

Glossary

Adjustment factor	The required conversion of the size of a treatment device in a given location to achieve the same pollutant reduction as an equivalent treatment device in Melbourne.
Afflux	The rise in water level immediately upstream of, and due to, an obstruction.
Antecedent conditions	Pre-existing conditions (e.g. soil wetness).
Aquifer Storage and Recovery (ASR)	The process of recharging water into an aquifer for the purpose of storage and subsequent withdrawal. Injection of recycled water into aquifers for storage, which may be recovered later to meet water demands.
Bathymetry	Topography or the shape of the land below a water surface.
Batter slopes	An edge that slopes backward from perpendicular.
Biofilm	A gelatinous sheath of algae and micro-organisms, including benthic algae and bacteria, formed on gravel and sediment surfaces and surfaces of large plants.
Biological uptake	Take-up of gas or fluid through a cell membrane.
Bioretention basin	A grassed or landscaped basin promoting infiltration into the underlying medium. A perforated pipe collects the infiltrated water and conveys it downstream.
Bioretention swale	A grassed or landscaped swale promoting infiltration into the underlying medium. A perforated pipe collects the infiltrated water and conveys it downstream. Flows are also conveyed along the surface of the swale prior to being infiltrated.
Bollard	Structure designed to prevent vehicular access.
Buffer	A vegetated strip between the edge of a stream or drainage channel and a land use activity, designed to trap the lateral overland flow-borne pollutants.
Catchment	A topographically defined area, drained by a stream such that all outflow is directed to a single point.
Check banks/dams	Flow spreaders constructed across a channel to decrease velocities and promote uniform flows.
Colloidal particles	Particles that remain suspended in a solution (i.e. fail to settle out)
Constructed wetland	An artificially created system containing pond, marsh and swamp features.
Design flow	Calculated flow used to size engineering structures to a defined standard.
Detention time	The time it takes for a 'parcel' of water to flow from the inlet of a wetland system to the outlet. Detention time is never a constant (see also <i>Notional detention time</i>).
Discharge	The volume of flow passing a predetermined section in a unit time.
Enhanced sedimentation	Additional sedimentation due to the presence of vegetation and biofilms.

Ephemeral	Temporary or intermittent (e.g. a creek or wetland which dries up periodically).
Extended detention	Volume above wetland normal water level and the overflow weir height in a treatment element (e.g. wetland, bioretention basin, infiltration basin).
Filtration media	Soil media that retain pollutants as stormwater passes through it.
First flush diverter	Device for directing initial roof water collected after a rainfall event away from storage as it is thought to contain a high concentration of pollutants.
Flood retarding basin	A temporary flood storage system used to reduce flood peaks. A basin designed to temporarily detain storm or flood waters, to attenuate peak flows downstream to acceptable levels.
Greenfield site	Broadacre subdivision on land previously used for agriculture or native vegetation.
Gross Pollutant Trap (GPT)	A structure used to trap large pieces of debris (> 5 mm) transported through the stormwater system.
Hydrologic effectiveness	Describes the interaction between runoff capture, detention time and detention volume within a wetland system. Or proportion of runoff from catchment that is treated in treatment element.
Hydrologic design region	A spatial region that has a common rainfall pattern.
Infiltration measure	Trenches filled with permeable material (gravel) and placed to intercept stormwater and direct it to permeable soil or groundwater zones.
Inlet zone	See <i>Sediment basin</i> .
Littoral zone	Areas around the shallow margin of wetland characterised by specific vegetation that are alternatively wetted and dried as water level fluctuates.
Macrophyte zone	Vegetated section of wetland.
Macrophyte	A large plant including macroscopic algae, mosses, ferns and flowering plants.
Manning's equation	Commonly used for indirect estimation of discharge in a channel or estimation of channel capacity: $Q = 1/n \times A \times R^{2/3} \times S^{1/2}$ <p>Where: Q = discharge (m³/s) n = Manning's 'n' A = cross-sectional area of flow (m²) R = hydraulic radius (m) S = slope.</p>
Manning's n	A measure of channel roughness.
MUSIC	The acronym used for the Model for Urban Stormwater Improvement Conceptualisation software developed by the Cooperative Research Centre for Catchment Hydrology to model urban stormwater management schemes.
Notional detention time	The average time it takes for the wetland to return to its normal water level after rainfall event (i.e. the time it takes for the extended detention to drain). Notional detention time is used to provide a point of reference in modelling and determining the design criteria for riser outlet structures.
Permanent pool	The level of water retained within a basin below the invert of the lowest outlet structure.
Pluviograph	An instrument that records rainfall collected as a function of time.

Pond	An artificial open water body.
Porous pavement	Pavements comprising materials which facilitate infiltration of rainwater and transfer to the underlying subsoil.
Rainwater tanks	Tanks used to collect and store rainfall from household roofs for beneficial use.
Rational Method	or Probabilistic Rational Method. Widely used simple method for estimating peak design flow rates: $Q = C \times I \times A / 360$ <p>Where, Q = design flow rate. C = dimensionless runoff coefficient. I = rainfall intensity (mm/hr). A = catchment area (km²).</p>
Referral authority	An authority nominated in Section 55 of the <i>Planning and Environment Act 1987</i> that has statutory powers to provide conditions or object to a planning permit application.
Reliability (with respect to reuse from tanks)	The percentage of demand met by water from the rainwater tank. The remainder of demand is met from mains water or an alternative water source.
Riser outlet	Hydraulic designed outlet control from a wetland, designed to provide the desired notional detention time.
Rock beaching	Protecting areas of high scour potential by lining them with hard material (rocks).
Sediment basin	Area where velocities are slowed and coarse sediments settle out of stormwater. Typically pools are about 2 m deep.
Sedimentation	Process of particles settling out of a water column.
Stochastic	The random variability in the occurrence and magnitude of a parameter.
Stormwater	All surface water runoff from rainfall, predominantly in urban catchments. Such areas may include rural residential zones.
Swale	A vegetated open channel, designed to intercept and convey surface run-off to a drainage network inlet.
Transition layer	Layer between filtration media and drainage layer in a bioretention system. The purpose of this layer is to prevent filtration media clogging up the drainage layer.
Treatment train	A series of treatment processes designed to collectively meet a prescribed water quality objective (e.g. a gross pollutant trap used in conjunction with a wetland system).
Water Sensitive Urban Design (WSUD)	A philosophical approach to urban planning and design that aims to minimise the hydrological effect of urban development on the surrounding environment.
Weir	A small dam in a stream or basin designed to raise water levels or to divert its flow through a desired channel.
Wetland	An area transitional between land and water systems, which is either permanently or periodically inundated with shallow water.