

Appendix A
Glossary

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| Acidification | Continuing loss of the capacity to neutralize acids indicated by declining alkalinity and increasing pH. |
| Aesthetic | Pleasant in appearance. |
| Agglomeration ² | An area where the population and/or economic activities are sufficiently concentrated for urban waste water to be collected and conducted to an urban waste water treatment plant or to a final discharge point. |
| Algae | Simple aquatic plants that may be attached or free floating (planktonic) and occur as single cells, colonies, branched or unbranched filaments. |
| Algal bloom | Dense growth of planktonic algae or most commonly cyanobacteria (blue-green bacteria formerly classified as algae) in nutrient enriched surface water bodies causing discolouration of water. |
| Ammonia (NH ₃) | A simple form of nitrogen primarily originating in waste discharges. It can be toxic to fish under certain circumstances and is a source of nitrogen for plants and algae. |
| Anthropogenic | Relating to or resulting from the influence humans on the natural world. |
| Aquifer | A subsurface layer or layers of rock or other geological strata of sufficient porosity and permeability to allow either a significant flow of groundwater or the abstraction of significant quantities of groundwater. |
| Attenuation | Reduction of the force of flow through a system, which has the effect of reducing the peak flow and increasing the duration of a flow event. |
| Attenuation Pond | A pond designed to attenuate flows by storing runoff during peak periods and releasing it after the flood peak has passed. |
| Average Recurrence Interval | The average period between occurrences of an event or of one greater than it; normally expressed in years (also see Probability). |
| Bad status ¹ | Waters which show severe alterations to the values of the biological quality elements for the surface water body type and in which large portions of the relevant biological communities normally associated with the surface water body type under undisturbed conditions are absent. |
| Baseflow | The groundwater contribution to river flow. |
| Basin | Flow control or water treatment structure that is normally dry. |
| Beneficial use | A use of the (water) environment, e.g. for recreation, drinking or bathing) which benefits a human population and which should be protected so its use may continue. |
| Best Management Practices | A range of measures designed to reduce the rate and quantity of surface runoff from developed areas and to improve runoff water quality; also known as source control. |
| Biological quality rating ³ | A range rating for water quality based on the composition of macro-invertebrate communities/faunal groups present and their general sensitivity to organic pollution. |
| Biodiversity | The sum of all the different species of animals, plants, fungi, and microbial organisms living on Earth and the variety of habitats in which they live. |
| Biological | Relating to living organisms. |
| Biological Oxygen Demand | The amount of oxygen absorbed from water by the micro-organisms present in it. Provides a measure of the pollution present in water. |
| Biomass | The amount of living material provided by a given area of the earth's surface. |
| Bioretention | A water quality practice that utilizes landscaping and soils to treat urban stormwater runoff by collecting it in shallow depressions, before filtering it through a fabricated planting soil media. |

¹ As defined in the Water Framework Directive (2000/60/EC)

² As defined in the Urban Wastewater Treatment Directive (91/271/EEC)

³ As defined in the Phosphorus Regulations (S.I. 258 of 1998)

