

## SEQ Design and Construct Code Generic Glossary and Abbreviations

Term	Definition	See Also
<b>Access chamber</b>	Large diameter inspection/maintenance chamber which allows operator access to water/sewer network assets.	Chamber, Manhole
<b>Activated sludge process</b>	A system for treating sewage by growing bacteria and other micro-organisms (biomass) mixed with sewage in a tank (bioreactor). When raw sewage is aerated over a period of time the bacteria form a grainy light brown sludge. Because the sludge is biologically active it is called 'activated sludge'. The biomass is maintained in suspension by aeration and/or mechanical mixing in the bioreactor. The biomass is separated from the liquid non-drinking water in a settling tank (clarifier) or by filtration (see MBR) and fed back to the bioreactor to maintain the treatment process. Excess biomass called Waste Activated Sludge (WAS) is removed (wasted) from the bioreactor to maintain the system in balance.	Bioreactor
<b>Active playing surfaces (APS)</b>	Turf and non-turf surfaces used for sport, schools and child care centres that are required to follow the APS guidelines.	
<b>Actuator</b>	An actuator is a hydraulic, pneumatic or electrical device to allow for automatic operation of the asset to which it is attached (either by local switching or remote switching) - note that solenoid and hydraulic pilot actuators are recognised with their associated valves.	
<b>Advanced water treatment plant</b>	Advanced Water or Purified Non-drinking Water Plant which processes effluent and produces purified non-drinking water.	Purified non-drinking water plant
<b>ADWG</b>	Australian Drinking Water Guidelines (2004) published by the National Health and Medical research Council (NHMRC).	
<b>Aeration</b>	Aeration is the process of introduction of air into water/sewage as part of a broader treatment process. In sewage treatment, aeration is designed to encourage the growth of aerobic biomass and separation of solids from liquids. In water treatment, aeration is designed to remove impurities including those responsible for odour and taste complaints (iron and manganese).	
<b>Aggressive soil</b>	Soil which could have a corrosive or other adverse effect on a pipeline component and which requires special consideration with respect to protective measures.	Contaminated Soil
<b>Alignment of mains</b>	Positioning of mains relative to locations such as property boundaries or the Water Agency's space allocation in the road reserve.	
<b>Allotment</b>	Refer "Lot".	Lot, Service Connection
<b>Allowable Operating Pressure (AOP)</b>	Maximum pressure at which a piping system can sustain in continuous use under given service conditions without pressure surge. For plastics piping systems the value is specified at a temperature of 20°C.	Rated Pressure
<b>Alternate site</b>	An alternate operating site to be used when an organisation's primary facilities are inaccessible or inoperable.	
<b>Annual demand</b>	Total water demand for a year.	
<b>Aquifer</b>	A geological formation or structure that stores and/or transmits water, such as to wells and springs. Use of the term is usually restricted to those water-bearing formations which are capable of yielding water in sufficient quantity to constitute a usable supply source.	
<b>Asset attractiveness</b>	How a threat source views an asset in terms of the activity they wish to undertake.	
<b>Asset configuration information</b>	Information about an asset that defines its requirements and documents its physical, functional and performance characteristics. Also includes information that is used to test, operate, maintain and dispose of the asset	Configuration management
<b>Audit</b>	A process of checking if existing plans and arrangements have been effectively implemented.	
<b>Australian Height Datum (AHD)</b>	A level datum, uniform throughout Australia, derived from mean sea level observations at 30 tide gauge locations located along the Australian coastline and used as a base reference for "derived" datum levels throughout Australia; replaces "Australian Levelling Survey".	

Term	Definition	See Also
<b>Average day demand</b>	Annual demand divided by 365	
<b>Average dry weather flow</b>	This is the combined average daily sanitary flow into a sewer from domestic, commercial and industrial sources.	
<b>Avoided costs</b>	Costs which are unavoidable if nothing is done but may be avoided if action is taken	
<b>Backflow prevention device</b>	A backflow prevention device is a specific type of non return valve to prevent contamination of the upstream fluid by the downstream fluid.	Valve – non return
<b>Balancing storage</b>	The quantity of water required to be stored in a reservoir for equalising or balancing fluctuating demand against constant supply (or vice versa)	Operating Storage
<b>Base-line water consumption</b>	Water consumption in the years prior to introduction of a change	
<b>Belt press</b>	A mechanical device (typically including rollers and belts), used for dewatering sludge.	Sludge Press
<b>Beneficial use</b>	The use of any element or segment of treatment wastes or by-products that contributes to public benefit, welfare, safety, health or aesthetic enjoyment.	
<b>Best practice</b>	The adoption of any business practice initiatives where the economic, social and environmental benefits exceed the cost of the initiative.	
<b>Bioreactor</b>	A bioreactor is a tank in which a mix of activated sludge (micro-organisms) and sewage undergo aerated and un-aerated cycles.	
<b>Biosolids</b>	Stabilised organic solids derived from sewage treatment process sludge which can be beneficially reused	
<b>Biosolids reuse</b>	Reuse involves managing biosolids safely and sustainably to beneficially utilise their nutrient, energy, or other values. This may include biosolids beneficially used for agriculture (e.g. fertiliser), soil conditioning, mine rehabilitation, and other applications recognised as reuse.	
<b>Bore</b>	Includes a drilled borehole, bore sleeve, lining, filter, cap, but excluding pump, pipework from the bore and other associated assets e.g. fence, building, valves etc. A borehole could be used for drinking water abstraction, ground water injection, ground water pumping to reduce water table etc.	Boring
<b>Boring</b>	A method of machine excavation working to create a cylindrical tunnel slightly larger than the pipeline(includes standard boring, micro tunnelling, pipe jacking, directional drilling but excludes pipe cracking).	Bore, Pipe cracking
<b>Boundary</b>	Survey line separating adjoining properties for the purposes of defining ownership/title	
<b>Breaks or leaks</b>	A break or leak is a failure of the water or sewer infrastructure which results in an interruption to the service.	
<b>Building</b>	A building includes floor, walls and roof, together with all doors, windows, attached lighting and plumbing services (e.g. toilets, showers). Internal civil, mechanical and electrical works associated with housed processes are recognised separately.	
<b>Bulk meter</b>	A Bulk Meter is a device used to measure the flow of water for water system management and commercial billing purposes. Domestic meters used for customer billing are not to be included in this definition.	Bulk supply point, Bulk supply sampling point, Offtake
<b>Bulk pipeline</b>	Closed conduit whose primary purpose: <ul style="list-style-type: none"> <li>In the case of the potable water network, is to deliver large quantities of raw water (supplied to treatment facilities) and/or potable water (supplied to the distribution system)</li> <li>In the case of the sewerage network, is to transport large volumes of sewage to treatment facilities[.]</li> </ul>	Trunk Main
<b>Bulk supply point</b>	A point of connection between a provider of BULK water services and a distributor/retailer. The term includes connections that are metered and not metered.	Bulk mete Bulk supply sampling point, Offtake
<b>Bulk supply sampling point</b>	Location where water samples are taken for testing to make a water quality assessment at facilities seeking certification.	Bulk meter, Bulk supply point, Offtake
<b>Business Continuity Management Plan (BCMP)</b>	A collection of procedures and information that is developed, compiled and maintained in readiness for use should an event occur, which would otherwise disrupt the organisation or it's through chain.	

