

Glossary

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G.1 Glossary

Portions of this glossary were adapted from the “*1994 Maryland Standards and Specifications for Soil Erosion and Sediment Control*” produced by the Maryland Department of the Environment, Water Management Administration.

ANTI-SEEP COLLAR - An impermeable diaphragm usually of sheet metal or concrete constructed at intervals within the zone of saturation along the conduit of a principal spillway to increase the seepage length along the conduit and thereby prevent piping or seepage.

ANTI-VORTEX DEVICE - A device designed and placed on the top of a riser or the entrance of a pipe to prevent the formation of a vortex in the water at the entrance.

AQUATIC BENCH - A bench which is located around the inside perimeter of a permanent pool and is normally vegetated with aquatic plants; the goal is to provide pollutant removal and enhance safety in areas using stormwater pond BMP's.

AQUIFER – A porous water bearing geologic formation generally restricted to materials capable of yielding an appreciable supply of water

“AS-BUILT” - Drawing or certification of conditions as they were actually constructed.

BAFFLES - Guides, grids, grating or similar devices placed in a pond to deflect or regulate flow and create a longer flow path.

BANKFULL FLOW - The condition where streamflow fills a stream channel to the top of the bank and at a point where the water begins to overflow onto a floodplain.

BARREL - The closed conduit used to convey water under or through an embankment; part of the principal spillway.

BASE FLOW - The stream discharge from groundwater.

BERM - A shelf that breaks the continuity of a slope; a linear embankment or dike.

BEST MANAGEMENT PRACTICE (BMP) - A structural or non-structural device designed to temporarily store or treat stormwater runoff in order to mitigate flooding, reduce pollution and provide other amenities.

BIORETENTION - A water quality practice that utilizes landscaping and soils to treat urban stormwater runoff by collecting it in shallow depressions before filtering through a fabricated planting soil media.

BUFFER – Zone of variable width located along both sides of a natural feature (e.g., stream or forested area) and designed to provide a protective area along a corridor.

CHANNEL - A natural stream that conveys water; a ditch or channel excavated for the flow of water.

CHANNEL PROTECTION VOLUME (Cpv) - A design criteria which requires 24 hour detention of the one year post-developed, 24 hour storm event for the control of stream channel erosion and is calculated according to Appendix D.11.

CHANNEL STABILIZATION - Erosion prevention and stabilization of velocity distribution in a channel using jetties, drops, revetments, structural linings, vegetation and other measures.

CHECK DAM - A small dam constructed in a gully or other small watercourse to decrease flow velocity (by reducing the channel gradient), minimize scour, and promote deposition of sediment.

CHUTE - A high velocity, open channel for conveying water to a lower level without erosion.

CLAY (SOILS) - 1. A mineral soil separate consisting of particles less than 0.002 millimeter in equivalent diameter. 2. A soil texture class. 3. (Engineering) A fine grained soil (more than 50 percent passing the No. 200 sieve) that has a high plasticity index in relation to the liquid limit. (Unified Soil Classification System)

COCONUT ROLLS - Also known as coir rolls, these are rolls of natural coconut fiber designed to be used for streambank stabilization.

COMPACTION (SOILS) - Any process by which the soil grains are rearranged to decrease void space and bring them in closer contact with one another, thereby increasing the weight of solid material per unit of volume, increasing the shear and bearing strength and reducing permeability.

CONDUIT - Any channel intended for the conveyance of water, whether open or closed.

CONTOUR - 1. An imaginary line on the surface of the earth connecting points of the same elevation. 2. A line drawn on a map connecting points of the same elevation.

CORE TRENCH - A trench, filled with relatively impervious material intended to reduce seepage of water through porous strata.

CRADLE - A structure usually of concrete shaped to fit around the bottom and sides of a conduit to support the conduit, increase its strength and, in dams, to fill all voids between the underside of the conduit and the soil.

