

## Glossary of Terms used in the Stormwater Industry

Term	Code	Definition
Palaeochannel	Wwy	A channel formed a long time ago and now not usually part of an active river system.
Paleofloods	Hyd	Major floods that have occurred outside the historical record for which geological, geomorphological or botanical evidence exists.
Paleohydrology	Hyd	The study of the hydrological characteristics of paleofloods.
Parameter	Gen	A measurable or quantifiable characteristic or feature.
Parshall flume	Hyd	A specific design of a straight-edged, horizontal, open channel flume developed by Dr. Ralph Parshall. The flume has a straight-edged vertical constriction (weir) on the bed, which hydraulically functions as a broad-crested weir allowing critical depth to occur at the choke.
Partial area effects	Hyd	A hydrologic catchment condition where a greater peak discharge is achieved within the Rational Method when a storm is assumed to be applied to only part of the catchment, as compared to a longer duration storm being applied to the whole catchment.
Partial series	Hyd	A data set consisting of the events greater than an arbitrary base value, but including only the greatest event from any group of dependent events.  Statistical analysis of a partial series of historical rainfall data produces an assessment of the ARI.
Particle size analysis	Sol	The quantifiable separation of a soil sample into predetermined particle size groups such as clay, silt, fine sand, coarse sand and gravel. The amounts are normally expressed as percentages by weight of dry soil and are determined by dispersion, sedimentation, sieving, micrometry or combinations of these techniques.
Particulate	Gen	Existing as, composed of, or pertaining to particles.
Passive recreation	Gen	A non-motorised activity that requires minimal visitor facilities and services and that does not impact natural values.
	Wwy	A type of recreation that does not involve primary or secondary contact with the water body, e.g. bird watching, walking, etc.
Pathogen	Sto	An organism capable of causing disease symptoms in another organism, e.g. faecal coliform bacteria, enterococcus bacteria, protozoa and viruses.
Pea gravel	Wwy	Granular material between 2 and 10mm equivalent diameter.
Peak discharge	Hyd	The peak flow rate for a given flood event at a given location.
Peak flow	—	See PEAK DISCHARGE.
Pediment	Lfm	A gently inclined to level landform with rapidly migrating and very shallow incipient stream channels. A pediment lies down-slope from adjacent hills with markedly steeper slopes. Typically underlain by bedrock in the upper parts, and formed by a combination of alluvial and gravitational (colluvial) processes.

Pedology	Gen	The study of soils, particularly their formation, morphology, distribution and classification.
Pelagic	Eco	1. Relating to living at or near the surface of an ocean or sea, far from land.
	Eco	2. Relating to organisms living in the upper part of the water column.
Percentile	Gen	A way of describing sets of data by ranking the data set and establishing the value for each percentage of the total number of data records, i.e. the 90th percentile of the distribution is the value such that 90% of the observations fall at or below it.
Percolation	Sol	The downward movement of water through soil, contributing to internal drainage.
Percolation rate	Sol	The rate, usually expressed as mm/hr or mm/day, at which water moves through the soil profile.
Perennial	Gen	Relating to lasting for an indefinitely long time.
Perennial plant	Bot	A plant whose lifecycle extends for more than two years and continues to live from year to year.
Perennial stream	Wwy	A watercourse with a continuous flow regime.
Perimeter bank	Esc	A small flow diversion bank constructed adjacent a property boundary or the outer perimeter of a soil disturbance.  Perimeter banks are usually constructed of earth, but may be formed from composted material, or a tightly placed row of straw bales.
Periphyton	Eco	Organisms (plants and animals) attached to submerged objects such as rocks, logs or other plants; usually microscopic.
Permeability	Gen	Relating to being permeable and having the capacity for water to pass through it.
Permeability (soil)	Soil	The characteristic of a soil, soil horizon or soil material that governs the rate at which water moves through it. It is a composite expression of soil properties and depends largely on soil texture, soil structure, the presence of compacted or dense soil horizons, and the size and distribution of pores in the soil.
Permeability rate	Sol	The rate at which water will move through a saturated soil.  The qualitative categories of permeability for general use are: (i) Slowly permeable – less than 10 mm per day (ii) Moderately permeable – 10 to 1000 mm per day (iii) Highly permeable – more than 1000 mm per day.
Permeable (porous) pavement	Sto	A pavement made of materials that allow rainwater to infiltrate and transfer to the underlying sub-soil.  Also known as a POROUS PAVEMENT and PERVIOUS PAVEMENT.
Permissible site discharge (PSD)	Sto	A specified discharge from a stormwater detention device for the specified design storm frequency.