Term	Definition	See Also
<b>Business impact analysis</b>	A management level analysis that assesses the risks associated with disruption, including a consideration of the required resources, interdependencies and the nature, impact and likelihood of capability loss over time.	
<b>Business interruption</b>	Any event, whether anticipated or unanticipated that disrupts the organisation's normal course of routine operations.	
<b>Business resilience</b>	A process that takes a holistic or integrated approach to risk management, compliance, security, emergency and crisis management, business continuity and disaster recovery.	
<b>Capability</b>	The ability, experience and knowledge of a threat source to undertake an activity.	
<b>Cathodic protection</b>	Partial or complete protection of a metal from corrosion by making it the cathode, using either galvanic or impressed current. It is usually applied to mitigate external corrosion of electrically continuous welded steel buried pipelines and internal corrosion of welded steel service reservoirs	
<b>Chamber</b>	A chamber allows access to assets other than sewer mains. Chambers (or pits) generally house one or more network devices (e.g. valves, flow meters) providing access to such devices for maintenance work. Note that concrete surrounds and lids over buried valves and hydrants are recognised as part of the valve / hydrant asset. Ref also to manholes (used for access to sewers and tanks). To avoid any confusion, pump station wet wells are recognised as tanks, while pump station dry wells are recognised as chambers.	Access chamber, manhole
<b>Chlorine contact facility</b>	Any facility used for holding chlorinated water until disinfection is complete.	
<b>Chlorine gas system</b>	Facility for storing and dosing chlorine. Includes the chlorine gas shut-off system. Compressor may be local or plant air unit.	
<b>Clarifier</b>	A tank that is used for settling solids from the bioreactor to produce clear non-drinking water and return solids (RAS) back to the bioreactor. May include a flocculation chamber in the centre. In the clarifier tank, slow mixing helps the coagulation process and the heavier lumps of dirt fall to the bottom of the tank. The clear water on the top (supernatant) is piped into the supernatant tank.	
<b>Clear water chamber</b>	Part of a filter structure used for storing filtered water prior to disinfection or other post-dosing. May be known as clear water cells or ponds. Not to be confused with a Treated Water Reservoir.	Treated Water Reservoir
<b>Coating</b>	Additional organic or inorganic material applied to the internal and/or external surface of a pipeline component at a specified film thickness, which is intended to provide long-term protection from corrosion, mechanical damage and/or chemical attack. Such coatings require special surface preparation and application techniques.	Lining
<b>Common trenching</b>	Refer "Shared Trenching".	Shared trenching
<b>Communications coordination</b>	The emergency response function largely involving coordinating Water Grid internal and external communications	
<b>Community service obligations</b>	Activities which would not normally be undertaken by a commercial entity (usually because they are not profitable) and are provided by a commercial entity under an agreement with government.	
<b>Configuration</b>	The interrelated functional and physical characteristics of an asset as defined in technical documents and verified as existing in the asset.	
<b>Configuration baseline</b>	The approved configuration of asset characteristics at a given point in time that provides an engineering point of reference for future activities in the asset life cycle.	
<b>Configuration change management</b>	A configuration management function to manage the control of change to identified configuration items, including documented justification, evaluation of consequences, approval processes, implementation and verification of approved change and revision of technical documentation.	
<b>Configuration control</b>	The result of implementing configuration change management	
<b>Configuration item</b>	An aggregation of equipment, hardware, software, technical documentation or any discrete portion thereof that satisfies an end use function.	
<b>Configuration management</b>	A process that establishes and maintains consistency of an asset's characteristics with its requirements and configuration information throughout the life cycle	

Term	Definition	See Also
<b>Configuration status accounting</b>	A function of configuration management that records and reports; configuration item descriptions, configuration item information, and all changes to configuration items both approved and proposed.	
<b>Consequence</b>	Outcome of an event affecting objectives (also 'level of impact' per section 4.34 of the Market Rules).	
<b>Constant Flow System</b>	A water supply system where water is supplied at a constant rate of flow with peak demands being obtained from individual storages at each house	
<b>Consumption band</b>	The water consumed by customers or customer sectors at various volumetric levels (e.g. 1-5ML/a; 5-10 ML/a, 10-20 ML/a and >20 ML/a).	
<b>Consumption data</b>	The meter readings of water consumed by customers or customer sectors; meter readings used for the purpose of billing.	
<b>Contaminated soil</b>	Soil that has been affected by previous land use or by direct or indirect infiltration of chemicals or other substances such that it requires special consideration.	Aggressive Soil
<b>Control</b>	The overall direction of response activities in an incident situation	
<b>Control (emergency management)</b>	The overall direction of response activities in an incident situation.	
<b>Control management (risk management)</b>	A measure that is modifying risk.	
<b>Control panel</b>	Panel used to house controls, junction boxes, used to join or access cables / pipes etc. Or switchboards. Often telemetry assets or instrument transmitters will be housed in a cubicle.	Cubicle
<b>Control valve</b>	A valve designed to alter flow and pressure in the pipework on either side of the control valve to achieve the required operational outcomes.	
<b>Conveyor</b>	A mechanical apparatus that transports by belts, cables, or chains.	
<b>Coordination</b>	The bringing together of elements to ensure effective response to emergencies.	
<b>Corrosion</b>	Deterioration of a material and alteration of its properties due to chemical or electrochemical reaction between the material and its environment.	
<b>Crisis</b>	A situation where organisations shift from routine to non-routine operation, requiring management to divert a proportion of their attention, time, energy and resources away from normal operations to managing an event.	
<b>Critical business functions</b>	Vital functions without which an organisation will either not survive or will lose the capability to effectively achieve its critical objectives.	
<b>Critical infrastructure</b>	Those physical facilities, supply chains, information technologies and communication networks, which if destroyed, degraded or rendered unavailable for an extended period, would significantly impact water supply to South East Queensland.	
<b>Critical objectives</b>	Those objectives, as determined by the organisation, which must continue to be achieved.	
<b>Cross connection</b>	Any connection or arrangement, physical or otherwise, between any drinking water supply system either directly or indirectly connected to a water main, and any fixture, storage tank, receptacle, equipment or device through which it may be possible for any non-drinking, used, unclean, polluted or contaminated water, or any other substance, to enter any part of such drinking water system under any conditions (per plumbing and drainage code AS/NZS 3500).	Cross Link
<b>Cross link</b>	Pipework between (joining) separate water supply systems such as drinking water and non-drinking water systems. Cross links comprise off-take branches, pipes, isolating valves and, in some cases, backflow prevention devices.	Cross Connection
<b>Cubicle</b>	A cubicle is a housing type asset typically used to house/contain instrumentation devices such as telemetry assets or instrument transmitters. This is discrete from a control panel which is used to house controls, junction boxes, used to join or access cables / pipes etc or switchboards.	Control Panel
<b>Current risk</b>	The level of risk, taking account of the affect of any controls and/or treatments currently in place.	
<b>Customer meter</b>	Flow meter used to measure usage by an individual customer or group of customers within a retail network.	Flowmeter

Term	Definition	See Also
<b>Customer service standards</b>	A document developed by a water service provider to inform customers who do not have contracts with the service provider of the level of service standards.	
<b>Dam</b>	An artificial structure, whether permanent or temporary, built as a barrier to retain or impound a volume of water, including the storage area created by the structure and the embankments or other structures that control the flow of water or are incidental to the main structure.	
<b>Data storage</b>	Data storage devices are IT equipment used to store digital data and can include hard disc drives, backup tape recorders, optical discs etc.	
<b>Dead water</b>	Water that is not useable. For example, water below the outlet level of a reservoir or tank and/or water that has deteriorated due to excessive detention (through poor operational flow, dead ends or other operational means).	
<b>Declared service water</b>	A water service declared by the Minister under Chapter 2A, Part 5a, Division 2 of the Water Act 2000.	
<b>Demand</b>	Volume of water used by customers during a certain time interval from a water supply system. Can be a measure of individual usage or collective use.	
<b>Demand forecasting</b>	Process of anticipating volumes of water required to meet current and projected customers' peak (maximum) hourly, daily and annual requirements.	
<b>De-rating</b>	Refer to "fatigue de-rating".	Fatigue de-rating, temperature de-rating, Operating pressure limit
<b>Desalination</b>	The removal of salt from seawater or brackish water to produce drinking water, using various techniques.	
<b>Desalination plant</b>	A treatment facility which undertakes removal of salts from seawater or other saline sources (e.g. groundwater) by distillation, chemical reactions or use of membranes.	
<b>Design capacity ("nameplate")</b>	The capacity of an asset as intended in the original design of the facility. May differ from the actual capacity of the asset.	
<b>Design period</b>	Period of time a design analysis should cover in order to size system facilities (such as service reservoirs, pumping stations and water filtration plants). It is typically expressed as the number of consecutive days that the daily demand factor exceeds the ratio of supply (or input) capacity to maximum day demand.	
<b>Design Pressures (DP)</b>	Limiting pressures, both maximum and minimum, that the designer allows for in the design of a pipeline system. These pressures are used to determine: <ul style="list-style-type: none"> <li>the extent of the proposed development that may be serviced, in terms of elevation (acceptable range of residual pressures) and distance (acceptable minimum residual pressure after head losses)</li> <li>a suitable pipe material to meet expected operating pressures for the duration of the system life, and</li> <li>structural requirements associated with the pipeline pressure</li> </ul>	
<b>Direct tapping</b>	A procedure consisting of drilling and tapping the pipe wall followed by insertion of a tapping valve/maintap. A "wet" tapping is one undertaken while the mains remain online. A "dry" tapping is one undertaken when the mains are offline.	
<b>Disinfection</b>	Inactivation or removal of pathogenic micro-organisms.	
<b>Dissolved Flotation (DAF) Air</b>	A process for incorporating air bubbles to induce separation of solids and impurities from the raw water or sewage stream.	
<b>Distribution main</b>	A water main serving as the principal distributor within the supply area, normally without direct consumer connections.	Trunk Distribution main
<b>Distribution network</b>	A combination (network) of larger diameter water mains necessary to ensure an adequate supply of water to, and within, reticulation networks (systems).	