CREST - 1. The top of a dam, dike, spillway or weir, frequently restricted to the overflow portion. 2. The summit of a wave or peak of a flood.

CRUSHED STONE - Aggregate consisting of angular particles produced by mechanically crushing rock.

CURVE NUMBER (CN) - A numerical representation of a given area's hydrologic soil group, plant cover, impervious cover, interception and surface storage derived in accordance with Natural Resources Conservation Service methods. This number is used to convert rainfall depth into runoff volume.

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

CUT-AND-FILL - Process of earth moving by excavating part of an area and using the excavated material for adjacent embankments or fill areas.

CUTOFF - A wall or other structure, such as a trench, filled with relatively impervious material intended to reduce seepage of water through porous strata.

CZARA - Acronym used for the Coastal Zone Act Reauthorization Amendments of 1990. These amendments sought to address the nonpoint source pollution issue by requiring states to develop coastal nonpoint pollution control programs in order to receive federal funds.

DAM - A barrier to confine or raise water for storage or diversion, to create a hydraulic head, to prevent gully erosion, or for retention of soil, sediment or other debris.

DETENTION - The temporary storage of stormwater runoff in a BMP with the goals of controlling peak discharge rates and providing gravity settling of pollutants.

DETENTION STRUCTURE - A permanent structure for the temporary storage of runoff that is designed to not create a permanent pool of water.

DIKE - An embankment to confine or control water, for example, one built along the banks of a river to prevent overflow to lowlands; a levee.

DISTRIBUTED RUNOFF CONTROL (DRC) - A stream channel protection criteria which utilizes a non-uniform distribution of the storage-stage-discharge relationship within a BMP to minimize the change in channel erosion potential from pre-developed to developed conditions.

DISTURBED AREA - An area in which the natural vegetative soil cover has been removed or altered and, therefore, is susceptible to erosion.

DIVERSION - A channel with a supporting ridge on the lower side constructed across the slope to divert water to areas where it can be used or disposed of safely. Diversions differ from terraces in that they are individually designed.

DRAINAGE - 1. The removal of excess surface water or ground water from land by means of surface or subsurface drains. 2. Soil characteristics that affect natural drainage.

DRAINAGE AREA (WATERSHED) - That area contributing runoff to a single point measured in a horizontal plane, which is enclosed by a ridge line.

DROP STRUCTURE - A structure for dropping water to a lower level and dissipating surplus energy; a fall.

DRY SWALE - An open drainage channel explicitly designed to detain and promote the filtration of stormwater runoff through an underlying fabricated soil media.

EMERGENCY SPILLWAY - A dam spillway, constructed in natural ground, that is to discharge flow in excess of the principal spillway design discharge.

ENERGY DISSIPATOR - A designed device such as an apron of rip-rap or a concrete structure placed at the end of a conduit for the purpose of reducing the velocity, energy and turbulence of the discharged water.

EROSION - 1. The process by which the land surface is worn away by the action of water, wind, ice, or gravity. 2. Detachment and movement of soil or rock fragments by water, wind, ice or gravity. The following terms are used to describe different types of water erosion:

Accelerated erosion - Erosion much more rapid than normal, natural or geologic erosion, primarily as a result of the influence of the activities of man or, in some cases, of other animals or natural catastrophes that expose base surfaces.

Gully erosion - The erosion process whereby water accumulates in narrow channels and removes the soil from this narrow area to considerable depths ranging from 1 or 2 feet to as much as 75 to 100 feet.

Rill erosion - An erosion process in which numerous small channels only several inches deep are formed. See rill.

Sheet erosion - The spattering of small soil particles caused by the impact of raindrops on wet soils. The loosened and spattered particles may or may not subsequently be removed by surface runoff.

EROSIVE VELOCITIES - Velocities of water that are high enough to wear away the land surface. Exposed soil will generally erode faster than stabilized soils. Erosive velocities will vary according to the soil type, slope, structural, or vegetative stabilization used to protect the soil.

