

## Appendix 3: Glossary

**ABC** means the Australian Broadcasting Corporation.

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**ACCESS forecast** means a Bureau of Meteorology forecast obtained from the Australian Community Climate and Earth-System Simulator.

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**Aeromedical services** means the use of helicopters and fixed wing aircraft to assist in medical situations (e.g. to transport patients in isolated areas to hospital).

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**AgForce Queensland** is a peak organisation representing Queensland's rural producers (adapted from AgForce website [www.agforceqld.org.au](http://www.agforceqld.org.au)).

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**ALERT** means Automated Local Evaluation in Real-Time which is a system of monitoring and displaying rainfall and water level data. It is a combination of field stations, communications networks and data collection software.

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**All Hazards Information Management System** is an information system that supports logistical planning and integration of major incident co-ordination, response and recovery activities.

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**Annual Exceedance Probability (AEP)** means the chance of a flood of a given or larger size occurring in any one year, usually expressed as a percentage. For example, if a peak flood discharge of 500m<sup>3</sup>/s has an AEP of 5%, it means that there is a 5% chance (1 in 20 chance) of a 500m<sup>3</sup>/s or larger event occurring in any one year (see ARI).

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**Appliance** is a term used by the fire service when referring to a vehicle used in its firefighting operations. Specific types of appliances include aerial ladder platforms, pumper tankers and fire command vehicles.

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**Australian Bureau of Meteorology (the Bureau)** is Australia's national weather, climate and water agency.

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**Australian Height Datum (AHD)** means a common national surface level datum approximately corresponding to mean sea level.

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**Australian National Committee on Large Dams (ANCOLD)** is an incorporated voluntary association of organisations and individual professionals with an interest in dams in Australia (taken from [www.ancold.org.au](http://www.ancold.org.au)).

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**Auxiliary firefighter** is a paid part-time firefighter, located in regional communities across Queensland.

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**Average Recurrence Interval (ARI)** means the long term average number of years between the occurrence of a flood as big as, or larger than, the selected event. For example, floods with a discharge as great as, or greater than, the 20 year ARI flood event will occur on average once every 20 years. ARI is another way of expressing the likelihood of occurrence of a flood event.

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**Calibrate** (with respect to a hydrologic and hydraulic model) means the checking of values derived from the model against physical measurements. This is achieved by adjusting parameters, within an acceptable range and in a consistent manner, to best fit the physical measurements.

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**Catchment** is the land area draining through the main stream, as well as tributary streams, to a particular site. It always relates to an area above a specified location.

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**Cells on Wheels (COWs)** are temporary mobile base stations used by Telstra to provide temporary coverage if a mobile site was lost during the 2010/2011 floods.

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**Co-ordination centre** is a centre established at state, district or local government level as a centre of communication and co-ordination in times of disaster.

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**Council** is a local government as defined in the *Local Government Act 2009*. The terms council and local government are used interchangeably in this report.

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**Councillor** is an elected official of a local government (council), including the mayor.

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**Council of Australian Governments (COAG)** is Australia's peak intergovernmental forum which comprises the Prime Minister, Premiers and Chief Ministers.

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**DERM** is the Queensland Department of Environment and Resource Management.

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**Disaster district** is a part of the state prescribed under a regulation as a disaster district (*Disaster Management Act 2003*).

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**Disaster management** includes activities undertaken before, during or after an event to help reduce loss of human life, illness or injury to humans, property loss or damage, or damage to the environment, including, for example, activities to mitigate the adverse effects of the event (*Disaster Management Act 2003*).

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**Disaster management group** may refer to the state group, a district group or a local group.

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**Disaster management guidelines** are the guidelines prepared by Emergency Management Queensland to assist disaster groups prepare disaster management plans, and matters to be included in plans (*Disaster Management Act 2003*).

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**Disaster response** is the taking of measures to respond to a disaster before, during and immediately after its onset including; issuing warnings, providing medical assistance, evacuating people and establishing emergency food and shelter (*Disaster Management Act 2003*).

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**Discharge** is the rate of flow of water measured in terms of volume per unit time, for example, cubic metres per second (m<sup>3</sup>/s). Discharge is different from the speed or velocity of flow, which is a measure of how fast the water is moving.

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**District disaster co-ordinator (district co-ordinator)** is a person appointed to co-ordinate disaster operations in the disaster district (*Disaster Management Act 2003*). The district disaster co-ordinator is also the chairperson of the district group.

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**District disaster management group (district group)** is a disaster management group established to perform disaster management activities in the district (*Disaster Management Act 2003*).

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**District disaster management plan (district plan)** is the disaster plan prepared by a district disaster management group (*Disaster Management Act 2003*).

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**Emergency service unit** is established in rural and remote locations and is staffed by volunteers. It performs the functions of an SES unit, fire prevention and/or fire-fighting work (*Disaster Management Act 2003*).

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**ESCAD** means Emergency Service Computer Aided Despatch system used by the Department of Community Safety (fire and ambulance officers).

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**ESCORT** means the Emergency Services Communications and Operational Response Tasking computer despatch system used by the Queensland Police Service.