Term	Definition	See Also
<b>Distributor-retailers</b>	Providers of water services to individual customers/groups of customers. Services to the South East Corner are specified in the South-East Queensland Water (Distribution and Retail Restructuring) and Natural Resources Provisions Act 2009 and service providers include Allconnex Water, Queensland Urban Utilities and Unitywater.	SEQ Service Providers (SEQ-SP)
<b>Diurnal pressure variation</b>	A daily variation in system pressure, at any location, between periods of high and low water usage (normally between day and night).	
<b>Domestic meter</b>	Meter on a residential service connection for the purpose of measuring water consumption and associated billing.	
<b>Drinking water</b>	Water that is suitable for human consumption, food preparation, utensil washing and oral hygiene.	Potable Water, Purified non-drinking water
<b>Dual Service</b>	Refer "Split Service"	Split Service
<b>Dual reticulation</b>	The supply of water from two separate sources, requiring two sets of pipes: one to provide drinking water (for drinking, cooking, bathing and laundry purposes); the other to provide appropriately treated non-drinking water (e.g. raw water or non-drinking water) for purposes such as toilet flushing, garden watering/irrigation and other external uses or industrial applications	
<b>Duplicate main</b>	An additional main, laid parallel to the original main (usually on the other side of the road), to service allotments that cannot be easily serviced from the original main.	Rider Main
<b>Dynamic pressure head</b>	When a pump is operating, vertical distance from a reference point (such as a pump centre line) to the hydraulic grade line.	Static head
<b>Easement</b>	A right held by one party to make use of the land of another for certain purposes.	
<b>Economic analysis</b>	Assesses the overall impact of a project on the local, regional or state economy.	
<b>Economically viable</b>	Evaluation of whether the gains from a project outweigh the costs of a project. Economic evaluation is undertaken from the perspective of the economy as a whole and does not differentiate between winners and losers	
<b>Effluent</b>	Treated or untreated liquid waste flowing from a sewage treatment plant or from agricultural and industrial processes.	
<b>Emergency</b>	A situation or occurrence that happens as a consequence of an incident and demands immediate action. A an 'emergency' is an incident that impacts on water quality, water supply reliability and/or public reassurance, and has an overall severity rating of Level 3, 4 or 5 under the severity classification approach outlined in this Plan.	
<b>Emergency management</b>	The emergency response function largely involving strategic command and external communications.	
<b>Emergency operating instructions</b>	Emergency Operating Instructions issued by the Water Grid Manager.	
<b>Emergency response plan</b>	A plan prepared by the Water Grid Manager or by a Grid Participant in accordance with the Market Rules.	
<b>Energy recovery device</b>	Including micro hydro or similar assets for generation of energy from water management	
<b>Engineered fill</b>	Fill that has been selected, placed and compacted to meet specified performance criteria	
<b>Environmental outcomes or impacts</b>	These include efficient resource use, environmental impacts, and environmental compliance.	
<b>Equivalent Person (EP)</b>	The water supply demand or the quantity and/or quality of sewage discharge for a person resident in a detached house. It is also applied to: <ul style="list-style-type: none"> <li>The number of persons who would have a water demand equivalent to the establishment being considered.</li> <li>The number of persons who would contribute the same quantity and/or quality of domestic sewage as the establishment being considered.</li> </ul>	

Term	Definition	See Also
<b>External water use / Demand</b>	Water used externally in activities such as garden watering or irrigation, car washing, filling swimming pools.	
<b>Event</b>	An occurrence or change of a particular set of circumstances.	
<b>Exercise</b>	An activity to practise or test plans and arrangements. This can involve a theory based approach such as discussion or desktop exercise, a practical approach such as a deployment exercise, or a combination of both.	
<b>Existing surface level</b>	Undisturbed ground surface, prior to adjustment as part of the development works.	
<b>Exposure</b>	Extent to which an organisation and/or stakeholder is subject to an event.	
<b>Fatigue de-rating</b>	An allowance made, during the design process, for the reduced pressure withstanding capability of products (particularly plastics) as a result of anticipated cyclic loadings within the system.	
<b>Fence</b>	A fence is a freestanding structure designed to restrict or prevent movement across a boundary, which includes posts or stakes joined together by boards, wire, or rails, gates (and automation equipment if automated) and locks.	
<b>Filter</b>	An asset that uses replaceable media or a replaceable cartridge to filter particles from a fluid (e.g. a pressure sand filter or a cartridge filter). Assets recognised as this type will include the filter media.	Filter Media
<b>Filter media</b>	Filter media is any media that is used to remove contaminants from water. It can include sand anthracite, garnet, manganese dioxide, granular activated carbon, dolomite and others depending on the type of application and is. Contaminants are removed through straining and/or absorption depending on the chosen media.	Filter
<b>Financial analysis</b>	Evaluates the financial viability of a project from the perspective of the service provider.	
<b>Financial viability</b>	A project is financially viable if the revenues from the project cover the project costs and earn a commercial return on investment. Financial evaluation is considered from the perspective of the project developer.	
<b>Fire flow demand</b>	Quantity of water required for fire fighting purposes often expressed as a flow rate for a particular time period or from particular locations in the water supply system.	
<b>Fire system</b>	This is an engineered set of components that work together to detect a fire, alert occupants, and extinguish a fire. It may include the fire control panel, smoke detectors, heat detectors, alarms, VESDA fire detection, CO2 fire suppression and dedicated fire pumps and pipework.	
<b>Fitting</b>	A component of a pipeline, other than a pipe, which allows pipeline deviation, change of direction or bore. In addition, valves, flanged-socketed pieces, flanged-spigot pieces, collars and couplings are also defined as fittings	
<b>Flexible joint</b>	A joint that permits limited, defined angular deflection, both during and after installation, and which can accept a slight offset to the centreline	
<b>Flexible pipe</b>	A pipe that relies primarily upon side support to resist vertical loads without excessive deformation. Flexible pipe materials include PVC, GRP, and PE.	
<b>Flowmeter</b>	A flowmeter is a device used for measuring flow through a particular point. A meter may be either a customer meter which is used to measure usage by an individual consumer, a network meter which is used by field operations to measure usage at a particular location on the network or a process meter to measure process flows at treatment plants. (Note measuring flumes are considered to be flowmeters).	Customer Meter
<b>Flushing point</b>	A specially designed flushing assembly, hydrant or scour.	Scour
<b>footpath</b>	A formed pavement for pedestrians, especially one at the side of a road in the footway.	Footway, verge
<b>footway</b>	A strip of land between the front boundary of a lot and the kerb or carriageway. It can include a footpath and is also known as nature strip (where it is not paved) or verge in some regions of Australia.	Carriageway, verge
<b>Frequency</b>	A specially designed flushing assembly, hydrant or scour.	
<b>Generator set</b>	An asset comprising a primary drive source (e.g. a diesel engine) and an alternator to generate electrical power.	