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| Catchment | The land area contributing flow to a point on a watercourse. |
| Check dam | A small dam constructed in a swale to decrease flow velocity (by reducing the channel gradient), minimise scour, and promote deposition of sediment. |
| Chemical Oxygen Demand | A measure of the oxygen consuming capacity of a water sample resulting from the chemical (COD) oxidation of the total carboniferous material in the sample. |
| Chlorophyll | The green pigment found in algae and higher plants which is involved in photosynthesis. |
| Climate change | Changes in meteorological conditions caused by the enhanced Greenhouse Effect, which is predicted to result in, amongst others, sea level rise and increased rainfall. |
| Coastal waters ¹ | 'coastal waters' means the waters outside the low-water line or the outer limit of an estuary. |
| Collecting system ² | A system of conduits which collects and conducts urban waste water. |
| Combined Sewer Overflow | An outlet from a combined sewer system to a receiving waterway, designed to relieve pressure on the system during storm events. |
| Combined sewer system | A system designed to carry both foul sewage and stormwater runoff in the same pipe or channel. |
| Composite Sampling | Flow proportional or time based 24 hour samples collected at a well-defined point by an automatic sampler. |
| Constituent | Material or elemental component. |
| Contaminant | A substance that has been introduced into the environment as a result of man activities. |
| Cost benefit analysis | An analysis of the present value of benefits and the present value of costs undertaken usually for a particular project/scheme; normally expressed as a ratio. |
| Culvert | A circular or box-shaped conduit for conveying a watercourse underground. |
| Cyprinid Waters ⁴ | Waters which support or become capable of supporting fish belonging to the cyprinids (Cyprinidae), or other species such as pike, perch, and eel. |
| Development Plan | Plan which established medium term policies and objectives. |
| Design storm | A synthetic rainfall profile used for design or analysis of a drainage or flood defence system. |
| Detention | A practice to store stormwater runoff and provide for its gradual (attenuated) release and thereby control peak discharge rates. |
| Detention Basin | A basin constructed to store water temporarily to attenuate flows. |
| Diffuse Source Pollution | Originating from a wide area of influence comprising many smaller sources. |
| Dolomitization | The process by which the original calcium carbonate rock is converted to dolomite (magnesian limestone), often involving hypersaline marine brines. |
| Dry Weather Flow | The minimum flow that might be expected to occur once in 50 years and used to calculate waste assimilative capacity of rivers for toxic and dangerous substances. |
| Ecology | The study of the relationship among organisms and between those organisms and their non-living environment. |
| Ecological status ¹ | The quality of the structure and functioning of aquatic ecosystems associated with surface waters, classified in accordance with Annex V (WFD). |

¹ As defined in the Water Framework Directive (2000/60/EC)

² As defined in the Urban Wastewater Treatment Directive (91/271/EEC)

⁴ As defined in the Freshwater Fish Directive (78/659/EEC)

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| Effluent | Liquid waste. |
| Emission Limit Value | Legally enforceable limits on the physical, chemical and biological characteristics of a point source of emission to water (or air), normally expressed as a maximum permissible concentration of a specified substance. |
| Environmental Quality | Descriptions of the intended use of an environmental medium; the use to which the medium is to be Objectives (EQO) put defines the quality required to be maintained. |
| Environmental Quality | The concentration of specific determinands in an environmental medium required to meet or sustain a Standards (EQS) particular EQO. |
| Environmental / Social Impact | An assessment on the potential impacts of a proposed development, plan or policy, and consideration Assessment of measures to mitigate those impacts; usually presented as an Environmental Impact Statement. |
| Estuary | An enclosed or semi-enclosed embayment of the coast in which fresh river water entering at its head mixes with the relatively saline ocean water; estuarine water levels and salinity vary in response to the behaviour of tides and river flows. |
| Estuary ¹ | The transitional area at the mouth of a river between fresh-water and coastal waters. Member States are to establish the outer (seaward) limits of estuaries as part of the programme for implementation of the Water Framework Directive. |
| Eutrophication ² | The enrichment of water by nutrients, especially compounds of nitrogen and/or phosphorus, causing an accelerated growth of algae and higher forms of plant life to produce an undesirable disturbance to the balance of organisms present in the water and to the quality of the water concerned. |
| Extended Detention Basin | A detention basin where the runoff is stored beyond the time required for attenuation of flow (flood control). The extra time allows natural processes to remove some of the pollutants in the water. Extended detention basins are typically empty between storms and release detained water 24 to 40 hours after capture. |
| Extreme high water | The highest elevation reached by the sea as recorded by a tide gauge during a given period. |
| Fault | A fracture in rock in which there had been an observable amount of displacement. |
| Filtration | In storm water treatment; a common process that removes particulate matter by separating water from solid material usually by passing it through sand. |
| Filter drain | A type of drain consisting of an excavated trench refilled with pervious material, such as coarse sand, gravel or crushed stone, through whose voids, water percolates and flows to an outlet. |
| Filter strip | Grass strips along roads or car parks that removal pollutants from the runoff as it passes through, allowing infiltration and velocity reduction. |
| First Flush | Phenomena whereby pollutants that build up on impervious areas during dry periods are washed off during the early stages of a storm event. |
| Fissure | Linear crack. |
| Flood fringe | The area of the floodplain, outside the floodway, which is affected by flooding. This area is generally covered by still or very slow moving waters during large floods. |
| Floodplain | Land adjacent to a watercourse over which water flows in times of flood; floodplain limits are defined by the peak water level of a chosen ARI event and affected by the presence of any flood defence works. |
| Floodway | The river channel and portion of the floodplain which forms the main flow path of flood waters once the main channel has overflowed. |
| Fluvial flooding | Flooding from rivers. |