Pervious	Gen	Relating to allowing the passage or entrance of water.
Pervious pavement	Sto	A pavement with traditional strength characteristics but which allows rainfall and runoff to percolate through it.
Pervious surface (pervious area)	Hyd	A surface or area within a drainage catchment where some of the rainfall will infiltrate.
Pesticide	Sto	A chemical agent designed to control pest organisms. The most common forms of pesticides are organic chemicals designed to target insects (insecticides) and vascular plants (herbicides).
pH (soil)	Sol	A measure of the acidity or alkalinity of a soil. A pH of 7.0 denotes neutrality, higher values indicated alkalinity, and lower values indicate acidity. Strictly it represents the negative logarithm of the hydrogen ion concentration in a specified soil/water suspension on a scale of 0-14.
pH (water)	Sto	A measure of the acidity or alkalinity of a water. A pH of 7.0 denotes neutrally, higher values indicated alkalinity, and lower values indicate acidity. Strictly it represents the negative logarithm of the hydrogen ion concentration on a scale of 0-14.
Photodegradation	Sci	The process whereby ultraviolet radiation in sunlight attacks a chemical bond or link in a chemical structure.
Photolysis	Sci	The process of decomposition of a compound into simpler units as a result of absorbing one or more quanta of radiation.
Photo-oxidation	Sci	The process of oxidation induced by radiant energy.
Photosynthesis	Bot	The process of conversion of carbon dioxide to carbohydrates in the presence of chlorophyll using light energy, undertaken by most plants.
Phreatic surface	Gel	The free surface of groundwater where pressures are equal to atmospheric pressure along this surface.
Phreatophytes	Bot	A plant that depends on underground water.
Physical trapping	Sto	The trapping of stormwater pollutants by a screen or barrier, e.g. floating litter trapped by a trash rack, or litter boom.
Physiology	Gen	The study of the functioning of organisms and their parts.
Phytophthora	Bot	A root parasite.
Phytoplankton	Eco	Planktonic (floating) algae.
Phytoremediation	Sto	The process of treating runoff in channels by phreatic vegetation.
Piezometer	Hyd	An instrument used to measure the static pressure of a flowing fluid within a section of straight pipe. Usually attached to a pressure gauge or U-tube manometer.
	Gel	A non-pumping well, generally of small diameter, that is used to measure the elevation of the water table or potentiometric surface. A piezometer generally has a short well screen through which water can enter.
Piezometric head	Gel	The pressure head experienced by a given body of water, comprising both static levels and inertial forces.