Term	Definition	See Also
<b>Gravity system</b>	A system wherein flow and/or pressure are caused by the force of gravity. There are two kinds of such systems: <ul style="list-style-type: none"> <li>• Pressurised gravity system, where the pipeline operates full, and</li> <li>• Non-pressurised gravity system, where the pipeline operates partially full[.]</li> </ul>	
<b>Greenhouse gas emissions</b>	Emissions of gasses defined by the national pollution inventory as a greenhouse gas including "carbon dioxide (CO <sub>2</sub> ), carbon dioxide equivalent (indirect), Methane(CH <sub>4</sub> ), nitrous oxide (N <sub>2</sub> O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulphur hexafluoride (SF <sub>6</sub> )".	
<b>Grid Customer</b>	A Customer of the Water Grid Manager as defined in Schedule 4 of the Water Act 2000.	
<b>Grid Instructions</b>	Instructions prepared by the Water Grid Manager and given to the Water Grid and Distribution Service Providers in accordance with the Market Rules.	
<b>Grid Participant</b>	An entity that is referred to in section 2.3 of the Market Rules.	
<b>Grid Participant risk</b>	A risk, the consequence of which is wholly contained within that Grid Participant in which the risk arises.	
<b>Grid Service Provider</b>	Has the meaning given in Schedule 4 of the Water Act 2000 and includes a Bulk Supplier, Bulk Transporter and/or Manufactured Water Provider.	
<b>Hazard</b>	A source of potential harm.	
<b>Head, H</b>	Pressure expressed in terms of the height of a column of water (in metres head). The head is a factor of 9.81 (nominally 10) lower than the equivalent value in kPa, e.g. 800 kPa @ 80 m head	
<b>Hold point</b>	A point beyond which an activity may not proceed without the approval of a designated organisation or authority	
<b>Hurdle rate</b>	The rate of return which is required to be demonstrated to be able to be met before a capital investment project should be commenced; i.e. It is the level of profitability which the proposed project is required to exceed (or "hurdled") to be accepted for development.	
<b>Hydrant</b>	A water hydrant is a special type of controllable fitting placed on trunk and reticulation mains for providing water for emergency use. There are two subtypes available – hydrant (spring) and offtake. The asset by definition includes its cover box.	
<b>Hydraulic Grade Line (HGL)</b>	A line (hydraulic profile) indicating the piezometric level of flow at all points along a conduit, open channel or stream. In pipes under pressure, each point on the hydraulic profile is an elevation expressed as the sum of the height associated with the pipe elevation and the pipe pressure (head).	
<b>Hydraulics</b>	The science that deals with the laws governing water or other liquids in motion and their applications in engineering.	
<b>Hydrology</b>	The science dealing with water on the land, or under the earth's surface, its properties, laws, geographical distribution, etc.	
<b>Incident</b>	Any occurrence within or caused by the Water Grid that has resulted in, or has the potential to result in adverse consequences to water supply, water quality, people, the environment, property, reputation or a combination of these and classified against a gradient from 1 to 5. Ongoing conditions that have the potential to result in adverse consequences and non-compliance with legal and regulatory requirements are also considered to be incidents.	
<b>Incident management</b>	The emergency response function largely involving managing the physical incident on-site.	
<b>Infrastructure leakage index</b>	The Infrastructure Leakage Index (ILI) is the ratio of the Current Annual Real Losses (CARL) to the Unavoidable Annual Real Losses (UARL).	
<b>Influent</b>	Liquid waste flowing into a treatment facility.	
<b>Internal rate of return</b>	The discount rate at which a project has a net present value of zero.	
<b>Internal water use / demand</b>	Water used internally in buildings and would also encompass any other water consumption that is not influenced by climate. This demand is assumed to remain unchanged by seasonal effects during the year.	
<b>Inherent robustness</b>	The degree to which the composition, design, location or function of a particular facility or asset would hinder the level of harm that could affect quality, supply, or both, depending on the threat being considered.	



Term	Definition	See Also
<b>Intake structure</b>	The facility which draws raw water into the water treatment plant. It may include multiple intakes and screens.	
<b>Interagency Operations Team</b>	An expert reference panel assembled by the Water Grid Manager or the Emergency Operations Team when required to provide technical, operational and risk assessment advice and recommendations on any aspect of managing a given emergency.	
<b>Joint</b>	A connection between the ends of two pipeline components including the means of sealing.	
<b>Key Risk</b>	A risk to the operation of the Water Grid and the achievement of Market Outcomes, including the meaning given in section 4.34 of the Market Rules.	
<b>K-value</b>	Colebrook-White roughness coefficient ; a measure of the interior roughness of a pipe.	
<b>Lake</b>	A natural water body including: <ul style="list-style-type: none"> <li>a lagoon, swamp or other natural collection of water, whether permanent or intermittent</li> <li>the bed and banks and any other element confining or containing the water[.]</li> </ul>	Dam, Weir
<b>Layout of main</b>	Nominal route of a main, generally shown in terms of specific roads, reserves and/or easements.	
<b>Least cost planning</b>	Least Cost Planning or Integrated Resource Planning aims to identify an appropriate balance between system operation/capacity expansion costs and the savings associated with programs aimed at increasing the efficiency of water use.	
<b>Lifecycle assessment(LCA)</b>	An environmental assessment of the overall mass balance of an option, from the production of raw materials to the ultimate disposal of all wastes.	
<b>Level of risk</b>	The magnitude of a risk or combination of risks, expressed in terms of the combination of consequences and their likelihood.	
<b>Lightning protection system</b>	An asset comprising lightning rods, conductors, ground electrodes to protect a structure from damage due to lightning strikes.	
<b>Likelihood</b>	The chance of something happening.	
<b>Lining</b>	Additional organic or inorganic material applied to the internal surface of a pipeline component at a specified thickness, which is intended to provide long-term protection from corrosion, mechanical damage and/or chemical attack. Such linings require special surface preparation and application techniques.	Coasting
<b>Local planning authority</b>	Local municipal council or local government body or appeals board authorised to administer or arbitrate government town planning legislation.	
<b>Lot</b>	A property for which a separate title may be held or issued, and which will be serviced by the water reticulation system.	Allotment, service connections
<b>Major water users</b>	Businesses that use more than 10 ML/a.	
<b>Manhole</b>	An opening with a cover which allows access to sewer mains. These include: <ul style="list-style-type: none"> <li>A standard manhole is an opening in a sewer allowing access by operators or equipment. It may also be called an access hole or maintenance hole.</li> <li>End manholes occur at the beginning of sewer line having only an outlet main and no inlet (other than a customer service). End manholes generally have no access lid but do have the ability to be modified should the sewer line be extended.</li> <li>Flume pits are the access points to flumes, which measure sewerage flow at that location; and</li> <li>Discharge manhole which is a manhole which receives the flow from a rising main.</li> </ul> <p>Note – a manhole may have more than one of the above characteristics.</p>	
<b>Market outcomes</b>	Adapted from section 3.2 of the Market Rules <ul style="list-style-type: none"> <li>ensure the efficient use of the Water Grid;</li> <li>facilitate water sharing across the SEQ Region and improvements in regional coordination of water supplies leading to greater water supply security for the SEQ Region;</li> <li>assist in achieving the desired levels of service objectives provided for in the</li> </ul>	

