

# Glossary of Terms

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**AASHTO**—American Association of State Highway and Transportation Officials

**Aquifer**—A porous water bearing geologic formation that yields water for consumption.

**ASTM**—American Society for Testing and Materials

**Best Management Practice (BMP)**—A structural or non-structural device designed to infiltrate, temporarily store, or treat stormwater runoff in order to reduce pollution and flooding.

**Choke course**—A layer of aggregate placed or compacted into the surface of another layer to provide stability and a smoother surface. The particle sizes of the choke course are generally smaller than those of the surface into which it is being pressed.

**Clay soils**—1. (Agronomy) Soils with particles less than 0.002 mm in size.

2. A soil textural class.

3. (Engineering) A fine-grained soil with more than 50% pass the No. 200 sieve with a high plasticity index in relation to its liquid limit, according the Unified Soil Classification System.

**Crushed stone**—Mechanically crushed rock that produces angular particles.

**CSA**—Canadian Standards Association

**Curve Number (CN)**—A numerical representation of a given area's hydrological soil group, plant cover, impervious cover, interception and surface storage. The U.S. Soil Conservation Service (SCS) originally developed the concept. A curve number is used to convert rainfall depth into runoff volume.

**Dense-graded base**—Generally a crushed aggregate base with fines that, when compacted, creates a foundation for pavements and does not allow significant amounts of water into it. Particle sizes can range from 1.5 in. (40 mm) to smaller than the No. 200 (0.075 mm) sieve.

**Detention pond or structure**—The temporary storage of stormwater runoff in an area with objective of decreasing peak discharge rates and providing a settling basin for pollutants.

**Erosion**—1. The process of wearing away of soil by water, wind, ice, and gravity.

2. Detachment and movement of soil particles by same.

**Exfiltration**—The downward movement of water through an open-graded, crushed stone base into the soil beneath.

**Fines**—Silt and clay particles in a soil, generally those smaller than the No. 200 or 0.075 mm sieve.

**Grade**—1. (Noun) The slope or finished surface of an excavated area, base, or pavement usually expressed in percent.

2. (Verb) To finish the surface of same by hand or with mechanized equipment.

**Gravel**—1. Aggregate ranging in size from  $\frac{1}{8}$  in. (6 mm) to 3 in. (75 mm) which naturally occurs in stream-beds or riverbanks that has been smoothed by the action of water.

2. A type of soil as defined by the Unified Soil Classification System having particle sizes ranging from the No. 4 sieve (4.75 mm) and larger.

**Hotspot**—A land use that generates highly contaminated runoff with concentrations higher than those typical to stormwater.

**Hydrological Soil Group**—The soils classification system developed by the U.S. Soil Conservation Service (now the Natural Resource Conservation Service) that categorizes soils into four groups,

A through D, based on runoff potential. A soils have high permeability and low runoff whereas D soils have low permeability and high runoff.

**Impervious cover**—Surfaces that do not allow rainfall to infiltrate into the soil. Examples include pavements, roofs, sidewalks, driveways, etc.

**Infiltration rate**—The rate at which stormwater moves through soil measured in inches per hour or meters per second.

**Observation well**—A perforated pipe inserted vertically into an open-graded base used to monitor its infiltration rate.

**One year storm**—A rainfall event that occurs once a year or has a 100% chance of occurring in a given year.

**One hundred year storm**—A very unusual rainfall event that occurs once every 100 years or has a 1% chance of occurring in a given year.

**Open-graded base**—Generally a crushed stone aggregate material used as a pavement base that has no fine particles in it. The void spaces between aggregate can store water and allow it to freely drain from the base.

**Outlet**—The point at which water is discharged from an open-graded base through pipes into a stream, lake, river, or storm sewer.

**Peak discharge rate**—The maximum instantaneous flow from a detention or retention pond, open-graded base, pavement surface, storm sewer, stream or river usually related to a specific storm event.

**Permeability**—The rate of water movement through a soil column under saturated conditions, usually expressed as  $k$  in calculations per specific ASTM or AASHTO tests, and typically expressed in inches per hour or meters per second.

**Permeable pavement**—A surface with penetrations capable of passing and spreading water capable of supporting pedestrians and vehicles, e.g. permeable interlocking concrete pavement.

**Pervious or permeable surfaces/cover**—Surfaces that allow the infiltration of rainfall such as vegetated areas.

**Porosity**—Volume of voids in a base divided by the total volume of a base.

**Porous pavement**—A surface full of pores capable of supporting pedestrians and vehicles, e.g. porous asphalt, porous concrete (cast-in-place or precast units).

**Pretreatment**—BMPs that provide storage and filtering pollutants before they enter another BMP for additional filtering, settling, and/or processing of storm water pollutants.

**Retention pond**—A body of water that collects runoff and stays full permanently. Runoff

flowing into the pond that exceeds its capacity is released into a storm sewer, stream, lake, or river.

**Sand**—1. (Agronomy) A soil particle between 0.05 and 2.0 mm in size.

2. A soil textural class.

3. (Engineering) A soil larger than the No. 200 (0.075 mm) sieve and passing the No. 4 (4.75 mm) sieve, according to the Unified Soil Classification System (USCS).

**Sediment**—Soils transported and deposited by water, wind, ice, or gravity.

**Silt**—1. (Agronomy) A soil consisting of particles sizes between 0.05 and 0.002 mm.

2. A soil textural class.

3. (Engineering) A soil with no more than 50% passing the No. 200 (0.075 sieve) that has a low plasticity index in relation to the liquid limit, according to the Unified Soil Classification System.

**Time of concentration**—The time required for water to flow from the most remote point of a watershed or catchment to an outlet.

**Void Ratio**—Volume of voids around the aggregate divided by the volume of solids.



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