¹ As defined in the Water Framework Directive (2000/60/EC)

² As defined in the Urban Wastewater Treatment Directive (91/271/EEC)

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| Forebay | Storage space located near the SUDS inlet that serves to trap incoming coarse sediments before they accumulate in the main treatment area. |
| Fracture | Rock breakage along a direction which is not cleavage (fissile). |
| Gabion | A rectangular cage made of steel wire laced together and filled with stone. They are used for the construction of retaining structures and protecting ground against erosion. |
| Geographical Information | A set of integrated techniques for storing, retrieving, transforming and displaying spatially referenced Systems (GIS) thematic data in map form. |
| Good ecological potential ¹ | The status of a heavily modified or artificial body of waters as classified in Annex V of the WFD. |
| Good ecological status ¹ | The values of the biological quality elements for the surface water body type show low levels of distortion resulting from human activity, but deviate only slightly from those normally associated with the surface water body type under undisturbed conditions. The classification of ecological status of surface waters is based on indicators chosen from the main biological groupings within an eco-system: aquatic flora, macro-invertebrate fauna and fish fauna. Taken together with hydromorphological and physico-chemical parameters, the overall ecological status of the river, lake, estuary or coastal water would be defined. |
| Good groundwater status ¹ | The status achieved by a groundwater body when both its quantitative status and its chemical status are at least "good". |
| Good housekeeping | Keeping a clean, orderly site. Good housekeeping practices reduce the possibility of accidental spills and reduce safety hazards as well. |
| Good Status ¹ | The values of the biological quality elements for the surface water body type show low levels of distortion resulting from human activity but deviate only slightly from those normally associated with the surface water body type under undisturbed conditions. |
| Good surface water | The chemical status required to meet the environmental objectives for surface waters, that is where chemical status ¹ the concentrations of pollutants do not exceed the environmental quality standards (EQS) set out in the Directive. This includes EQS for dangerous substances (Annex IX), priority substances (Article 16 (7)) and other relevant Community legislation which sets EQS at Community level. |
| Good surface water status ¹ | The status achieved by a surface water body when both its ecological and chemical status are at least 'good'. It is based on biological, hydro-morphological and physiochemical elements. |
| Grab Sampling | A "one-off" sample collected manually and transported to a laboratory for analysis. |
| Green Edge Index | An environmental indicator derived from analysis of databases for Monitoring Land Use Dynamics (MOLAND) funded by the European Commission Joint Research Centre. The index shows how much of a region's urban fabric is adjacent to (i.e. has an edge with) vegetated areas. Areas with a high value for the index will have greater access to recreational facilities (e.g. gardens, parks, wooded areas, sports fields), and will be less affected by noise and air pollution from traffic. |
| Greywater. | Any water that has been used in the home, except water from toilets water (known as "black water"), is called greywater. Dish, shower, sink and laundry water comprise 50-80% of residential "waste" water. This may be reused for other purposes, especially landscape irrigation. |
| Groundwater ¹ | All water which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil, i.e. below the water table. |
| Groundwater Protection Response | Control measures, conditions or precautions recommended as a response to the acceptability of an activity within a groundwater protection zone. |
| Groundwater protection scheme | A scheme comprising two main components: a land surface zoning map which encompasses the hydrogeological elements of risk and a groundwater protection response for different activities. |
| Groundwater protection zones | Zones delineated by integrating aquifer categories or source protection areas and associated vulnerability ratings. The zones are shown on a map, each zone being identified by a code e.g. SO/H (outer source area with a high vulnerability) or Rk/E (regionally important aquifer with an extreme vulnerability). Groundwater protection responses are assigned to these zones for different potentially polluting activities. |