Term	Definition	See Also
	<p>Regional Water Security Program and the System Operating Plan; and</p> <ul style="list-style-type: none"> <li>ensure the costs of the Water Grid are shared amongst water users in the SEQ Region[.]</li> </ul>	
<b>Market Rules</b>	The Market Rules SEQ Water Market govern operational and commercial aspects of the South East Queensland Water Market, as they apply to all entities participating in the Water Market.	
<b>Maximum acceptable outage</b>	The maximum period of time that an organisation can tolerate the disruption of a critical business function before its ability to achieve its objectives is adversely affected.	
<b>Maximum day demand</b>	Refer "Peak day demand"	Peak Day demand
<b>Maximum design pressure</b>	Maximum operating pressure of the system or of the pressure zone as fixed by the Designer, considering future developments, all other foreseeable operating conditions and including an allowance for surge	
<b>Maximum hour demand</b>	Maximum demand which a system or part of a system is required to supply in any one hour of the year (also called peak hour demand). It is often expressed as a daily rate	Peak Hour Demand
<b>Mean day, maximum month</b>	The highest 30 day moving average daily water demand during a year.	
<b>Minimum design pressure</b>	<p>Lower limiting pressure that the Designer allows for in the design of a pipeline system. This pressure is selected to ensure:</p> <ul style="list-style-type: none"> <li>Acceptable minimum residual pressure for the types of development; and</li> <li>Acceptable range of residual pressures (between operating pressure limits)</li> </ul> <p>In the selection of pipe material, transient pressures below the minimum design pressure should be taken into account.</p>	
<b>Minimum static head</b>	The minimum required pressure (head), at zero flow, within a supply zone, being the difference between the maximum hydraulic gradient of the supply source (reservoir FSL, maximum operating HGL of a pump or maximum setting of a PRV) and the highest development/property to be supplied from that source.	
<b>Moderate water users</b>	Businesses that use between 1ML/a and 10 ML/a.	Major Water Users
<b>Net present value</b>	The discounted value of the expected benefits of a project, less the discounted value of the expected costs.	
<b>Network analysis</b>	A process of analysing a water supply system by using a computer software network modelling package. Also known as dynamic system analysis.	
<b>Network meter</b>	Flow meter for measuring water usage at a particular location in the network.	Flowmeter
<b>Nominal diameter (DN)</b>	A designation of size of a pipe or components of a pipeline system. It is indirectly related to the physical size, in millimetres, of the bore or outside diameter of the end connections.	Pipe Barrel/Pipe Bore
<b>Non-revenue water</b>	Components include real and apparent water losses and unbilled authorised consumption. Refer to IWA "best practice" standard approach to water balance calculations.	
<b>Non-drinking water</b>	Water that has been reclaimed from sewage and treated to a standard (as defined by the Regulator) for reuse.	Reclaimed Water
<b>Non-drinking water treatment plant</b>	Any processes required in addition to sewage treatment requirements to bring the sewage quality to a level appropriate for recycling to meet the customer needs. If the level required for recycling is equal or less stringent than that required for discharge, i.e. no additional treatment is required; this is not included as a non-drinking water treatment plant. A non-drinking water treatment plant takes sewage exclusively for recycling. In the event the treatment plant has a dual purpose (used both as a sewage treatment plant and as a non-drinking water treatment plant) then predominant use (>50 per cent) should be used to classify the plant to avoid confusion.	
<b>Odour control</b>	An asset used to remove odours from gases emanating from the sewer network. (Recognised separately and additionally to vents). Examples include activated carbon, odour scrubbers, biological odour control etc.	

Term	Definition	See Also
<b>Offset</b>	A distance specifying the location of the centreline of a pipeline, generally measured perpendicular from a title boundary.	
<b>Offtake</b>	An Offtake is the point of delivery from a Water Supply Scheme to an individual customer (or group of customers), being a pipe or channel through which water is taken from a stream, channel, bore or storage. An offtake may be a metered offtake or an unmetered offtake. This is distinctly different to a bulk supply point.	Bulk meter, Bulk supply point, Bulk supply sampling point
<b>Operating pressure (OP)</b>	Internal pressure that occurs at a particular time and at a particular point in a water supply system. For gravity systems, maximum operating pressure is the full supply level of the reservoir, less the lowest ground level applicable to the pipeline, plus surge. For pumped systems, maximum operating pressure is the greater of: <ul style="list-style-type: none"> <li>The surge HGL less the ground level, or</li> <li>The maximum pump suction HGL plus the no discharge head of the pump, less the lowest ground level</li> </ul> Minimum operating pressure is due to maximum headloss conditions i.e. minimum supply pressure to the zone combined with peak demand in the zone (maximum water velocity through the pipelines).	
<b>Operating pressure limit</b>	Maximum pressure to which the Water Agency will permit a pipeline of particular material and class to be subjected in service. It typically results in a de-rating of the pipe pressure class e.g. 1.2 Mpa for a Class 16 pipe.	
<b>Operating storage</b>	Amount of storage provided to accommodate diurnal fluctuations in demand and to cater for demands exceeding the maximum available inflow rate.	Balancing storage
<b>Overflow weir gate</b>	Movable barrier designed to control the flow of fluid over a weir (operated by adjusting the gate depth manually - without stop boards - or with an actuator).	
<b>Ozonation</b>	Process of water treatment wherein ozone is used to disinfect and remove iron, manganese and sulphides as part of the production of potable water. Ozonation is also used for disinfection of wastewater.	
<b>Package treatment plant</b>	Typically refers to a “standalone” facility which uses a range of processes to treat sewage from smaller communities or users.	
<b>Peak day demand</b>	Maximum demand in any one day of the year.	Maximum day demand
<b>Peak dry weather flow</b>	The most likely peak sanitary flow in a sewer during a normal day. It exhibits a regular diurnal pattern with morning and evening peaks.	
<b>Peak hour demand</b>	Peak hour demand that a system will be called on to supply.	Maximum Hour demand
<b>Peak wet weather flow</b>	Includes peak dry weather flow, groundwater infiltration and rainfall dependent infiltration.	
<b>Penstock</b>	An asset used to control the flow of fluid in a channel or through a large opening in a tank.	Valve
<b>Per capita consumption</b>	An estimate of the water usage in a community, including residential, industrial and commercial, determined by dividing the total water used by the number of persons using it. It is the average amount of water used by a person within a given period of time and is most commonly expressed in units of litres per capita per day.	
<b>Permanent Water Conservation Measures (PWCM)</b>	Long-term water conservation measures designed to embed the efficient use of water into the everyday lives of the community.	
<b>Pipe</b>	A pipeline component of uniform bore, normally straight in axis, having socket, spigot or flanged ends.	Pipeline
<b>Pipe – bedding and backfill</b>	All materials used to ensure the integrity of the pipeline in-situ including the following <ul style="list-style-type: none"> <li>Foundation material – the naturally occurring or replaced material beneath the bedding:</li> <li>Support Layer- Haunch and Side support for the pipeline</li> <li>Overlay – the zone between the side support and either the trench fill or embankment fill</li> <li>Backfill – material used to fill an excavation</li> </ul>	
<b>Pipe barrel/pipe bore</b>	Internal cylindrical part of the pipe with a uniform cross section excluding socket and spigot or flanges where relevant.	Nominal diameter (DN)

Term	Definition	See Also
<b>Pipe cracking</b>	A method of in-situ installation of pipework using the existing conduit as a pilot hole. Pipe cracking typically comprises use of a percussive tool or hydraulic expander to break out an existing pipe with a new pipe being pulled or jacked in behind it.	
<b>Pipeline</b>	The network of enclosed passive assets which convey water from one part of the grid to another. This includes all bulk mains, raw water mains, potable water mains, trunk and large distribution mains.	Pipe
<b>Potable reuse</b>	Treatment of non-drinking water to a very high standard for return to the drinking water supply. Indirect potable reuse would see the non-drinking water returned to a waterway or reservoir upstream of the water treatment plant. Direct potable reuse would involve the direct injection of non-drinking water into the water supply network.	
<b>Potable water</b>	Refer "Drinking water"	Drinking Water
<b>Power factor correction unit</b>	An asset used to correct the power factor of an electric power system (linear loads). Refer also to electrical filters for power factor correction of non linear loads	
<b>Power system</b>	Includes main supply, distribution, diesel backup generators, hydro and solar power generators.	
<b>Pressure creep</b>	A tendency for pressure, which is normally controlled at a particular upper level, to rise toward a potential maximum pressure when conditions necessary for the control are reduced. Examples of this effect in pipelines are: <ul style="list-style-type: none"> <li>The pressure increase when flow rates reduce to less than the usual (designed) minimum</li> <li>The pressure increase downstream of a PRV when the flow rate reduces to less than that required for the PRV to operate effectively</li> </ul>	
<b>Pressure Sewerage main</b>	A low pressure network for sewage transportation	
<b>Pressure surge</b>	Refer "Surge".	Pulsation dampner, Surge
<b>Pressure zone</b>	A reticulated supply area connected to a controlled water pressure source (typically a service reservoir or tank), covering a limited area and range of elevations to enable supply within a range of minimum and maximum operating pressures.	
<b>Programmable Logic Controller (PLC)</b>	Programmable logic controller, including all IO modules and integral (PLC rack mounted) protocol converters. If self contained, will include the cabinet, power supply and other cabinet ancillaries.	
<b>Property service</b>	Portion of a property water service from main to meter location.	Service Pipe
<b>Public reassurance</b>	Used in the Risk Management Plan to refer to the confidence of the general public in the quality and security of the water supply, and in the ability of the Water Grid and Grid Participants to deliver their contracted services.	
<b>Pulsation dampener</b>	A device used to reduce pressure surges caused by piston or diaphragm type pumps.	Surge
<b>Pump</b>	An asset that uses an external power source (typically electricity) to drive fluid through a network. Pumps can be recognised as one asset or as a separate pump and motor	
<b>Pumped and gravity system</b>	A system where gravity and pumping are used, either separately or in combination, to provide flow and/or pressure	
<b>Pumped system</b>	A system where flow and/or pressure are provided by means of one or more pumps and where the pipe(s) operate full	
<b>Pumping station</b>	Includes water (both bulk and distribution) and sewerage: <ul style="list-style-type: none"> <li>Water pump stations comprise both mechanical and electrical equipment to assist in the movement and taking of water.</li> <li>Sewage pump stations comprise mechanical and electrical equipment to assist in the transportation of sewage</li> </ul>	Sewerage pump station, Water pump station
<b>Purified non-drinking water</b>	Sewage that has been treated to a very high standard.	Drinking Water, Potable Water
<b>Purified non-drinking water plant</b>	Refer "Advanced water treatment plant"	Advanced Water Treatment