EXFILTRATION - The downward movement of water through the soil; the downward flow of runoff from the bottom of an infiltration BMP into the soil.

EXTENDED DETENTION - A stormwater design feature that provides for the gradual release of a volume of water in order to increase settling of pollutants and protect downstream channels from frequent storm events.

EXTREME FLOOD VOLUME (Q_f) - The storage volume required to control those infrequent but large storm events in which overbank flows reach or exceed the boundaries of the 100-year floodplain.

FILTER BED - The section of a constructed filtration device that houses the filter media and the outflow pipe.

FILTER FENCE - A geotextile fabric designed to trap sediment and filter runoff.

FILTER MEDIA - The sand, soil, or other organic material in a filtration device used to provide a permeable surface for pollutant and sediment removal.

FILTER STRIP - A strip of permanent vegetation above ponds, diversions and other structures to retard the flow of runoff, causing deposition of transported material, thereby reducing sedimentation.

FINES (SOIL) - Generally refers to the silt and clay size particles in soil.

FLOODPLAIN - Areas adjacent to a stream or river that are subject to flooding or inundation during a storm event that occurs, on average, once every 100 years (or has a likelihood of occurrence of 1/100 in any given year).

FLOW SPLITTER - An engineered, hydraulic structure designed to divert a percentage of storm flow to a BMP located out of the primary channel, or to direct stormwater to a parallel pipe system or to bypass a portion of baseflow around a BMP.

FOREBAY - Storage space located near a stormwater BMP inlet that serves to trap incoming coarse sediments before they accumulate in the main treatment area.

FREEBOARD (HYDRAULICS) - The distance between the maximum water surface elevation anticipated in design and the top of retaining banks or structures. Freeboard is provided to prevent overtopping due to unforeseen conditions.

FRENCH DRAIN - A type of drain consisting of an excavated trench filled with pervious material, such as coarse sand, gravel or crushed stone; water percolates through the voids in this material and flows to an outlet.

GABION - A flexible woven wire basket composed of rectangular cells filled with small stones. Gabions may be assembled into many types of structures such as revetments, retaining walls, channel liners, drop structures and groins.

GABION MATTRESS - A thin gabion, usually six or nine inches thick, used to line channels for erosion control.

GRADE - 1. The slope or finished surface of a road, channel, canal bed, roadbed, top of embankment, bottom of excavation, or natural ground; any surface prepared for the support of construction, like paving or laying a conduit. 2. To finish the surface of a canal bed, roadbed, top of embankment or bottom of excavation.

GRASS CHANNEL - An open vegetated channel used to convey runoff and to provide treatment by filtering pollutants and sediments.

GRAVEL - 1. Aggregate consisting of mixed sizes of 1/4 inch to 3 inches which normally occur in or near old streambeds and have been worn smooth by the action of water. 2. A soil having particle sizes, according to the Unified Soil Classification System, ranging from the No. 4 sieve size, angular in shape, as produced by mechanical crushing.

GRAVEL DIAPHRAGM - A stone trench filled with small, river-run gravel used as pretreatment and inflow regulation in stormwater filtering systems.

GRAVEL FILTER - Washed and graded sand and gravel aggregate placed around a drain or well screen to prevent the movement of fine materials from the aquifer into the drain or well.

GRAVEL TRENCH - A shallow excavated channel backfilled with gravel and designed to provide temporary storage and permit percolation of runoff into the soil substrate.

GROUND COVER - Plants which are low-growing and provide a thick growth which protects the soil as well as providing some beautification of the area occupied.

GULLY - A channel or miniature valley cut by concentrated runoff through which water commonly flows during and immediately after heavy rains or snow melt. The distinction between gully and rill is one of depth. A gully is sufficiently deep such that it would not be obliterated by normal tillage operations, whereas a rill is of lesser depth and would be smoothed by ordinary farm tillage or grading activities.