¹ As defined in the Water Framework Directive (2000/60/EC)

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| Groundwater source | A source of water supply which depends on groundwater, usually a well (dug well or borehole) or a spring, occasionally an infiltration gallery. |
| Gully | A structure, usually incorporating a grating and grit trap, to permit the entry of stormwater runoff into a drain or sewer. |
| Habitat | The dwelling place of a species or community, providing a particular set of environmental conditions. (e.g. forest floor, sea shore, river bank). |
| Halogens | Series of five closely related chemically reactive non-metal elements: fluorine, F; chlorine, Cl; bromine, Br; iodine, I; and astatine, At, which form group VIIa of the periodic table. |
| Hardness | Hardness has been described as the soap consuming capacity, or scale forming capacity of water. Calcium and magnesium are the main constituents of hardness. Total hardness comprises the $\text{Ca}^{2+} + \text{Mg}^{2+}$ concentration and is expressed as "mg/l CaCO_3 equivalent". |
| Hazard | An object, event or phenomenon that has the potential to cause harm or damage e.g. high tide levels, fast flowing waters, blocked culverts, raw sewage overflows. |
| Headwaters | The upper tributaries of a watercourse. |
| High Status | Only very minor anthropogenic alterations to the values of the physico-chemical and hydromorphological quality elements for the surface water body type from those normally associated with that type under undisturbed conditions. The values of the biological quality elements for the surface water body reflect those normally associated with that type under undisturbed conditions, and show no, or only very minor, evidence of distortion. These are the type specific conditions and communities. |
| High water | The maximum height reached by a rising tide. The high water is due to the periodic tidal forces and the effects of meteorological, hydrologic, and/or oceanographic conditions. For tidal datum computational purposes, the maximum height is not considered a high water unless it contains a tidal high water. |
| High water mark | A line or mark left upon tide flats, beach or along shore objects indicating the elevation of the intrusion of high water. The mark may be a line of oil, scum or debris and is physical evidence of the general height reached by wave run up at recent high waters. It should not be confused with the mean high water line or mean higher high water line. |
| Highest Astronomical Tide | The highest level predicted to occur under average meteorological conditions and any combination of astronomical conditions. HAT levels will not be reached every year nor are they the most extreme level which can be reached, as storm surges may cause considerably higher levels to occur. |
| Hydraulics | The application of fluid mechanics principles to natural channels or engineered structures. |
| Hydrocarbon | An organic chemical compound containing only hydrogen and carbon atoms, arranged in rows, rings, or both, and connected by single, double, or triple bonds. Hydrocarbons are a form of organic pollution which can be caused by leakages from fuel storage tanks and underground pipelines or from accidental spillages and can result in serious pollution of waterbodies. |
| Hydrology | The study of water, its properties, distribution and utilisation, from when it rains until it returns to the sea. |
| Hydrodynamics | The study of water in motion. |
| Hydromorphological ¹ | Hydromorphological quality elements relate to both the hydrological regime and the morphological conditions for a water body, be it a river, transitional water, coastal water, lake or heavily modified or artificial waterbody. |
| Hydrological regime ¹ | The quantity and dynamics of flow, and the resultant connection to groundwaters. At high status these, reflect totally, or nearly totally, undisturbed conditions. |
| Infiltration trench | A trench, usually filled with stone, designed to promote infiltration of surface water to the ground. |