Term	Definition	See Also
		plant
<b>Rainfall dependent inflow/infiltration</b>	Peak (rainfall dependent) inflow and infiltration. This includes flow discharges into the sewer from: <ul style="list-style-type: none"> <li>unauthorised roof, ground or stormwater drainage</li> <li>leaking manhole covers</li> <li>disconnected sewers</li> <li>low disconnecter traps.</li> <li>indirect infiltration of rainwater entering defective pipes and joints from the surrounding soil.</li> </ul>	
<b>Rainwater tanks</b>	Tanks used to collect and store rainfall from household roofs for beneficial use	
<b>Rated pressure</b>	Refers to the operating (allowable) internal pressure of a vessel, tank, or piping used to hold or transport.	Allowable Operating Pressure (AOP)
<b>Raw Water</b>	Water that forms the source supply for drinking water before it has been treated	
<b>Raw water distribution chamber</b>	A chamber to split the raw water to multiple clarifiers / basins. May have gates or valves to control the flow.	
<b>Raw water pipeline</b>	A pipeline which draws raw (untreated) water into a treatment plant for the production of potable water.	
<b>Reclaimed water</b>	Sewage that has been recently treated to a standard sufficient to enable it to be recycled for some specific use	Non-drinking water
<b>Recovery point objective</b>	The capability at a pre-event point in time to which systems, operations and capacity must be recovered after an event.	
<b>Recovery time objective</b>	The period of time required to fully re-establish adequate resources to recover a critical activity, process, function or other capability to a required minimum operational level.	
<b>Reduced level (RL)</b>	Elevation of a point or mark related to a nominated datum (metric or imperial). Some water agencies may use the term EL for metric RL's.	
<b>Remote Terminal Unit (RTU)</b>	An electronic hardware device used to collect, process and transmit SCADA data and signals at a site.	
<b>Reserve storage</b>	Amount of storage provided to cater for some continuing supply in the event of a system component failure and depletion of the operating storage.	
<b>Reserve Storage Level (RSL)</b>	Top level of the reserve storage.	
<b>Reservoir</b>	A structure which provides storage of potable water within the water network. Includes the following assets types: <ul style="list-style-type: none"> <li>Ground level reservoirs</li> <li>Elevated reservoirs (e.g. water towers)</li> <li>Bulk drinking water storage supplying to transfer and/or distribution mains, and</li> <li>A tank or similar storage supplying to a reticulation zone[.]</li> </ul>	Dam, Weir
<b>Residential Excessive Water Users Compliance Program (Excessive Users Program)</b>	Program focused on households using more than 800 litres per day (for High Level Restrictions), more than 1000 litres per day (for Medium Level Restrictions) and more than 1200 litres per day (for PWCM). Households are alerted to their high volume water use and provided with information and assistance on how to reduce consumption.	
<b>Residual risk</b>	The risk remaining after risk treatment.	
<b>Resilience</b>	Adaptive capacity of an organisation in a complex and changing environment.	
<b>Reticulated water supply</b>	Water supply network that provides a piped water supply to each dwelling, commercial or industrial premises	
<b>Retrofit customers</b>	Businesses required to install water-efficient devices (shower heads, urinals etc).	
<b>Review</b>	A process of comparing existing plans and arrangements with the current environment to ensure these plans and arrangements remain valid and appropriate.	



Term	Definition	See Also
<b>Rider main</b>	An additional main laid parallel to a transfer or distribution main to provide for service connections. Typically a rider main is provided alongside a trunk main where the distributor/retailer does not allow direct tapping of connections to the trunk main.	Duplicate Main
<b>Rigid pipe</b>	A pipe that supports vertical loads primarily by virtue of its inherent resistance to bending or deformation as a ring; when rigid pipes are used, flexible joints must be used to ensure that the pipeline installation is flexible. Pipe types include VC, RC, steel and DI.	
<b>Rising Main</b>	The main which conveys sewer through the network from pump station to discharge manhole	
<b>Risk</b>	The chance of something happening that will have an impact on objectives. It is measured in terms of the consequences of an event and their likelihood. (ISO 31000:2009 'Risk management'.)	
<b>Risk acceptance</b>	Informed decision to take a particular risk.	
<b>Risk action owner</b>	The entity responsible for delivery of a particular action that will manage a particular risk. There may be multiple Risk Action Owners assigned actions to manage a single risk.	
<b>Risk action plan</b>	The detailed plan on how a particular risk is to be managed, including risk treatments, resources, timelines and responsibilities.	
<b>Risk aggregation</b>	The combination of several risks into one risk to develop a more complete understanding of the overall risk.	
<b>Risk analysis</b>	The process to comprehend the nature of risk and to determine the level of risk.	
<b>Risk appetite</b>	Amount and type of risk that an organisation is willing to pursue or retain.	
<b>Risk assessment</b>	The overall process of risk identification, risk analysis and risk evaluation.	
<b>Risk avoidance</b>	An informed decision not to be involved in, or to withdraw from, an activity in order not to be exposed to a particular risk.	
<b>Risk evaluation</b>	The process of comparing the results of risk analysis with risk criteria to determine whether the risk and/or its magnitude are acceptable or tolerable.	
<b>Risk identification</b>	The process of finding, recognising and describing risks.	
<b>Risk management</b>	Coordinated activities to direct and control an organisation with regard to risk.	
<b>Risk management plan</b>	A scheme within the Risk Management Framework specifying the approach, the management components and resources to be applied to the management of risk.	
<b>Risk management process</b>	The systematic application of management policies, procedures and practices to the activities of communicating, consulting and establishing the context, and identifying, analysing, evaluating, treating, monitoring and reviewing risk.	
<b>Risk owner</b>	Person or entity with the accountability and authority to manage a risk.	
<b>Risk retention</b>	Acceptance of the potential benefit of gain, or burden of loss, from a particular risk.	
<b>Risk sharing</b>	A form of risk treatment involving the agreed distribution of risk with other parties.	
<b>Risk tolerance</b>	An organisations readiness to bear the risk after risk treatment in order to achieve its objectives.	
<b>Risk treatment</b>	Process to modify risk.	
<b>Sampler</b>	A device to automatically retrieve a process sample based on an external input. The asset may include a refrigerated sample storage facility.	
<b>Scheme</b>	An aggregation of water assets such as pipelines, pump stations, reservoirs, dams etc that operate conjunctively to transport or supply water services.	
<b>Scour</b>	An assembly of valves and fittings installed at low points in the network and used for dewatering a portion of pipeline for operational or maintenance purposes.	Flushing Point
<b>Sedimentation Basin</b>	Any facility designed to allow gravity settling of solid particles from a liquid stream.	
<b>SEQ</b>	South East Queensland.	
<b>SEQ Service Provider (SEQ –SP)</b>	Providers of water services to individual customers/groups of customers. Services to the South East Corner are specified in the South-East Queensland Water (Distribution and Retail Restructuring) and Natural Resources Provisions Act 2009 and service providers include Allconnex Water, Queensland Urban Utilities and Unitywater.	
<b>SEQWGM</b>	South East Queensland Water Grid Manager	