HEAD (HYDRAULICS) - 1. The height of water above any plane of reference. 2. 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 terms such as pressure head, velocity head, and head loss.

HERBACEOUS PERENNIAL (PLANTS) - A plant whose stems die back to the ground each year.

HIGH MARSH - A pondscaping zone within a stormwater wetland that exists from the surface of the normal pool to a six inch depth and typically contains the greatest density and diversity of emergent wetland plants.

HIGH MARSH WEDGES - Slices of shallow wetland (less than or equal to 6 inches) dividing a stormwater wetland.

HOTSPOT - Area where land use or activities generate highly contaminated runoff, with concentrations of pollutants in excess of those typically found in stormwater.

HYDRAULIC GRADIENT - The slope of the hydraulic grade line. That includes static and potential head.

HYDRODYNAMIC STRUCTURE - An engineered structure to separate sediments and oils from stormwater runoff using gravitational separation and/or hydraulic flow.

HYDROGRAPH - A graph showing variation in stage (depth) or discharge of a stream of water over a period of time.

HYDROLOGIC SOIL GROUP (HSG) - A Natural Resource Conservation Service classification system in which soils are categorized into four runoff potential groups. The groups range from A soils, with high permeability and little runoff production, to D soils, which have low permeability rates and produce much more runoff.

HYDROSEED - An application of seed or other material applied with forced water in order to revegetate.

IMPERVIOUS COVER (I) - Those surfaces in the landscape that cannot infiltrate rainfall consisting of building rooftops, pavement, sidewalks, driveways, etc..

INDUSTRIAL STORMWATER PERMIT - An NPDES permit issued to an identified land use that regulates the pollutant levels associated with industrial stormwater discharges or specifies on-site pollution control strategies.

INFILTRATION RATE (f) - The rate at which stormwater percolates into the subsoil measured in inches per hour.

INFLOW PROTECTION - A water handling device used to protect the transition area between any water conveyance (dike, swale, or swale dike) and a sediment trapping device.

KARST GEOLOGY - Regions that are characterized by formations underlain by carbonate rock and typified by the presence of limestone caverns and sinkholes.

LEVEL SPREADER - A device for distributing stormwater uniformly over the ground surface as sheet flow to prevent concentrated, erosive flows and promote infiltration.

MANNING'S FORMULA (HYDRAULICS) - A formula used to predict the velocity of water flow in an open channel or pipeline:

$$V = \frac{1.486}{n} r^{2/3} s^{1/2}$$

Where V is the mean velocity of flow in feet per second; r is the hydraulic radius; s is the slope of the energy gradient or for assumed uniform flow the slope of the channel, in feet per foot; and n is the roughness coefficient or retardance factor of the channel lining.

MICROPOOL - A smaller permanent pool which is incorporated into the design of larger stormwater ponds to avoid resuspension of particles and minimize impacts to adjacent natural features.

MICROTOPOGRAPHY - The complex contours along the bottom of a shallow wetland system, providing greater depth variation that increases the wetland plant diversity and increases the surface area to volume ratio.

MULCH - Covering on the soil surface to protect and enhance certain characteristics, such as water retention qualities.

MUNICIPAL STORMWATER PERMIT - An NPDES permit issued to municipalities to regulate discharges from municipal separate storm sewers for compliance with EPA regulations.

NPDES - Acronym for the National Pollutant Discharge Elimination System, which regulates point source discharges.

NON-STRUCTURAL BMPs - Stormwater runoff treatment techniques which use natural measures to reduce pollution levels, do not require extensive construction efforts and/or promote pollutant reduction by eliminating the pollutant source.

NITROGEN-FIXING (BACTERIA) - Bacteria having the ability to fix atmospheric nitrogen, making it available for use by plants.

NORMAL DEPTH - Depth of flow in an open conduit during uniform flow for any given conditions.

OUTFALL - The point where water discharges from a conduit, stream, or drain.