¹ As defined in the Water Framework Directive (2000/60/EC)

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| Impact | The damage caused should a hazard be realised e.g. loss of life, damage to property, social disruption, environmental degradation, etc. |
| Industrial hot spot | Area where land use or activities generate highly contaminated runoff, with concentrations of pollutants in excess of those typically found in stormwater. |
| Impervious surface | Typically, any man made surface which significantly decreases the ability of precipitation to infiltrate, thereby increasing runoff. Rooftops and paved area are typical impervious surfaces. |
| Infiltration | A practice designed to promote groundwater recharge by containment and concentration of stormwater in porous soils. |
| Infiltration basin | An impoundment made by excavation or embankment construction to contain and infiltrate runoff into the soil layer. |
| Inorganic | Chemical compounds that contain no carbon, excluding the oxides of carbon, carbon disulfide, cyanides, and their associated acids and salts. |
| Integrated Coastal Zone | An internationally established technique that promotes a co-ordinated, participative and multi-Management disciplinary approach for the sustainable planning and management of coastlines. |
| Karstification | The process by which limestone or other highly soluble rock becomes transformed into an area in which landforms are predominantly solutional in origin, and in which the drainage is usually underground in solutionally enlarged fissures and conduits. |
| Levee | Either an artificial embankment or wall built to exclude flood waters, or a natural formation adjacent to a waterway built by the deposition of silt from floodwaters. |
| Level of Service | The design or actual performance of a system e.g. drainage network or flood defence, normally expressed in terms of the frequency of flooding experienced. |
| Lithology | The composition and texture of, generally sedimentary rocks. |
| Lowest Astronomical Tide | The lowest level predicted to occur under average meteorological conditions and any combination of astronomical conditions. |
| Lower Palaeozoic | The geological time period from about 600 million years ago (Ma) to x00 Ma (which includes Cambrian, Ordovician and Silurian) when organisms with shells and land plants appeared. |
| Machair Sand Dune | Herb-rich calcareous grassland which grows on sand shell. |
| Macro-invertebrate | Immature aquatic stages of aerial insects, crustaceans, molluscs and worms. |
| Mean High Water | The average tidal level of all high waters observed over a sufficiently long period. |
| Mean Higher High Water | The mean height of the higher of the two daily high waters over a long period of time. When only one high water occurs on a day, this is taken as the higher high water. |
| Mean High Water Springs | (Also known as Spring High Water) The average height of the high waters of the spring tides. Spring tides are those tides of increased range occurring semi-monthly as the result of the Moon being new or full. The spring range of tide is the average range occurring at the time of spring tides and is most conveniently computed from the harmonic constants. It is larger than the mean range where the type of tide is either semi diurnal or mixed, and is of no practical significance where the type of tide is predominantly diurnal. |
| Mean Sea Level | The average level of the sea over a long period or the average level which would exist in the absence of tides. |
| Median Concentration for Molybdate | The limiting concentrations applicable to the corresponding target biological water quality |
| Reactive Phosphate (MRP) | Molybdate-Reactive rating as determined by the EPA. |
| Microbial | Of microscopic organisms, especially those that transmit disease. |