Term	Definition	See Also
<b>Service connection</b>	The number of metered accounts, minus the total of any sub-meters (after master meters e.g. to shops and flats), plus the estimated number of unmetered service connections (e.g. fire service connections). The number of service connections is not the same as the number of metered accounts or connected properties.	Allotment, Lot
<b>Service pipe</b>	A water pipe that supplies water from the reticulation main to the consumer. The portion of the service pipe under the control of a Water Agency generally terminates at the water meter, or in the case of fire services, the isolating valve of the fire protection system.	
<b>Service water system</b>	May include service water pumps, surge vessels and an elevated service water tank for filter backwashing.	
<b>Service pressure</b>	Internal pressure delivered at the point of connection to a consumer's installation at zero flow in the service pipe. Service pressure does not include surge pressure	
<b>Sewage</b>	The waste matter which passes through sewers.	
<b>Sewage pump station</b>	Sewage pump stations comprise mechanical and electrical equipment to assist in the transportation of sewage.	Pumping station
<b>Sewage treatment plant</b>	A facility for the treatment of effluent to meet environmental licence obligations.	
<b>Sewerage</b>	The sewerage system comprises the pipes, pumps and plan needed to collect, transport and treat sewage	
<b>Sewerage reticulation</b>	Sewage collection and transport network	
<b>Shared trenching</b>	Simultaneous installation of two or more services in one common trench.	Common trenching
<b>Sludge drying bed</b>	Shallow ponds which allow for dewatering (drying) of sludge volumes.	
<b>Sludge hopper</b>	A chamber or container that collects discharged sludge for disposal or beneficial reuse.	
<b>Sludge Lagoon</b>	A natural storage used for settling of sludge.	
<b>Sludge pond</b>	An engineered storage with concrete base/sides or a plastic liner used for settling of sludge.	
<b>Sludge press</b>	Refer "Belt press".	Belt Press
<b>Smart Sewers</b>	Systems designed to modified design criteria which take advantage of modern materials and design and construction approaches to produce a lower cost collection system without any loss in the quality of service to customers.	
<b>Socket</b>	The end of the pipe or pipe fittings with an enlarged internal diameter for the reception of the plain or spigot end of another pipe fitting.	
<b>Specifications</b>	Precise standards of performance for construction work, materials and manufactured products. Specifications make it possible to express expected values when work or items are purchased or contracted for, and they provide means of determining conformance with expectations after purchase or construction.	
<b>Spigot</b>	The plain or specifically formed end of a pipe fitting for insertion in a socket or coupling to form a joint.	
<b>Split service</b>	A service pipe that divides into two services to provide on-property connection points for two properties from a single connection at the water main.	Dual Service
<b>Spray system</b>	A system of sprinklers spraying water onto a bed of limestone gravel.	
<b>Spring line</b>	Projection of the horizontal centreline to the walls of a pipe.	
<b>Stakeholder</b>	Stakeholders include persons or groups who will define, constrain, influence or decide on planning options and all those affected through implementation of the planning recommendations to those using or receiving the resulting services.	

Term	Definition	See Also
	Key stakeholder groups will include customers, business owners, and regulators. For most planning exercises, “environmental representatives”, the “community” and the “service provider” will be stakeholders. A “stakeholder” may also be defined as anyone who directly or indirectly receives the benefit, or sustains the costs, resulting from the implementation of a project. Primary stakeholders are those stakeholders that will be closely linked to a particular aspect or phase of the planning or asset lifecycle. These primary stakeholders may change over the planning or asset lifecycle	
<b>Standards</b>	<p>Dependant on its usage Standards is defined as:</p> <ul style="list-style-type: none"> <li>• Documents that specify the minimum acceptable characteristics of a product or material, a test procedure, an installation method etc., issued by an organisation that develops such documents e.g. Standards Australia. Such standards may or may not be used as (or called) specifications</li> <li>• A set numerical limit e.g. a contaminant limit set by a regulatory agency</li> </ul>	
<b>Static head</b>	When water is not moving, vertical distance from a specific point in the water/pipeline to the free water surface.	Dynamic Pressure Head
<b>Stormwater drainage</b>	Includes open drains, road culverts and underground pipe drainage.	
<b>Structure</b>	Refers to structural assets that are not buildings, chambers, manholes, tanks, reservoirs, walkways, roads, ladders, power poles or fences which each have their own asset category. Examples of structures could include bridges, monopoles, lattice towers and guyed poles. (the sewer network recognises piers and concrete stops as structures).	
<b>Supply Chain</b>	The end-to-end value chain (through chain) encompassing the supply, process and distribution chains, including information, knowledge and financial flows.	
<b>Surge</b>	A rapid fluctuation of pressure caused by flow alteration over a short period of time.	Pressure Surge, Pulsation Dampner
<b>Surge pressure</b>	A short-duration pressure increase caused by a sudden movement of water from such causes as a directional change in flow, the starting or stopping of a pump, and opening or closing of a valve or hydrant.	Water Hammer
<b>Switchboard</b>	Can also be referred to as a motor control centre. Some components of switchboards are recognised as separate assets e.g. circuit breakers (and other starters) , electrical filters, power factor correction units, plc's, radios and local power distribution.	
<b>System</b>	A combination of elements that together makes up a functioning water supply.	
<b>System Control and Data Acquisition (SCADA)</b>	An electronic supervisory control and data acquisition system for compiling water system operations data and enabling automatic and remote control/operation of specific facilities.	
<b>System planning</b>	A process of examining the present, recognising trends, making projections and developing plans to ensure water supply systems have the capability to achieve agreed customer, stakeholder and regulator outcomes.	
<b>Tank</b>	Refers to all types of non pressurised tanks, including bins, hoppers, holding tanks, intermediate bulk containers used for the storage of a liquids and solids. Note that water and recycle water storage reservoirs and water towers are recognised as a reservoir asset type. Refer also to buildings, structures, reservoirs, manholes and chambers for additional information, silo's are recognised as a tank asset type. Pump station wet wells are tanks, pump station dry wells are chambers.	
<b>Technical coordination</b>	The emergency response function largely involving coordinating whole-of-Grid operations and support. It will often involve the use of Grid Instructions and Emergency Operating Instructions.	
<b>Telemetry system</b>	Site-to-site communication system via radio, microwave or mobile phone technology. Includes the Remote Terminal Unit (RTU) even if the RTU performs a control function at small sites.	
<b>Temperature de-rating</b>	An allowance made, during the design process, for the reduced performance of products (particularly plastics) as a result of anticipated operating temperatures above 20°C within the system.	