OFF-LINE - A management system designed to control a storm event by diverting a percentage of stormwater events from a stream or storm drainage system.

ON-LINE - A management system designed to control stormwater in its original stream or drainage channel.

ONE YEAR STORM - A stormwater event which occurs on average once every year or statistically has a 100% chance on average of occurring in a given year.

ONE HUNDRED YEAR STORM - An extreme flood event which occurs on average once every 100 years or statistically has a 1% chance on average of occurring in a given year.

OPEN CHANNEL - Also known as swale, grass channel, and biofilter. This system is used for the conveyance, retention, infiltration and filtration of stormwater runoff.

OUTLET - The point at which water discharges from such things as a stream, river, lake, tidal basin, pipe, channel or drainage area.

OUTLET CHANNEL - A waterway constructed or altered primarily to carry water from man-made structures such as terraces, subsurface drains, diversions and impoundments.

OVERBANK FLOOD PROTECTION VOLUME (Q_p) - The volume controlled by structural practices to prevent an increase in the frequency of out of bank flooding generated by development.

PEAK DISCHARGE RATE - The maximum instantaneous rate of flow during a storm, usually in reference to a specific design storm event.

PERCENT AREA METHOD - Technique used to evaluate the compliance of a non-structural BMP for meeting recharge requirements by calculating the percent of impervious area effectively treated and comparing to a minimum recharge target percentage for the various soil groups.

PERCENT VOLUME METHOD - Procedure used with structural BMPs to evaluate compliance with recharge requirements by assuring that the volume of runoff treated by the practice exceeds the computed recharge volume.

PERMANENT SEEDING - The establishment of perennial vegetation which may remain for many years.

PERMEABILITY - The rate of water movement through a soil column under saturated conditions.

PERMEABLE COVER - Those surfaces in the landscape consisting of open space, forested areas, meadows, etc. that infiltrate rainfall.

PERMISSIBLE VELOCITY (HYDRAULICS) - The highest average velocity at which water may be carried safely in a channel or other conduit. The highest velocity that can exist through a substantial length of a conduit and not cause scour of the channel. A safe, non-eroding or allowable velocity

pH - A number denoting the common logarithm of the reciprocal of the hydrogen ion concentration. A pH of 7.0 denotes neutrality, higher values indicate alkalinity, and lower values indicate acidity.

PIPING - Removal of soil material through subsurface flow channels.

PLUGS - Pieces of turf or sod, usually cut with a round tube, which can be used to propagate the turf or sod by vegetative means.

POCKET POND - A stormwater pond designed for treatment of small drainage area (< 5 acres) runoff and which has little or no baseflow available to maintain water elevations and relies on groundwater to maintain a permanent pool.

POCKET WETLAND - A stormwater wetland design adapted for the treatment of runoff from small drainage areas (< 5 acres) and which has little or no baseflow available to maintain water elevations and relies on groundwater to maintain a permanent pool.

POND BUFFER - The area immediately surrounding a pond which acts as a filter to remove pollutants and provide infiltration of stormwater prior to reaching the pond. Provides a separation barrier to adjacent development.

POND DRAIN - A pipe or other structure used to drain a permanent pool within a specified time period.

PONDSCAPING - Landscaping around stormwater ponds which emphasizes using native vegetative species to meet specific design intentions. Species are selected for up to six zones in the pond and its surrounding buffer based on their ability to tolerate inundation and/ or soil saturation.

POROSITY (*n*) - Ratio of pore volume to total volume.

PRETREATMENT - Techniques employed in stormwater BMPs to provide storage or filtering to help trap coarse materials and other pollutants before they enter the system.

PRINCIPAL SPILLWAY - The primary pipe or weir which carries baseflow and storm flow through a dam embankment.

RECHARGE RATE - Annual amount of rainfall which contributes to groundwater as a function of hydrologic soil group.

RECHARGE VOLUME (Re_v) - The portion of the water quality volume (WQ_v) used to maintain groundwater recharge rates at development sites.