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**Essential services** encompass the provision of electrical power, drinking water and telecommunications.

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**Flash flood** is usually the result of intense local rain and characterised by rapid rises in water-levels.

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**Flood engineer** means one of the four engineers who operated Wivenhoe, Somerset and North Pine dams from the flood operations centres in flood events throughout the 2010/2011 wet season.

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**Flood event** (with regard to Wivenhoe, Somerset or North Pine dams) means a situation where the flood engineer on duty expects the water level in Wivenhoe, Somerset or North Pine dams to exceed the full supply level.

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**Flood operations centre** means the location used by flood engineers during a flood event to manage Wivenhoe, Somerset and North Pine dams.

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**Floodplain** is a geological term meaning a low plain adjacent to a river that is formed chiefly of river sediments and is subject to flooding. .

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**Freeboard** (with regard to dams) means the height between the water level at a dam and the top of a dam wall.

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**Full supply level (FSL)** means the level of the water surface when the reservoir is at maximum operating level, excluding periods of flood discharge.

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**Fuse plugs** are sections of embankment at a dam which are designed to erode when the water level reaches a certain height to increase releases from the dam.

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**Gauge** is a tool which takes measurements of, for example, rainfall or river height.

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**Hydrodynamic (hydraulic) model** uses data about the flow in streams and the terrain of a particular area to estimate flood heights, velocities and flow over time. In order to do this the hydrodynamic model solves the equations for the conservation of mass and momentum/energy.

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**Hydrologic model (runoff routing model)** uses rainfall data and estimates of the proportion of the rainfall which turns into runoff and the time which the runoff from each part of the catchment takes to flow into the stream to estimate flow in the stream over time.

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**Hydrology** is the term given to the study of the rainfall and runoff process; in particular, the evaluation of peak flows, flow volumes and the derivation of hydrographs for a range of floods.

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**La Niña** refers to the extensive cooling of the central and eastern Pacific Ocean. In Australia (particularly eastern Australia), La Niña events are associated with increased probability of wetter conditions (adapted from [www.bom.gov.au](http://www.bom.gov.au)).

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**Levee** is a raised embankment or earthworks along the floodplain that reduce the frequency of inundation of areas adjacent to the waterway. They are designed to withstand certain river heights, and will be overtopped if floodwaters exceed this level (Office of the Chief Scientist, 2011, *Understanding floods: questions and answers*).

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**Local controller** is the person appointed as the local controller of an SES unit (*Disaster Management Act 2003*).

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**Local disaster co-ordinator (local co-ordinator)** is a person appointed to co-ordinate disaster operations for a local disaster management group (*Disaster Management Act 2003*).

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**Local disaster management group (local group)** is a local group established by a local government to perform disaster management activities in the local region (*Disaster management Act 2003*).

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**Local disaster management plan (local plan)** is the disaster plan prepared by a local government.

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**Local Government Association of Queensland** is the peak body representing local government in its dealings with other governments, unions, business and the community ([www.lgaq.asn.au](http://www.lgaq.asn.au)).

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**Mobile Exchanges on Wheels (MEOWs)** are portable ADSL2+ enabled temporary exchanges used by Telstra to enable the quick installation of temporary communication solutions in the 2010/2011 floods.

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**Major flooding** leads to extensive flooding of rural areas and/or urban areas. Properties and towns are likely to be isolated and major traffic routes likely to be closed. Evacuation of people from flood affected areas may be required (adapted from the Australian Bureau of Meteorology [www.bom.gov.au](http://www.bom.gov.au)).

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**Megalitre** is equal to one million litres.

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**Minor flooding** occurs in low-lying areas next to watercourses where inundation may require the removal of stock and equipment. Minor roads may be closed and low-level bridges submerged (adapted from the Australian Bureau of Meteorology [www.bom.gov.au](http://www.bom.gov.au)).

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**Moderate flooding** may require the evacuation of some houses and main traffic routes may be covered. The area of inundation is substantial in rural areas, requiring the removal of stock (adapted from the Australian Bureau of Meteorology [www.bom.gov.au](http://www.bom.gov.au)).

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**m<sup>3</sup>/s (cumec)** means a rate of flow being one cubic metre per second or 1000 litres per second.

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**National Emergency Management Committee** is a Commonwealth body that provides advice and direction on national emergency management issues and policy (adapted from the Attorney-General's Department website [www.ag.gov.au](http://www.ag.gov.au)).

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**National Registration Inquiry System** is a voluntary registration system that is jointly managed, maintained and operated by the Australian Red Cross on behalf of the Commonwealth Attorney-General's Department.

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**Natural Disaster Relief and Recovery Arrangements** is a disaster response and recovery assistance program to assist local governments restore essential public assets damaged by a disaster event. It is administered by the Queensland Government's Department of Local Government and Planning.

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**Natural Disaster Resilience Program** is a grants program that is administered as a partnership between the Australian and state/territory governments. Its aim is to enhance Australia's disaster resilience through mitigation

works and activities. Local governments and disaster groups and agencies are able to seek funding for particular projects.