Term	Definition	See Also
<b>Test pressure</b>	Hydrostatic pressure applied to a newly laid pipeline in order to demonstrate its integrity and tightness. This pressure may be greater than the operating pressure limit of a pipeline for a relatively short duration.	
<b>Trade waste</b>	Water borne waste from business, trade or manufacturing premises other than waste that is a prohibited substance or human waste or stormwater.	
<b>Treated effluent</b>	Aqueous waste flowing from sewage treatment plants or agriculture and industry processes, that has been treated to improve its quality.	
<b>Traverse line</b>	A survey line fixed on the ground consisting of several connected lines of known length which meet at measured angles or bearings, and used for setting out the location of a proposed water main.	
<b>Treated water delivery pump</b>	Used for transferring treated water to an off-site reservoir. Occasionally used for backwashing at small plants.	Treated Water pump
<b>Treated water pump</b>	Used for transferring treated water to an on-site reservoir.	Treated Water Delivery Pump
<b>Treated water reservoir</b>	Any structure used to store large volumes (i.e. >1ML) of <u>potable</u> water. May be underground, on ground, elevated on a tower/support structure, or wineglass with a tapered concrete structure.	Clear Water Chamber
<b>Triple bottom line</b>	An integrated approach to the achievement of environmental, social and economic outcomes.	
<b>Trunk distribution main</b>	Water mains owned by LinkWater which distribute bulk potable water from SEQWater (as the point of supply) to the Distribution Retailers (as the point of delivery of bulk potable water).	
<b>Trunk main</b>	(Pipelines). The network of enclosed passive assets which convey water from one part of the grid to another. This includes ALL bulk mains, raw water mains, potable water mains, trunk and large distribution mains.	Bulk pipeline
<b>Underground services</b>	Underground assets, including those owned by other authorities or companies, e.g. gas, telecommunications and electrical.	
<b>Uninterruptible power supply</b>	An uninterruptible power supply is an electrical apparatus that provides emergency power to a load when the input power source fails. It includes all chargers, batteries, inverters and autotransformers associated with a particular ups.	
<b>Unplanned water supply interruption</b>	Occurs when the customer has NOT received at least 24 hours notification of the interruption (or as otherwise prescribed by regulatory requirements). It also includes situations where the duration of a planned interruption exceeds that which was originally notified. In this circumstance the length of the entire interruption is counted. All un-notified interruptions caused by third parties should be included.	
<b>Useable capacity</b>	Operating storage plus reserve storage (of a service reservoir).	
<b>Vacuum sewerage</b>	A system in which all sewage is conveyed by a vacuum in the sewage collection network.	
<b>Valve</b>	A mechanical device used for stopping or regulating flow and controlling pressure e.g. gate valve, isolating valve, control valve, pressure reducing valve, air valve and hydrant.	
<b>Valve - air (gas)</b>	Air valves encompass air release, vacuum release and combined air / vacuum release. For ease of reference, valves to remove other gasses from pipelines or tanks are also recognised under this asset type.	
<b>Valve - control</b>	Control valves include flow control, pressure control (sustaining or reducing), pressure relief, altitude. They are used to control the flow rate through a flow meter or in a pipe (e.g. pump start / stop control to prevent surges), automatically close the inlet to a storage tank, relieve the pressure in mains, control the pressure in mains to preset limits. The small isolation valves on hydraulic valve control pipework are considered part of the control valve.	
<b>Valve - non return</b>	Also called reflux or check valve. Used to ensure fluid flows in one direction only (note backflow devices are a special type of non return valve that are recognised separately because of their specific maintenance management needs - refer backflow prevention device). Note that some pump control valves include a non return function to prevent surges etc. In this case judgment will be needed whether to consider the valve a valve, a control valve or non return valve.	Backflow prevention device

Term	Definition	See Also
<b>Vent pipe</b>	Vent pipes connect the sewer mains to a vent.	
<b>Vent pole</b>	An outlet to allow potentially dangerous gases to escape from the sewer network. Includes vertical risers and non motorised ventilation equipment. Mechanical fans and odour control assets will be recognised separately.	
<b>verge</b>	Areas between the boundaries of a road reserve and the carriageway. This term is usually applied where there are no formed footways	Footpath, footways
<b>VPM</b>	Volumetric Point Measurement. Each VPM monitors the volume of water measured by the bulk supply meters located within the Water Grid.	
<b>Vulnerability</b>	In a security context, vulnerability is a measure of the likelihood that various types of security/control measures (physical, personnel, policies, etc.) against a threat source will fail. Vulnerability comprises 'resilience' and 'susceptibility'. Resilience is related to existing controls and susceptibility is related to exposure.	
<b>Wastewater</b>	The dirty water or sewage that goes down the drains of homes, offices, shops, factories and other premises discharged into the sewerage system. Also known as sewage.	
<b>Wastewater discharge pipeline</b>	A pipeline that transports treated effluent from the plant to the point of discharge to the environment. This is not for sewage.	
<b>Water Act</b>	The Water Act 2000 (QLD).	
<b>Water Agency</b>	An authority, board, business, corporation, council or local government body with the responsibility for planning or defining planning requirements, for defining and authorising design requirements, for defining and authorising construction requirements and for operating and maintaining or defining operation and maintenance requirements for a water supply and/or sewerage system or systems.	
<b>Water distribution system</b>	Part of the water supply system comprising pipelines, service reservoirs, pumping stations and other assets by which water is distributed to the consumers. It generally begins at the outlet of a water treatment works (or source, if there is no treatment) and includes the reticulation system.	Water supply system
<b>Water grid</b>	The water supply and transport infrastructure that supplies water to South East Queensland. Managed by the Water Grid Manager.	
<b>Water hammer</b>	Any sudden pressure head change in a pipe caused whenever the velocity in the pipe is changed from one steady state condition to another (commonly caused by stopping flow too rapidly). It is often characterised by pipe movement or noise.	Surge Pressure
<b>Water pump station</b>	Water pump stations comprise both mechanical and electrical equipment to assist in the movement and taking of water.	Pumping Station, Sewerage Pumping Station
<b>Water quality</b>	The chemical, physical and biological condition of water.	
<b>Water quality management facility</b>	Water quality facility which incorporates dosing and which may also be referred to as a water quality facility, water quality station or a dosing station.	
<b>Water quality monitoring point</b>	Water quality facility which is only for the purpose of monitoring (either automatic or manual) i.e. no dosing. May also be referred as a water quality station or measuring point.	
<b>Water sensitive urban design</b>	The integration of urban planning with the management, protection and conservation of the urban water cycle that ensures urban water management is sensitive to natural hydrological and ecological processes.	
<b>Water sensitive urban development</b>	An holistic approach to planning, design and construction of water supply, sewerage, rainwater and stormwater systems for urban communities. Underpins sustainable development by improved efficiency in water use through optimised storage, distribution, use, diversion, loss reduction, treatment and recycling.	
<b>Water service</b>	Refer "Service pipe".	Service Pipe
<b>Water Supply Emergency Declaration</b>	A Water Supply Emergency Declaration made in accordance with section 25B of the Water Act 2000.	



Term	Definition	See Also
<b>Water supply system</b>	Potable water supply to plant buildings, lab etc. Also known as "domestic" water supply. May also provide "service water" in small plants where there is not a separate Service Water System. May include Water Supply Pumps or Surge Vessels.	Water distribution system
<b>Water treatment plant</b>	Any facility that treats raw or partially treated water to a potable standard for delivery to customers. Water treatment plants that provide disinfection and/or fluoridation only should be classified as "Water quality management facilities".	Water quality management facility
<b>WaterHub</b>	Refers to a centralised data processing, information storage and retrieval system that will provide easy access to relevant, consistent, timely and accurate water data across South East Queensland.	
<b>Weir</b>	A structure usually of concrete, across a stream to impound water with any water flowing over the crest.	Dam, Lake
<b>Well field</b>	Well field is a protected tract of land (surface and subsurface) which contains one or more wells for supplying potable water to the public.	
<b>WEMP</b>	Water Efficiency Management Plan.	
<b>Work As Executed</b>	Documentation showing details of work as actually constructed (in contrast to Design Drawings).	
<b>Working pressure</b>	Internal pressure that occurs at a particular time and at a particular point in a water supply system. For gravity systems, maximum operating pressure is the full supply level of the reservoir, less the lowest ground level applicable to the pipeline, plus surge. For pumped systems, maximum operating pressure is the greater of: <ul style="list-style-type: none"> <li>• The surge HGL less the ground level, or</li> <li>• The maximum pump suction HGL plus the no discharge head of the pump, less the lowest ground level</li> </ul> Minimum operating pressure is due to maximum headloss conditions i.e. minimum supply pressure to the zone combined with peak demand in the zone (maximum water velocity through the pipelines)	

## Abbreviations

ADD	Average Day Demand
ADWF	Average Dry Weather Flow
AWA	Australian Water Association
CR	Character Residential
CSS	Customer Standards of Service
DERM	Department of Environment and Resource Management
DMA	District Metered Area
DOF	Depth of Flow
DSS	Desired Standards of Service
EC	Emerging Communities
EP	Equivalent Persons
ET	Equivalent Tenement
GWI	Ground Water Infiltration
HDR	High Density Residential
HGL	Hydraulic Grade Line
HR	High Residential
LDR	Low Density Residential
LMR	Low Medium Residential
LR	Low Residential
MAJ	Major Users
MD	Max Day
MDMM	Mean Day Maximum Month
MH	Maximum Hour
MNR	Minor Non-Residential
MOL	Minimum Operating Level
MR	Medium Residential
NRW	Non Revenue Water
PD	Peak Day
PDD	Peak Day Demand
PDWF	Peak Dry Weather Flow
PH	Peak Hour
PWWF	Peak Wet Weather Flow
RDF	Rain Dependent Inflow
RU / RUR	Rural
RW	Recycled Water
SCADA	Supervisory Control and Data Acquisition
WD	Water Distribution
WSSCI	Water Supply System Service Capacity Improvement
WSZ	Water Supply Zone