
NEW SOUTH WALES STATE FLOOD PLAN GLOSSARY

Supporting Document to the NSW State Flood Plan

FEBRUARY 2018

GLOSSARY

After Action Review. An After Action Review (AAR), or debrief, is a structured learning tool. It is intended to evaluate an incident or activity in order to improve operational performance by sustaining strengths and correcting weaknesses. Accordingly, an AAR should identify areas of positive performance as well as areas that require improvement. AARs can be held at various levels including operational areas, agencies and multi-agency.

Agency. A government or non-government sector agency (1).

Annual Exceedance Probability (AEP). 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 level (height) has an AEP of 5%, there is a 5% chance (that is, a one-in-20 chance) of such a level or higher occurring in any one year (see also Average Recurrence Interval).

Assembly Area. An assembly area is a designated location used for the assembly of emergency-affected persons before they move to temporary accommodation or a nominated evacuation centre. As such these areas do not provide welfare assistance nor are they used for long term sheltering or provision of meals.

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

Average Recurrence Interval (ARI). 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 reaching a height as great as, or greater than, the 20 year ARI flood event will occur **on average** once every 20 years.

Catchment (river basin). 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 specific location.

Coastal Erosion. Coastal erosion is the loss of land along the shoreline due to the natural removal of beach and dune material in response to changing wave and water conditions.

Coastal Inundation. Coastal inundation is the flooding of low-lying coastal land by ocean waters caused by wave run-up overtopping dunes and coastal barriers.

Combat Agency. Means the agency identified in the State EMPLAN as the agency primarily responsible for controlling the response to a particular emergency.

Command. The internal direction of the members and resources of an agency in the performance of the organisation's roles and tasks. Command operates vertically within an organisation (2).

Community Action Teams. Local volunteers who are recognised as members of the NSW SES and undertake local initiatives in their communities for flood preparedness and response activities.

Community Education, Awareness and Engagement Programs. Interventions intended to increase people's perception of their risk and to generate changes in behaviour to reduce their risk (3).

Community Engagement. The process of stakeholders working together before, during and after the impact of a disaster, to build resilience through collaborative action, shared capacity building and the development of strong relationships built on mutual trust and respect (4).

Community Resilience. Communities and individuals harnessing local resources and expertise to help themselves in an emergency, in a way that complements the response of the emergency services (5). Resilient communities are better able to withstand a crisis event and have an enhanced ability to recover from residual impacts (6).

Concept of Operations. The Controller's general idea or notion, given the anticipated consequences of the event, of how the emergency response and recovery operation is to be conducted. It is the statement of the Controller's operational intentions and may be expressed in terms of stages/ phases of the emergency operation (6).

Control. The overall direction of the activities, agencies or individuals concerned (1). Authority for control is established in legislation or in an emergency plan and carries with it the responsibility for tasking other organisations in accordance with the needs of the situation. Control relates to situations and operates horizontally across organisations (2).

Coordination. The bringing together of agencies and individuals to ensure effective emergency or rescue management, but does not include the control of agencies and individuals by direction (1). It involves the systematic acquisition and application of resources (organisational, human and equipment) in an emergency situation (2).

Dam Failure. The uncontrolled release of a water storage. The failure may consist of the collapse of the dam or some part of it, or excessive seepage or discharges. The most likely causes of dam failure are:

Flood Induced Dam Failure. Dam failure caused by flood, either due to overtopping erosion or by subsequent structural failure.

Sunny Day Dam Failure. Dam Failure as a result of factors other than flood i.e. other than flood flow into the reservoir. Causes of "Sunny Day" dam failure can include internal erosion, landslide, piping, earthquake, structural weaknesses or sabotage.

Dam Safety Emergency Plan (DSEP). A DSEP outlines the required actions of owners and their personnel at dams in response to a range of possible emergency situations. The NSW Dam Safety Committee requires a quality controlled DSEP, with associated dam break warning procedures, to be prepared for prescribed dams where persons may be at risk downstream if the dam were to fail.