Piezometric surface	Hyd	Surface or elevation of the hydraulic grade line.
Pipe	Sto	A hollow cylinder or tube, solid or flexible, used to convey liquids.
Pipe drain	Sto	A drain constructed using pipes or in the form of a pipe.
Pipe flow	Hyd	A condition of flow in which pressurised water occurs within an enclosed chamber and there is no free surface except at the ends of the chamber.
Pipe spillway	Hyd	A spillway with a pipe for its control section.  An inclined pipe spillway consists of a pipe passing through an embankment with a fall throughout its length.  A drop Inlet pipe spillway consists of a pipe passing through the embankment horizontally, or near horizontally, where flows enter the pipe through a drop inlet.
Piping	Sol	The process of losing sub-surface soil due to water-induced erosion (tunnel erosion) while the surface soil remains relatively intact.  The tunnel may eventually collapse to form a gully.
Piping failure	Sol	The failure of an earthwork due to tunnel erosion (piping).
Pitching	Eng	Large stones laid by hand to a regular slope or surface shape on a road, cutting, embankment or on the bed and slopes of a channel.
Plan form	Eng	A bird's-eye view of a structure or land surface.
Plankton	Eco	Plants (phytoplankton) and animals (zooplankton), usually microscopic, suspended, floating or a drift in aquatic systems.
Planktonic algae	Eco	Algae suspended in water.
Plant	Bot	Any member of the vegetable, herb, shrub or tree group of living organisms.
	Eng	Equipment, including fixtures, machinery, tools, etc. and often the buildings, necessary for any individual business.
Plant succession	Bot	A gradual change in the number of individuals of each plant species of a community and the establishment of new species populations over time.
Plug flow	Hyd	A flow condition in which a fluid passes sequentially through a structure such that the retention time for an individual element of the fluid is similar to the average retention time of the fluid.
Plug flow reactor	Sto	An ideal reactor in which an element of material moves sequentially through the reactor.
Plunging jet	Hyd	A liquid jet impacting (or impinging) on a receiving pool of liquid.
Pluviometer	Hyd	An instrument for measuring rainfall in a continuous manner that allows for the determination of rainfall intensity.
Pluviograph	Hyd	Numerical or graphical data output from a pluviometer rainfall gauge.

PMF	Hyd	<p>The abbreviation for Probably Maximum Flood, meaning the largest flood that could conceivably occur at a particular location, resulting from the probable maximum precipitation (PMP) and, where applicable, snowmelt, coupled with the worst flood-producing catchment conditions that can be realistically expected in the prevailing meteorological conditions.</p> <p>The PMF defines the extent of flood-prone land.</p>
PMP	Hyd	<p>The abbreviation for probable maximum precipitation, meaning the greatest depth of precipitation for a given duration meteorologically possible for a given size storm area at a particular location at a particular time of year.</p>
Podzolic soils	Sol	<p>Soils with distinct layers (horizons) down the profile.</p>
Point source	Sol	<p>A discernible, confined and discrete source of a given substance, e.g. the release of given pollutant from a known property or process.</p>
Pollutant	Gen	<p>Anything that pollutes.</p>
	Sto	<p>Any constituent present in sufficient quantity to impair the beneficial uses of a receiving water body.</p>
Pollutant retention	Sto	<p>The proportion of pollutant load intercepted and retained by a device, either on an event or annual basis.</p>
Pollution containment system	Sto	<p>Typically a non-free-draining pond designed to capture and hold pollution spills, such as that resulting from traffic accidents. The trapped pollution usually being collected and treated and/or disposed of off-site.</p>
Pollution control ponds	Sto	<p>A shallow pool of water, characterised by areas of emergent aquatic plants and open water, designed to intercept event discharges and enable adsorption and sedimentation of pollutants, and to support a diverse range of microorganisms and plants associated with the breakdown of organic material and uptake of nutrients.</p>
Pond	Sto	<p>1. Small to medium, open body of water where the pond volume is less than the typical volume of stormwater runoff from a regular, but not an irregular or extreme, storm or flood event.</p>
	Sto	<p>2. The open water region of a wetland usually surrounded by emergent macrophytes.</p>
Pool	Wwy	<p>A section of a channel bed where the normal water depth is deeper than in the adjoining channel regions and where water can pond during periods of zero flow.</p>
Porosity (soil)	Sol	<p>The degree to which the soil mass is permeated with pores or cavities, usually expressed as a percentage of the whole volume of a soil horizon that is unoccupied by solid particles.</p>
Porous pavement	Sto	<p>A pavement made of materials that allow rainwater to infiltrate and transfer to the underlying sub-soil.</p> <p>Also known as a PERMEABLE PAVEMENT.</p>