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| Moderate status ¹ | The values of the biological quality elements for the surface water body type deviate moderately from those normally associated with the surface water body type under undisturbed conditions. The values show moderate signs of distortion resulting from human activity and are significantly more disturbed than under conditions of good status. |
| Molybdate Reactive | A measure of the biologically available phosphate in water. |
| Morphological conditions ¹ | Channel patterns, width and depth variations, flow velocities, substrate conditions and both the structure and condition of the riparian zones. At high status these correspond to totally or nearly totally undisturbed conditions. |
| Non-structural or soft measures | Measures such as planning controls, public awareness, flood warning, etc that can be undertaken to help reduce flood risk (see Structural Measures). |
| Numerical Modelling | The use of computerised models to help assess the interaction between natural processes and (Environmental) anthropogenic activities in the fields of meteorology, hydrology, hydraulics, water quality, coastal processes, etc. |
| Nutrient | Element or chemical essential for growth e.g. phosphorous, nitrogen. |
| Ordnance Datum | A fixed benchmark of known height used as a reference for determining other heights. |
| Organic | [f1]Naturally occurring compounds of carbon combined with one or more other elements, most often hydrogen, oxygen, nitrogen, sulphur and halogens such as phosphorous, fluorine and bromine. |
| Organic Pollution | Pollution generated from human and animal wastes, caused by a variety of activities such as excessive or inappropriate application of animal manure slurries, effluent discharges from WTP or trade effluent such as wastes from food processing plants. |
| Overland flow | Water that runs over the ground surface, including both paved and unpaved surfaces. |
| Pathogen | Disease causing organism. |
| Pathway | The means by which the source can impact upon a receptor e.g. by watercourse, land, pipes. |
| Pesticide | A general term for any chemical agent used in order to kill unwanted plants (weeds), animal pests or disease causing fungi. |
| PCB's | A group of closely related organo-chlorines, the principal use of which has been in high voltage transformers. |
| Penstock | A sluice or gate used to control a flow of water. |
| Permeable surface | A surface that allows water to infiltrate through itself into a permeable sub-base, before disposal. |
| Photosynthesis | Process by which green plants and certain other organisms use the energy of light to convert carbon dioxide and water into the simple sugar glucose. An extremely important by-product of photosynthesis is oxygen, on which most organisms depend. |
| Physico-chemical | Pertaining to general conditions such as temperature, oxygen balance and transparency, specific synthetic pollutants and specific non-synthetic pollutants. |
| Point Source Pollution | Originates from identifiable relatively smaller scale sources such as leaking storage tanks and WTP. |
| Pollutant | A contaminant whose concentration has increased to an objectionable level and which may harm the recipient. |
| Poor status ¹ | Waters which show evidence of major alterations to the values of the biological quality elements for the surface water body type and in which the relevant biological communities deviate substantially from those normally associated with the surface water body type under undisturbed conditions. |

¹ As defined in the Water Framework Directive (2000/60/EC)