Damage Assessment. Collection and collation of impact information to inform the transition to recovery.

Design Flood (or flood standard). A flood of specified magnitude that is adopted for land use planning purposes. Selections should be based on an understanding of flood behaviour and the associated flood risk, and take account of social, economic and environmental considerations. There may be several design floods for an individual area depending on the requirement.

Disaster Resilience. Disaster resilience is an outcome derived from a sharing of responsibility between all levels of government, business, the non-government sector and the community who then act on this basis prior to, during and after a disaster. Disaster resilience is significantly increased by active planning and preparation. A shared understanding of the disaster risks at community level is a vital precursor (6).

Emergency Alert. A national telephone warning system used by emergency services to send voice messages to landlines and text messages to mobile telephones within a defined area, about likely or actual emergencies.

Emergency Management. A range of measures to manage risks to communities and the environment; the organisation and management of resources for dealing with all aspects of emergencies. Emergency management involves the plans, structures and arrangements which are established to bring together the normal endeavours of government, voluntary and private agencies in a comprehensive and coordinated way to deal with the whole spectrum of emergency needs including prevention, preparedness, response and recovery (7).

Emergency Response Planning Classification. A risk-based sectorisation method applied during the flood planning process to classify communities, and parts thereof, according to how the hazard is expected to impact. The community is sectorised into areas described as: Flood Island (low or high); Trapped Perimeter area (low or high); Rising Road Access area; Areas able to be evacuated (Rising Road Access or Overland Access); Indirectly Affected Areas; Overland Refuge Areas. This approach allows for response strategies (e.g. property protection, warning, evacuation, rescue and resupply) to be devised accordingly and caters for the full range of flooding possible in an area.

Essential Services and Utilities. Those services and/or utilities that are considered essential to the life of communities and include energy, transport, health services, sanitation services, water and welfare institutions (8).

Evacuation. A risk management strategy that may be used to mitigate the effects of an emergency on a community. It involves the movement of people to a safer location and their return. For an evacuation to be effective, it must be appropriately planned and implemented (9).

Evacuation Centre. A centre which provides affected people with basic human needs including accommodation, food and water (7).

Flash Flooding. Flooding which is sudden and often unexpected because it is caused by sudden local or nearby heavy rainfall and typically occurs in small catchments. It is defined as any flooding of short duration with a relatively high peak discharge in which the time interval between the observable causative event and the flood is less than six hours (10).

Flood. Relatively high water level which overtops the natural or artificial banks in any part of a stream, river, estuary, lake or dam, and/or local overland flooding associated with drainage before entering a watercourse, and/or coastal inundation resulting from super-elevated sea levels and/or waves (including tsunami) overtopping coastline defences.

Flood Bulletin. Communication issued to radio stations by NSW SES to inform people about what is expected to happen during flooding. NSW SES Flood Bulletins contain information on likely flood consequences and what actions are required to protect persons and property.

Flood Classifications. Locally-defined flood levels used in flood warnings to give an indication of the severity of flooding (minor, moderate or major) expected. These levels are defined and then used by the NSW SES and the Bureau in flood bulletins and flood warnings.

Flood Liable Land. Synonymous with flood prone land, i.e. land susceptible to flooding by the Probable Maximum Flood (PMF) event. Note that the term flood liable land covers the whole floodplain, not just the part below the flood planning level (10).

Flood of Record. Maximum observed historical flood.

Flood Sub Plan. A plan that deals specifically with flooding and is a sub-plan of an EMPLAN. Flood Sub Plans describe agreed roles, responsibilities, functions, actions and management arrangements for the conduct of flood operations and for preparing for them.

Floodplain. Area of land which is subject to inundation by floods up to and including the probable maximum flood event, that is, flood liable land.