Potable water	Gen	Water suitable, on the basis of both health and aesthetic considerations, for drinking or culinary purposes.
Potential infiltration rate	Sol	The infiltration rate of a given soil at the point when water begins to pond on the soil surface.
Precipitation	Hyd	Particles of liquid or solid water formed within a cloud and falling to the ground.
	Sci	The process of separation by gravity of chemical substances from solution in which they combine to form insoluble compounds.
Pre-entrance treatments	Sto	Stormwater treatment measures that either use infiltration techniques to separate out entrained sediments from stormwater before it enters the drainage network, or use enhanced sedimentation to contain contaminants.
Pressure	Hyd	The force exerted per unit area by a fluid upon a body or the internal surface of a conduit. The SI unit of pressure is the pascal.
Pressure change	Hyd	The change in average fluid pressure between two specified locations, such as the inlet and outlet of a component of a hydraulic conduit.
Pressure change coefficient	Hyd	A dimensionless coefficient that, when multiplied by the velocity head at a specified location (e.g. the outlet of a pit), gives the reduction in static water pressure across a structure or component of a structure.  Also known as HEAD LOSS COEFFICIENT and PRESSURE LOSS COEFFICIENT.
Pressure gradient	Hyd	The slope of the line representing the pressure head, or piezometric head in a pipeline.  Also known as the FRICTION SLOPE and HYDRAULIC GRADIENT.
Pressure head	Hyd	The pressure of a fluid at a given point in a system divided by the unit weight of the fluid.  The pressure head represents the height of the column of water that can be supported above a given point in a fluid by the static water pressure at that point.  The pressure head is representative of the potential energy of the water column.
Pressure loss coefficient	Hyd	A dimensionless coefficient that, when multiplied by the velocity head at a specified location (e.g. the outlet of a pit), gives the reduction in static water pressure across a structure or component of a structure.  Also known as HEAD LOSS COEFFICIENT and PRESSURE CHANGE COEFFICIENT.
Primary contact	Wwy	Frequent direct contact with water by humans either as part of an activity or accidentally, e.g. swimming, surfing, windsurfing, diving and water skiing.
Primary producers	Eco	Organisms that can produce their own food, such as green plants.
Primary production	Eco	The production of organic matter from inorganic materials.

Primary treatment	Sto	The treatment of water by physical screening, separation or settling (rapid sedimentation). Typical retained contaminants include sediment, solids, litter, hydrocarbons (oil separation) and organic matter.
Principal outlet	Sto	The hydraulic structure, or component of a hydraulic structure, through which discharge occurs to a receiving environment during normal operating conditions, but not necessarily during extreme discharge events.
Pristine aquatic ecosystem	Eco	An aquatic ecosystem that has not been, or is not, subject to human interference through releases (whether direct or indirect) into water that is part of the ecosystem, or activities in the water's catchment area.
Probable maximum flood (PMF)	Hyd	The largest flood that could conceivably occur at a particular location, resulting from the probable maximum precipitation (PMP) and, where applicable, snowmelt, coupled with the worst flood-producing catchment conditions that can be realistically expected in the prevailing meteorological conditions.  The PMF defines the extent of flood-prone land.
Probable maximum precipitation (PMP)	Hyd	The greatest depth of precipitation for a given duration meteorologically possible for a given size storm area at a particular location at a particular time of year.
Problematic soil	Esc	Any soil type or condition that could result in significant short-term or ongoing environmental harm if disturbed, even if current best practice construction and ESC procedures are adopted during the disturbance. Such soil conditions are likely to include highly dispersive soils (ESP >15%) and actual or potential acid sulfate soils.  Note: Soils are not in themselves a problem or problematic. Problems arise through disturbance or management of the soil.
Producers	Eco	Organisms that are able to build up their body substance from inorganic materials.
Prolarvae	Eco	Newly hatched larvae during the first few days when they feed on their supply of embryonic yolk.
Proportional loss rate	Hyd	An assumed stormwater loss rate that is represented as a constant fraction of the rainfall intensity.
Protect	Gen	To defend or guard from attack, annoyance, alteration, or damage. To cover or shield from injury or danger.
Protection	Eco	1. The act of protecting.
		2. The state of being protected.
PSD	Sto	The abbreviation for permissible site discharge, a specified discharge from a stormwater detention device for the specified design storm frequency.
Pug (verb)	Eng	To pack with clay or similar plastic material, generally for the purpose of checking leakage of water.