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| Population Equivalent ² | 1 P.E. is the organic biodegradable load having a five-day biochemical oxygen demand (BOD ₅) of 60 g of oxygen per day. |
| Primary treatment ² | Treatment of urban waste water by a physical and/or chemical process involving settlement of suspended solids, or other processes in which the BOD ₅ of the incoming waste water is reduced by at least 20% before discharge and the total suspended solids of the incoming waste water are reduced by at least 50%. |
| Probability | The estimated likelihood of a storm event e.g. a 1 in 100 year flood event is one that is expected to be equalled or exceeded once every 100 years; it also has a 1% chance of occurring in any one year. |
| Probable Maximum Flood | The largest flood that could conceivably ever be experienced, based on a detailed assessment of meteorological, catchment and watercourse conditions. |
| Quality Management | The largest flood that could conceivably ever be experienced, based on a detailed assessment of meteorological, catchment and watercourse conditions. |
| Quality Management | Storm water quantity management is concerned with the amount of storm water runoff and how it might adversely affect human safety (flooding) and stream integrity (streambank erosion). |
| Quaternary | The geological time period from 1.6 million years ago to the present day which includes the Ice Age. |
| Receptor | The target threatened by a hazard e.g. people, property. |
| Reclamation | The activity of reclaiming land from a watercourse or the sea, normally by filling, protecting and building. |
| Regional Control | A storm water control practice which is designed to control storm water quality and or quantity from a larger urban development, or a group of developments. |
| Retention Pond | A type of SUD system consisting of a permanent pool of water designed to treat runoff by detaining water long enough for settling, filtering and biological uptake. Often designed to provide aesthetic or recreational value. |
| Riparian | Along or near the bank of a river. |
| Riparian Corridor | An area extending from the edge of a watercourse onto adjacent terrestrial land, with its width dependent upon its location within the catchment and the adjacent landuse. |
| Risk | A combination of the probability of a hazard occurring combined with the degree or scale of the resultant impact; risk is temporally and spatially dynamic. |
| River Basin | The area of land from which all surface run-off flows through a sequence of streams, rivers and, possibly, lakes into the sea at a single river mouth, estuary or delta. It is a natural and hydrological unit. |
| River Basin District | An area of land and sea made up of one or more neighbouring river basins together with their associated groundwater, and coastal waters and identified as the main unit for management of river basins. A River Basin District must include coastal/marine waters up to one nautical mile beyond the boundary from which territorial waters are measured. |
| River Basin Management | Plan which describes the existing condition of waterbodies and their future environmental objectives. |
| Plan | These objectives will be defined as good status or less stringent where economic or technical constraints require. |
| River Continuity | River continuity contributes to hydromorphological quality (see above). At high status, the continuity of the river is not disturbed by anthropogenic activities and allows undisturbed migration of aquatic organisms and sediment transport. |
| Salmonid Waters | High quality waters suitable for the maintenance of viable self sustaining populations of wild salmon and trout. |

² As defined in the Urban Wastewater Treatment Directive (91/271/EEC)

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| Secondary treatment ² | Treatment of urban waste water by a process generally involving biological treatment with a secondary settlement or other process in which the requirements established in Table 1 of Annex I are respected. |
| Sensitive Areas | Bodies or reaches of water that are either eutrophic or prone to eutrophication. |
| Sensitive Waters | Designated waters under the E.C. Urban Wastewater Treatment Directive as affected by eutrophication. Qualifying sewage treatment plants discharging to these waters must meet a defined effluent quality. |
| Separate Sewer System | System whereby, foul sewage and stormwater run-off are kept separate and confined to individual designated sewer systems: one for foul sewage which is conveyed to treatment; and one for stormwater run-off which is discharged to water courses. |
| Sewage | The wastewater that passes through sewers. |
| Sewerage | System of pipes (sewers) to transport sewage. |
| Site Control | A storm water control which is designed to control storm water quality and or quantity from a small development or site. |
| Sludge | The suspended matter in industrial effluent or sewage remaining after partially drying. |
| Soakaway | A subsurface structure designed to promote the infiltration of surface water. |
| Soffit | The underside of a structural component. |
| Source | The initial condition that can lead to a hazard being realised e.g. rainfall, high tides, waves, catastrophic reservoir failure. |
| Source control | Practices which limit the amount of runoff generated from a site. Management of runoff at source. |
| Source-Pathway-Receptor Model | A method for establishing, assessing and communicating risk relationships. |
| Stoplog | A plank or beam used to close up a spillway or other water channel. |
| Storm Surge | The local increase in sea levels along a shore due to a storm; normally caused by onshore winds 'piling' water up on the shore and low barometric pressure. Potentially catastrophic, especially on low lying coasts with gently sloping offshore topography (Also see Wave run-up). |
| Stormwater | Runoff from rain, snow or other forms of precipitation, resulting in surface runoff and drainage. |
| Stormwater treatment train | A series of SUDS, each designated to treat a different aspect of runoff that are implemented together to maximise their effectiveness. |
| Stormwater wetlands | Shallow, constructed pools that capture and treat stormwater and allow for the growth of characteristic wetland vegetation. |
| Structural measures | Hard engineering works such as embankments, dredging, house raising, etc undertaken in conjunction with non-structural measures to help reduce flood risk. |
| Sub-Littoral | Situated near the seashore near or just below the low tide level. |
| Surface Water Status ¹ | The general expression of the status of a body of surface water, determined by the poorer of its ecological and its chemical status. |
| Suspended solids | Small particles that suspend in the water column and create turbid, or cloudy conditions. |
| Sustainable Urban Drainage Systems | A sequence of management practices and control structures designed to drain surface water in a more sustainable fashion than some conventional techniques (see also best management practices). |
| Swale | A manmade depression or wide shallow ditch used to route, or filter runoff. |