Floodplain Risk Management Plan. A plan developed as part as the Floodplain Management Process in accordance with the principles and guidelines in the New South Wales Floodplain Development Manual. Such a plan usually includes both written and diagrammatic information describing how particular areas of flood prone land can be used and managed to achieve defined objectives.

Floodway. An area where a significant volume of water flows during floods. Such areas are often aligned with obvious naturally-defined channels and are areas that, if partially blocked, would cause a significant redistribution of flood flow which may in turn adversely affect other areas. They are often, but not necessarily, the areas of deeper flow or the areas where higher velocities occur.

Flood Intelligence. The product of a process of collecting, evaluating and analysing flood information relating to an event and presenting and communicating it in such a way as to inform decision making and to devise treatment options across prevention, preparedness, response and recovery. Flood intelligence can be developed before, during and after a flood event and uses a range of sources. NSW SES maintain a Flood Intelligence system to store Flood Intelligence.

Flood Island. Inhabited or potentially habitable areas of high ground within a floodplain linked to the flood-free valley sides by a road across the floodplain and with no alternative overland access. The road can be cut by floodwater, closing the only evacuation route and creating an island. After closure of the road the only access to the area is by boat or by aircraft. There are two types: High flood island(s) and low flood island(s).

Flood Warning. Advance notice that a flood may occur in the near future at a certain location or in a certain river basin or catchment. The list of locations where the Bureau Warnings is provided in Volume 3. For locations where the Bureau provides quantitative predictions, warnings normally include predicted flood heights at the forecast location. Flood Warnings are renewed at regular intervals until the relevant river level gauge drops to below the minor flood level. Flood Warnings are distributed to the media by the Bureau and are published on the Bureau website.

Flood Watch. A Flood Watch is an early advice of increased flood risk over a catchment by the Bureau up to four days in advance of large-scale weather systems that have the potential to cause flooding. The Flood Watch covers all catchments in NSW including catchments without flood forecasting systems and data networks, and also covers inland and desert areas, and areas without well-defined rivers and streams where

local flooding is the dominant flood risk. Flood Watches are distributed to the media by the Bureau and are published on the Bureau website.

Functional Area. A category of services involved in the prevention of, preparation for, responses to or recovery from an emergency, including Agriculture and Animal Services, Energy and Utility Services, Engineering Services, Environmental Services, Health Services, Public Information Services, Telecommunications Services, Transport Services, and Welfare Services.

Functional Area Coordinator. The nominated coordinator of a Functional Area, tasked to coordinate the provision of Functional Area support and resources for emergency response and recovery operations, who, by agreement of Participating and Supporting Organisations with the Functional Area, has the authority to commit the resources of those organisations, or to coordinate their response (6).

Government Sector Agency. A Department within the meaning of the Government Sector Employee Act 2013; (a) in the case of the Public Service-a Public Service agency, or (b) in the case of any other service in the government sector-the group of staff comprising the service or (subject to the regulations) any separate group of that staff.

Hazardous Material. Anything that, when produced, stored, moved, used or otherwise dealt with without adequate safeguards to prevent it from escaping, may cause injury or death or damage to property (1).

Hazardous Material Incident. An actual or impending land-based spillage or other escape of hazardous material that causes or threatens to cause injury or death or damage to property (1).

Incident. An event, occurrence or set of circumstances which has a definite spatial extent, has a definite duration, calls for human intervention has a set of concluding conditions that can be defined, and is or will be under the control of an individual who has the authority to make decisions about the means by which it will be brought to an end. AIIMS (2) identifies three classes of incident:

- Level One incidents are characterised as being able to be resolved through the use of local or initial response resources only;
- Level Two incidents are more complex in size, resources or risk characterised by the need for deployment of resources beyond initial response, sectorisation of the incident and/or the establishment of functional section due to the levels of complexity.
- Level Three incidents are characterised by degrees of complexity that may require divisions for effective management of the situation and usually involve delegation of all functions.