REDEVELOPMENT - Any construction, alteration, or improvement exceeding five thousand square feet of land disturbance performed on sites where existing land use is commercial, industrial, institutional, or multifamily residential.

RETENTION - The amount of precipitation on a drainage area that does not escape as runoff. It is the difference between total precipitation and total runoff.

REVERSE-SLOPE PIPE - A pipe which draws from below a permanent pool extending in a reverse angle up to the riser and determines the water elevation of the permanent pool.

RIGHT-OF-WAY - Right of passage, as over another's property. A route that is lawful to use. A strip of land acquired for transport, conveyance or utility construction.

RIP-RAP - Broken rock, cobbles, or boulders placed on earth surfaces, such as the face of a dam or the bank of a stream, for protection against the action of water (waves); also applies to brush or pole mattresses or brush and stone, or similar materials used for soil erosion control.

RISER - A vertical pipe or structure which extends from the bottom of a pond and houses the control devices (weirs/orifices) to achieve the discharge rates for specified designs.

ROUGHNESS COEFFICIENT (HYDRAULICS) - A factor in velocity and discharge formulas representing the effect of channel roughness on energy losses in flowing water. Manning's "n" is a commonly used roughness coefficient.

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RUNOFF (HYDRAULICS) - That portion of the precipitation on a drainage area that is discharged from the area in the stream channels. Types include surface runoff, groundwater runoff or seepage.

SAFETY BENCH - A relatively flat area above the permanent pool and surrounding a stormwater pond designed to provide a separation to adjacent slopes.

SAND - 1. (Agronomy) A soil particle between 0.05 and 2.0 millimeters in diameter. 2. A soil textural class. 3. (Engineering) According to the Unified Soil Classification System, a soil particle larger than the No. 200 sieve (0.074mm) and passing the No. 4 sieve (approximately 1/4 inch).

SEDIMENT – Soils or other surficial materials transported or deposited by the action of wind, water, ice, or gravity as a product of erosion.

SEEPAGE - 1. Water escaping through or emerging from the ground. 2. The process by which water percolates through soil.

SEEPAGE LENGTH - In sediment basins or ponds, the length along the pipe and around the anti-seep collars that is within the zone of saturation through an embankment.

SETBACKS - The minimum distance requirements for locating certain structures in relation to roads, wells, septic fields, or other structures.

SHEET FLOW - Water, usually storm runoff, flowing in a thin layer over the ground surface.

SIDE SLOPES (ENGINEERING) - The slope of the sides of a channel, dam or embankment. It is customary to name the horizontal distance first, as 1.5 to 1, or frequently, 1 ½: 1, meaning a horizontal distance of 1.5 feet to 1 foot vertical.

SILT - 1. (Agronomy) A soil separate consisting of particles between 0.05 and 0.002 millimeter in equivalent diameter. 2. A soil textural class. 3. (Engineering) According to the Unified Soil Classification System a fine grained soil (more than 50 percent passing the No. 200 sieve) that has a low plasticity index in relation to the liquid limit.

SOIL TEST – 1. Physical analysis of soil properties such as grain size, plasticity, or texture. 2. Chemical analysis of soil to determine the need for fertilizers or amendments for species of plant being grown.

SPILLWAY - An open or closed channel, or both, used to convey excess water from a reservoir. It may contain gates, either manually or automatically controlled to regulate the discharge of excess water.

STABILIZATION - Providing vegetative and/or structural measures that will reduce or prevent erosion.

STAGE (HYDRAULICS) - The variable water surface or the water surface elevation above any chosen datum.

STILLING BASIN - An open structure or excavation at the foot of an outfall, conduit, chute, drop, or spillway to reduce the energy of the descending stream of water.

STORMWATER FILTERING - Stormwater treatment methods which utilize an artificial media to filter out pollutants entrained in urban runoff.

STORMWATER PONDS - A land depression or impoundment created for the detention or retention of stormwater runoff.