¹ As defined in the Water Framework Directive (2000/60/EC)

² As defined in the Urban Wastewater Treatment Directive (91/271/EEC)

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| Tides | The regular, alternating rise and fall of the surface of the seas and oceans, due mainly to the gravitational attraction (pull) of the moon and sun on the rotating earth. |
| Time of Concentration | The time taken for flow to reach a particular point from all contributing parts of the catchment; a river catchment will usually have different times of concentration than an urban stormwater catchment. |
| Total Nitrogen (TN) | Organic nitrogen, nitrate, nitrite and ammonia. |
| Total Oxidised Nitrogen (TON) | Nitrate and nitrite. Nitrate (NO ₃) being the more oxidised form of N. |
| Total Phosphorous ³ | The limiting annual average concentrations of Total Phosphorous corresponding to the trophic status set by the EPA. |
| Toxic | Capable of producing an adverse effect in a biological system seriously injuring structure or function or causing death. e.g. pesticides and heavy metals. |
| Toxicity | The inherent potential or capacity of a material to cause adverse effects in a living organism. |
| Transitional Waters ¹ | Bodies of surface water in the vicinity of river mouths which are partly saline in character as a result of their proximity to coastal waters but which are substantially influenced by freshwater flows. |
| Treatment Volume | The volume of surface runoff containing the most polluted portion of the flow from a rainfall event. |
| Trigger Level | Standard or level above which a system is considered to be 'unsatisfactory' and requires upgrading. |
| Target Level | Standard or level which a system needs to achieve following rehabilitation. |
| Trophic State | The extent of enrichment of a water body as assessed by the nutrient concentrations, amount of planktonic algae and macrophytes, water transparency and oxygen levels. The trophic categories oligotrophic, mesotrophic, eutrophic and hypotrophic are used to describe waters varying from un-enriched to highly enriched. |
| Trophic Status ³ | The phosphorus regulations define the trophic status of lake water quality as determined by the EPA is based on the Annual Maximum Chlorophyll concentrations and described in the second schedule. |
| Turbidity | A unit of measurement quantifying the degree to which light travelling through a water column is scattered by the suspended organic (including algae) and inorganic particles. The scattering of light increases with a greater suspended load. |
| Ultra Urban | Densely developed urban area in which little pervious surface exists. |
| Vulnerability | A term used to represent the intrinsic geological and hydrogeological characteristics that determine the ease with which groundwater may be contaminated by human activities. |
| Water butt | Receptical or tank, usually covered and placed at ground level, connected to downpipes, to provide offline attenuation of runoff from roofs. |
| Watercourse | Any river, stream, creek or land drain in which water flows in a natural, semi-natural or artificial open channel, whether permanently or intermittently. |
| Water quality volume (Vt) | The storage needed to capture and treat 90% of the average annual stormwater runoff volume. |
| Watertable | The saturated level of the unconfined groundwater. |
| Waterways | All rivers, streams, estuaries, coastal lagoons, canals and harbours. |
| Waves (or Wind Waves) | The build-up of water above still water level causes by the action of wind blowing across the water surface. |
| Wave run-up | The action of breaking waves that causes water to run-up onto the land above normal water levels; this is not included in the definition of storm surge. |

¹ As defined in the Water Framework Directive (2000/60/EC)

³ As defined in the Phosphorus Regulations (S.I. 258 of 1998)