Incident Controller. The individual responsible for the overall management of an emergency or critical incident.

Indirect Effects. Properties and/or communities that are exposed to flood risks but are not directly impacted by inundation or isolation. Indirect effects include impacts and risks associated with flood damaged infrastructure, loss of transport links, electricity supply, water supply, sewerage or telecommunications.

Intelligence. See definition for Flood Intelligence.

Inundation. Properties and/or communities that are submerged by flooding. Inundation is one of the three primary sources of risk in the context of flooding (the other two are isolation and indirect effects).

Isolation. Properties and/or communities where flooding cuts access to essential services or means of supply. Isolation is one of the three primary sources of risk in the context of flooding (the other two are inundation and indirect effects).

Lacustrine Flooding. Flooding that occurs around lakes.

Liaison Officer. A person nominated or appointed by an organisation or functional area, to represent that organisation or functional area at a control centre, emergency operations centre, coordination centre or site control point. A liaison officer maintains communications with and conveys directions/requests to their organisation or functional area, and provides advice on the status, capabilities, actions and requirements of their organisation or functional area (6).

Livestock and Equipment Warnings. Issued when there is evidence of significant rises in stream levels to below minor flood heights. NSW SES may seek advice from the Bureau on likely rises.

Local Flood Advices. Issued on the basis of localised valley watch information for locations for which the Bureau does not issue Flood Warnings. They normally predict which class of flooding (minor, moderate, major) will occur, and must not contradict any Flood Warnings provided by the Bureau for other gauges on the same river. Local Flood Advices are to be clearly identified as being issued by the NSW SES.

Local (Overland) Flooding. Inundation by local runoff rather than overbank discharge from a stream, river, estuary, lake or dam (10).

Major Evacuation Centre. Large scale evacuation centre that requires multiagency co-ordination and response to deliver basic services to individuals and their companion animals affected by an emergency. Major evacuation centres are established to provide emergency accommodation when the scale and duration of the emergency

are beyond the capability and capacity of the established local /regional emergency management arrangements for evacuation centres (11).

Major Flooding. In addition to Moderate Flooding, flooding which causes inundation of extensive rural areas, with properties, villages and towns isolated and/or appreciable urban areas flooded. Evacuation of flood affected areas may be required. Utility services may be impacted.

Minor Flooding. Flooding which causes inconvenience. Low-lying areas next to watercourses are inundated. Minor roads may be closed and low-level bridges submerged. In urban areas inundation may affect some backyards and buildings below the floor level as well as bicycle and pedestrian paths. In rural areas removal of stock and equipment may be required.

Mitigation. Measures taken in advance of a disaster aimed at decreasing or eliminating its impact on society and environment (6).

Moderate Flooding. In addition to Minor Flooding, flooding which inundates low-lying areas, requiring removal of stock and/or evacuation of some houses. Main traffic routes may be flooded. In addition to the effects of minor flooding, the area of inundation is more substantial. Main traffic routes may be affected. Some buildings may be affected above the floor level. Evacuation of flood affected areas may be required. In rural areas removal of stock is required.

Non Government Agency. A voluntary organisation or any other private individual or body, other than a government sector agency (1).

NSW SES Operations Commander. An operational management role that provides strategic advice and support to the Incident Controller when required.

NSW SES State Controller. The NSW SES Commissioner, in connection with the exercise of his or her functions under the SES Act, may use the title NSW SES State Controller and the NSW SES Deputy Commissioner may use the title NSW SES Deputy State Controller.

NSW SES State Duty Operations Controller (SDOC). The delegated authority appointed by the NSW SES State Controller, responsible for providing advice and support to an Incident Controller and/or Operations Commander when required. The role can also perform emergency management functions delegated by the NSW SES State Controller.