STORMWATER WETLANDS - Shallow, constructed pools that capture stormwater and allow for the growth of characteristic wetland vegetation.

STREAM BUFFERS - Zones of variable width which are located along both sides of a stream and are designed to provide a protective natural area along a stream corridor.

STRUCTURAL BMPs - Devices which are constructed to provide temporary storage and treatment of stormwater runoff.

SUBGRADE - The soil prepared and compacted to support a structure or a pavement system.

TAILWATER - Water, in a river or channel, immediately downstream from a structure.

TECHNICAL RELEASE No. 20 (TR-20) - A Soil Conservation Service (now NRCS) watershed hydrology computer model that is used to compute runoff volumes and provide routing of storm events through stream valleys and/or ponds.

TECHNICAL RELEASE No. 55 (TR-55) - A watershed hydrology model developed by the Soil Conservation Service (now NRCS) used to calculate runoff volumes and provide a simplified routing for storm events through stream valleys and/or ponds.

TEMPORARY SEEDING - A seeding which is made to provide temporary cover for the soil while waiting for further construction or other activity to take place.

TEN-YEAR STORM - The 24 hour storm event which exceeds bankfull capacity and occurs on average once every ten years (or has a likelihood of occurrence of 1/10 in a given year).

TIME OF CONCENTRATION (t_c) - Time required for water to flow from the most remote point of a watershed, in a hydraulic sense, to the outlet.

TOE (OF SLOPE) - Where the slope stops or levels out. Bottom of the slope.

TOE WALL - Downstream wall of a structure, usually to prevent flowing water from eroding under the structure.

TOPSOIL - Fertile or desirable soil material used for the preparation of a seedbed.

TOTAL PHOSPHORUS (TP) - The total amount of phosphorus that is contained within the water column.

TOTAL SUSPENDED SOLIDS (TSS) - The total amount of particulate matter that is suspended in the water column.

TRASH RACK - Grill, grate or other device installed at the intake of a channel, pipe, drain or spillway for the purpose of preventing oversized debris from entering the structure.

TRUNCATED HYDROGRAPH - A method of computing the required design infiltration storage volume utilizing the differences from post-developed and pre-developed hydrograph volumes over a specific time frame.

TWO-YEAR STORM - The 24 hour storm event which exceeds bankfull capacity and occurs on average once every two years (or has a likelihood of occurrence of 1/2 in a given year).

ULTIMATE CONDITION - Full watershed build-out based on existing zoning.

ULTRA-URBAN - Densely developed urban areas in which little pervious surface exists.

VELOCITY HEAD - Head due to the velocity of a moving fluid, equal to the square of the mean velocity divided by twice the acceleration due to gravity (32.16 feet per second per second) $[v^2/2g]$.

VOLUMETRIC RUNOFF COEFFICIENT (R_v) - The value that is applied to a given rainfall volume to yield a corresponding runoff volume based on the percent impervious cover in a drainage basin.

WATER QUALITY VOLUME (WQ_v) - The volume needed to capture and treat 90% of the average annual stormwater runoff volume equal to 1" (or 0.9" in Western Rainfall Zone) times the volumetric runoff coefficient (R_v) times the site area.

WATER SURFACE PROFILE - The longitudinal profile assumed by the surface of a stream flowing in an open channel; the hydraulic grade line.

WATER USE DESIGNATION - State of Maryland water use classification for the protection of resources (i.e., Use I-contact recreational use, Use II-shellfish harvest waters, Use III-natural trout waters, Use IV-recreational trout waters).

WEDGES - Design feature in stormwater wetlands that increases flow path length to provide for extended detention and treatment of runoff.

WET SWALE - An open drainage channel or depression, explicitly designed to retain water or intercept groundwater for water quality treatment.

WETTED PERIMETER - The length of the wetted surface of the channel.

WING WALL - Side wall extensions of a structure used to prevent sloughing of banks or channels.