris from entering a pipe spillway or other hydraulic structure.

Turbidity - Cloudiness of a liquid, caused by suspended particles (silt, clay, organic material, plankton etc.) that cause light rays to be scattered and absorbed rather than transmitted in straight lines through a sample. Small clay particles known as colloids remain in suspension for long periods of time and are a major contributor to turbidity where they exist.

Turf - Surface soil supporting a dense growth of grass and associated root mat.

Turf reinforcement mat (TRM) – a rolled erosion control product composed of non-degradable synthetic fibers, filaments, nets, wire mesh and/or other elements, including degradable components, designed to impart immediate erosion protection, enhance vegetation establishment and provide long-term erosion control by permanently reinforcing vegetation during and after establishment.

Unified soil classification system - A classification system based on the identification of soils according to their particle size, gradation, plasticity index, and liquid limit.

Uniform flow - A state of steady flow when the mean velocity and cross-sectional area remain constant in all sections of a reach.

Vegetative stabilization - Protection of erodible or sediment-producing areas with: permanent seeding, producing long-term vegetative cover, short-term seeding, producing temporary vegetative cover, or sodding, producing areas covered with a turf of a perennial sod-forming grass.

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Watercourse - A definite channel with bed and banks within which concentrated water flows, either continuously or intermittently.

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.

Waters of the State - [of Alabama] means waters of any river, stream, watercourse, pond, lake, coastal, groundwater or surface water, wholly or partially within the State, natural or artificial. This does not include 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", Code of Alabama 1975, § 22-22-1(b)(2), as amended. Waters "include all navigable waters" as defined in 33 U.S.C. § 1362(7), as amended, which are within the State of Alabama.

Watershed - The region drained by or contributing water to a stream, lake, or other body of water.

Watershed area - The area of all land and water within the confines of a drainage divide.

Wattle (also referred to as a sediment retention fiber roll) – a manufactured device of a filler material encapsulated within a flexible containment material such as natural fiber, straw, or recycled products. Wattles are utilized in sediment and flow control applications such as sediment barriers, inlet protection and small sediment traps.

Weir - A device for measuring or regulating the flow of water.

Wetland - Areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions (from Army Corps of Engineers 1987 Wetlands Delineation Manual).