Participating Organisation. The Government Departments, statutory authorities, volunteer organisations and other agencies who have either given formal notice to Agency Controllers or Functional Area Coordinators, or have acknowledged to the State Emergency Management Committee, that they are willing to participate in

emergency management response and recovery operations under the direction of the Controller of a combat agency, or Coordinator of a Functional Area, with the levels of resources or support as appropriate to the emergency operation (6).

Peak Height. The highest flood level reached, at a nominated gauging station, during a particular flood event.

Preparation. Arrangements or plans to deal with an emergency or the effects of an emergency (1).

Prevention. The identification of hazards, the assessment of threats to life and property and the taking of measures to reduce potential loss to life or property (1).

Probable Maximum Flood (PMF). The largest flood that could conceivably be expected to occur at a particular location, usually estimated from probable maximum precipitation. The PMF defines the maximum extent of flood prone land, that is, the floodplain. It is difficult to define a meaningful Annual Exceedance Probability for the PMF, but it is commonly assumed to be of the order of 10^4 to 10^7 (once in 10,000 to 10,000,000 years) (10).

Recovery. The process of returning an affected community to its proper level of functioning after an emergency (1).

Rescue. The safe removal of persons or domestic animals from actual or threatened danger of physical harm (1).

Response. The process of combating an emergency and of providing immediate relief for persons affected by an emergency (1).

Riverine Flooding. Inundation of normally dry land occurring when water overflows the natural or artificial banks of a stream, river, estuary, lake or dam.

Runoff. The amount of rainfall which ends up as stream flow, also known as 'rainfall excess' since it is the amount remaining after accounting for other processes such as evaporation and infiltration.

Sector. The organisational level having responsibility for operations with a defined area or having a specific functional responsibility.

Secondary Emergency. An emergency that occurs as a result of another hazard or disaster, i.e. fires, landslides, hazardous materials, food shortages following droughts or floods (7).

Spontaneous Volunteers. Emergent volunteers during times of crisis who volunteer their time to help their local communities but do not wish to have an ongoing commitment to an organisation.

State Controller. The Commissioner of the NSW State Emergency Service, who exercises his/her powers under the State Emergency Service Act.

Stage Height. A flood level reached, at a nominated gauging station, during the development of a particular flood event. The Bureau provides stage height predictions leading up to the prediction of a peak flood level.

Staging Area. A prearranged, strategically placed area, where support response personnel, vehicles and other equipment can be held in readiness for use during an emergency.

Standing Operating Procedures. A step by step set of instructions for carrying out specific techniques for consistency and quality.

Storm Surge. The increases in coastal water levels above predicted astronomical tide levels (i.e. tidal anomaly) resulting from a range of location dependant factors including the inverted barometer effect, wind and wave set-up and astronomical tidal waves, together with any other factors that increase tidal water level.

Stream Gauging Station. A place on a river or stream at which the stage height is routinely measured, either daily or continuously, and where the discharge is measured from time to time so as to develop a relationship between stage and discharge which is referred to as a rating curve.

Strike Teams. A set number of resources of the same type that have an established number of personnel. Strike teams are usually made up of five resources of the same type such as: vehicles, crews, earth moving machinery etc. (2).

Sub Plan. This Plan is an action Plan required for a specific hazard, critical task or special event. It is prepared when the management arrangements necessary to deal with the effects of the hazard, the critical task or special event differ from the general coordination arrangements set out in the main or supporting plans for the area.

Supporting Organisation. The Government Departments, statutory authorities, volunteer organisations and other specialist agencies who have indicated a willingness to participate and provide specialist support resources to a combat agency Controller or Functional Area Coordinator during emergency operations (6).

Supporting Plan. Prepared by an agency or functional area, which describes the support which is to be provided to the controlling or coordinating authority during emergency operations. It is an action plan which describes how the agency or functional area is to be coordinated in order to fulfil the roles and responsibilities allocated under this plan and the State EMPLAN.

Task Force. A combination of resources that can be assembled for a specific purpose. Task forces are established to meet tactical needs and may incorporate a mixture of different resources (2).

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