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**O’Sullivan Review** was an independent review of Queensland’s disaster management legislation, policies, guidelines and plans, as well as management and accountability in the State Emergency Service (SES). Many of the review’s recommendations took effect in November 2010 through amendments to the *Disaster Management Act 2003*.

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**Peak (river height)** represents the highest river height (in metres) reached by a river at a specified gauge site during a flood. A peak may be described as ‘minor’, ‘moderate’ or ‘major’, denoting its severity and the impact on nearby areas.

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**Probable maximum flood** is an estimate of the largest possible flood that could occur at a particular location, under the most severe meteorological and hydrological conditions as they are currently understood (Office of the Chief Scientist (Qld), 2010, *Understanding floods: questions and answers*).

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**Pumper** is a fire service vehicle primarily used for pumping water. Water may be pumped to another fire truck or directly onto flames.

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**Q100** is a probability-based design flood event, aimed to reflect typical combinations of flood producing and flood modifying factors which act together to produce a flood event at a specific location of interest that has a 1 in 100 chance of being equalled or exceeded in any one year (1% annual exceedance probability – AEP); it is described as having an average recurrence interval (ARI) of 100 years. It is a theoretical flood model used to inform planning and policy. (Brisbane City Council Joint Flood Taskforce Report, March 2011.)

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**Quantitative Precipitation Forecast** for the Wivenhoe and Somerset dams catchment is a Bureau of Meteorology product which predicts the amount of rainfall in millimetres for the following 24 hours.

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**Rating** means a estimated relationship at a particular point in a waterway between the height of the water and flow.

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**Real time flood model** is a suite of models used by the flood engineers during a flood event to estimate water flow in the catchments of, and downstream from, Wivenhoe, Somerset and North Pine dams.

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**Referable dam** is a dam which has been assessed as posing a risk to the safety of two or more people should it fail.

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**Risk register** is a listing of risk statements describing sources of risk and elements at risk with assigned consequences, likelihoods and levels of risk (State Disaster Management Group, 2010, *Queensland State Disaster Management Plan*).

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**Roads and Traffic Authority (RTA)** is a New South Wales state government agency responsible for improving road safety, testing and licensing drivers, inspecting vehicles and managing the road network.

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**Royal Automobile Club of Queensland (RACQ)** is Queensland’s peak motoring organisation, providing a range of services including roadside assistance, car insurance and finance ([www.racq.com.au](http://www.racq.com.au)).

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**Runoff** is the water flow that occurs when either (1) soil is infiltrated to full capacity; or (2) rainfall occurs at a rate greater than the rate at which it can infiltrate to the soil. The resultant ‘excess’ water from rain and other sources flows over the land (Office of the Chief Scientist, 2011, *Understanding floods: questions and answers*).

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**Rural Fire Service** is the volunteer branch of the Queensland Fire and Rescue Service. It provides fire management for rural and semi-rural communities across approximately 93% of the State.

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**Seqwater** means the Queensland Bulk Water Supply Authority, trading as Seqwater.

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**SES** is the State Emergency Service (*Disaster Management Act 2003*).

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**SES member** is a person appointed as an SES member (*Disaster Management Act 2003*).

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**SES unit** is an SES unit established for a local government region (*Disaster Management Act 2003*).

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**SMS** means short message service, or text message.

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**Social media** allow users to communicate and share information online. Examples include Facebook and Twitter.

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**Spillway** means a structure designed to provide for the release of water from a dam in a safe manner.

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**‘splash page’** means a single webpage which contains all of the site content on one page rather than providing further hyperlinks to subsequent web pages.

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**State disaster co-ordinator (state co-ordinator)** is a person appointed by the chairperson of the state group to co-ordinate the disaster response operations on behalf of the state group (*Disaster Management Act 2003*).

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**State disaster management group (state group)** is the peak disaster management policy and decision-making body in Queensland and it provides strategic direction and advice to government (*Disaster Management Act 2003*).

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**State disaster management plan (state plan)** is prepared by the state disaster management group and articulates Queensland’s disaster management arrangements (*Disaster Management Act 2003*).

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**State recovery co-ordinator (recovery co-ordinator)** is a person appointed by the chairperson of the state group to co-ordinate the disaster recovery operations for the state group (*Disaster Management Act 2003*).

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**Stream / river gauging station (gauge)** measures the height of the water in a river at a particular location. It may be manual or automated (Office of the Chief Scientist, 2011, *Understanding floods: questions and answers*).

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**Telemeter gauge** is a gauge that sends river level or rainfall data at periodic intervals to a computer. Data is sent via telephone communication landline, mobile or satellite.

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**Turbidity** relates to the amount of small particles of solid matter suspended in the water sample.

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**UHF** means ultra high (radio) frequency

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**VHF** means very high (radio) frequency

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**‘with forecast’ model** means the hydrologic model which estimates lake level at Wivenhoe and Somerset dams taking into account both rain that has already fallen and the full quantitative precipitation forecast most recently issued by the Bureau of Meteorology.

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**‘without forecast’ model** means the hydrologic model which estimates lake level at Wivenhoe and Somerset dams taking into account only rain that has already fallen and is on the ground.

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